

Gasoline Impacted Soils-Final Site Remediation
3733-3737 South "G" Street
Tacoma, Washington

Prepared for:

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I. Introduction

This report documents the results of the site remediation of gasoline contaminated soils at the property located at 3737 South G Street, Tacoma, Washington. Site clean-up was conducted independently under Washington State Model Toxics Control Act (MTCA) and in accordance with the appropriate guidelines from Washington State Department of Ecology (DOE) "Guidance for Site Checks and Site Assessments for Underground Storage Tanks". Nowicki & Associates, Inc. (NAI) served as the site assessor for the site assessment under an agreement with the property owners, Mr. & Mrs. Bich Lam located at 769 South 38th Street, Tacoma, Washington. Soil excavation services were provided by Wm. Dickson Company, a Washington State licensed UST contractor.

II. Executive Summary

Four gasoline underground storage tanks, two 1,000-gallon and two 2,000-gallon, were removed from the subject site located at 3737 South G Street, Tacoma, Washington in July of 1996. Soil impact with gasoline hydrocarbons was confirmed during the tank removal site assessment completed by ALS Consulting. In April of 1998, Nowicki & Associates, Inc. was retained by Wells Fargo Bank to oversee site clean-up. Approximately 300 tons of gasoline impacted soil were excavated for off-site treatment disposal. However, soil impact was discovered to be more extensive than anticipated and the site clean-up was halted due to the limited budget available. At the time, the site was in the Robert Lyons Trusts managed by Wells Fargo Bank.

In 1999, under the oversight of the property executor at the time, Leroy Hintz, a close friend of Robert Lyons, Fife Sand & Gravel was retained to perform the site clean up of remaining impacted soils. During soil excavation, four abandoned USTs between 300-500 gallon in size were discovered. However, due to some un-resolved issues between Mr. Hintz and Fife Sand, site clean-up was again halted and there was no available records documenting site clean-up activities.

In 2000, under the new ownership of the Lams, Nowicki & Associates, Inc. was retained to perform the final site clean up. A total of 925 tons of gasoline impacted soils were removed from the site in December of 2000 for off site treatment disposal at the Olympic View Sanitary Landfill located in Port Orchard, Washington. The removed impacted soils were from the excavated pit where the former dispenser island and the abandoned tanks were located. No petroleum-impacted soils were found at the former excavated tank pit during the final site clean-up.

Laboratory results of collected soil samples indicate all impacted soils were removed for disposal except for the soil at the south sidewall of the large excavated pit. The impacted soil was left in-place due to its inaccessible location directly underneath the concrete sidewalk along South 38th Street. The impacted soil on the south wall appeared to be confined in a gravelly sand seam at about 8' to 8.5' below ground surface, in the approximate western half of the south wall. TPH gasoline was detected at 180 ppm at the west end and 1,200 ppm at the middle of the wall. Benzene was detected at 1.2 ppm or less. Toluene, ethylbenzene, and xylenes were all below current MTCA Method A clean-up samples. The excavated pits were backfilled and compacted to grade with clean excavated soil and new clean materials.

III. Site Background

The site is located within the City Limits of Tacoma. Surrounding land use is mostly commercial with small retail businesses. Prior uses of the site include a restaurant and a gasoline service station. Currently, the site is a vacant lot and is under the ownership of the Lams located at 769 South 38th Street, Tacoma, Washington. Up until approximately 1999, site ownership was under the Robert Lyons Trust overseen by Wells Fargo Bank and a designated Executor, Mr. Leroy Hintz.

Former UST system at the site included four USTs: two 1,000-gallon and two 2,000-gallon with two dispenser islands. Although the original 30-Day Intent to Close indicates a 500-gallon waste oil UST, it was never found at the site. The tanks were located at the southeast corner of the lot and the dispenser islands located west and south of the former on-site building. The four USTs were removed in July of 1996 by Wes Pac Environmental, a licensed UST service provider. ALS Consulting provided site assessment services during the initial tank removals. Soil impacted with

gasoline and BTEX above current MTCA Method A was confirmed from the initial site assessment at the former tank excavation and the west dispenser island. Gasoline TPHs were found in the range between 700 ppm and 2,500 ppm. Refer to Table 2 for a summary of collected data. The Initial Site Assessment report by ALS dated August 19, 1996 is included with this report.

The original groundcover over the tanks is assumed asphalt and concrete. The on-site building was demolished in 1995 prior to tank removal. Sometimes before or during tank removal the asphalt and concrete surfacing materials were also removed. Native soil consists of brown to light brown silty sand corresponding to SM of the ASTM Designation D-2487. Beginning at about 5' bgs, interlayers of clay and dense silt are present. Contaminated soils were generally observed to be discolored light grey to grey. Only surface water from run-off and precipitation entered the excavated pit. No groundwater was confirmed at the maximum excavated depth of approximately 14' bgs.

A. Initial Soil Removal Activity - April of 1998:

In April of 1998, Nowicki & Associates, Inc. was retained by Wells Fargo Bank to oversee the impacted soil excavation at the site. Approximately 300 tons of gasoline impacted soil from the former west dispenser island were removed for disposal at TPS Technologies in Tacoma. Excavation limits were approximately 23' x 28' x 10' bgs with no encountered groundwater. Because of insufficient budget reserved for the project, site remedial activities were halted and impacted soils were left in-place. At the base of the excavation at 10' bgs, gas TPHs were found at 2,100 ppm. Soil from the north and east excavation walls were detected with gas TPHs at 193 ppm and 680 ppm, respectively. No remediation work was completed at the tank excavation pit. Refer to Table 2 for data summary.

B. Site Clean-up Attempt - 1999:

In 1999, under the direction of the Trust Executor at the time Mr. Leroy Hintz, Fife Sand & Gravel was retained to provide site remediation services. During soil removal activities, four additional abandoned USTs (appeared to be empty and some were torn-apart and/or partially crushed) ranging in sizes between approximately 300 and 500 gallon were found at the southwest corner of the lot. It was assumed by NAI that because of unresolved issues between the site owner's representative and Fife Sand, there was no documentation of the activities completed or laboratory data of soil samples. However, based on field observations, the excavated pit appeared to cover the former south pump island and part of the west dispenser island. The abandoned USTs were left on the north side of the excavated pit (See attached photos). A large and a small soil stockpiles were observed occupying the north and northeast corner of the lot. It is unknown if any excavated contaminated soil was transported off-site for treatment. The site was fenced and the excavated pit left open. As a result, the large excavated pit was filled with surface water run-off and precipitation accumulation.

IV. Final Site Clean-up, November & December of 2000

Prior to the final site clean-up activities, a sample was collected from the accumulated water in the large excavation on September 18, 2000 for laboratory analysis. Laboratory results

indicate non-detect for gasoline, BTEX, diesel and oil. A permit to discharge the water in the excavation into the nearby storm water catch basin was then obtained from the City of Tacoma Public Works Sewer Utility (Copy of permit is included with this report).

Site remedial activities are discussed below according to the locations where the work was performed. Because of site constraints imposed by space limitation, the site activities had been completed in the order dictated by the site conditions. In general, activities at the excavated pit took precedence once the water was pumped. However, the soil stockpiles also had to be cleared to allow room for any excavated contaminated soils. Prior to site clean-up activities, a site remediation Work Plan was submitted to the Pierce County Health Department for review and approval.

A. Discharge of Accumulated Water in the Excavated Pit:

On November 29, 2000, water from the excavation was pumped into the catch basin located next to the sidewalk, at northeast corner of the intersection of South 38th and G Street. The catch basin is part of the City of Tacoma municipal storm drainage system and discharge was under the Special Approved Discharge Permit. Under the permit, maximum allowable discharge rate was 450 gpm (gallons per minute) during dry conditions and 225 gpm during rainy conditions, with no flooding. Monitoring for turbidity and petroleum sheen was also part of the requirements. A few days prior to the water discharge, the City Sewer Utility was notified.

On the day of discharge weather conditions were mostly dry with occasional light drizzles. A suction pump with a maximum capacity of 300 gpm was attached and secured to an auto tire tube. The pump set up was then placed afloat in the excavation and tied to the chain-link fence on-site. Discharge rate was monitored with a flow meter which was attached to the discharge hose and had an initial reading of 6,937,500 gallons. Samples at the discharge point were collected into glass jars every ½ hour to assess visually for turbidity and oil sheen. Throughout the discharge period, approximately 5.5 hours, no oil sheen was noted in the collected water samples. No visually detectable particulates or color change in the water samples was observed. Pumping of the water was stopped when there was approximately 4" of water at the lowest point in the excavation, where the pump was set. The final pump meter reading was 7,001,900, giving a total discharge volume of 64,400 gallons. The average discharge rate was approximately 200 gpm. One water sample was collected toward the end of the discharge period and submitted for laboratory confirmation. The sample was observed to be clear with no settled solids and laboratory results indicate non-detect for gas, BTEX, diesel and oil TPHs. All discharge requirements were met.

B. Existing Excavated Stockpiled Soils:

Prior to any excavation activities, two soil stockpiles, one small (approximately 100 cubic yards) and one large (approximately 500 cubic yards), were observed present at the north portion of the lot. Because the excavated stockpiled soils had been left on-site by Fife Sand, uncovered, for approximately 12 to 16 months, it was assumed that some degradation of the gasoline hydrocarbons had occurred, especially within the exposed surface soils. Field screening indicated localized hot spots in the stockpiled soils. However, the majority of the stockpile soils had relatively low field screen readings above background levels. Soils were separated and field screened in approximately 2-foot lifts. Field screening was performed using a combustible gas indicator (CGI).

The suspected clean soils were placed at the asphalt parking lot immediately to the east of tank excavation area. The soils were placed on double layers of polyethylene sheeting and covered during off-site hours.

The clean separated soils were placed in three stockpiles, A, B & C. The separated contaminated soils were placed at the north end of the main lot, on polyethylene sheeting.

Stockpile A:

Stockpile A initially contained approximately 100 cubic yards and was placed at the south end of the asphalt parking lot. Five discrete soil samples were collected on November 29, 2000 and laboratory results were non-detect for gas TPHs and BTEX. These samples were also screened for diesel and oil TPHs by the laboratory and results were non-detect. An additional 50 cubic yards of soil were added to stockpile A and two soil samples were collected from the 50 cubic yards on December 1, 2000. Laboratory results were also non-detect for gas TPHs and BTEX.

Stockpile B:

Because of limited site access for the trackhoe during soil screening, stockpile B was initially placed at the north end of the asphalt parking lot. Additional screened soil was added to the stockpile later to give a total amount of approximately 100 cubic yards. Three soil samples were collected from the stockpile for laboratory analysis and laboratory results were all non-detect for gas TPHs, and BTEX.

Stockpile C:

Because the asphalt parking lot could not accommodate additional soil other than stockpiles A and B, the remaining clean separated soils were placed in stockpile C, located at the northeast corner of the large excavated pit. The stockpile consisted of minimal amount of clean soil from the previous existing pile and mostly clean soil from the excavation of the large excavated pit. A total of approximately 200 cubic yards were placed in stockpile C. Five discrete soil samples were collected from this stockpile for laboratory analysis and laboratory results were non-detect for gas and BTEX.

Throughout the site clean up, approximately 450 cubic yards of clean soil were separated and stockpiled at the site for use as backfill at the site.

C. Former Tank Excavation - Small Pit:

At the former tank excavation, the initial soil sampling during the tank removal in July of 1996 indicates two locations with remaining impacted soils moderately above the current MTCA Method A clean-up level. The two locations were the area below the former north UST (at 10.5' bgs with gas TPHs at 700 ppm) and the west sidewall where the product piping run to the dispenser islands (at 7' bgs and gas TPHs at 640 ppm).

At the time of final clean-up, the former tank excavation was noted to have some temporary sandy fill to within of approximately 3' to 4' from the ground surface. On November 30, the clean temporary sandy fill was removed and soil samples were obtained at the two aforementioned

locations with assumed remaining impacted soils. Excavation proceeded to approximately 11' bgs but no trace of impacted soil was found at the north end or at the north portion of the west sidewall. It appeared that the remaining impacted soils at these locations had been removed by Fife Sand & Gravel in 1999 and that the excavation had been backfilled with clean sand. Thus, two soil samples were collected for laboratory confirmation: one from the north bottom (approximately 30 north of the concrete sidewalk, or at 11' bgs or 2' north of the assumed original limit of excavation) and one from the west wall at 9' bgs. Laboratory results indicate non-detect for gas and BTEX in both samples. The excavation was then backfilled with the clean excavated fill to provide stability for the Ackerly sign footing.

D. Former Dispenser Island and Abandoned Tank Excavation - Large Pit:

The large excavated pit at the site covered the areas of the former dispenser islands and the locations of the four abandoned USTs. This excavated pit was located west and northwest of the former main tank pit.

i. Removal of Impacted Soil – Base of Excavation:

The initial soil profile of samples collected on November 30, 2000 indicated a hot spot at approximately the center of the existing excavation base, at approximately 10' bgs. Soil at this depth was dense brown/grey silty sand with strong petroleum odor. Gas TPHs were detected at 8,200 ppm. Benzene, ethylbenzene and xylenes were detected at 8.5 ppm, 32.7 ppm and 156 ppm, respectively. No lead was detected in the sample. Additional four soil samples collected at the excavation base east and west of the south end, from 8' to 13' bgs indicated non-detect for gas TPHs and BTEX. Due to limited accessibility, the contaminated soil at the center of the south end of the excavation was removed on December 6, after the north end was cleaned up and backfilled to provide support for the trackhoe. The impacted soil appeared to be limited to above 11.5' bgs, where brown clean dense silty sand was encountered. A soil sample was collected after soil removal, sample Bot-8 11.5'-12', was non-detect for gas and BTEX. Additional soil samples were also collected from the excavation base from various locations at depths of approximately 12' bgs (samples Bot-9, Bot-10, and Bot-11). All samples were non-detect for gas TPHs and BTEX.

On December 1, excavation of the contaminated soil at the former west dispenser island started. Impacted soil was removed to a depth of approximately 12' to 14' bgs, where clean brown dense clayey sand was found. Two bottom samples were collected, one at the center of the former dispenser excavation at 14' bgs (Disp-Bot 1) and the other at 12' (Disp-Bot 2) at the north end of the excavation. Both samples are non-detect for gas TPHs and BTEX. Additional impacted soils were also removed from the north, east and west sidewalls as the excavated pit was expanded on December 5 and 6. The impacted soil to the north of the former west dispenser island area appeared to be limited to the top 8' to 9' bgs. Bottom samples collected at 8' (Disp-Bot-4) and at 8' (Disp-Bot) were either non-detect or below current MTCA Method A clean-up levels.

ii. South Sidewall:

At the time of final site clean-up, the south sidewall was observed to have been excavated to approximately the edge of the concrete sidewalk. Four soil samples were collected at various depths from the south sidewall. Based on laboratory results of collected soil samples, some residual impacted soils are present at approximately 8' to 8.5' bgs, in a

dense gravelly sand seam. At approximately 15' east of the crosswalk post, which was taken as a reference point (See Figure 2), sample SW-2 was detected with 139 ppm gas TPHs. The impacted soil layer appeared to continue east to approximately 20' east where sample SW-5, which was collected between 8' and 8.5' bgs, was found with gas TPHs at 1,200 ppm. Benzene was detected at 1.2 ppm and TEX were below current MTCA Method A levels. At the same location of SW-5, SW-4 was collected at 6' to 6.5' bgs and was found to be non-detect of gas and BTEX. Because the residual impacted soil is located under the sidewalk, removal of the residual impacted soil was not feasible without the removal of the concrete sidewalk.

At the west and east ends of the south walls, locations of samples SW-1 and SW-3, soil samples were non-detect for gas and BTEX.

iii. East Excavation Sidewall:

The east sidewall was initially characterized with samples EW-1 (7.5' bgs) and NE-1 (10' bgs) with non-detect results for gas and BTEX. On December 1, 2000 impacted soils at the north end of the pit were excavated. Some sections of abandoned metal product piping were encountered at shallow depths (approximately 3' bgs) at the northeast corner of the pit. Contaminated soils were found associated with the presence of abandoned piping. After the removal of contaminated soils, three additional soil samples were collected from the north portion of the east sidewall at various depths, ranging from 5' to 10' bgs. All samples were non-detect or below MTCA Method A levels for gas and BTEX.

iv. West Excavation Sidewall:

Mark LaVergne of Tacoma Pierce County Health Department (TPCHD) was on-site on November 30 for a brief site visit. He mentioned that Fife Sand & Gravel informed him that the west sidewall might need additional detailed soil profiling, as the abandoned USTs were found in this approximate area. Field screening however did not indicate any presence of remaining impacted soil. The south end of the west sidewall was characterized with soil samples collected at approximately 6' to 8.5' bgs. All samples, WW-1 through WW-4, were non-detect for gas and BTEX.

As the removal of impacted soil continued at the north excavation end, in the former north fuel dispenser island area, the north end of the west wall was also excavated. Soil samples, Disp-WW-2 and Disp-WW-3 collected at 5' and 7' bgs, respectively, on the west wall after the impacted soil removal were non-detect of gas and BTEX.

v. North Excavation Sidewall:

As the removal of impacted soil proceeded north, the north excavation sidewall was also expanded approximately 25' to 30'. North of the former west dispenser island area, impacted soil appeared to be confined to within the top 8' to 9' bgs. The encountered impacted soil in this area also appeared to be not continuous with the soil plume found at the former west dispenser island area. Below 9' bgs, native soil was observed to be of clean brown clayey sand with no petroleum odor. Soil samples collected from the north wall between 5' and 7' bgs after removal of impacted soil were non-detect for gas and BTEX.

V. Contaminated Soil Disposal

Approximately 925 tons of gasoline hydrocarbon impacted soil were removed during the final site clean-up in November and December of 2000 and transported to the Olympic View Sanitary Landfill for treatment disposal. Soil disposal weight tickets are included in Appendix G. In addition, approximately 300 tons of contaminated soil were removed and disposed of at TPS Technologies in Tacoma in April of 1998 (TPS Soil Recycling Certificate is included in Appendix I). Thus, a combined total of 1225 tons of gasoline impacted soils were removed from the site for disposal treatment.

VI. Excavation Backfill and Test Pit Sampling:

As the laboratory results indicate, all accessible gasoline impacted soils were removed for disposal. The excavation south wall, approximately western half, is the only location with impacted soil left in-place. These impacted soils are directly located under the concrete sidewalk. The lateral extent of soil impact was not determined but assumed to be minimal due to the relatively dense native soil.

The excavated pit was backfilled and compacted to grade with the clean excavated stockpiled soils and new clean materials. The south sidewall was covered with polyethylene sheeting prior backfilling.

After the excavated pit was backfilled, the un-excavated area to the north was explored with three test pits to determine if there was any un-identified contaminated soils at or near ground surface. The test pits were placed at approximately 40' north of the northern edge of the former excavated pit, and about 25' apart. Field observations indicated no soil impact in any of the test pits. Soil samples were collected at 3' bgs at pits #1 and #3 (See Figure 2). Laboratory results were non-detect for gas TPHs and BTEX.

VII. Tank Disposal:

The original four removed USTs were assumed transported off-site and disposed of by Wes Pac Environmental at the time of tank removal in 1996. However, there is no record of tank disposal receipt in the ALS Site Assessment Report.

The additional four discovered abandoned USTs were disposed of at Joseph Simon & Sons located at 2202 East River East, Tacoma, Washington. Disposal receipt is included with the report.

VIII. Field and Laboratory Methods:

During tank excavation, field screening was performed with a Tank Techtor, which measures the combustible volatile hydrocarbons. Soil samples were collected using the bucket of the trackhoe or with hand tools when applicable. Samples were taken from the undisturbed soil in the center of the trackhoe bucket and inserted directly into sample containers. For laboratory analysis, soil was collected into laboratory-provided pre-cleaned 4-oz glass jars with teflon lids, and samples were over-packed to minimize any head space. Water samples were collected into 40-ml vials with teflon lids. All samples were logged onto a sample chain of custody and stored in an ice cooler until delivery to the laboratory. Samples were lab-analyzed for gas TPHs and BTEX using

Washington State Methods NWTPH-Gx and EPA Method 8021B. Soil samples with elevated gasoline detection were also lab-analyzed for total lead using EPA Method 7000 Series.

Laboratory analyses were performed by Transglobal Environmental Geosciences Northwest, Inc. located at 677 Woodland Square Loop SE, Suite D, Lacey, Washington. Laboratory quality control parameters were within control limits. Analytical results are summarized in Table 1.

Table 1 – Final Site Clean-up Laboratory Data

Sample ID	Collection Date	Description	Gas TPHs (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenz (ppm)	Xylenes (ppm)
SP1-1	11-29-00	Clean excavated stockpiled soil	nd ¹	nd	nd	nd	nd
SP1-2	"	"	nd ¹	nd	nd	nd	nd
SP1-3	"	"	nd ¹	nd	nd	nd	nd
SP1-4	"	"	nd ¹	nd	nd	nd	nd
SP1-5	"	"	nd	nd	nd	nd	nd
SP2-1	"	"	nd ^{1, 2}	nd	nd	nd	nd
SE-1	"	Suspected clean sand at southeast corner of the lot	nd ¹	nd	nd	nd	nd
WW-1	11-30-00	Main excavated pit, west wall, 7' bgs	nd	nd	nd	nd	nd
WW-2	"	West wall, middle, 8' bgs	nd	nd	nd	nd	nd
WW-3	"	West wall, south end, 8.5' bgs	nd	nd	nd	nd	nd
WW-4	"	West wall, south end, 6' bgs	nd	nd	nd	nd	nd
SW-1	"	South wall, west end, 8' bgs	nd	nd	nd	nd	nd
SW-2	"	South wall, west end, 8' bgs	139	.08	.28	.5	1.26
SW-3	"	South wall, east end, 7' bgs	nd	nd	nd	nd	nd
EW-1	"	East wall, south end, 7.5' bgs	nd	nd	nd	nd	nd
NE-1	"	East wall, middle, 10' bgs	nd	nd	nd	nd	nd
NW-1	"	Northeast area, 8.5' bgs	82	nd	.14	.1	.83
Bot-2	"	Excavation base, southwest corner, 10' bgs	nd	nd	nd	nd	nd
Bot-3	"	Removed contaminated soil from approx. middle of excavation base (10' bgs)	8,200 ³	8.5	22.6	32.7	156
Bot-4	"	Excavation base, west side, middle, 8.5' bgs	nd	nd	nd	nd	nd
Bot-6	"	Excavation base, east side, middle, 12.5' bgs	nd	nd	nd	nd	nd
Bot-7	"	Excavation base, southeast, 13' bgs	nd	nd	nd	nd	nd
SP2-2	"	Clean excavated stockpiled soil	nd	nd	nd	nd	nd
SP2-3	"	"	nd	nd	nd	nd	nd
EX-1	"	Hot spot from existing soil stockpile (removed for disposal)	246	.06	.8	.54	1.8
TP-1	"	Former tank pit, west wall, 11' bgs	nd	nd	nd	nd	nd
TP-2	"	Former tank pit, north wall, 9' bgs	nd	nd	nd	nd	nd
Disp-Bot-1	12-1-00	Below former dispenser island, 14' bsg	nd	nd	nd	nd	nd
Disp-Bot-2	"	Below former dispenser island, east end, 12' bgs	nd	nd	nd	nd	nd
Disp-EW-1	"	East wall, 9' bgs	nd	nd	nd	nd	nd
Disp-EW-2	"	East wall, 8' bgs	nd	nd	nd	nd	nd
Disp-EW-3	"	East wall, 5'	59	nd	.05	nd	1.4

Dips-NW-1	"	Northeast area of excavation , 8.5' bgs	nd	nd	nd	nd	nd
Disp-NW-2	"	North of former dispenser island, 12' bgs	nd	nd	nd	nd	nd
Disp-NW-3	"	North wall, 7' bgs	nd	nd	nd	nd	nd
Disp-WW-1	"	Excavated impacted soil west of former dispenser island	1800 ³	nd	.45	1.13	16.4
SP1-6	"	Clean stockpiled soil	nd	nd	nd	nd	nd
SP1-7	"	"	nd	nd	nd	nd	nd
SP3-1	"	Suspected contaminated stockpiled soil (removed for disposal)	162	nd	.21	.65	1.42
SP3-2	"	"	74	nd	nd	nd	.44
SP3-3	"	" (removed for disposal)	198	.22	.93	.66	1.53
SP3-4	"	"	33	.23	.1	nd	.23
SP3-5	"	"	58	nd	nd	nd	.27
Disp-Bot-3	12-5-00	Excavation base, west of former dispenser island, 8' bgs	nd	.11	.11	.07	.28
Disp-WW-2	"	West wall, northwest of former dispenser island, 7' bgs	.07	.05	nd	.18	nd
Disp-WW-3	"	NW corner, 5' bgs	nd	nd	nd	nd	nd
Disp-NW-3	"	North wall, 7' bgs	nd	nd	nd	nd	nd
Disp-Bot-4	"	Excavation base, northwest corner, 9' bgs	nd	nd	nd	nd	nd
Disp-EW-4	"	East wall, north end, 7' bgs	nd	nd	.3	.11	.65
SC-SP1	"	Clean stockpiled soil	nd	nd	nd	nd	nd
SC-SP2	"	"	nd	nd	nd	nd	nd
SC-SP-3	12-6-00	"	nd	nd	nd	nd	nd
SC-SP4	"	"	nd	nd	nd	nd	nd
SC-SP5	"	"	nd	nd	nd	nd	nd
SW-4	"	South wall, middle, beneath concrete sidewalk, 6'-6.5' bgs	nd	nd	nd	nd	nd
SW-5	"	South wall, middle, beneath concrete sidewalk, 8'-8.5' bgs	1200	1.2	1.5	4.8	13
Bot-8	"	Excavation base, 11.5'-12' bgs	nd	nd	nd	nd	nd
Bot-9	"	Excavation base, 12' bgs	nd	nd	nd	nd	nd
Bot-10	"	Excavation base, southwest corner, 12' bgs	nd	nd	nd	nd	nd
Bot-11	"	Excavation base, west end, 12' bgs	nd	nd	nd	nd	nd
Near	12-11-00	Test pit #1, northwest corner of lot, 3' bgs	nd	nd	nd	nd	nd
Far	"	Test pit #3, northeast corner of lot, 3' bgs	nd	nd	nd	nd	nd
Exc-W	9-18-00	Water from excavated pit prior to site clean-up activities	nd ¹	nd	nd	nd	nd
Dis-W-1	11-30-00	Water from excavated pit during pumping	nd ¹	nd	nd	nd	nd

-	-	Method Detection Limit	S: 10 GW: 100 ppb	S: .05 GW: 1 ppb	S: .05 GW: 1 ppb	S: .05 GW: 1 ppb	S: .05 GW: 1 ppb
-	-	Current MTCA Method A Clean-up Level	S: 100 ppm GW: 1,000 ppb	S: 0.5 ppm GW: 5.0 ppb	S: 40 ppm GW: 40 ppb	S: 20 ppm GW: 30 ppb	S: 20 ppm GW: 20 ppb

Note:

nd = Non-detect at the method detection limit.

S ... Denotes soil

GW ... Denotes groundwater

¹ ... Samples were also non-detect for diesel and oil TPHs.

² ... Sample was detected with total lead at 7 ppm, below MTCA Method A level of 250 ppm.

³ ... Samples were non-detect for total lead.

Table 2. Laboratory Data from Site Assessment and Prior Soil Excavation Activities

Sample ID	Collection Date	Description	Gas TPHs (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenz (ppm)	Xylenes (ppm)
SW-7'	7-25-96	Former tank excavation south wall, 7' bgs	nd	nd	nd	nd	nd
B-1 10.5'	"	Below tank #1, 10' bgs	13	nd	nd	nd	nd
EW 5.5'	"	East excavation wall, 5.5' bgs	18	nd	nd	nd	nd
B-2 10.5'	"	Below tank #2, 10.5' bgs	140	nd	1.3	1	3.6
B-3 10.5'	"	Below tank #3, 10.5' bgs	nd	nd	nd	nd	nd
WW 7'	"	West wall, 7' bgs	640	nd	3.6	3.6	16
NW 6'	"	North wall, 6' bgs	30	nd	nd	nd	.3
B4 10.5'	"	Below tank #4, 10.5' bgs	700	nd	4.4	8.1	22
SI 3.5'	"	Below product piping, 3.5' bgs	nd	nd	nd	nd	nd
WI 4'	"	Under dispenser island, 4' bgs	2500	10	nd	nd	nd
WP 4'	"	Under product piping, 4' bgs	nd	nd	nd	nd	nd
EP 3'	"	Under product piping, 3' bgs	nd	nd	nd	nd	nd
BGW	"	Water sample from tank excavation	25	.71	.3	.58	1.2
WI 8'	8-2-96	Under dispenser island, 8' bgs	140	nd	nd	nd	1.4
SP 1	"	Excavated stockpiled soil	23	nd	nd	nd	nd
SP 2	"	"	100	nd	.47	.36	nd
SP 3	"	"	nd	nd	nd	nd	nd
Disp-Bot 3.5' 10'	4-14-98	Dispenser island excavation bottom, 10 bgs	2100 ¹	nd	nd	nd	11.7
Disp 4'-NW 8'	"	Dispenser island excavation north wall, 8' bgs	193 ¹	nd	nd	nd	1.16
DWP 4'isp-SW 6'	"	Dispenser island excavation 6' bgs	16 ¹	nd	nd	nd	nd
Disp-EW 7'10"	"	Dispenser island excavation east wall, 7' 10" bgs	680 ¹	nd	nd	nd	1.14
Disp-WW 9'	"	Dispenser island excavation west wall, 9' bgs	nd ¹	nd	nd	nd	nd
Disp-EX1	"	Dispenser island excavated impacted soil	450 ¹	nd	nd	nd	2.73

Note:

All impacted soils as indicated in Table 2 above have been excavated for off-site disposal during subsequent site clean-up activities. Final confirmational samples results are listed in Table 1.

nd ... Non-detect at the method detection limit(s).

¹ ... Values reported as Intermediate Petroleum Distillate (IPD).

Data of samples collected on 7/25/96 and 8/2/96 were obtained from ALS Site Assessment Report dated August 19, 1996.

Refer to attached reports for method detection levels.

IX. Conclusion and Recommendation:

Field observations and laboratory data confirm all accessible gasoline impacted soils have been removed from the site for off-site treatment disposal. The only location where remaining soil is left in-place is the western half of the large excavated pit south sidewall along South 38th Street. The soil left in-place is located directly under the concrete sidewalk and is inaccessible for removal without alteration or removal of the concrete sidewalk. Relatively low levels of gasoline TPHs and trace levels of BTEX were detected in the remaining soil, which is believed to be very degraded soil associated with the abandoned USTs. The extents of soil impact appeared to be limited to a relatively dense gravelly sand seam at approximately 8' to 8.5' bgs.

Because no actual groundwater was present at the depth of soil excavation at the site and because of the relatively dense soil matrix at the depth where the impacted soil remains on the south sidewall, the potential for further contaminant migration of the left in-place soil is remote. In addition, because the remaining impacted soil is not near surface and is covered with polyethylene sheeting on the side and an impervious concrete layer at the top, the potential for un-planned direct human contact or exposure is low if not unlikely. Therefore, there appears to be no threat to human or the environment by the left in-place soil. However, additional characterization of the soil left in-place at a later time, such as when there is repair of or construction at the sidewalk that would render the soil accessible, is recommended.

X. Limitations:

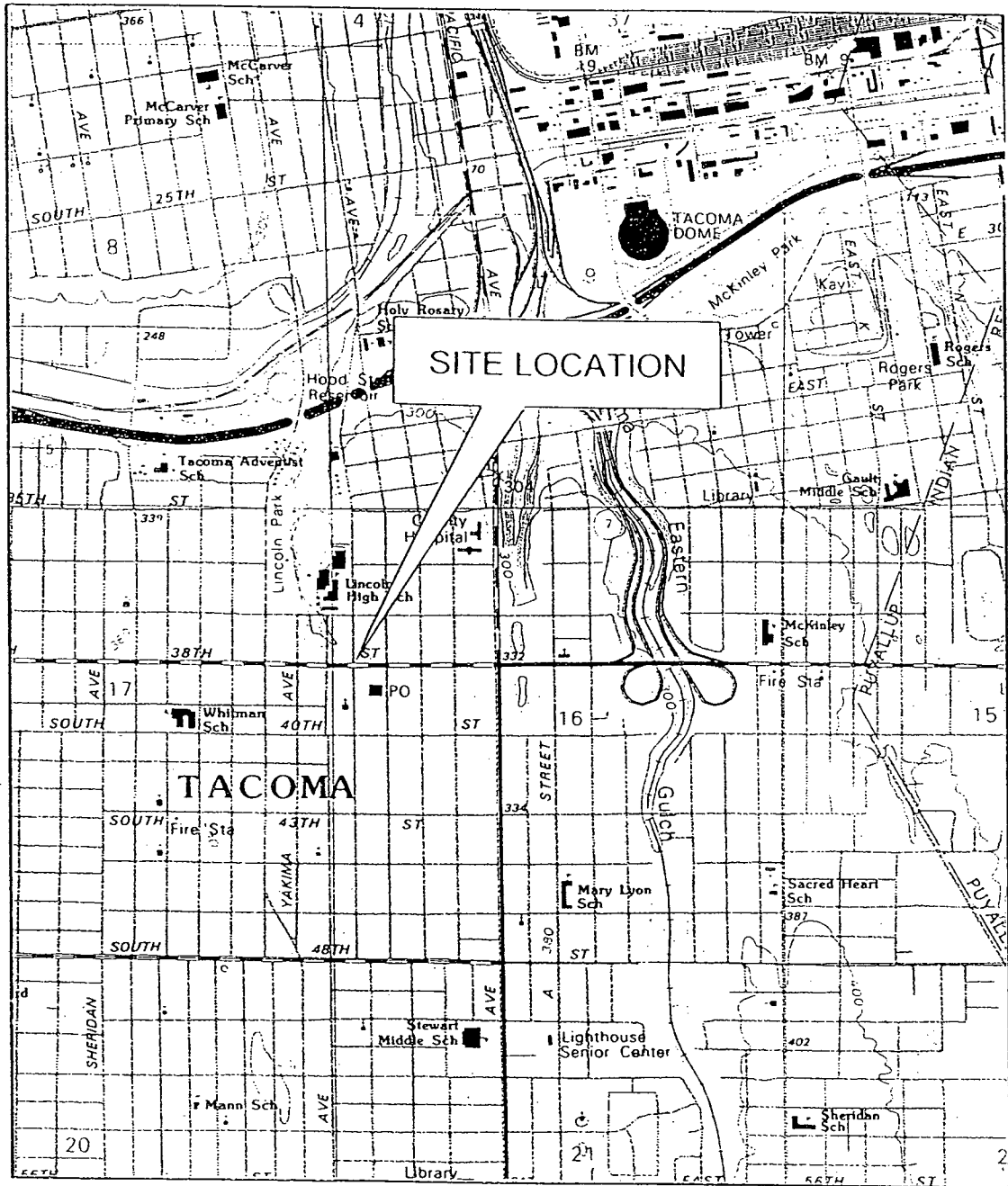
This report has been prepared for the use of NAI's client, the Lams. The work was performed under an agreement between NAI and the Lams and in accordance with recommended guidelines established by Ecology for a UST site and clean-up standards established under the Washington State Model Toxics Control Act, and limited to the removed USTs only.

APPENDIX A

Site Map & Soil Sample Locations Figures

R 3 E.

T. 20 N



SCALE 1 : 24,000



1/2 0 1 MILE

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC SURVEY MAP OF
SOUTH BEND, WASHINGTON QUADRANGLE PHOTOREVISED 1984

Site Address:
3733-3737 South 38th Street
Tacoma, Washington

Figure 1. Site Location Map

CURRENT WASHINGTON STATE
MODEL TOXICS CONTROL ACT (MTCA) METHOD A
CLEAN-UP LEVELS FOR SOIL:

Gasoline TPHs=100 ppm
Benzene=0.5 ppm
Ethylbenzene=20 ppm
Toluene=40 ppm
Xylenes=20 ppm

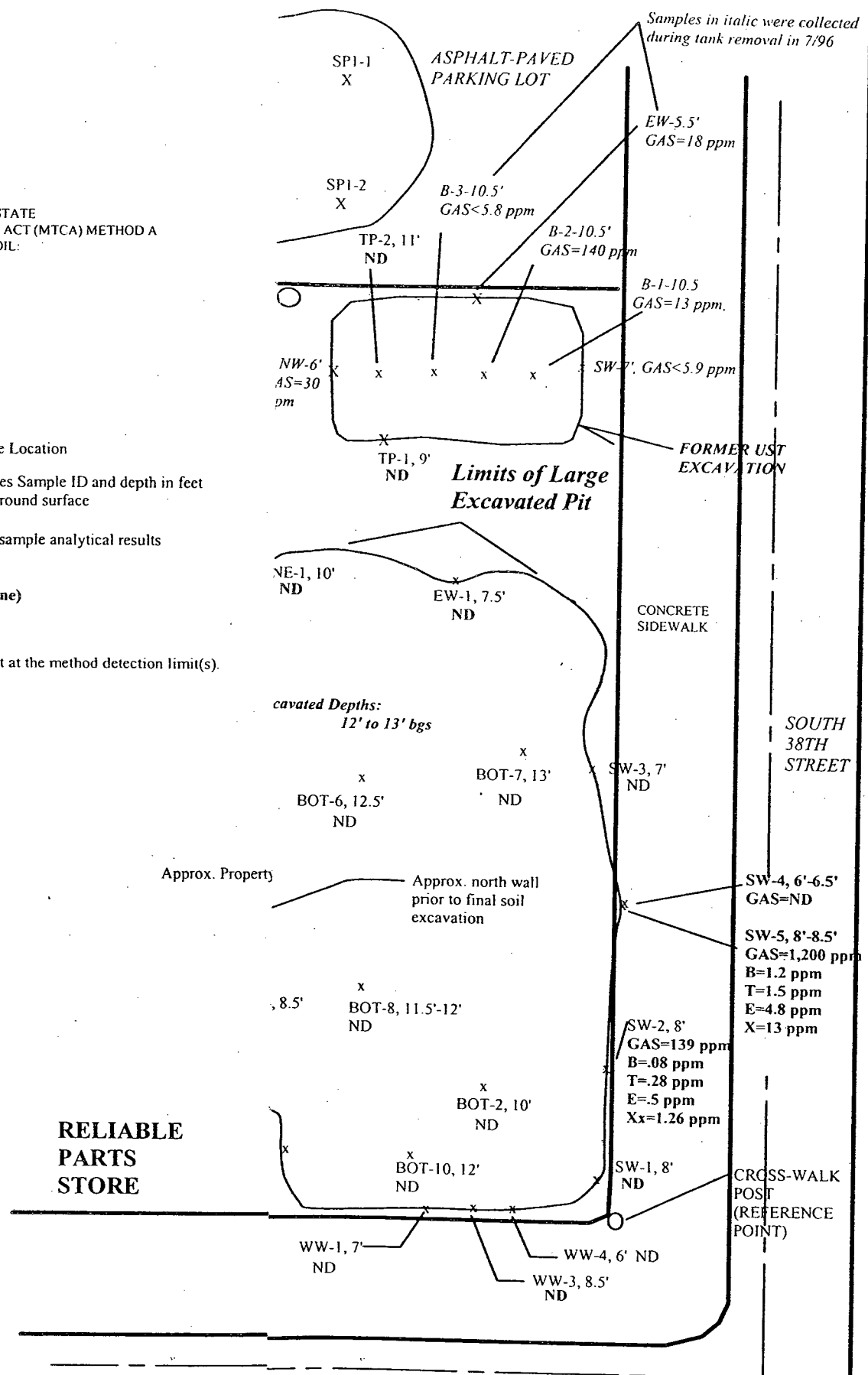
Note:

x ... Denotes soil sample Location

DISP-BOT3, 8' ... Denotes Sample ID and depth in feet
below ground surface

GAS=ND ... Denotes sample analytical results
B=.11 ppm (Benzene)
T=.11 ppm (Toluene)
E=.07 ppm (Ethylbenzene)
X=.28 ppm (Xylenes)

ND ... Denotes non-detect at the method detection limit(s).



Project: 3733-3737 South G Street, Tacoma, WA

Figure 2. Soil Sample Locations

12-29-00

1"=15'

Nowicki & Associates, Inc.

APPENDIX B

DOE Abandoned UST Site Assessment & Closure Notice



UNDERGROUND STORAGE TANK Closure and Site Assessment Notice

See back of form for instructions

FOR OFFICE USE ONLY	
Site ID	
Owner ID	

✓ the appropriate box(es)

☐ Temporary Tank Closure ☐ Change-In-Service ☒ Permanent Tank Closure ☒ Site Check/Site Assessment

Site Information

Number N.A.
ble from Ecology if the tanks are registered)
Business Name VACANT
Address 3733 - 3737 South G street
City Tacoma State WA
Zip Code 98401 Telephone ()

Owner Information

(This form will be returned to this address)

UST Owner/Operator BICH & CANH LAM
Mailing Address 769 SOUTH 38 ST.
City/State TACOMA WA
Zip Code 98408 Telephone (253) 472-1320

Tank Closure/Change-In-Service Company

Company W.M. DICKSON Co.
Supervisor TED F. PAGGEOT Decommissioning Certification No. 1038003-26
Supervisor's Signature Ted F. Paggeot Date 2-19-01
Address 3315 SOUTH PINE STREET
City TACOMA State WA Zip Code 98409 Telephone (253) 472-4489

Site Check/Site Assessor

Site Assessor MICHAEL LAM - NOWICKI & ASSOC. INC.
Address 33516 9TH AVE SOUTH BLDG 6
City FEDERAL WAY State WA Zip Code 98003 Telephone (253) 927-5233

Tank Information

Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored
<u>ONE</u>	<u>11-29-01</u>	<u>REMOVAL</u>	<u>200 - 500 GAL</u>	<u>EMPTY (GAS)</u>

Contamination Present at the Time of Closure

☒ Yes ☐ No ☐ Unknown
Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

☐ Yes ☐ No
If contamination is present, has the release been reported to the appropriate regional office?

APPENDIX C

Photographic Documentation



Site in 1996, just after tank removal, looking southeast across South G Street.



Impacted soil observed on excavated pit at former north fuel dispenser island, 1996.



During impacted soil removal in 1996 by NAI, former north dispenser island.



North dispenser island excavated pit after soil removal, 1996.



Open pit prior to final soil clean-up. Note the accumulated water and abandoned USTs, looking east/southeast.



Excavated stockpiled soil before final site clean-up, looking east.



During pumping of excavation on November 29, 2000.



Soil sampling locations on south wall of existing pit, 11-30-00.



Existing excavated pit before final soil clean-up, looking toward South G Street.



Excavated pit before final soil clean-up, looking toward 38th South.



West excavation wall.



Southwest corner after impacted soil removal/soil sampling.



Soil sampling at west wall of excavation.



During soil excavation activity, looking northeast.



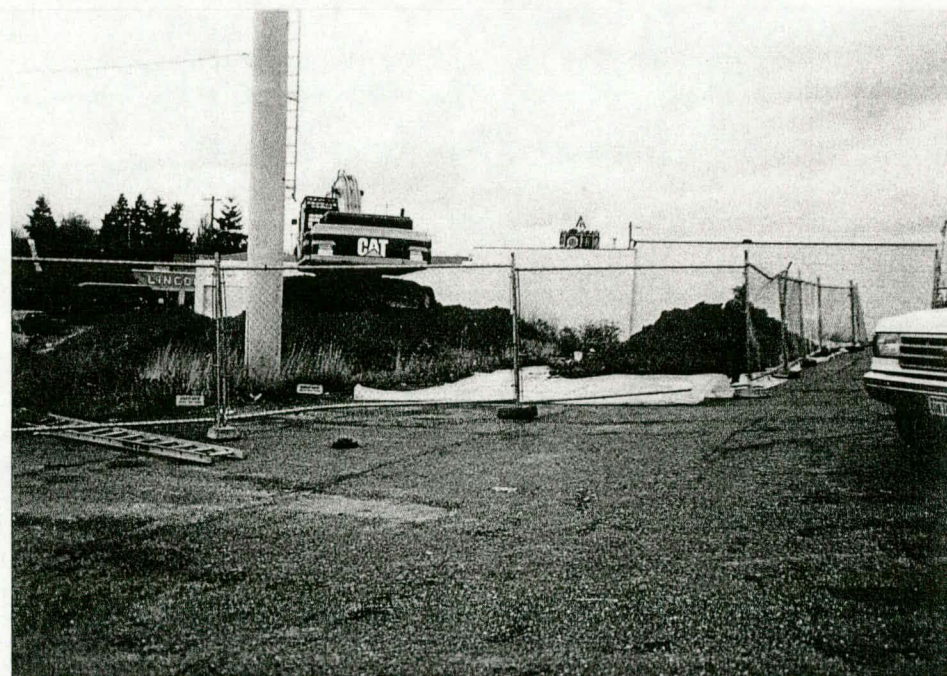
During soil characterization at the former UST removal pit, which had been backfilled by Fife Sand after assumed removal of impacted soil.



Relocation of stockpiled soil over to asphalt parking lot.



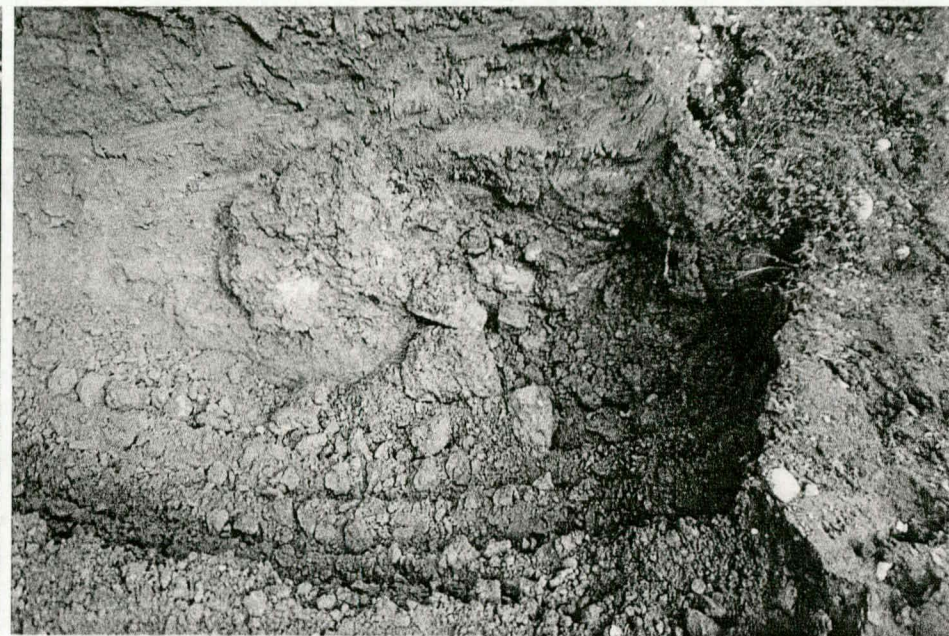
Relocated stockpiled soil at the asphalt parking lot to the east.



Site looking from the southeast corner.



Encountered impacted soil at northeast of excavation. Notice abandoned pipe in upper left of picture.



Soil impact at northeast corner, up close



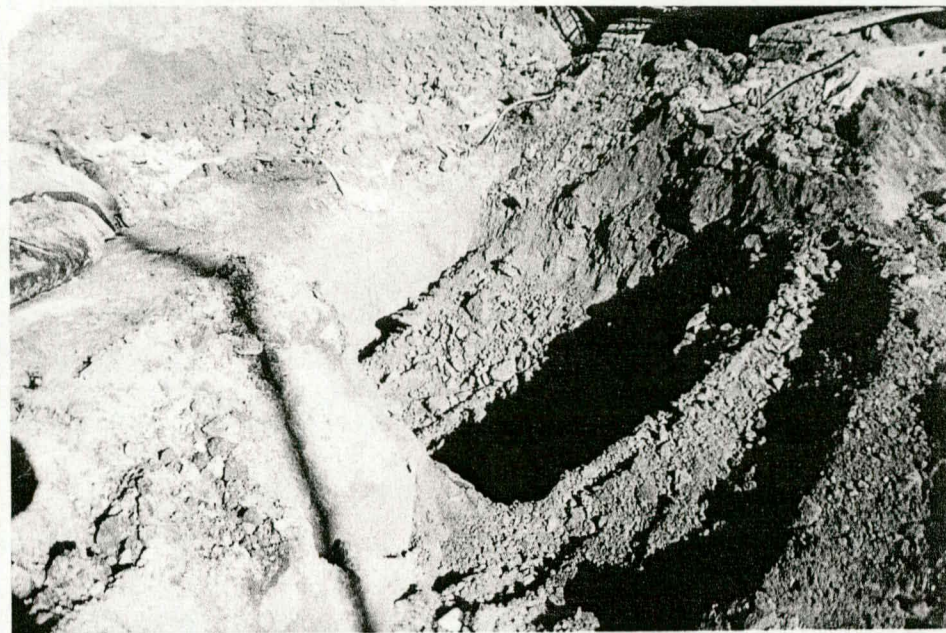
Impact soil removal continued at northeast corner.



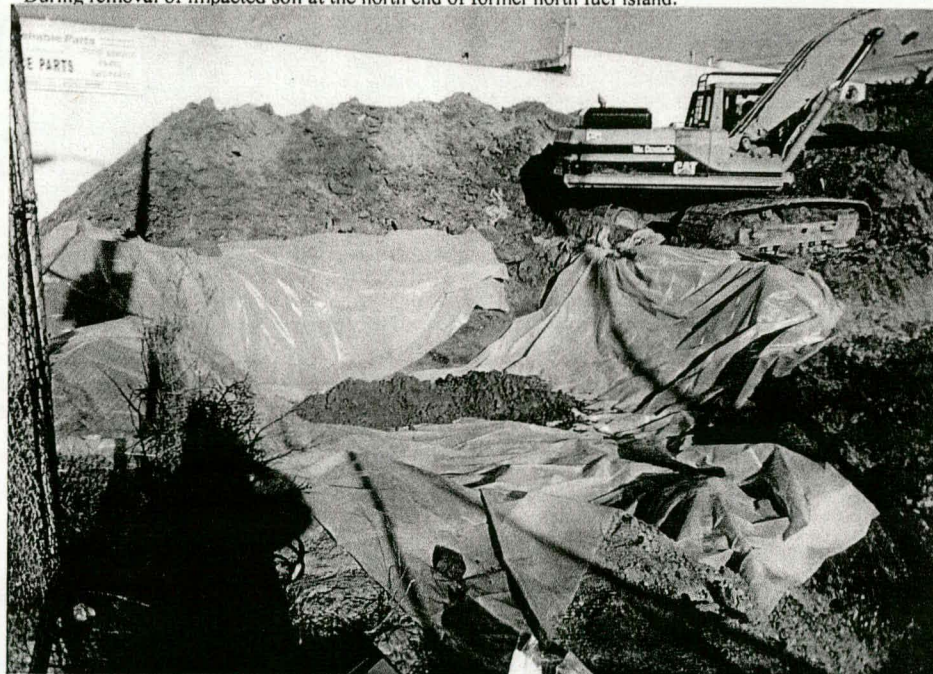
After impacted soil removal at northeast area.



During removal of impacted soil at the north end of former north fuel island.



Soil removal continued at former fuel island.



North end of former fuel island after impacted soil removal, being lined with plastic to accommodate removed soil from south end.



Addition of removed impacted soil to plastic lined area.



South excavation wall after limited impacted soil removal.



Removed impacted soil being stockpiled at the north end, on plastic sheeting.



After soil removal, looking at southeast corner.



Excavation south end after impacted soil removal.

APPENDIX D

TEG Laboratory Reports with Gas Chromatograms for Final Site Clean-up Samples

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

December 14, 2000

Ron Nowicki
Nowicki and Associates
33516 9th Ave. South
Bldg. #6
Federal Way, WA 98003

Dear Mr. Nowicki:

Please find enclosed the analytical data report for the 38th & G Project in Washington State. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8021B on December 14, 2000.

The results of these analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Nowicki and Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

38TH & G PROJECT

Washington

Nowicki & Associates, Inc.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Water

Sample Number	Date Analyzed	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (ug/l)	Gasoline (ug/l)	Surrogate Recovery (%)
Method Blank	12/14/00	nd	nd	nd	nd	nd	96
Near	12/14/00	nd	nd	nd	nd	nd	85
Far	12/14/00	nd	nd	nd	nd	nd	103
Method Detection Limits		1	1	1	1	100	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Marilyn Farmer

CLIENT: Nowicki & Assoc.

ADDRESS: _____

PHONE: _____ FAX: _____

CLIENT PROJECT # 35th & G PROJECT MANAGER: Rou

DATE: 11 Dec 2000 PAGE 1 OF 1

PROJECT NAME: 35th & G

LOCATION: Under former stockpile

COLLECTOR: R Nowicki DATE OF COLLECTION: 11 Dec

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES															NOTES	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
					VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	PH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
<u>Nowicki & Assoc.</u>	<u>11 Dec 11:00</u>	<u>Jim McCall</u>	<u>11/11/00</u>
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS _____

CHAIN OF CUSTODY SEALS Y/N/NA _____

SEALS INTACT? Y/N/NA _____

RECEIVED GOOD COND./COLD _____

NOTES: _____

LABORATORY NOTES:

Turn Around Time: _____

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

December 8, 2000

Michael Lam
Nowicki and Associates
33516 9th Ave South, Bldg. #6
Federal Way, WA 98003

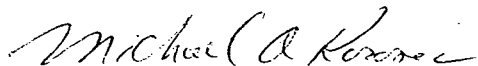
Dear Mr. Lam:

Please find enclosed the analytical data report for the 3733 – 3737 South G Street Project in Tacoma, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8021B on December 6 & 7, 2000.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Nowicki and Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733 - 3737 SOUTH G ST PROJECT

Tacoma, Washington

Nowicki & Associates, Inc.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	12/7/00	nd	nd	nd	nd	nd	106
SW-4	12/7/00	nd	nd	nd	nd	nd	130
SW-5	12/7/00	1.2	1.5	4.8	13	1200	int
BOT-8	12/7/00	nd	nd	nd	nd	nd	86
BOT-9	12/7/00	nd	nd	nd	nd	nd	107
BOT-9 Dup.	12/7/00	nd	nd	nd	nd	nd	94
BOT-10	12/7/00	nd	nd	nd	nd	nd	106
BOT-11	12/7/00	nd	nd	nd	nd	nd	112
SC-SP3	12/7/00	nd	nd	nd	nd	nd	80
SC-SP4	12/7/00	nd	nd	nd	nd	nd	84
SC-SP5	12/7/00	nd	nd	nd	nd	nd	112
Method Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Tim McCall

CLIENT: Novak & Assoc Inc
ADDRESS: 33516 9th Ave S #6 Red Wing MN 55063
PHONE: 253 927 5253 FAX: 253 944-0323
CLIENT PROJECT #: _____ PROJECT MANAGER: Robert Linn

DATE: 12/6/00 PAGE 1 OF 1
PROJECT NAME: 2730 - 2737 Lowell St
LOCATION: Tacona MN
COLLECTOR: MLC DATE OF COLLECTION 12/6/00

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES												NOTES	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
					VOA 8010/8021B	VOA 8021B BTEX	VOA 8260	SEMI VOL 8270	TPH - HClD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	pH				EC/BTEX																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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ELINQUISHED BY (Signature) Robert Linn DATE/TIME 12/6/00 3:00 pm RECEIVED BY (Signature) Ann McCall DATE/TIME 12/6/00 5:30
ELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____ DATE/TIME _____

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS _____
CHAIN OF CUSTODY SEALS Y/N/NA _____
SEALS INTACT? Y/N/NA _____
RECEIVED GOOD COND./COLD _____
NOTES: _____

LABORATORY NOTES:

24-Hr TAT

Turn Around Time: _____

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	12/6/00	nd	nd	nd	nd	nd	90
DISP-Bot-3	12/6/00	0.11	0.11	0.07	0.28	nd	81
DISP-WW-2	12/6/00	0.07	0.05	nd	0.18	nd	111
DISP-Bot-4	12/6/00	nd	nd	nd	nd	nd	91
DISP-NW-3	12/6/00	nd	nd	nd	nd	nd	101
DISP-WW-3	12/6/00	nd	nd	nd	nd	nd	107
DISP-EW-4	12/6/00	nd	0.3	0.11	0.65	nd	121
SC-SP1	12/6/00	nd	nd	nd	nd	nd	109
SC-SP-2	12/6/00	nd	nd	nd	nd	nd	105
Method Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Marilyn Farmer

CLIENT: North 9 H5202

ADDRESS: 3356 9th Ave S #6 Fedway IA 47003

PHONE: 253 927-5233 FAX: 253 924 0323

CLIENT PROJECT #: _____ PROJECT MANAGER: Indel Lm

DATE: 12/5/00 PAGE 1 OF 1

PROJECT NAME: 3733-3737 South 4 Street

LOCATION: Tulsa, IA

COLLECTOR: ML DATE OF COLLECTION: 12/5/00

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES														NOTES	Total Number of Containers	Laboratory																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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ELINQUISHED BY (Signature) _____ DATE/TIME _____ RECEIVED BY (Signature) _____ DATE/TIME _____

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/NA

SEALS INTACT? Y/N/NA

RECEIVED GOOD COND./COLD

NOTES:

NOTES:

NOTES:

NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

LABORATORY NOTES:

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

Turn Around Time:

24 hr TAT @
NHS's pricing

CLIENT: Nowicki & Assoc, Inc

ADDRESS: 33516 7th Ave S #6 Federal WA 98003

PHONE: 253 927 5223 FAX: 253 924 0323

CLIENT PROJECT #: _____ PROJECT MANAGER: H. Wood Lamm

DATE: 12/1/00 PAGE 1 OF 1

PROJECT NAME: 0733-3737 South G Street

LOCATION: Tulane, WA

COLLECTOR: hac DATE OF COLLECTION: 12/1/00

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES														NOTES	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
					VOA 8010/8021B	VOA 8021B BTEX	VOA 8280	SEMI VOL 8270	TPH - HClD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	PH	125/BTEX																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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RELINQUISHED BY (Signature) <u>H. Wood Lamm</u> DATE/TIME <u>12/1/00 4:50pm</u>		RECEIVED BY (Signature) <u>Jim McCall</u> DATE/TIME <u>12/1/00 4:00</u>		SAMPLE RECEIPT		LABORATORY NOTES:	
ELINQUISHED BY (Signature)		DATE/TIME		TOTAL NUMBER OF CONTAINERS			
RECEIVED BY (Signature)		DATE/TIME		CHAIN OF CUSTODY SEALS Y/N/NA			
				SEALS INTACT? Y/N/NA			
				RECEIVED GOOD COND./COLD			
SAMPLE DISPOSAL INSTRUCTIONS				NOTES:		Turn Around Time:	
<input type="checkbox"/> TEG DISPOSAL @ \$2.00 each <input type="checkbox"/> Return <input type="checkbox"/> Pickup							

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

December 11, 2000

Michael Lam
Nowicki and Associates
33516 9th Ave South, Bldg. #6
Federal Way, WA 98003

Dear Mr. Lam:

Please find enclosed the analytical data report for the 3733 – 3737 South G Street Project in Tacoma, Washington. Soil samples were analyzed for Pb by Method 7420 on December 6, 2000.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Nowicki and Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb)
		EPA 7420 (mg/kg)
Method Blank	12/6/00	nd
Disp-Bot-3	12/6/00	nd
Disp-WW-1	12/6/00	nd
Method Detection Limits		5

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

QA/QC Data - Total Metals EPA-7000 Series Analyses

Sample Number: Re-Sample							
Matrix Spike				Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	(%)
Lead	250	202	81	250	202	81	0.0

Laboratory Control Sample			
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Lead	250	244	98

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Sherry Chilcutt

[illegible]

GEOSCIENCES

CLIENT: Demko & Assoc Inc
 ADDRESS: 35216 9th Ave SE Red Wing MN 55003
 PHONE: 252 727 5233 FAX: 252 724 0323
 CLIENT PROJECT #: _____ PROJECT MANAGER: Michael Liron

DATE: 11/30/00 PAGE 1 OF 1
 PROJECT NAME: ST-25-27 South St.
 LOCATION: Township 10N
 COLLECTOR: ALC DATE OF COLLECTION: 11/30/00

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES											Total Number of Containers	Laboratory Note Number
					VOA 8010/8019	VOA 8019/810X	SEM VCL 8270	TPH: HCD	TPH 8015 (gasoline)	TPH 8015 (oil)	PCBs 8002	Pesticides 8081	TOTAL LEAD	pH	LEL / MEL		
1. WH-1	7'		WCL	6-07													
2. WH-2	5.5'																
3. WH-4	6'																
4. ST-1	-																
5. ST-2	-																
6. WH-3	4'																
7. WH-2	5.5'																
8. EH-1	3.5'																
9. NE-1	10'																
10. ST-1	5.5'																
11. ST-2	10'																
12. ST-3	8'																
13. ST-4	5.5'																
14. ST-6	12.5'																
15. ST-7	10'																
16. ST-2																	
17. ST-3																	
18. ST-1																	

RELINQUISHED BY (Signature) Michael Liron DATE/TIME 11/30/00 1:00 PM
 RECEIVED BY (Signature) John McCall DATE/TIME 11/30/00 5:00 PM

SAMPLE DISPOSAL INSTRUCTIONS
☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT
 TOTAL NUMBER OF CONTAINERS _____
 CHAIN OF CUSTODY SEALS Y/N/A _____
 SEALS INTACT? Y/N/A _____
 RECEIVED GOOD COND/COLD _____
 NOTES: _____

LABORATORY NOTES:
 24 Hr (2) spec for lead
 Turn Around Time: _____

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT
Tacoma, Washington
Nowicki & Associates

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	12/4/00	nd	nd	nd	nd	nd	97
Method Blank	12/4/00	nd	nd	nd	nd	nd	93
Disp-Bot-1	12/4/00	nd	nd	nd	nd	nd	98
Disp-Bot-2	12/4/00	nd	nd	nd	nd	nd	100
Disp-EW-1	12/4/00	nd	nd	nd	nd	nd	100
Disp-EW-2	12/4/00	nd	nd	nd	nd	nd	84
Disp-EW-3	12/4/00	nd	0.05	nd	1.4	59	94
Disp-NW-1	12/4/00	nd	nd	nd	nd	nd	133
Disp-NW-1 Dup.	12/4/00	nd	nd	nd	nd	nd	94
Disp-NW-2	12/4/00	nd	nd	nd	nd	nd	98
Disp-NW-3	12/4/00	nd	nd	nd	nd	nd	111
Disp-WW-1	12/4/00	nd	0.45	1.13	16.4	1800*	int
SP1-6	12/4/00	nd	nd	nd	nd	nd	96
SP1-7	12/4/00	nd	nd	nd	nd	nd	97
SP3-1	12/4/00	nd	0.21	0.65	1.42	162	102
SP3-2	12/4/00	nd	nd	nd	0.44	74	int
SP3-3	12/4/00	0.22	0.93	0.66	1.53	198	105
SP3-3 Dup	12/4/00	0.18	0.76	0.9	1.86	173	100
SP3-4	12/4/00	0.23	0.1	nd	0.23	33	int
SP3-5	12/4/00	nd	nd	nd	0.27	58	90
Method Detection Limits		0.05	0.05	0.05	0.05	10	

"*" Indicates possible mineral spirits.

