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A Report Prepared For :

Vashon Park District
17130 Vashon Highway SW
Vashon, Washington 98070

**LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT
ELLISPORT CREEK ACQUISITION SITE
VASHON ISLAND, WASHINGTON**

September 17, 1999

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AGI
TECHNOLOGIES

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AGI Project No. 16,247.002

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INTRODUCTION

This report presents results of an investigation into the nature and extent of contamination resulting from previous industrial site usage at the Ellisport Creek property (site or property) on Vashon Island, Washington. AGI Technologies' (AGI) services were performed according to our proposal dated May 27, 1999.

SITE DESCRIPTION

The site is on the mouth of Ellisport Creek as it enters Tramp Harbor on the east coast of Vashon Island (**Figure 1**). The site consists of about 3.5 acres of wooded forest and wetlands surrounding the creek, and about 5 acres of tidelands. Chautauqua Beach Drive S.W., a paved two-lane road, crosses the site and separates the beachfront from the wooded area. A poorly maintained gravel road leads west along the south edge of the site.

An approximately 250-foot (ft) wide wetlands surrounding Ellisport Creek encompasses the center of the site. Wooded slopes border both sides of the wetland. The Creek branches into several channels through the wetlands, and two culverts beneath Chautauqua Beach Drive S.W. drain the creek and wetlands to Tramp Harbor. The site slopes to the southeast and is vegetated with Alder, salmonberries, and blackberries. Wetland vegetation is found onsite west of Chautauqua Beach Drive.

Pilings in the tidelands indicate the location of a dock that was used to offload bunker C fuel oil that fired a boiler used to heat off-site greenhouses. Two aboveground tanks previously on the site were used to store this oil¹. On the south bank of the creek, foundations remain for one of these tanks (**Figure 2**).

An enclosed concrete structure, of unknown origin, is situated close to the tank foundation. The concrete structure measures approximately 24 ft by 24 ft, and is 6 ft high, and has no means of access other than a small (~ 3/4-inch) opening recently drilled through the top.

BACKGROUND AND PREVIOUS WORK

Between about 1920 and 1940, the site housed a lumber mill, millpond, and greenhouses for growing vegetables². Several cement foundations onsite appear to be remnants of both the sawmill and greenhouses.

Following cessation of lumber mill and on-site greenhouse operations, the above ground storage tanks were used as part of a Bunker C fuel oil transfer facility. Oil was moved by barge to tank to truck to heat off-site greenhouses. Fuel transfer operations were terminated in 1959 or 1960. The two above ground tanks held approximately 100,000 gallons (gal) and 10,000 gal. Both tanks reportedly were removed around 1961.¹

¹ Thomas Beall Jr., 1995, personal communication.

² Howard Willsie, 1995, personal communication.

In 1995, volunteer scientists working for King County Department of Natural Resources (DNR) surveyed the site. Also in 1995, a private ecologist surveyed the site and listed flora and fauna. Both reports were made available to AGI.

In July 1998, other King County DNR representatives visited the site and collected three soil samples from the wetland and one surface water sample from Ellisport Creek. The results of this survey indicated that heavy petroleum hydrocarbon oil occurs in soil within the wetland at levels above 45,000 milligrams per kilogram (mg/kg). The single sample of surface water collected from Ellisport Creek did not contain quantifiable petroleum hydrocarbons. We understand that the discovery of soil contamination was reported to the Washington State Department of Ecology (Ecology).

OBJECTIVE AND SCOPE OF WORK

The objectives and scope of AGI's environmental site assessment was to characterize the nature and extent of the contamination that DNR identified. The scope of work that AGI performed to accomplish this objective consisted of the following:

- Advancing hand auger borings in areas where bunker C fuel oil was stored and off loaded. All soil samples were screened for the presence of petroleum hydrocarbons (TPH) by Ecology's TPH screening method. Samples gathered from locations where screening indicated the presence of TPH were then analyzed for TPH quantified as diesel and oil. The sample with the highest level of petroleum hydrocarbons was analyzed for polychlorinated biphenyls (PCBs) and polynuclear aromatic hydrocarbons (PAHs).
- Excavating six test pits to determine the extent of free product.
- Collecting a groundwater sample from the test pit displaying visual evidence of contamination.
- Analyzing the groundwater sample for TPH quantified as diesel and oil; benzene, ethylbenzene, toluene, and xylenes (BETX); and PAHs.

FIELD INVESTIGATION

On July 13 and 14, 1999, AGI conducted the field investigation. Community members David Frank and Ann Spiers were onsite on July 13, and led a tour of the property, indicating approximate property boundaries and site features.

Our field investigation on July 13 included advancing hand auger borings and collecting 17 soil samples (S1 through S17) for laboratory analysis. Free product was visually identified at sampling location S7, just east of the former tank foundation. On July 14, based on these findings, six test pits (TP1 through TP6) were excavated to determine the extent of free product, and a water sample (W1) was collected for laboratory analysis. Sample collection methods and field observations are described in the following sections. Hand auger boring, test pit, and groundwater sample locations are shown on **Figure 2**.

An attempt was made to sample within the enclosed concrete structure. A small hole had been previously drilled through the top of the structure, but this hole was not large enough to permit sampling tools. A clean piece of 3/4-inch pipe was inserted into the hole, and an attempt was made to drive the pipe into the floor of the structure without success. The pipe tip did not appear contaminated from the sampling attempt, and the OVM probe inserted into the hole at the top of the enclosure did not detect organic vapors within the enclosure. Oil stains were not noted on the structure.

SOIL AND GROUNDWATER CONDITIONS

Native soil underlying wetland vegetation is of fluvial origin consisting of light brown and gray sand and sandy gravel. Within the wetland area, groundwater was encountered between just beneath ground surface to 4 ft below ground surface.

HAND-AUGER BORINGS

A hand auger was used to advance the 17 borings shown on **Figure 2**. Soil samples were collected at 6 in. below ground surface (bgs) at all locations. A black tar-like substance was observed 2-inches bgs at sample location S7. Accordingly, the soil boring was advanced to observe groundwater conditions at this location. Groundwater was encountered at 1.3-feet bgs at this location. A sheen and distinct petroleum odor were noted on groundwater.

Soil samples were collected using a clean stainless steel spoon, then packed in 8-ounce laboratory-supplied glass jars, secured with chain-of-custody seals, labeled, and packed in a cooler chilled with Blue Ice.

TEST PITS

Six test pits were advanced using a shovel and hand auger to evaluate the extent of contamination around S7 as shown on Figure 2. Test pit data and observations are summarized in the following matrix:

Test Pit	Total Depth (feet bgs)	Depth to Groundwater (feet bgs)	Observations
TP1	5	3	No indications of soil or groundwater contamination observed.
TP2	3	0.2	Sheen noted on groundwater.
TP3	3	None	Black tar-like substance encountered at 3 ft bgs.
TP4	2	1	Sheen noted on groundwater.
TP5	5	2	No indications of soil or groundwater contamination observed.
TP6	1.5	1.3	Black tar-like substance encountered at 0.2 ft bgs. Sheen noted on groundwater. Groundwater sample W1 collected.

The inferred areal extent of free product is shown on Figure 2. No evidence of distressed vegetation is associated with the free product.

GROUNDWATER SAMPLING

One groundwater sample (W1) was collected from TP6 on July 14, 1999 (Figure 2). Groundwater was purged from the test pit and allowed to recharge. Recharge time was about 3 hours. A groundwater sample was collected by directly filling a laboratory-supplied 1-liter amber glass bottle. The sample container was labeled and placed into a chilled cooler.

ANALYTICAL METHODS AND RESULTS

ANALYTICAL METHODS

On July 15, 1999, soil and groundwater samples were delivered under chain-of-custody to CCI Analytical Laboratories, Inc. of Everett, Washington for analysis. All soil samples collected from hand-auger borings were screened for gasoline, diesel, gasoline, and oil petroleum hydrocarbons by the Washington Hydrocarbon Identification (NWTPH-HCID) method. Screening results indicated that diesel and oil range petroleum hydrocarbons were present. Gasoline range petroleum hydrocarbons were not present. Samples in which screening identified TPH were analyzed by Washington Method WTPH-D Extended to quantify diesel and oil-range petroleum hydrocarbons. The sample with the highest levels of TPH was also analyzed for PCBs by US Environmental Protection Agency (EPA) Method 8082-Modified and for polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270.

Groundwater sample W1 was analyzed for diesel and oil by Washington Method WTPH-D Extended, BETX by EPA Method 8021, and PAHs by EPA Method 8270.

ANALYTICAL RESULTS

Tables 1 and 2 summarize analytical results. **Appendix A** presents copies of laboratory reports. The following sections briefly describe the analytical results. Chromatograms from the Methods WTPH-D Extended analyses indicate that contamination identified originated from bunker C fuel oil.

Soil

Diesel Range Petroleum Hydrocarbons. Such hydrocarbons were quantified at four locations (S4, S6, S7, and S11) at concentrations ranging between 32 and 64,000 mg/kg, respectively. Diesel is not considered a separate contaminant on site. The diesel detections are considered to have resulted from overlap of the broad-based Bunker C oil range eluting into the diesel range.

Motor-Oil Range Petroleum Hydrocarbons. Such hydrocarbons were identified in six of the seventeen soil samples (S3, S4, S6, S7, S8, and S11) at concentrations ranging from 110 to 90,000 mg/kg.

PAHs. Eight PAH compounds were quantified in S7, including the carcinogenic PAHs (cPAHs), benzo (a) anthracene, chrysene, and benzo (a) pyrene. The PAHs identified in S7 are characteristic of bunker C fuel oil.

PCBs and BETX. Such compounds were not detected in sample S7.

Groundwater

The analytical result from groundwater sample W1 correlated reasonably well with soil sample S7. Diesel range petroleum hydrocarbons were quantified at 57,000 micrograms per liter (ug/L) and motor-oil range petroleum hydrocarbons were quantified at 100,000 ug/L. Fourteen PAH compounds were detected. The carcinogenic PAHs benzo (b) fluoranthene and benzo (k) fluoranthene were detected in groundwater in addition to the cPAHs detected in soil sample S7.

COMPARISON WITH CLEANUP LEVELS

Tables 1 and 2 list the Model Toxics Control Act (MTCA) Method A residential cleanup levels (Washington Administrative Code 173-340) which provide a basis for evaluating soil and groundwater contamination. Method A cleanup level exceedances are highlighted on Tables 1 and 2 and summarized in the following.

Soil

TPH. The MTCA Method A residential soil cleanup level for both diesel and oil is 200 mg/kg. This cleanup standard was exceeded in 2 of the 4 samples where diesel was detected and 5 of the 6 samples where oil was detected. Cleanup standard exceedances correlated well with the inferred extent of free product shown of Figure 2.

Carcinogenic PAHs. The MTCA Method A residential soil cleanup level for the sum of all cPAHs is 1.0 mg/kg. This cleanup level was exceeded in sample S7 with a total cPAH concentration of 6.3 mg/kg.

Groundwater

TPH. The MTCA Method A groundwater cleanup level for the sum of all TPH fractions is 1,000 micrograms per liter (ug/L). This cleanup level was exceeded in groundwater sample W1 with a TPH concentration of 157,000 ug/L.

Carcinogenic PAHs. The MTCA Method A groundwater cleanup level for the sum of all cPAHs compounds is 0.1 ug/L. This cleanup level was exceeded in groundwater sample W1 with a total cPAH concentration of 24.1 ug/L.

FINDINGS

Based on available historical information and the results of the environmental site assessment described above, AGI offers the following findings concerning Ellisport Creek Acquisition site:

- The property, located on Vashon Island, Washington, consists of about 3.5 acres of wooded forest and wetlands surrounding the Ellisport Creek and about 5 acres of tidelands bordering Tramp Harbor.
- Between about 1920 and 1940, the site housed an active lumber mill, millpond, and greenhouses for growing vegetables.
- Ending in the early 1960's the site was used as a Bunker C fuel oil transfer site. The oil was trucked from the site for use in heating off-site greenhouses. Two above ground oil tanks were located on site for use in the transfer operations: one with a reported capacity of 100,000 gal and the other with a reported capacity of 10,000 gal. The foundation for the 100,000-gal tank was identified by AGI in the course of this environmental site assessment.

- In July 1998, King County DNR representatives visited the site and collected three soil samples from the wetland and one surface water sample Ellisport Creek. The results of this survey indicated that a heavy petroleum hydrocarbon oil occurs in soil within the wetland. The single sample of surface water collected from Ellisport Creek did not contain quantifiable petroleum hydrocarbons.
- AGI's field investigation characterized the nature and extent of the petroleum hydrocarbons identified by DNR. The petroleum hydrocarbons most likely result from a historic spill of bunker C fuel oil. Free product was encountered by AGI in an area approximately 220 feet long by up to 100 feet wide. The free product is centered around the former storage tanks and located west of Ellisport Creek and north of Chautauqua Beach Drive SW.
- MTCA Method A residential soil cleanup levels are exceeded in the free product area for diesel and oil range petroleum hydrocarbons, and cPAHs. Gasoline range petroleum hydrocarbons, BETX compounds and PCBs were not detected.
- MTCA Method A groundwater cleanup standards are exceeded in the free product area for TPH and cPAHs.
- No distressed vegetation was noted in the free product area, or on any other areas surveyed during this investigation. The benthic organism community in the tidelands appears healthy and unaffected by the contamination in the area of the wetlands. DNR surface water sampling indicates TPH compounds in the free product area are not currently being transported to Ellisport Creek.

LIMITATIONS

This report has been prepared for exclusive use by the Vashon Park District and its consultants for this project only. The analyses and findings in this report are based on data described herein and on our experience and professional judgement. The data were either made available to AGI or reasonably obtained within the practical constraints of out scope of services. AGI cannot be responsible for the interpretation by others of the data contained herein.