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Marilyn Farmer

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

December 5, 2000

Michael Lam
Nowicki and Associates
33516 9th Ave South, Bldg. #6
Federal Way, WA 98003

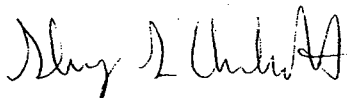
Dear Mr. Lam:

Please find enclosed the analytical data report for the 3733 – 3737 South G Street Project in Tacoma, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8021B on December 1, 2000.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Nowicki and Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Sherry L. Chilcutt
Vice President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	12/1/00	nd	nd	nd	nd	nd	100
WW-1	12/1/00	nd	nd	nd	nd	nd	116
WW-3	12/1/00	nd	nd	nd	nd	nd	80
WW-4	12/1/00	nd	nd	nd	nd	nd	114
SW-1	12/1/00	nd	nd	nd	nd	nd	104
SW-2	12/1/00	0.08	0.28	0.5	1.26	139	124
SW-3	12/1/00	nd	nd	nd	nd	nd	104
WW-2	12/1/00	nd	nd	nd	nd	nd	108
EW-1	12/1/00	nd	nd	nd	nd	nd	97
EW-1 Dup.	12/1/00	nd	nd	nd	nd	nd	108
NE-1	12/1/00	nd	nd	nd	nd	nd	108
NW-1	12/1/00	nd	0.14	0.1	0.83	82	103
BOT-2	12/1/00	nd	nd	nd	nd	nd	108
BOT-3	12/1/00	8.5	22.6	32.7	156	8,200	int
BOT-4	12/1/00	nd	nd	nd	nd	nd	103
BOT-6	12/1/00	nd	nd	nd	nd	nd	114
BOT-7	12/1/00	nd	nd	nd	nd	nd	116
BOT-7 Dup.	12/1/00	nd	nd	nd	nd	nd	100
SP2-2	12/1/00	nd	nd	nd	nd	nd	96
SP2-3	12/1/00	nd	nd	nd	nd	nd	101
EX-1	12/1/00	0.06	0.8	0.54	1.8	246	int
IP-1	12/1/00	nd	nd	nd	nd	nd	106
IP-2	12/1/00	nd	nd	nd	nd	nd	93
Method Detection Limits		0.05	0.05	0.05	0.05	10	

'nd' Indicates not detected at the listed detection limits.

'int' Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Marilyn Farmer

CLIENT: Domick & Assoc Inc.

ADDRESS: 33516 9th Ave S NE Red Wing WA 98003

PHONE: 253 927 5233 FAX: 253 927 0323

CLIENT PROJECT #: _____ PROJECT MANAGER: Michael Loran

DATE: 11/30/00 PAGE 1 OF 2

PROJECT NAME: 3733-3737 South G St.

LOCATION: Tele. WA

COLLECTOR: MLC DATE OF COLLECTION: 11/30/00

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES														NOTES	Total Number of Containers	Laboratory																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
					VOA 8010/8021B	VOA 8021B BTEX	VOA 8280	SEMI VOL 8270	TPH - HClD	TPH 8015 (gasoline)	TPH 8015 (diesel)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	pH	RES / GTEX																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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ELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES: <u>WAW 24th Special B...</u>
<u>Michael Loran</u>	<u>11/30/00 5:07 pm</u>	<u>Jim McCall</u>	<u>11/30/00 5:10</u>	TOTAL NUMBER OF CONTAINERS		
ELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	CHAIN OF CUSTODY SEALS Y/N/NA		
				SEALS INTACT? Y/N/NA		
SAMPLE DISPOSAL INSTRUCTIONS				RECEIVED GOOD COND./COLD		Turn Around Time:
<input type="checkbox"/> TEG DISPOSAL @ \$2.00 each <input type="checkbox"/> Return <input type="checkbox"/> Pickup				NOTES:		

CLIENT: MAY

ADDRESS: _____

PHONE: _____ FAX: _____

CLIENT PROJECT #: _____ PROJECT MANAGER: Myron Long

DATE: 11/30/00 PAGE 2 OF 2

PROJECT NAME: 5733 - 5737 14th G-82

LOCATION: 100101 101

COLLECTOR: ML DATE OF COLLECTION 11/30

DATE OF COLLECTION 11/30/61

[illegible]

ELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
----------------------------	-----------	-------------------------	-----------

Walker 1072 11/30/00 503 Mr. John McCall 11/30/00 512

ELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
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SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SEALS Y/N/NA

SEALS INTACT? Y/N/NA

RECEIVED GOOD COND./COLD

NOTES:

LABORATORY NOTES:

1944 24th Jan 1944

Turn Around Time:

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

December 11, 2000

Michael Lam
Nowicki and Associates
33516 9th Ave South, Bldg. #6
Federal Way, WA 98003

Dear Mr. Lam:

Please find enclosed the analytical data report for the 3733 – 3737 South G Street Project in Tacoma, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8021B on December 4, 2000.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Nowicki and Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

**800 Sleater-Kinney SE, PMB #262
Lacey, Washington 98503-1127**

**Mobile Environmental Laboratories
Environmental Sampling Services**

**Telephone: 360-459-4670
Fax: 360-459-3432**

December 1, 2000

Michael Lam
Nowicki and Associates
33516 9th Ave South, Bldg. #6
Federal Way, WA 98003

Dear Mr. Lam:

Please find enclosed the analytical data report for the 3733 – 3737 South G Street Project in Tacoma, Washington. Soil samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, BTEX by Method 8021B, and Pb by Method 7420 on November 29 & 30, 2000.

The results of these analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Nowicki and Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,



Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	11/29/00	nd	nd	nd	nd	nd	103
SP1-1	11/29/00	nd	nd	nd	nd	nd	109
SP1-2	11/29/00	nd	nd	nd	nd	nd	104
SP1-3	11/29/00	nd	nd	nd	nd	nd	104
SP1-4	11/29/00	nd	nd	nd	nd	nd	80
SP1-5	11/29/00	nd	nd	nd	nd	nd	70
SP2-1	11/29/00	nd	nd	nd	nd	nd	87
SE-1	11/29/00	nd	nd	nd	nd	nd	115
Method Detection Limits		0.05	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65% TO 135%

ANALYSES PERFORMED BY: Marilyn farmer

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Oil (mg/kg)
Method Blank	11/29/00	103	nd	nd
SP2-1	11/29/00	109	21	nd
Method Blank	11/30/00	104	nd	nd
SP1-1	11/30/00	108	nd	nd
SP1-2	11/30/00	94	nd	nd
SP1-3	11/30/00	93	nd	nd
SP1-4	11/30/00	102	nd	nd
SP1-5	11/30/00	91	nd	nd
SE-1	11/30/00	93	nd	nd
Method Detection Limits			20	40

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Marilyn Farmer

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

Heavy Metals in Soil by EPA-7000 Series

Sample Number	Date Analyzed	Lead (Pb)
		EPA 7420 (mg/kg)
Method Blank	11/30/00	nd
SP2-1	11/30/00	7
Method Detection Limits		5

"nd" Indicates not detected at listed detection limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

3733-3737 SOUTH G STREET PROJECT

Tacoma, Washington

Nowicki & Associates

QA/QC Data - Total Metals EPA-7000 Series Analyses

Sample Number: SP-11B-112900							
Matrix Spike			Matrix Spike Duplicate			RPD	
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)		(%)
Lead	125	103	82	125	118	94	13.6

Laboratory Control Sample			
Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
Lead	125	108	86

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 20%

ANALYSES PERFORMED BY: Sherry Chilcutt

CLIENT: Nowitzki & HSW

ADDRESS: 33516 9th Ave S #6 Red Bluff, AL

PHONE: 252 924-7233 FAX: 252 924-0323 7503

CLIENT PROJECT #: _____ PROJECT MANAGER: Michael L...

DATE: 11/27/00 PAGE 1 OF 1

PROJECT NAME: 3733-3734 South G Street

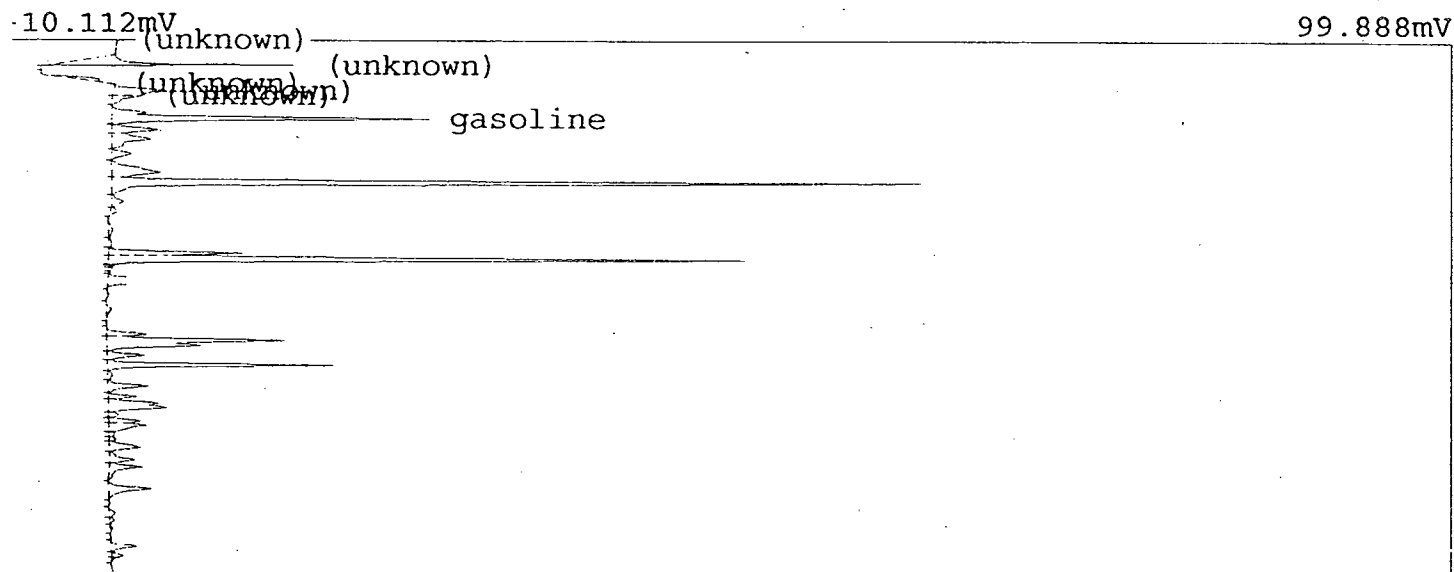
LOCATION: Talco, AL

COLLECTOR: ALL DATE OF COLLECTION: 11/25/00

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES															NOTES	Total Number of Containers	Laboratory Note Number																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
					VOA 8010/8021B	VOA 8021B BTX	VOA 8280	SEMI VOL 8270	TPH - HCID	TPH 8015 (gasoline)	TPH 8015 (diesel)	TPH 8015 (d & o)	PAH 8100	PCBs 8082	Pesticides 8081	TOTAL LEAD	pH	AsTPH - 5 INDEX	Total Lead																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
1. SP1-1		10:00	Soil	4-02																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES: <u>Please wait for more samples...</u>
<u>Michael L...</u>	<u>11/28/00</u>	<u>M O Summer</u>	<u>11/29/00</u>	TOTAL NUMBER OF CONTAINERS		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	CHAIN OF CUSTODY SEALS Y/N/NA		
				SEALS INTACT? Y/N/NA		
				RECEIVED GOOD COND./COLD		
SAMPLE DISPOSAL INSTRUCTIONS				NOTES:		Turn Around Time: <u>11/29/00</u>
<input type="checkbox"/> TEG DISPOSAL @ \$2.00 each <input type="checkbox"/> Return <input type="checkbox"/> Pickup						

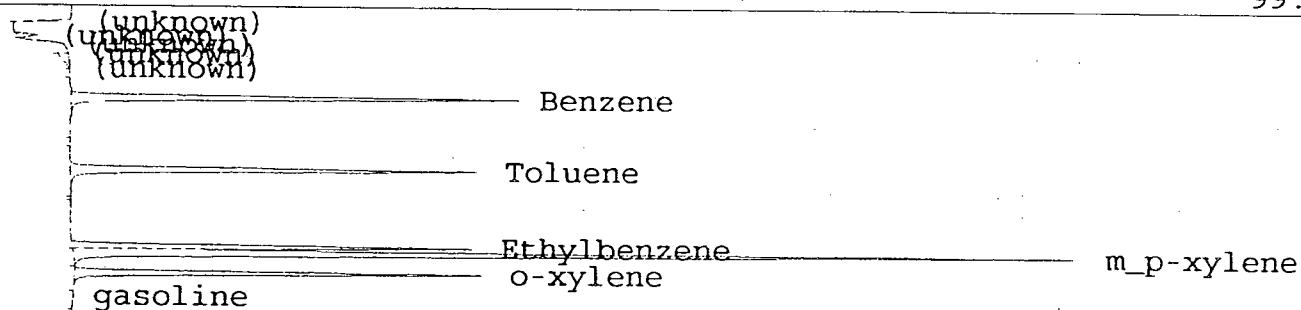
Lab name: TEG NW
 Analysis date: 11/29/2000 11:40:37
 Description: Ch. 1 Detector
 Data file: ch1det2007.CHR ()
 Sample: 200 ppm gas
 Operator: MF



Component	Retention	Area	External	Units
ine	2.683	2035.7325	197.4564	ppm
ne	3.383	43.0560	1.2907	ppm
benzene	8.666	1.7300	0.0678	ppm
		2080.5185	198.8149	

Lab name: TEG NW
 Analysis date: 11/29/2000 12:15:45
 Description: Ch. 1 Detector
 Data file: ch1det2009.CHR ()
 Sample: 10 ppm btex
 Operator: MF

-10.112mV 99.888mV

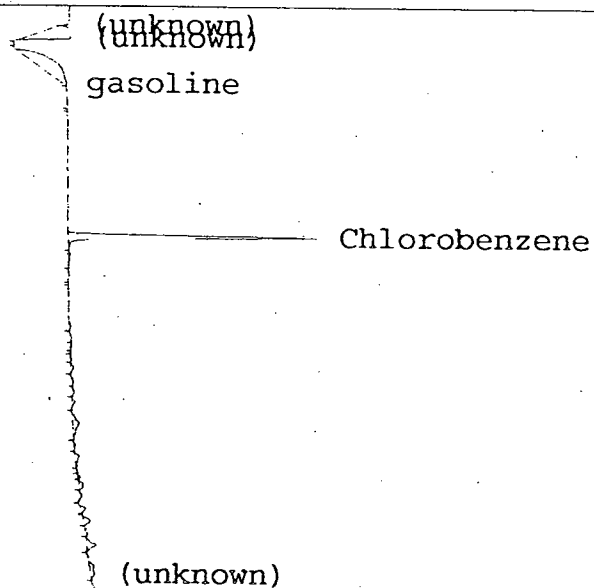


Component	Retention	Area	External	Units
ne	3.150	298.5880	8.9509	ppm
ne	5.600	278.4740	9.0494	ppm
benzene	8.216	230.2320	9.0274	ppm
ylene	8.433	607.9230	17.9929	ppm
ene	9.133	235.6700	9.0202	ppm
ine	9.933	1651.7770	160.2145	ppm
		3302.6640	214.2554	

Lab name: TEG NW
 Analysis date: 11/29/2000 12:29:48
 Description: Ch. 1 Detector
 Data file: ch1det2010.CHR ()
 Sample: method blank
 Operator: MF

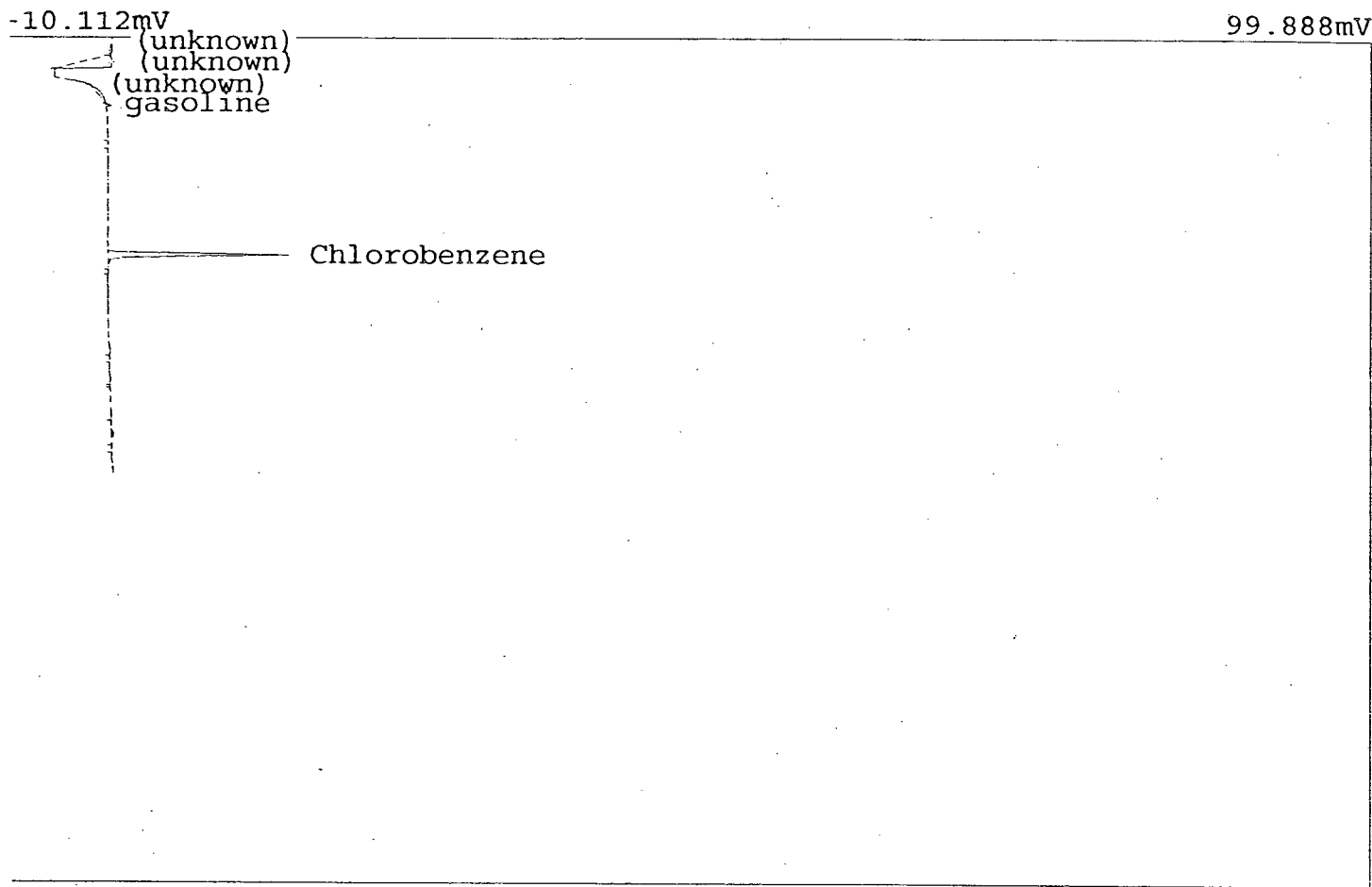
-10.112mV

99.888mV



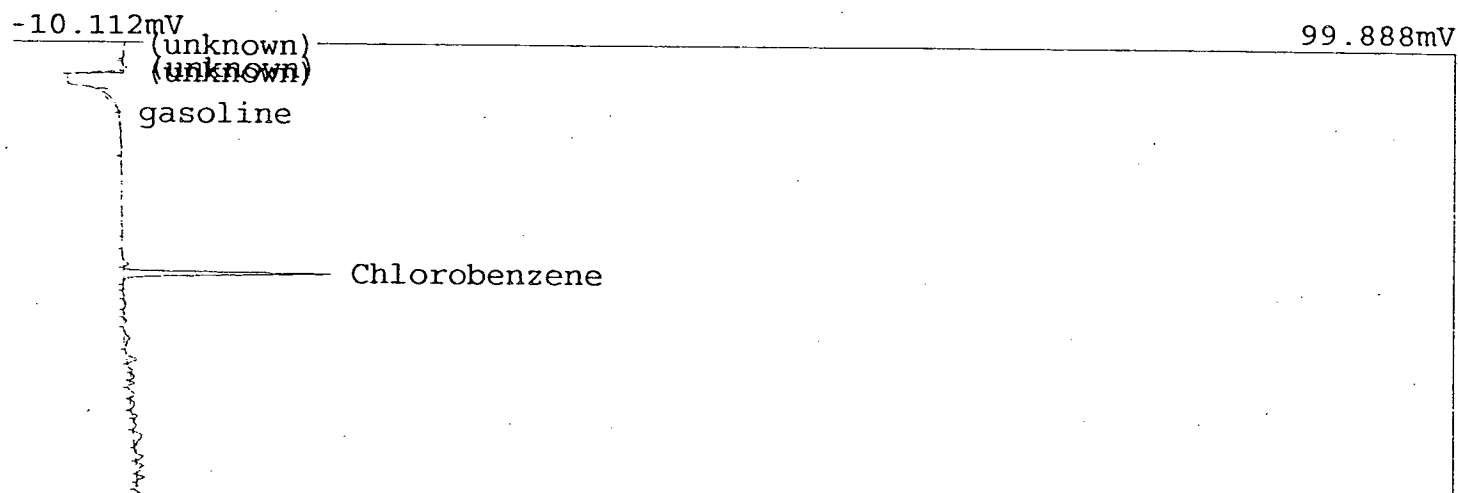
Component	Retention	Area	External	Units
Gasoline	2.650	280.2880	27.1866	ppm
Chlorobenzene	7.866	133.5720	597.9051	ppm
Styrene	8.483	1.1140	0.0330	ppm
Benzene	9.166	0.6340	0.0243	ppm
		415.6080	625.1489	

Lab name: TEG NW
 Analysis date: 11/29/2000 12:56:02
 Description: Ch. 1 Detector
 Data file: chldet2011.CHR ()
 Sample: SP1-4
 Operator: MF



Component	Retention	Area	External	Units
ine	2.383	119.0160	11.5440	ppm
obenzene	7.866	103.3900	462.8021	ppm
		222.4060	474.3461	

Lab name: TEG NW
Analysis date: 11/29/2000 13:14:43
Description: Ch. 1 Detector
Data file: chldet2012.CHR ()
Sample: SP2-1
Operator: MF



Component	Retention	Area	External	Units
ine	2.400	205.8840	19.9698	ppm
obenzene	7.850	113.9620	510.1253	ppm
		319.8460	530.0951	

Lab name: TEG NW
Analysis date: 11/29/2000 13:33:45
Description: Ch. 1 Detector
Data file: chldet2013.CHR ()
Sample: SE-1
Operator: MF

-10.112mV

99.888mV

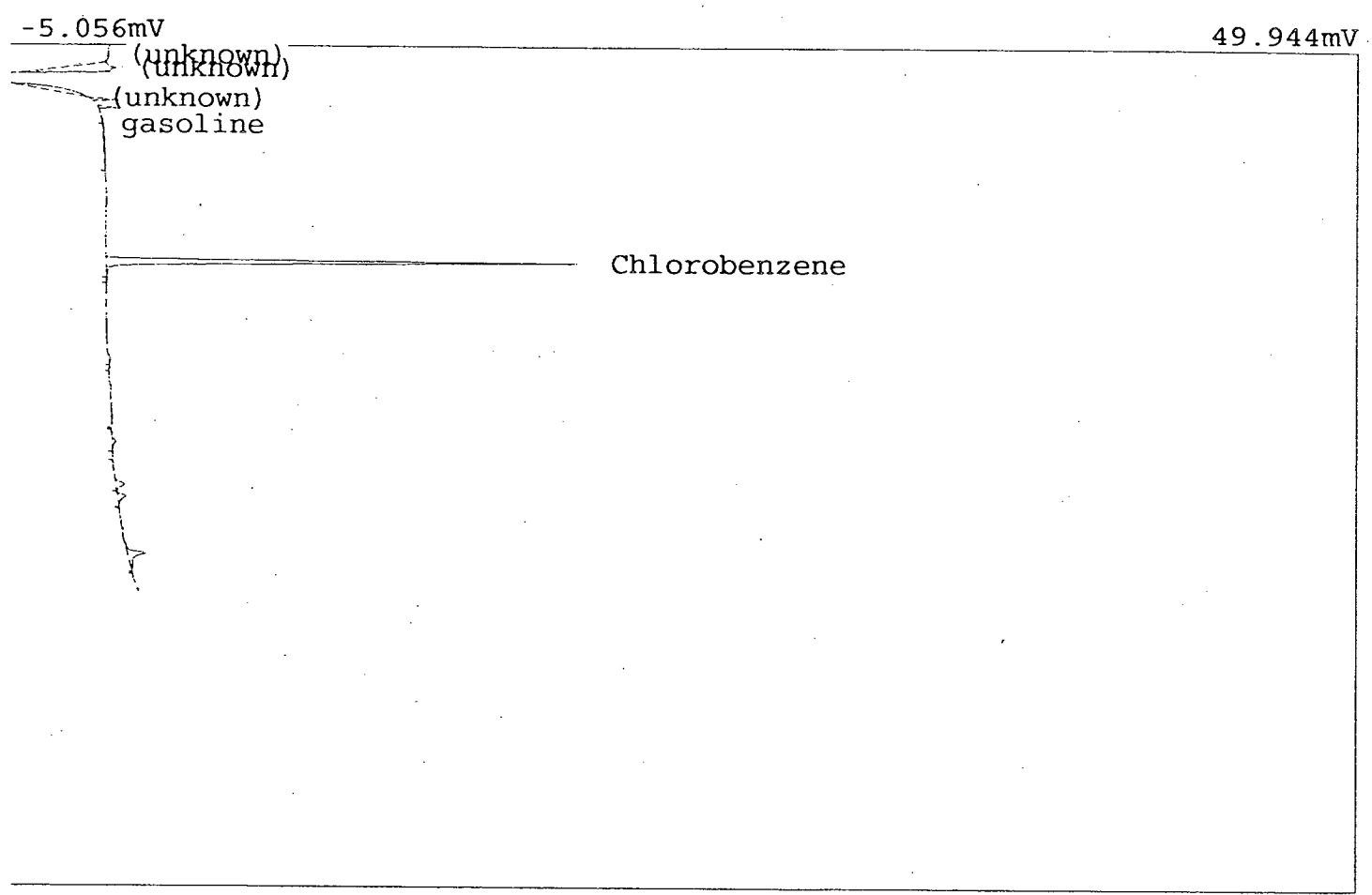
(unknown)
(unknown)
(unknown)

gasoline

Chlorobenzene

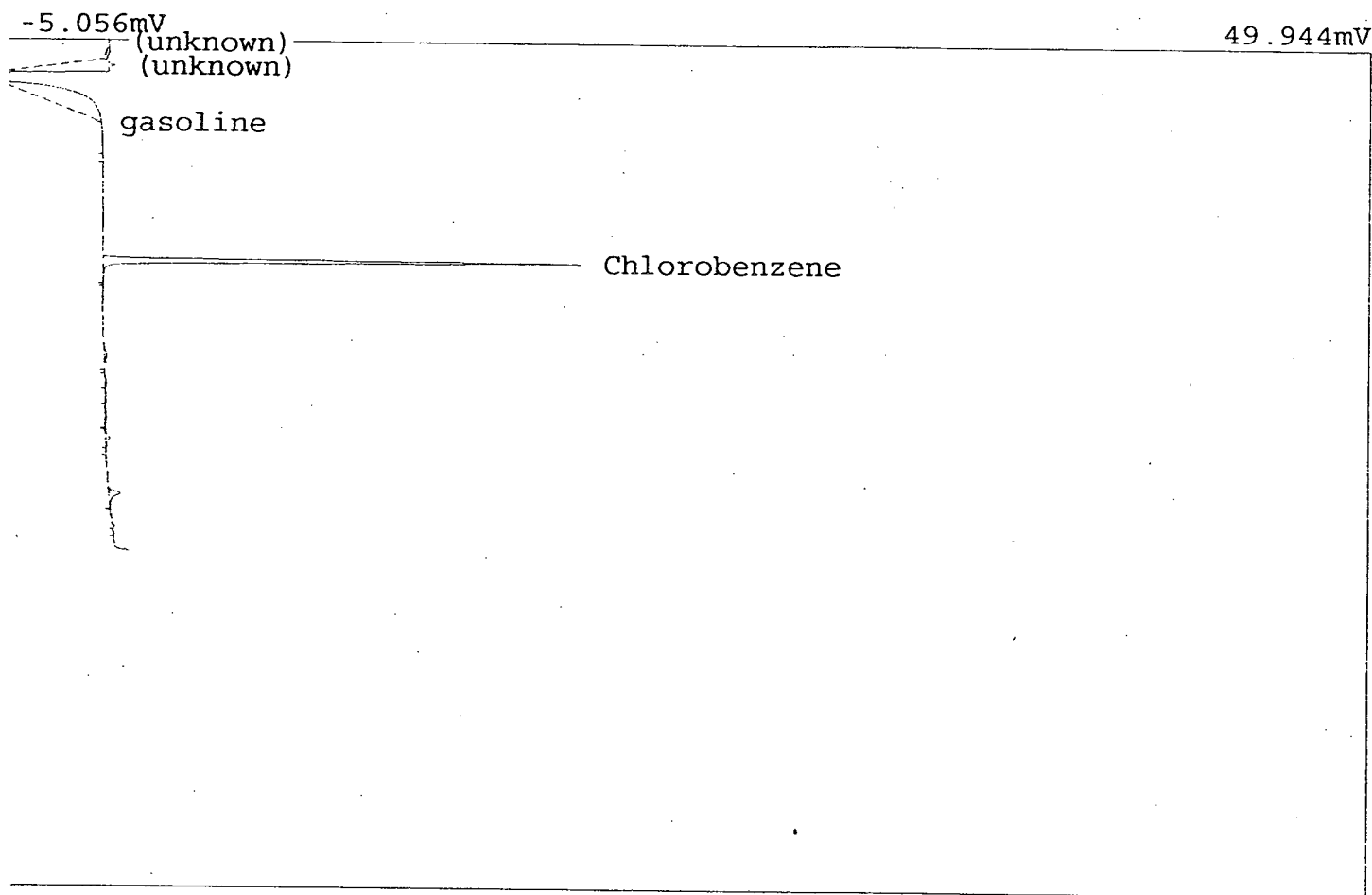
Component	Retention	Area	External	Units
ine	4.333	181.8570	17.6393	ppm
obenzene	7.916	150.1560	672.1397	ppm
		332.0130	689.7789	

Lab name: TEG NW
 Analysis date: 11/29/2000 13:51:52
 Description: Ch. 1 Detector
 Data file: ch1det2014.CHR ()
 Sample: SE-1 SP1-1
 Operator: MF



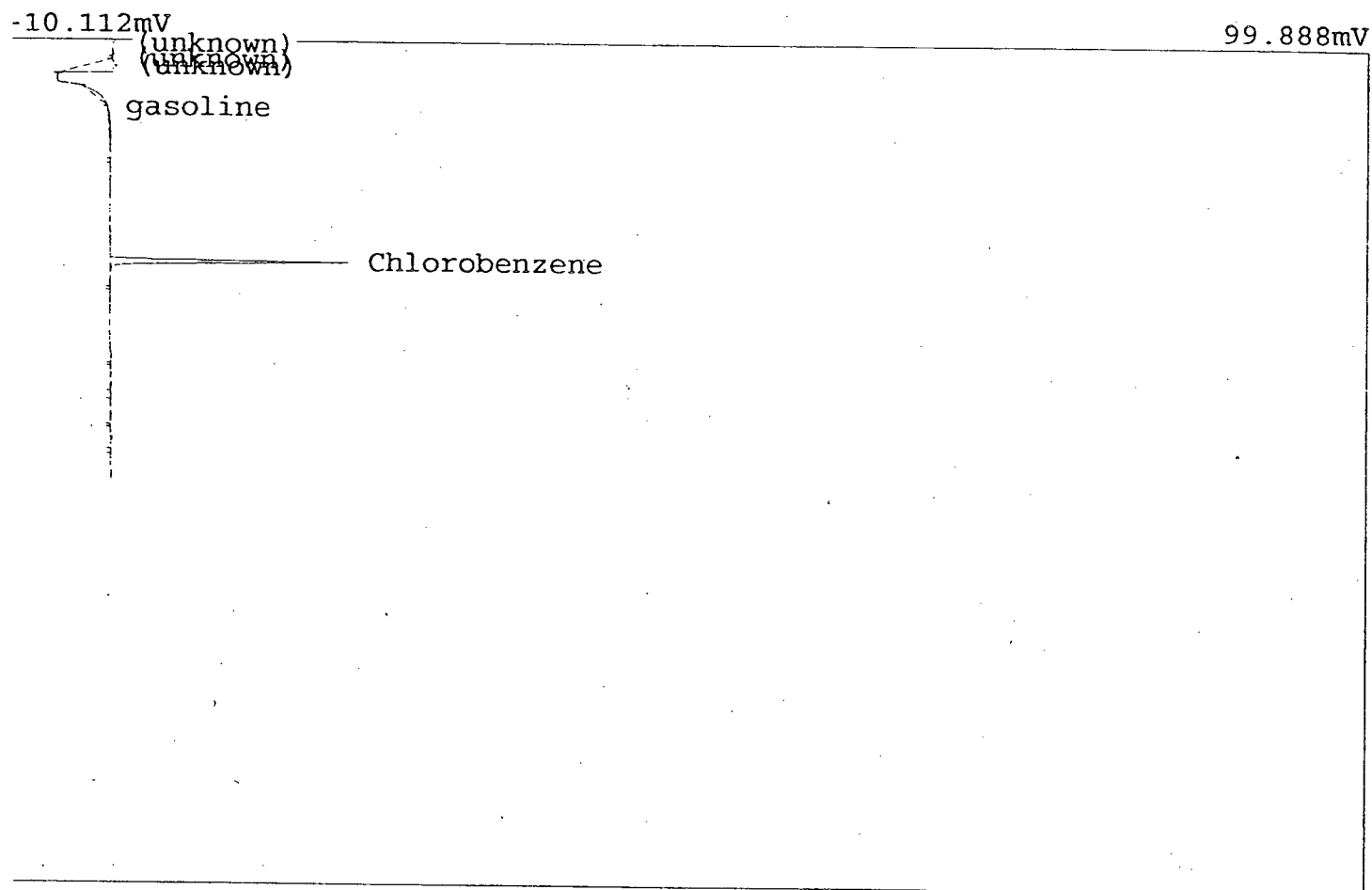
Component	Retention	Area	External	Units
gasoline	2.883	168.1660	16.3113	ppm
Chlorobenzene	7.883	142.2490	636.7457	ppm
		310.4150	653.0571	

Lab name: TEG NW
 Analysis date: 11/29/2000 14:19:43
 Description: Ch. 1 Detector
 Data file: chldet2015.CHR ()
 Sample: SP1-2
 Operator: MF



Component	Retention	Area	External	Units
Gasoline	2.983	260.1940	25.2376	ppm
Chlorobenzene	7.966	136.1410	609.4047	ppm
		396.3350	634.6422	

Lab name: TEG NW
ysis date: 11/29/2000 14:43:14
scription: Ch. 1 Detector
Data file: chldet2016.CHR ()
Sample: SP1-3
Operator: MF

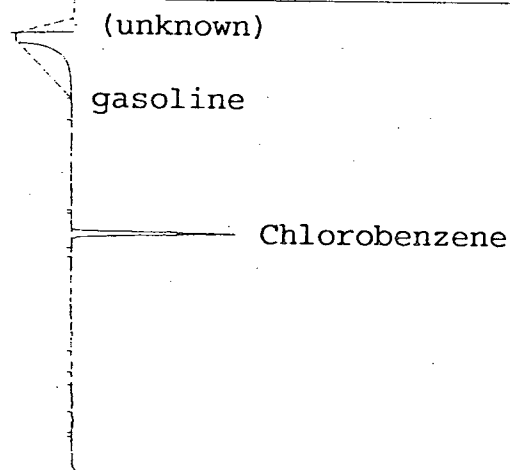


Component	Retention	Area	External	Units
Gasoline	2.400	163.3300	15.8422	ppm
Chlorobenzene	7.983	136.4400	610.7431	ppm
		299.7700	626.5853	

Lab name: TEG NW
Analysis date: 11/29/2000 15:01:05
Description: Ch. 1 Detector
Data file: chidet2017.CHR ()
Sample: SP1-5
Operator: MF

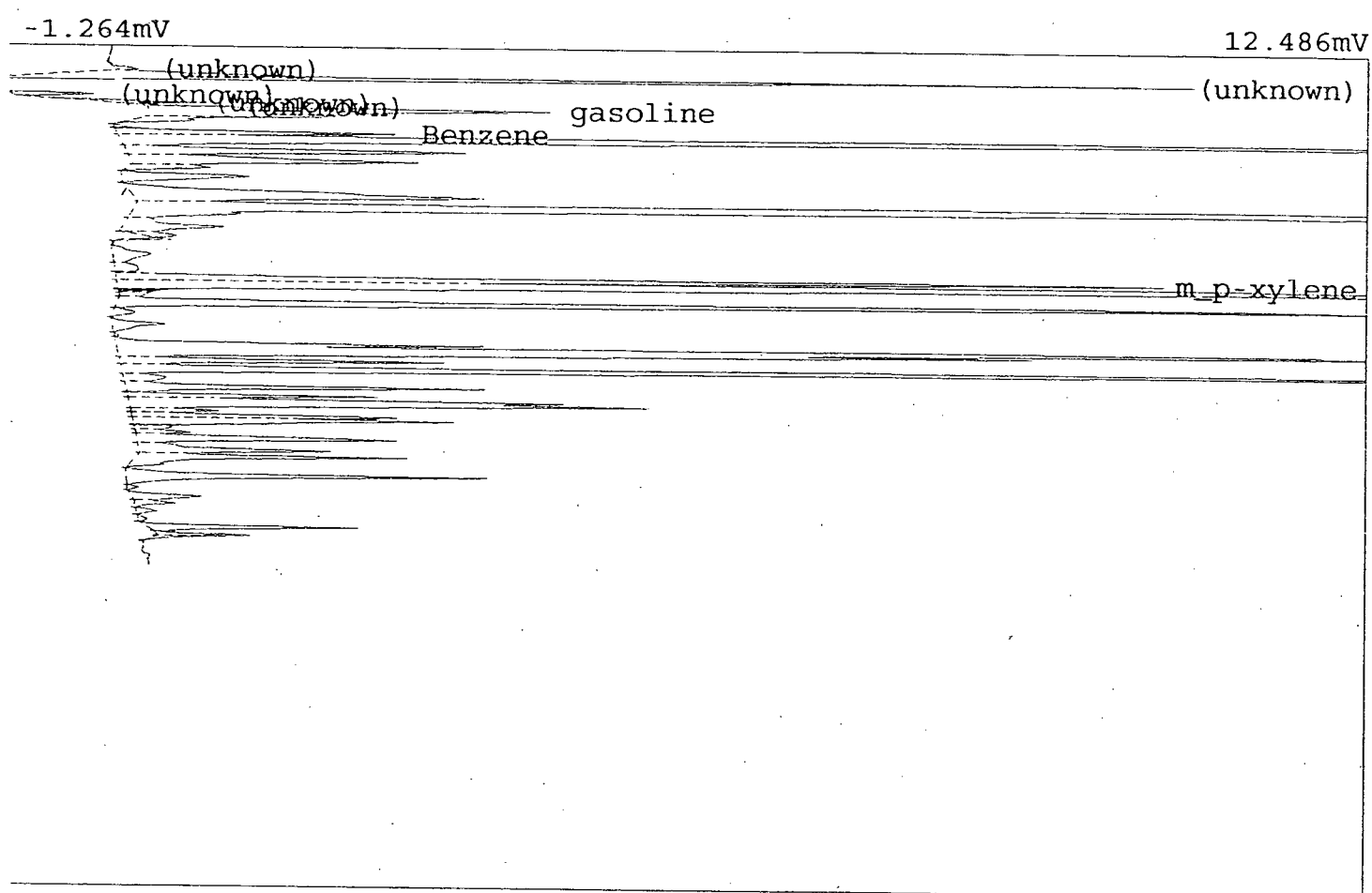
-10.112mV

99.888mV



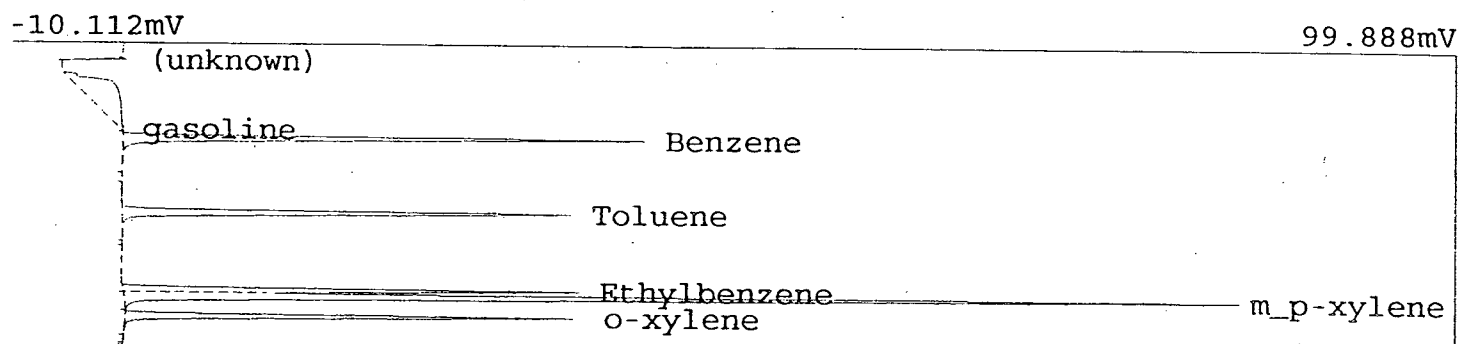
Component	Retention	Area	External	Units
Gasoline	3.383	267.0560	25.9032	ppm
Chlorobenzene	7.966	90.0080	402.9006	ppm
		357.0640	428.8038	

Lab name: TEG NW
 Analysis date: 11/29/2000 15:29:10
 Description: Ch. 1 Detector
 Data file: ch1det2018.CHR ()
 Sample: 200 PPM GAS
 Operator: MF



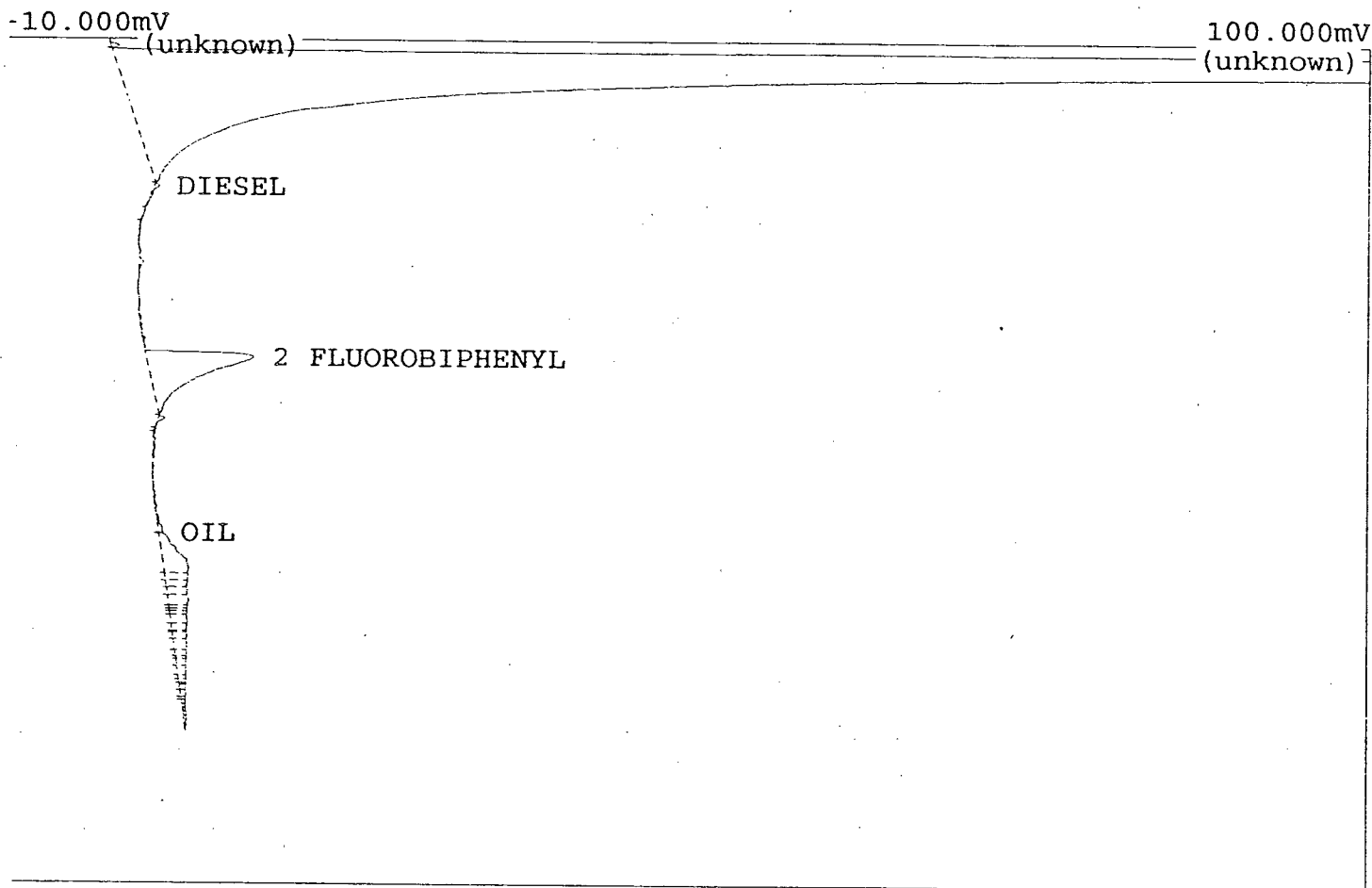
Component	Retention	Area	External	Units
ine	2.283	2220.4195	215.3702	ppm
ne	3.133	20.3100	0.6088	ppm
ylene	8.400	75.8140	2.2439	ppm
		2316.5435	218.2229	

Lab name: TEG NW
 Analysis date: 11/29/2000 15:52:15
 Description: Ch. 1 Detector
 Data file: ch1det2019.CHR ()
 Sample: 10 PPM BTEX
 Operator: MF



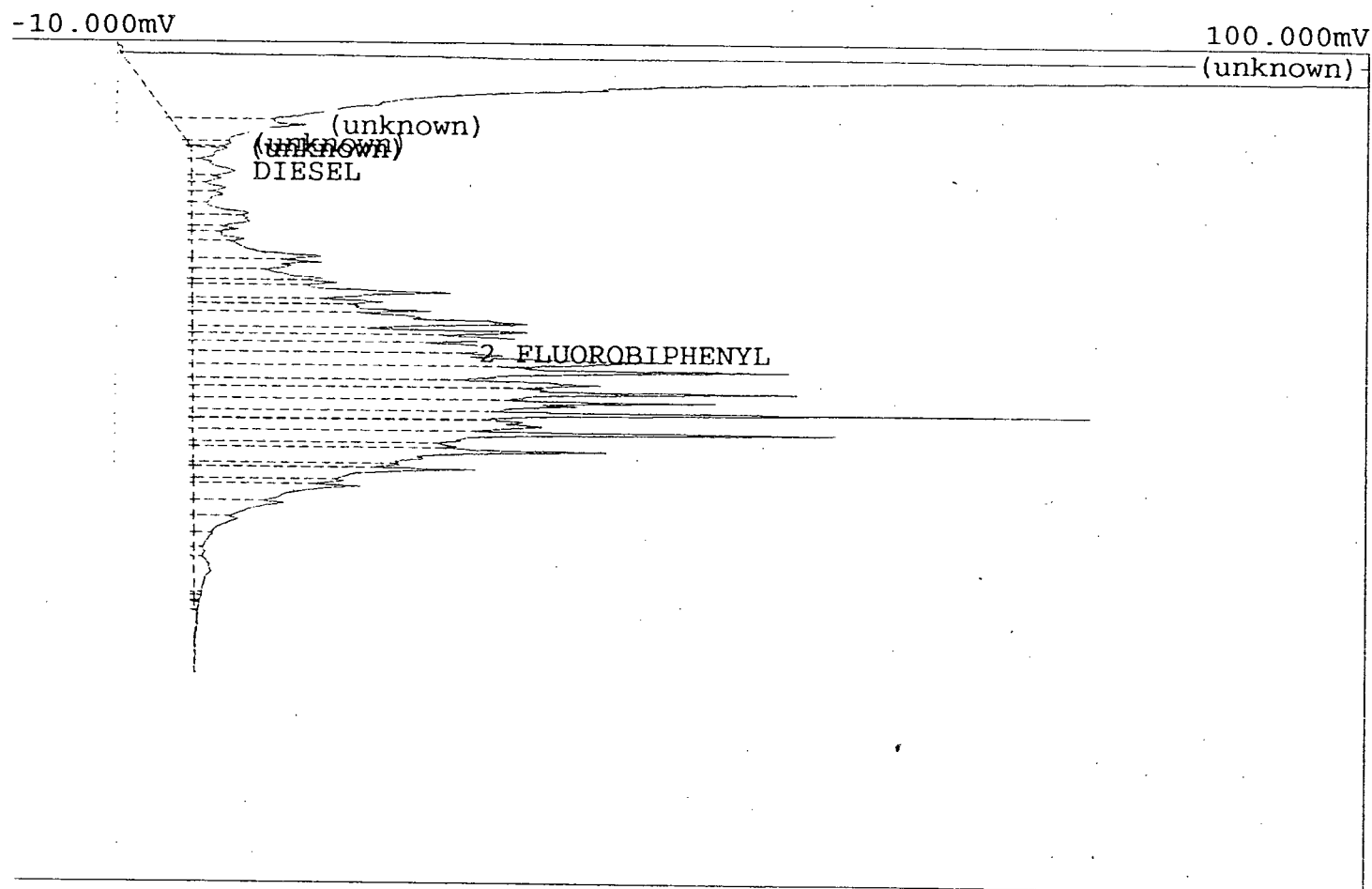
Component	Retention	Area	External	Units
ine	2.950	2026.7815	196.5882	ppm
ne	3.250	332.9720	9.9817	ppm
ne	5.766	309.2860	10.0507	ppm
benzene	8.383	251.8370	9.8746	ppm
ylene	8.616	675.7785	20.0013	ppm
ene	9.283	260.3770	9.9658	ppm
		3857.0320	256.4622	

Lab name: TEG NW
 Analysis date: 11/30/2000 10:57:05
 Description:
 Data file: ch3de1770.CHR ()
 Sample: method blank
 Operator: MF



Component	Retention	Area	External	Units
2 FLUOROBIPHENYL	5.333	493.2460	18.3423	
	11.516	480.3400	17.8631	
	17.933	429.3595	15.9673	
		1402.9455	52.1727	

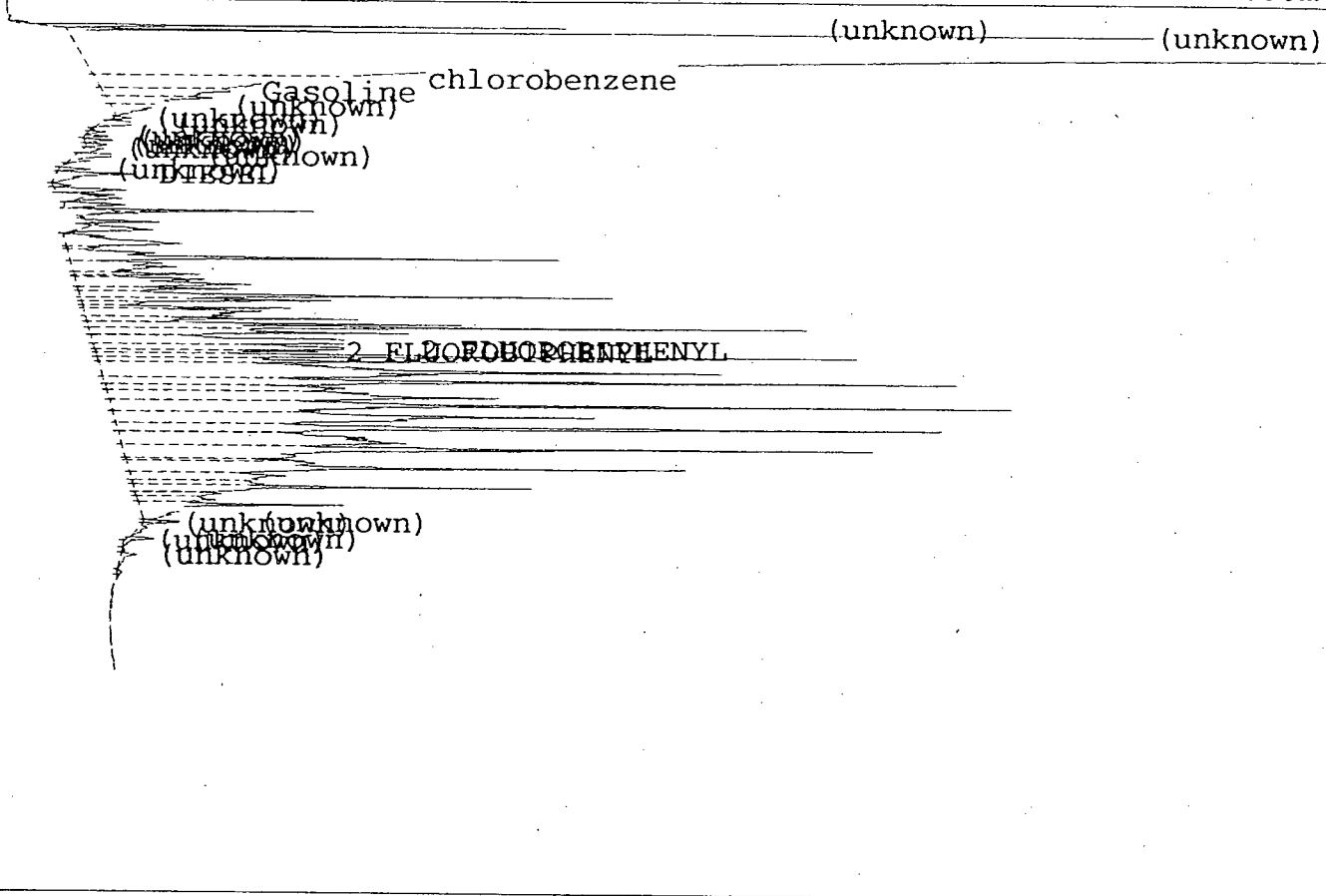
Lab name: TEG NW
 Analysis date: 11/30/2000 09:28:16
 Description:
 Data file: ch3de1767.CHR ()
 Sample: 500 PPM DIESEL
 Operator: MF



Component	Retention	Area	External	Units
L	4.716	12073.2425	448.9678	
OROBIPHENYL	11.266	21.5005	0.7996	
		12094.7430	449.7674	

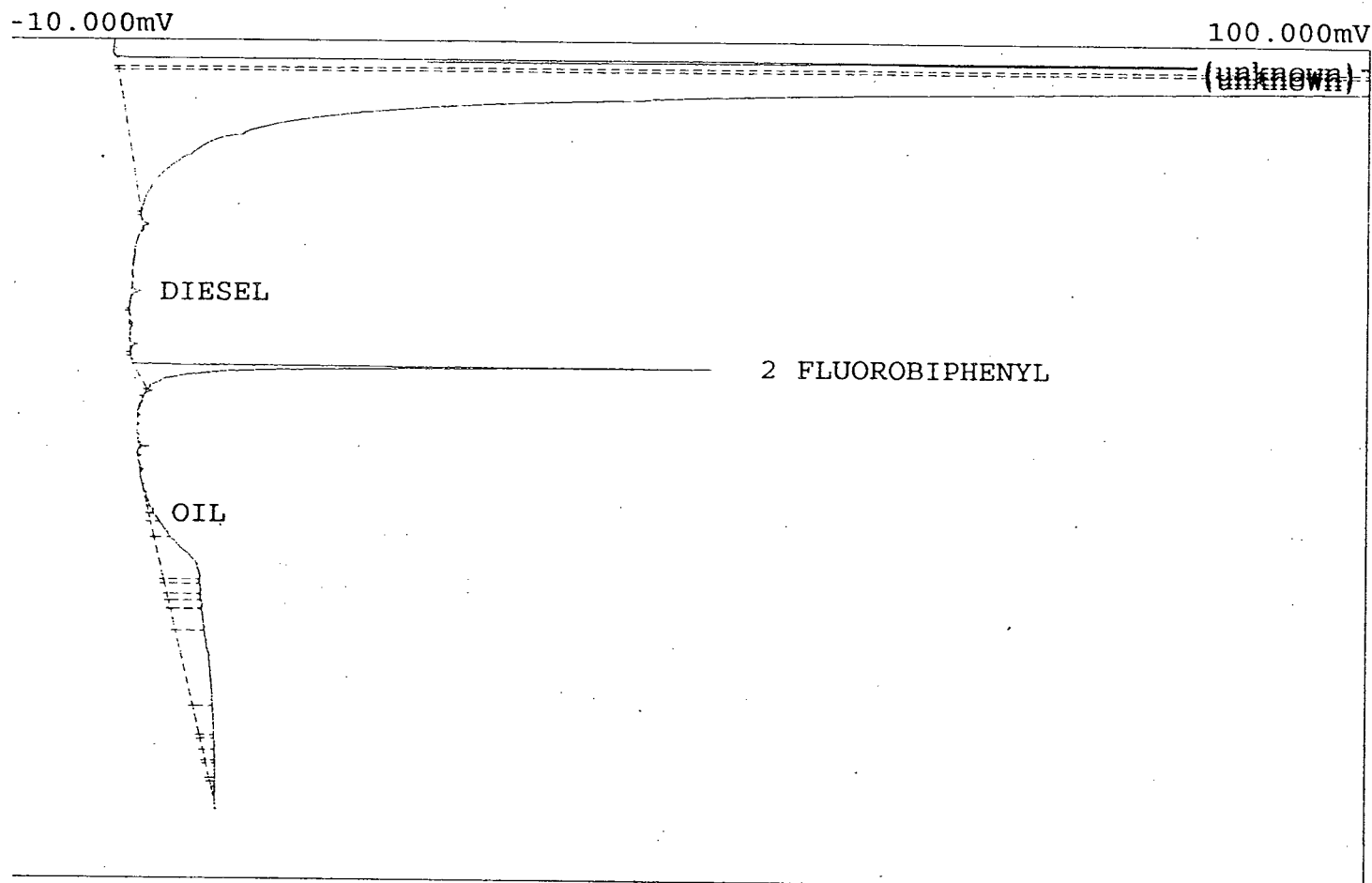
-10.000mV

100.000mV



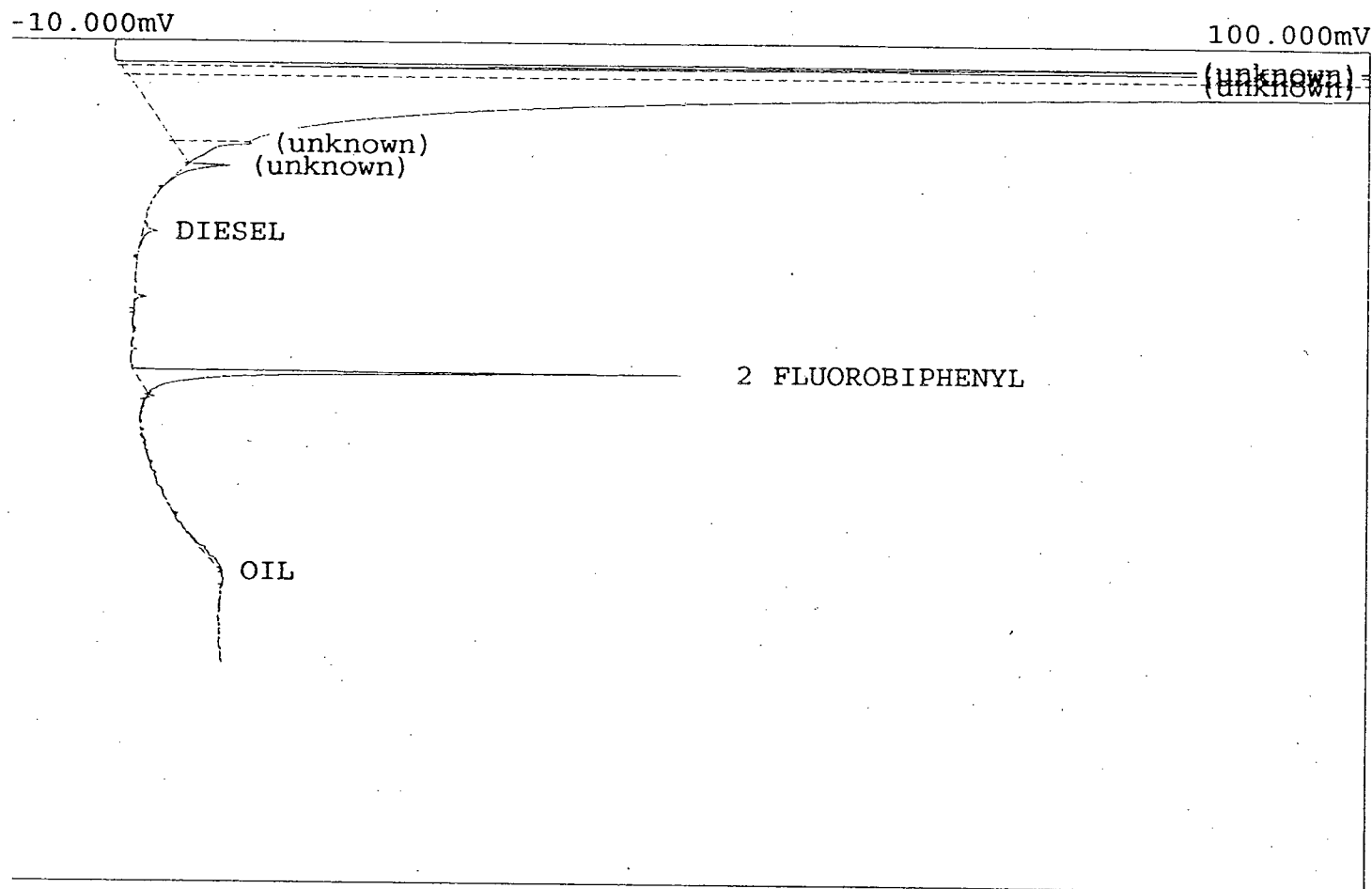
Component	Retention	Area	External	Units
benzene	2.666	370.4810	0.0000	
line	3.133	229.0865	0.0000	
L	6.000	8473.0805	592.0156	
OROBIPHENYL	11.950	202.6600	7.4425	
OROBIPHENYL	12.033	89.7980	3.2978	
		9365.1060	602.7558	

Lab name: TEG NW
 Analysis date: 11/30/2000 09:55:58
 Description: Ch. 4 Detector
 Data file: ch4det1653.CHR ()
 Sample: method blank
 Operator: MF



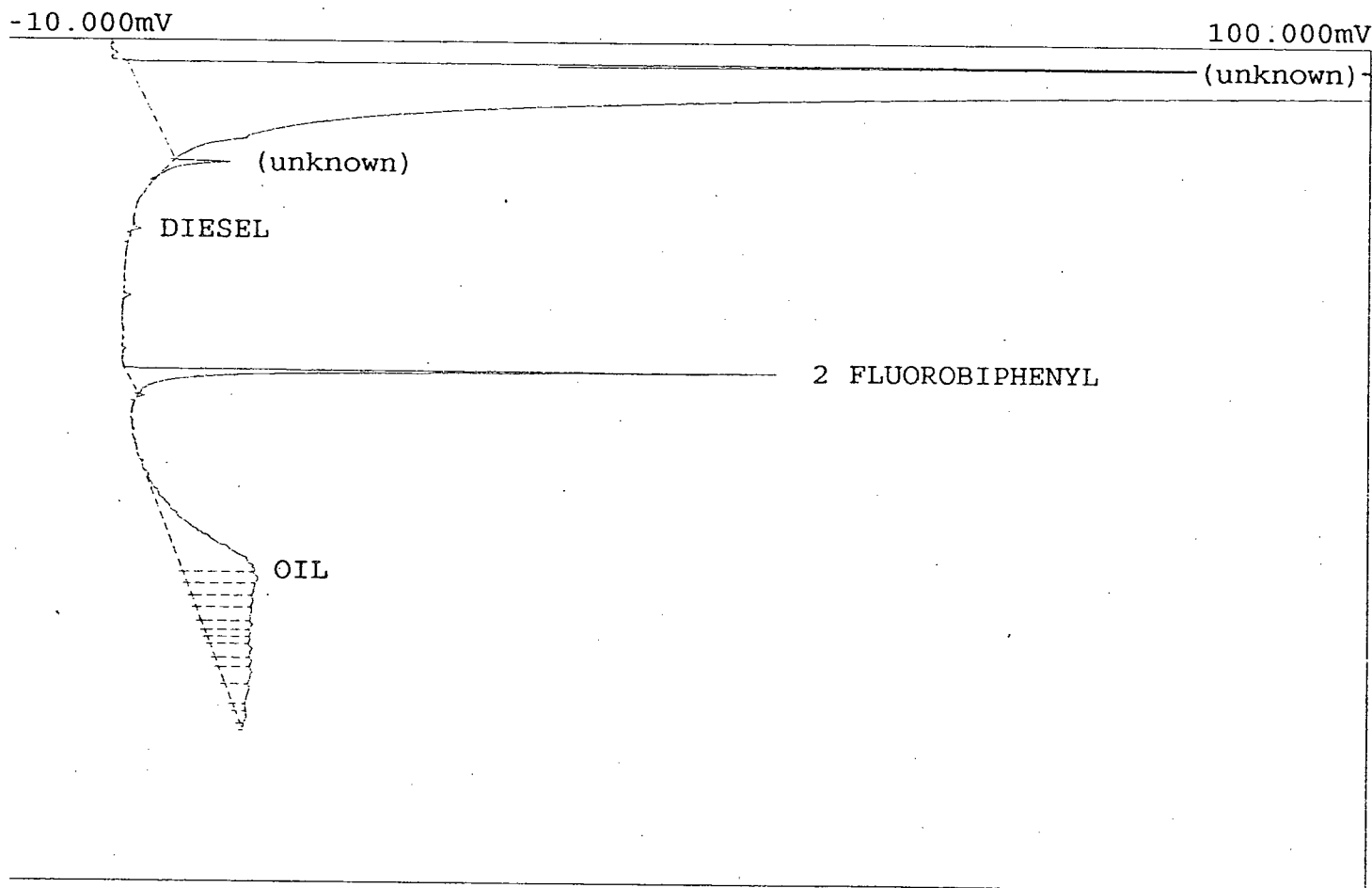
Component	Retention	Area	External	Units
L	9.166	385.0480	26.9034	
OROBIPHENYL	11.883	372.9900	13.6978	
	17.300	1077.4380	39.5680	
		1835.4760	80.1692	

Lab name: TEG NW
 Analysis date: 11/30/2000 10:29:51
 Description: Ch. 4 Detector
 Data file: ch4det1654.CHR ()
 Sample: SP1-4
 Operator: MF



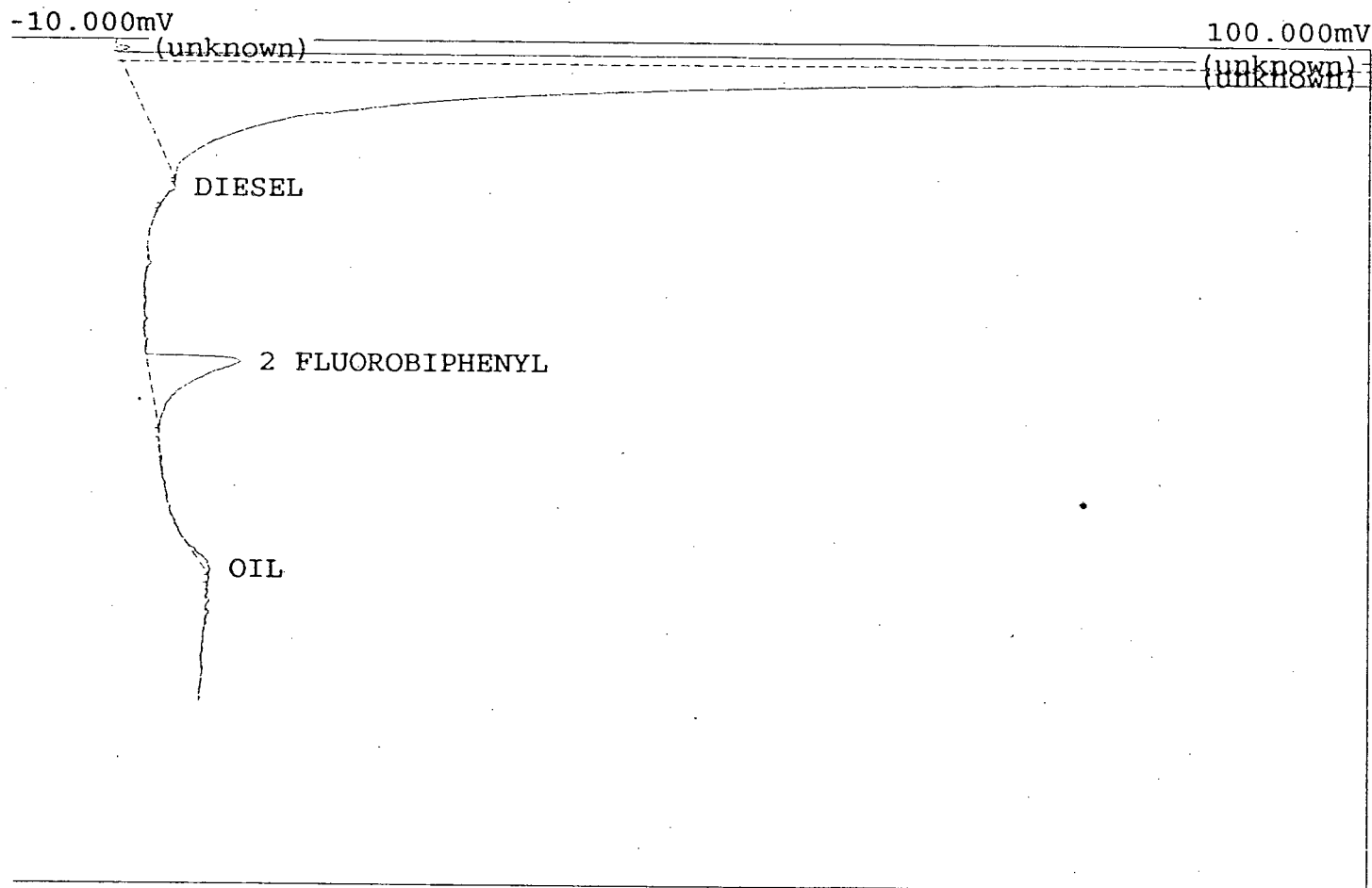
Component	Retention	Area	External	Units
L	6.933	389.3300	27.2026	
OROBIPHENYL	12.033	365.8600	13.4359	
	19.333	25.5870	0.9397	
		780.7770	41.5781	

Lab name: TEG NW
 Analysis date: 11/30/2000 10:57:05
 Description: Ch. 4 Detector
 Data file: ch4det1655.CHR ()
 Sample: SP1-1
 Operator: MF



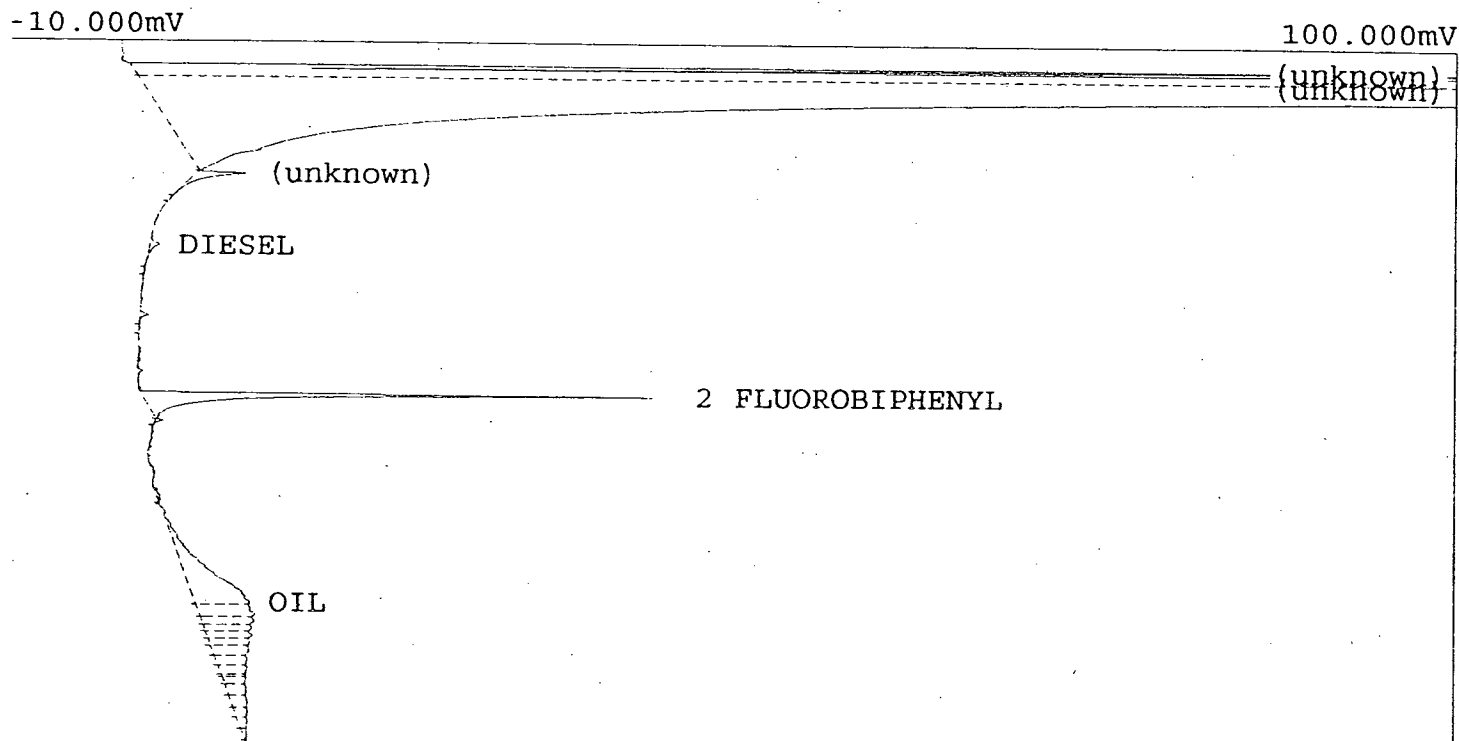
Component	Retention	Area	External	Units
L	6.866	390.9820	27.3180	
ROBIPHENYL	12.016	384.8940	14.1349	
	19.316	1568.8175	57.6136	
		2344.6935	99.0665	

Lab name: TEG NW
 Analysis date: 11/30/2000 11:27:26
 Description:
 Data file: ch3de1771.CHR ()
 Sample: SP1-2
 Operator: MF



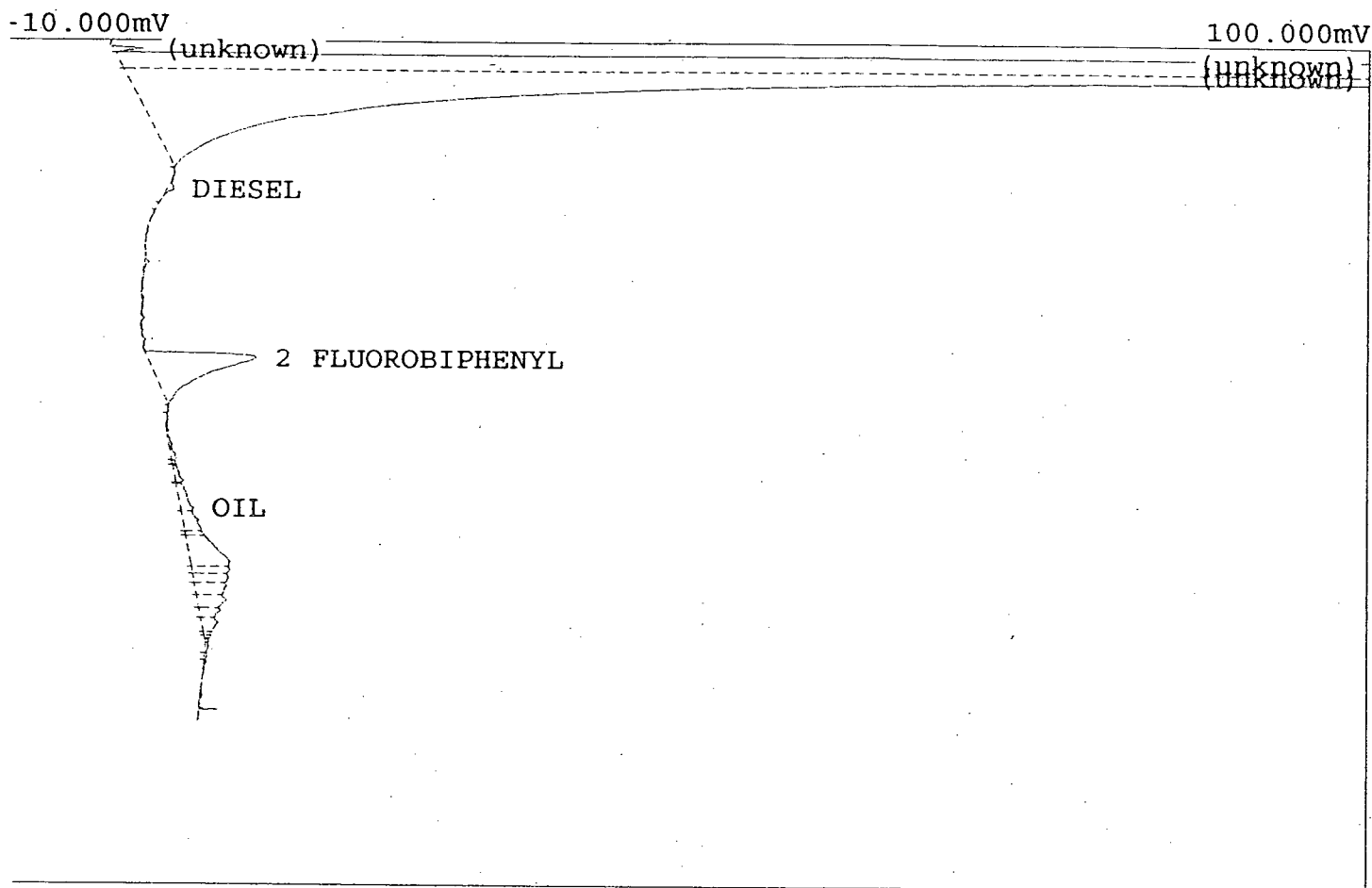
Component	Retention	Area	External	Units
L	5.333	445.8710	16.5806	
OROBIPHENYL	11.650	438.6440	16.3125	
	19.216	28.5820	1.0629	
		913.0970	33.9561	

Lab name: TEG NW
 Analysis date: 11/30/2000 11:27:26
 Description: Ch. 4 Detector
 Data file: ch4det1656.CHR ()
 Sample: SP1-5
 Operator: MF



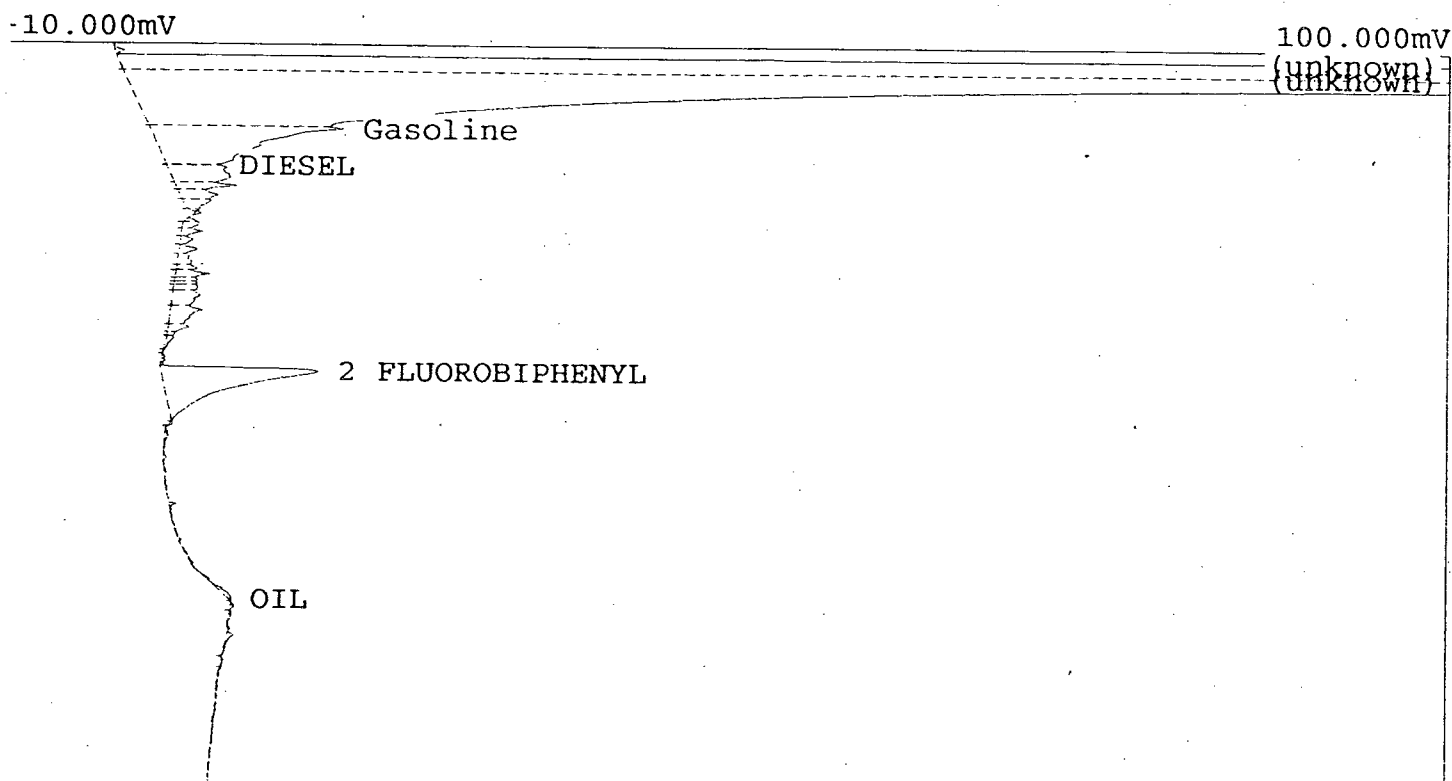
Component	Retention	Area	External	Units
L	6.950	348.2170	24.3300	
OROBIPHENYL	12.050	326.0060	11.9723	
	19.216	889.7485	32.6753	
		1563.9715	68.9776	

Lab name: TEG NW
 Analysis date: 11/30/2000 11:56:43
 Description:
 Data file: ch3de1772.CHR ()
 Sample: SP1-3
 Operator: MF



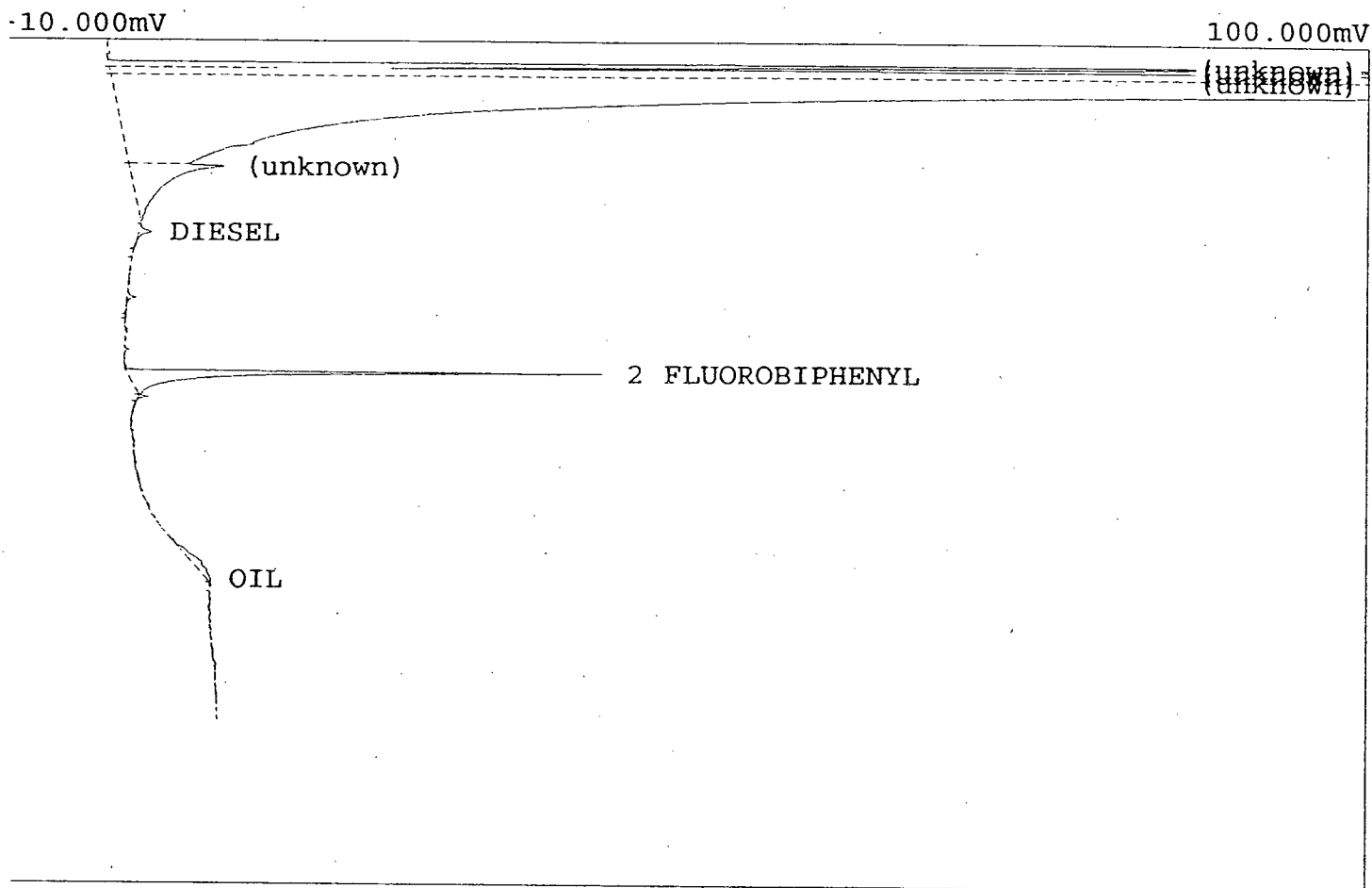
Component	Retention	Area	External	Units
L	5.400	467.6415	17.3902	
2 FLUOROBIPHENYL	11.516	434.4190	16.1554	
	17.000	562.6180	20.9229	
		1464.6785	54.4685	

Lab name: TEG NW
 Analysis date: 11/29/2000 16:12:16
 Description:
 Data file: ch3de1765.CHR ()
 Sample: sp2-1
 Operator: MF



Component	Retention	Area	External	Units
line	2.866	639.6160	0.0000	
	4.133	1094.5195	40.7019	
2 FLUOROBIPHENYL	11.166	512.0100	19.0409	
	19.016	23.0990	0.8590	
		2269.2445	60.6018	

Lab name: TEG NW
 Analysis date: 11/30/2000 11:56:43
 Description: Ch. 4 Detector
 Data file: ch4det1657.CHR ()
 Sample: SE-1
 Operator: MF



Component	Retention	Area	External	Units
2 FLUOROBIPHENYL	6.950	351.5510	24.5629	
	12.050	332.9180	12.2261	
	19.600	40.6260	1.4920	
		725.0950	38.2810	

Batch 1 of 2

TEG ANALYSIS LOG EXTRACTION AND ANALYSIS OF HEAVY METALS

CLIENT _____ CLIENT PROJECT# _____

DATE 11-30 TEG PROJECT# _____ ANALYST Sc

LOCATION _____

Digester Cont. #	Sample #	Weight (g)	Dilution	Metal 1: conc. AA	¹⁰ conc.	Metal 2: conc. AA	¹ conc.	Metal 3: conc. AA	²⁰ conc.	Metal 4: conc. AA	^{10 = 2 400} conc.
1	std			1224		985		897		2469	
2	m Blank										
3	LCS			942	108	965	22	202	56	2343	122
4	SP9A			3415	388	189	4.3				
5	9B			189	21	38	ND			365	m
6	10A				ND					272	
7	10B				ND					316	
8	11A			656	75					346	
9	11B			838	95					279	
10	11B Dp			881	100		✓			262	↓
11	HBMS			1789	¹⁰³ 205-100	1209	27.5	229	64	1907	99
12	11B MSD			1922	¹¹⁸ 218-100	1166	26.5	242	67	2280	119

H₉

Batch 2 of 2

TEG ANALYSIS LOG EXTRACTION AND ANALYSIS OF HEAVY METALS

CLIENT _____ CLIENT PROJECT# _____

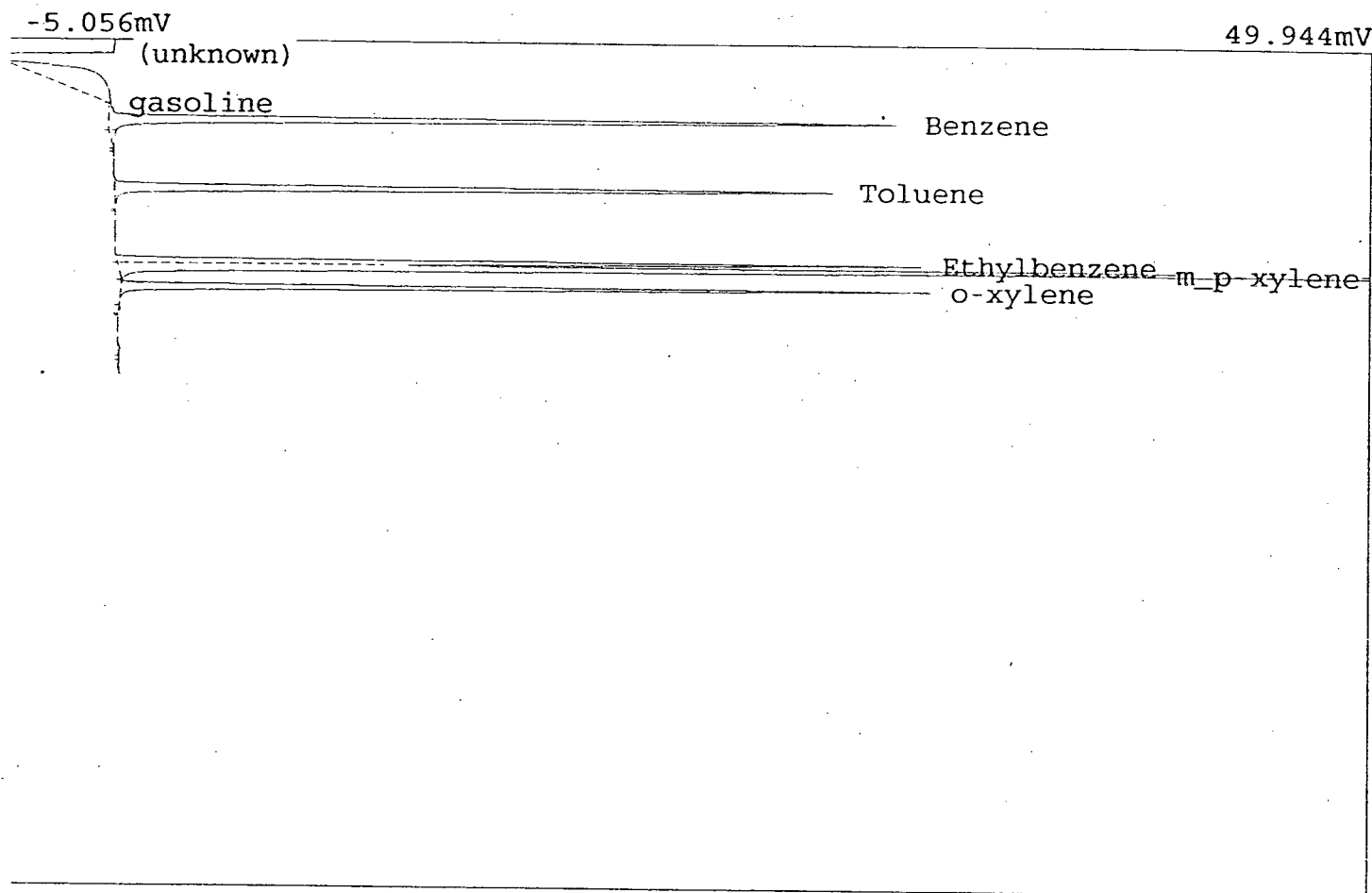
DATE 11-30 TEG PROJECT# _____ ANALYST SL

LOCATION _____

Digester Cont. #	Sample #	Weight (g)	Dilution	Metal 1: <u>Pb</u> conc. AA conc.		Metal 2: <u>Cd</u> conc. AA conc.		Metal 3: <u>As</u> conc. AA conc.		Metal 4: <u>Cr</u> conc. AA conc.	
1	std			1091		985		906		2992	
2	SP2-1			60	7						
3	#1				ND						
4	#2				ND						
5	#3			60	0.545 mg = 0.027mg						
6	#4				ND						
7	std			1070							
8											
9											
10											
11											
12											

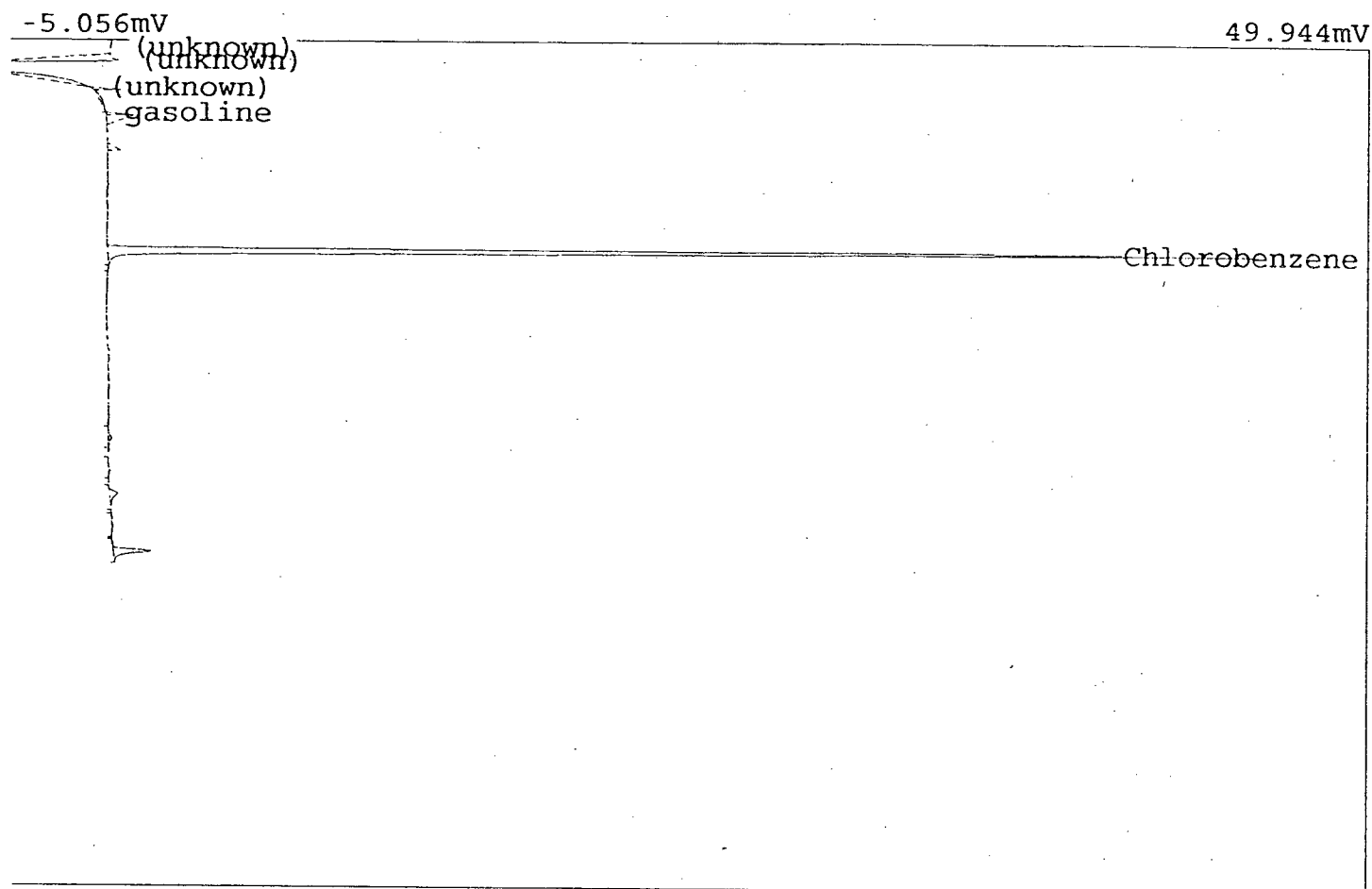
17g

Lab name: TEG NW
 Analysis date: 11/30/2000 10:10:46
 Description: Ch. 1 Detector
 Data file: ch1det2022.CHR ()
 Sample: 10 ppm btex
 Operator: MF



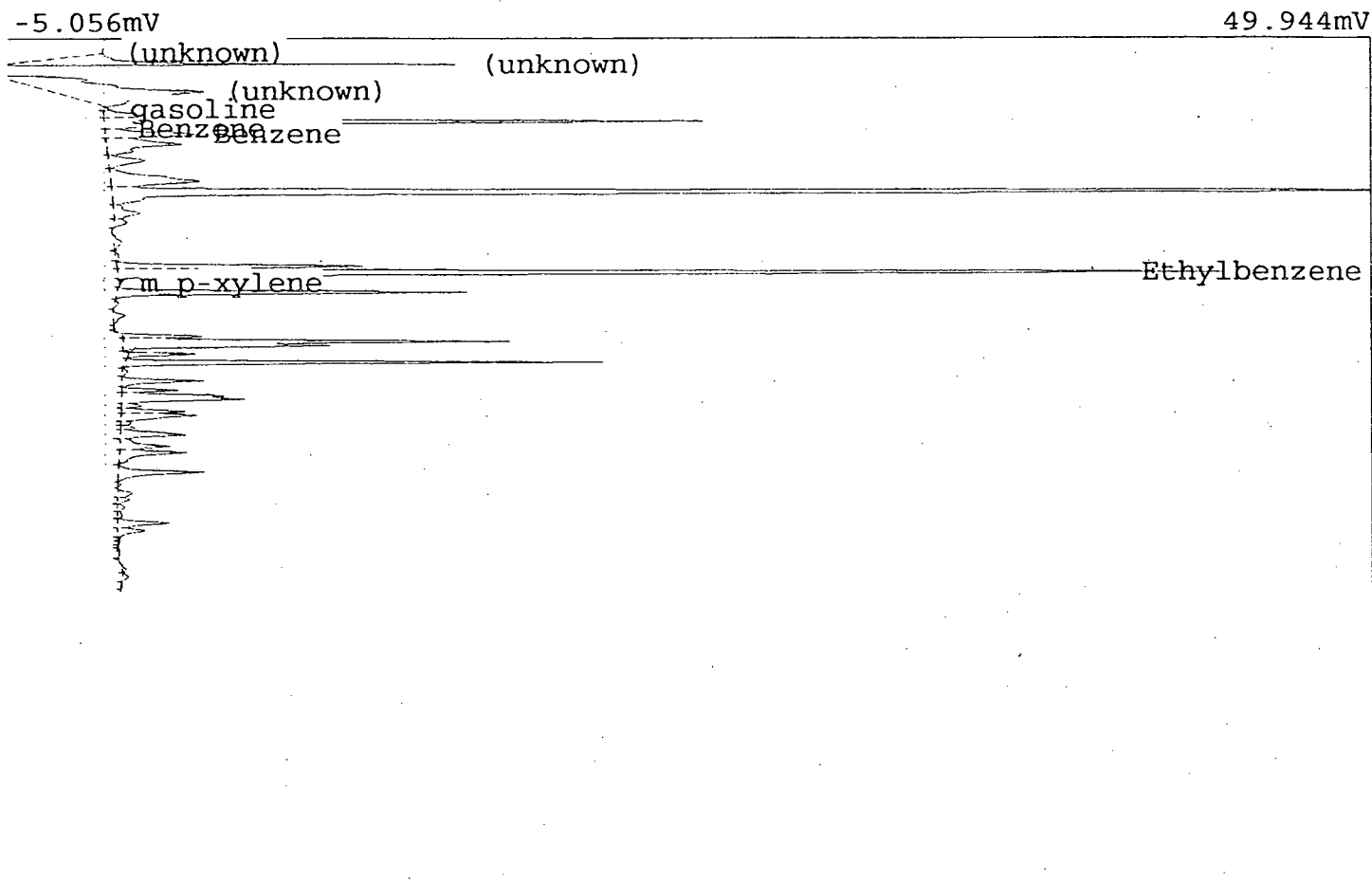
Component	Retention	Area	External	Units
ine	2.300	1881.2840	182.4756	ppm
ne	2.850	320.5090	9.6080	ppm
ne	5.333	289.5960	9.4108	ppm
benzene	7.983	243.9680	9.5660	ppm
ylene	8.216	636.2020	18.8299	ppm
ene	8.916	247.5120	9.4734	ppm
		3619.0710	239.3639	

Lab name: TEG NW
Analysis date: 11/30/2000 11:02:45
Description: Ch. 1 Detector
Data file: chldet2025.CHR ()
Sample: method blank
Operator: MF



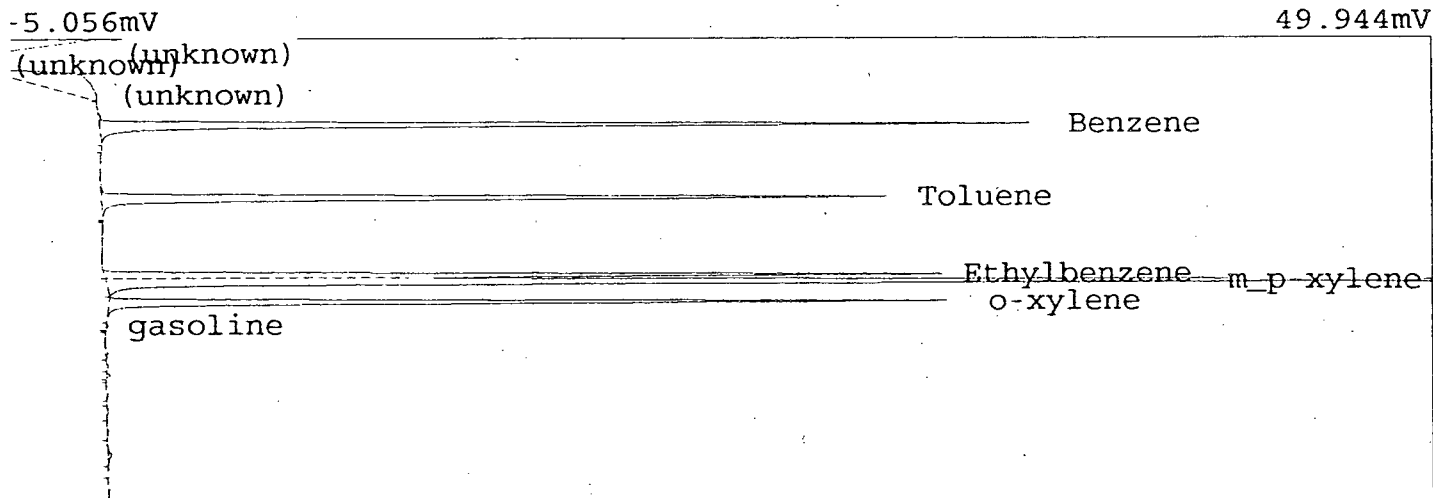
Component	Retention	Area	External	Units
Gasoline	2.633	392.7240	38.0924	ppm
Chlorobenzene	7.616	366.1700	1639.0779	ppm
		758.8940	1677.1703	

Lab name: TEG NW
 Analysis date: 12/01/2000 09:38:45
 Description: Ch. 1 Detector
 Data file: ch1det2036.CHR ()
 Sample: 200 PPM GAS
 Operator: MF



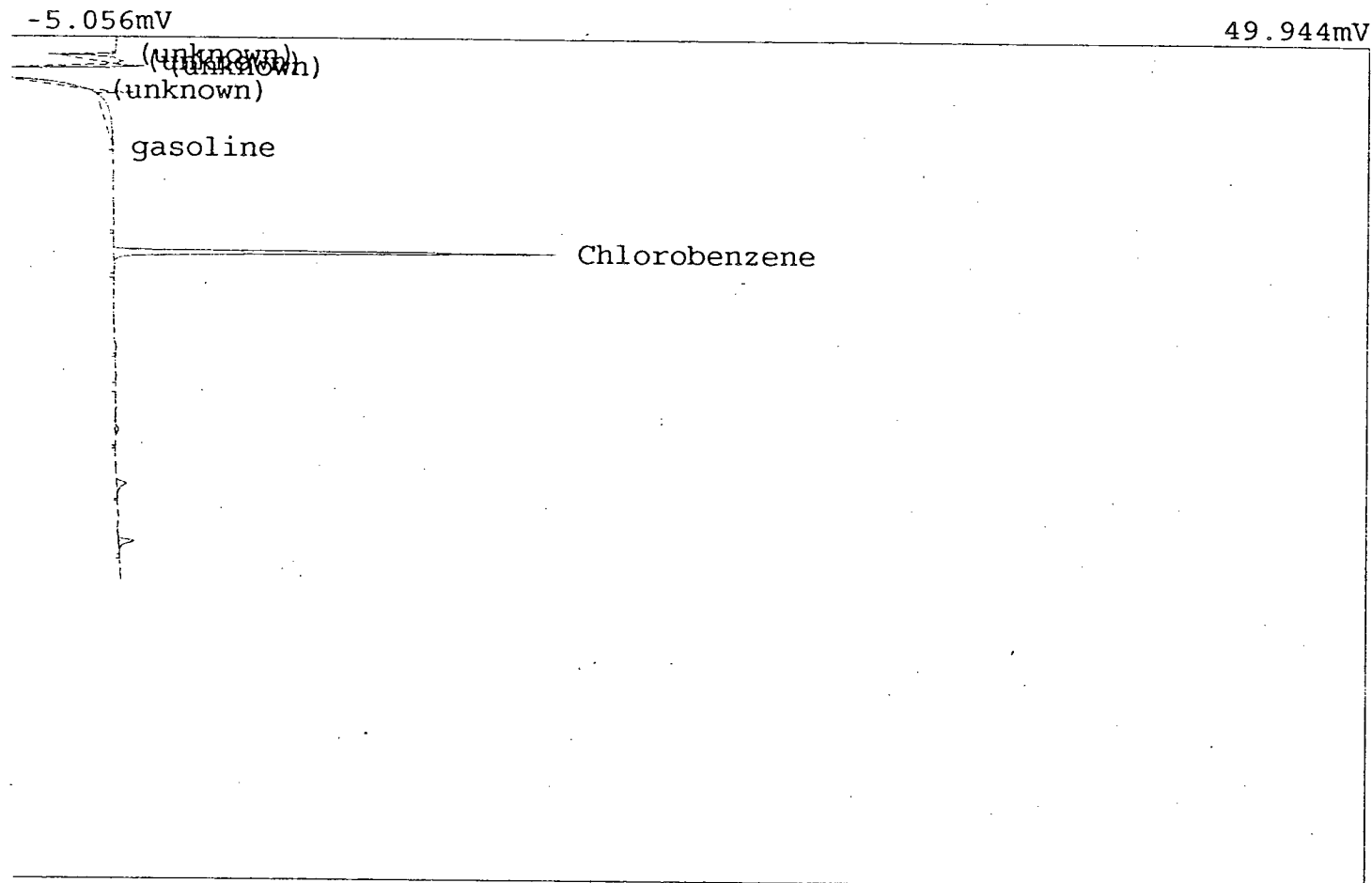
Component	Retention	Area	External	Units
ine	2.550	2153.3800	208.8676	ppm
ne	3.233	0.5650	0.0169	ppm
ne	3.416	39.7640	1.1920	ppm
benzene	8.383	365.7000	14.3392	ppm
ylene	8.766	0.5880	0.0174	ppm
		2559.9970	224.4332	

Lab name: TEG NW
 sis date: 12/01/2000 10:01:28
 cription: Ch. 1 Detector
 ata file: chldet2037.CHR ()
 Sample: 200 PPM GAS 10 ppm btex
 Operator: MF



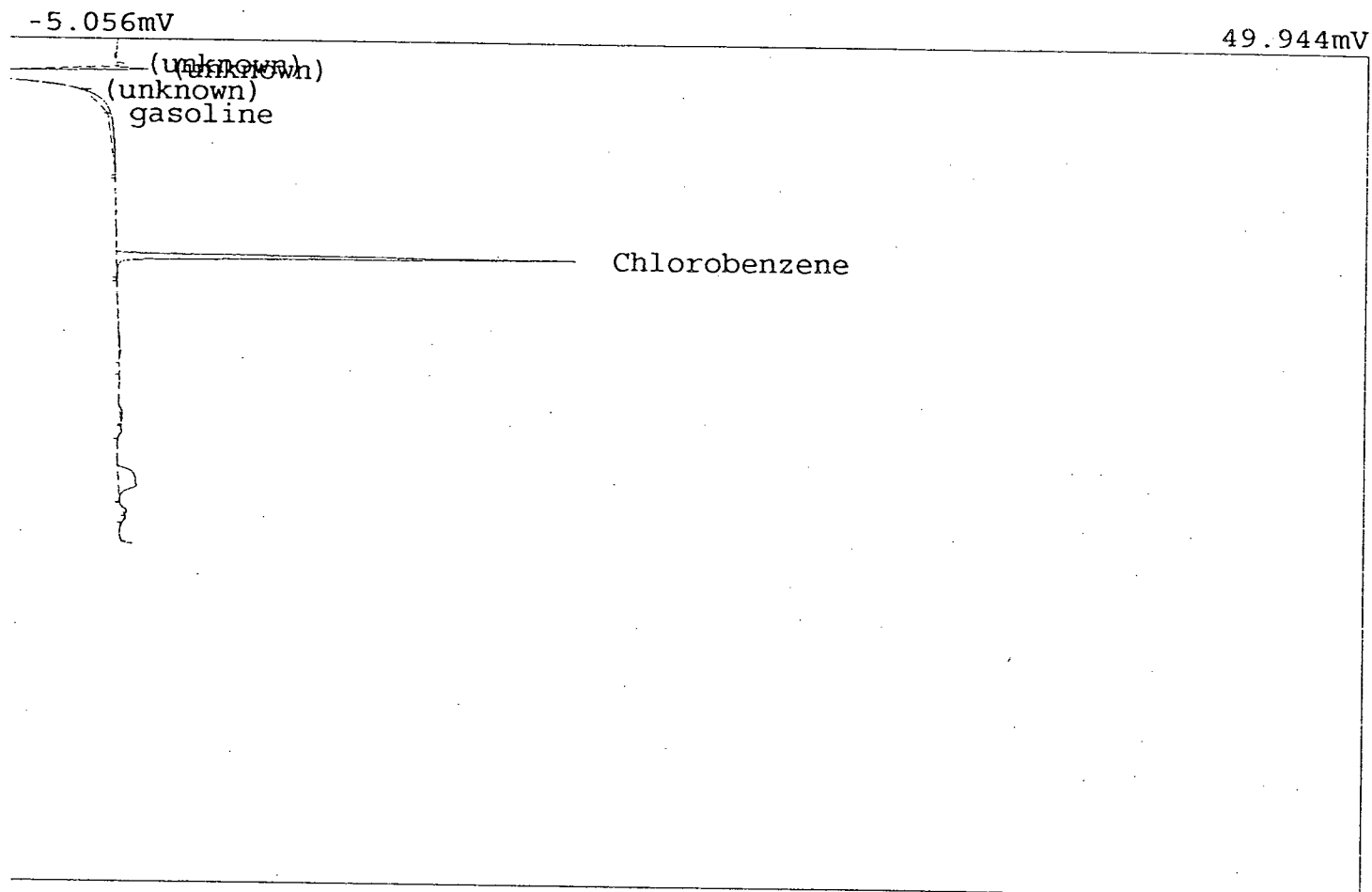
omponent	Retention	Area	External	Units
ie	2.933	314.1400	9.4171	ppm
ie	5.416	293.2140	9.5284	ppm
benzene	8.050	241.4360	9.4668	ppm
ylene	8.266	637.2935	18.8622	ppm
ene	8.966	247.0140	9.4544	ppm
ne	9.766	1741.5645	168.9235	ppm
		3474.6620	225.6523	

Lab name: TEG NW
Analysis date: 12/01/2000 10:50:14
Description: Ch. 1 Detector
Data file: chldet2039.CHR ()
Sample: method blank
Operator: MF



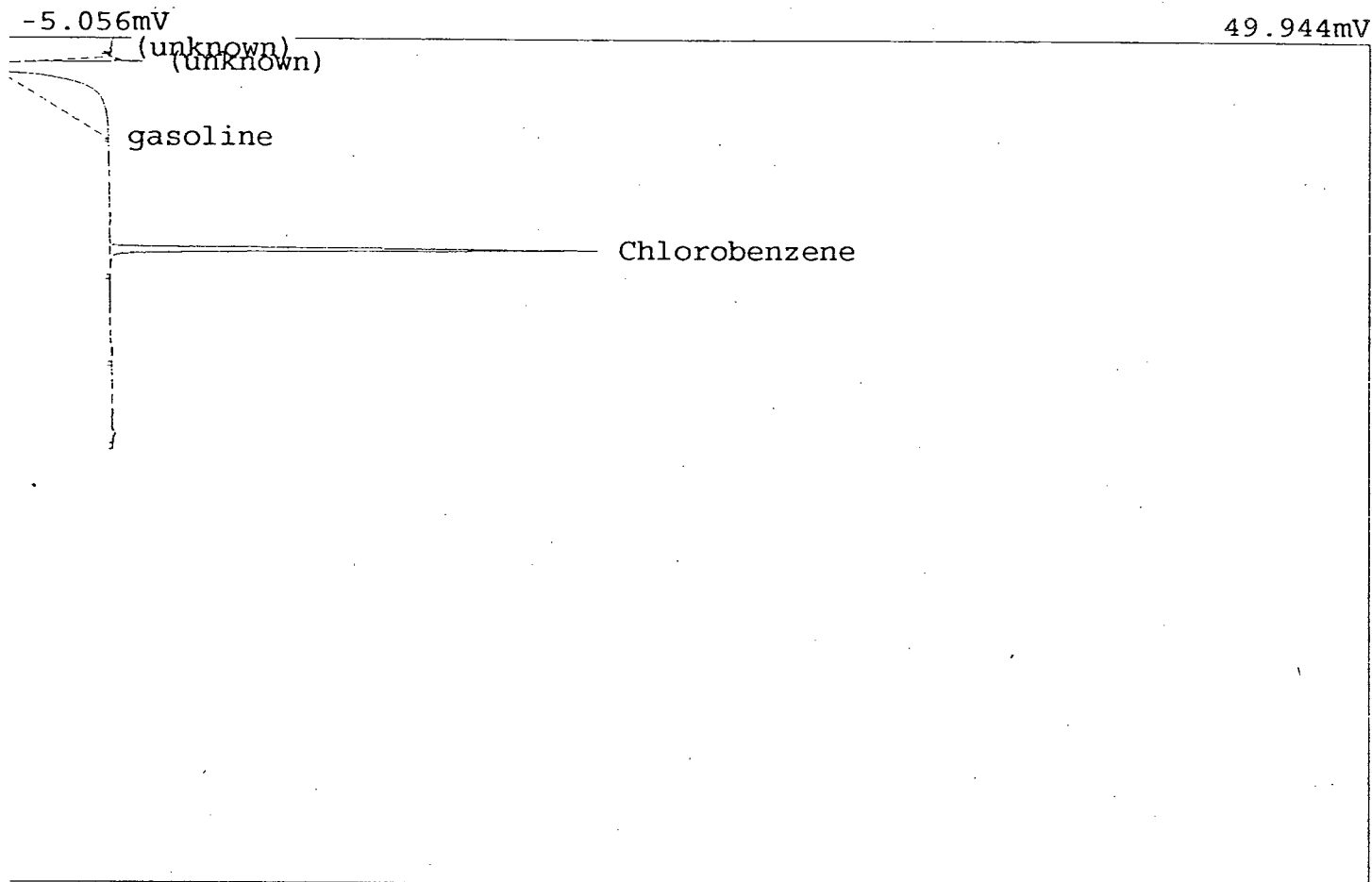
Component	Retention	Area	External	Units
ine	4.000	166.2050	16.1211	ppm
obenzene	7.783	126.1740	564.7896	ppm
		292.3790	580.9107	

Lab name: TEG NW
Analysis date: 12/01/2000 12:07:53
Description: Ch. 1 Detector
Data file: chldet2040.CHR ()
Sample: NE-1
Operator: MF



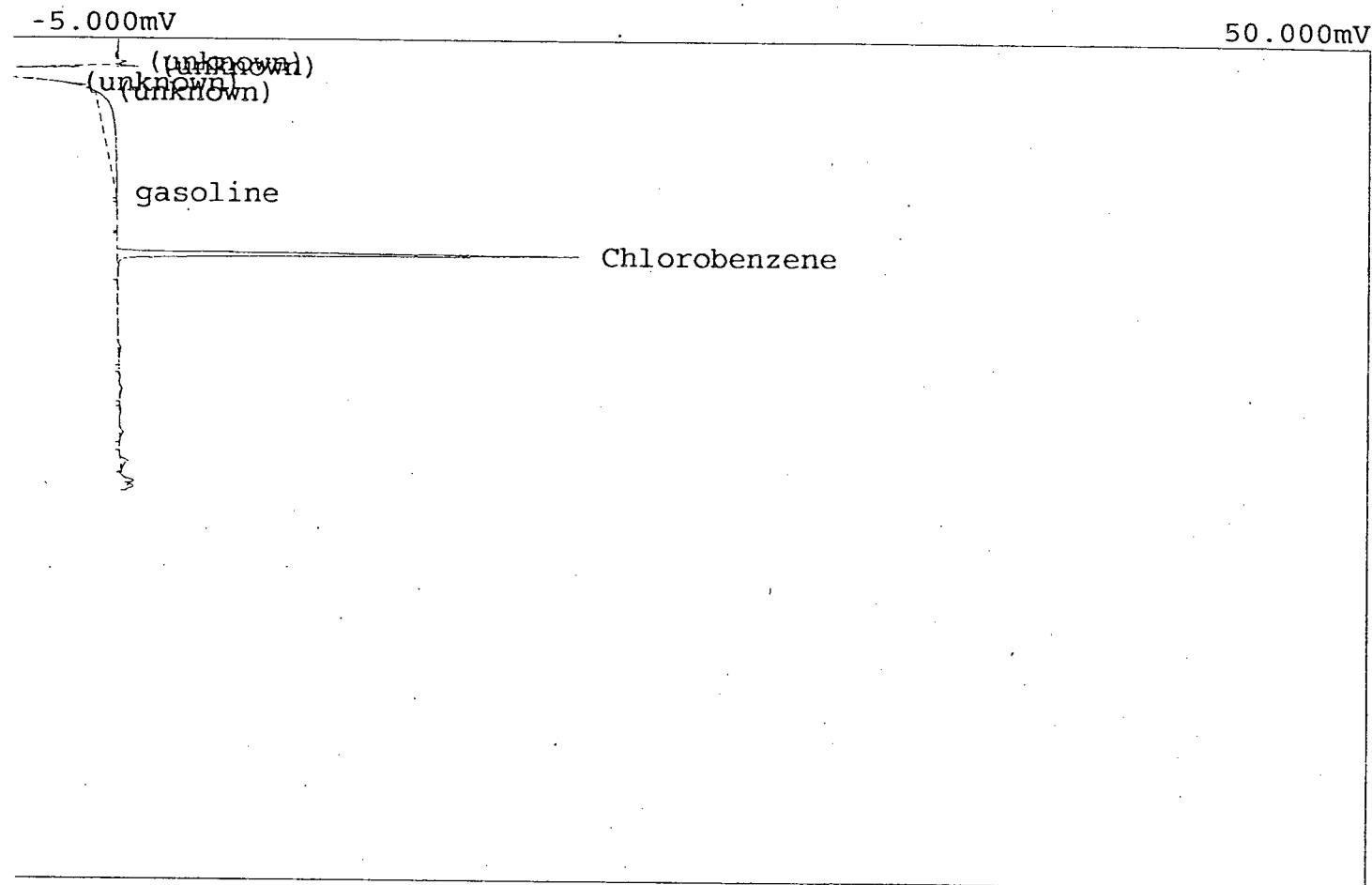
Component	Retention	Area	External	Units
Gasoline	2.716	201.2250	19.5179	ppm
Chlorobenzene	7.866	135.1580	605.0045	ppm
		336.3830	624.5223	

Lab name: TEG NW
 ysis date: 12/01/2000 12:28:17
 scription: Ch. 1 Detector
 Data file: ch1det2041.CHR ()
 Sample: WN-1
 Operator: MF