We must presume the conditions encountered are representative as interpreted within this report. However, you should be aware that subsurface conditions may vary between exploration locations and with time, and unanticipated conditions can and do often occur.

Our work has been performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the area. No other warranty, express or implied, is made.

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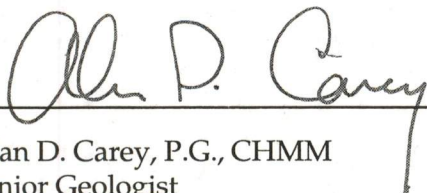
Ms. Ann Spiers
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Vashon, Washington 98070

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Department of Ecology
3190 160th Avenue SE
Bellevue, Washington 98008

Attention: Ms. Louise Bardy, Site Analyst

Quality Assurance / Technical Review by:



Alan D. Carey, P.G., CHMM
Senior Geologist

Table 1
NWTPH-HCID and WTPH-D (extended) Soil and Groundwater Sample Testing Results
 Vashon Park District/Ellisport Phase II Site Assessment
 Vashon, Washington

Soil Samples

Sample No.	Date Sampled	Washington State Test Method				
		NWTPH - HCID			WTPH-D (extended)	
		Gasoline	Diesel	Oil	Diesel	Oil
		mg/kg			mg/kg	
S1	07/13/99	ND	ND	D	ND	52
S2	07/13/99	ND	ND	D	ND	ND
S3	07/13/99	ND	ND	D	ND	110
S4	07/13/99	ND	ND	D	380	4,400
S5	07/13/99	ND	ND	ND	NA	NA
S6	07/13/99	ND	ND	D	120	420
S7	07/13/99	ND	ND	D	64,000	90,000
S8	07/13/99	ND	ND	D	ND	370
S9	07/13/99	ND	ND	ND	NA	NA
S10	07/13/99	ND	ND	ND	NA	NA
S11	07/13/99	ND	ND	D	32	310
S12	07/13/99	ND	ND	ND	NA	NA
S13	07/13/99	ND	ND	ND	NA	NA
S14	07/13/99	ND	ND	ND	NA	NA
S15	07/13/99	ND	ND	ND	NA	NA
S16	07/13/99	ND	ND	ND	NA	NA
S17	07/13/99	ND	ND	ND	NA	NA
Laboratory Detection Limit		20	50	100	25	50
Cleanup Level ^a		--	--	--	200	200

Groundwater Sample

Sample No.	Date Sampled	Washington State Test Method				
		NWTPH - HCID			WTPH-D (extended)	
		Gasoline	Diesel	Oil	Diesel	Oil
		µg/L			µg/L	
W1	07/14/99	NA	NA	NA	57,000	100,000
Cleanup Level ^b		--	--	--	1,000	1,000

Notes:

Shaded value indicates that concentration exceeds cleanup level.

a) Washington Administrative Code Chapter 173-340 Model Toxics Control Act Cleanup Regulation Method A suggested cleanup level for residual soil.

b) Washington Administrative Code Chapter 173-340 Model Toxics Control Act Cleanup Regulation Method A suggested cleanup level for groundwater.

HCID - Ecology Hydrocarbon Identification Method.

WTPH-D (extended) – total petroleum hydrocarbons quantified as diesel and oil.

D - detected above laboratory detection limit.

NA - not analyzed.

ND – not detected at or above laboratory detection limit.

mg/kg – milligram per kilogram.

µg/L - microgram per liter.

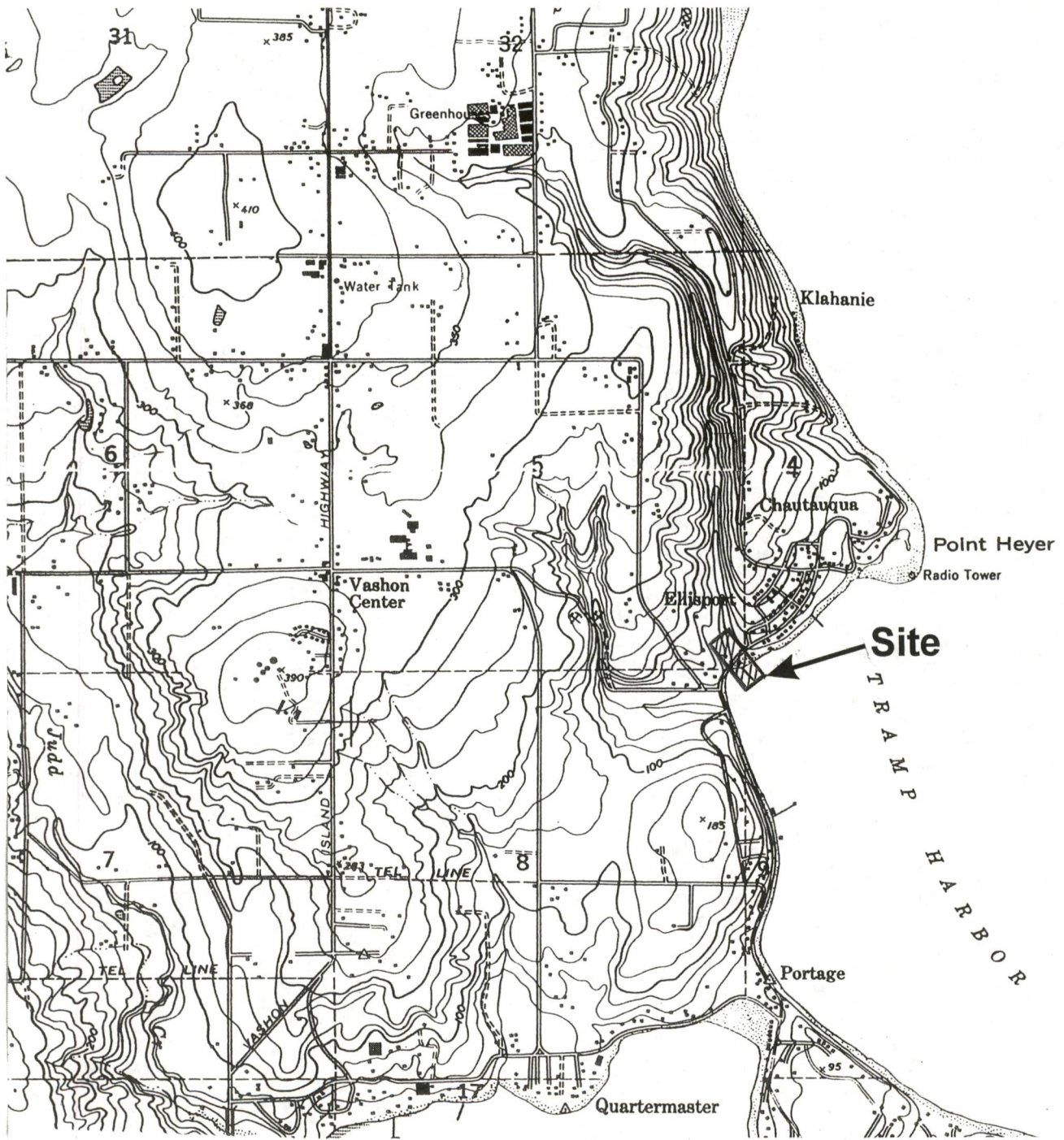
Table 2
BETX, PCB, and PAH Soil and Groundwater Sample Testing Results

Vashon Park District/Ellisport Phase II Site Assessment
 Vashon, Washington

Analyte	Laboratory Detection Limit Soil	Cleanup Level Soil	Sample I.D. S7	Laboratory Detection Limit Groundwater	Cleanup Level Groundwater	Sample I.D. W1
EPA Test Method 8021						
	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>	<u>µg/L</u>	<u>µg/L</u>	<u>µg/L</u>
Benzene	0.4	0.5	ND	1	5	ND
Ethylbenzene	0.4	20	ND	1	30	ND
Toluene	0.4	40	ND	1	40	ND
Xylenes	1.2	20	ND	5	20	ND
EPA Test Method 8082M						
	<u>mg/kg</u>	<u>mg/kg</u>	<u>mg/kg</u>			
PCB-1016	0.1	1	ND	N/A	N/A	NA
PCB-1221	0.1	1	ND	N/A	N/A	NA
PCB-1232	0.1	1	ND	N/A	N/A	NA
PCB-1242	0.1	1	ND	N/A	N/A	NA
PCB-1248	0.1	1	ND	N/A	N/A	NA
PCB-1254	0.1	1	ND	N/A	N/A	NA
PCB1260	0.1	1	ND	N/A	N/A	NA
Polyaromatic Hydrocarbons (PAHs)						
EPA Test Method 8270						
	<u>µg/kg</u>	<u>µg/kg</u>	<u>µg/kg</u>	<u>µg/L</u>	<u>µg/L</u>	<u>µg/L</u>
Napthalene	1,000	3,200 ppm	ND	0.5		34
Acenaphthylene	1,000		ND ppm	0.5		0.5
Acenaphthene	1,000	4,800	1,700 1.7	0.5		8.2
Fluorine	1,000	3,200	ND	0.5		10
Phenanthrene	1,000		2,100 2.1	0.5		37
Anthracene	1,000	24,000	ND	0.5		8.1
Fluoranthene	1,000	3,200	1,300 1.3	0.5		9.4
Pyrene	1,000	2,400	6,800 6.8	0.5		14
Benzo [a] Fluoranthene	1,000	.137	1,000 1.0	0.5		3.6
✓ Chrysene	1,000	.137	3,900 3.9	0.5		7.2
✓ Benzo (b) Fluoranthene	1,000	.137	ND	0.5		5.3
✓ Benzo (k) Fluoranthene	1,000	.137	ND	0.5		5.3
✓ Benzo (a) Pyrene	1,000	.137	1,400 1.4	0.5		2.7
✓ Indeno (1,2,3-cd) Pyrene	1,000	.137	ND	0.5		ND
✓ Dibenz (a,h) Anthracene	1,000	.137	ND	0.5		ND
Benzo (g,h,i) Perylene	1,000	?	1,300 1.3	0.5		1.3

std:
 320
 960
 640
 480
 4,800
 640
 480
 .12
 .012
 .012
 .012

Notes:
 mg/kg – milligram per kilogram.
 µg/kg - microgram per kilogram.
 ug/L - micrograms per liter
 N/A - not applicable.
 NA - not analyzed.
 ND – not detected



0 24000
Scale in Feet

Reference: USGS Map, Vashon, Washington 1949, Revised 1958



Washington

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Vicinity Map

Vashon Park District / Ellisport Phase II Site Assessment
Vashon, Washington

FIGURE

1

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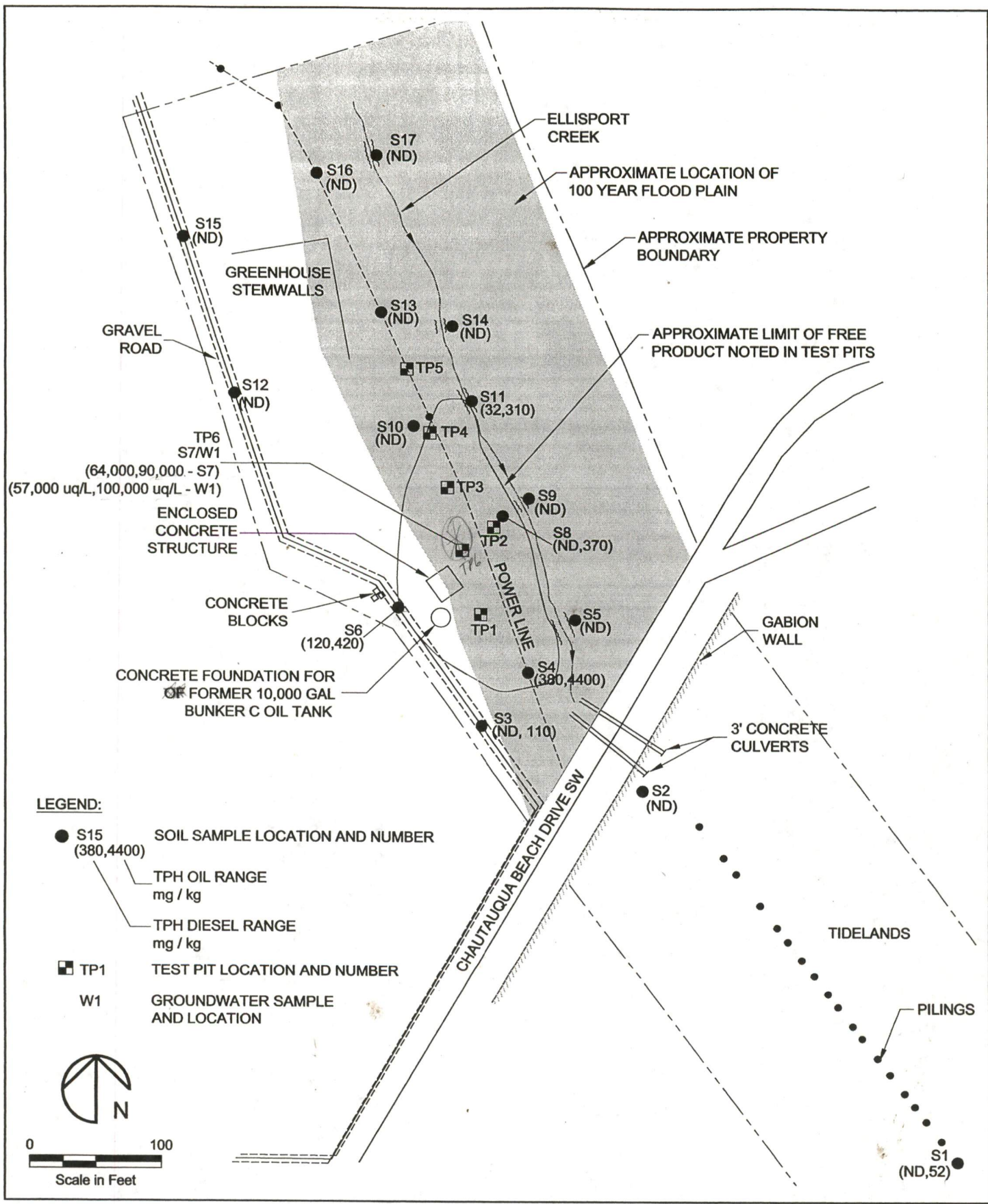
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Sampling Locations