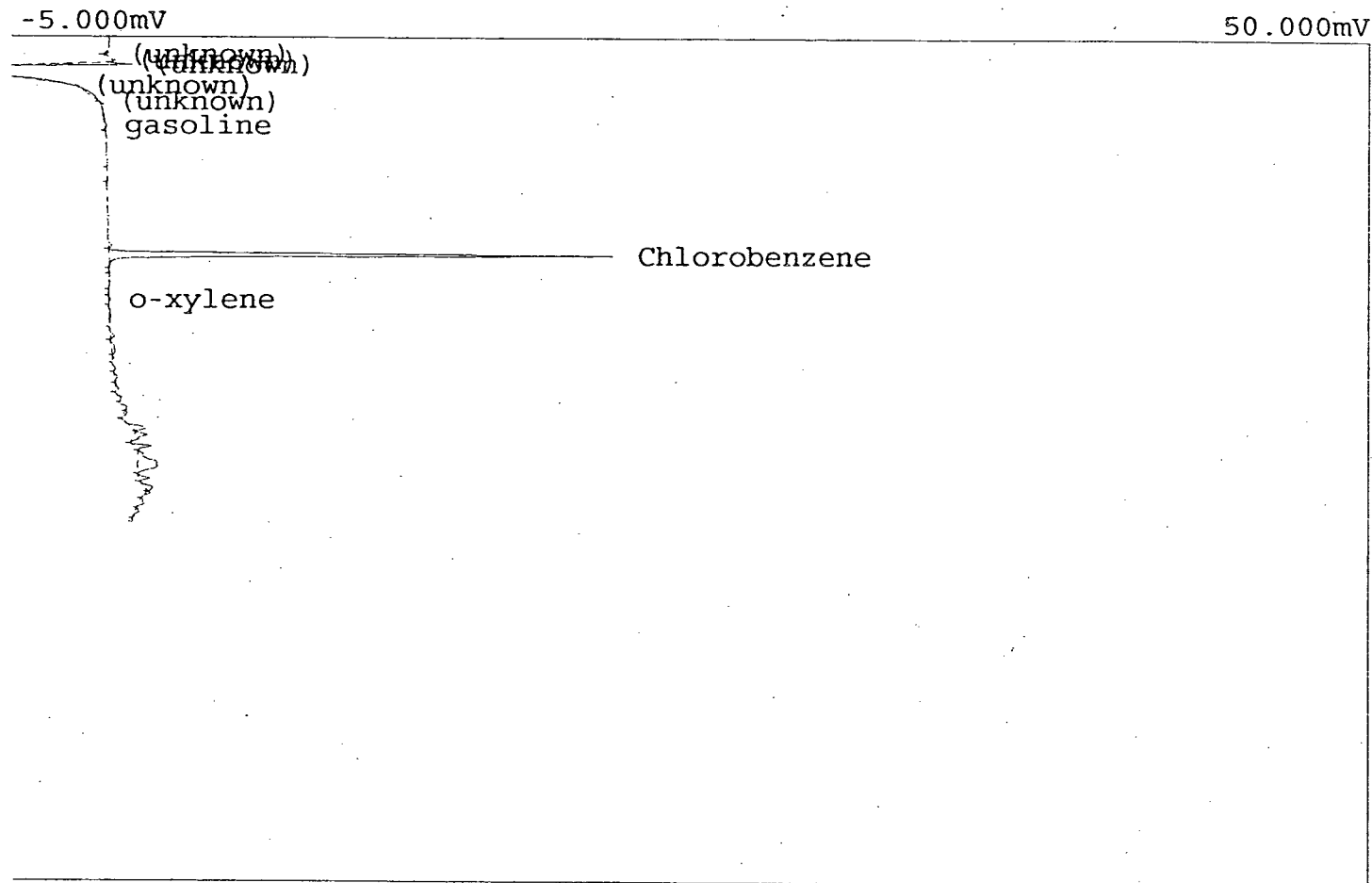
Component	Retention	Area	External	Units
ine	3.583	381.8930	37.0418	ppm
obenzene	7.616	145.4020	650.8594	ppm
		527.2950	687.9013	

Lab name: TEG NW
Analysis date: 12/01/2000 13:00:16
Description: Ch. 1 Detector
Data file: C:\PEAKWIN\ch1det2043.CHR ()
Sample: WW-2
Operator: MF



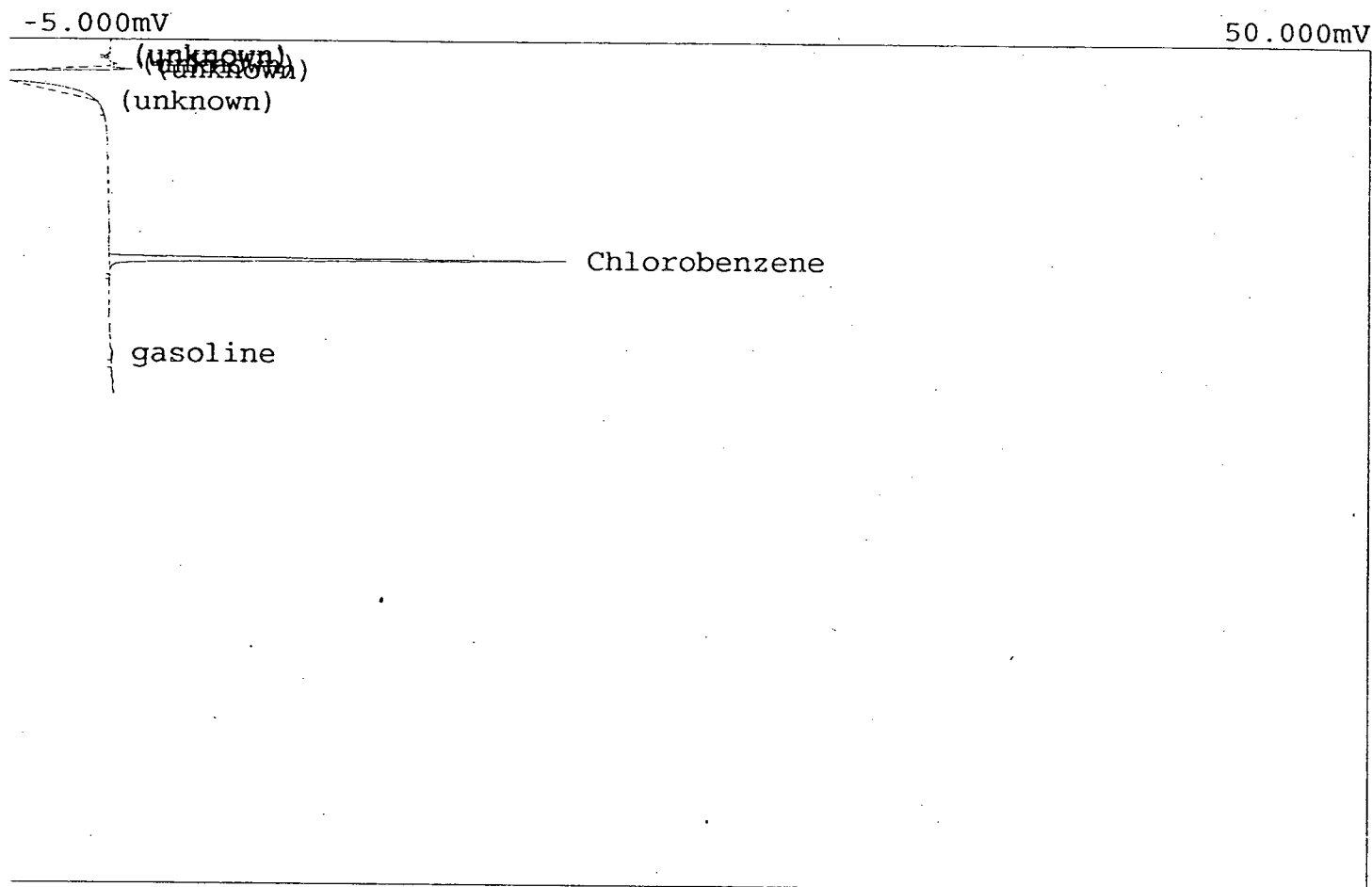
Component	Retention	Area	External	Units
ine	5.616	227.0040	22.0183	ppm
obenzene	7.833	135.0470	604.5076	ppm
		362.0510	626.5259	

Lab name: TEG NW
 Analysis date: 12/01/2000 13:19:41
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2044.CHR ()
 Sample: WW-4
 Operator: MF



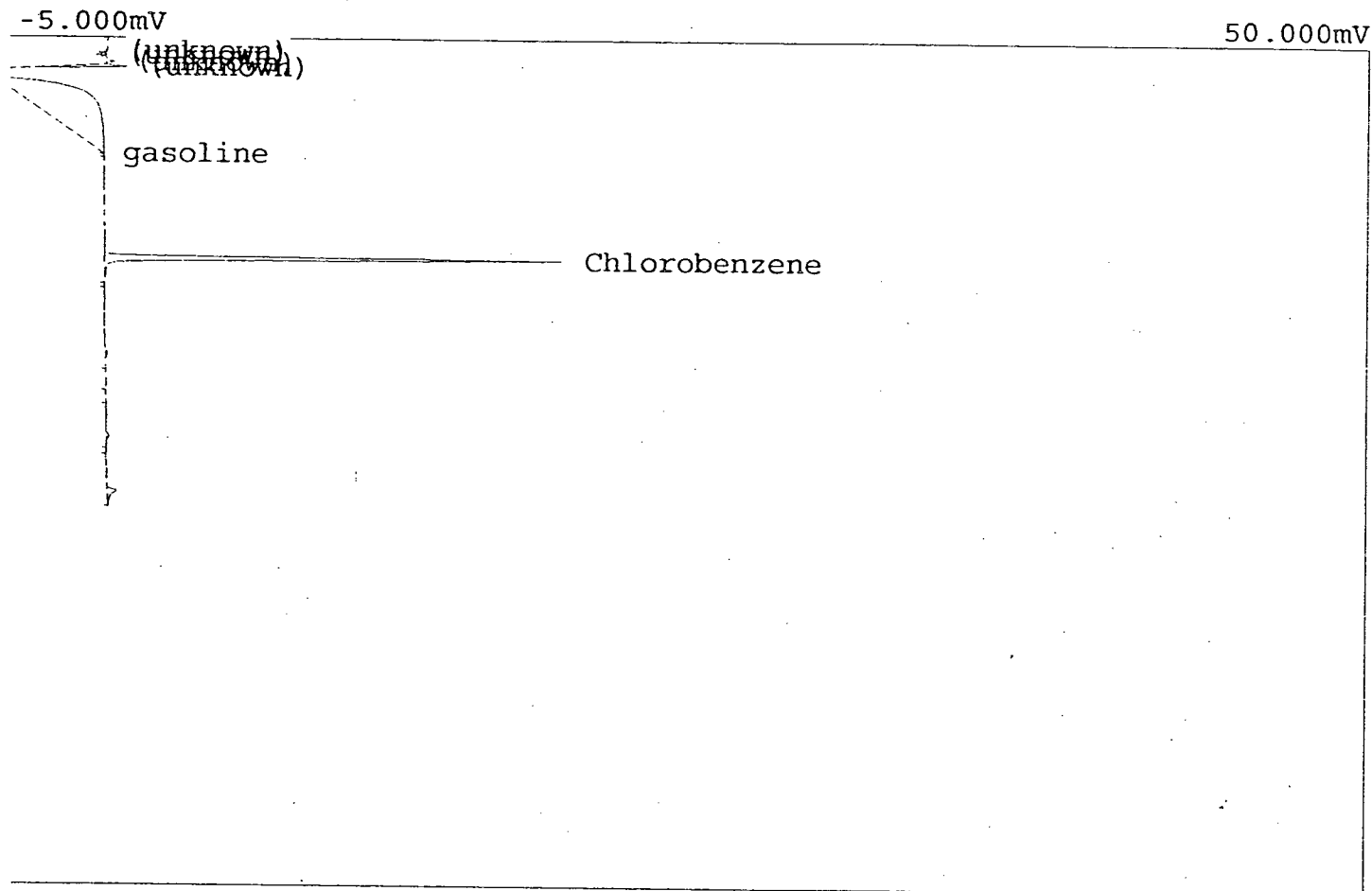
Component	Retention	Area	External	Units
ine	3.233	212.7940	20.6400	ppm
obenzene	7.900	143.7320	643.3841	ppm
ene	9.516	0.6710	0.0257	ppm
		357.1970	664.0498	

Lab name: TEG NW
 Analysis date: 12/01/2000 13:40:53
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2045.CHR ()
 Sample: SW-1
 Operator: MF



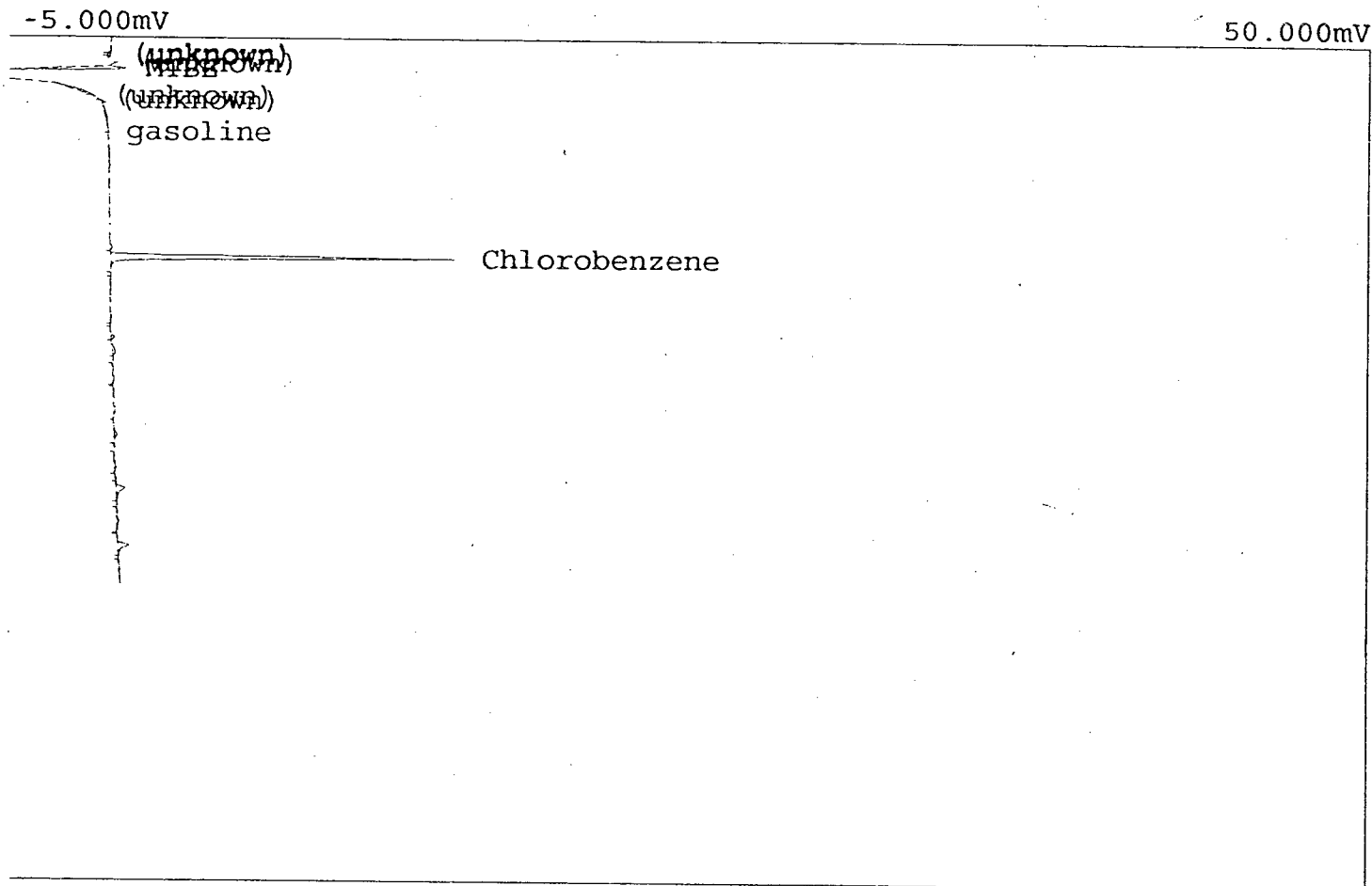
Component	Retention	Area	External	Units
Chlorobenzene	7.916	129.2960	578.7645	ppm
gasoline	11.350	130.6610	12.6735	ppm
		259.9570	591.4380	

Lab name: TEG NW
 Analysis date: 12/01/2000 14:42:15
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2048.CHR ()
 Sample: SW-3
 Operator: MF



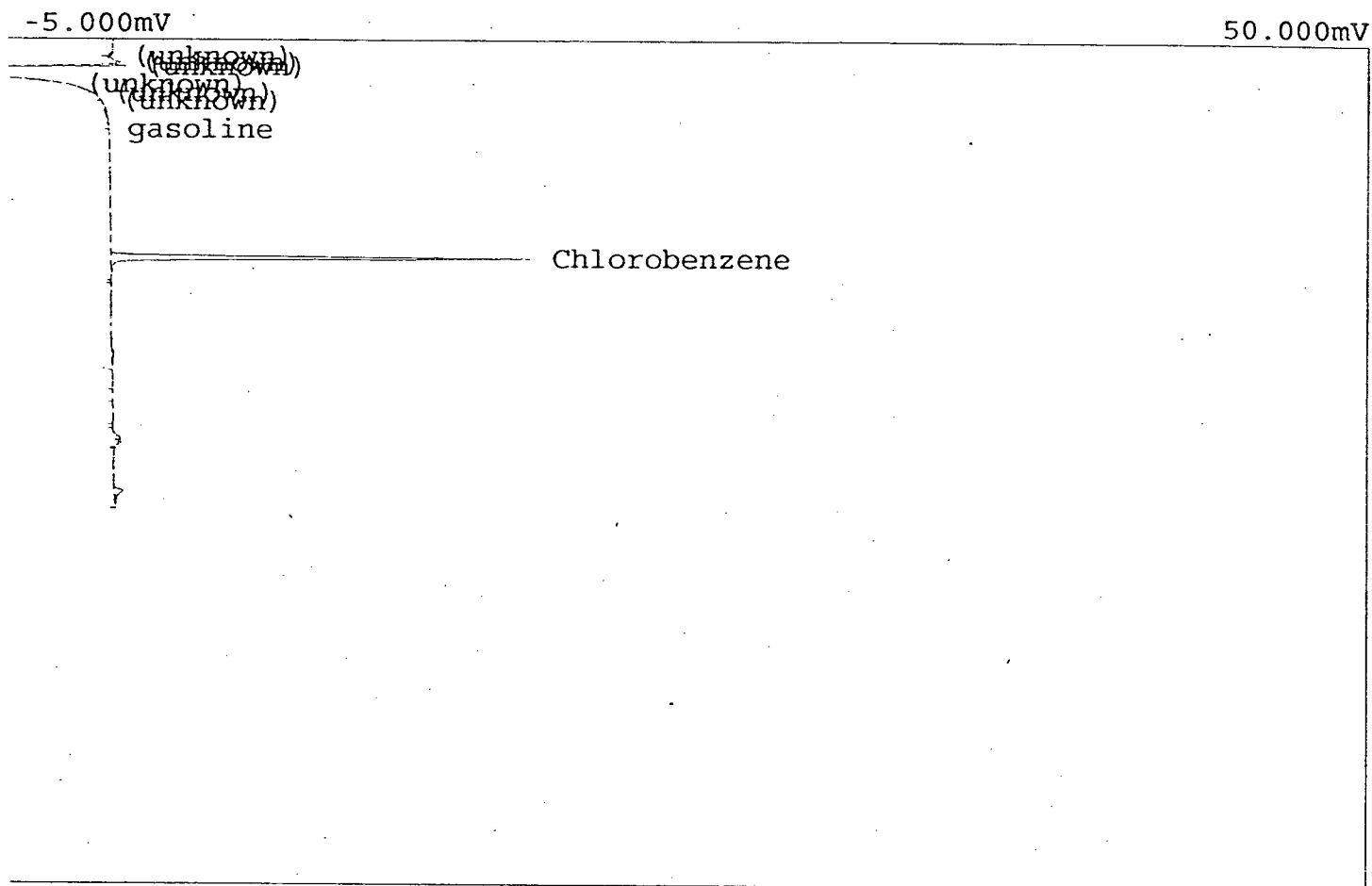
Component	Retention	Area	External	Units
gasoline	4.183	414.6150	40.2157	ppm
Chlorobenzene	7.950	131.2780	587.6365	ppm
		545.8930	627.8522	

Lab name: TEG NW
 Analysis date: 12/01/2000 14:19:47
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2047.CHR ()
 Sample: WW-3
 Operator: MF



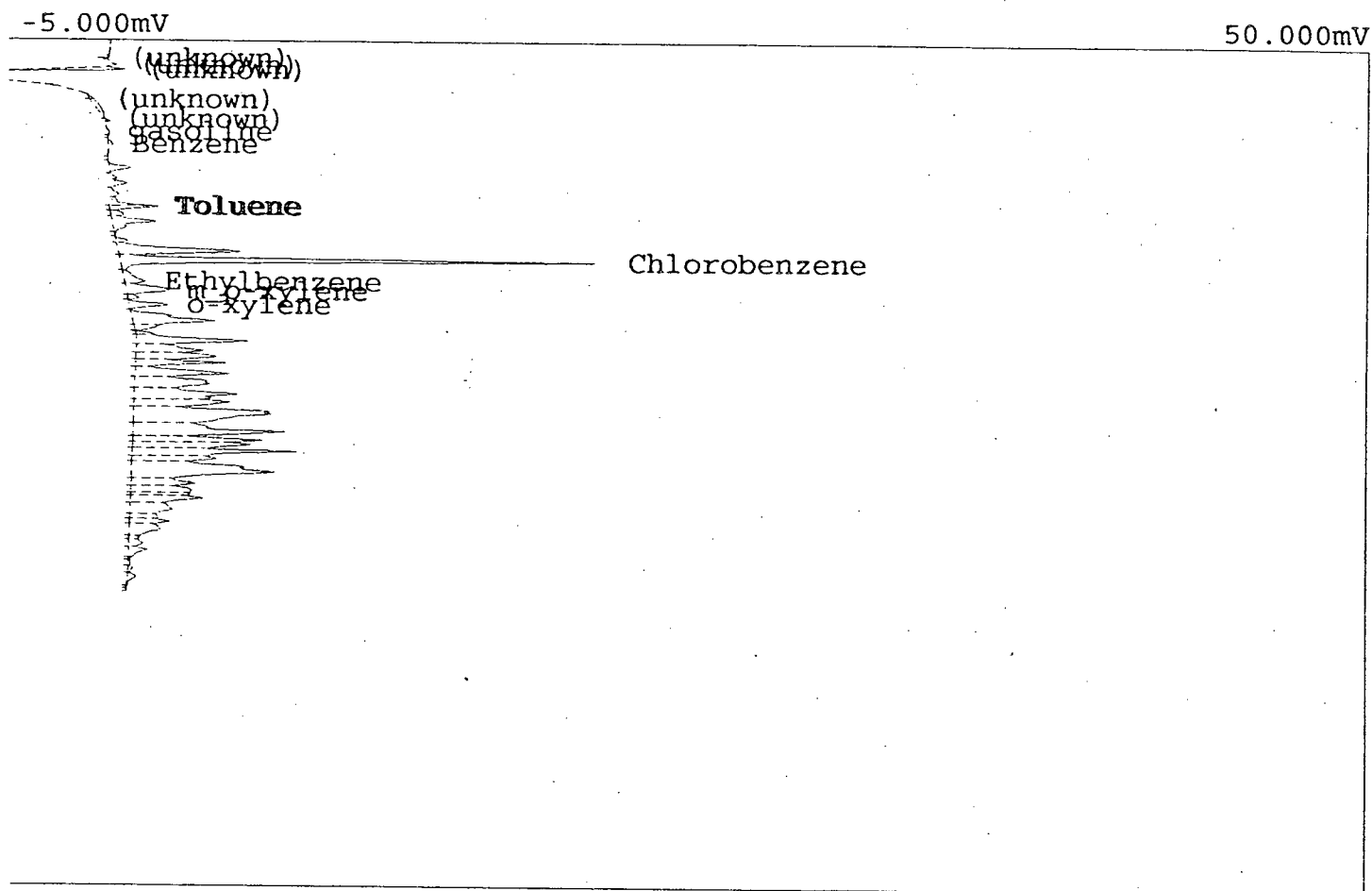
Component	Retention	Area	External	Units
ine	1.133	22.2240	0.0000	
obenzene	3.416	123.2685	11.9565	ppm
	7.966	99.7600	446.5533	ppm
		245.2525	458.5097	

Lab name: TEG NW
 Analysis date: 12/01/2000 15:01:11
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2049.CHR ()
 Sample: EW-1
 Operator: MF



Component	Retention	Area	External	Units
ine	3.266	134.1930	13.0161	ppm
obenzene	7.916	121.5710	544.1853	ppm
		255.7640	557.2014	

Lab name: TEG NW
 Analysis date: 12/01/2000 13:56:09
 Description: Ch. 1 Detector
 Data file: ch1det2046.CHR ()
 Sample: SW-2
 Operator: MF

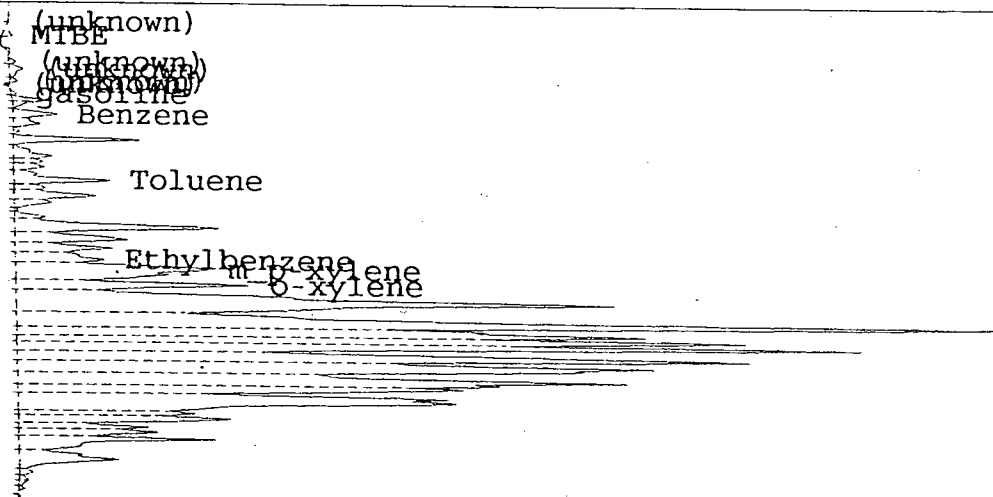


Component	Retention	Area	External	Units
ine	3.300	1593.6155	154.5731	ppm
ne	3.766	2.6980	0.0809	ppm
ne	5.983	8.6600	0.2814	ppm
ne	6.000	11.1290	0.3617	ppm
obenzene	7.933	155.3970	695.5998	ppm
benzene	8.700	12.7655	0.5005	ppm
ylene	9.033	24.7900	0.7337	ppm
ene	9.550	14.0100	0.5362	ppm
		1823.0650	852.6674	

Lab name: TEG NW
 Analysis date: 12/01/2000 15:22:00
 Description: Ch. 1 Detector
 Data file: chldet2050.CHR ()
 Sample: BOT-3
 Operator: MF

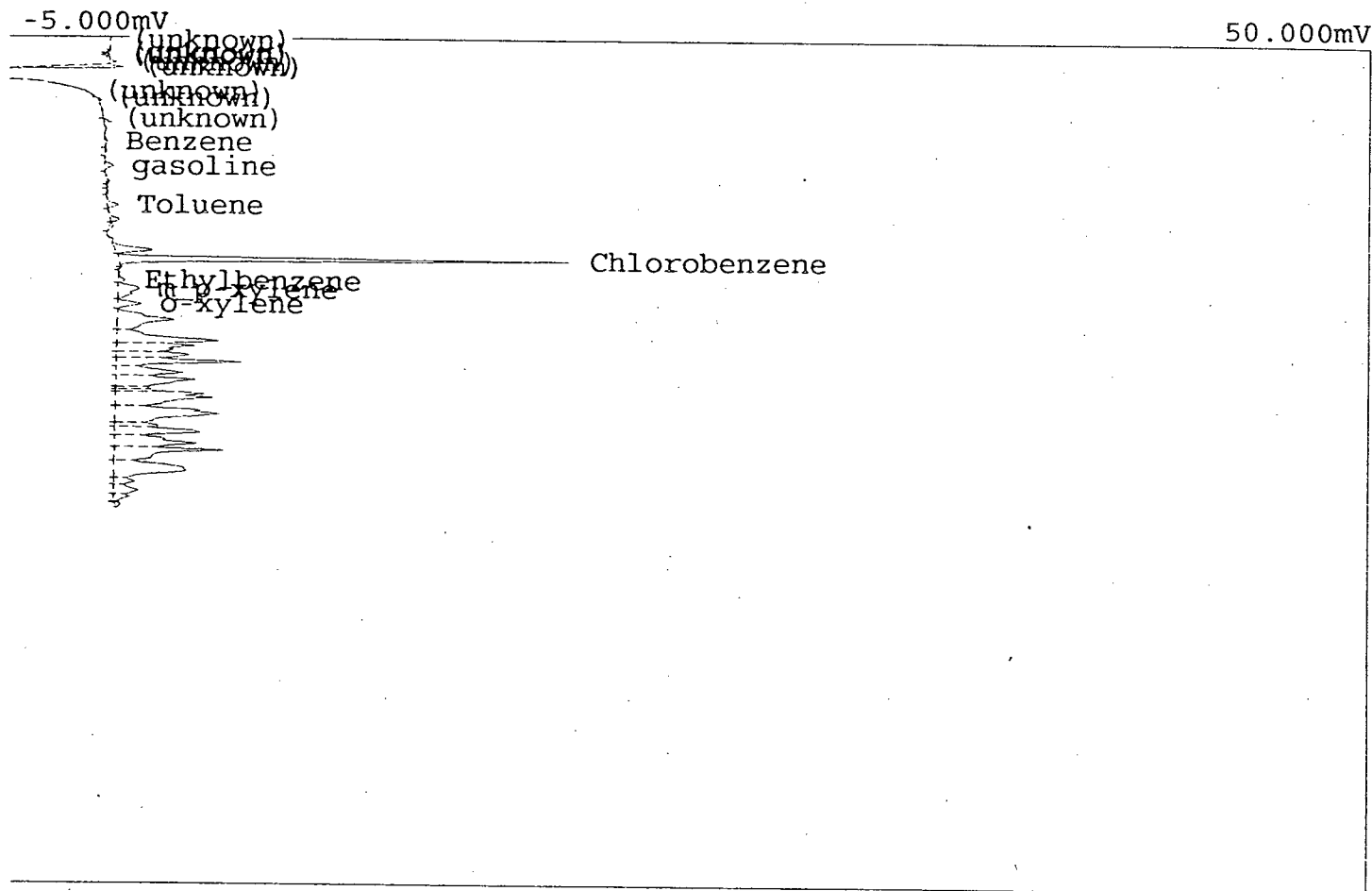
-80.000mV

800.000mV



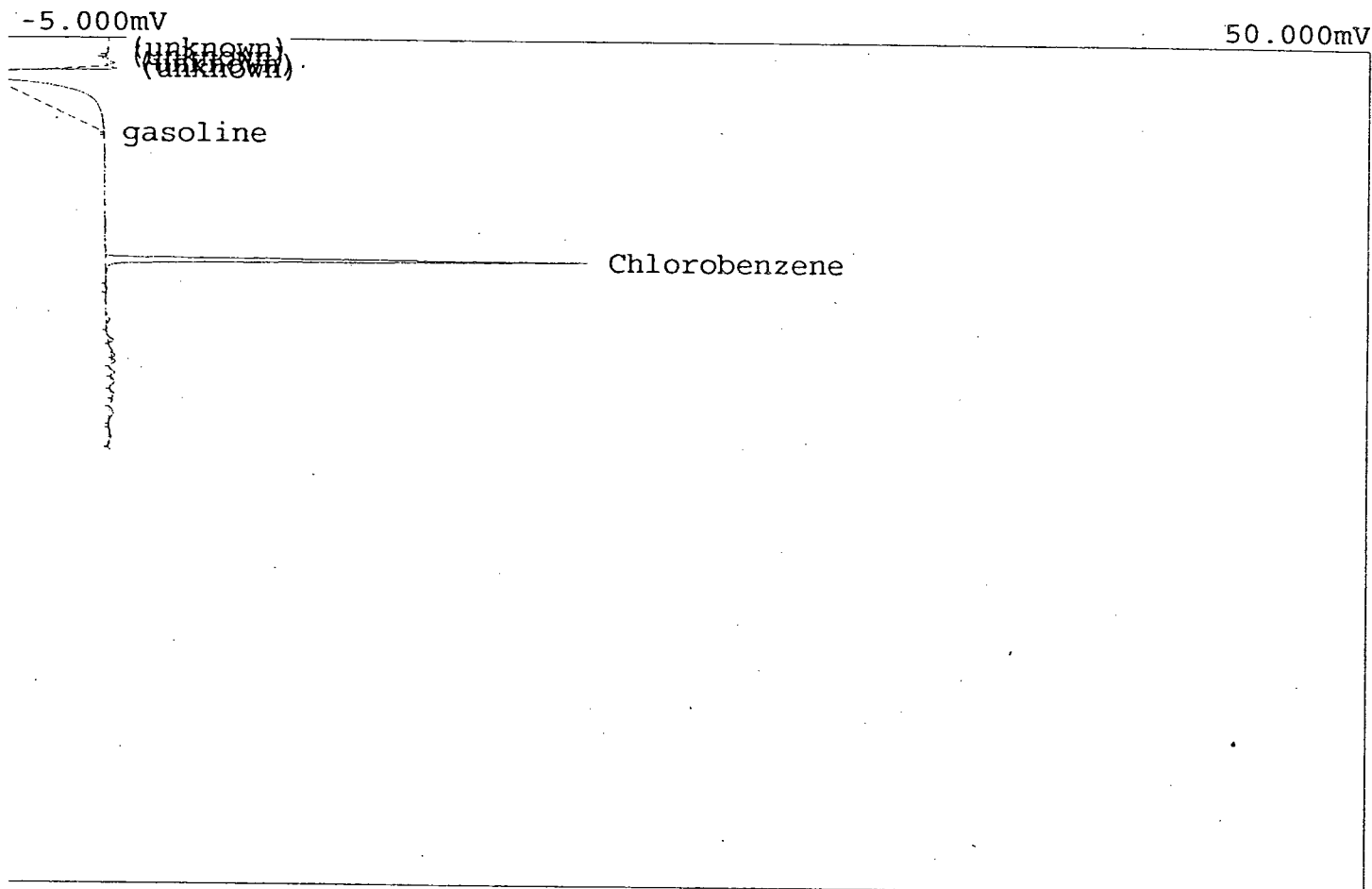
Component	Retention	Area	External	Units
ine	1.133	85.2550	0.0000	
ne	3.116	84565.9655	8202.4975	ppm
ne	3.816	282.7820	8.4771	ppm
ne	6.050	697.7140	22.6732	ppm
benzene	8.750	833.9900	32.7009	ppm
ylene	9.066	2972.7540	87.9857	ppm
ene	9.600	1772.3140	67.8346	ppm
		91210.7745	8422.1690	

Lab name: TEG NW
 Analysis date: 12/01/2000 15:44:42
 Description: Ch. 1 Detector
 Data file: chldet2051.CHR ()
 Sample: NW-1
 Operator: MF



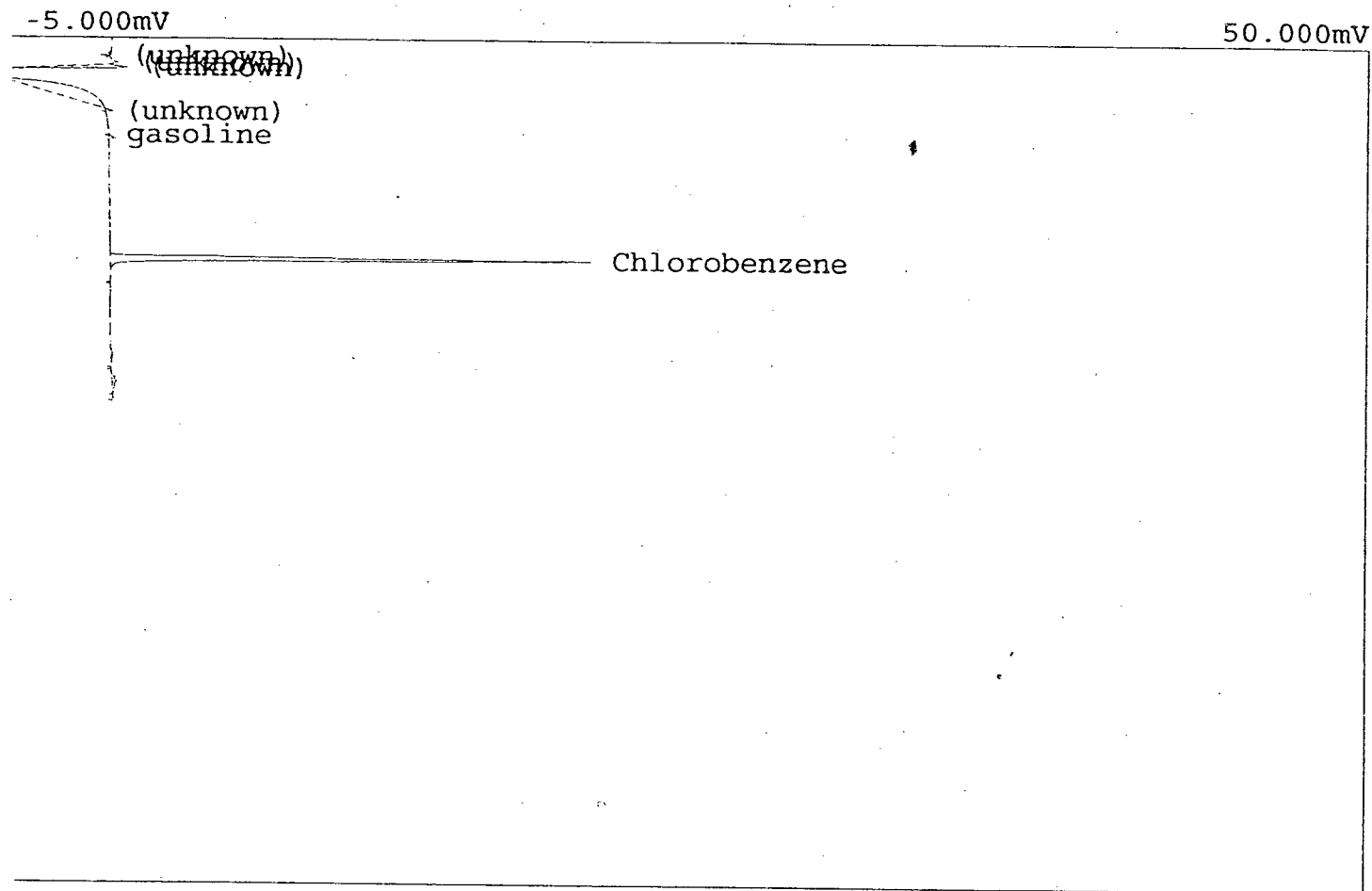
Component	Retention	Area	External	Units
ne	3.783	1.0540	0.0316	ppm
ine	4.650	979.8200	95.0379	ppm
ne	6.050	4.3400	0.1410	ppm
obenzene	7.983	129.9680	581.7726	ppm
benzene	8.750	2.6075	0.1022	ppm
ylene	9.050	17.0425	0.5044	ppm
ene	9.600	8.7980	0.3367	ppm
		1143.6300	677.9265	

Lab name: TEG NW
Analysis date: 12/01/2000 16:07:57
Description: Ch. 1 Detector
Data file: ch1det2052.CHR ()
Sample: EW-1 Dup.
Operator: MF



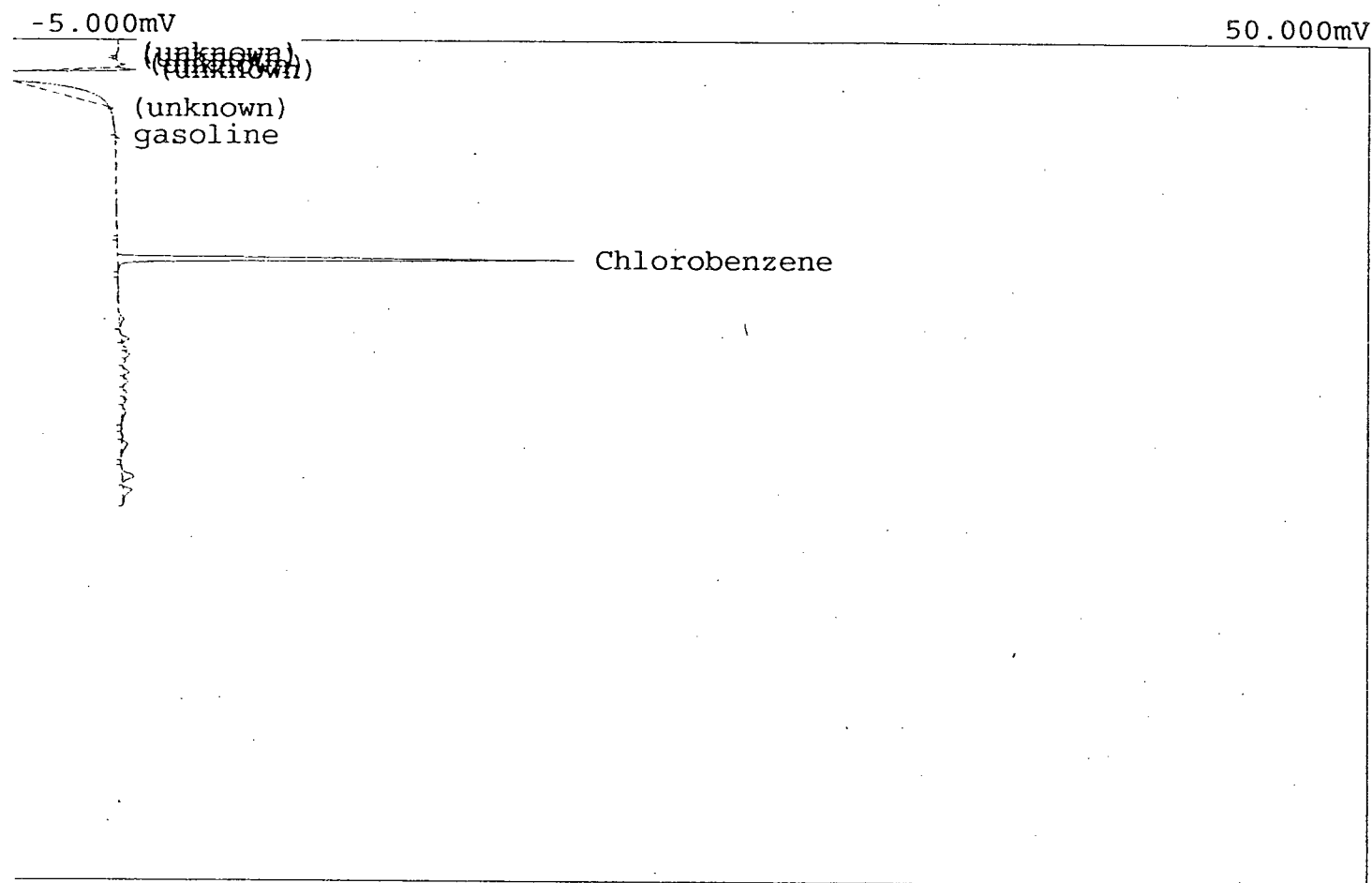
Component	Retention	Area	External	Units
gasoline	3.416	330.4440	32.0515	ppm
Chlorobenzene	8.000	136.6920	611.8711	ppm
		467.1360	643.9226	

Lab name: TEG NW
 Analysis date: 12/01/2000 16:24:55
 Description: Ch. 1 Detector
 Data file: chldet2053.CHR ()
 Sample: BOT-2
 Operator: MF



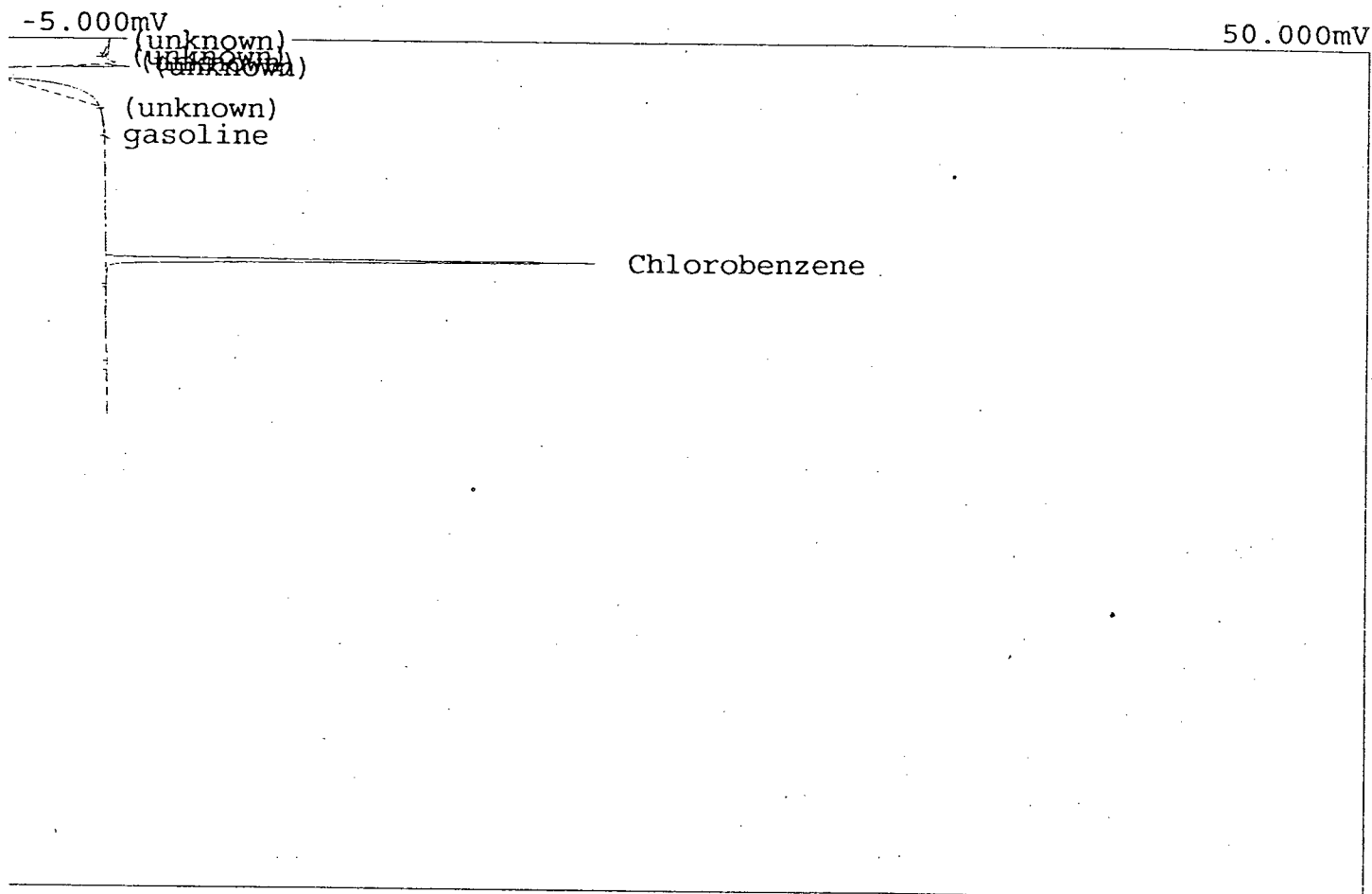
Component	Retention	Area	External	Units
ine	3.516	142.9330	13.8638	ppm
obenzene	7.983	136.5270	611.1325	ppm
		279.4600	624.9963	

Lab name: TEG NW
Analysis date: 12/01/2000 16:39:55
Description: Ch. 1 Detector
Data file: chldet2054.CHR ()
Sample: BOT-4
Operator: MF



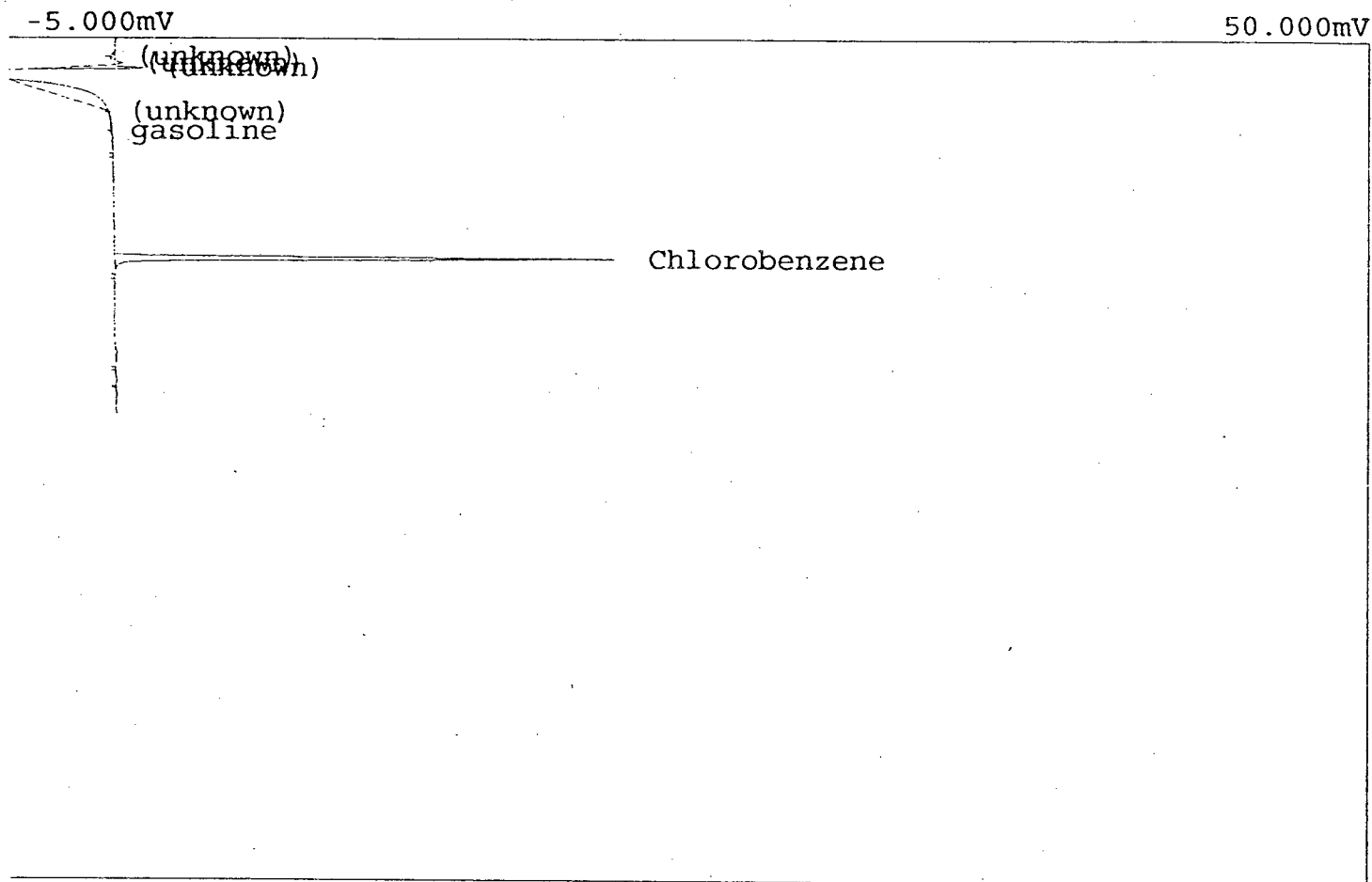
Component	Retention	Area	External	Units
ine	3.466	167.5070	16.2474	ppm
obenzene	7.983	129.2620	578.6124	ppm
		296.7690	594.8597	

Lab name: TEG NW
 Analysis date: 12/01/2000 17:01:09
 Description: Ch. 1 Detector
 Data file: chldet2055.CHR ()
 Sample: BOT-6
 Operator: MF



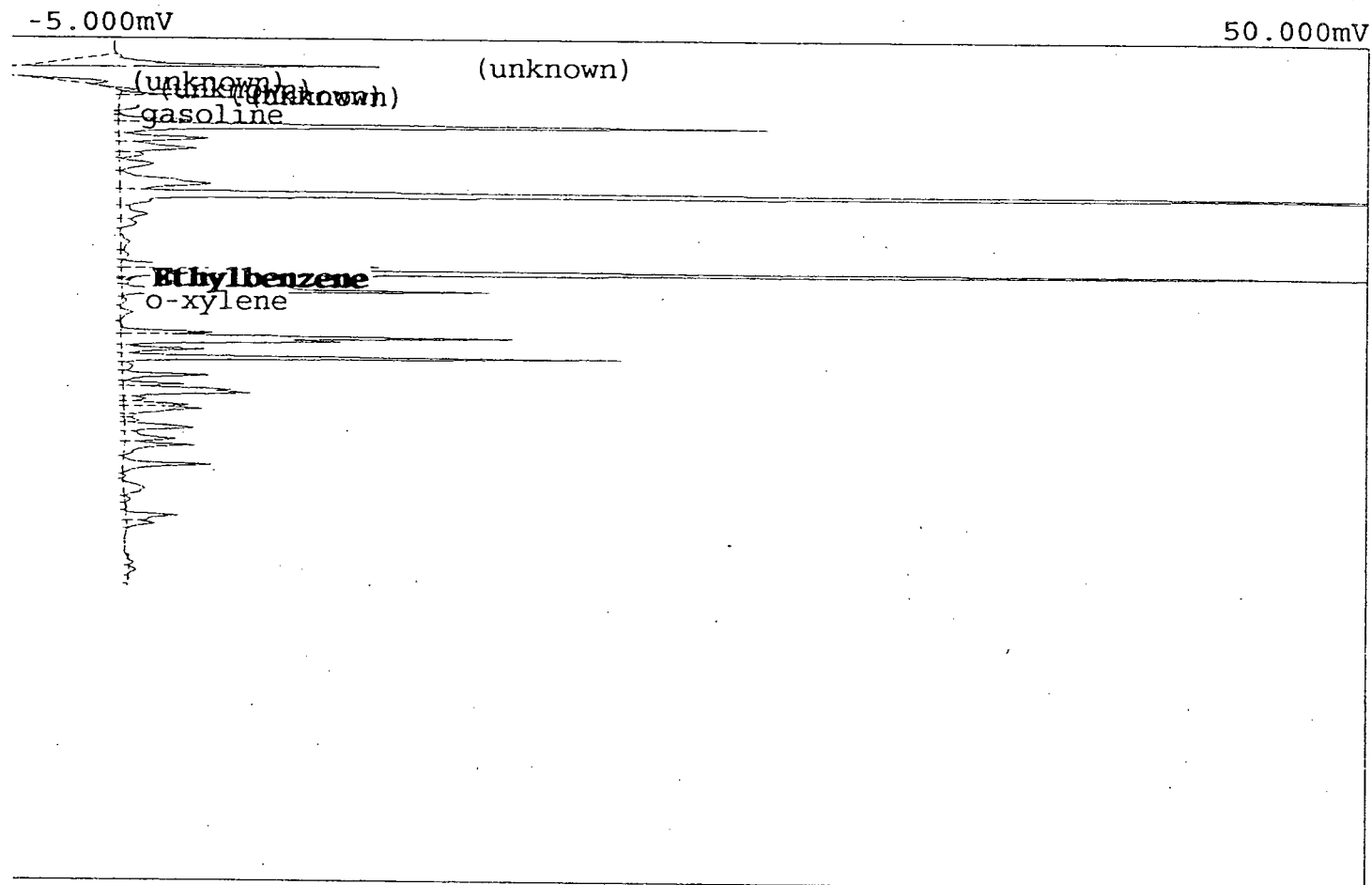
Component	Retention	Area	External	Units
ine	3.450	145.4600	14.1089	ppm
obenzene	7.933	143.2470	641.2131	ppm
		288.7070	655.3220	

Lab name: TEG NW
Analysis date: 12/01/2000 17:16:37
Description: Ch. 1 Detector
Data file: ch1det2056.CHR ()
Sample: BOT-7
Operator: MF



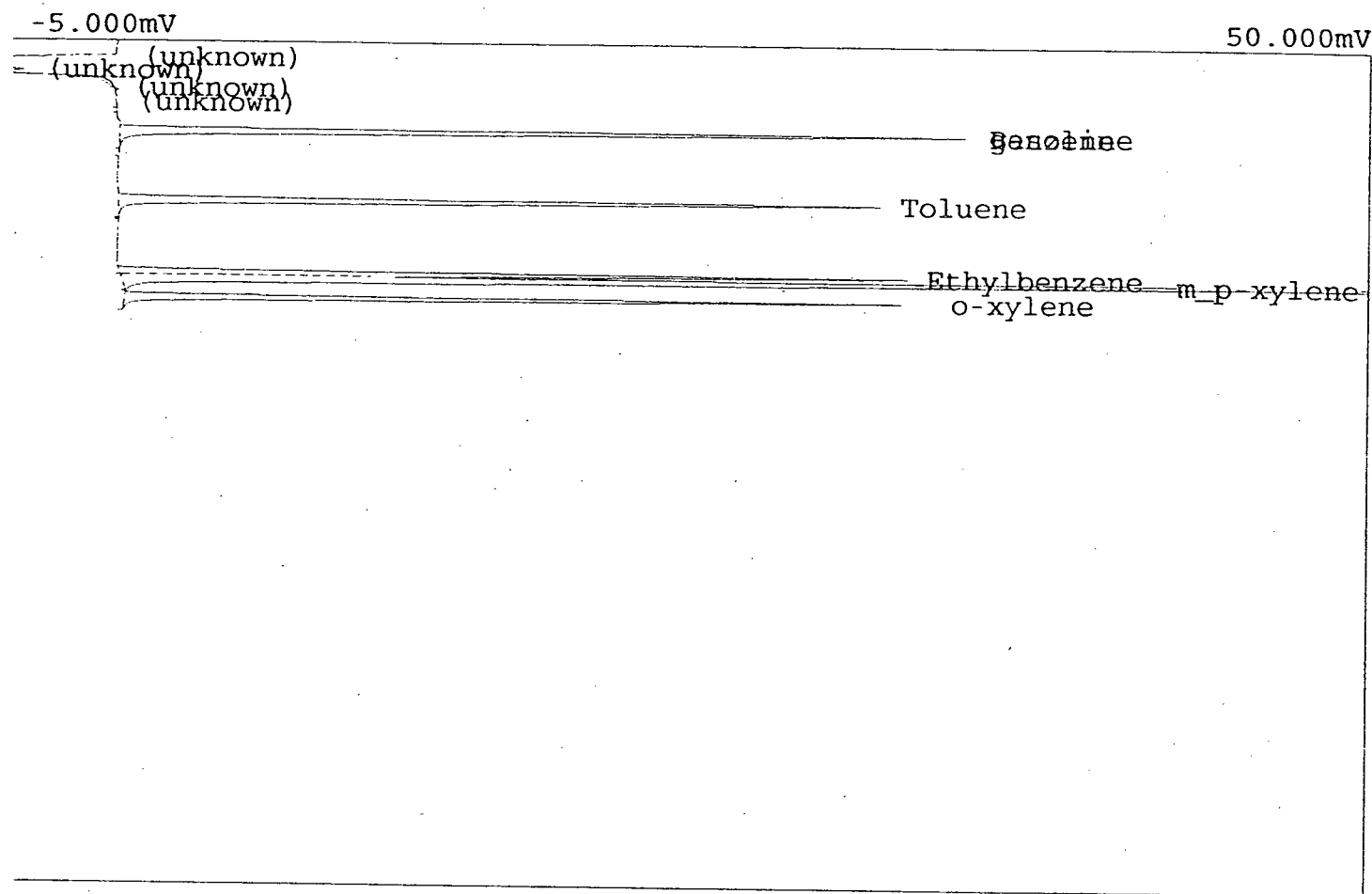
Component	Retention	Area	External	Units
ine	3.366	150.7745	14.6244	ppm
obenzene	7.966	145.2600	650.2238	ppm
		296.0345	664.8482	

Lab name: TEG NW
 Analysis date: 12/01/2000 17:32:02
 Description: Ch. 1 Detector
 Data file: ch1det2057.CHR ()
 Sample: 200 PPM GAS
 Operator: MF



Component	Retention	Area	External	Units
ine	2.783	2213.5800	214.7068	ppm
benzene	8.650	0.6425	0.0252	ppm
benzene	8.666	0.5420	0.0213	ppm
benzene	8.700	0.8570	0.0336	ppm
ene	9.500	2.1145	0.0809	ppm
		2217.7360	214.8677	

Lab name: TEG NW
 Analysis date: 12/01/2000 17:54:23
 Description: Ch. 1 Detector
 Data file: ch1det2058.CHR ()
 Sample: 10 PPM BTEX
 Operator: MF



Component	Retention	Area	External	Units
ine	3.266	1679.7545	162.9282	ppm
ne	3.266	303.2550	9.0908	ppm
ne	5.766	287.0840	9.3292	ppm
benzene	8.383	232.9545	9.1342	ppm
ylene	8.600	618.5720	18.3081	ppm
ene	9.283	237.8890	9.1051	ppm
		3359.5090	217.8956	

TEG ANALYSIS LOG
EPA 602/8020 (BTEX)

CLIENT: Nowicki CLIENT PROJECT #: _____

DATE: 12-4-00 TEG PROJECT #: _____ ANALYST(S) mas

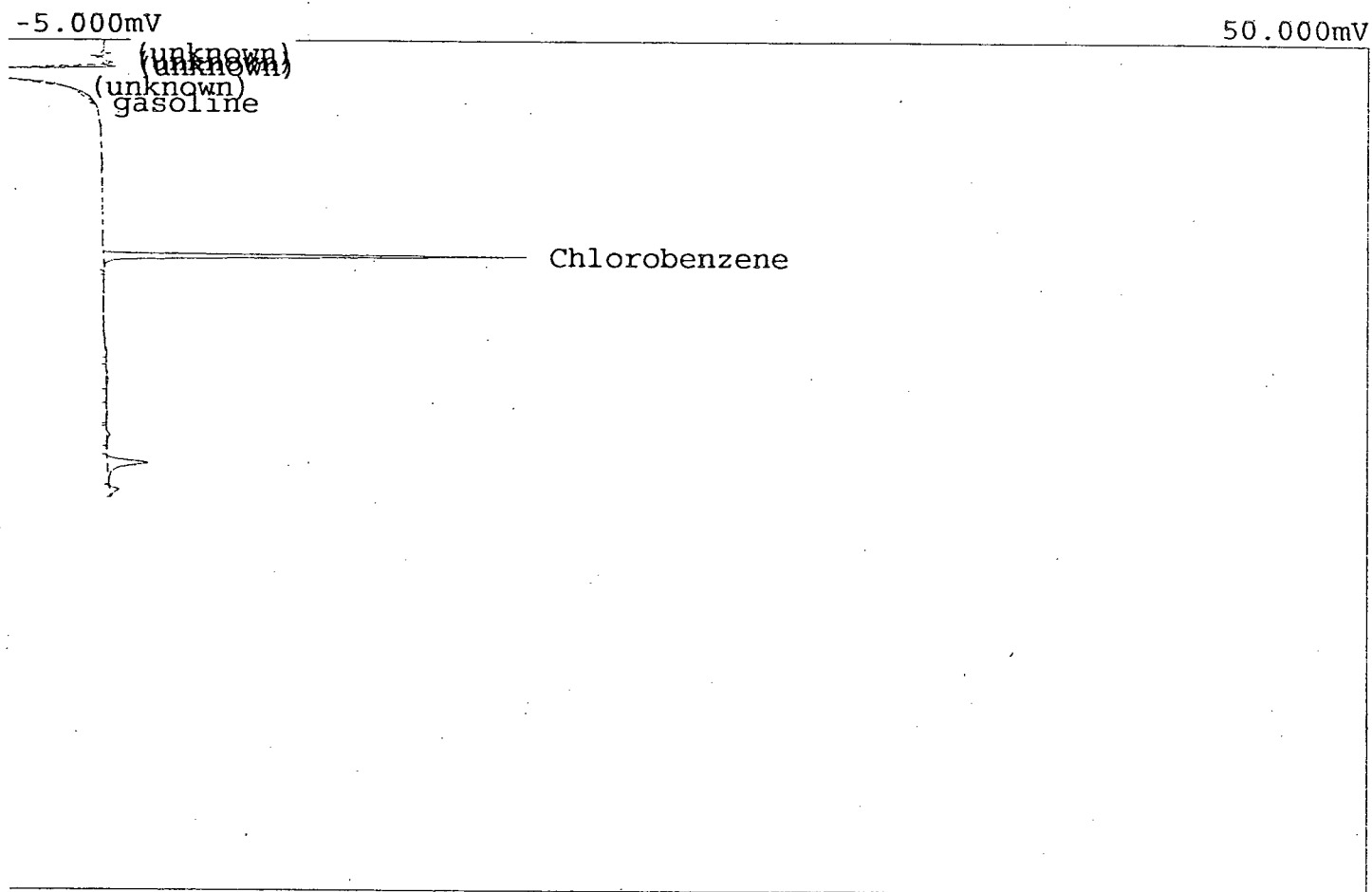
LOCATION: _____

INSTRUMENT: Gc 1 pin 1+2 CONDITIONS: Soils

3.1 5.6 8.1 1.3 9.0

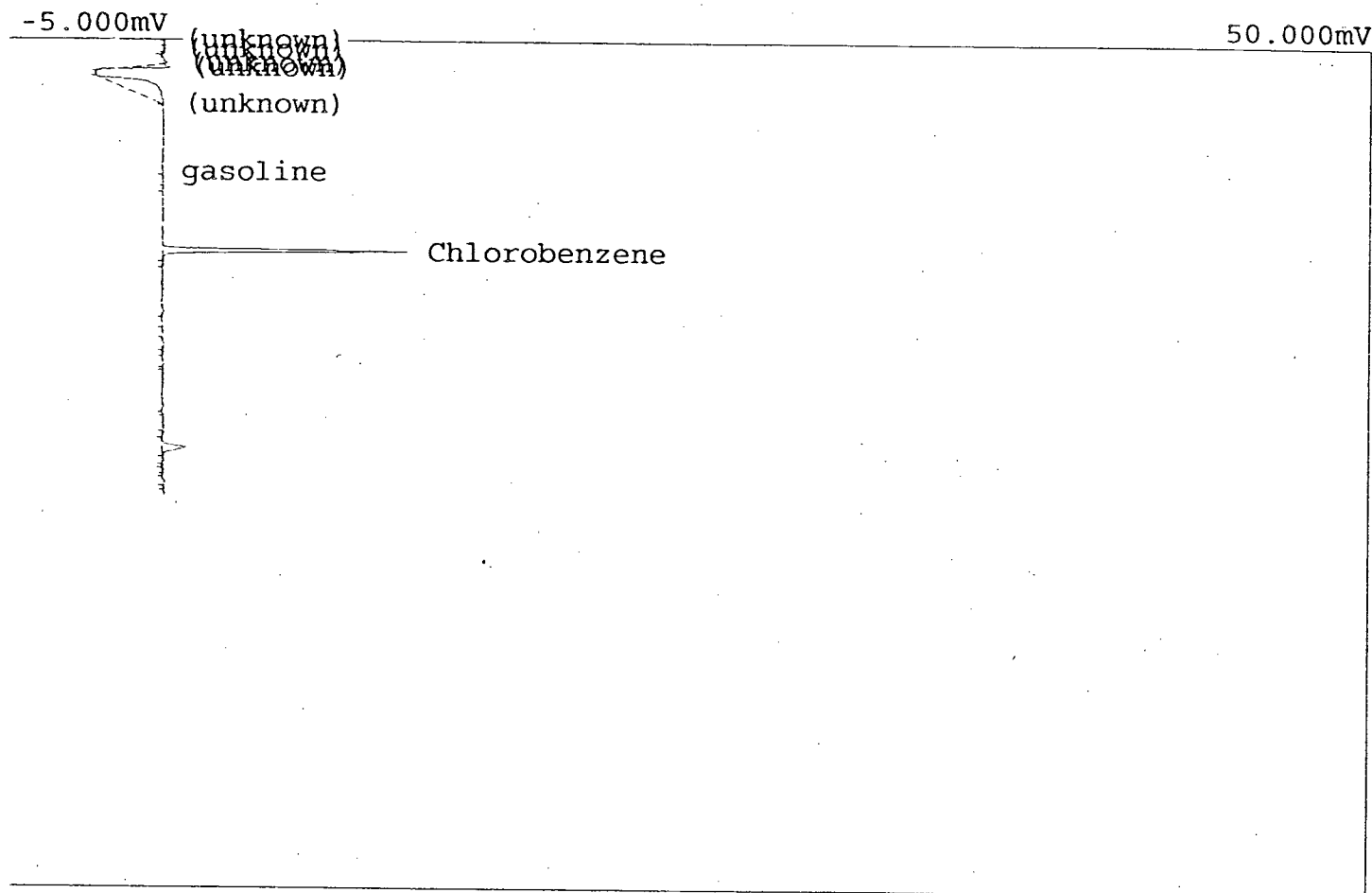
[illegible]

Lab name: TEG NW
Analysis date: 12/04/2000 11:01:01
Description: Ch. 1 Detector
Data file: ch1det2063.CHR ()
Sample: TP-2
Operator: MF



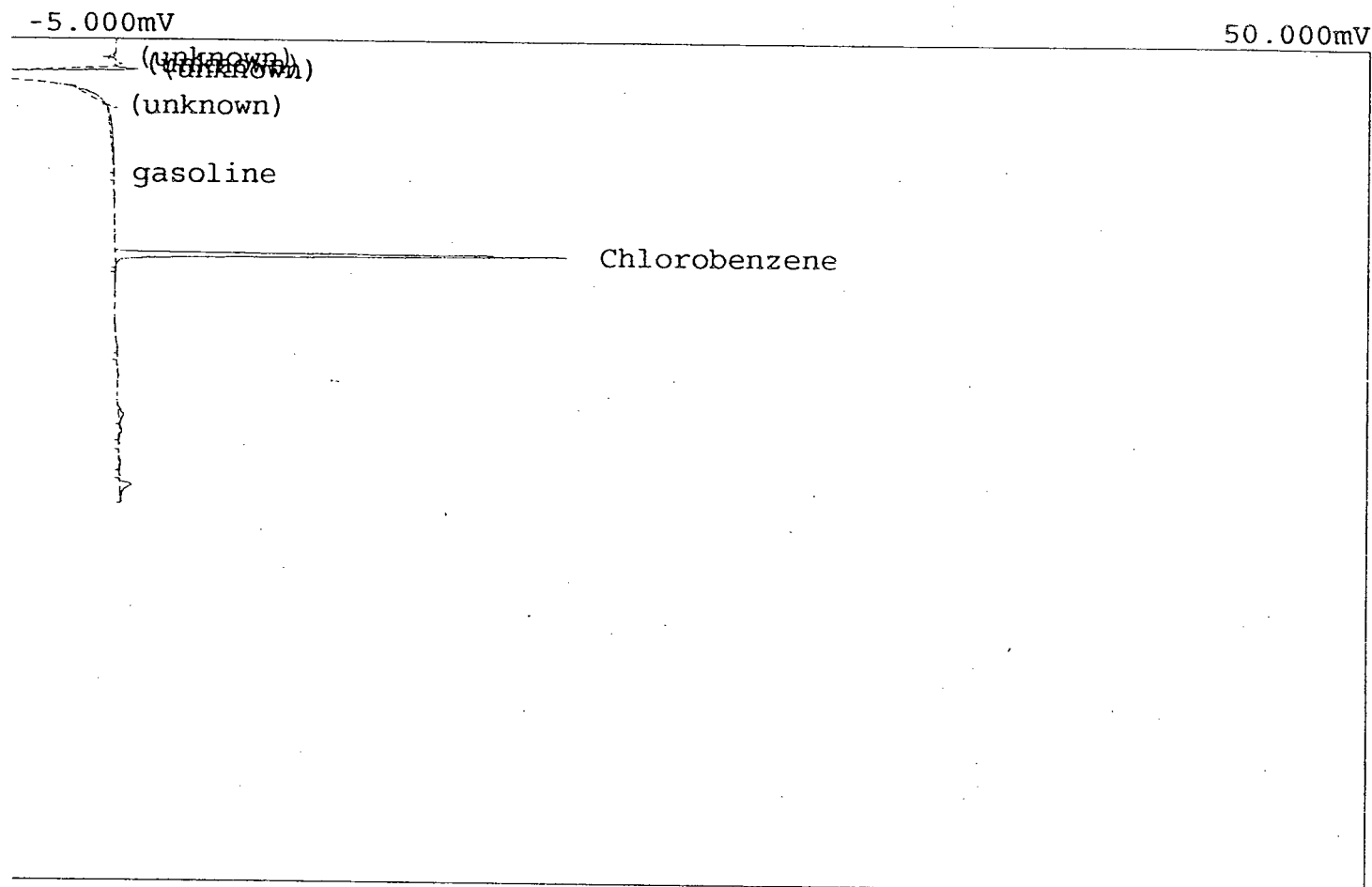
Component	Retention	Area	External	Units
gasoline	2.300	158.7545	15.3984	ppm
Chlorobenzene	7.766	121.1000	542.0770	ppm
		279.8545	557.4754	

Lab name: TEG NW
 ysis date: 12/04/2000 11:01:01
 scription: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1809.CHR ()
 Sample: TP-1
 Operator: TM



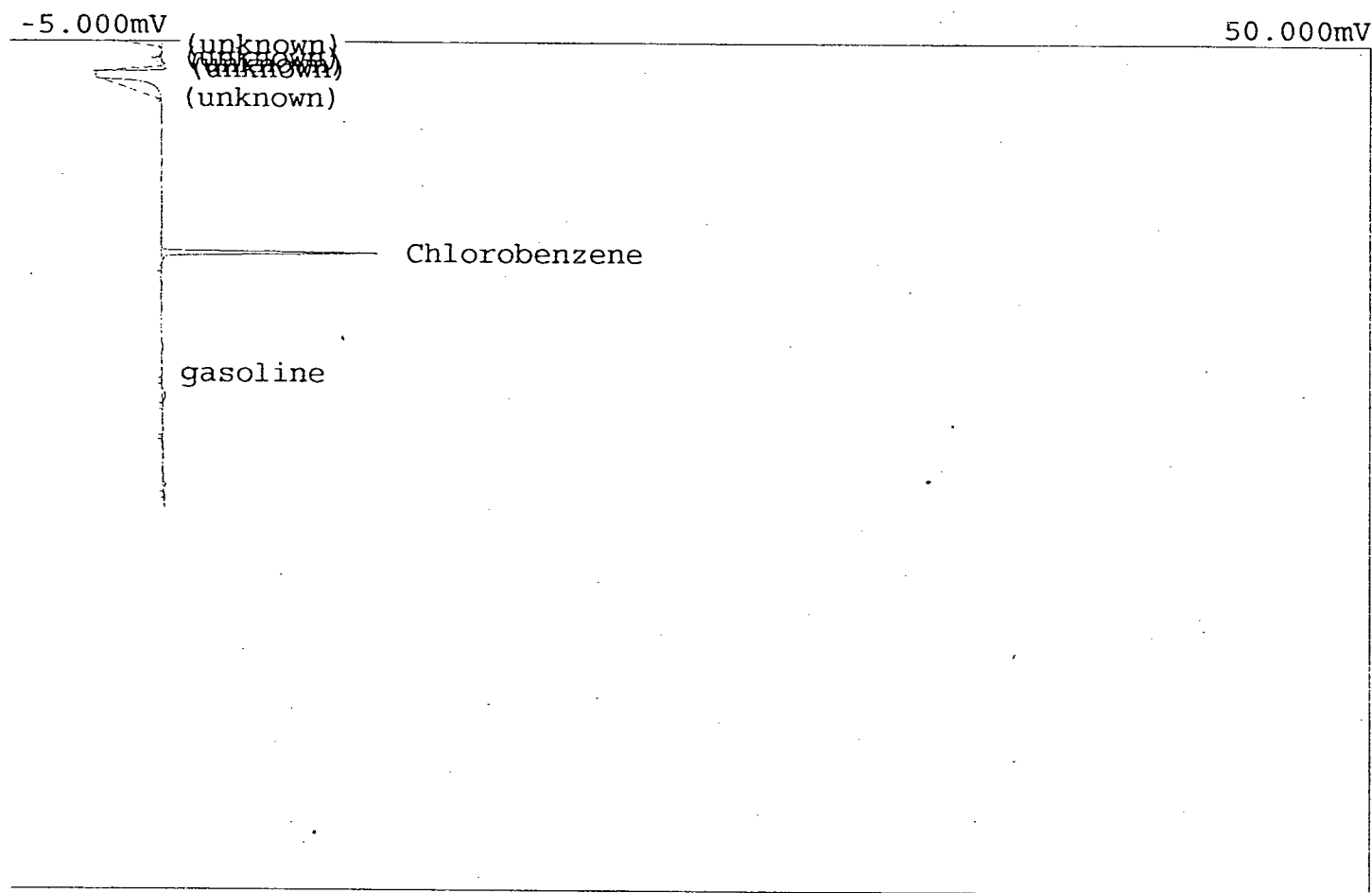
Component	Retention	Area	External	Units
ine	4.750	87.2760	16.9572	
obenzene	7.616	65.9120	4.9977	ppm
		153.1880	21.9549	

Lab name: TEG NW
 Analysis date: 12/04/2000 11:21:28
 Description: Ch. 1 Detector
 Data file: chldet2064.CHR ()
 Sample: Bot-7 Dup.
 Operator: MF



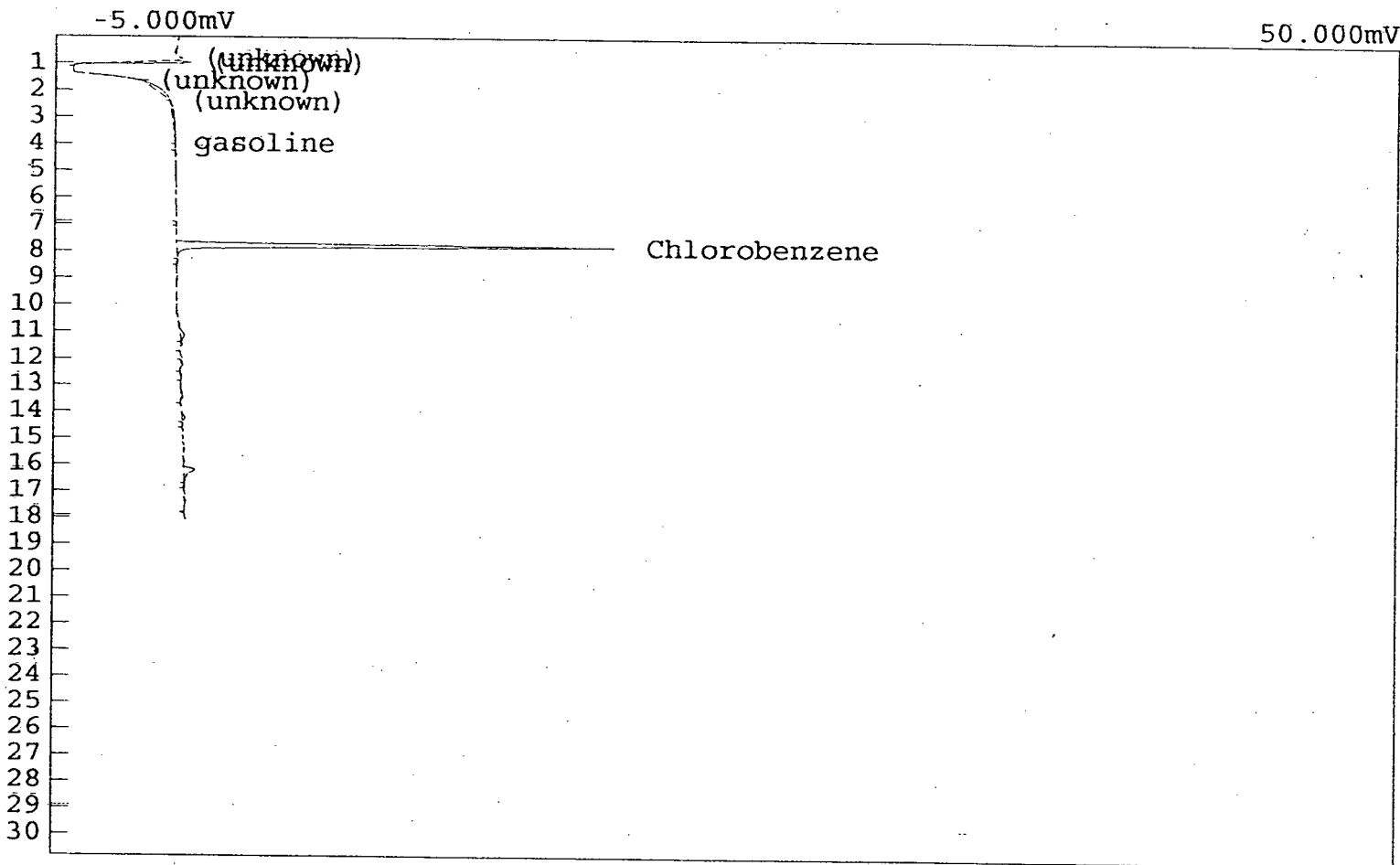
Component	Retention	Area	External	Units
ine	4.866	153.5680	14.8954	ppm
obenzene	7.800	130.6080	584.6374	ppm
		284.1760	599.5328	

Lab name: TEG NW
 Analysis date: 12/04/2000 11:21:28
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1810.CHR ()
 Sample: SP2-2
 Operator: TM



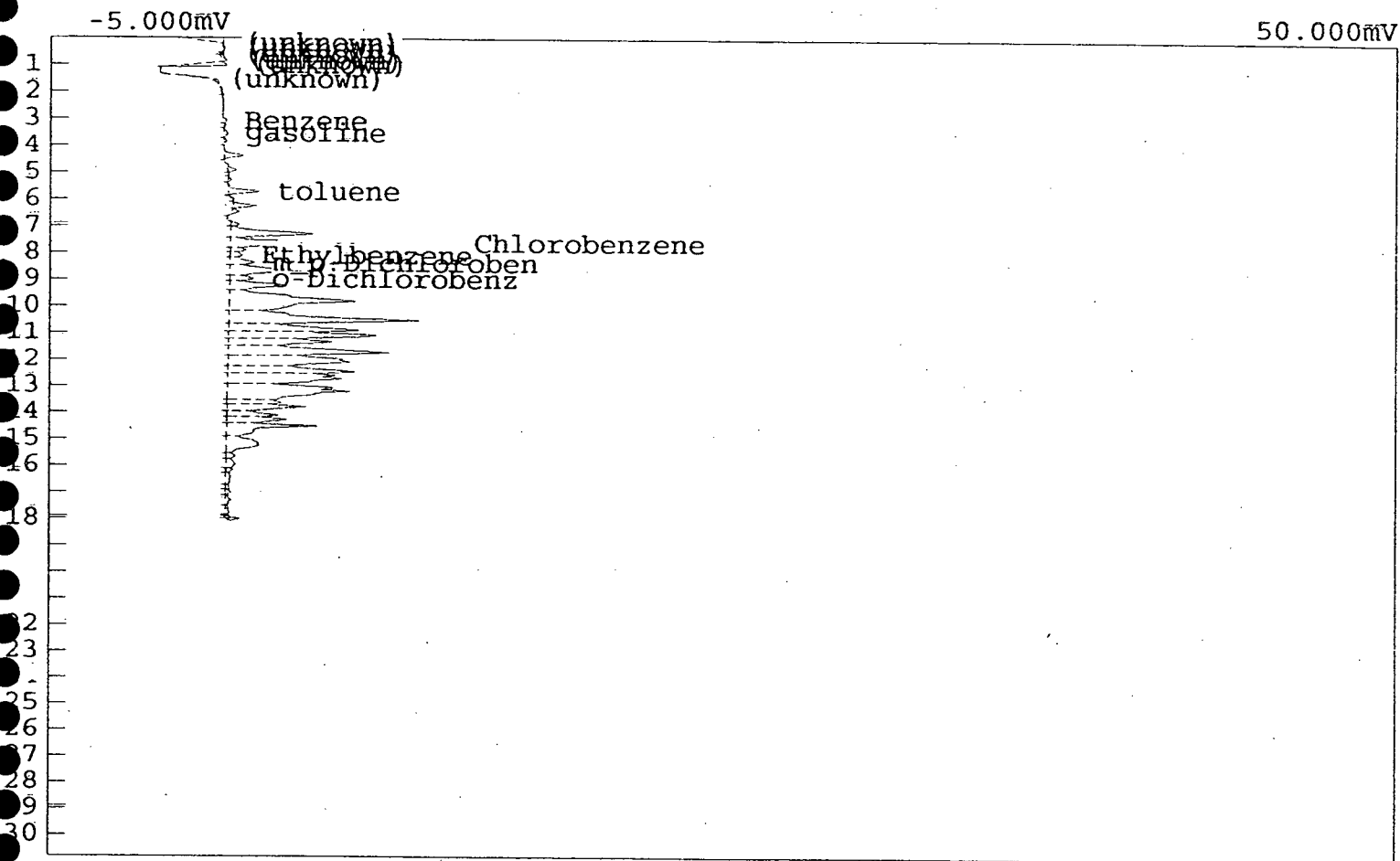
Component	Retention	Area	External	Units
Chlorobenzene	7.600	59.6620	4.5238	ppm
gasoline	11.966	65.2360	12.6749	
		124.8980	17.1987	

Lab name: TEG NW
 Analysis date: 12/04/2000 11:42:23
 Description: Ch. 1 Detector
 Data file: chldet2065.CHR ()
 Sample: SP2-3
 Operator: MF



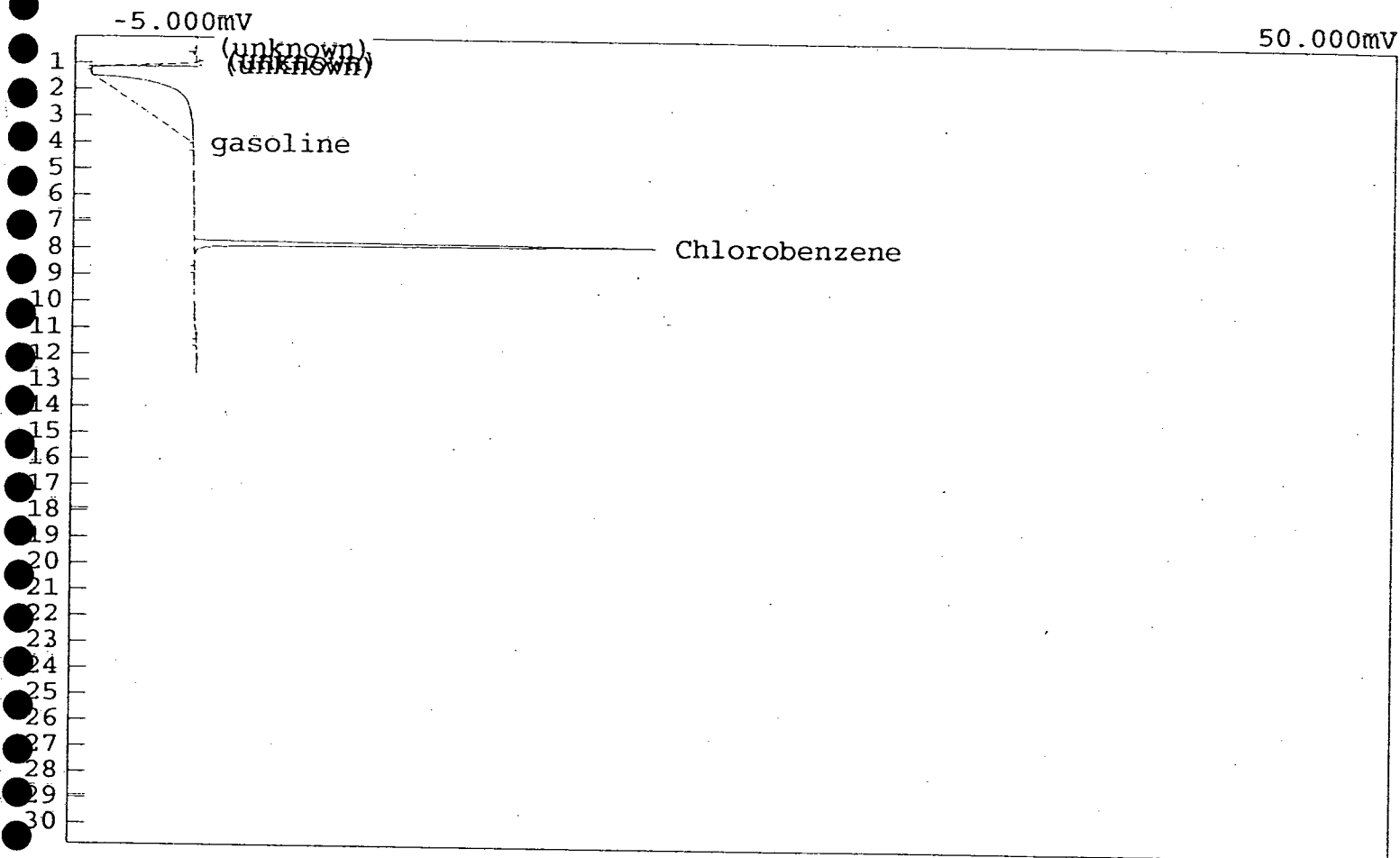
Component	Retention	Area	External	Units
gasoline	3.950	152.0220	14.7454	ppm
Chlorobenzene	7.766	131.6570	589.3330	ppm
		283.6790	604.0784	

Lab name: TEG NW
 Analysis date: 12/04/2000 11:42:23
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1811.CHR ()
 Sample: EX1
 Operator: TM



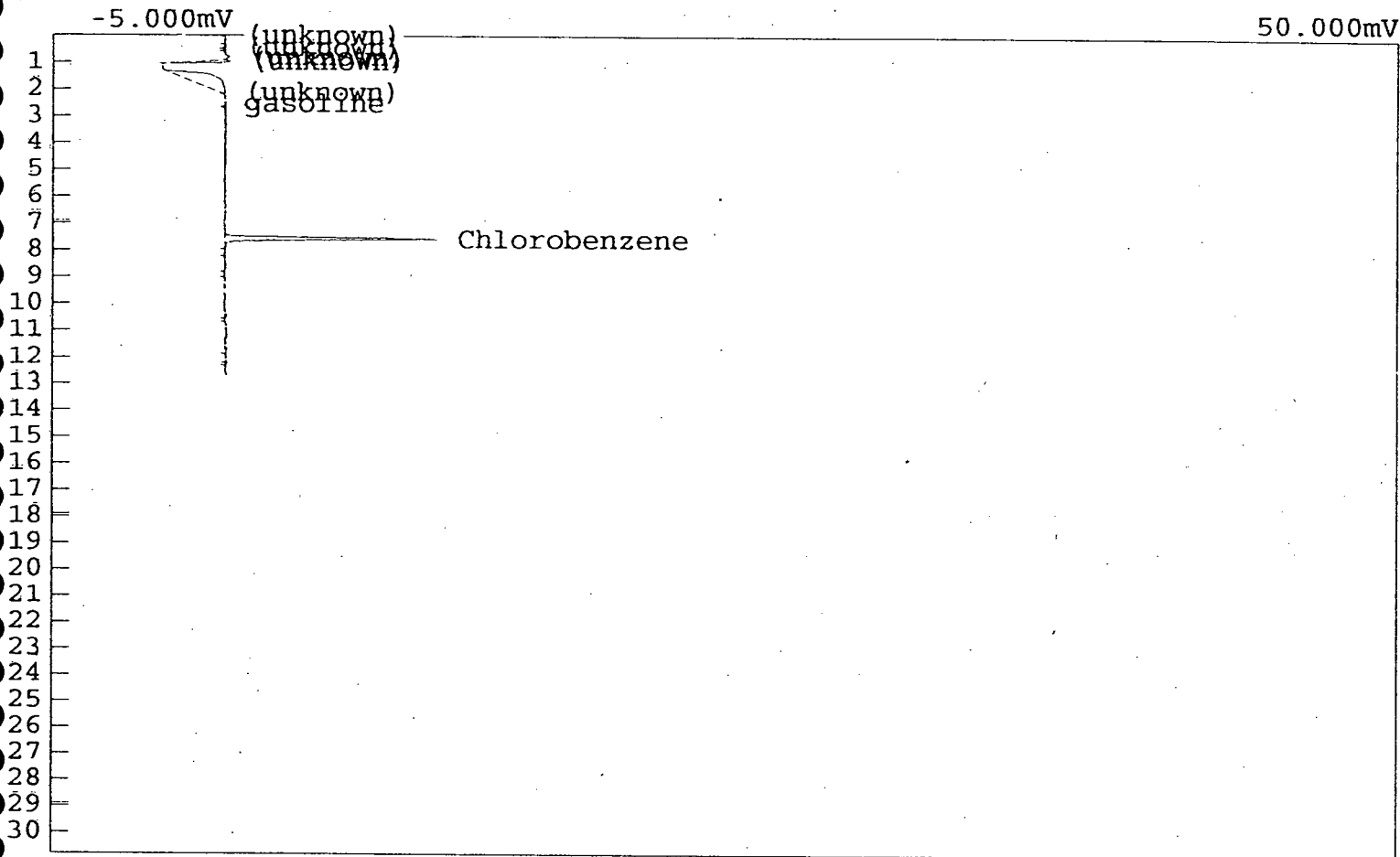
Component	Retention	Area	External	Units
Benzene	3.083	0.9800	0.0693	ppm
Gasoline	3.533	1329.2835	258.2710	
Toluene	5.716	10.5810	0.8012	
Chlorobenzene	7.616	73.0720	5.5406	ppm
Ethylbenzene	8.083	4.5710	0.5585	ppm
m-p-Dichloroben	8.366	11.8090	1.0410	ppm
o-Dichlorobenz	8.966	8.4615	0.7606	ppm
		1438.7580	267.0423	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:03:26
 Description: Ch. 1 Detector
 Data file: chldet2066.CHR ()
 Sample: SP1-6
 Operator: MF



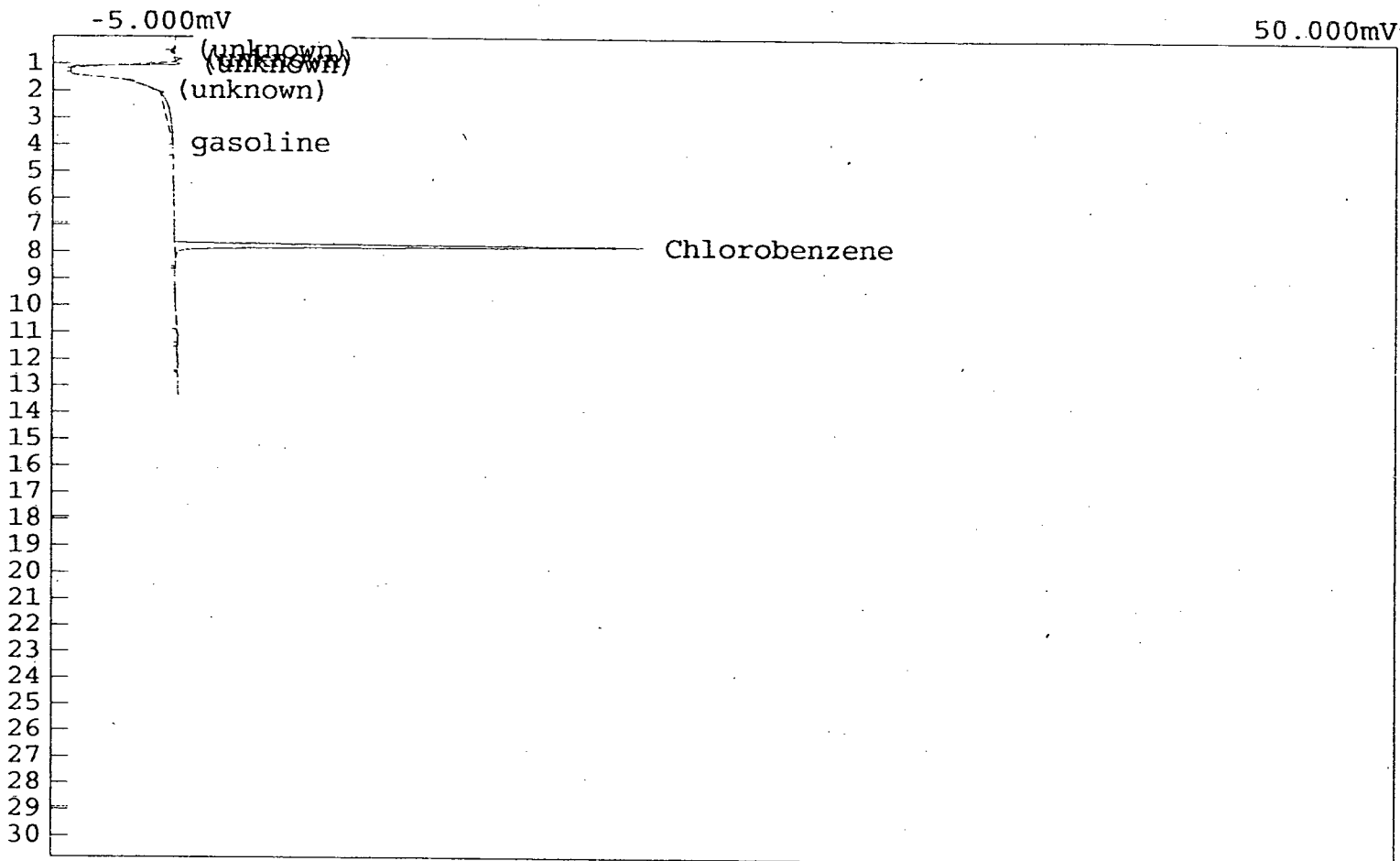
Component	Retention	Area	External	Units
gasoline	4.000	373.7270	36.2497	ppm
Chlorobenzene	7.783	134.8610	603.6750	ppm
		508.5880	639.9248	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:03:26
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1812.CHR ()
 Sample: Bot-1
 Operator: TM



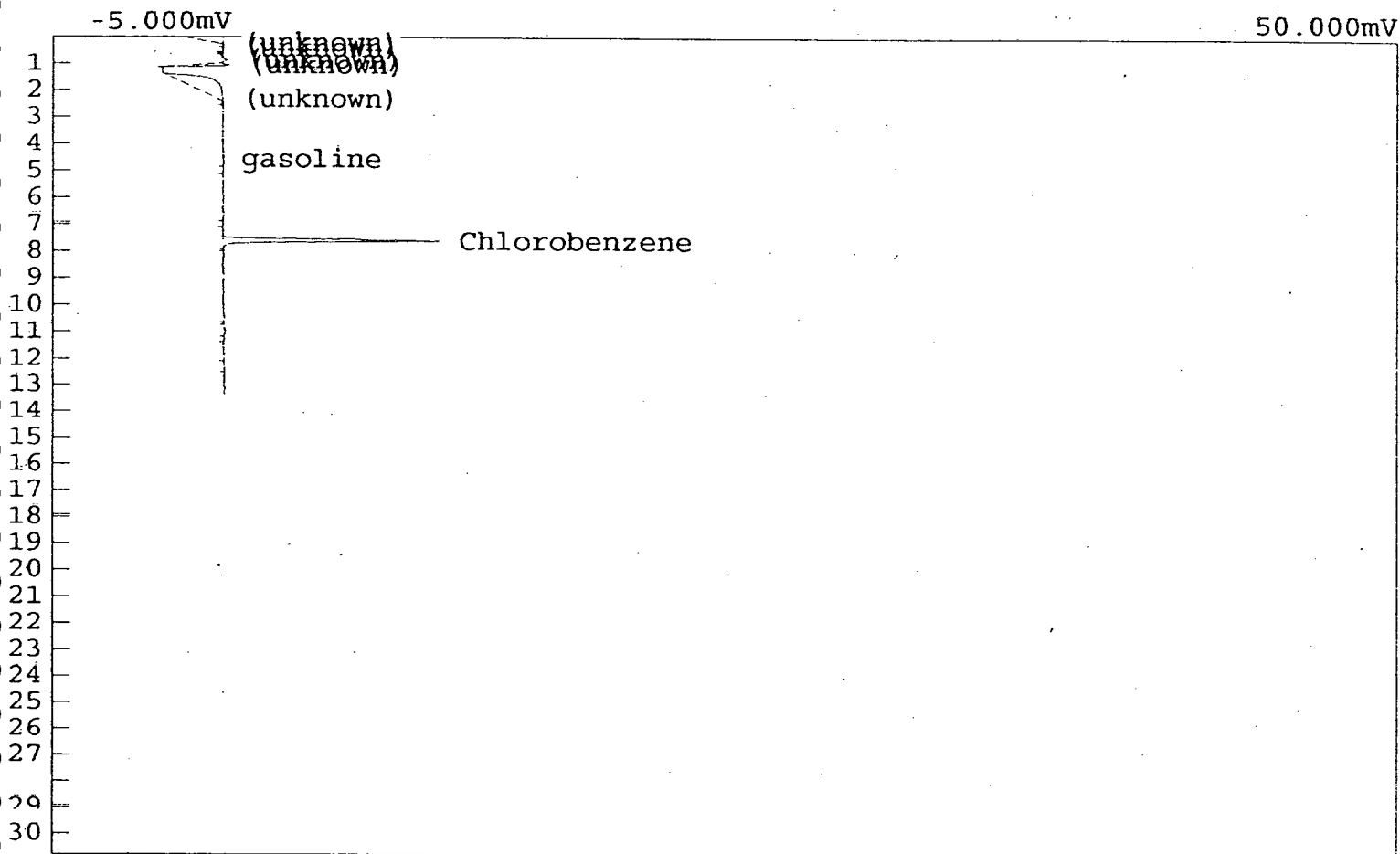
Component	Retention	Area	External	Units
gasoline	2.533	60.9230	11.8369	
Chlorobenzene	7.583	57.2300	4.3394	ppm
		118.1530	16.1763	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:18:58
 Description: Ch. 1 Detector
 Data file: chldet2067.CHR ()
 Sample: SP1-7
 Operator: MF



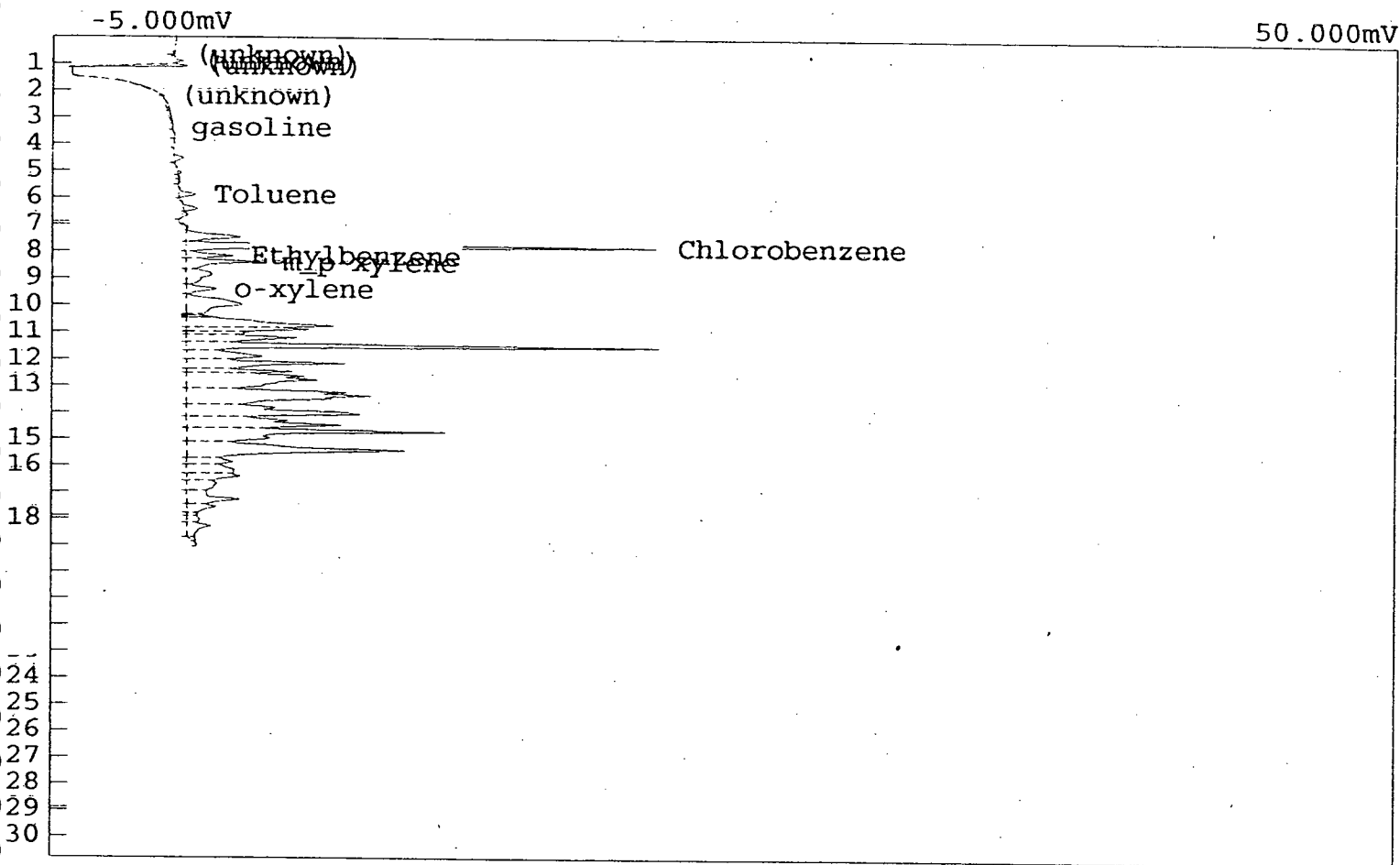
Component	Retention	Area	External	Units
gasoline	3.933	153.6510	14.9034	ppm
Chlorobenzene	7.766	135.9120	608.3796	ppm
		289.5630	623.2830	

Lab name: TEG NW
Analysis date: 12/04/2000 12:18:58
Description: PID- 2 GC-1
Data file: C:\PEAKWIN\ch3de1813.CHR ()
Sample: Bot-2
Operator: TM



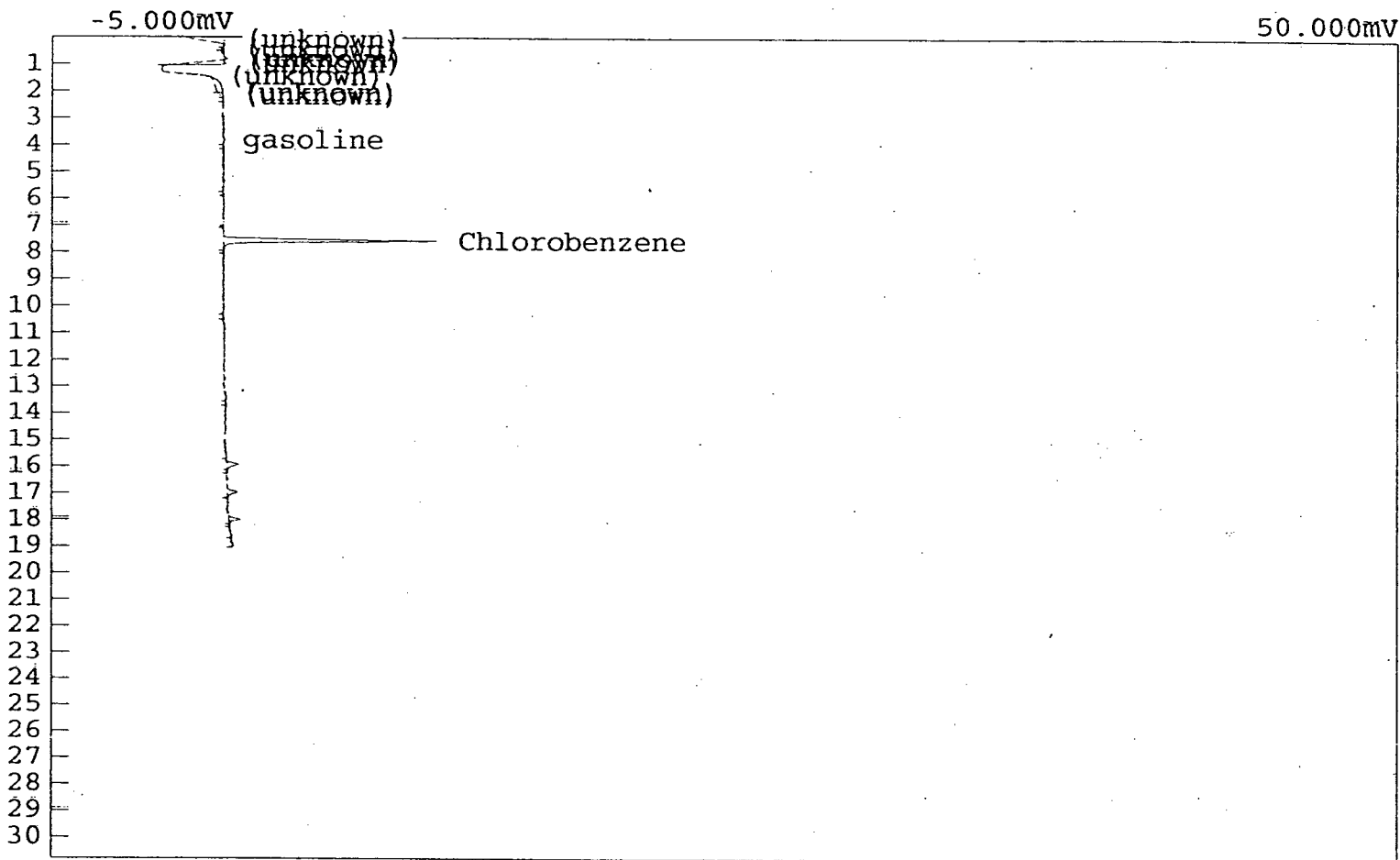
Component	Retention	Area	External	Units
gasoline	4.583	62.4450	12.1327	
Chlorobenzene	7.600	58.4730	4.4337	ppm
		120.9180	16.5663	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:35:17
 Description: Ch. 1 Detector
 Data file: chldet2068.CHR ()
 Sample: SP3-1
 Operator: MF



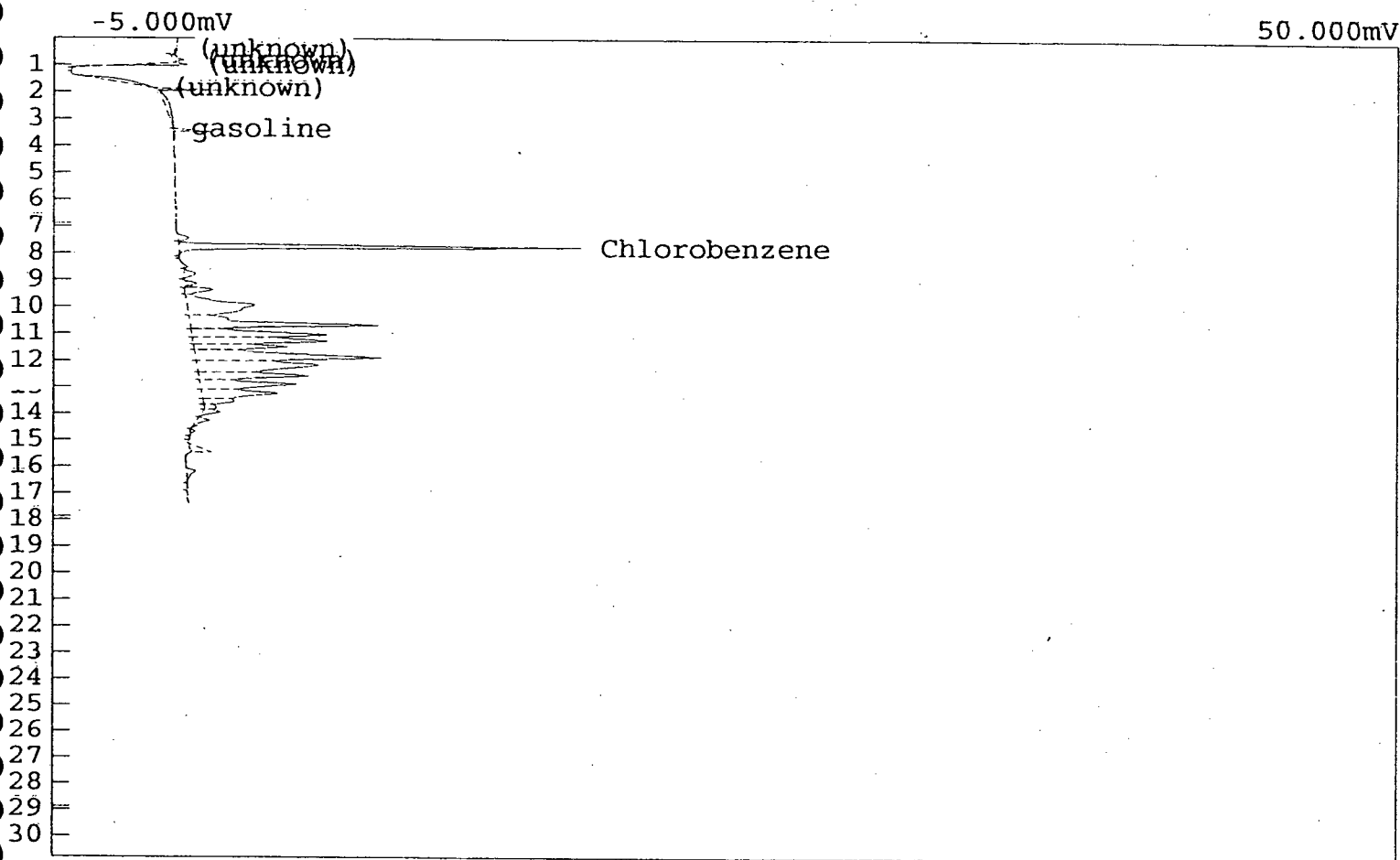
Component	Retention	Area	External	Units
gasoline	3.383	1824.6735	176.9847	ppm
Toluene	5.883	6.7160	0.2182	ppm
Chlorobenzene	7.783	143.3060	641.4772	ppm
Ethylbenzene	8.150	16.6680	0.6536	ppm
m-p-xylene	8.383	30.7945	0.9114	ppm
o-xylene	9.383	13.4115	0.5133	ppm
		2035.5695	820.7584	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:35:17
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1814.CHR ()
 Sample: EW-1
 Operator: TM



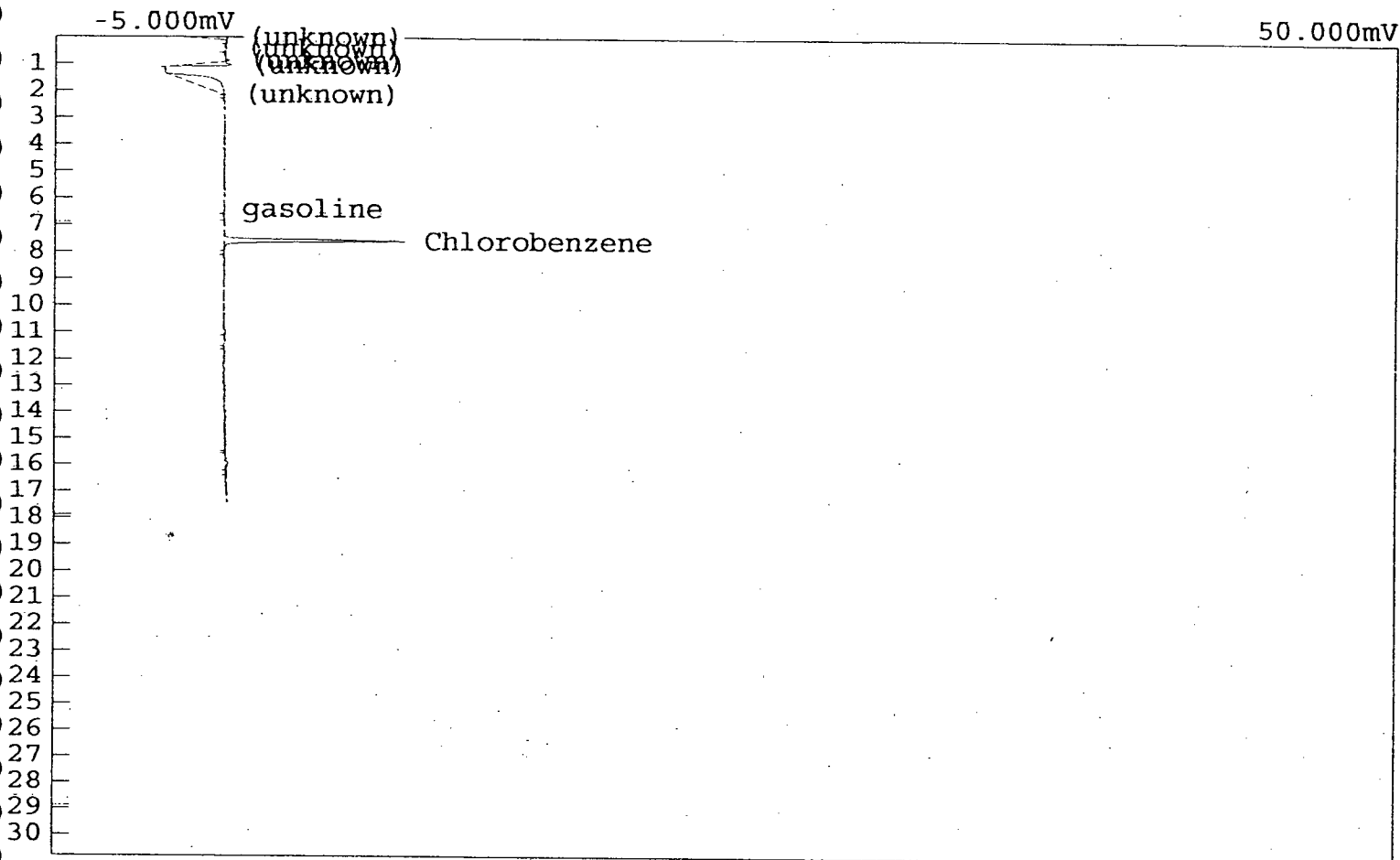
Component	Retention	Area	External	Units
gasoline	3.816	75.9550	14.7576	
Chlorobenzene	7.566	58.0510	4.4017	ppm
		134.0060	19.1592	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:56:55
 Description: Ch. 1 Detector
 Data file: ch1det2069.CHR ()
 Sample: SP3-2
 Operator: MF



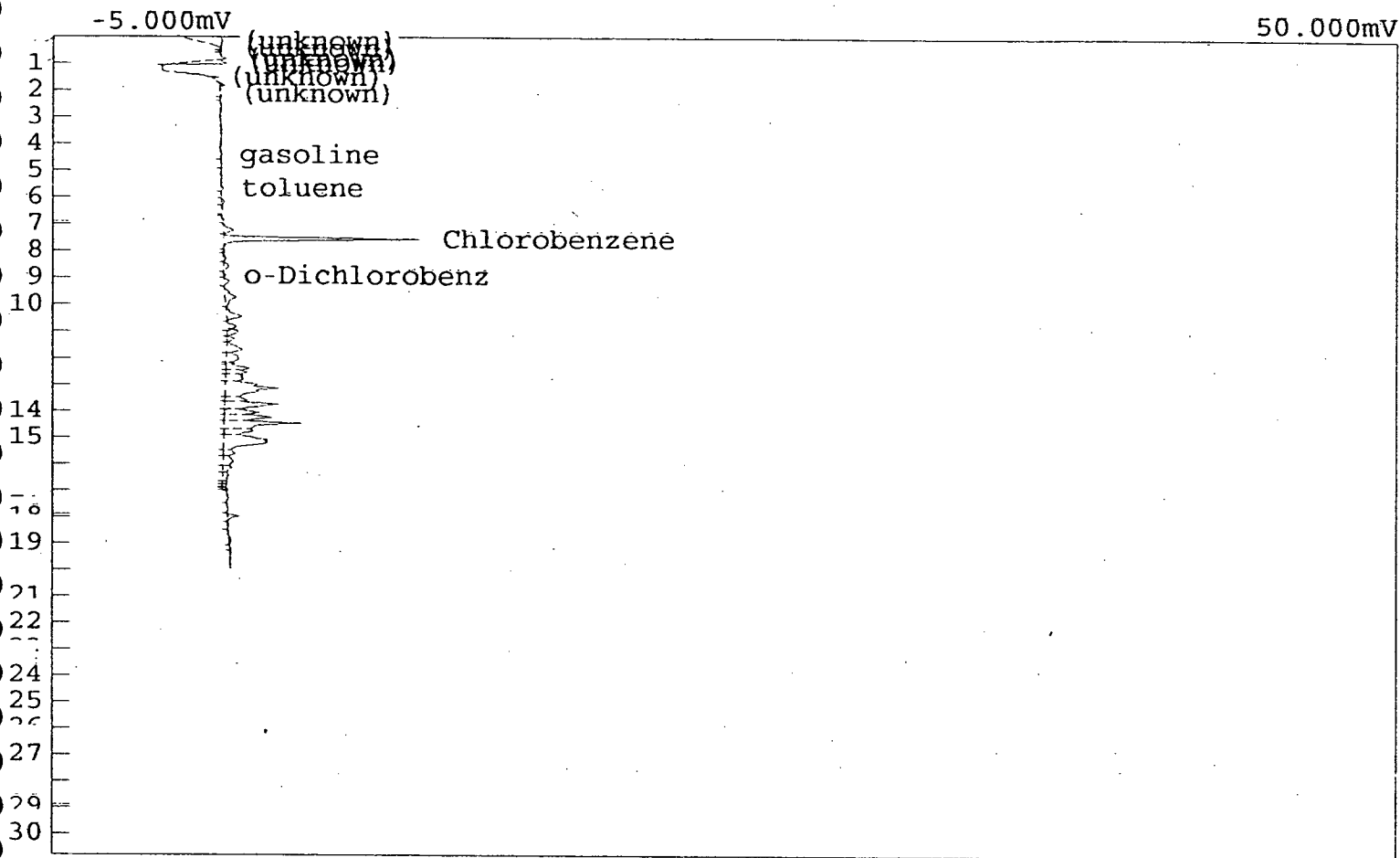
Component	Retention	Area	External	Units
gasoline	3.366	904.2095	87.7040	ppm
Chlorobenzene	7.750	119.4230	534.5703	ppm
o-xylene	9.366	11.6030	0.4441	ppm
		1035.2355	622.7184	

Lab name: TEG NW
 Analysis date: 12/04/2000 12:56:55
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1815.CHR ()
 Sample: EW-2
 Operator: TM