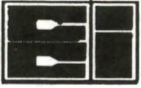
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Vashon, Washington

FIGURE
2

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APPENDIX A



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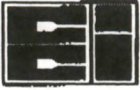
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**DATE: 8/5/99
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CCIL SAMPLE #: 4
DATE RECEIVED: 7/18/99
WDOE ACCREDITATION #: C142**

CLIENT CONTACT: LEIF CHRISTENSEN

**CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S4 7/13/99 1205**

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>100	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	380	MG/KG	200MG/KG	7/31/99	CMH
TPH-OIL RANGE	WTPH-D EXT	4400	MG/KG	200MG/KG	7/31/99	CMH

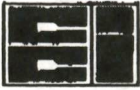
NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY MOTOR OIL OR BUNKER TYPE PRODUCT.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

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CCIL JOB #: 907071
CCIL SAMPLE #: 8
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142**

CLIENT CONTACT: LEIF CHRISTENSEN

**CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S6 7/13/99 1230**

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>100	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	120	MG/KG	200MG/KG	7/31/99	CMH
TPH-OIL RANGE	WTPH-D EXT	420	MG/KG	200MG/KG	7/31/99	CMH

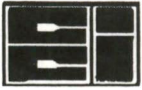
NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY MOTOR OIL OR BUNKER TYPE PRODUCT.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CCIL JOB #: 907071
CCIL SAMPLE #: 7
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

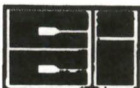
CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S7 7/13/99 1250

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<400)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<1000)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>2000	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	84000	MG/KG	200MG/KG	8/2/99	CMH
TPH-OIL RANGE	WTPH-D EXT	90000	MG/KG	200MG/KG	8/2/99	CMH

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY BUNKER TYPE PRODUCT.

BENZENE	EPA-8021	ND(<0.4)	MG/KG	.5MG/KG	7/22/99	LAH
TOLUENE	EPA-8021	ND(<0.4)	MG/KG	40MG/KG	7/22/99	LAH
ETHYLBENZENE	EPA-8021	ND(<0.4)	MG/KG	20MG/KG	7/22/99	LAH
XYLENES	EPA-8021	ND(<1.2)	MG/KG	20MG/KG	7/22/99	LAH
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
NAPHTHALENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
ACENAPHTHYLENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
ACENAPHTHENE	EPA-8270	1700	UG/KG		7/23/99	LRK
FLUORENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
PHENANTHRENE	EPA-8270	2100	UG/KG		7/23/99	LRK
ANTHRACENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
FLUORANTHENE	EPA-8270	1300	UG/KG		7/23/99	LRK
PYRENE	EPA-8270	6800	UG/KG		7/23/99	LRK
BENZO(A)ANTHRACENE	EPA-8270	1000	UG/KG		7/23/99	LRK
CHRYSENE	EPA-8270	3900	UG/KG		7/23/99	LRK
BENZO(B)FLUORANTHENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
BENZO(K)FLUORANTHENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
BENZO(A)PYRENE	EPA-8270	1400	UG/KG		7/23/99	LRK



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 7
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S7 7/13/99 1250

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION	ANALYSIS	ANALYSIS
				LEVEL***	DATE	BY
INDENO[1,2,3-CD]PYRENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
DIBENZ[A,H]ANTHRACENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
BENZO[G,H,I]PERYLENE	EPA-8270	1300	UG/KG		7/23/99	LRK

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRJ

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 18
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: W1 7/14/99 1800

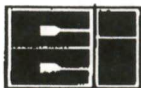
DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
BENZENE	EPA-8021	ND(<1)	UG/L	5 UG/L	7/23/99	LAH
TOLUENE	EPA-8021	ND(<1)	UG/L	40 UG/L	7/23/99	LAH
ETHYLBENZENE	EPA-8021	ND(<1)	UG/L	30 UG/L	7/23/99	LAH
XYLENES	EPA-8021	5	UG/L	20 UG/L	7/23/99	LAH
TPH-DIESEL RANGE	WTPH-D EXT	57000	UG/L	1000UG/L	7/24/99	CMH
TPH-OIL RANGE	WTPH-D EXT	100000	UG/L	1000UG/L	7/24/99	CMH
NAPHTHALENE	EPA-8270	34	UG/L		7/29/99	LRK
ACENAPHTHYLENE	EPA-8270SIM	0.5	UG/L		7/28/99	LRK
ACENAPHTHENE	EPA-8270SIM	8.2	UG/L		7/28/99	LRK
FLUORENE	EPA-8270SIM	10	UG/L		7/28/99	LRK
PHENANTHRENE	EPA-8270	37	UG/L		7/29/99	LRK
ANTHRACENE	EPA-8270SIM	8.1	UG/L		7/28/99	LRK
FLUORANTHENE	EPA-8270SIM	9.4	UG/L		7/28/99	LRK
PYRENE	EPA-8270SIM	14	UG/L		7/28/99	LRK
BENZO[A]ANTHRACENE	EPA-8270SIM	3.8	UG/L		7/28/99	LRK
CHRYSENE	EPA-8270SIM	7.2	UG/L		7/28/99	LRK
BENZO[B] & [K]FLUORANTHENE	EPA-8270SIM	5.3	UG/L		7/28/99	LRK
BENZO[A]PYRENE	EPA-8270SIM	2.7	UG/L		7/28/99	LRK
INDENO[1,2,3-CD]PYRENE	EPA-8270SIM	ND(<0.5)	UG/L		7/28/99	LRK
DIBENZO[A,H]ANTHRACENE	EPA-8270SIM	ND(<0.5)	UG/L		7/28/99	LRK
BENZO[G,H,I]PERYLENE	EPA-8270SIM	1.3	UG/L		7/28/99	LRK

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY BUNKER TYPE PRODUCT.
WTPH-D EXT AND EPA-8270 EXTRACTIONS PERFORMED ONE DAY OUTSIDE OF HOLD TIME.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS



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CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
 11811 N.E. FIRST ST., SUITE 201
 BELLEVUE, WA 98005

DATE: 8/5/99
 CCIL JOB #: 907071

DATE RECEIVED: 7/16/99
 WDOE ACCREDITATION #: C142

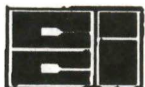
CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
907071-01	NWTPH-HCID	BCB	99
907071-01	NWTPH-HCID	C25	129
907071-01	WTPH-D EXT	C25	99
907071-02	NWTPH-HCID	BCB	86
907071-02	NWTPH-HCID	C25	119
907071-02	WTPH-D EXT	C25	89
907071-03	NWTPH-HCID	BCB	88
907071-03	NWTPH-HCID	C25	132
907071-03	WTPH-D EXT	C25	130
907071-04	NWTPH-HCID	BCB	100
907071-04	NWTPH-HCID	C25	108
907071-04	WTPH-D EXT	C25	146
907071-05	NWTPH-HCID	BCB	99
907071-05	NWTPH-HCID	C25	129
907071-06	NWTPH-HCID	BCB	99
907071-06	NWTPH-HCID	C25	109
907071-06	WTPH-D EXT	C25	107
907071-07	NWTPH-HCID	BCB	.
907071-07	NWTPH-HCID	C25	.
907071-07	WTPH-D EXT	C25	.
907071-07	EPA-8021	TFT	72
907071-07	EPA-8082 MOD	DBC	73
907071-07	EPA-8082 MOD	DBC	88
907071-07	EPA-8270	2-FLUOROBIPHENYL	103
907071-07	EPA-8270	TERPHENYL-d14	125



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11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005**

**DATE: 8/5/99
CCIL JOB #: 907071**

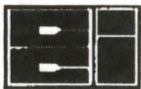
**DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142**

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

907071-08	NWTPH-HCID	BCB	111
907071-08	NWTPH-HCID	C25	123
907071-08	WTPH-D EXT	C25	126
907071-09	NWTPH-HCID	BCB	94
907071-09	NWTPH-HCID	C25	105
907071-10	NWTPH-HCID	BCB	90
907071-10	NWTPH-HCID	C25	90
907071-11	NWTPH-HCID	BCB	107
907071-11	NWTPH-HCID	C25	124
907071-11	WTPH-D EXT	C25	128
907071-12	NWTPH-HCID	BCB	115
907071-12	NWTPH-HCID	C25	129
907071-13	NWTPH-HCID	BCB	99
907071-13	NWTPH-HCID	C25	103
907071-14	NWTPH-HCID	BCB	97
907071-14	NWTPH-HCID	C25	104
907071-15	NWTPH-HCID	BCB	83
907071-15	NWTPH-HCID	C25	99
907071-16	NWTPH-HCID	BCB	93
907071-16	NWTPH-HCID	C25	91
907071-17	NWTPH-HCID	BCB	98
907071-17	NWTPH-HCID	C25	92
907071-18	WTPH-D EXT	C25	.
907071-18	EPA-8021	TFT	110
907071-18	EPA-8270	2-FLUOROBIPHENYL	59
907071-18	EPA-8270	TERPHENYL-d14	86



CERTIFICATE OF ANALYSIS

**CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005**

**DATE: 8/5/99
CCIL JOB #: 907071**

**DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142**

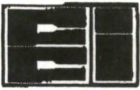
CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLE	DUP RESULT	ORIG RESULT	%RDP	ASSOC SMPLS
NWTPH-HCID(GAS)	ND(<20)	907071-01 TO 14	ND(<20)	ND(<20)	****	SAME
NWTPH-HCID(DSL)	ND(<50)	907071-01 TO 14	ND(<50)	ND(<50)	****	SAME
NWTPH-HCID(OIL)	ND(<100)	907071-01 TO 14	ND(<100)	ND(<100)	****	SAME
NWTPH-HCID(GAS)	ND(<20)	907071-15 TO 17	ND(<20)	ND(<20)	****	SAME
NWTPH-HCID(DSL)	ND(<50)	907071-15 TO 17	ND(<50)	ND(<50)	****	SAME
NWTPH-HCID(OIL)	ND(<100)	907071-15 TO 17	ND(<100)	ND(<100)	****	SAME
EPA-8021(BENZENE)	ND(<.1)	907071-07	ND(<.1)	ND(<.1)	****	SAME
EPA-8021(TOLUENE)	ND(<.1)	907071-07	ND(<.1)	ND(<.1)	****	SAME
EPA-8021(ETHYLBENZ)	ND(<.1)	907071-07	ND(<.1)	ND(<.1)	****	SAME
EPA-8021(XYLENE)	ND(<.3)	907071-07	ND(<.3)	ND(<.3)	****	SAME
WTPH-D EXT (DSL)	ND(<25)	907071-ALL SOIL	ND(<25)	ND(<25)	****	SAME
WTPH-D EXT (OIL)	ND(<50)	907071-ALL SOIL	ND(<50)	ND(<50)	****	SAME
EPA-8021(BENZENE)	ND(<1)	907071-18	ND(<1)	ND(<1)	****	SAME
EPA-8021(TOLUENE)	ND(<1)	907071-18	ND(<1)	ND(<1)	****	SAME
EPA-8021(ETHYLBENZ)	ND(<1)	907071-18	ND(<1)	ND(<1)	****	SAME
EPA-8021(XYLENE)	ND(<3)	907071-18	ND(<3)	ND(<3)	****	SAME
WTPH-D EXT (DSL)	ND(<250)	907071-18	910	980	****	SAME
WTPH-D EXT (OIL)	ND(<500)	907071-18	ND(<500)	ND(<500)	****	SAME
EPA-8270	SEE BLANK REPORT					
EPA-8082MOD	SEE BLANK REPORT					



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CERTIFICATE OF ANALYSIS

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11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071

DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

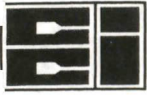
SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED SAMPLES	% SPIKE RECOVERY	% SPIKE DUP RECOVERY	REL % DIFF
EPA-8021	BENZENE	907071-07	101	N/A	N/A
EPA-8021	TOLUENE	907071-07	100	N/A	N/A
EPA-8021	ETHYLBENZENE	907071-07	97	N/A	N/A
EPA-8021	XYLENE	907071-07	102	N/A	N/A
EPA-8270	ACENAPHTHENE	907071-07	72	88	6
EPA-8270	PYRENE	907071-07	74	74	0
EPA-8082 MOD	PCB-1260	907071-07	90	89	1
EPA-8021	BENZENE	907071-18	91	N/A	N/A
EPA-8021	TOLUENE	907071-18	90	N/A	N/A
EPA-8021	ETHYLBENZENE	907071-18	91	N/A	N/A
EPA-8021	XYLENE	907071-18	95	N/A	N/A
EPA-8270	ACENAPHTHENE	907071-18	73	76	4
EPA-8270	PYRENE	907071-18	79	83	4

* SURROGATE DILUTED OUT OF CALIBRATION RANGE

**** %RPD NOT REPORTED FOR RESULTS < X5 THE REPORTING LIMIT

APPROVED BY: CRP



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 4
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S4 7/13/99 1205

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>100	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	380	MG/KG	200MG/KG	7/31/99	CMH
TPH-OIL RANGE	WTPH-D EXT	4400	MG/KG	200MG/KG	7/31/99	CMH

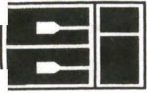
NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY MOTOR OIL OR BUNKER TYPE PRODUCT.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRP



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 6
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S6 7/13/99 1230