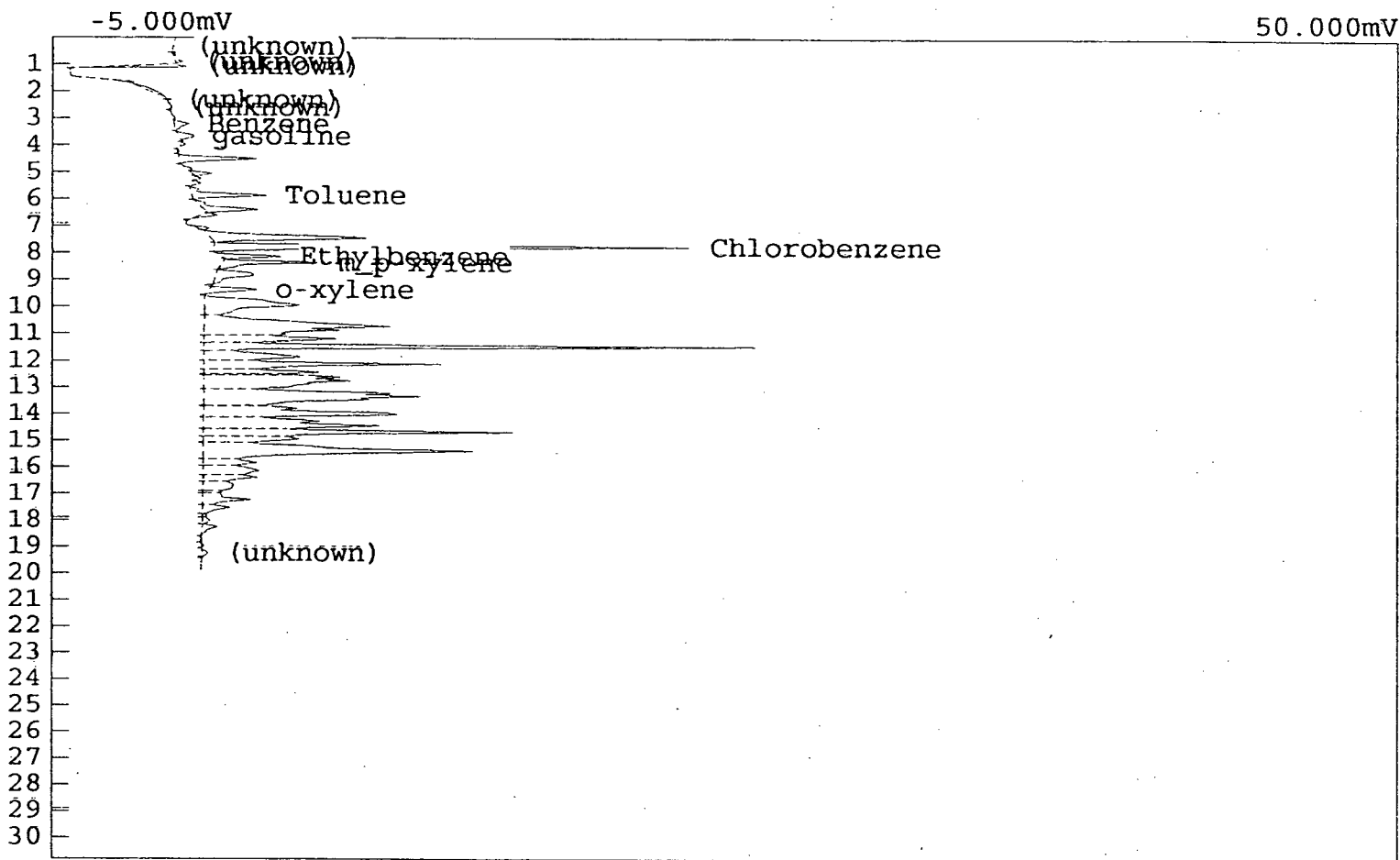
Component	Retention	Area	External	Units
gasoline	6.400	53.7120	10.4359	
Chlorobenzene	7.583	49.7120	3.7694	ppm
		103.4240	14.2052	

Lab name: TEG NW
 Analysis date: 12/04/2000 13:19:09
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1816.CHR ()
 Sample: EW-3
 Operator: TM



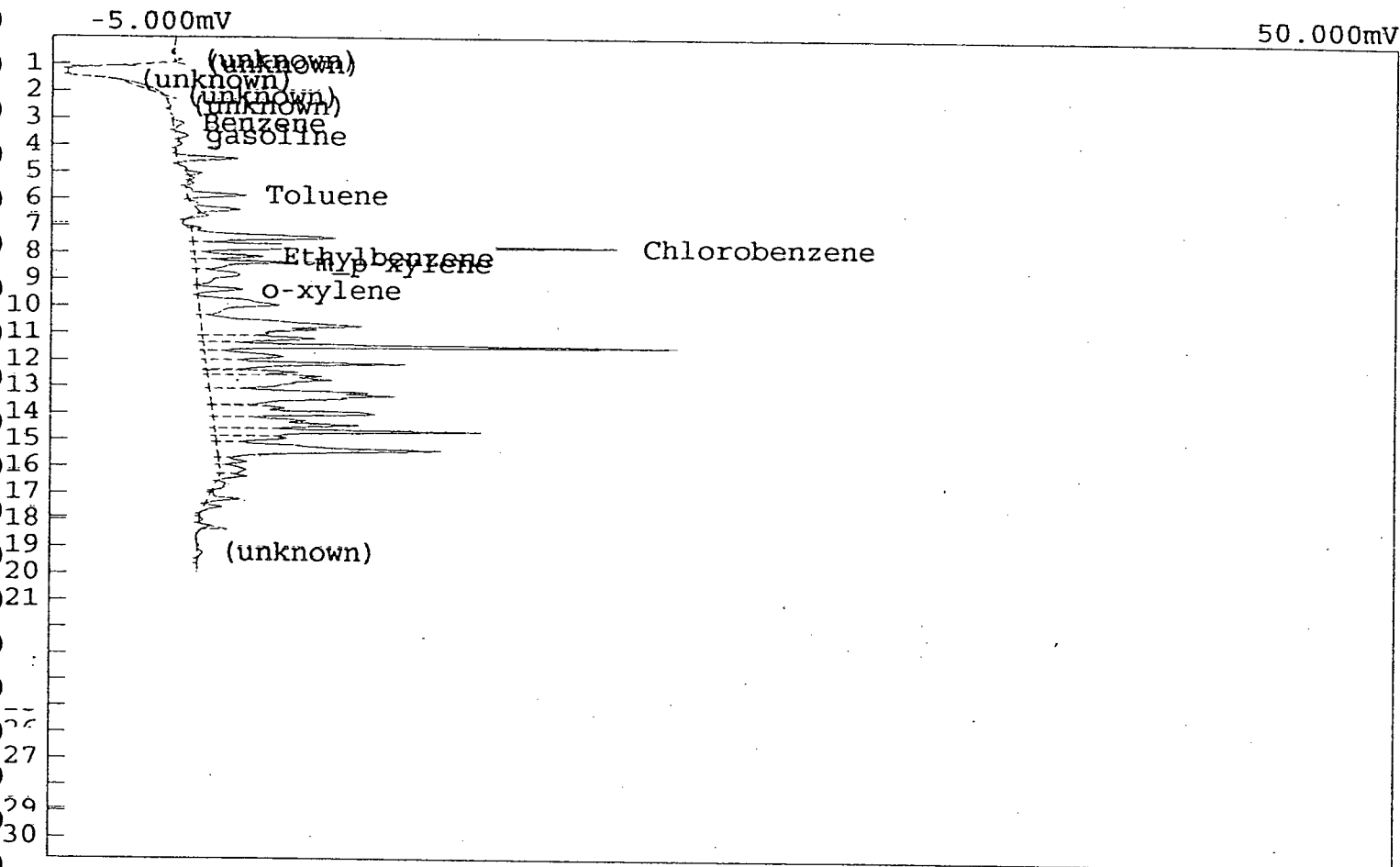
Component	Retention	Area	External	Units
gasoline	4.416	360.2980	70.0035	
toluene	5.666	0.7560	0.0572	
Chlorobenzene	7.550	55.3160	4.1943	ppm
m_p-Dichloroben	8.316	0.9080	0.0800	ppm
o-Dichlorobenz	8.916	0.6790	0.0610	ppm
		417.9570	74.3961	

Lab name: TEG NW
 Analysis date: 12/04/2000 13:19:09
 Description: Ch. 1 Detector
 Data file: chidet2070.CHR ()
 Sample: SP3-3
 Operator: MF



Component	Retention	Area	External	Units
Benzene	3.216	7.5420	0.2261	ppm
gasoline	3.666	2197.7885	213.1751	ppm
Toluene	5.866	28.7300	0.9336	ppm
Chlorobenzene	7.766	147.3480	659.5703	ppm
Ethylbenzene	8.133	17.0850	0.6699	ppm
m_p-xylene	8.366	30.6690	0.9077	ppm
o-xylene	9.366	16.6525	0.6374	ppm
		2445.8150	876.1200	

Lab name: TEG NW
 Analysis date: 12/04/2000 13:42:51
 Description: Ch. 1 Detector
 Data file: chldet2071.CHR ()
 Sample: SP3-3 Dup.
 Operator: MF



Component	Retention	Area	External	Units
Benzene	3.200	5.9270	0.1777	ppm
Gasoline	3.666	1777.6125	172.4200	ppm
Toluene	5.866	23.2600	0.7559	ppm
Chlorobenzene	7.766	139.1300	622.7842	ppm
Ethylbenzene	8.150	25.0300	0.9814	ppm
p-xylene	8.366	41.4870	1.2279	ppm
o-xylene	9.383	17.4745	0.6688	ppm
		2029.9210	799.0159	

Lab name: TEG NW

Analysis date: 12/04/2000 14:08:25

Description: Ch. 1 Detector

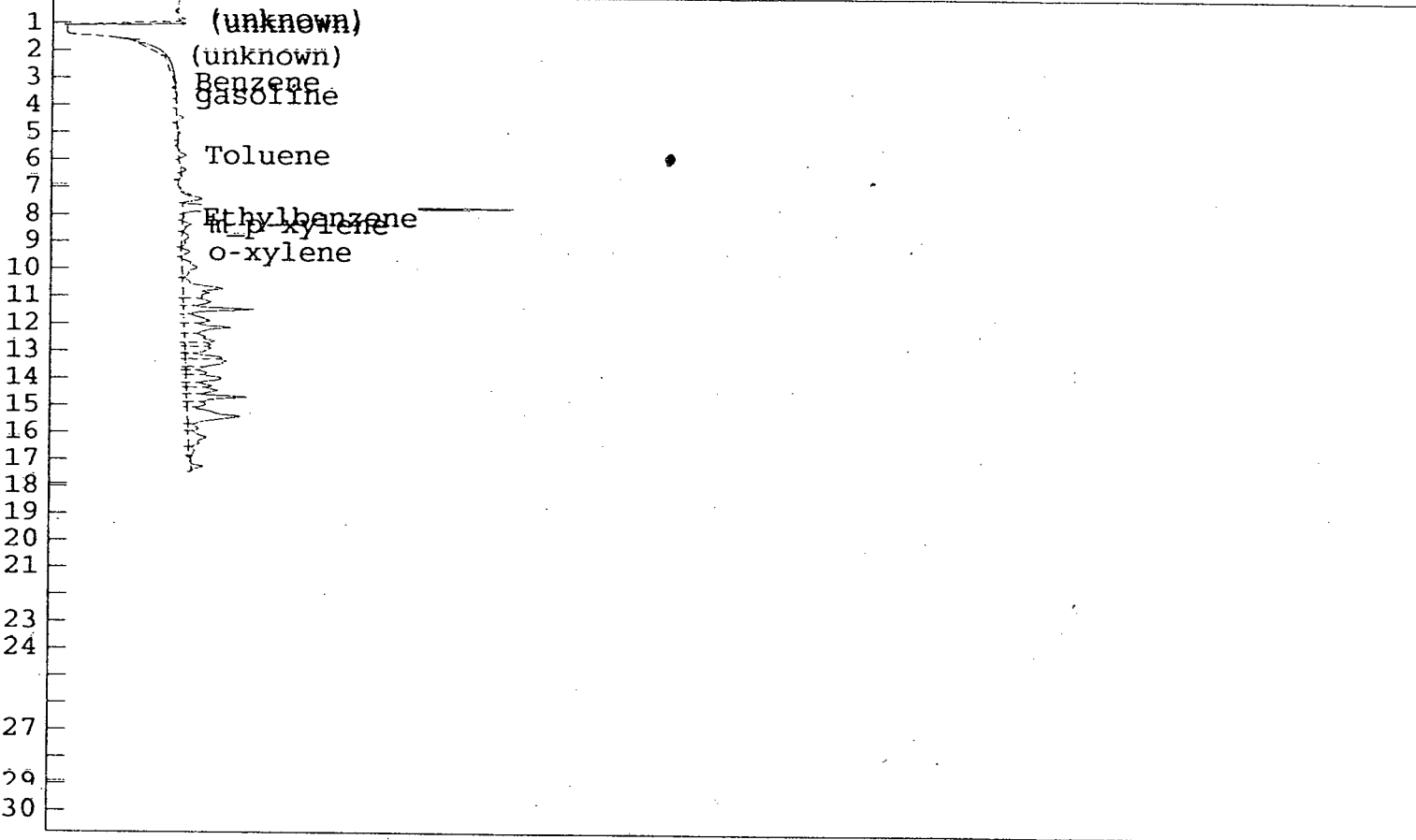
Data file: chldet2072.CHR ()

Sample: SP3-4

Operator: MF

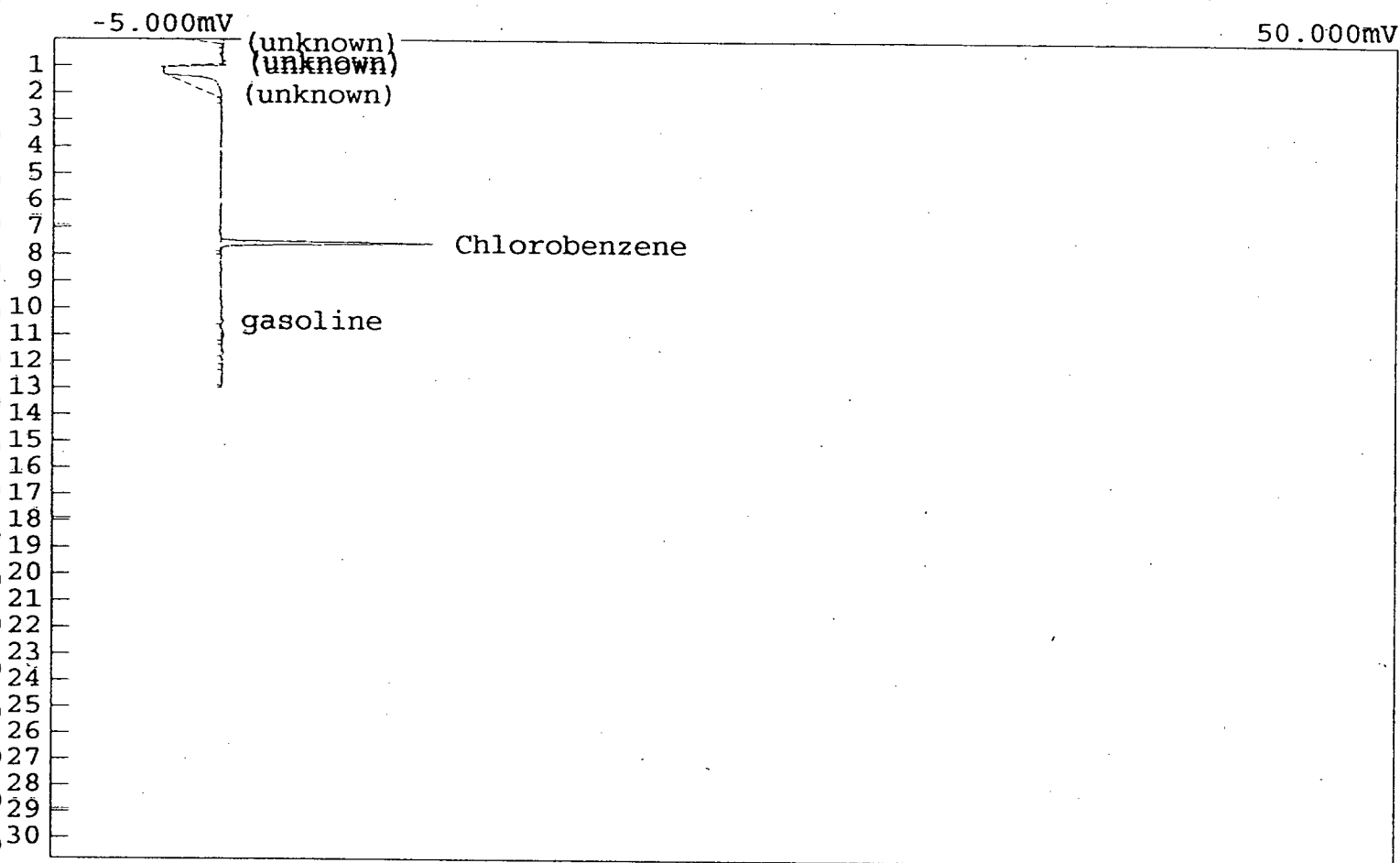
-5.000mV

50.000mV



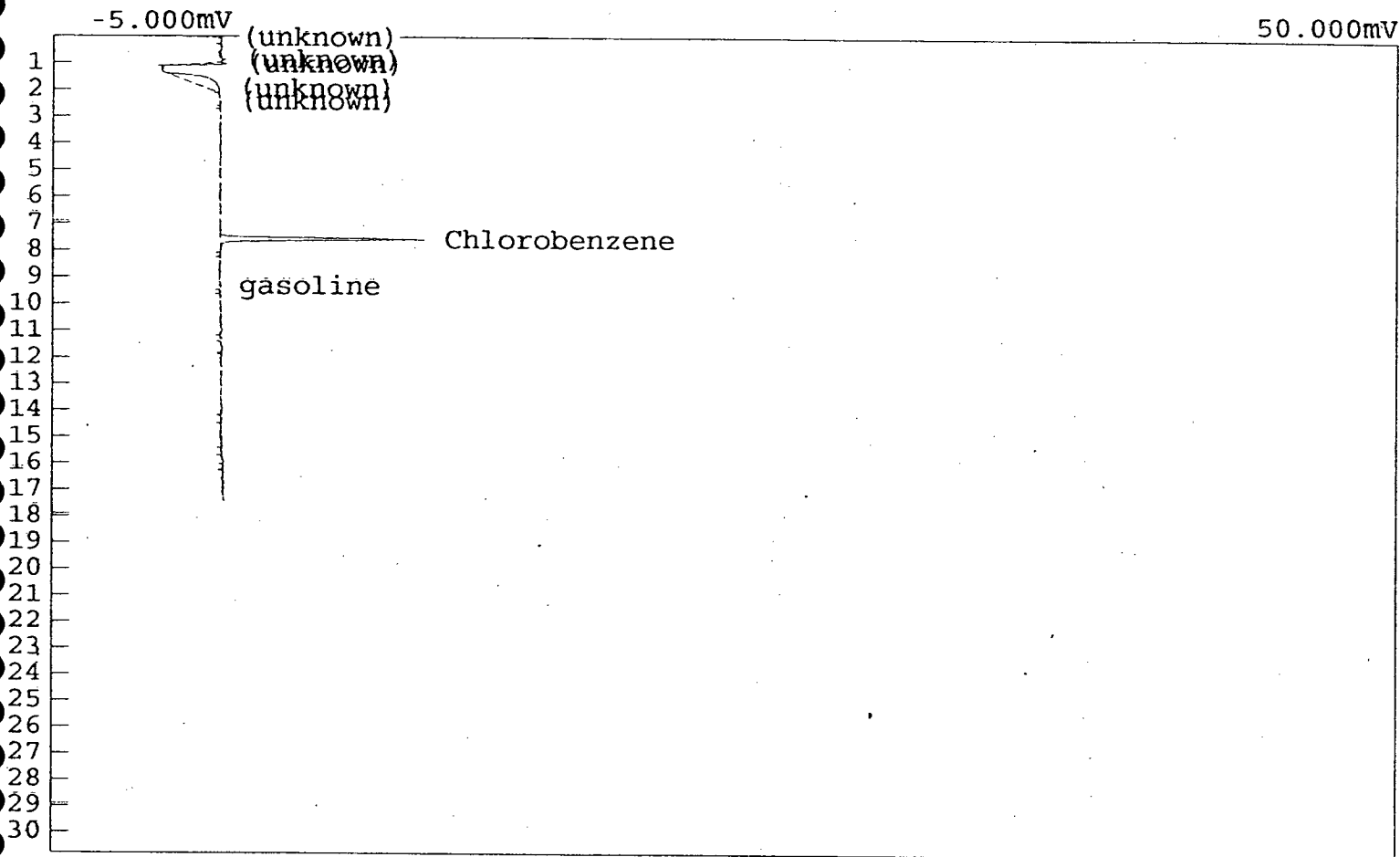
Component	Retention	Area	External	Units
Benzene	3.166	7.9320	0.2378	ppm
Gasoline	3.650	480.6235	46.6182	ppm
Toluene	5.850	2.9940	0.0973	ppm
Chlorobenzene	7.750	97.6845	437.2628	ppm
Ethylbenzene	8.100	0.5050	0.0198	ppm
p-xylene	8.366	3.5335	0.1046	ppm
o-xylene	9.366	3.4220	0.1310	ppm
		596.6945	484.4714	

Lab name: TEG NW
 Analysis date: 12/04/2000 14:28:27
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1819.CHR ()
 Sample: NW-2
 Operator: TM



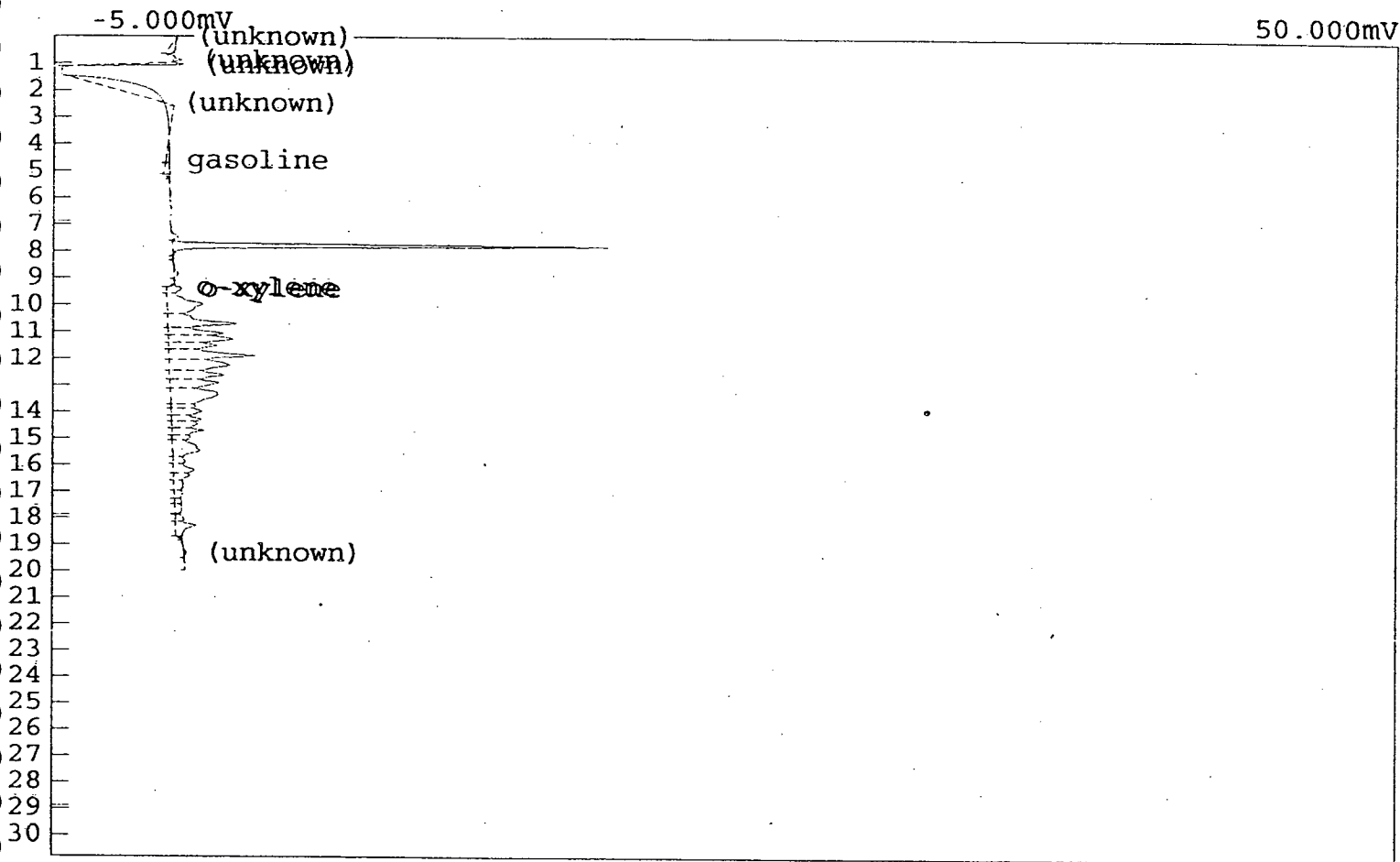
Component	Retention	Area	External	Units
Chlorobenzene	7.566	57.3700	4.3500	ppm
gasoline	10.466	62.6990	12.1820	
		120.0690	16.5320	

Lab name: TEG NW
 Analysis date: 12/04/2000 14:08:25
 Description: PID- 2 GC-1
 Data file: ch3de1818.CHR ()
 Sample: NW-1 Dup.
 Operator: TM



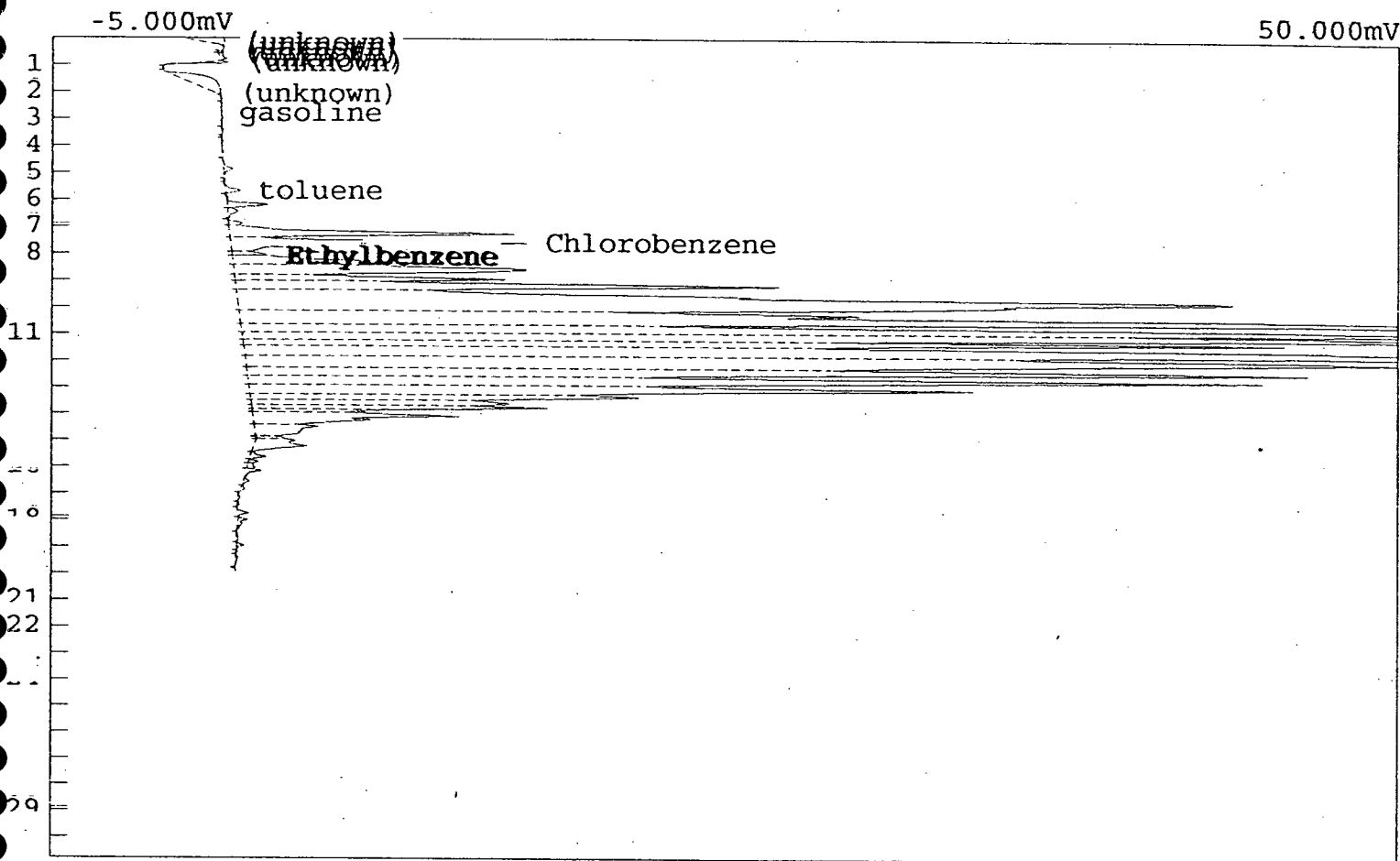
Component	Retention	Area	External	Units
Chlorobenzene	7.583	55.6540	4.2199	ppm
gasoline	9.333	61.9440	12.0353	
		117.5980	16.2552	

Lab name: TEG NW
 Analysis date: 12/04/2000 15:09:21
 Description: Ch. 1 Detector
 Data file: chldet2075.CHR ()
 Sample: SP3-5
 Operator: MF



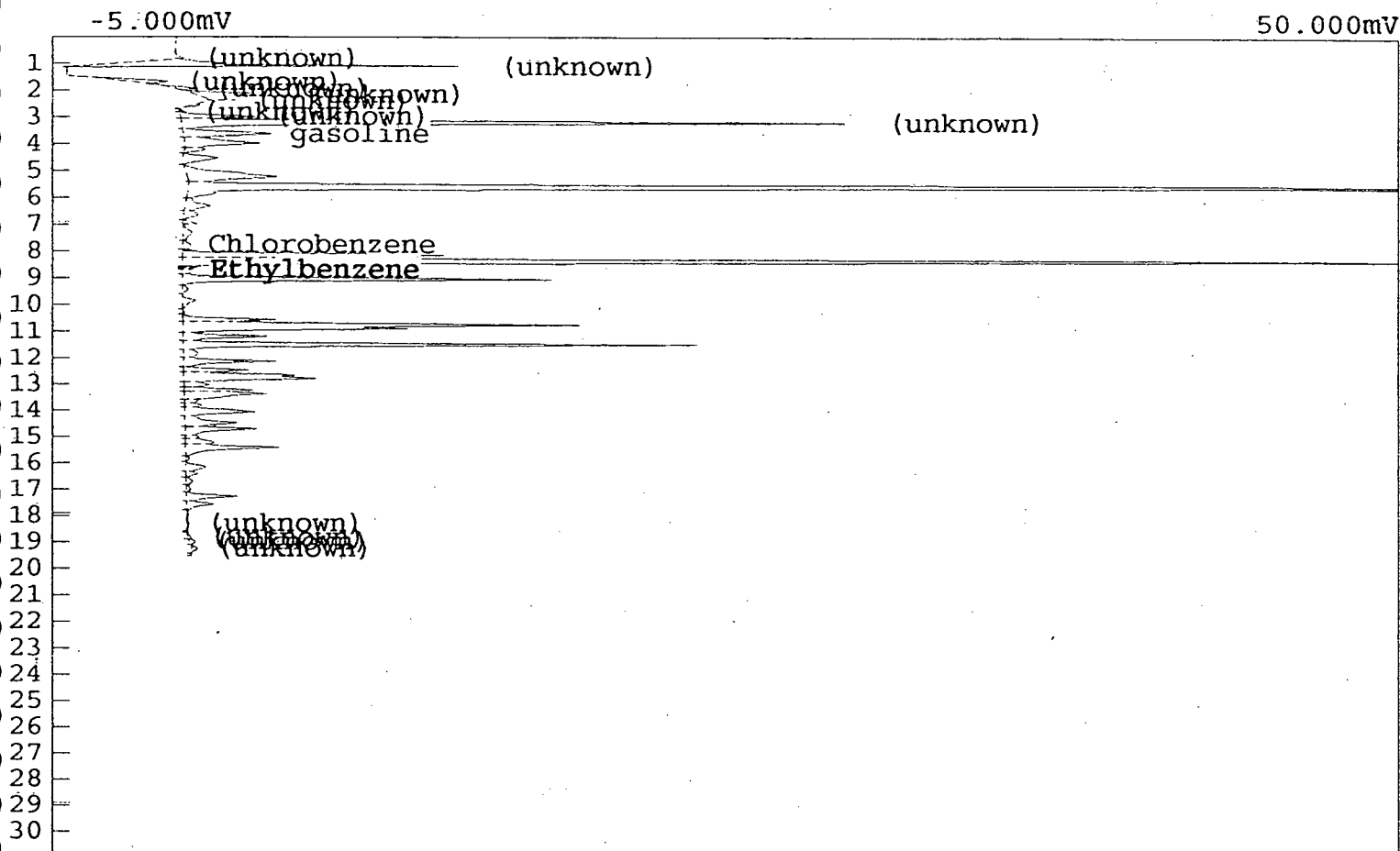
Component	Retention	Area	External	Units
gasoline	4.600	722.8090	70.1090	ppm
chlorobenzene	7.183	126.8730	567.9185	ppm
toluene	8.393	1.3490	0.0516	ppm
o-xylene	9.400	7.2750	0.2784	ppm
		858.3060	638.3577	

Lab name: TEG NW
 Analysis date: 12/04/2000 15:09:21
 Description: PID- 2 GC-1
 Data file: ch3del821.CHR ()
 Sample: WW-1
 Operator: TM



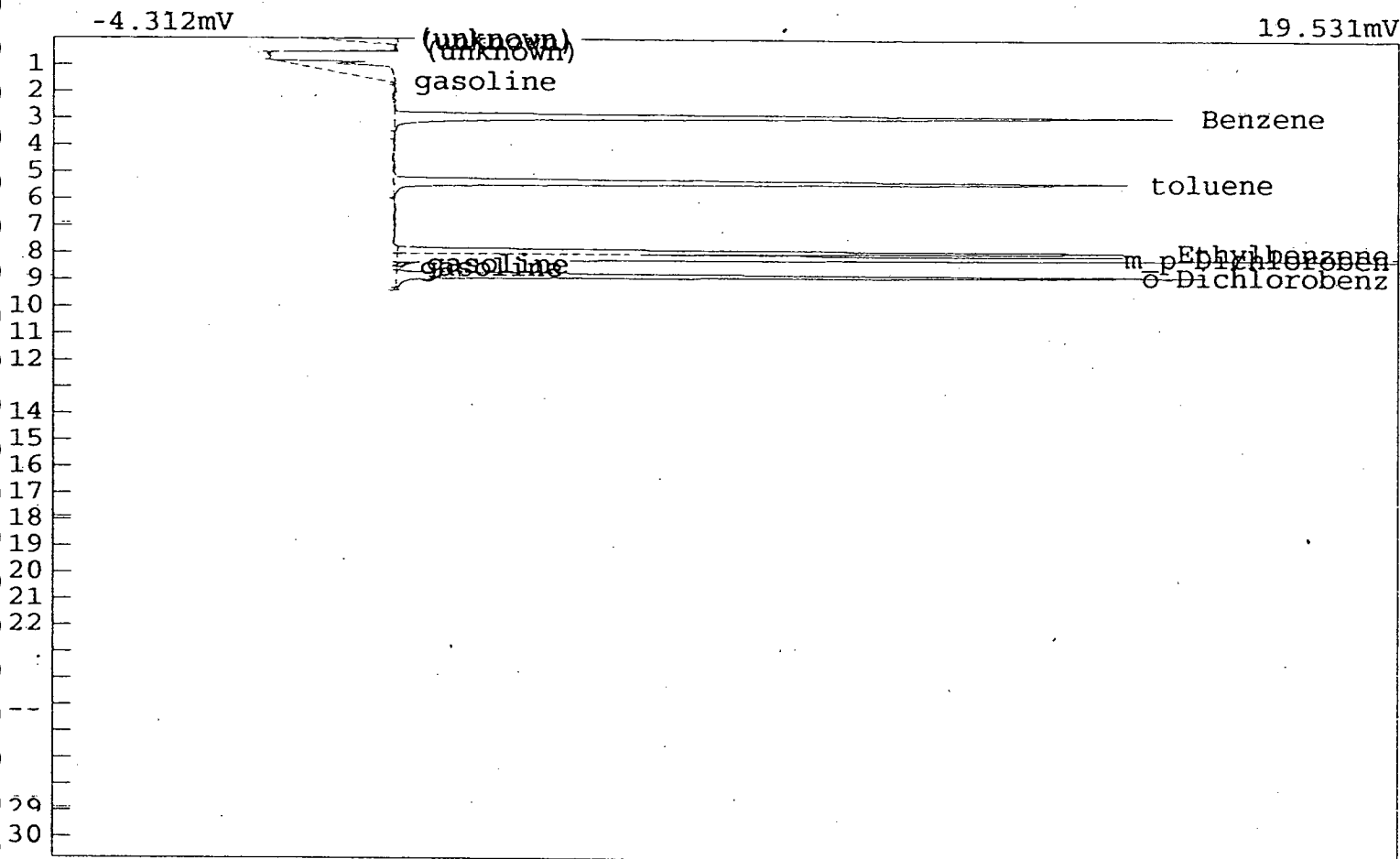
Component	Retention	Area	External	Units
gasoline	2.783	9500.0380	1845.7948	
toluene	5.666	5.9960	0.4540	
Chlorobenzene	7.583	142.6200	10.8140	ppm
Ethylbenzene	8.066	9.3240	1.1393	ppm
Ethylbenzene	8.083	1.4570	0.1780	ppm
Ethylbenzene	8.100	1.5485	0.1892	ppm
m-p-Dichloroben	8.316	87.1400	7.6818	ppm
Dichlorobenz	8.933	98.6130	8.8638	ppm
		9846.7365	1875.1149	

Lab name: TEG NW
 Analysis date: 12/04/2000 16:02:55
 Description: Ch. 1 Detector
 Data file: ch1det2077.CHR ()
 Sample: NW-3
 Operator: MF



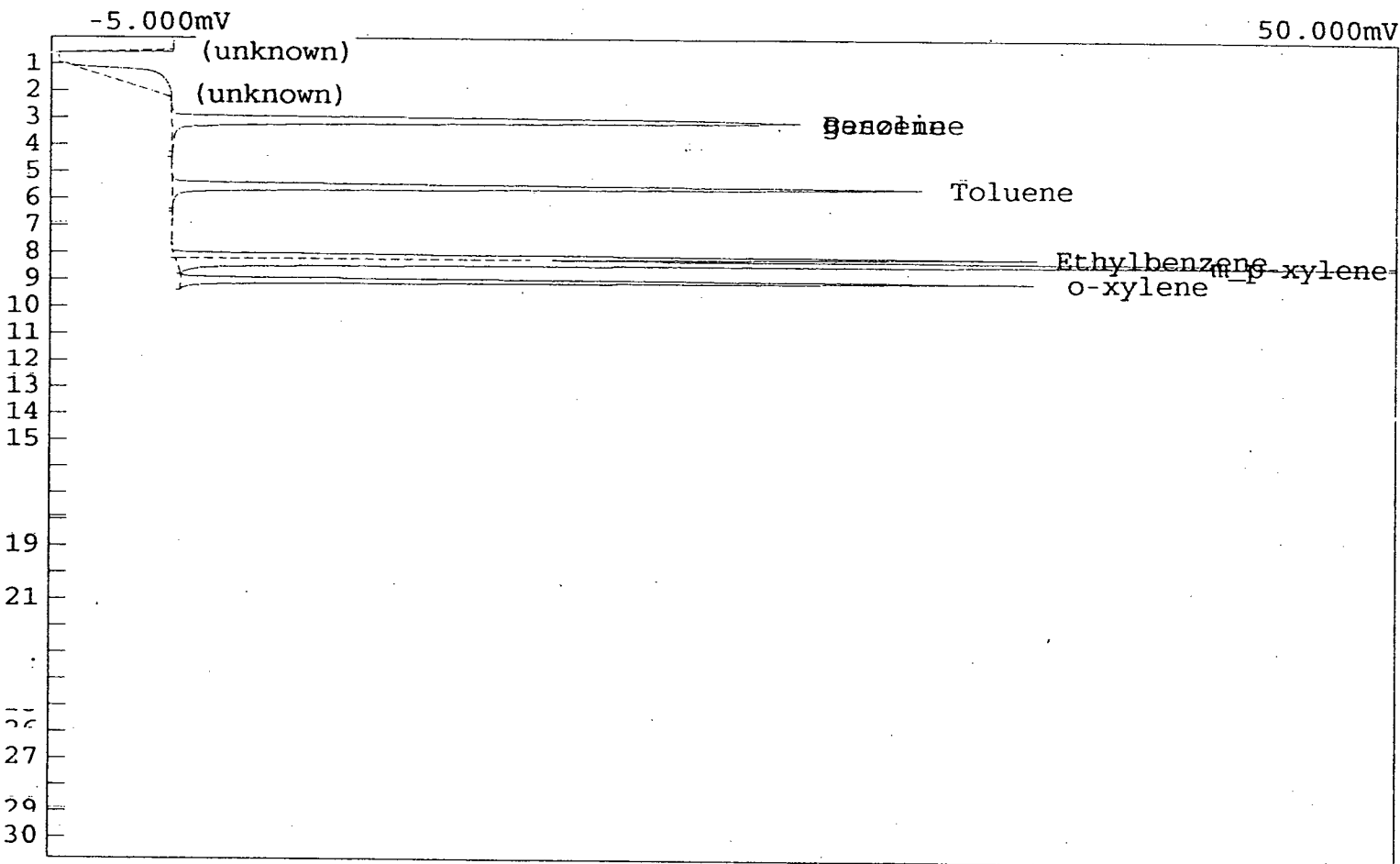
Component	Retention	Area	External	Units
gasoline	3.633	2096.1875	203.3202	ppm
Chlorobenzene	7.750	4.7240	21.1459	ppm
Ethylbenzene	8.650	0.8500	0.0333	ppm
Ethylbenzene	8.700	2.9220	0.1146	ppm
		2104.6835	224.6141	

Lab name: TEG NW
 Analysis date: 12/04/2000 16:24:54
 Description: FID 1, GC No. 9
 Data file: C:\PEAKWIN\ch3de1823.CHR ()
 Sample: 10 ppm btex
 Operator: TM



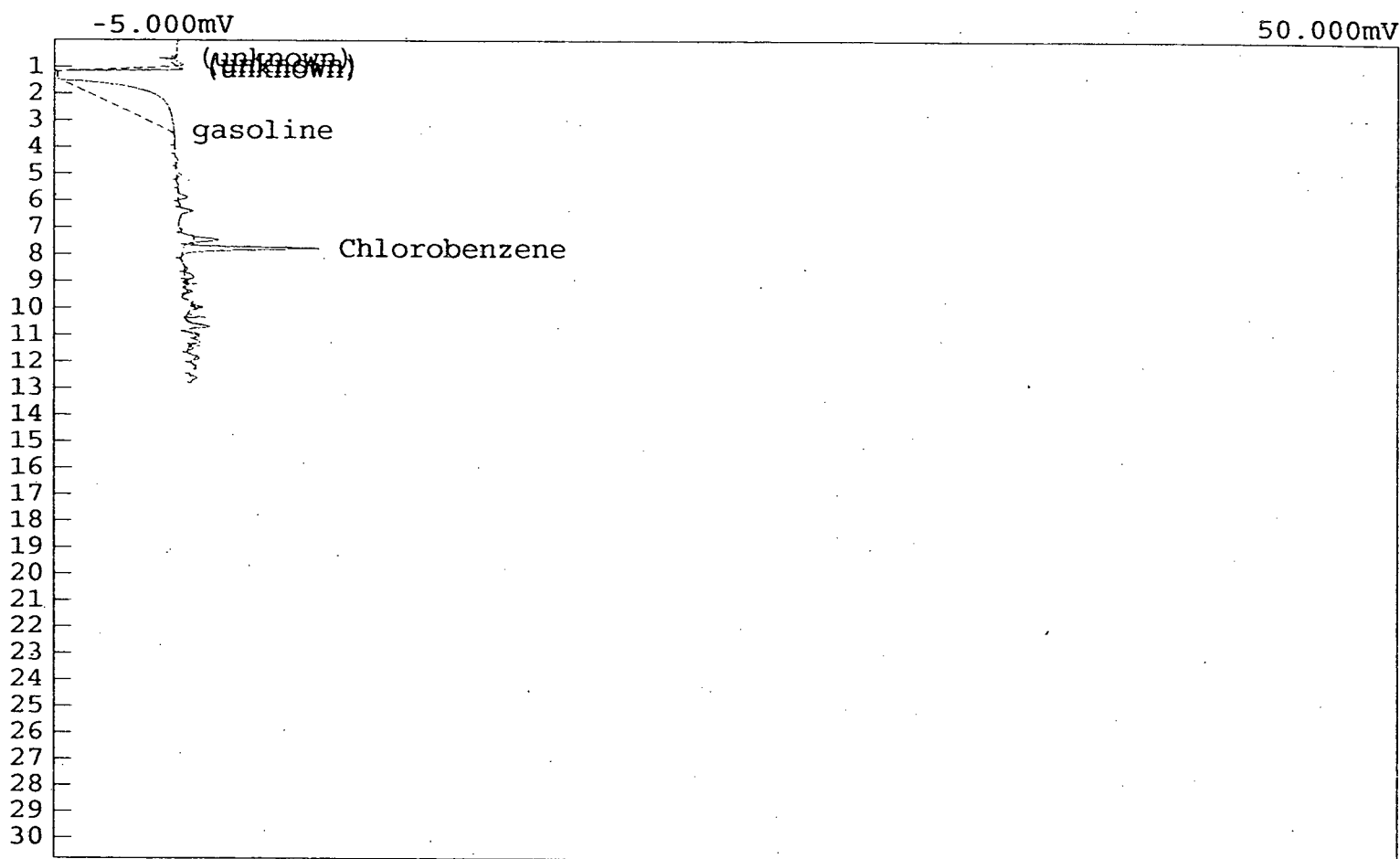
Component	Retention	Area	External	Units
gasoline	1.600	42.3820	8.2345	
Benzene	2.900	135.5080	9.5868	ppm
toluene	5.350	128.1940	9.7071	
Ethylbenzene	7.916	109.2000	13.3431	ppm
m_p-Dichloroben	8.133	262.5685	23.1465	ppm
gasoline	8.400	0.5930	0.1152	
gasoline	8.533	0.5980	0.1162	
o-Dichlorobenz	8.816	110.1730	9.9028	ppm
		789.2165	74.1524	

Lab name: TEG NW
 Analysis date: 12/04/2000 16:24:54
 Description: Ch. 1 Detector
 Data file: chldet2078.CHR ()
 Sample: 10 ppm btex
 Operator: MF



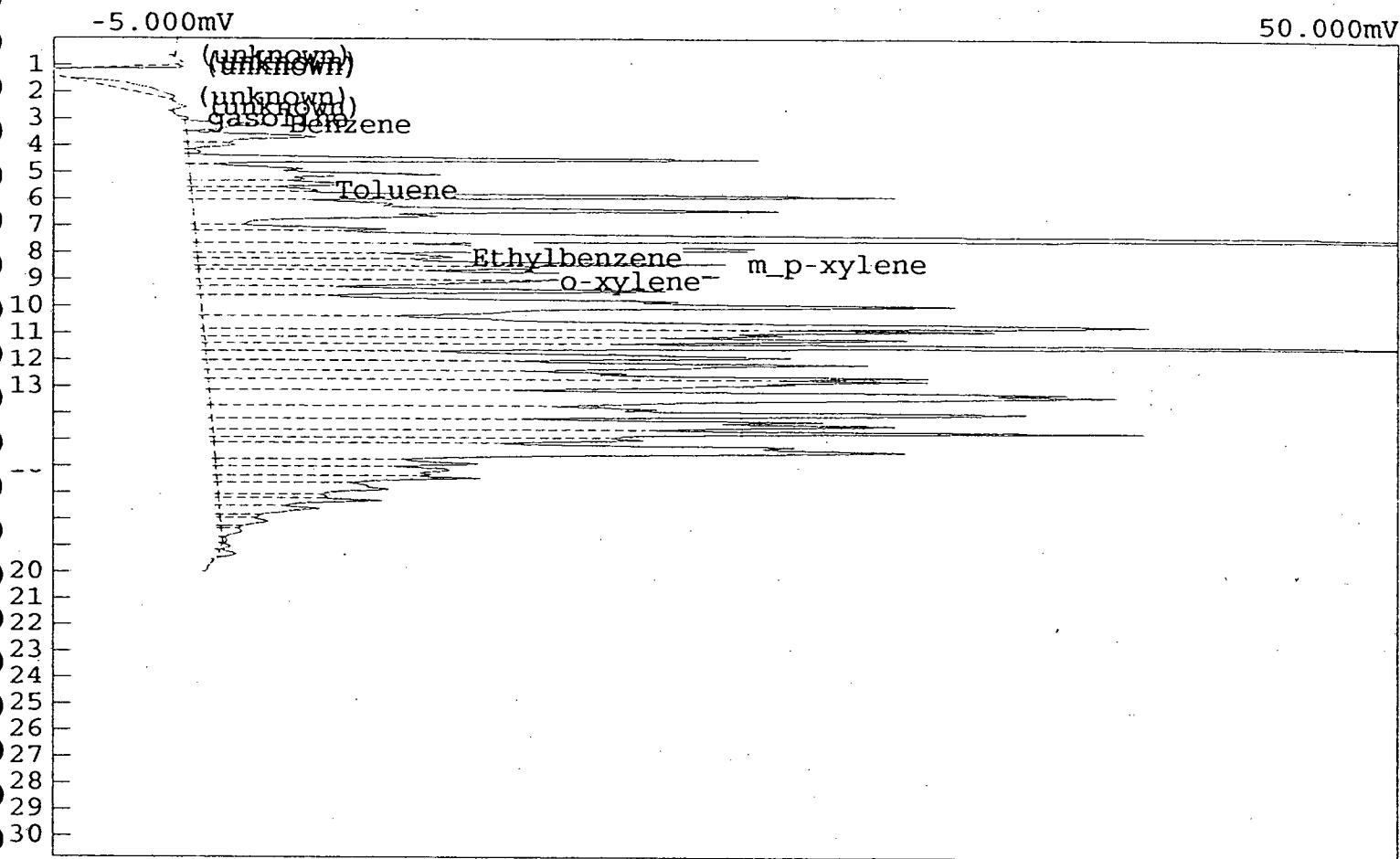
Component	Retention	Area	External	Units
gasoline	3.116	1967.3515	190.8238	ppm
benzene	3.116	357.7790	10.7253	ppm
Toluene	5.550	331.8700	10.7846	ppm
Ethylbenzene	8.116	273.4525	10.7221	ppm
p-xylene	8.333	725.7500	21.4803	ppm
o-xylene	9.016	278.5000	10.6595	ppm
		3934.7030	255.1956	

Lab name: TEG NW
Analysis date: 12/07/2000 10:39:08
Description: Ch. 1 Detector
Data file: chldet2100.CHR ()
Sample: SW4
Operator: MF



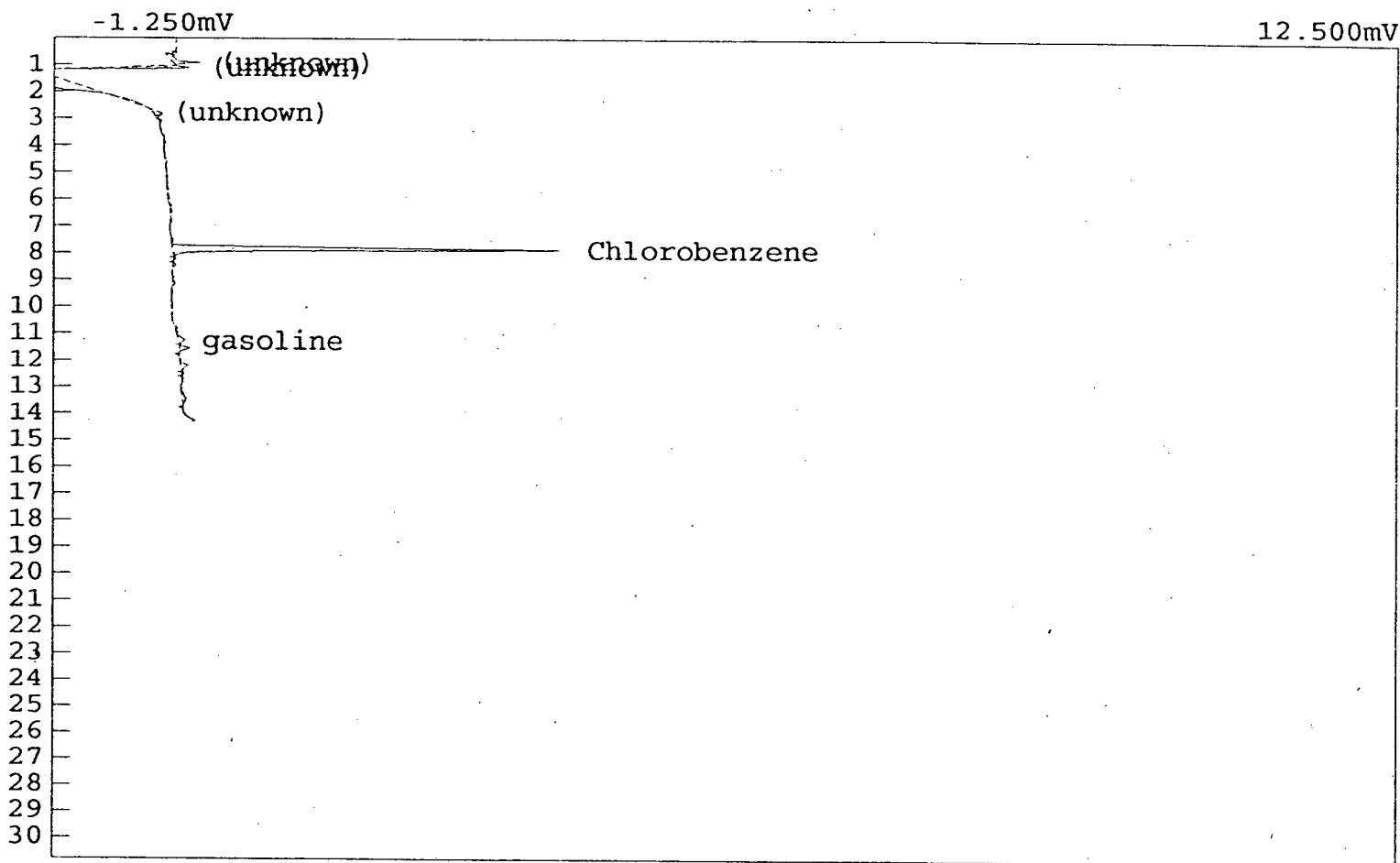
Component	Retention	Area	External	Units
gasoline	3.383	270.3230	26.2200	ppm
Chlorobenzene	7.783	44.1810	197.7663	ppm
		314.5040	223.9864	

Lab name: TEG NW
 Analysis date: 12/07/2000 10:54:46
 Description: Ch. 1 Detector
 Data file: ch1det2101.CHR ()
 Sample: SW5
 Operator: MF



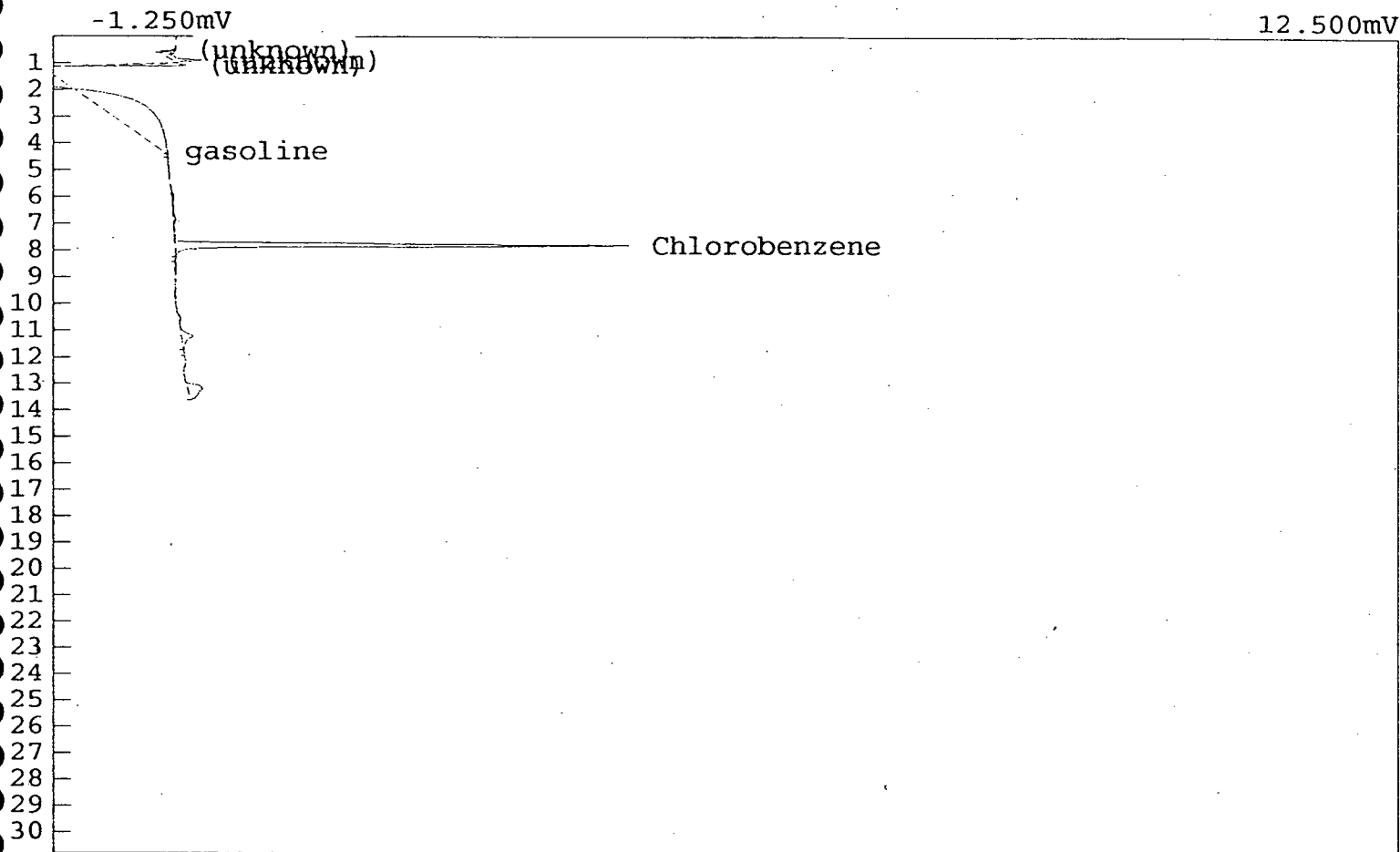
Component	Retention	Area	External	Units
gasoline	3.000	12603.4265	1222.4726	ppm
Benzene	3.216	40.3350	1.2091	ppm
Toluene	5.666	44.8200	1.4565	ppm
Ethylbenzene	8.166	121.9975	4.7835	ppm
m_p-xylene	8.400	221.7730	6.5639	ppm
o-xylene	9.033	158.9270	6.0829	ppm
		13191.2790	1242.5685	

Lab name: TEG NW
 Analysis date: 12/07/2000 11:17:43
 Description: Ch. 1 Detector
 Data file: chldet2102.CHR ()
 Sample: BOT8
 Operator: MF



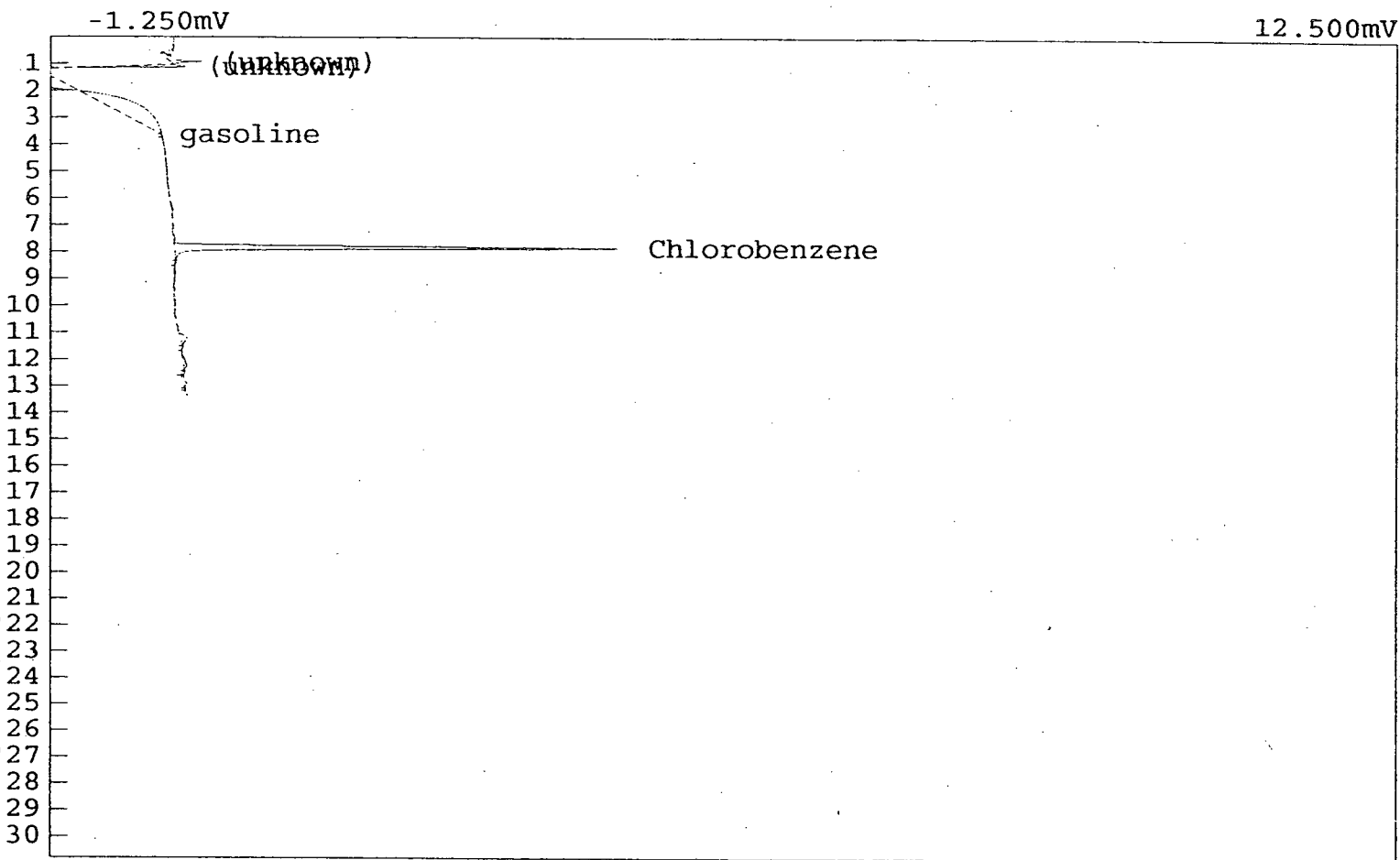
Component	Retention	Area	External	Units
Chlorobenzene	7.833	29.1260	130.3760	ppm
gasoline	11.266	31.9830	3.1022	ppm
		61.1090	133.4782	

Lab name: TEG NW
Analysis date: 12/07/2000 11:36:00
Description: Ch. 1 Detector
Data file: ch1det2103.CHR ()
Sample: BOT9
Operator: MF



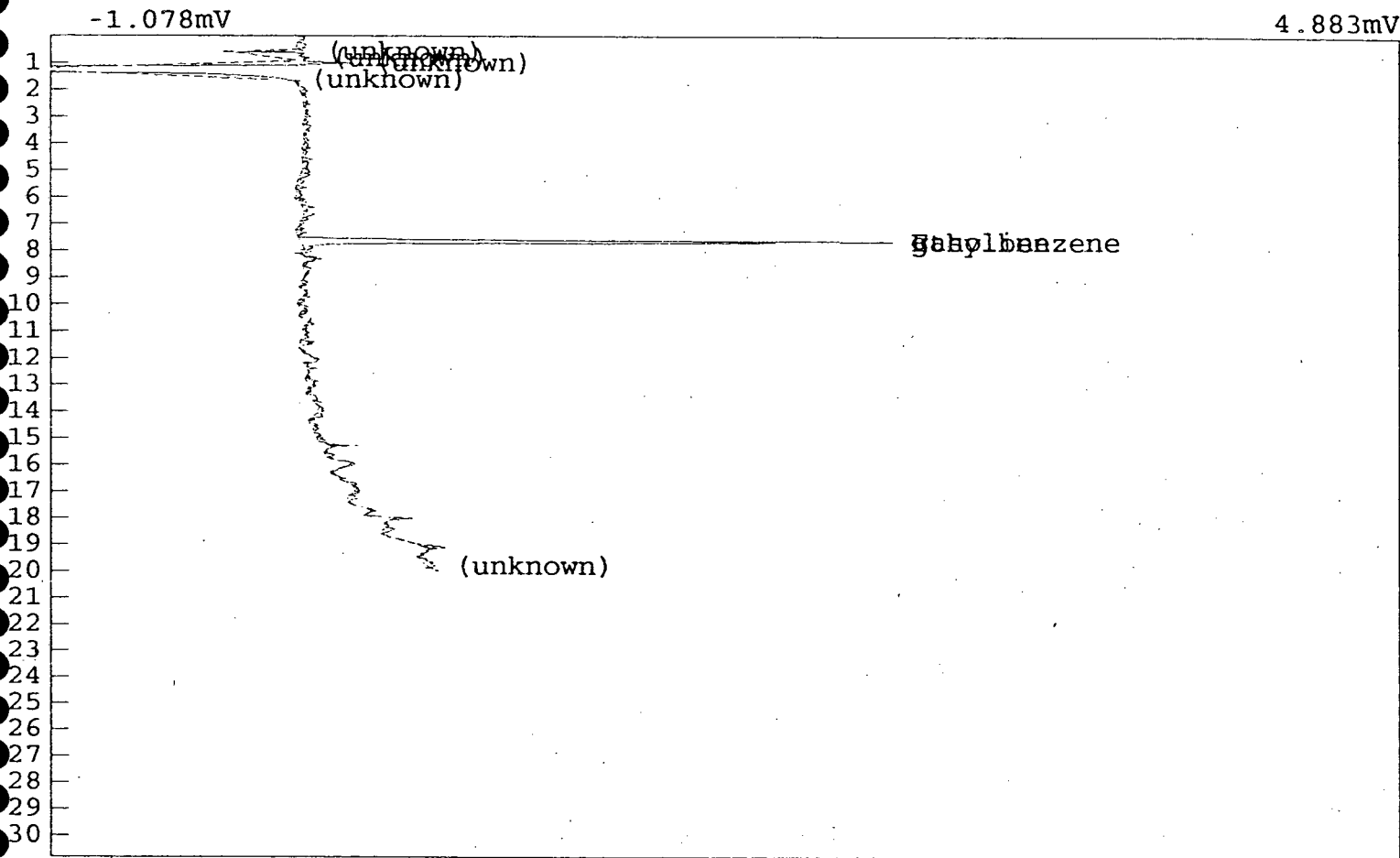
Component	Retention	Area	External	Units
gasoline	4.316	349.8170	33.9306	ppm
Chlorobenzene	7.816	34.0830	152.5649	ppm
		383.9000	186.4955	

Lab name: TEG NW
 Analysis date: 12/07/2000 11:52:59
 Description: Ch. 1 Detector
 Data file: chldet2104.CHR ()
 Sample: BOT9 DUP.
 Operator: MF



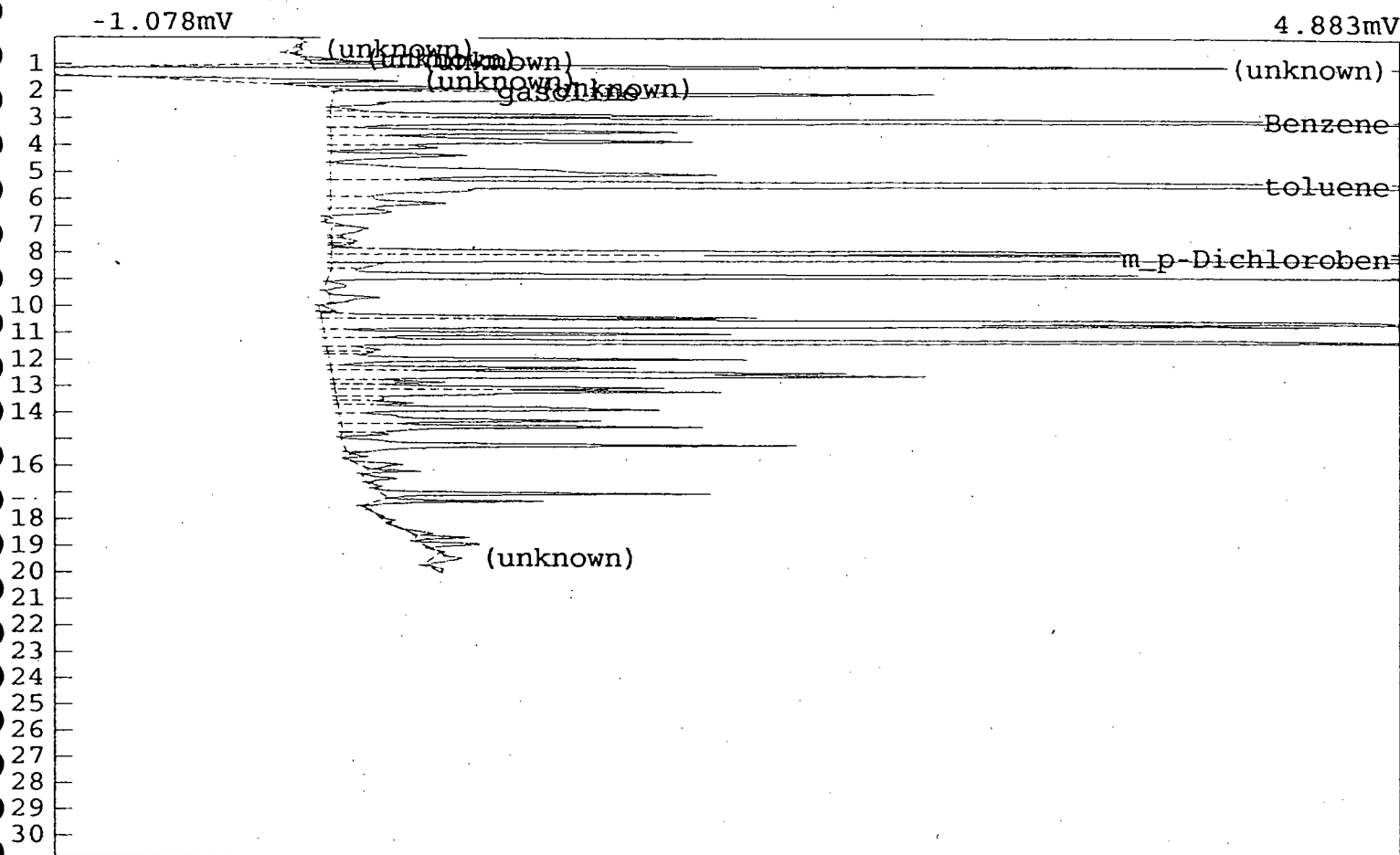
Component	Retention	Area	External	Units
gasoline	3.633	237.1530	23.0027	ppm
Chlorobenzene	7.833	33.6940	150.8236	ppm
		270.8470	173.8264	

Lab name: TEG NW
 Analysis date: 12/07/2000 09:34:00
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1857.CHR ()
 Sample: 10 PPM BTEX
 Operator: TM



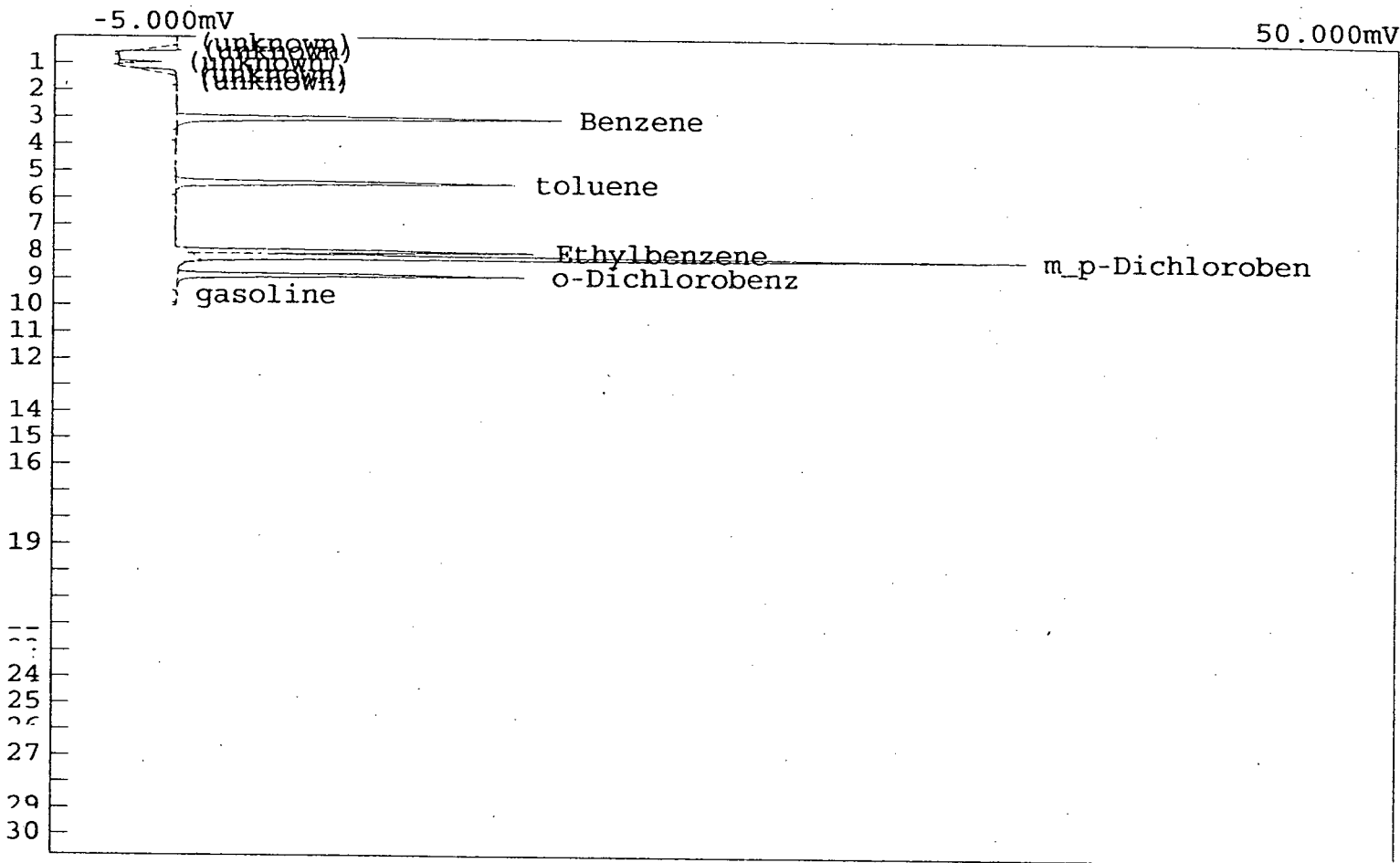
Component	Retention	Area	External	Units
Ethylbenzene	7.650	17.7280	2.1662	ppm
Gasoline	7.650	17.7280	3.4444	
		35.4560	5.6106	

Lab name: TEG NW
 Analysis date: 12/07/2000 10:01:15
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1858.CHR ()
 Sample: 200 ppm Gas
 Operator: MF



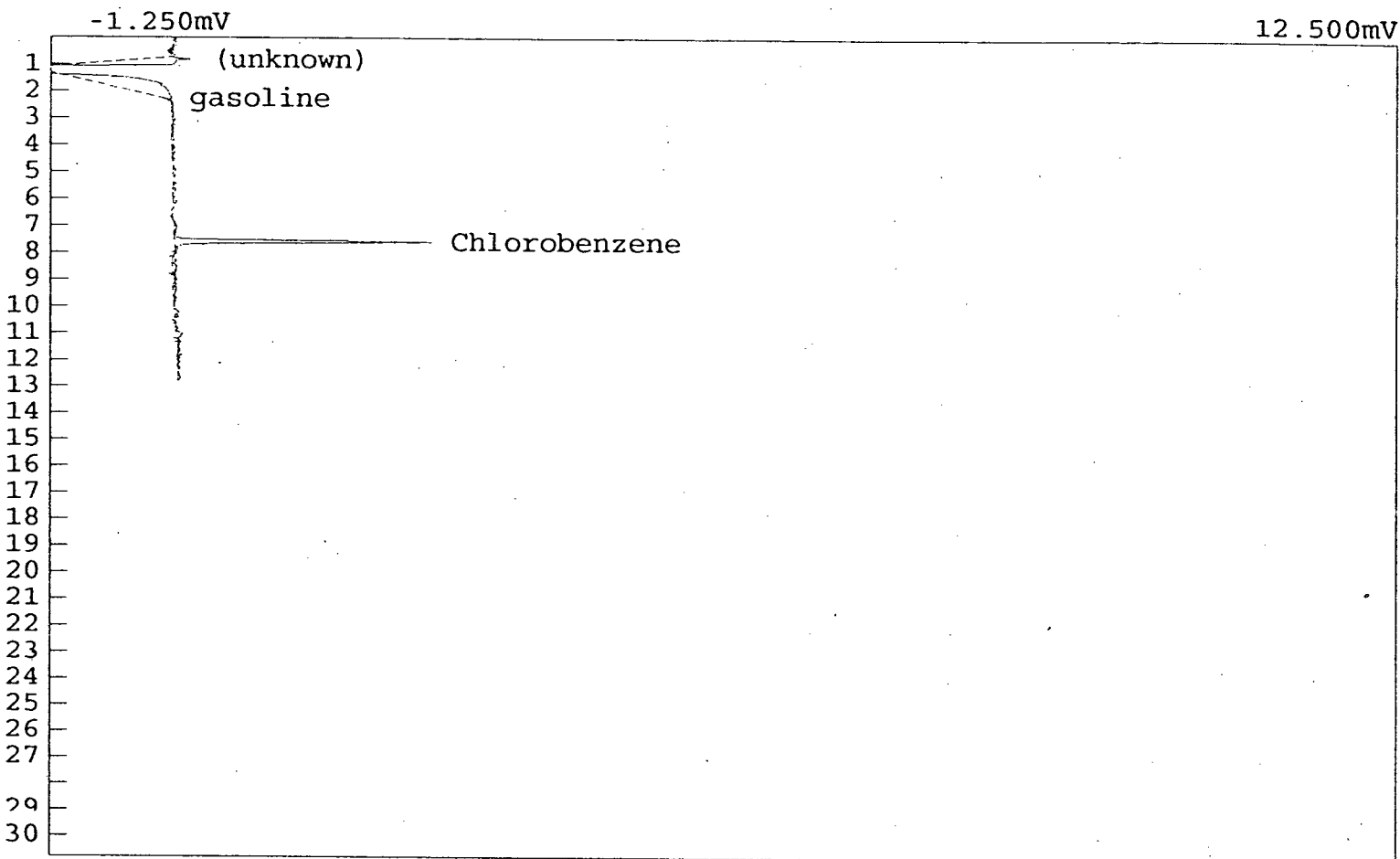
Component	Retention	Area	External	Units
gasoline	2.000	1032.6825	200.6434	
Benzene	3.100	84.1080	5.9504	ppm
toluene	5.450	220.8330	16.7219	
m_p-Dichloroben	8.183	162.9220	14.3623	ppm
p-Dichlorobenz	8.866	51.0200	4.5859	ppm
		1551.5655	242.2639	

Lab name: TEG NW
 Analysis date: 12/07/2000 10:24:58
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1859.CHR ()
 Sample: 10 ppm BTEX
 Operator: MF



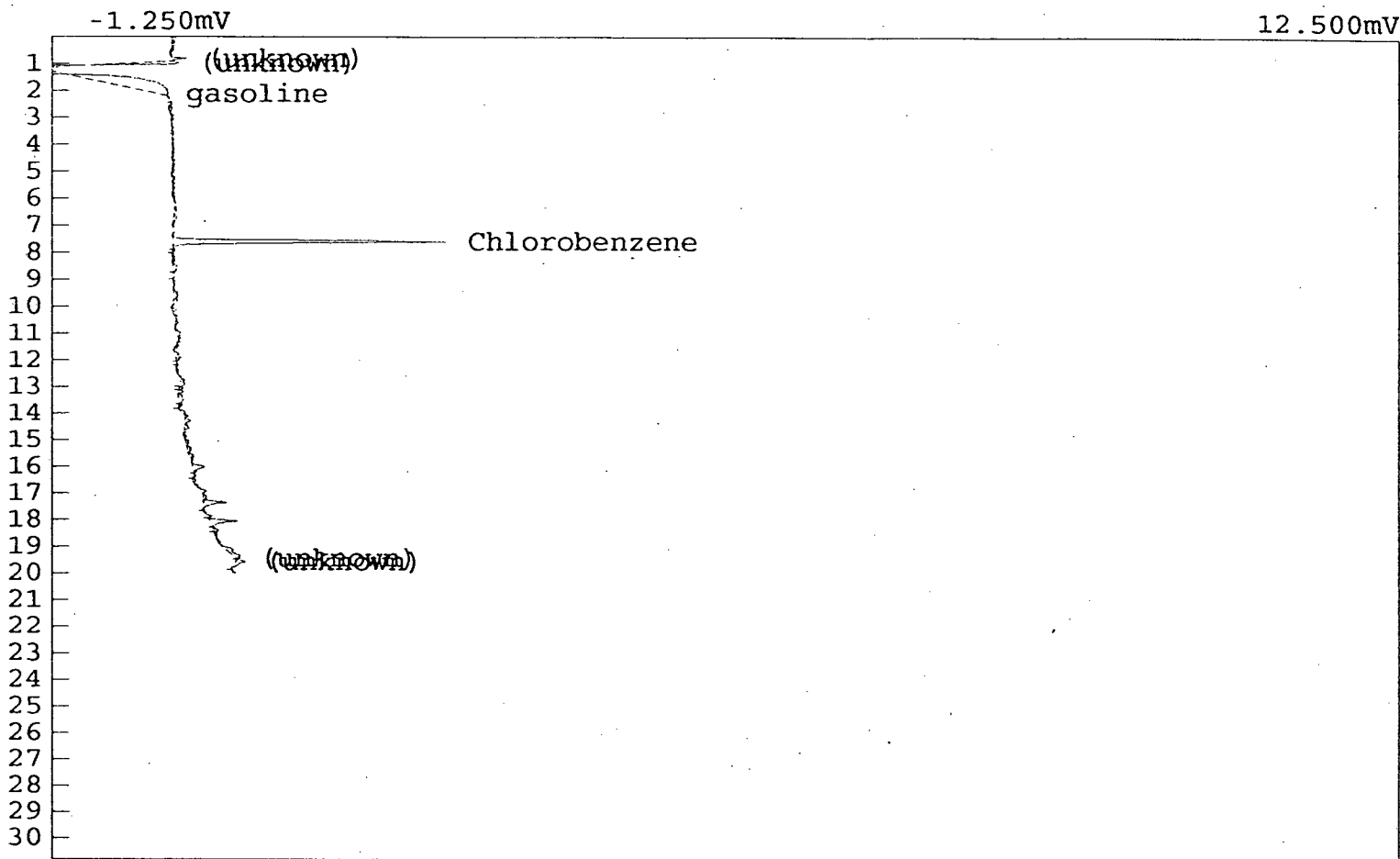
Component	Retention	Area	External	Units
Benzene	3.016	128.3520	9.0806	ppm
Toluene	5.416	122.4890	9.2751	
Ethylbenzene	7.966	95.6330	11.6854	ppm
m_p-Dichloroben	8.183	235.5360	20.7635	ppm
o-Dichlorobenz	8.866	103.6060	9.3126	ppm
gasoline	9.583	686.4640	133.3754	
		1372.0800	193.4925	

Lab name: TEG NW
Analysis date: 12/07/2000 10:39:08
Description: PID- 2 GC-1
Data file: C:\PEAKWIN\ch3de1860.CHR ()
Sample: BOT10
Operator: MF



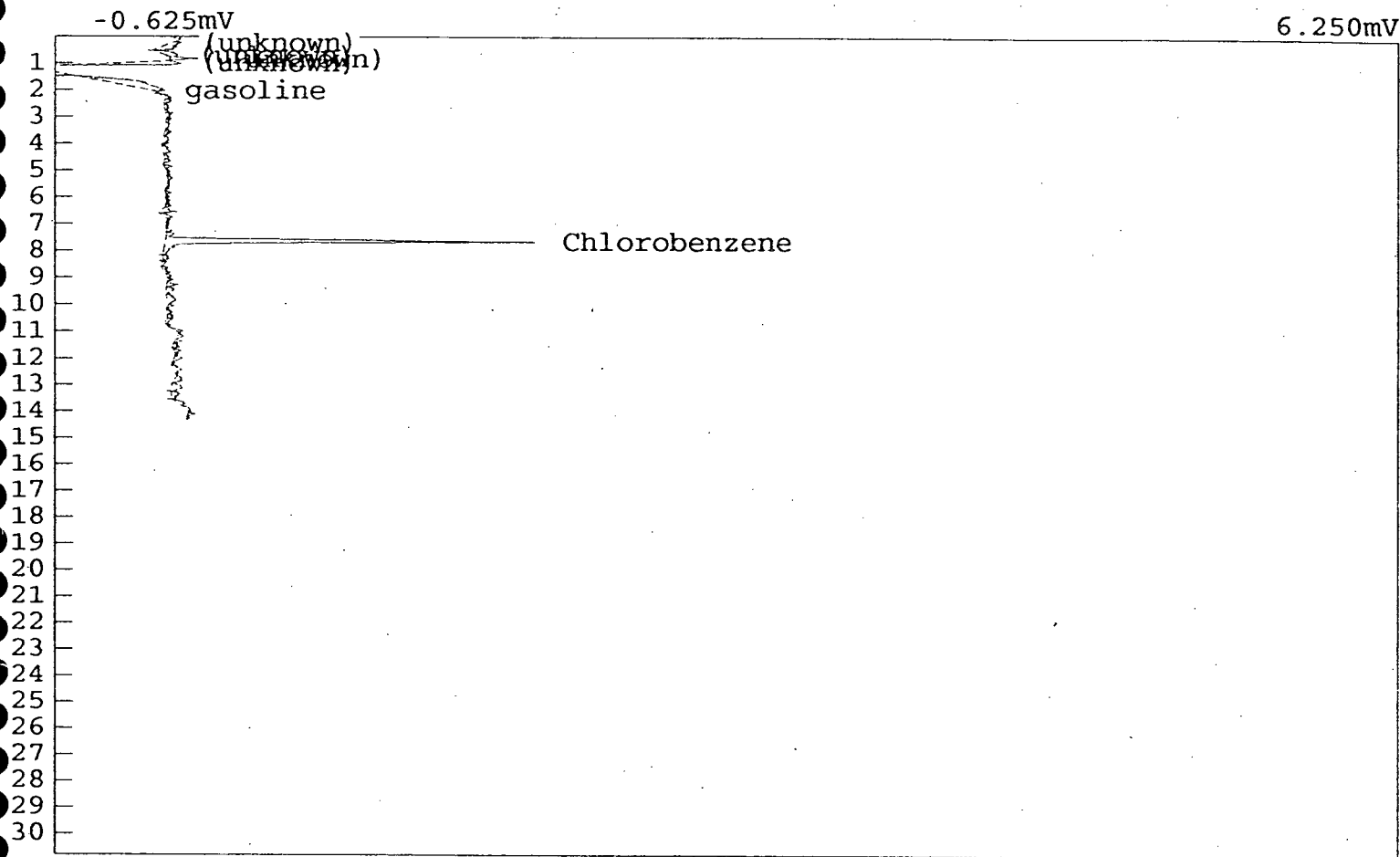
Component	Retention	Area	External	Units
gasoline	2.266	70.8440	13.7645	
Chlorobenzene	7.583	17.7720	1.3475	ppm
		88.6160	15.1121	

Lab name: TEG NW
 Analysis date: 12/07/2000 10:54:46
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1861.CHR ()
 Sample: BOT11
 Operator: MF



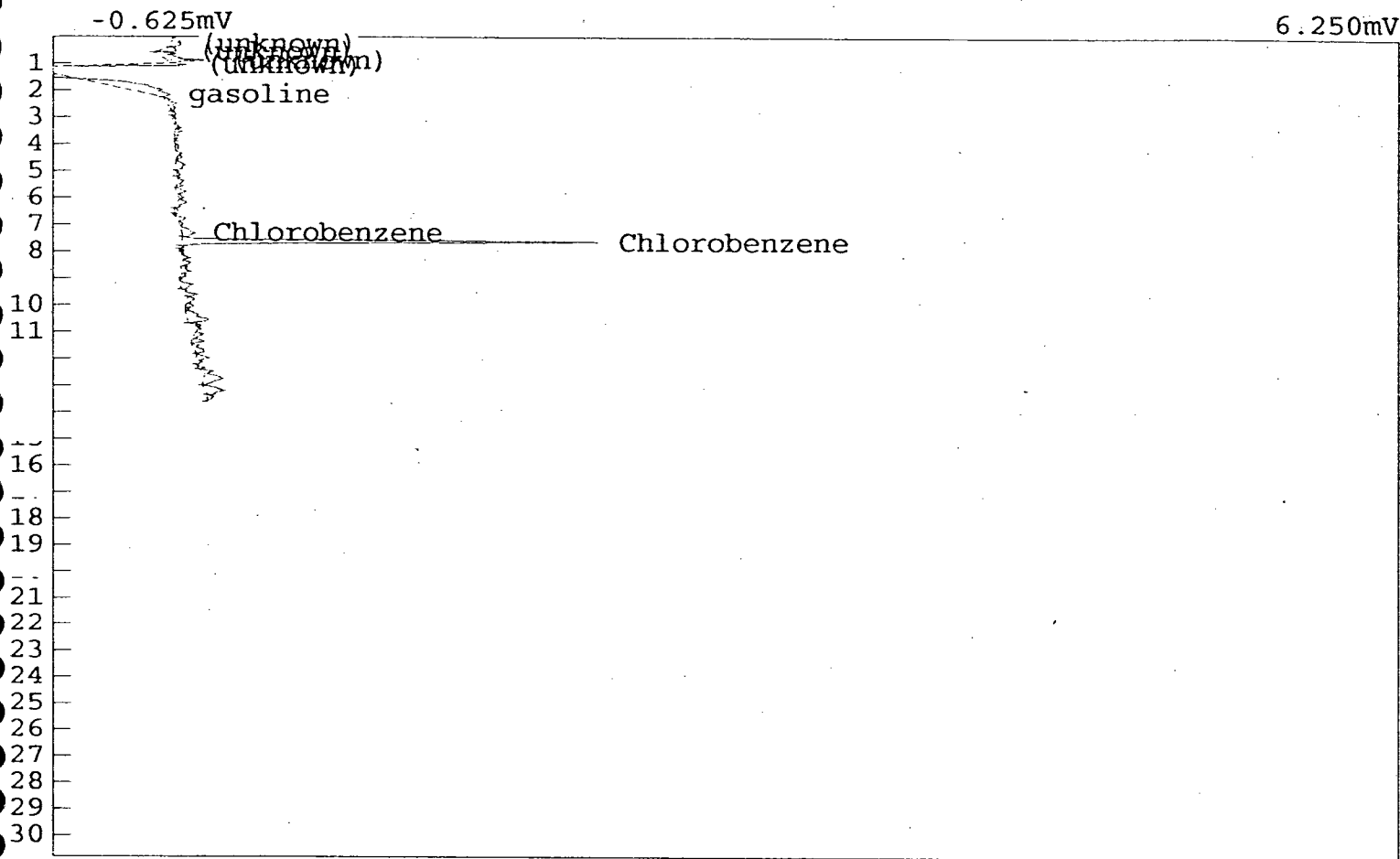
Component	Retention	Area	External	Units
gasoline	2.133	67.8750	13.1877	
Chlorobenzene	7.600	18.6280	1.4124	ppm
		86.5030	14.6001	

Lab name: TEG NW
 Analysis date: 12/07/2000 11:17:43
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1862.CHR ()
 Sample: SP3
 Operator: MF



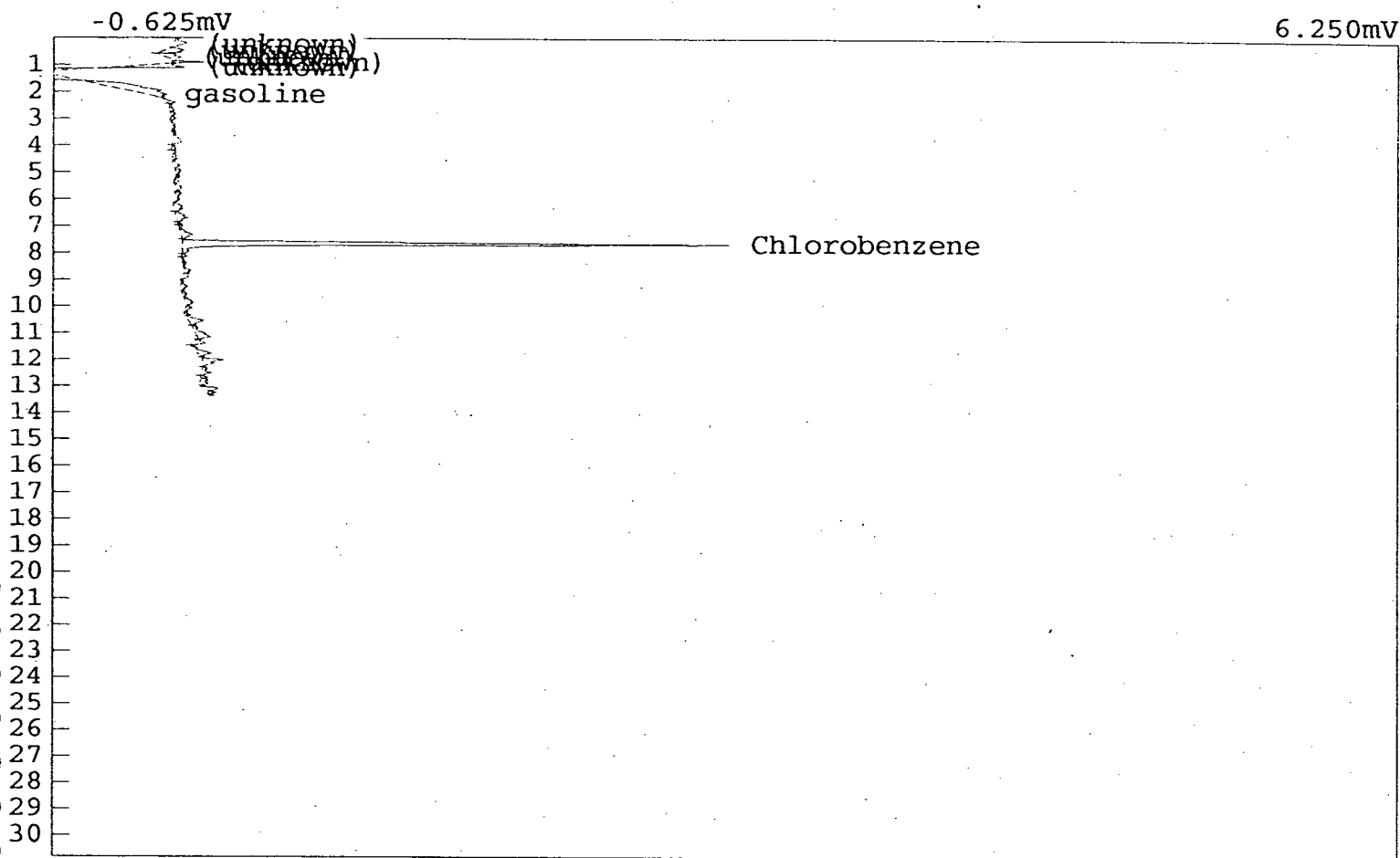
Component	Retention	Area	External	Units
gasoline	2.033	49.0690	9.5338	
Chlorobenzene	7.633	13.4860	1.0226	ppm
		62.5550	10.5563	

Lab name: TEG NW
 Analysis date: 12/07/2000 11:36:00
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1863.CHR ()
 Sample: SP4
 Operator: MF



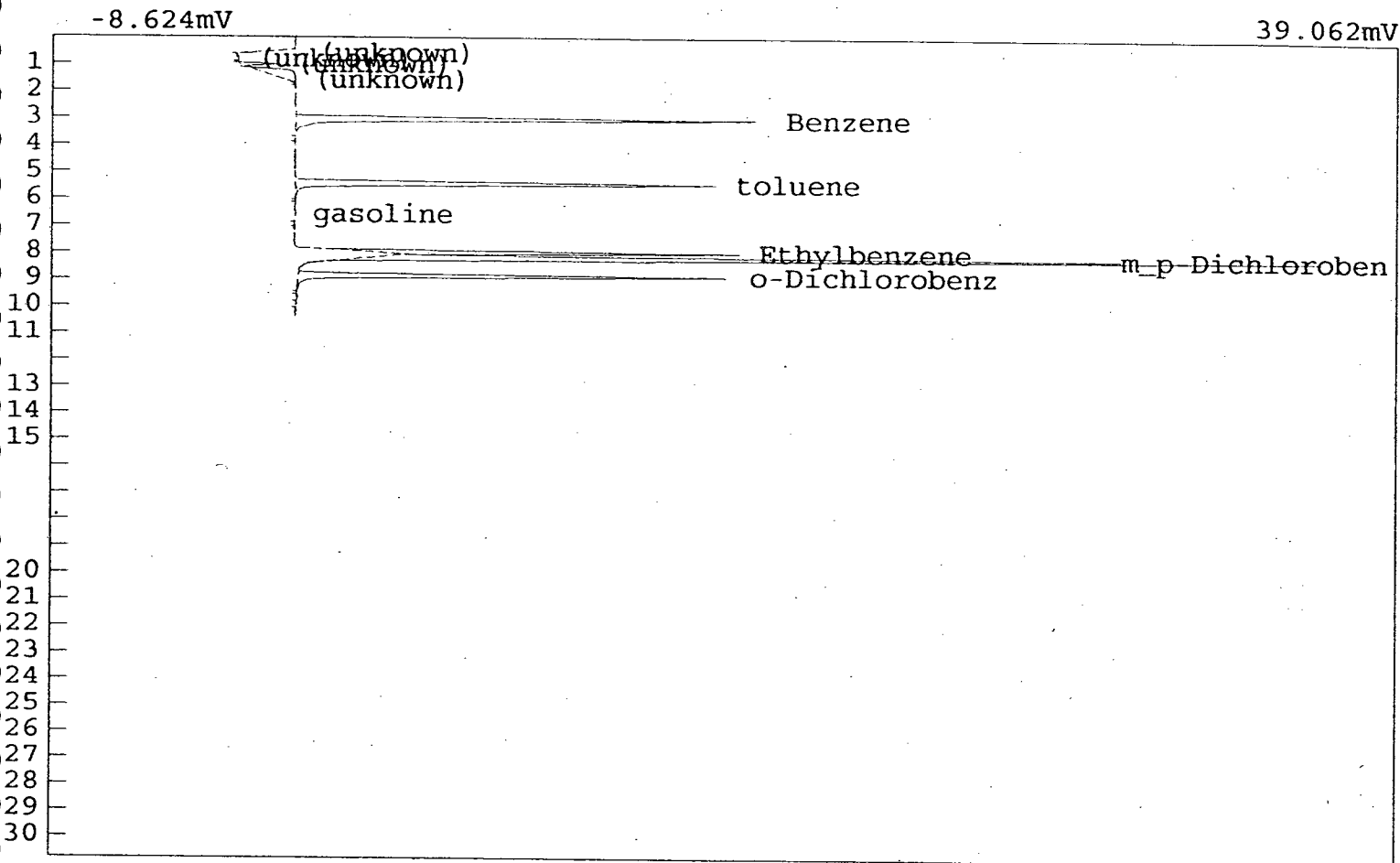
Component	Retention	Area	External	Units
gasoline	2.166	64.4680	12.5257	
Chlorobenzene	7.316	0.9980	0.0757	ppm
Chlorobenzene	7.633	14.0280	1.0637	ppm
		79.4940	13.6650	

Lab name: TEG NW
 Analysis date: 12/07/2000 11:52:59
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1864.CHR ()
 Sample: SP5
 Operator: MF



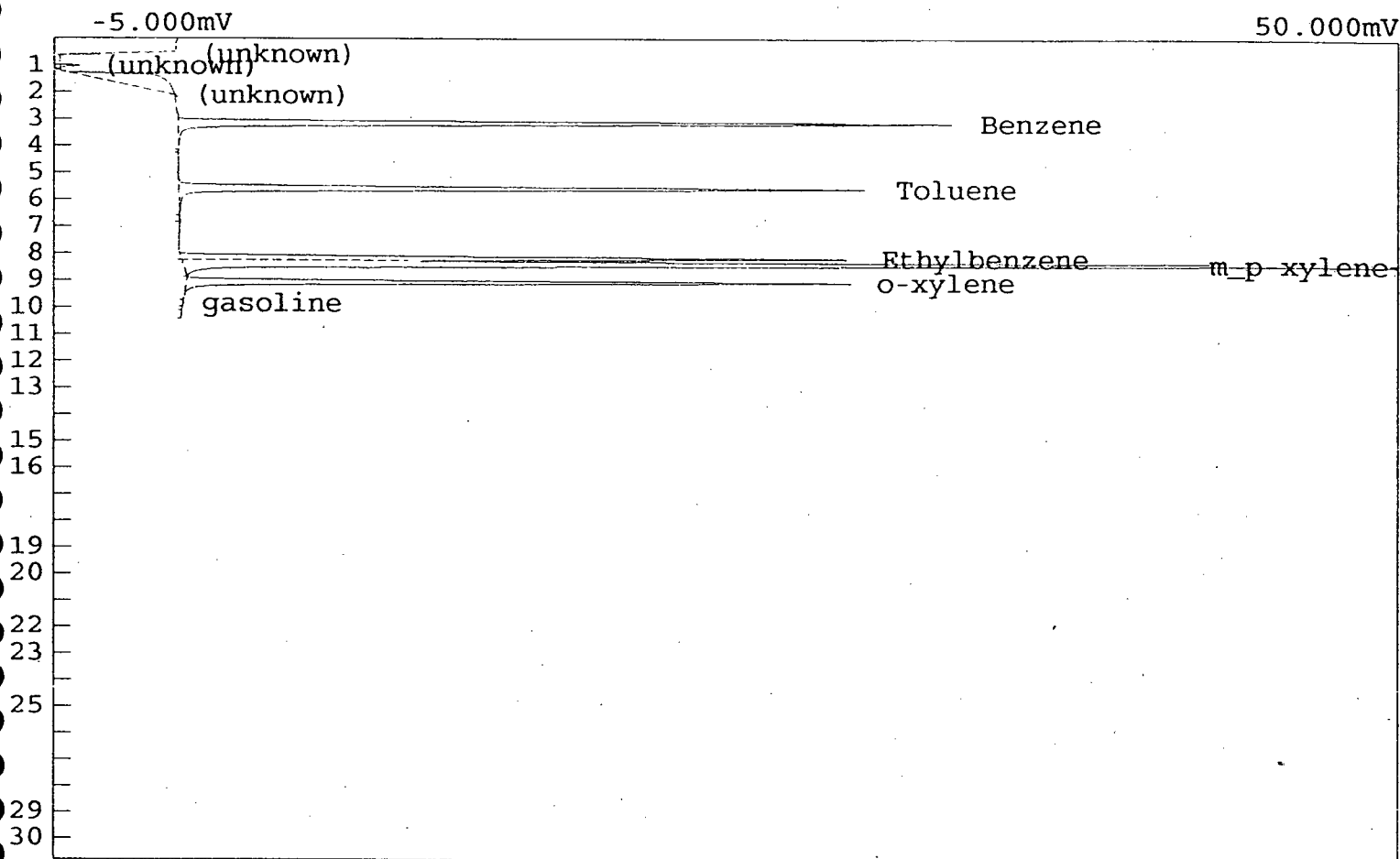
Component	Retention	Area	External	Units
gasoline	2.100	61.5280	11.9545	
Chlorobenzene	7.650	18.6900	1.4171	ppm
		80.2180	13.3716	

Lab name: TEG NW
 Analysis date: 12/07/2000 16:05:04
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1872.CHR ()
 Sample: 10 PPM BTEX
 Operator: MF



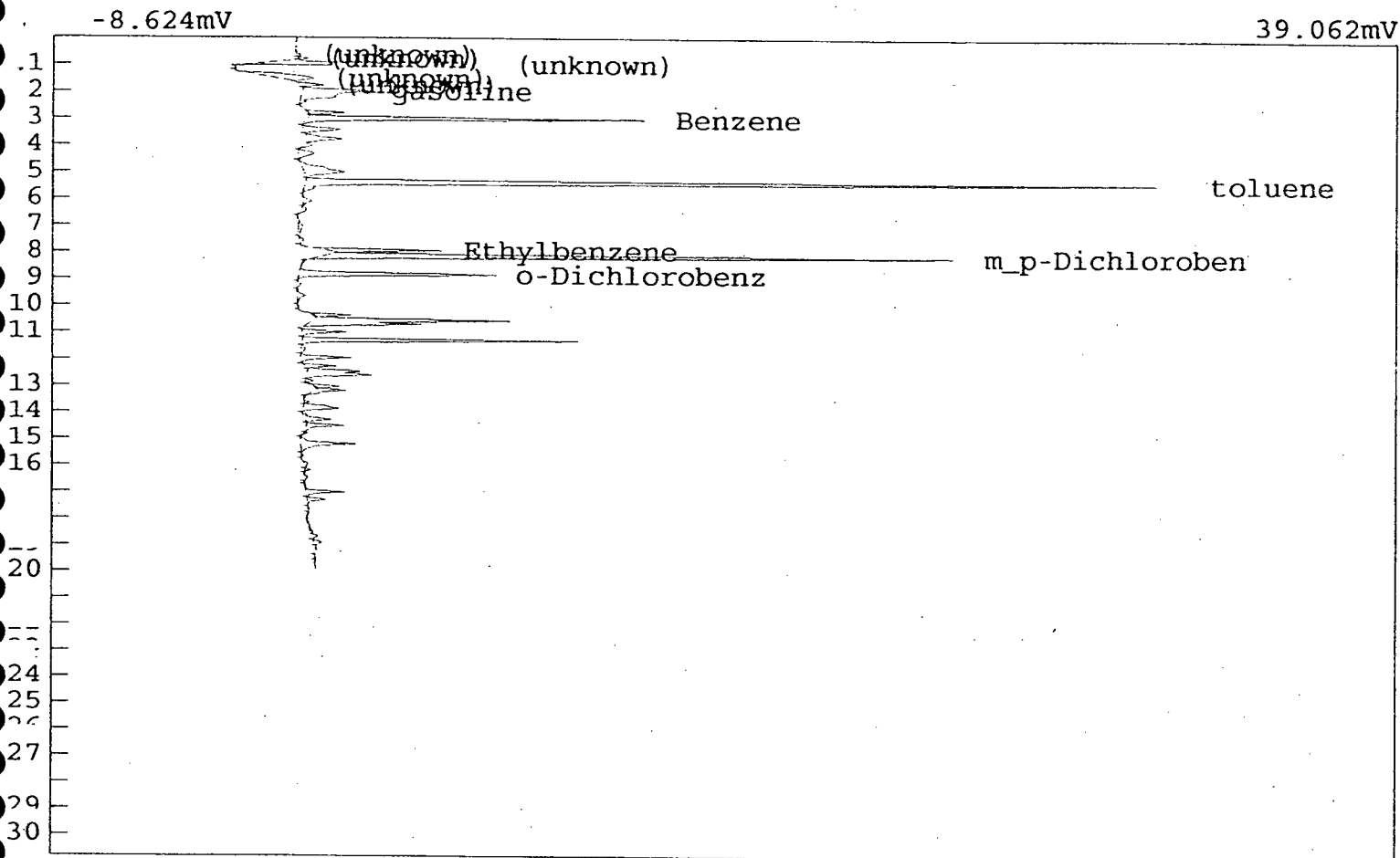
Component	Retention	Area	External	Units
Benzene	3.050	138.3820	9.7902	ppm
toluene	5.433	129.5300	9.8083	
gasoline	6.583	682.3020	132.5668	
Ethylbenzene	7.983	78.1920	9.5543	ppm
m_p-Dichloroben	8.183	224.2620	19.7697	ppm
o-Dichlorobenz	8.866	110.8260	9.9615	ppm
		1363.4940	191.4507	

Lab name: TEG NW
 Analysis date: 12/07/2000 16:05:04
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2107.CHR ()
 Sample: 10 PPM btex
 Operator: MF



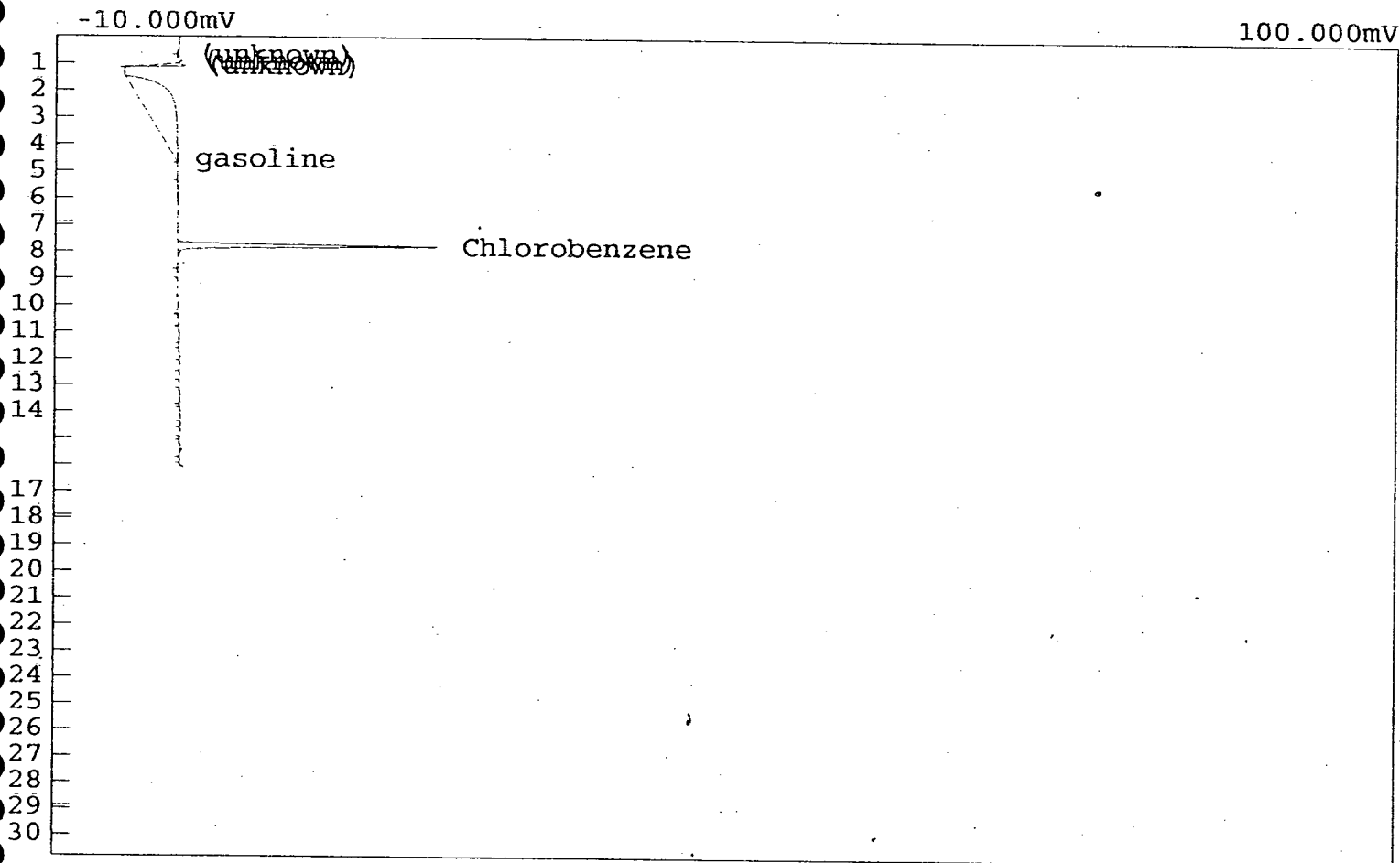
Component	Retention	Area	External	Units
Benzene	3.166	273.9070	8.2110	ppm
Toluene	5.600	254.7800	8.2794	ppm
Ethylbenzene	8.166	205.8280	8.0706	ppm
m_p-xylene	8.383	550.0640	16.2804	ppm
o-xylene	9.066	211.3460	8.0892	ppm
gasoline	9.866	1496.4450	145.1481	ppm
		2992.3700	194.0787	

Lab name: TEG NW
 Analysis date: 12/07/2000 15:37:12
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1871.CHR ()
 Sample: 200 PPM gAS
 Operator: MF



Component	Retention	Area	External	Units
gasoline	2.000	883.9240	171.7406	
benzene	3.033	76.7060	5.4267	ppm
toluene	5.400	206.7300	15.6540	
Ethylbenzene	7.950	24.8660	3.0384	ppm
m_p-Dichloroben	8.166	145.2150	12.8013	ppm
o-Dichlorobenz	8.850	48.8340	4.3894	ppm
		1386.2750	213.0505	

Lab name: TEG NW
 Analysis date: 12/04/2000 15:36:58
 Description: Ch. 1 Detector
 Data file: chldet2076.CHR ()
 Sample: NW-3
 Operator: MF



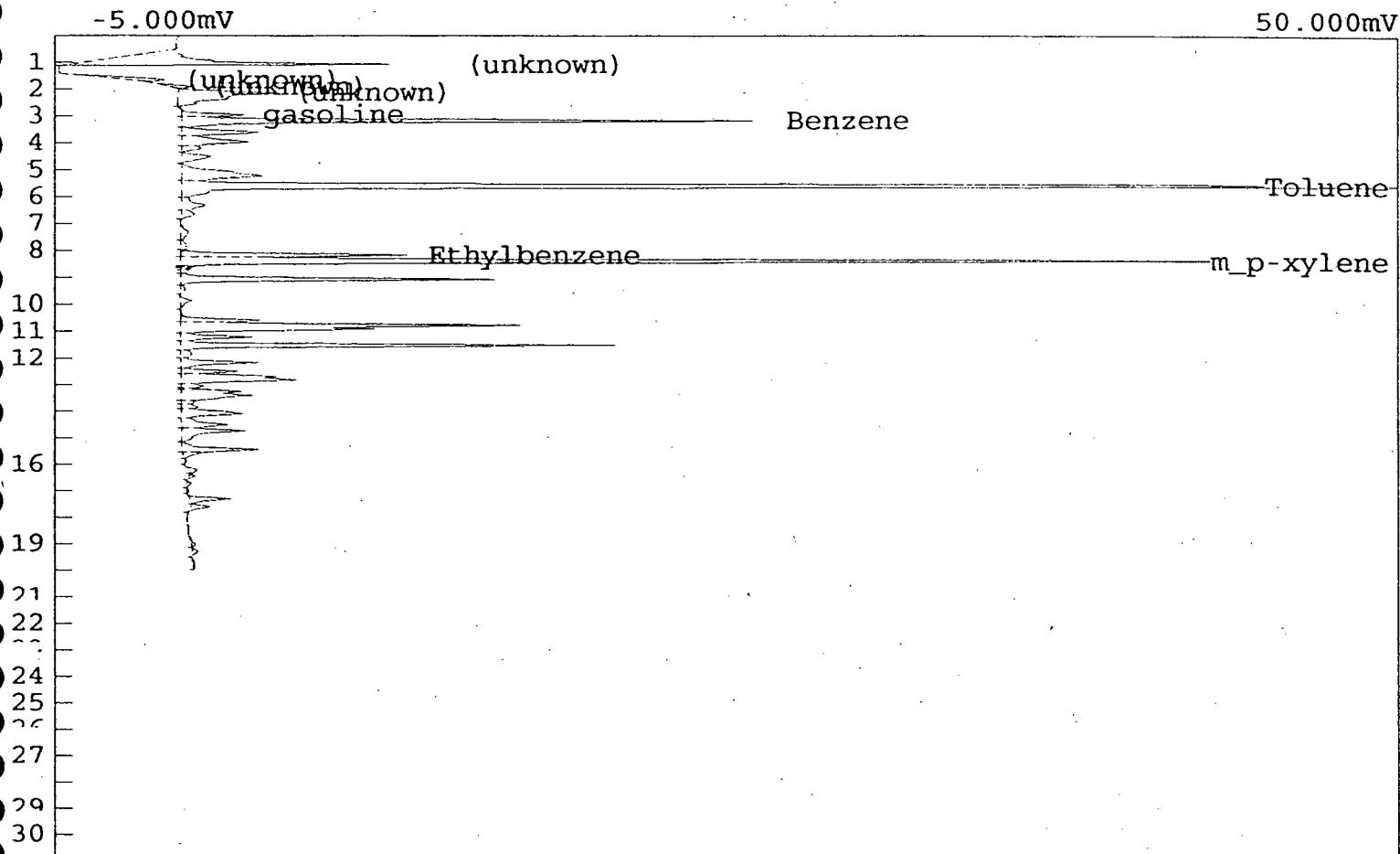
Component	Retention	Area	External	Units
gasoline	4.533	500.2230	48.5193	ppm
Chlorobenzene	7.766	155.5080	696.0967	ppm
		655.7310	744.6159	

TEG ANALYSIS LOG
EPA 602/8020 (BTEX)

CLIENT: Nowicki CLIENT PROJECT #: Sostr 6.1214
DATE: 12-4-00 TEG PROJECT #: _____ ANALYST(S) mc
LOCATION: Tacoma, wa
INSTRUMENT: GC 1 min 1+2 CONDITIONS: soil s

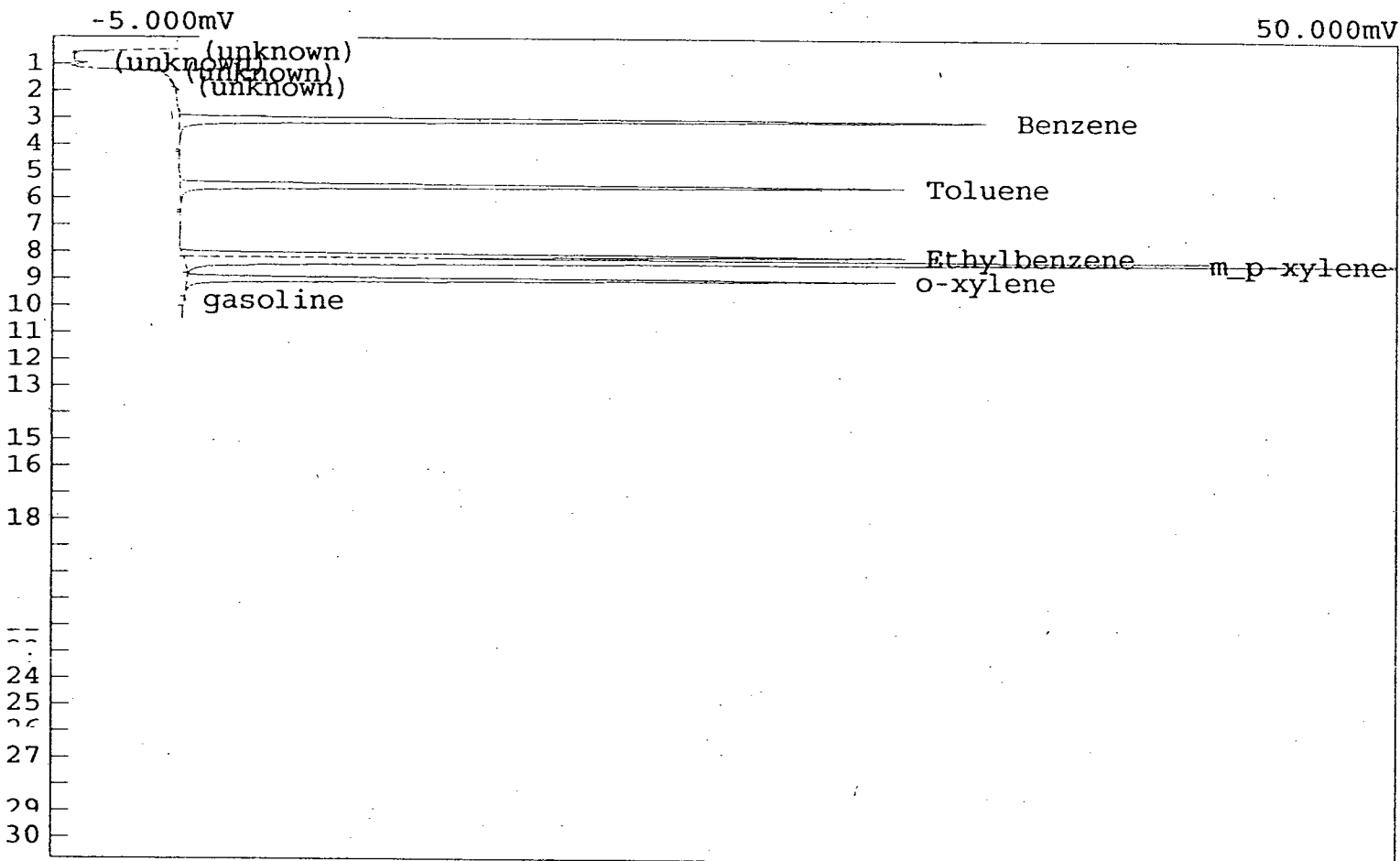
[illegible]

Lab name: TEG NW
 Analysis date: 12/07/2000 15:37:12
 Description: Ch. 1 Detector
 Data file: C:\PEAKWIN\ch1det2106.CHR ()
 Sample: 200 PPM gAS
 Operator: MF



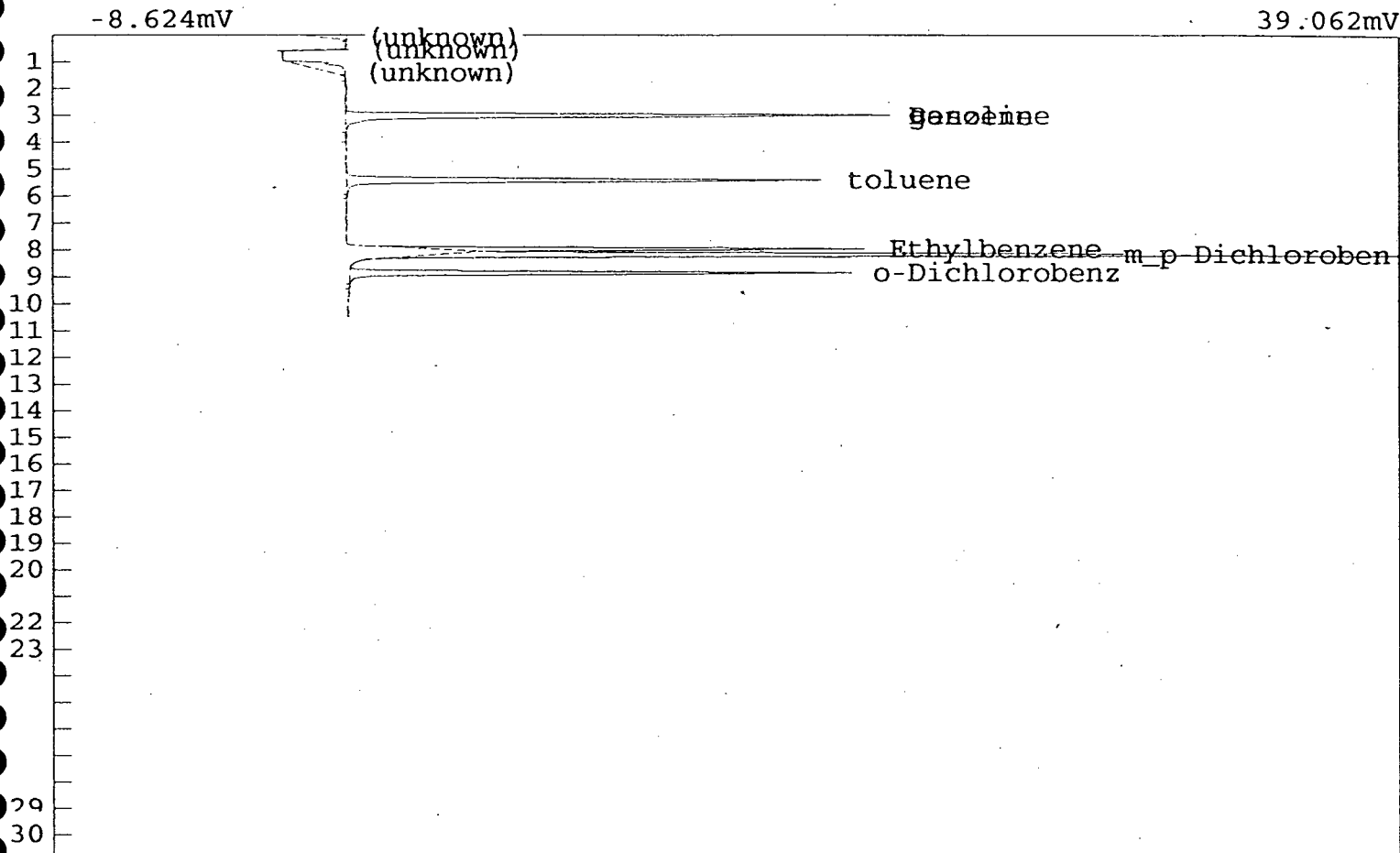
Component	Retention	Area	External	Units
gasoline	2.966	1975.6205	191.6258	ppm
benzene	3.183	173.4020	5.1982	ppm
Toluene	5.600	456.2400	14.8262	ppm
Ethylbenzene	8.166	66.2765	2.5987	ppm
m_p-xylene	8.383	335.2130	9.9214	ppm
		3006.7520	224.1703	