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>100	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	120	MG/KG	200MG/KG	7/31/99	CMH
TPH-OIL RANGE	WTPH-D EXT	420	MG/KG	200MG/KG	7/31/99	CMH

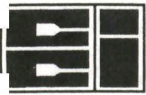
NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY MOTOR OIL OR BUNKER TYPE PRODUCT.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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APPROVED BY: CRP



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

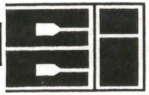
DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 7
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S7 7/13/99 1250

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<400)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<1000)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>2000	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	64000	MG/KG	200MG/KG	8/2/99	CMH
TPH-OIL RANGE	WTPH-D EXT	90000	MG/KG	200MG/KG	8/2/99	CMH
NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY BUNKER TYPE PRODUCT.						
BENZENE	EPA-8021	ND(<0.4)	MG/KG	.5MG/KG	7/22/99	LAH
TOLUENE	EPA-8021	ND(<0.4)	MG/KG	40MG/KG	7/22/99	LAH
ETHYLBENZENE	EPA-8021	ND(<0.4)	MG/KG	20MG/KG	7/22/99	LAH
XYLENES	EPA-8021	ND(<1.2)	MG/KG	20MG/KG	7/22/99	LAH
PCB-1016	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1221	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1232	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1242	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1248	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1254	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
PCB-1260	EPA-8082 MOD	ND(<0.1)	MG/KG		7/22/99	LAH
NAPHTHALENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
ACENAPHTHYLENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
ACENAPHTHENE	EPA-8270	1700	UG/KG		7/23/99	LRK
FLUORENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
PHENANTHRENE	EPA-8270	2100	UG/KG		7/23/99	LRK
ANTHRACENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
FLUORANTHENE	EPA-8270	1300	UG/KG		7/23/99	LRK
PYRENE	EPA-8270	6800	UG/KG		7/23/99	LRK
BENZO[A]ANTHRACENE	EPA-8270	1000	UG/KG		7/23/99	LRK
CHRYSENE	EPA-8270	3900	UG/KG		7/23/99	LRK
BENZO[B]FLUORANTHENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
BENZO[K]FLUORANTHENE	EPA-8270	ND(<1000)	UG/KG		7/23/99	LRK
BENZO(A)PYRENE	EPA-8270	1400	UG/KG		7/23/99	LRK



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 8
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S8 7/13/99 1255

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	>100	MG/KG OIL		7/22/99	CMH
TPH-DIESEL RANGE	WTPH-D EXT	ND(<25)	MG/KG	200MG/KG	7/31/99	CMH
TPH-OIL RANGE	WTPH-D EXT	370	MG/KG	200MG/KG	7/31/99	CMH

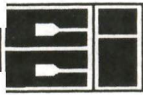
NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY MOTOR OIL OR BUNKER TYPE PRODUCT.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY. THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRP



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
 11811 N.E. FIRST ST., SUITE 201
 BELLEVUE, WA 98005

DATE: 7/26/99
CCIL JOB #: 907071
CCIL SAMPLE #: 9
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S9 7/13/99 1315

DATA RESULTS

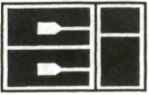
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION	ANALYSIS	ANALYSIS
				LEVEL***	DATE	BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	ND(<100)	MG/KG OIL		7/22/99	CMH

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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APPROVED BY: _____



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 7/26/99
CCIL JOB #: 907071
CCIL SAMPLE #: 13
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S13 7/13/99 1405


DATA RESULTS

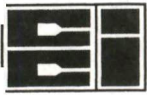
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	ND(<100)	MG/KG OIL		7/22/99	CMH

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APPROVED BY: 



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 7/26/99
CCIL JOB #: 907071
CCIL SAMPLE #: 14
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S14 7/13/99 1415

DATA RESULTS

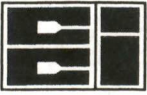
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	ND(<100)	MG/KG OIL		7/22/99	CMH

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APPROVED BY: 



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 7/26/99
CCIL JOB #: 907071
CCIL SAMPLE #: 15
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S15 7/13/99 1430


DATA RESULTS

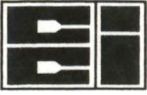
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION	ANALYSIS	ANALYSIS
				LEVEL***	DATE	BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	ND(<100)	MG/KG OIL		7/22/99	CMH

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APPROVED BY: 



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 7/26/99
CCIL JOB #: 907071
CCIL SAMPLE #: 16
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S16 7/13/99 1435

DATA RESULTS

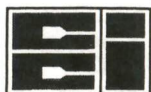
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	ND(<100)	MG/KG OIL		7/22/99	CMH

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APPROVED BY: CRJ



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 7/26/99
CCIL JOB #: 907071
CCIL SAMPLE #: 17
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: S17 7/13/99 1445

DATA RESULTS

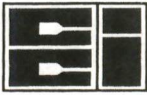
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
HCID-GAS RANGE	NWTPH-HCID	ND(<20)	MG/KG GAS		7/22/99	CMH
HCID-DIESEL RANGE	NWTPH-HCID	ND(<50)	MG/KG DSL		7/22/99	CMH
HCID-OIL RANGE	NWTPH-HCID	ND(<100)	MG/KG OIL		7/22/99	CMH

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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APPROVED BY: 



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071
CCIL SAMPLE #: 18
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON
CLIENT SAMPLE ID: W1 7/14/99 1800

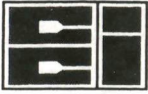
DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
BENZENE	EPA-8021	ND(<1)	UG/L	5 UG/L	7/23/99	LAH
TOLUENE	EPA-8021	ND(<1)	UG/L	40 UG/L	7/23/99	LAH
ETHYLBENZENE	EPA-8021	ND(<1)	UG/L	30 UG/L	7/23/99	LAH
XYLENES	EPA-8021	5	UG/L	20 UG/L	7/23/99	LAH
TPH-DIESEL RANGE	WTPH-D EXT	57000	UG/L	1000UG/L	7/24/99	CMH
TPH-OIL RANGE	WTPH-D EXT	100000	UG/L	1000UG/L	7/24/99	CMH
NAPHTHALENE	EPA-8270	34	UG/L		7/29/99	Lrk
ACENAPHTHYLENE	EPA-8270SIM	0.5	UG/L		7/28/99	Lrk
ACENAPHTHENE	EPA-8270SIM	8.2	UG/L		7/28/99	Lrk
FLUORENE	EPA-8270SIM	10	UG/L		7/28/99	Lrk
PHENANTHRENE	EPA-8270	37	UG/L		7/29/99	Lrk
ANTHRACENE	EPA-8270SIM	8.1	UG/L		7/28/99	Lrk
FLUORANTHENE	EPA-8270SIM	9.4	UG/L		7/28/99	Lrk
PYRENE	EPA-8270SIM	14	UG/L		7/28/99	Lrk
BENZO[A]ANTHRACENE	EPA-8270SIM	3.6	UG/L		7/28/99	Lrk
CHRYSENE	EPA-8270SIM	7.2	UG/L		7/28/99	Lrk
BENZO[B] & [K]FLUORANTHENE	EPA-8270SIM	5.3	UG/L		7/28/99	Lrk
BENZO[A]PYRENE	EPA-8270SIM	2.7	UG/L		7/28/99	Lrk
INDENO[1,2,3-CD]PYRENE	EPA-8270SIM	ND(<0.5)	UG/L		7/28/99	Lrk
DIBENZ[A,H]ANTHRACENE	EPA-8270SIM	ND(<0.5)	UG/L		7/28/99	Lrk
BENZO[G,H,I]PERYLENE	EPA-8270SIM	1.3	UG/L		7/28/99	Lrk

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY BUNKER TYPE PRODUCT.
WTPH-D EXT AND EPA-8270 EXTRACTIONS PERFORMED ONE DAY OUTSIDE OF HOLD TIME.

* "ND" INDICATES ANALYTE NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES

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CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071

DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

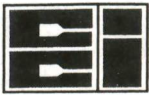
CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
907071-01	NWTPH-HCID	BCB	99
907071-01	NWTPH-HCID	C25	129
907071-01	WTPH-D EXT	C25	99
907071-02	NWTPH-HCID	BCB	86
907071-02	NWTPH-HCID	C25	119
907071-02	WTPH-D EXT	C25	89
907071-03	NWTPH-HCID	BCB	88
907071-03	NWTPH-HCID	C25	132
907071-03	WTPH-D EXT	C25	130
907071-04	NWTPH-HCID	BCB	100
907071-04	NWTPH-HCID	C25	108
907071-04	WTPH-D EXT	C25	146
907071-05	NWTPH-HCID	BCB	99
907071-05	NWTPH-HCID	C25	129
907071-06	NWTPH-HCID	BCB	99
907071-06	NWTPH-HCID	C25	109
907071-06	WTPH-D EXT	C25	107
907071-07	NWTPH-HCID	BCB	*
907071-07	NWTPH-HCID	C25	*
907071-07	WTPH-D EXT	C25	*
907071-07	EPA-8021	TFT	72
907071-07	EPA-8082 MOD	DBC	73
907071-07	EPA-8082 MOD	DBC	68
907071-07	EPA-8270	2-FLUOROBIPHENYL	103
907071-07	EPA-8270	TERPHENYL-d14	125



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071

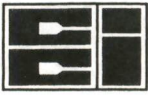
DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

907071-08	NWTPH-HCID	BCB	111
907071-08	NWTPH-HCID	C25	123
907071-08	WTPH-D EXT	C25	126
907071-09	NWTPH-HCID	BCB	94
907071-09	NWTPH-HCID	C25	105
907071-10	NWTPH-HCID	BCB	90
907071-10	NWTPH-HCID	C25	90
907071-11	NWTPH-HCID	BCB	107
907071-11	NWTPH-HCID	C25	124
907071-11	WTPH-D EXT	C25	128
907071-12	NWTPH-HCID	BCB	115
907071-12	NWTPH-HCID	C25	129
907071-13	NWTPH-HCID	BCB	99
907071-13	NWTPH-HCID	C25	103
907071-14	NWTPH-HCID	BCB	97
907071-14	NWTPH-HCID	C25	104
907071-15	NWTPH-HCID	BCB	83
907071-15	NWTPH-HCID	C25	99
907071-16	NWTPH-HCID	BCB	93
907071-16	NWTPH-HCID	C25	91
907071-17	NWTPH-HCID	BCB	98
907071-17	NWTPH-HCID	C25	92
907071-18	WTPH-D EXT	C25	*
907071-18	EPA-8021	TFT	110
907071-18	EPA-8270	2-FLUOROBIPHENYL	59
907071-18	EPA-8270	TERPHENYL-d14	66



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071

DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

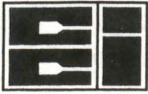
CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

BLANK AND DUPLICATE RESULTS

METHOD	BLK RESULT	ASSOC SMPLS	DUP RESULT	ORIG RESULT	%RDP	ASSOC SMPLS
NWTPH-HCID(GAS)	ND(<20)	907071-01 TO 14	ND(<20)	ND(<20)	****	SAME
NWTPH-HCID(DSL)	ND(<50)	907071-01 TO 14	ND(<50)	ND(<50)	****	SAME
NWTPH-HCID(OIL)	ND(<100)	907071-01 TO 14	ND(<100)	ND(<100)	****	SAME
NWTPH-HCID(GAS)	ND(<20)	907071-15 TO 17	ND(<20)	ND(<20)	****	SAME
NWTPH-HCID(DSL)	ND(<50)	907071-15 TO 17	ND(<50)	ND(<50)	****	SAME
NWTPH-HCID(OIL)	ND(<100)	907071-15 TO 17	ND(<100)	ND(<100)	****	SAME
EPA-8021(BENZENE)	ND(<.1)	907071-07	ND(<.1)	ND(<.1)	****	SAME
EPA-8021(TOLUENE)	ND(<.1)	907071-07	ND(<.1)	ND(<.1)	****	SAME
EPA-8021(ETHYLBENZ)	ND(<.1)	907071-07	ND(<.1)	ND(<.1)	****	SAME
EPA-8021(XYLENE)	ND(<.3)	907071-07	ND(<.3)	ND(<.3)	****	SAME
WTPH-D EXT (DSL)	ND(<25)	907071-ALL SOIL	ND(<25)	ND(<25)	****	SAME
WTPH-D EXT (OIL)	ND(<50)	907071-ALL SOIL	ND(<50)	ND(<50)	****	SAME
EPA-8021(BENZENE)	ND(<1)	907071-18	ND(<1)	ND(<1)	****	SAME
EPA-8021(TOLUENE)	ND(<1)	907071-18	ND(<1)	ND(<1)	****	SAME
EPA-8021(ETHYLBENZ)	ND(<1)	907071-18	ND(<1)	ND(<1)	****	SAME
EPA-8021(XYLENE)	ND(<3)	907071-18	ND(<3)	ND(<3)	****	SAME
WTPH-D EXT (DSL)	ND(<250)	907071-18	910	980	****	SAME
WTPH-D EXT (OIL)	ND(<500)	907071-18	ND(<500)	ND(<500)	****	SAME
EPA-8270	SEE BLANK REPORT					
EPA-8082MOD	SEE BLANK REPORT					



CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
11811 N.E. FIRST ST., SUITE 201
BELLEVUE, WA 98005