Lab name: TEG NW
 Analysis date: 12/06/2000 09:13:37
 Description: Ch. 1 Detector
 Data file: ch1det2085.CHR ()
 Sample: 10 PPM BTEX
 Operator: MF



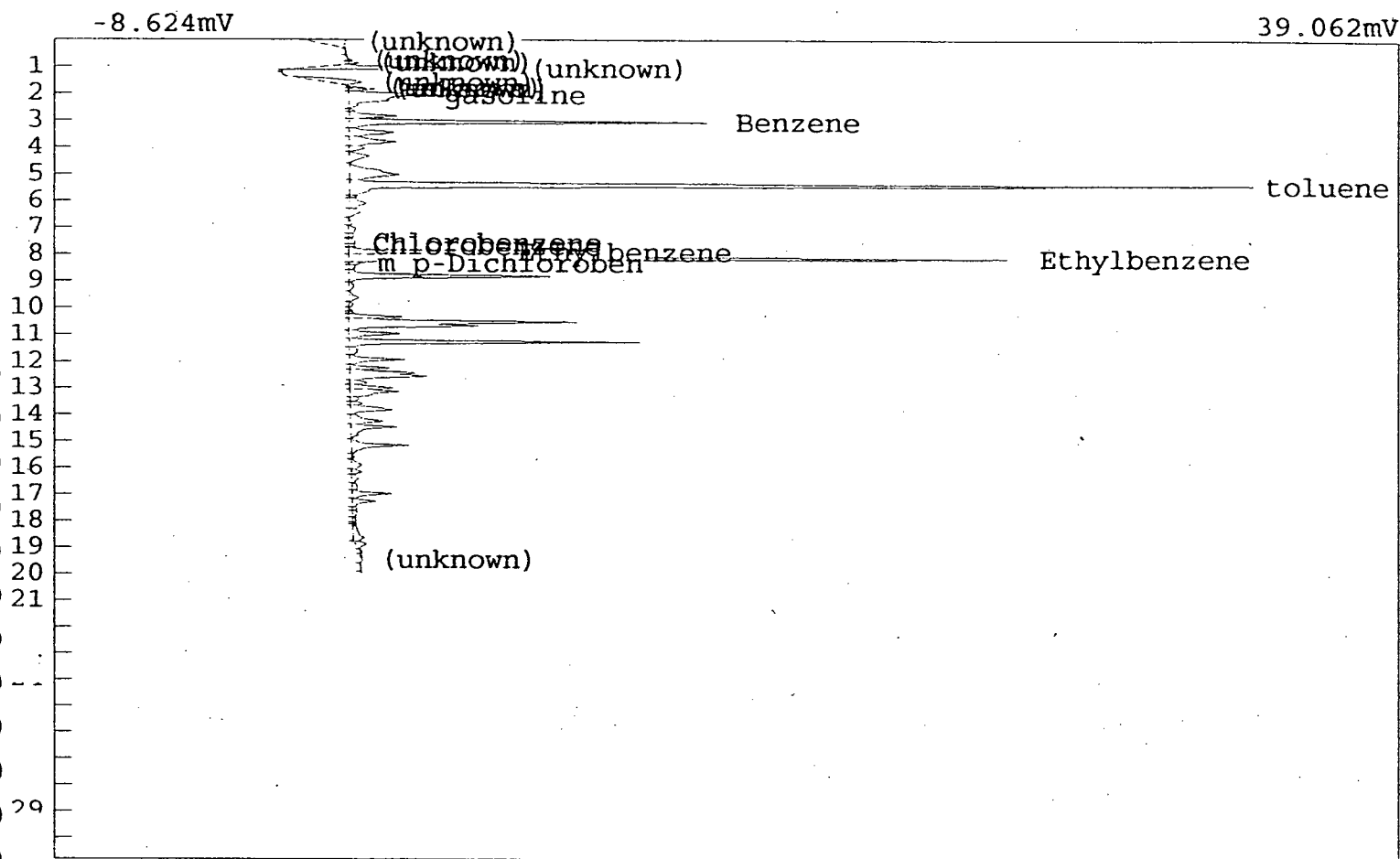
Component	Retention	Area	External	Units
Benzene	3.066	291.0550	8.7251	ppm
Toluene	5.533	271.1720	8.8121	ppm
Ethylbenzene	8.116	218.5120	8.5679	ppm
m_p-xylene	8.333	592.1950	17.5274	ppm
o-xylene	9.000	227.4660	8.7062	ppm
gasoline	9.783	1600.9420	155.2838	ppm
		3201.3420	207.6225	

Lab name: TEG NW
 Analysis date: 12/06/2000 09:13:37
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1841.CHR ()
 Sample: 10 PPM BTEX
 Operator: TM



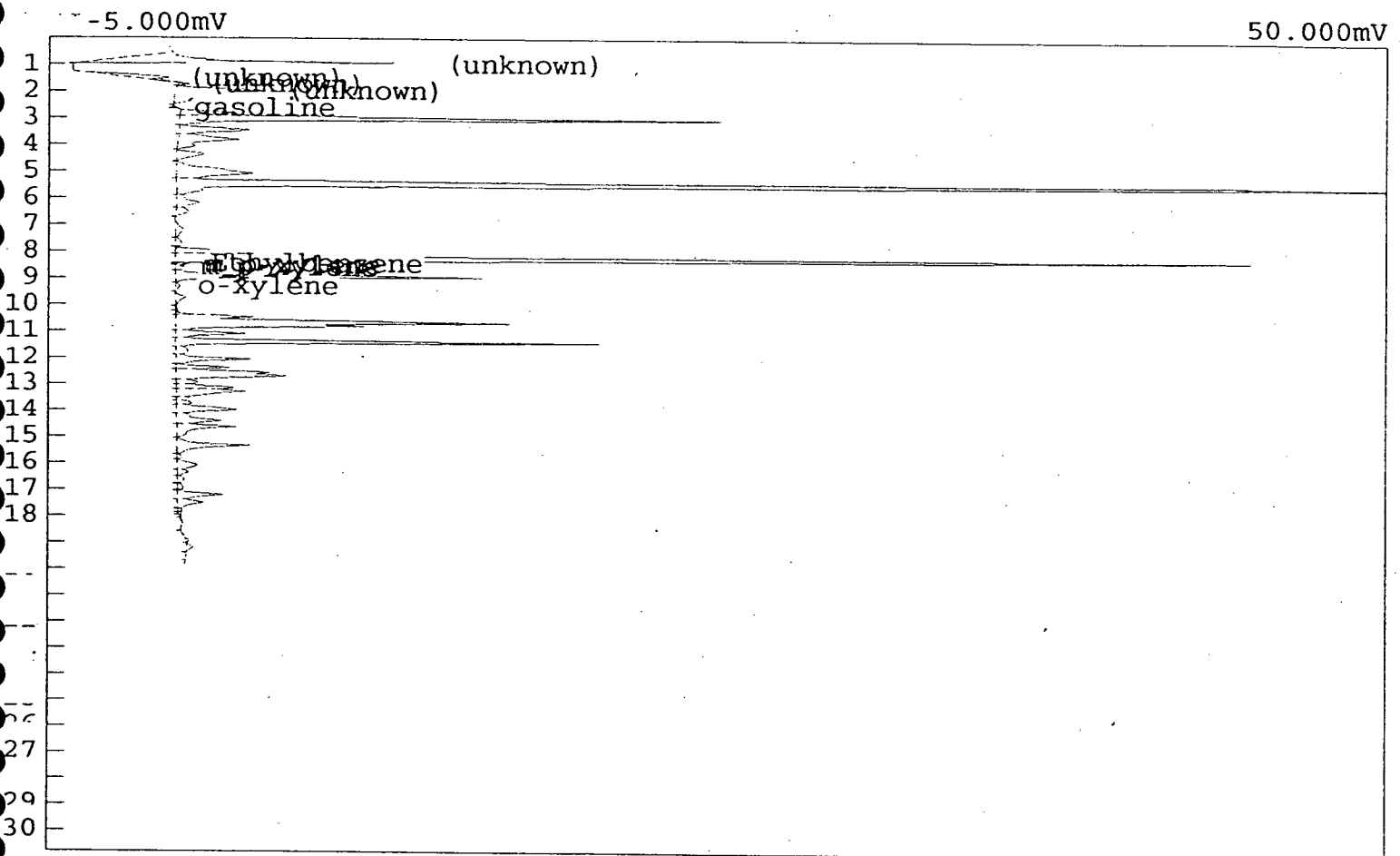
Component	Retention	Area	External	Units
gasoline	3.016	803.6280	156.1396	
benzene	3.016	163.6320	11.5765	ppm
toluene	5.416	153.4000	11.6158	
Ethylbenzene	7.966	93.8060	11.4621	ppm
p-Dichloroben	8.183	263.3460	23.2151	ppm
o-Dichlorobenz	8.850	129.4440	11.6350	ppm
		1607.2560	225.6441	

Lab name: TEG NW
 Analysis date: 12/06/2000 08:47:06
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1840.CHR ()
 Sample: 200 PPM GASOLINE
 Operator: TM



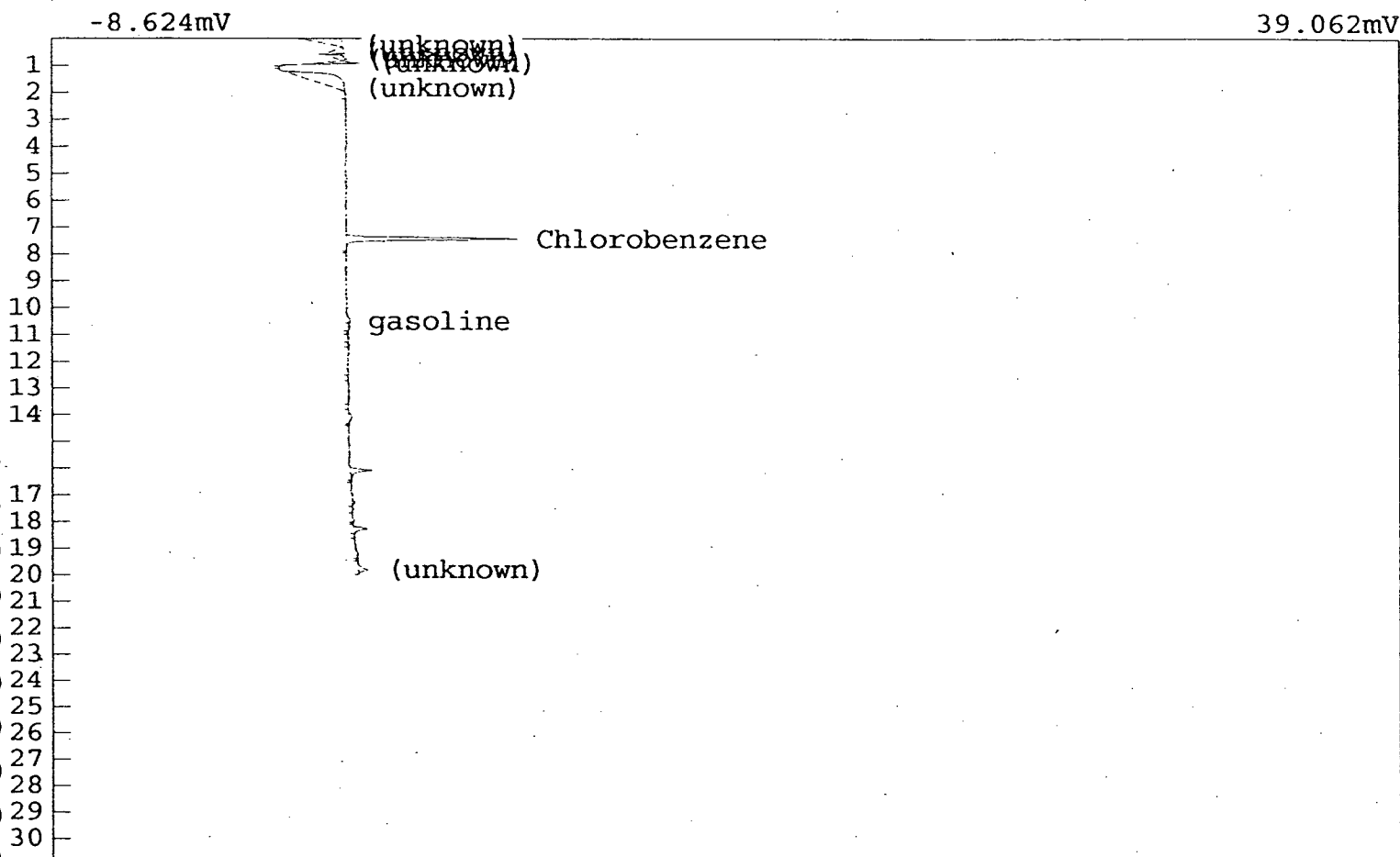
Component	Retention	Area	External	Units
gasoline	2.066	1129.4650	219.4476	
Benzene	3.066	87.0580	6.1591	ppm
toluene	5.416	224.5700	17.0049	
Chlorobenzene	7.566	2.5980	0.1970	ppm
Chlorobenzene	7.716	1.2690	0.0962	ppm
Ethylbenzene	7.933	36.5395	4.4647	ppm
Ethylbenzene	8.150	167.1050	20.4185	ppm
m p-Dichloroben	8.350	1.8705	0.1649	ppm
		1650.4750	267.9530	

Lab name: TEG NW
 Analysis date: 12/06/2000 08:47:06
 Description: Ch. 1 Detector
 Data file: chldet2084.CHR ()
 Sample: 200 PPM GASOLINE
 Operator: MF



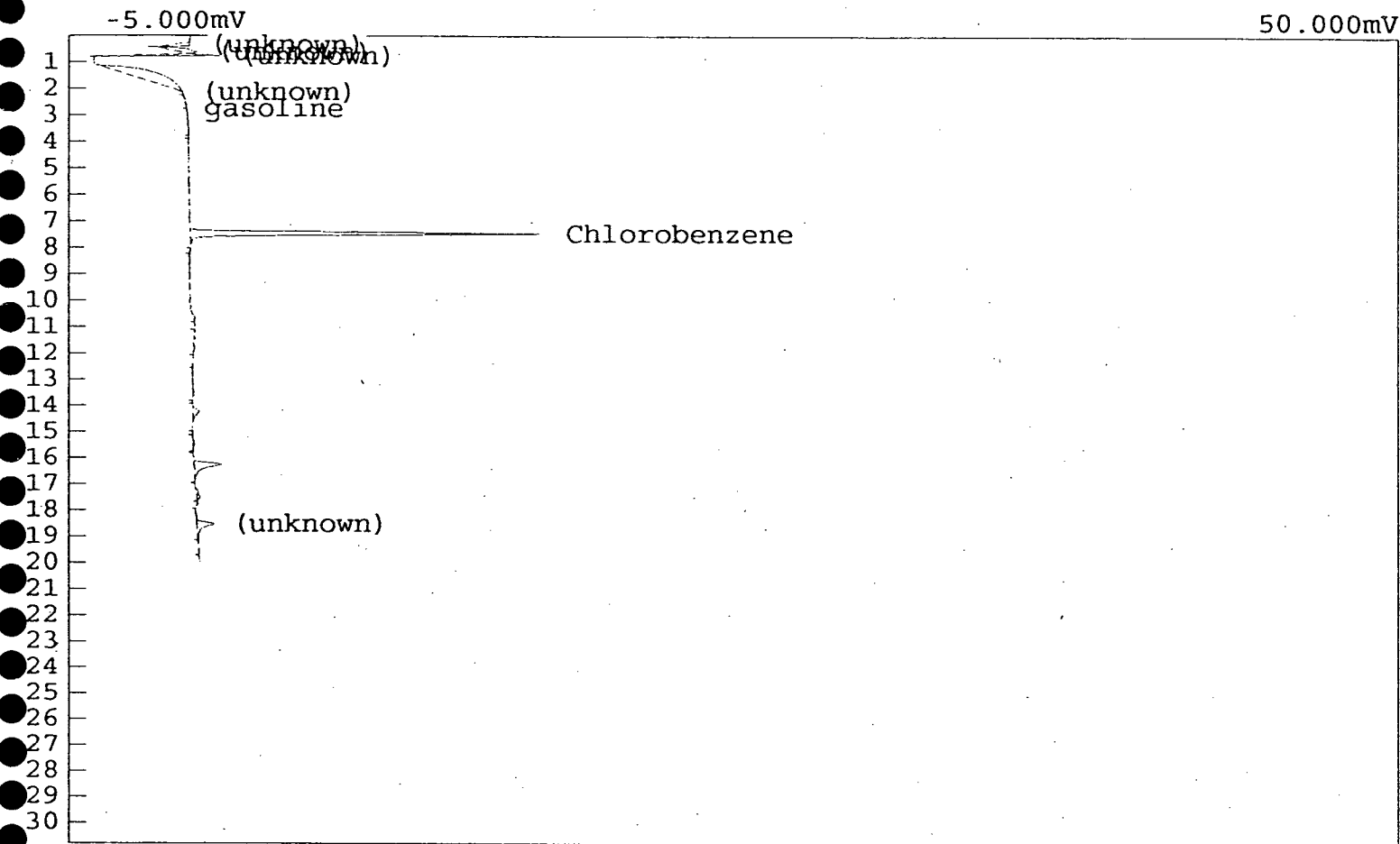
Component	Retention	Area	External	Units
gasoline	2.633	1951.9610	189.3310	ppm
ethylbenzene	8.433	0.7180	0.0282	ppm
p-xylene	8.483	0.9100	0.0269	ppm
m-p-xylene	8.583	2.5670	0.0760	ppm
-xylene	9.300	2.1900	0.0838	ppm
		1958.3460	189.5458	

Lab name: TEG NW
 Analysis date: 12/06/2000 08:12:51
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1839.CHR ()
 Sample: M BLANK
 Operator: TM



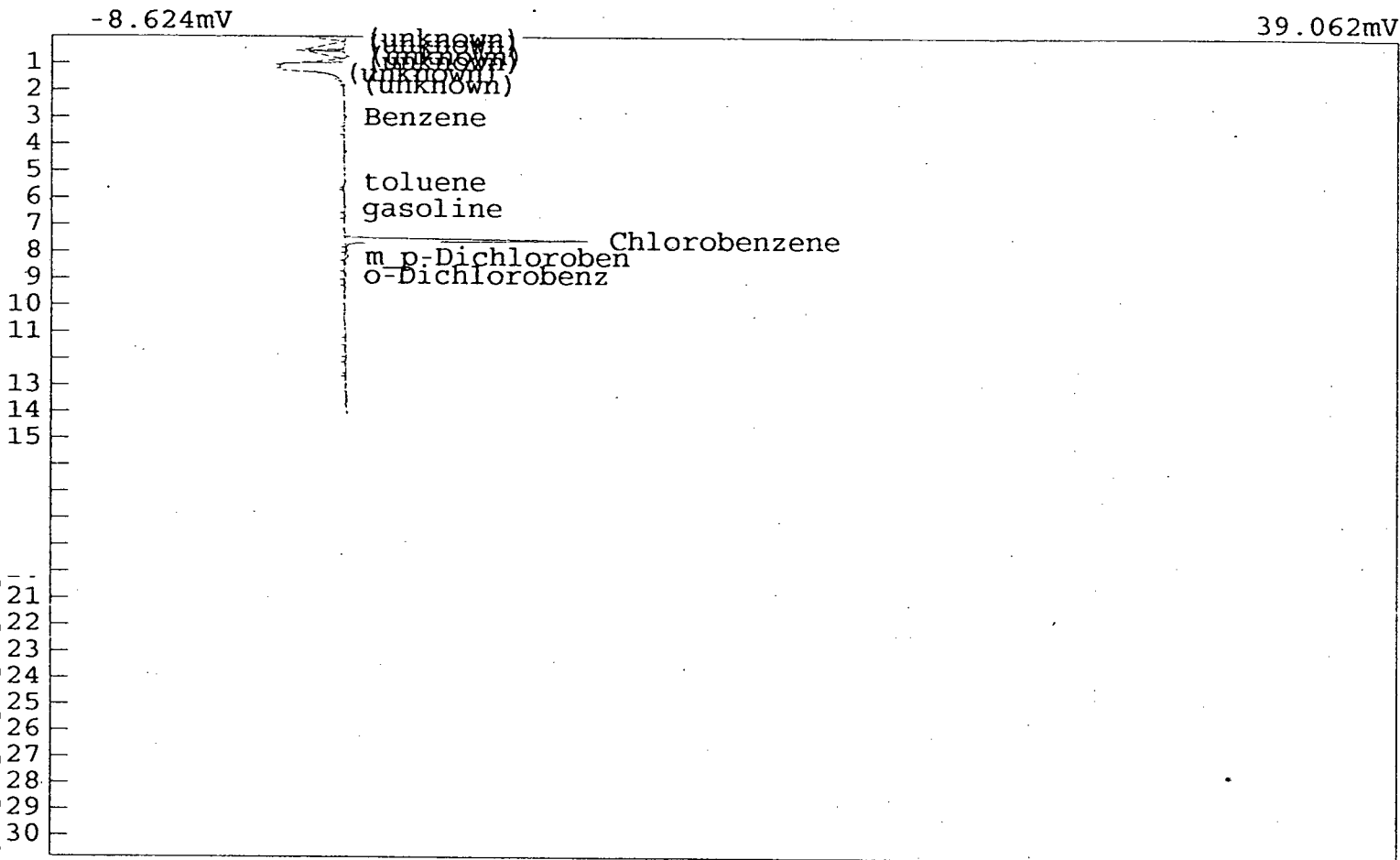
Component	Retention	Area	External	Units
Chlorobenzene	7.433	41.8520	3.1734	ppm
gasoline	10.500	58.8140	11.4272	
		100.6660	14.6006	

Lab name: TEG NW
 Analysis date: 12/06/2000 08:12:51
 Description: Ch. 1 Detector
 Data file: chldet2083.CHR ()
 Sample: M BLANK
 Operator: MF



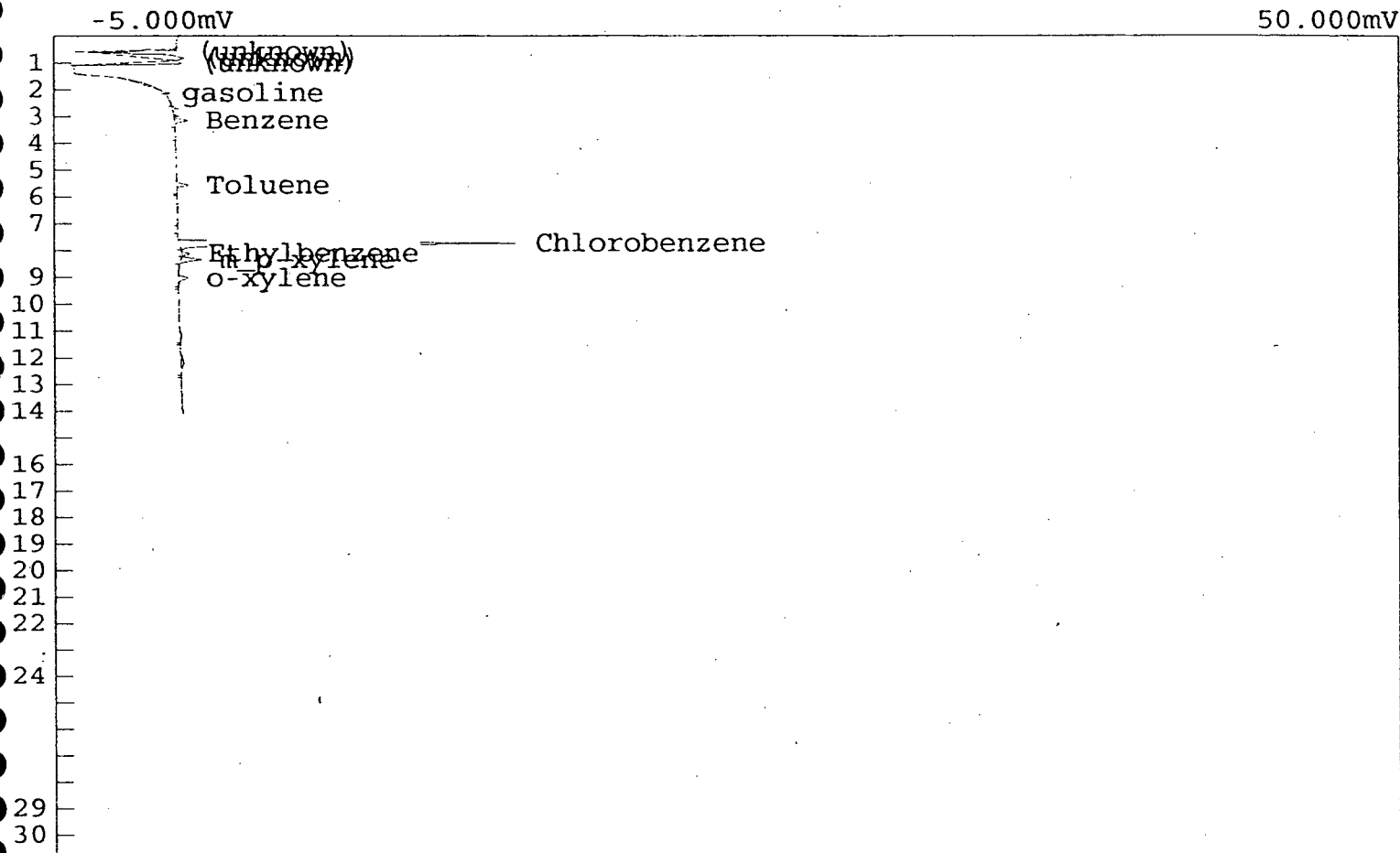
Component	Retention	Area	External	Units
gasoline	2.766	138.8880	13.4715	ppm
Chlorobenzene	7.466	110.1820	493.2050	ppm
		249.0700	506.6765	

Lab name: TEG NW
 Analysis date: 12/06/2000 09:27:39
 Description: PID- 2 GC-1
 Data file: C:\PEAKWIN\ch3de1842.CHR ()
 Sample: WW-2
 Operator: TM



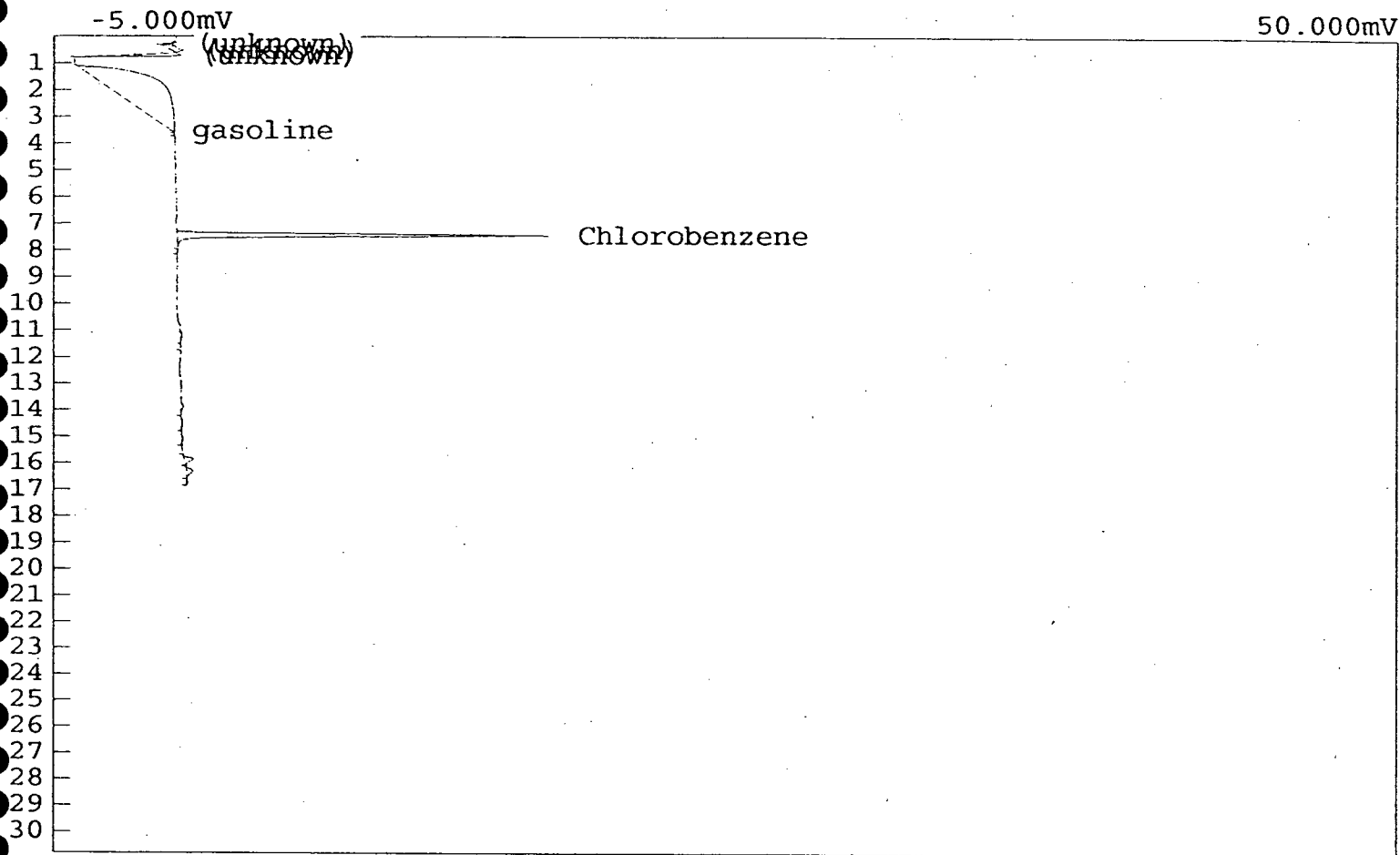
Component	Retention	Area	External	Units
Benzene	3.000	0.9940	0.0703	ppm
Toluene	5.400	0.7200	0.0545	
gasoline	6.366	64.9730	12.6238	
Chlorobenzene	7.550	58.3400	4.4236	ppm
m_p-Dichloroben	8.166	1.1700	0.1031	ppm
o-Dichlorobenz	8.850	0.9710	0.0873	ppm
		127.1680	17.3627	

Lab name: TEG NW
 Analysis date: 12/06/2000 09:27:39
 Description: Ch. 1 Detector
 Data file: chldet2086.CHR ()
 Sample: Bot-3
 Operator: MF



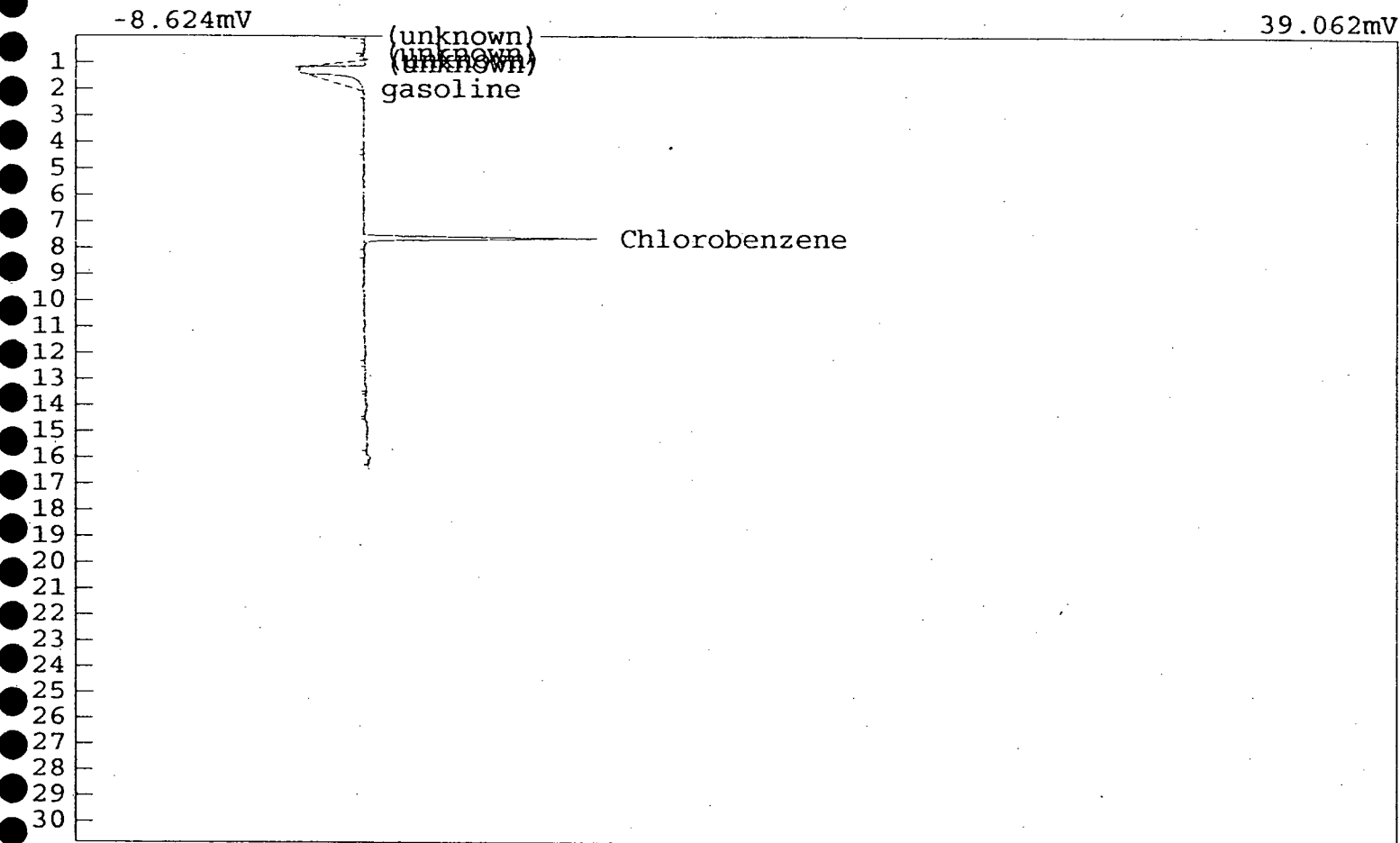
Component	Retention	Area	External	Units
gasoline	2.150	126.3650	12.2568	ppm
benzene	3.150	3.6790	0.1103	ppm
Toluene	5.566	3.4800	0.1131	ppm
Chlorobenzene	7.733	99.1540	443.8406	ppm
ethylbenzene	8.116	1.9440	0.0762	ppm
m-p-xylene	8.350	5.8930	0.1744	ppm
o-xylene	9.033	3.0220	0.1157	ppm
		243.5370	456.6871	

Lab name: TEG NW
Analysis date: 12/06/2000 09:46:18
Description: Ch. 1 Detector
Data file: chldet2087.CHR ()
Sample: Bot-4
Operator: MF



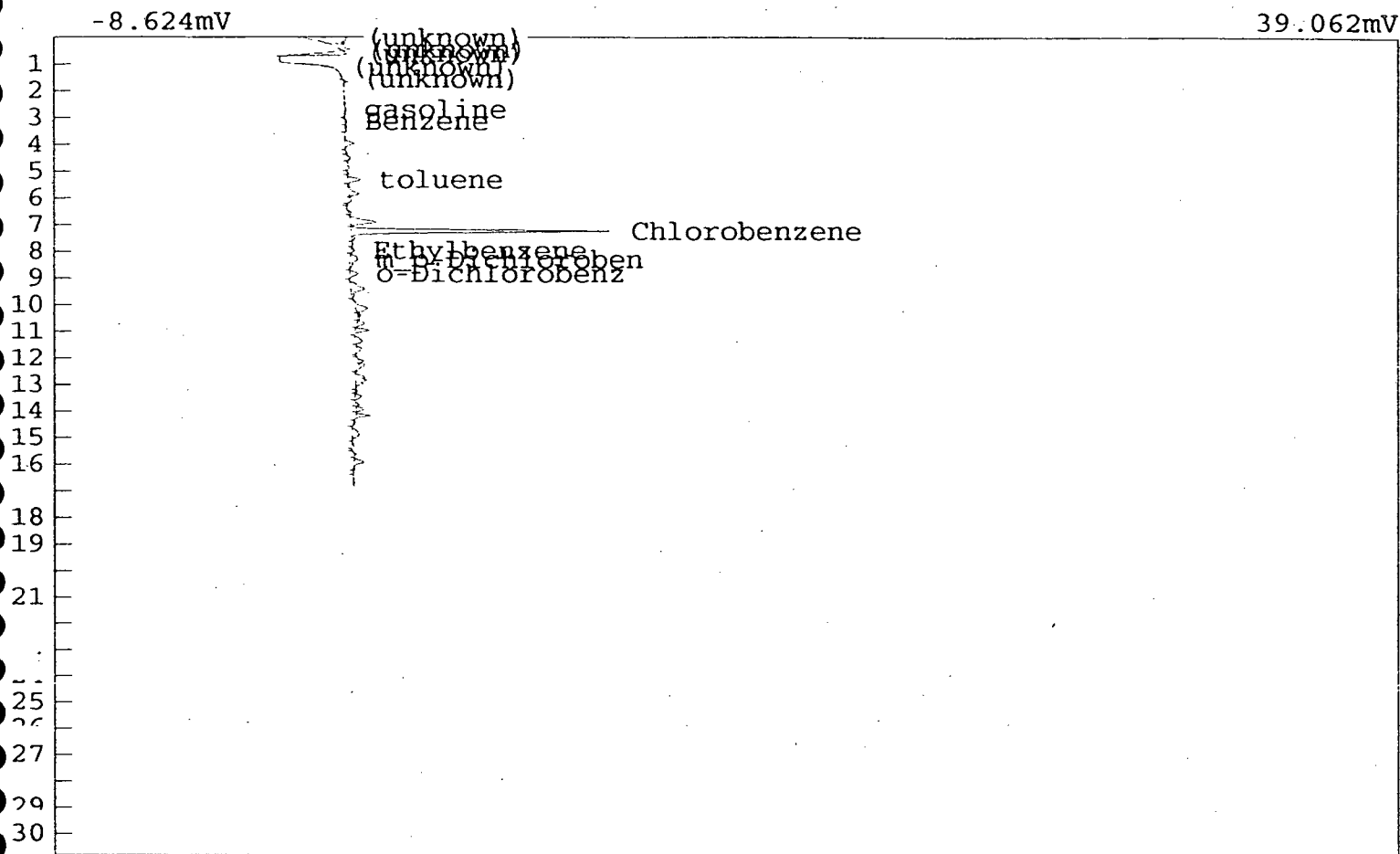
Component	Retention	Area	External	Units
gasoline	3.516	350.4010	33.9872	ppm
chlorobenzene	7.416	111.3400	498.3885	ppm
		461.7410	532.3758	

Lab name: TEG NW
Analysis date: 12/06/2000 10:06:42
Description: PID- 2 GC-1
Data file: C:\PEAKWIN\ch3de1844.CHR ()
Sample: WW-3
Operator: TM



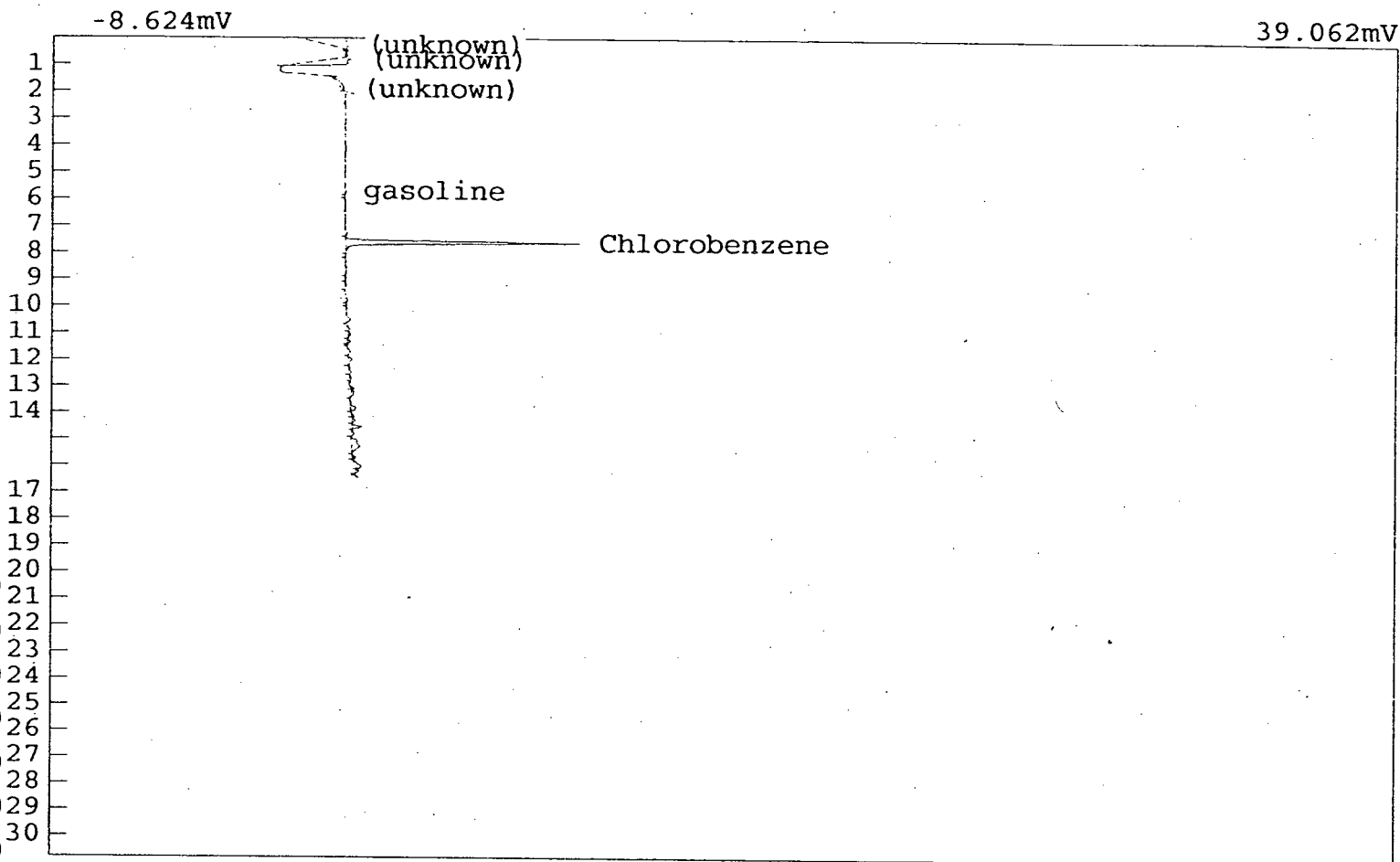
Component	Retention	Area	External	Units
gasoline	2.000	93.6220	18.1901	
Chlorobenzene	7.633	56.3860	4.2754	ppm
		150.0080	22.4655	

Lab name: TEG NW
 Analysis date: 12/06/2000 09:46:18
 Description: PID- 2 GC-1
 Data file: ch3de1843.CHR ()
 Sample: EW-4
 Operator: TM



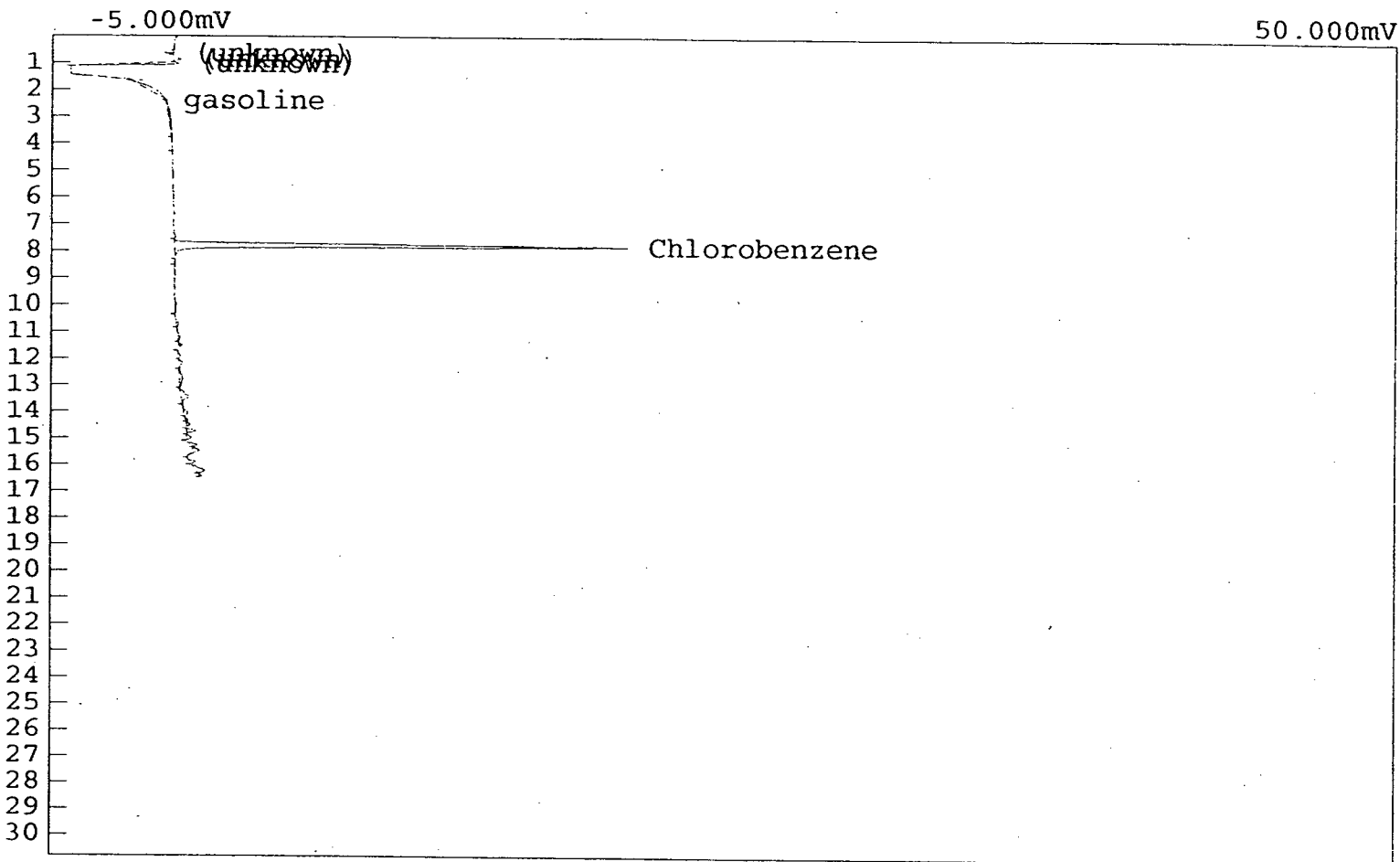
Component	Retention	Area	External	Units
gasoline	2.716	149.6540	29.0768	
Benzene	3.150	0.5870	0.0415	ppm
toluene	5.333	4.0490	0.3066	
Chlorobenzene	7.233	63.0000	4.7769	ppm
Ethylbenzene	7.966	0.9610	0.1174	ppm
p-Dichloroben	8.300	4.5580	0.4018	ppm
o-Dichlorobenz	8.833	2.8620	0.2572	ppm
		225.6710	34.9783	

Lab name: TEG NW
Analysis date: 12/06/2000 10:28:47
Description: PID- 2 GC-1
Data file: ch3de1845.CHR ()
Sample: SP--2
Operator: TM



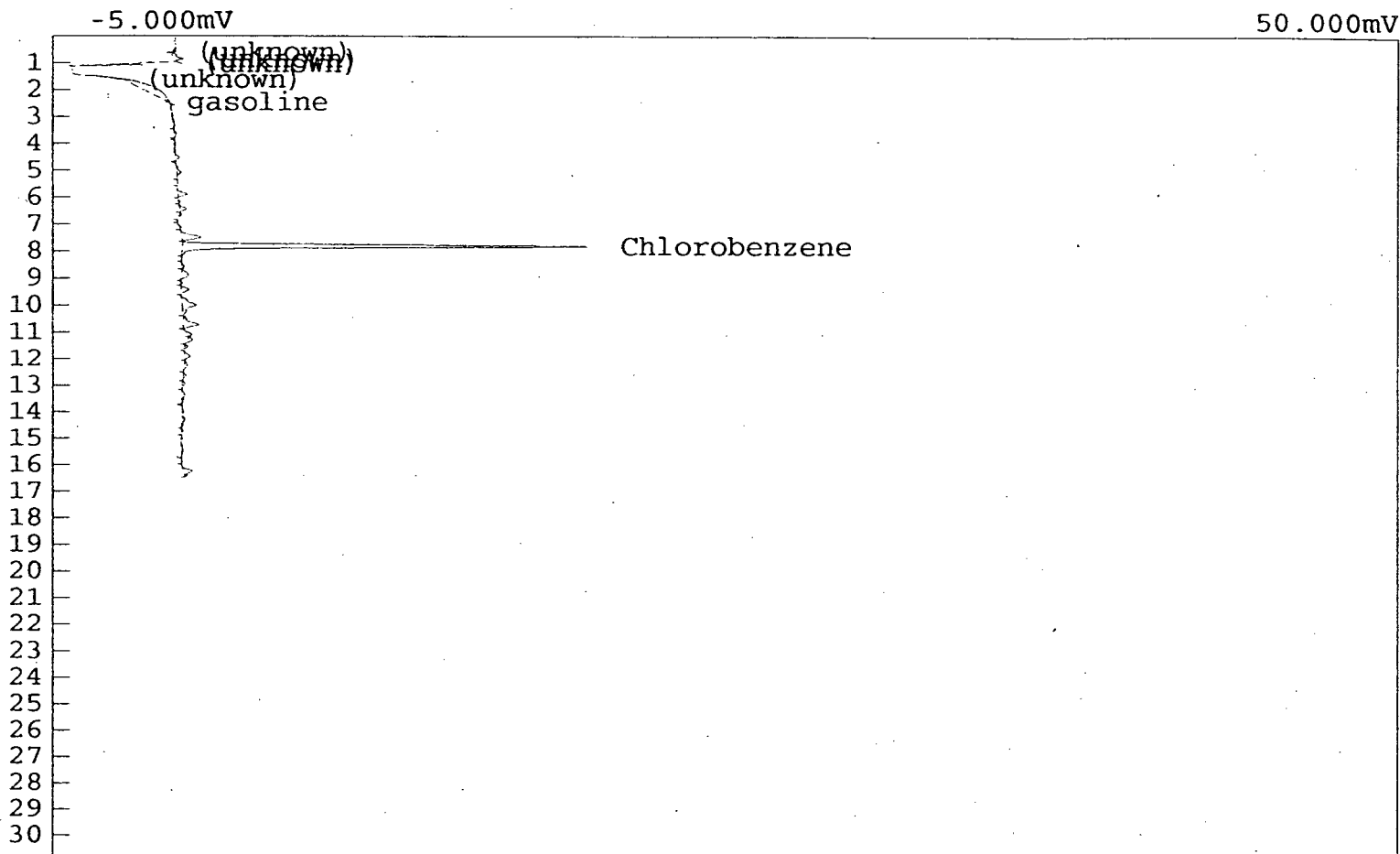
Component	Retention	Area	External	Units
gasoline	5.666	84.9290	16.5011	
Chlorobenzene	7.583	54.9420	4.1659	ppm
		139.8710	20.6671	

Lab name: TEG NW
 Analysis date: 12/06/2000 10:28:47
 Description: Ch. 1 Detector
 Data file: chldet2089.CHR ()
 Sample: SP-1
 Operator: MF



Component	Retention	Area	External	Units
gasoline	2.400	178.7310	17.3361	ppm
Chlorobenzene	7.783	132.4100	592.7037	ppm
		311.1410	610.0397	

Lab name: TEG NW
 Analysis date: 12/06/2000 10:06:42
 Description: Ch. 1 Detector
 Data file: chldet2088.CHR ()
 Sample: NW-3
 Operator: MF



Component	Retention	Area	External	Units
gasoline	2.483	208.5910	20.2323	ppm
Chlorobenzene	7.800	123.1300	551.1638	ppm
		331.7210	571.3962	

APPENDIX E

OnSite & TEG Laboratory Reports for Excavation Water Samples

DATE: 11/25/50 PAGE 1 OF 1

PROJECT NAME: 3733-3737 S. G street

LOCATION: Toronto, 1974

COLLECTOR: A. L. DATE OF COLLECTION 11/29

[illegible]

APPENDIX F

Abandoned UST Disposal Receipt

Abandoned 185s

Disposal Receipt

NF 14288

53860LB

45420LB

8440

**Joseph
Simon & Sons**2202 EAST RIVER ST.
TACOMA, WA 98421
TACOMA SEATTLE
253-272-9364 253-838-1993

NAME

ADDRESS

CITY

12-11-00

1 2 3 4

CHECK
NO.

CASH

TOTAL

SPECIAL INSTRUCTIONS

8440

D11 92 84

4

38^{1/2} + G

+ 10

92 84

DUPLICATE

APPENDIX G

City of Tacoma Public Works Special Approved Discharge Permit



City of Tacoma
Public Works Department

October 31, 2000

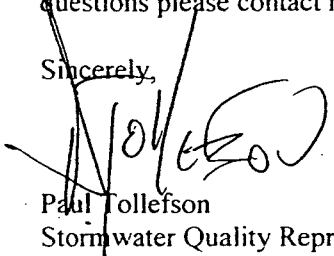
Mr. Michael Lam
Nowicki & Associates
33516 9th Avenue So.
Federal Way, WA 98003

RE: Special Approved Discharge Permit

Dear Mr. Lam:

Enclosed please find the Special Approved Discharge Permit for discharging groundwater into Tacoma's municipal storm drainage system from 3717 So. G Street. Please contact me 24 hours prior to discharging so I can verify the initial reading off of the flow meter. Should you have any questions please contact me at (253) 502-2120.

Sincerely,


Paul Tollefson
Stormwater Quality Representative
Environmental Services Technical Support Division

File: Nowicki & Associates S.A.D. file



**SPECIAL AUTHORIZATION
TO
DISCHARGE TO THE CITY OF TACOMA'S
STORM DRAINAGE SYSTEM**

In accordance with Tacoma Municipal Code Chapter 12.08.080, 12.08.365, and subject to any other applicable conditions contained in Chapter 12.08 and in this authorization the entity specified herein is authorized to discharge to the City of Tacoma's (TACOMA) storm drainage system:

Nowicki & Associates, Michael Lam, (253) 927-5233

Name of Responsible Company, Authorized Representative, Phone Number

33516 9th Avenue So., Federal Way, WA 98003

Address of Company, Street, City, State, Zip

Michael Lam, Nowicki & Associates, (253) 927-5233

Company Contact Person, Phone Number, Emergency (24-Hour) Phone Number

Mr. & Mrs. Bich Lam, (253) 472-1320

Name of Property Owner, Phone Number

769 So. 38th Street, Tacoma, WA 98409

Address of Property Owner, Street, City, State, Zip

3737 So. G Street, Tacoma, WA

Address of Discharge Location, Street, City

A. DISCHARGE CONDITIONS:

1. Flow Limitations and Monitoring Requirements:

(a) Discharge must not exceed 450 gpm during dry conditions, 225 gpm during rainy conditions. Discharge must not cause flooding during dry or rainy conditions.

(b) Flow rate must be metered (in gallons) for billing purposes.

(c) Discharging must be performed between the hours of 8:00 AM and 5:00 PM.

(d) Discharge must not interfere with vehicular or pedestrian traffic.

2. Quality Limitations and Monitoring Requirements:

Discharge must be monitored for turbidity and total petroleum hydrocarbons (TPH) during the duration of the operation. There shall be no visible sheen or discoloration (turbidity). Water must be prescreened prior to discharge. Samples may be required during discharge to insure compliance with Federal, State and Local water quality regulations.

If samples for compliance are required, they shall be by grab method and shall be analyzed in conformance with **Guidelines Establishing Test Procedures for the Analysis of Pollutants**, contained in 40 CFR Part 136 and appendices, as amended.

B. DISCHARGE LOCATION:

Discharge from site will be to a catch basin located in the Northeast corner of South 38th and G streets. Basin is located in City right of way.

C. OTHER CONDITIONS:

1. Must possess a valid NPDES Permit or equivalent authorization from Department of Ecology and/or Environmental Protection Agency (if applicable), and operate in compliance with that permit as determined by the issuing agency.
2. Must sign and submit to Tacoma prior to discharge, a Hold Harmless Agreement provided by Tacoma (as with any legally binding document, you are advised and may wish to consult with your attorney before executing it).
3. Must pay the applicable fees and maintain payments as provided for in Tacoma Municipal Code Chapter 12.08.365.
4. Must cease discharge upon any of the following conditions:
 - a. Violation, either suspected or detected, of any of the discharge conditions specified in A. above.
 - b. When directed to by TACOMA.
 - c. During rain events when 0.8 inches or more of precipitation has fallen during a consecutive 7-hour period (discharge may resume after less than or equal to 0.01 inches of precipitation has fallen during a consecutive 6-hour period); a rain gauge shall be placed on site and maintained for this purpose.
5. Must deliver a letter to TACOMA at the Utility Services Engineering Division, 2201 Portland Ave. E., Tacoma, WA 98421-2711, FAX 253-502-2107, within 5 calendar days of any exceedance of the discharge conditions specified in A. above, explaining the limitations exceeded, the cause, the measures taken to mitigate it and to prevent reoccurrence.

D. PRIOR TO COMMENCEMENT OF DISCHARGE:

At least 2 business days prior to the anticipated start of discharge, you must call the TACOMA representative at 253-591-5588 of your intent to start and receive final discharge approval. An on-site inspection may be performed by TACOMA staff including discharge sampling.

E. ENFORCEMENT:

Violations of this authorization or of Tacoma Municipal Code Chapter 12.08 will be subject to enforcement provisions of said Chapter.

F. DURATION:

This permit covers discharges from this event only. The permit will expire immediately after the discharge event is over or within 60 days after the issuance date of this permit, whichever occurs first.

ON BEHALF OF THE CITY OF TACOMA

Signature

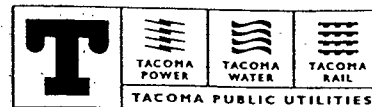
Dated

10/27/00

The 24-hour emergency telephone number is 253-591-5595. The regular business hours (Mon-Fri 8:00 a.m. to 4:30 p.m.) number is 253-591-5588. Fax 253-502-2160.

STATEMENT OF SERVICES

**24-hour automated service
253-502-8608**



NAME	NOWICKI & ASSOCIATES INC
SERVICE ADDRESS	3800 S G ST

ACCOUNT# 010-108-993
BILL DATE 12-20-00
DATE DUE 01-03-01

AMOUNT DUE: **\$85.95**

TYPE OF SERVICE	RATE	SERVICE FROM	SERVICE TO	CURR READ	PREV READ	MULT	CONSUMPTION	COST/UNIT	AMOUNT DUE
Storm Drainage		☎ 502-2100 12-01-00	Public Works 12-18-00						\$85.95
<p>If you have recently sold this property, or changed its use due to development, please contact Sewer Utilities Customer Service - 502-2100</p>									

Information Center Closing Bill

Information Center Closing
It has been a pleasure to serve you. If you have any questions regarding this bill, please call 591-5588.

PREVIOUS BALANCE	\$0.00
PAYMENTS APPLIED	\$-0.00
PAST DUE CHARGES	\$0.00
CURRENT CHARGES	\$85.95
AMOUNT DUE	\$85.95

✓ m
12/22/60

DETACH AND KEEP FOR YOUR RECORD. DETACH AND KEEP FOR YOUR RECORDS. DETACH AND KEEP FOR YOUR RECORDS.



PLEASE RETURN THIS STUB AND PAYMENTS TO:
CITY TREASURER - P.O. BOX 11010
TACOMA, WA 98411-1010

Yes, I would like to donate to Project Need.

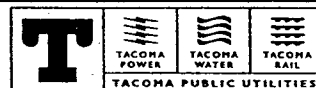
Monthly pledge: \$_____

Donation: \$_____

Tacoma Power will match every dollar donated to Project Need with an additional \$2.

SERVICE ADDRESS: 3800 S G ST

NOWICKI & ASSOCIATES INC
BLDG 6
33516 9TH ABE S
FEDERAL WAY WA 98003

**ACCOUNT NUMBER**

010-108-993

DATE DUE

01-03-01

AMOUNT DUE

\$85.95