DATE: 8/5/99
CCIL JOB #: 907071

DATE RECEIVED: 7/16/99
WDOE ACCREDITATION #: C142

CLIENT CONTACT: LEIF CHRISTENSEN

CLIENT PROJECT ID: ELLISPORT PHASE II, 16 247 002, VASHON

QUALITY CONTROL RESULTS

SPIKE/ SPIKE DUPLICATE RESULTS

METHOD	SPIKE ID	ASSOCIATED	% SPIKE	% SPIKE DUP	REL % DIFF
		SAMPLES	RECOVERY	RECOVERY	
EPA-8021	BENZENE	907071-07	101	N/A	N/A
EPA-8021	TOLUENE	907071-07	100	N/A	N/A
EPA-8021	ETHYLBENZENE	907071-07	97	N/A	N/A
EPA-8021	XYLENE	907071-07	102	N/A	N/A
EPA-8270	ACENAPHTHENE	907071-07	72	68	6
EPA-8270	PYRENE	907071-07	74	74	0
EPA-8082 MOD	PCB-1260	907071-07	90	89	1
EPA-8021	BENZENE	907071-18	91	N/A	N/A
EPA-8021	TOLUENE	907071-18	90	N/A	N/A
EPA-8021	ETHYLBENZENE	907071-18	91	N/A	N/A
EPA-8021	XYLENE	907071-18	95	N/A	N/A
EPA-8270	ACENAPHTHENE	907071-18	73	76	4
EPA-8270	PYRENE	907071-18	79	83	4

* SURROGATE DILUTED OUT OF CALIBRATION RANGE

**** %RPD NOT REPORTED FOR RESULTS < X5 THE REPORTING LIMIT

APPROVED BY: CPK

PROJECT INFORMATION					Laboratory Number: _____																																	
Project Manager: <u>LIFF CHRISTENSEN</u>					ANALYSIS REQUEST																																	
Project Name: <u>WATER TREATMENT II</u>					PETROLEUM HYDROCARBONS			ORGANIC COMPOUNDS					PESTS/PCBS			METALS			LEACHING TESTS			OTHER		NUMBER OF CONTAINERS														
Project Number: <u>11 747 002</u>					WTPH-HCID	WTPH-G	WTPH-D	WTPH-418.1	8015M Fuel Hydrocarbon	TPH Special Instructions	8010 Halogenated VOCs	8020 Aromatic VOCs	8020M - BETX only	8240 GC/MS Volatiles	8270 GC/MS Semivolatiles	8310 PAHs	8040 Phenols	DWS - Volatiles and Semivolatiles	8080 OC Pest/PCBs	8080M PCBs only	8140 OP Pesticides	8150 OC Herbicides	DWS - Herb/Pest		Selected Metals: list	Organic Lead (Ca)	TCL Metals (23)	Priority Poll. Metals (13)	DWS - Metals	M/SP - Metals (Wa)	TCLP - Volatiles (ZHE)	TCLP - Semivolatiles	TCLP - Pesticides	TCLP - Metals				
Site Location: <u>WATER</u> Sampled By: <u>MLH</u>																																						
DISPOSAL INFORMATION																																						
<input type="checkbox"/> Lab Disposal (return if not indicated)																																						
Disposal Method: _____																																						
Disposed by: _____ Disposal Date: _____																																						
QC INFORMATION (check one)																																						
<input type="checkbox"/> SW-846 <input type="checkbox"/> CLP <input type="checkbox"/> Screening <input type="checkbox"/> AGI Std. <input type="checkbox"/> Special																																						
SAMPLE ID	DATE	TIME	MATRIX	LAB ID																																		
S17	7/13/99	1445	SOIL	WTPH-17X																																		
W1	7/14/99	1800	WATER	WTPH-18X																																		

LAB INFORMATION		SAMPLE RECEIPT		RELINQUISHED BY: 1.		RELINQUISHED BY: 2.		RELINQUISHED BY: 3.		
Lab Name: <u>CCI</u>	Total Number of Containers: <u>18</u>	Chain-of-Custody Seals: Y/N/NA <u>Y</u>	Intact?: Y/N/NA <u>Y</u>	Received in Good Condition/Cold: <u>Y</u>	Signature: <u>MLH</u>	Time: <u>15:00</u>	Signature: <u>Christensen</u>	Time: <u>0930</u>	Signature: _____	Time: _____
Lab Address: <u>WATER</u>				Company: <u>AGI</u>	Printed Name: _____	Date: _____	Printed Name: <u>Christensen</u>	Date: <u>7-16-99</u>	Printed Name: _____	Date: _____
Via: _____				Company: _____	Company: <u>AGI</u>			Company: _____		
Turn Around Time: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. <input type="checkbox"/> 1 wk.				RECEIVED BY: 1.		RECEIVED BY: 2.		RECEIVED BY: 3.		
PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DATA				Signature: <u>Christensen</u>	Time: <u>1500</u>	Signature: <u>Christensen</u>	Time: <u>7/16/99</u>	Signature: _____	Time: _____	
Special Instructions: <u>CSI will be returned to AGI</u>				Printed Name: <u>Christensen</u>	Date: <u>7/16/99</u>	Printed Name: <u>Christensen</u>	Date: <u>7/16/99</u>	Printed Name: _____	Date: _____	
				Company: <u>AGI</u>	Company: _____	Company: _____	Company: _____	Company: _____		

External Standard Report

Data File Name	: D:\HPCHEM\1\DATA\19072101\025F0201.D	Page Number	: 1
Operator	: CMH	Vial Number	: 25
Instrument	: DIESEL #1	Injection Number	: 1
Sample Name	: 907071-12	Sequence Line	: 2
Run Time Bar Code:		Instrument Method:	NWTPHCID.MTH
Acquired on	: 22 Jul 99 09:47 AM	Analysis Method	: NWTPHCID.MTH
Report Created on:	22 Jul 99 01:40 PM	Sample Amount	: 0
Last Recalib on	: 22 JUL 99 01:23 PM	ISTD Amount	:
Multiplier	: 1		

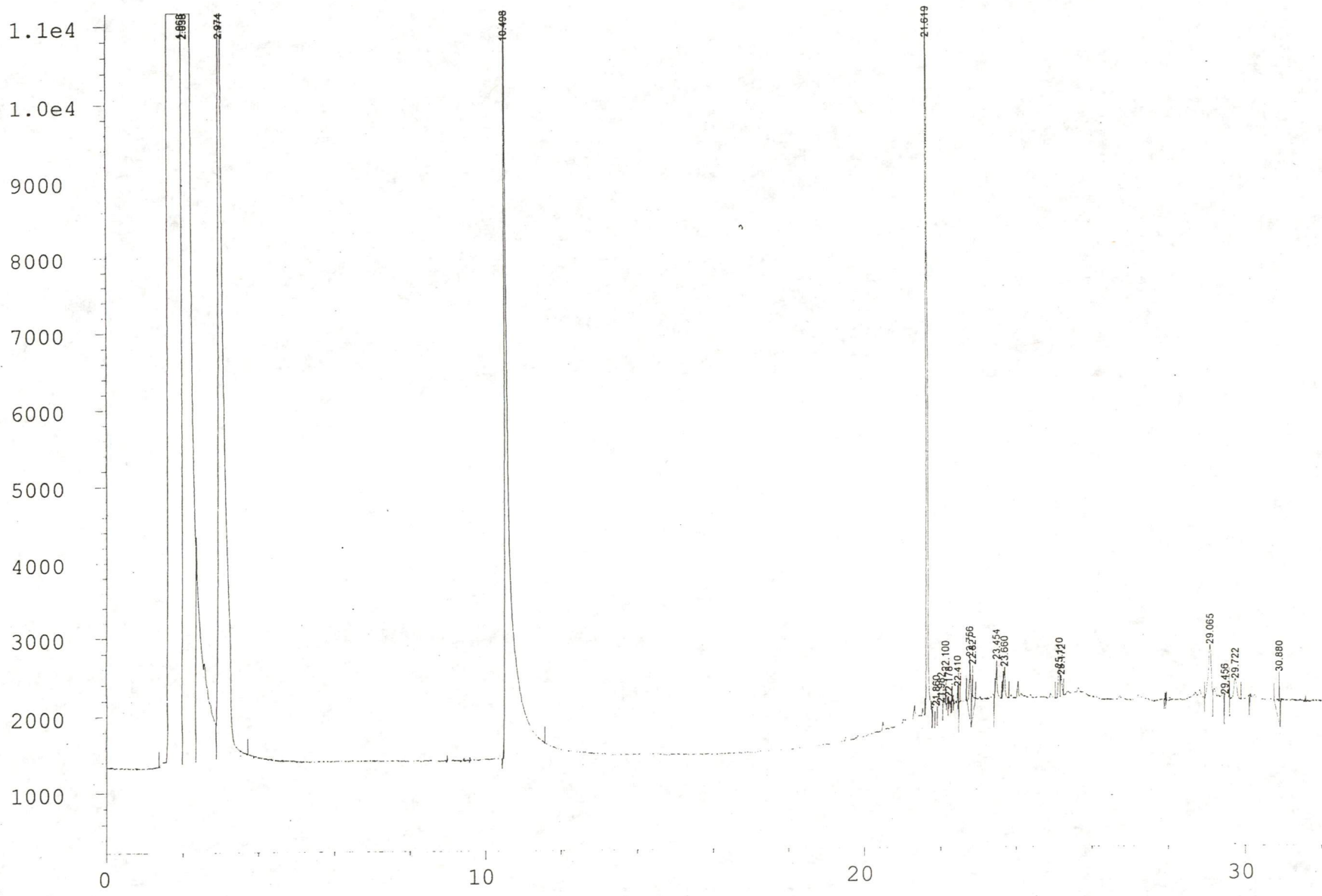
Sig. 1 in D:\HPCHEM\1\DATA\19072101\025F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.498	84123	PB	0.086	1	57.366	Bromochlorobenzene $50 \times 100 = 1157$
21.619	39819	BB	0.024	1	12.950	Pentacosane $110 \times 100 = 1297$

G = < 20 mg/kg
 D = < 50
 mo = < 100 ↓

72394

7.22.99 CH



External Standard Report

```

Data File Name   : D:\HPCHEM\1\DATA\19072101\026F0201.D
Operator        : CMH
Instrument       : DIESEL #1
Sample Name     : 907071-13
Run Time Bar Code:
Acquired on    : 22 Jul 99 10:31 AM
Report Created on: 22 Jul 99 01:41 PM
Last Recalib on : 22 JUL 99 01:23 PM
Multiplier     : 1
Page Number    : 1
Vial Number    : 26
Injection Number : 1
Sequence Line  : 2
Instrument Method: NWTPHCID.MTH
Analysis Method : NWTPHCID.MTH
Sample Amount  : 0
ISTD Amount    :
    
```

Sig. 1 in D:\HPCHEM\1\DATA\19072101\026F0201.D

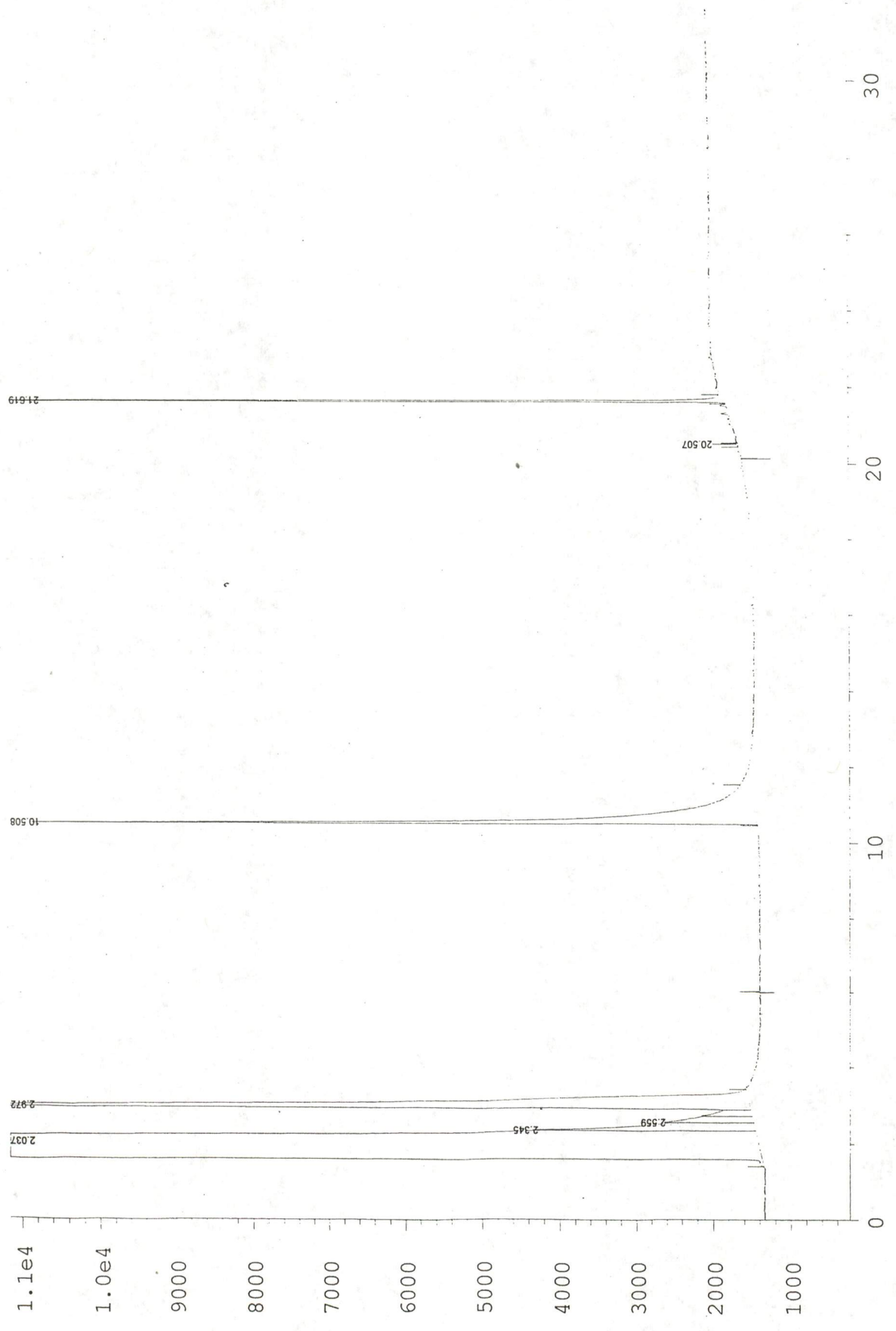
Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.508	72496	BB	0.094	1	49.438	Bromochlorobenzene $150 \times 100 = 99\%$
21.619	31785	PB	0.026	1	10.337	Pentacosane $110 \times 100 = 103\%$

$G = 220 \text{ mg/kg}$
 $D = < 50$
 $MO = < 100$ ↓

7-23-99

7-22-99 (H)

Sig. 1 in D:\HPCHEM\1\DATA\19072101\026F0201.D



External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\027F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 27
 Sample Name : 907071-14 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 11:32 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:41 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\027F0201.D

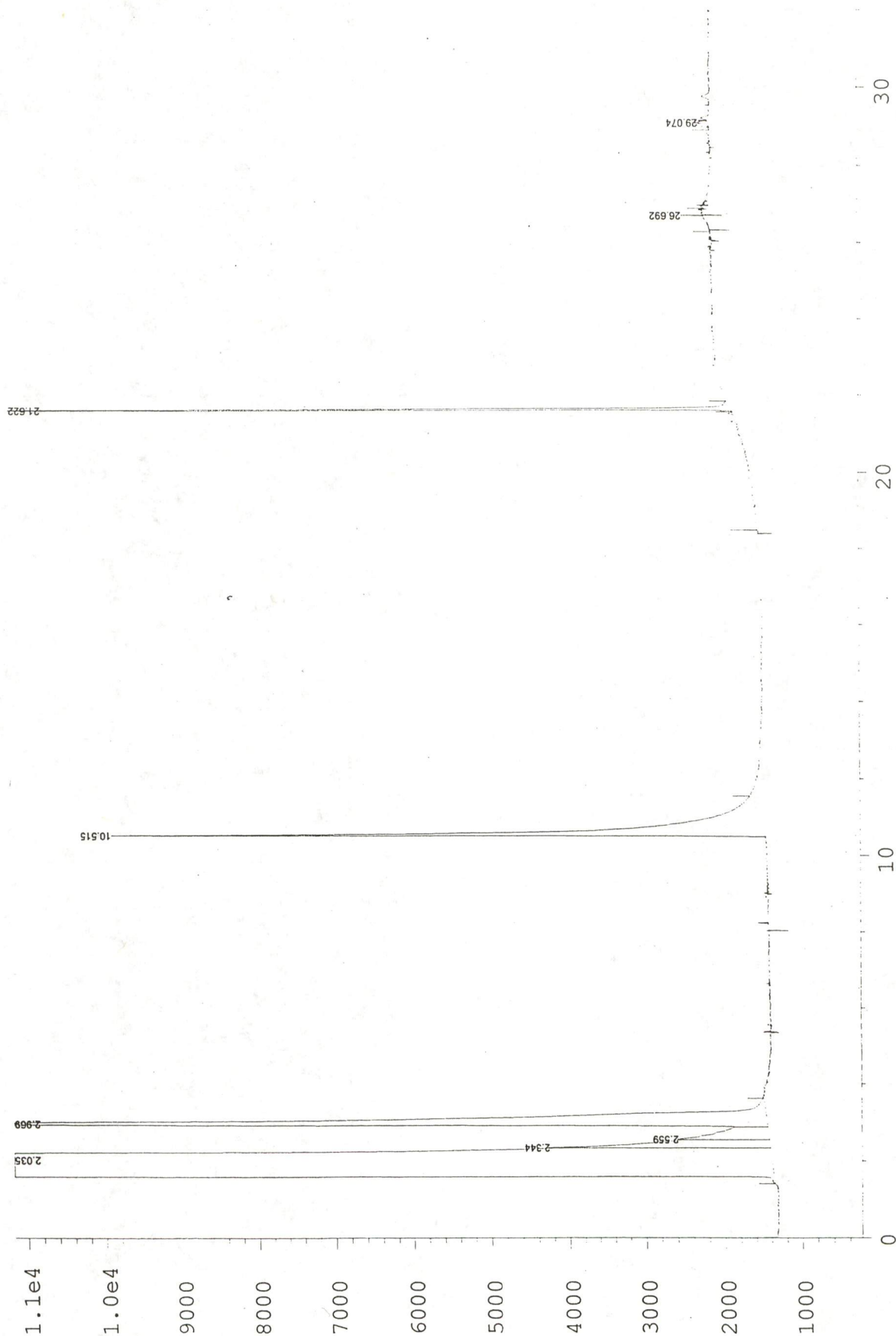
Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.515	70770	BB	0.103	1	48.260	Bromochlorobenzene / $50 \times 100 = 91\%$
21.622	31935	BB	0.026	1	10.386	Pentacosane / $10 \times 100 = 104\%$

G = 220 mg/kg
 D = 250
 MO = 100 ↓

7-23-99

7.22.99 acti

Sig. 1 in D:\HPCHEM\1\DATA\19072101\027F0201.D



External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\028F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 28
 Sample Name : 907071-15 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 12:06 PM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:41 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\028F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.511	60892	BV	0.085	1	41.524	Bromochlorobenzene / 50 x 100 = 83%
21.622	30619	PB	0.025	1	9.958	Pentacosane / 10 x 100 = 99%

E = <20 mg/kg

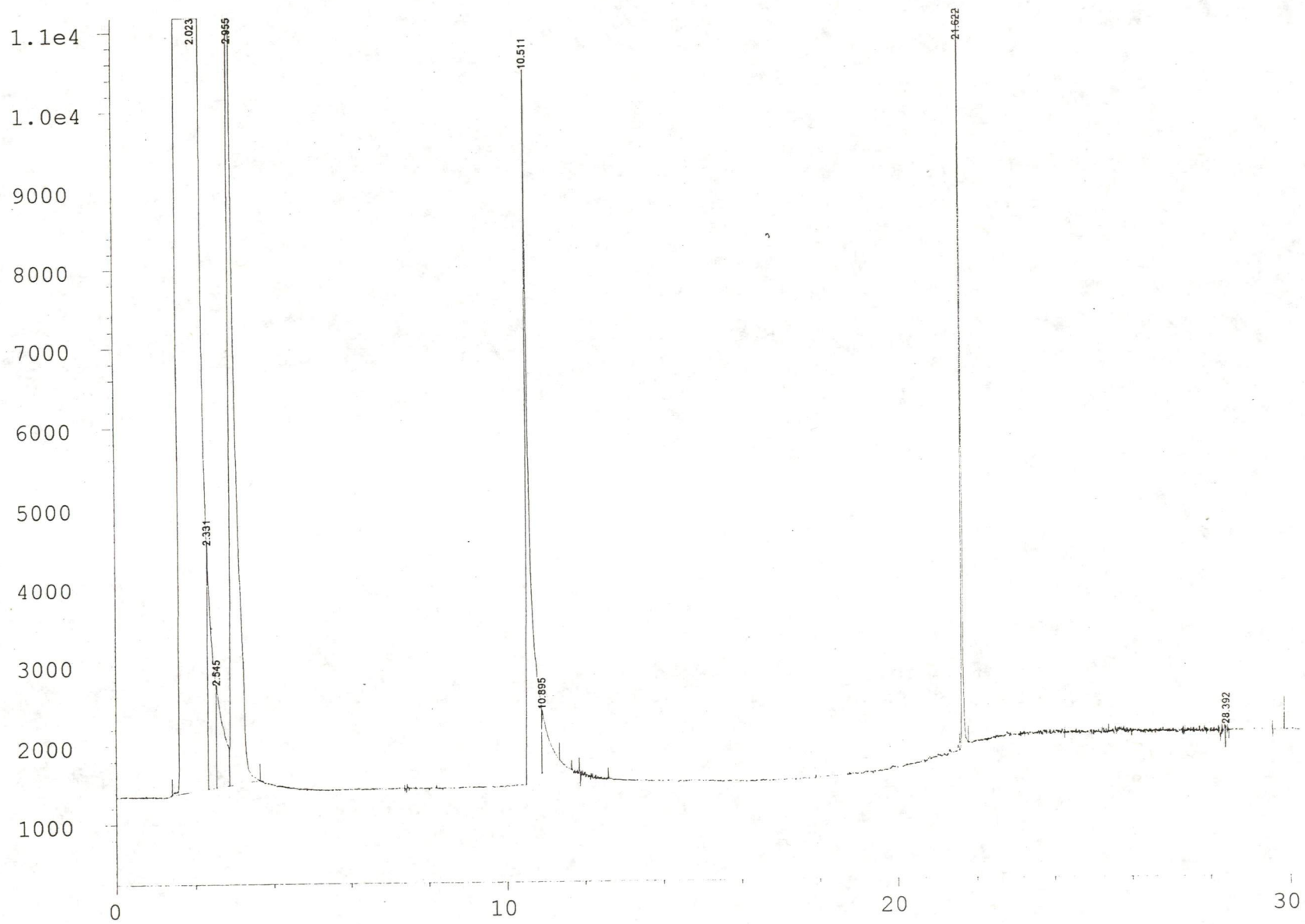
D = <50

MO = <100



7-23-99

7-22-99 CH



External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\030F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 30
 Sample Name : 907071-16 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 02:19 PM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 04:07 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\030F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.520	68530	BB	0.118	1	46.733	Bromochlorobenzene $\div 50 \times 100 = 93\%$
21.620	27983	BB	0.027	1	9.101	Pentacosane $\div 10 \times 100 = 91\%$

G = < 20 mg/kg

D = < 50

MS = < 100



7-23-99

7-22-99 CH

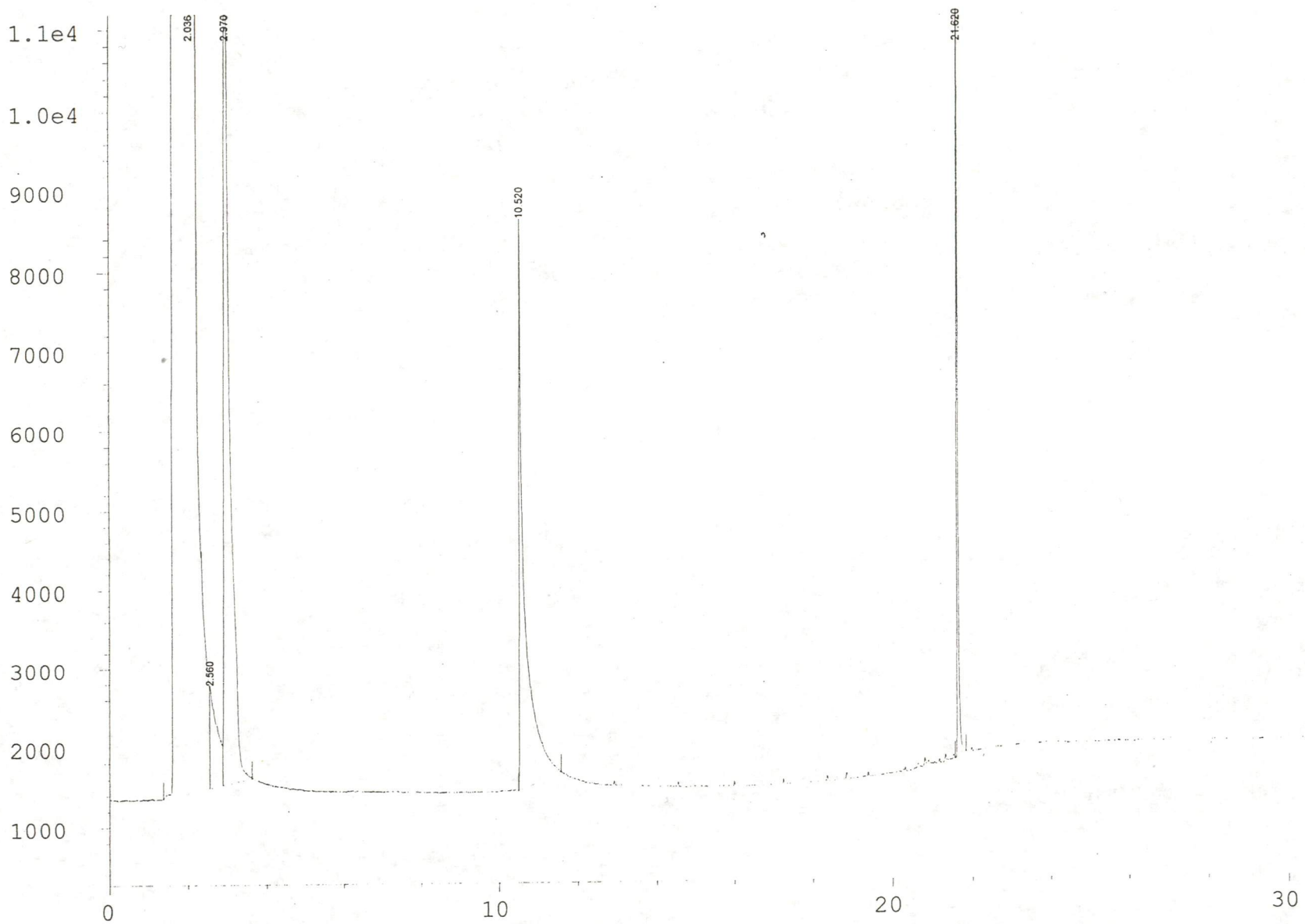


Fig. 1 In D:\HPCHEM\1\DATA\19072101\030F0201.D

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\031F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 31
 Sample Name : 907071-17 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 03:04 PM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 04:07 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

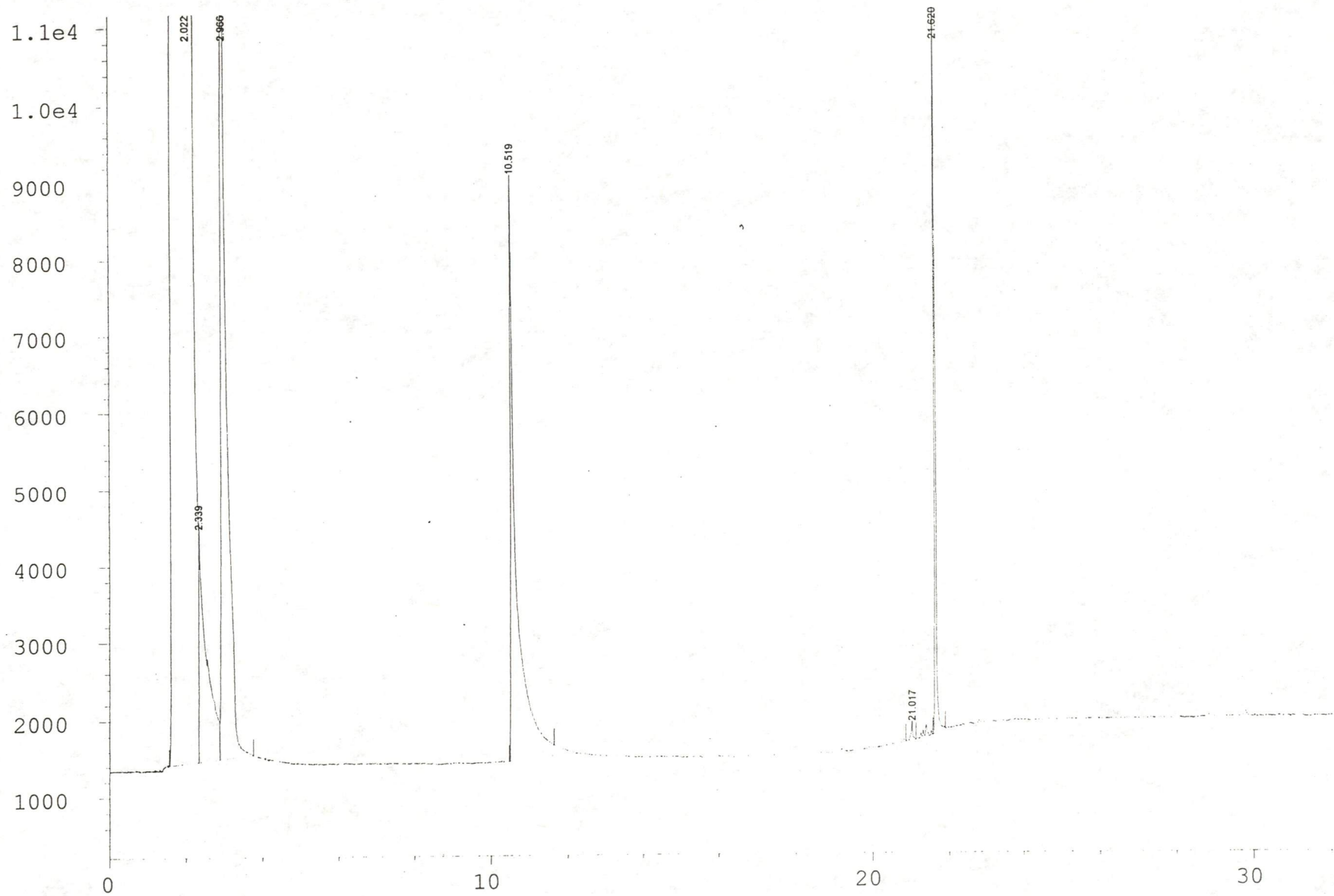
Sig. 1 in D:\HPCHEM\1\DATA\19072101\031F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.519	71925	BB	0.116	1	49.048	Bromochlorobenzene ÷ 50 × 100 = 98%
21.620	28210	BB	0.029	1	9.175	Pentacosane ÷ 10 × 100 = 92%

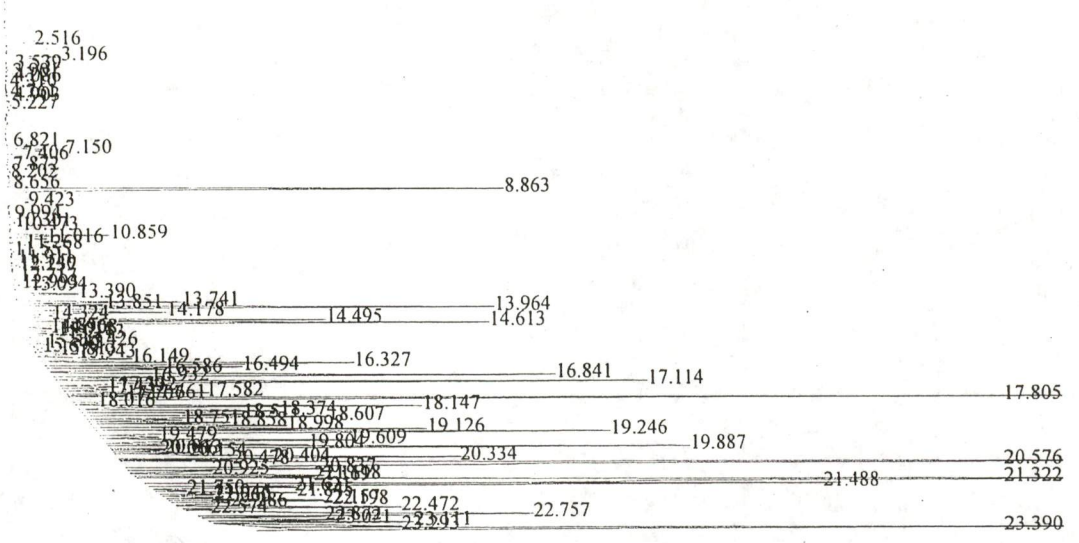
E = < 20 mg/kg
 D = < 50
 MD = < 100 ↓

REVIEW
 72399

7.22.99 CH



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=====
External Standard Report
=====

Data File Name : D:\HPCHEM\2\DATA\29072301\009R0401.D
 Operator : LAH Page Number : 1
 Instrument : GAS/BTEX Vial Number : 9
 Sample Name : 907071-18 RR 5ML Injection Number : 1
 Run Time Bar Code: Sequence Line : 4
 Acquired on : 23 Jul 99 12:52 PM Instrument Method: TPHG0699.MTH
 Report Created on: 23 Jul 99 01:15 PM Analysis Method : BTEX0399.MTH
 Last Recalib on : 17 MAR 99 11:11 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

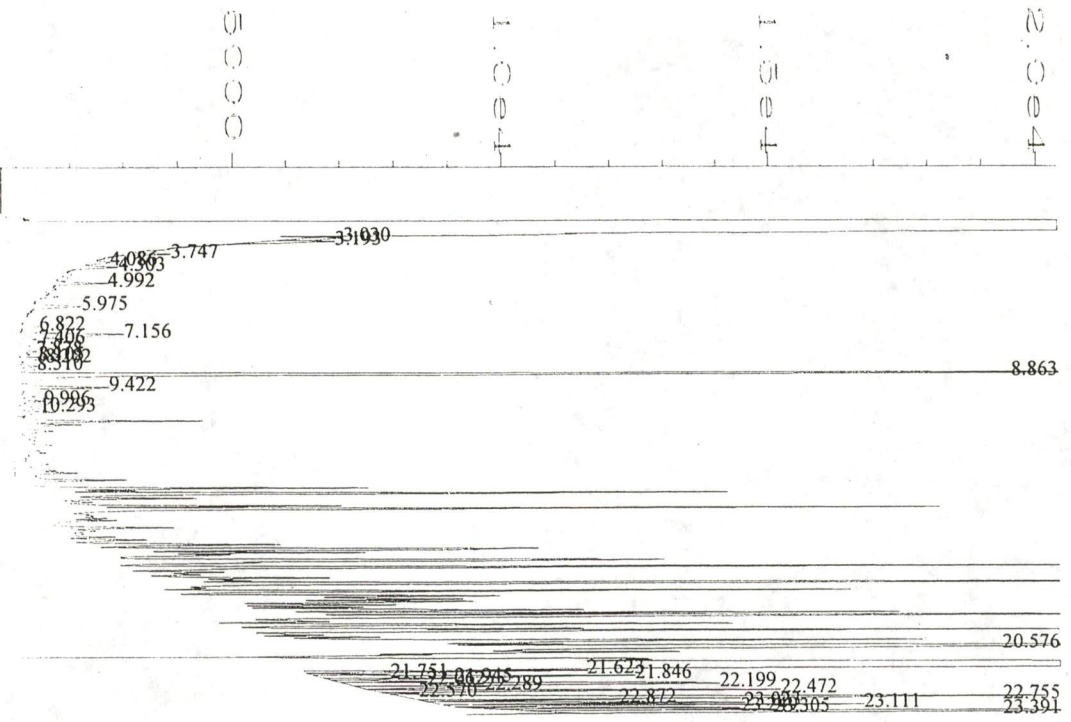
Sig. 2 in D:\HPCHEM\2\DATA\29072301\009R0401.D

Ret Time	Area	Type	Width	Ref#	ug/l	Name
7.150	26239	BV	0.087	1	0.356	Benzene
8.863	177283	VV	0.072	1	10.982	TFT surrogate : 10.982 - 11.028
10.859	29693	BV	0.060	1	0.422	Toluene
13.741	44592	PV	0.055	1	0.771	Ethylbenzene
13.964	151897	VV	0.063	1	1.681	M+P-Xylene
14.613	140745	VV	0.059	1	2.969	O-Xylene
					4.65	

BTE < 1ug/l
X = 5ug/l

REVIEWED BY
& DATE 7-29-99

7-26-99 LAH



=====
 External Standard Report
 =====

Data File Name : D:\HPCHEM\2\DATA\29072301\009F0401.D
 Operator : LAH Page Number : 1
 Instrument : GAS/BTEX Vial Number : 9
 Sample Name : 907071-18 RR 5ML Injection Number : 1
 Run Time Bar Code: Sequence Line : 4
 Acquired on : 23 Jul 99 12:52 PM Instrument Method: TPHG0699.MTH
 Report Created on: 23 Jul 99 01:20 PM Analysis Method : TPHG0699.MTH
 Last Recalib on : 29 JUN 99 05:16 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\2\DATA\29072301\009F0401.D

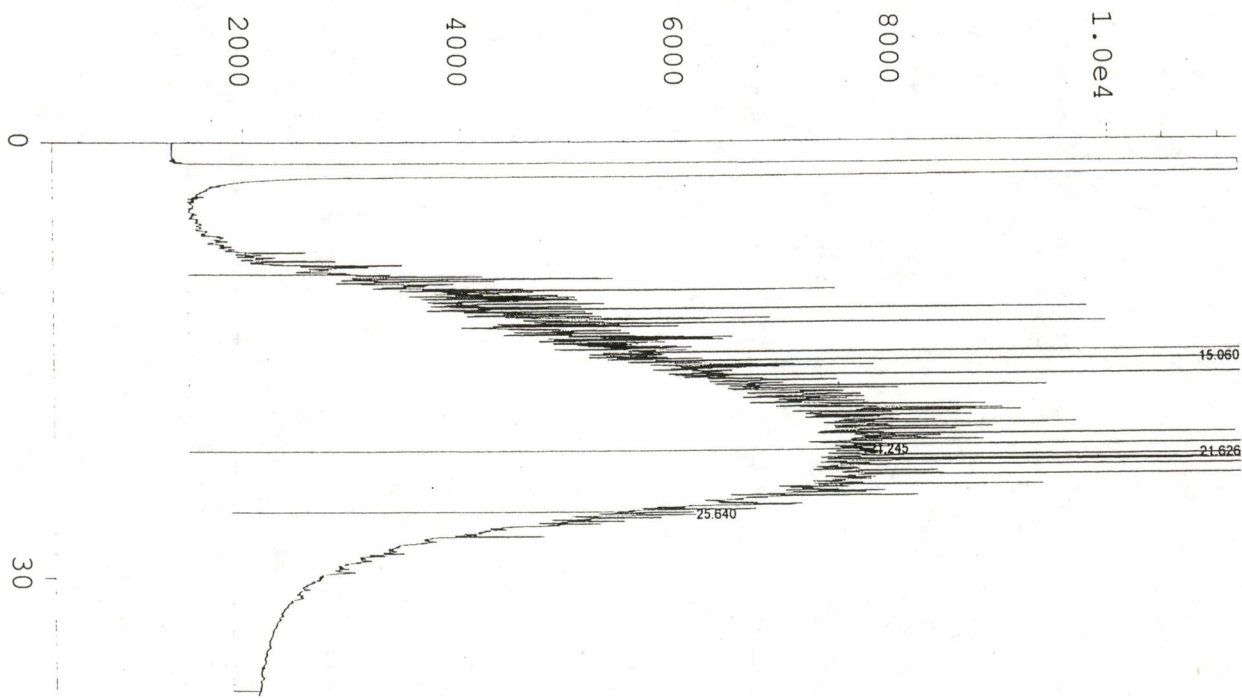
Ret Time	Area	Type	Width	Ref#	ug/l	Name
8.863	127634	VV	0.071	1	9.461	TFT-surrogate 3108100-959
20.576	2708631	MM	0.638	1	373.917	gasoline envelop

User Modified

Gas = 370 µg/L

7-26-99 LIT

user modified



=====
 External Standard Report
 =====

Data File Name : D:\HPCHEM\1\DATA\19072301\022F0901.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 22
 Sample Name : 907071-18 (X10) Injection Number : 1
 Run Time Bar Code: Sequence Line : 9
 Acquired on : 24 Jul 99 02:59 AM Instrument Method: TDMO0599.MTH
 Report Created on: 05 Aug 99 09:36 AM Analysis Method : TDMO0899.MTH
 Last Recalib on : 03 AUG 99 01:05 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072301\022F0901.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
15.060	3325061	MM	3.906	1	1144.945	Diesel #2
21.245	1418333	MM R	1.418	1	2295.510	Motor Oil
21.626	18503	MM T	0.029	1	4.459	nC-25 surrogate $\bar{x} = 2078.331$
25.640	712015	MM	2.778	1	1861.092	Motor Oil {2}

User Modified

$$D = 1144.945 \text{ ug/ml} \times \frac{2 \text{ ml}}{400 \text{ ml}} \times 10 = 57 \text{ ug/ml}$$

$$MO = 100 \text{ ug/ml}$$

REVIEWED BY *G.594*
 & DATE

Surrogate low due to dilution.

8.5.99 CH

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\013F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 13
 Sample Name : 907071-1 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 00:55 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:17 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 19 JUL 99 10:03 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\013F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.502	64881	MM T	0.102	1	44.150	Bromochlorobenzene $\div 50 \times 100 = 88\%$
21.619	30945	MM T	0.024	1	12.972	Pentacosane $\div 10 \times 100 = 129\%$

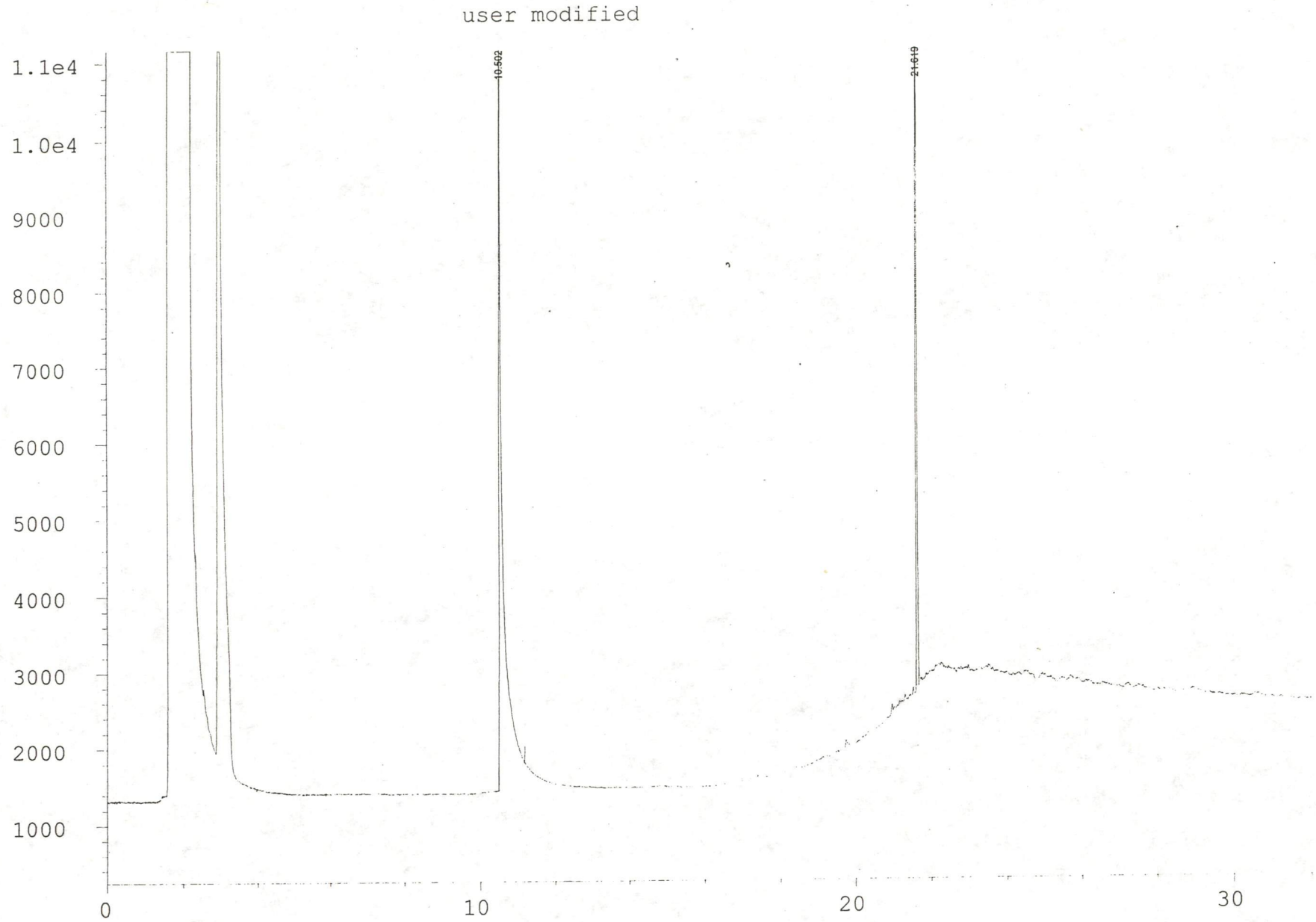
User Modified

G = 220 mg/kg
 D = 250
 m = >100 ↓

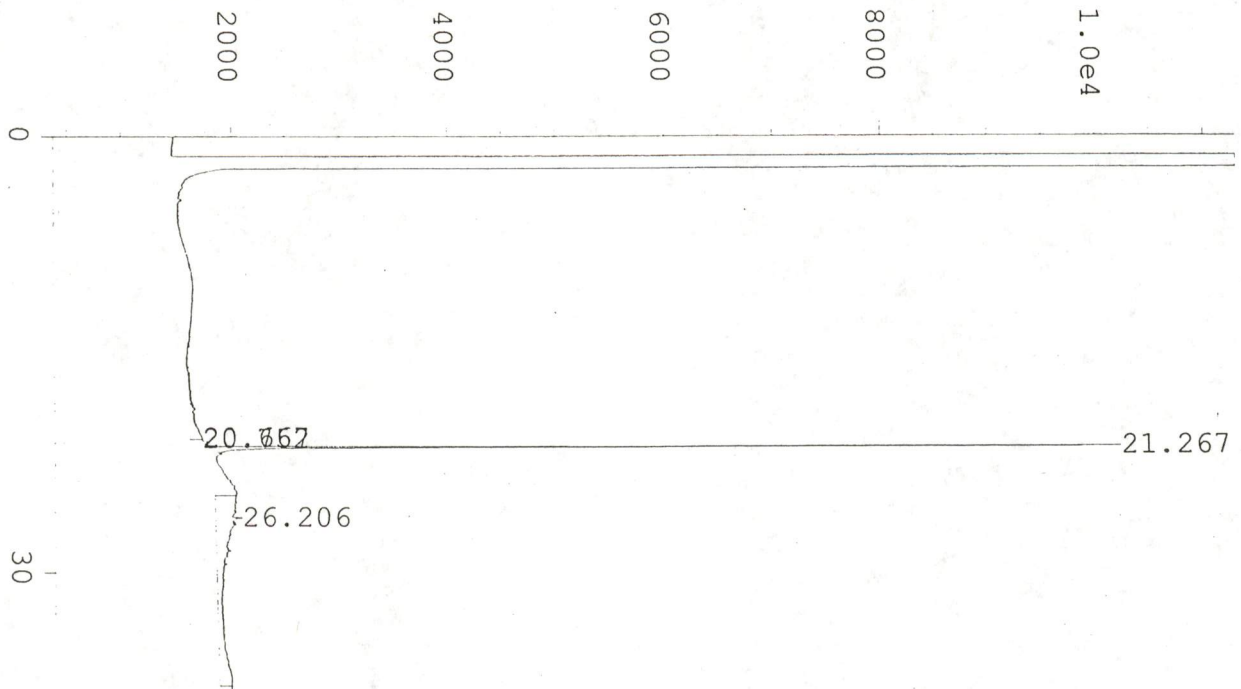
Resembles motor oil.
 or Buckler Type Product

REVIEWED BY [Signature] 7/23/99
 DATE

7-22-99 CH



Sig. 1 in D:\HPCHEM\1\DATA\19072101\013F0201.D



External Standard Report

```

Data File Name      : D:\HPCHEM\4\DATA\49073001\020F0701.D
Operator            : CMH
Instrument           : DIESEL #2
Sample Name         : 907071-1
Run Time Bar Code   :
Acquired on         : 30 Jul 99  11:02 PM
Report Created on   : 05 Aug 99  08:50 AM
Last Recalib on    : 04 AUG 99 11:23 AM
Multiplier          : 1
Page Number         : 1
Vial Number         : 20
Injection Number    : 1
Sequence Line       : 7
Instrument Method    : 4DXT0499.MTH
Analysis Method     : 4DXT0899.MTH
Sample Amount       : 0
ISTD Amount         :
  
```

Sig. 1 in D:\HPCHEM\4\DATA\49073001\020F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
20.667	15084	MM	2.282	1	5.255	TPH-Dsl envelope
20.752	40884	MM R	0.078	1	72.964	MOTOR OIL
21.267	28059	MM T	0.055	1	9.861	nC-25 surrogate $\bar{x} = 120.408$
26.206	71481	MM	4.816	1	167.852	MOTOR OIL {2}

User Modified

$$D = 5.255 \mu\text{g/ml} \times \frac{10 \text{ ml}}{23.02 \text{ g}} = 2.3 \text{ mg/kg} = < 25 \text{ mg/kg}$$

$$MO = 52 \text{ mg/kg}$$

$$\text{Surrogate} = \frac{9.861}{10} \times 100 = 98.61$$

APPROVED BY *S. J. G.*
DATE

5
3.4.99 CH

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\014F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 14
 Sample Name : 907071-2 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 01:40 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:18 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 19 JUL 99 10:03 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\014F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.515	62828	BB	0.107	1	42.753	Bromochlorobenzene $\div 50 \times 100 = 85.5\%$
21.619	28570	BB	0.025	1	11.976	Pentacosane $\div 10 \times 100 = 119\%$

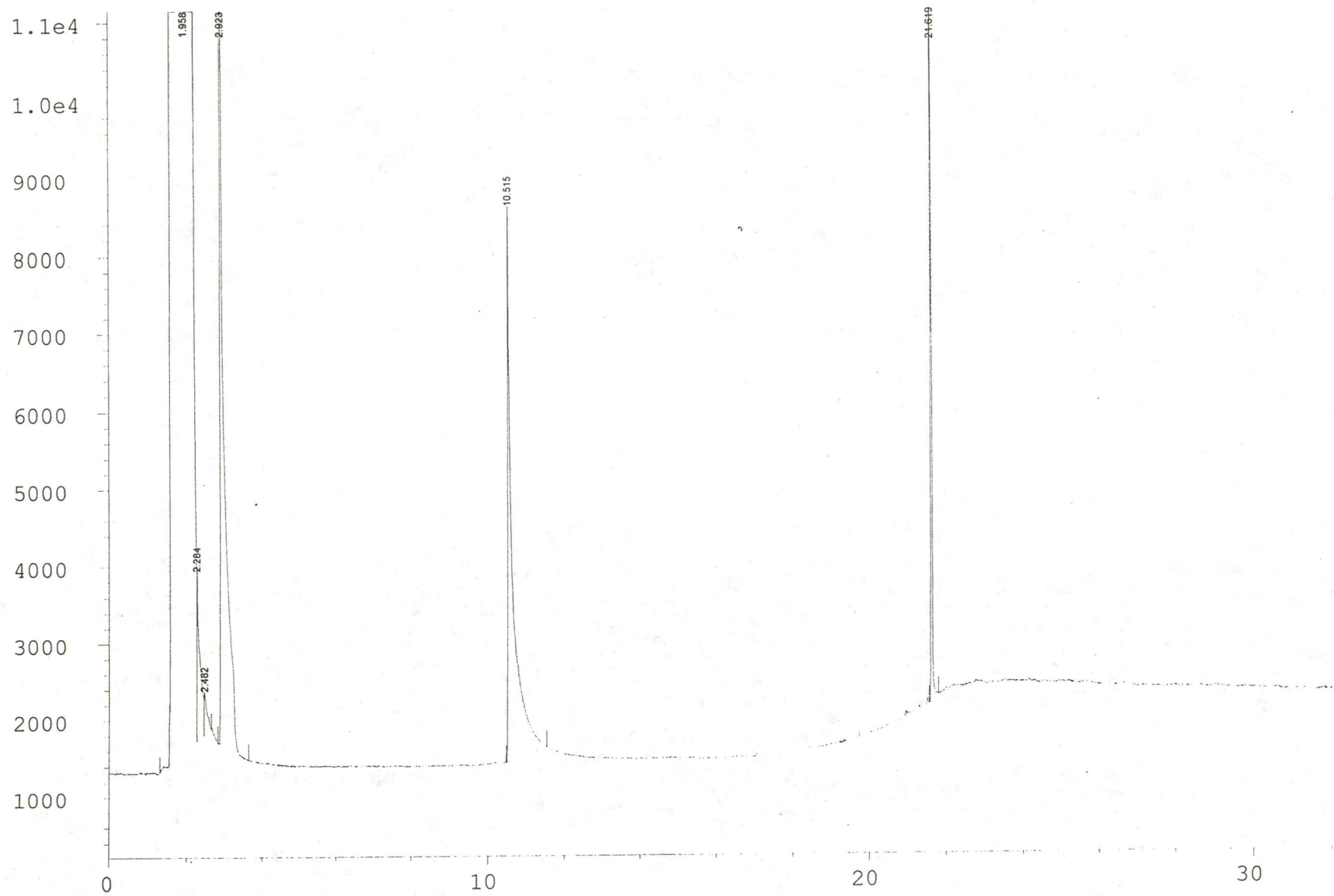
G = < 20 mg/kg
 D = < 50
 M = > 100 ↓

motor oil in brake type

produced
 G

ANALYZED BY 72374
 DATE

7-22-99 CW



Sig. 1 in D:\HPCHEM\1\DATA\19072101\014F0201.D

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\015F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 15
 Sample Name : 907071-3 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 02:25 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:21 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 19 JUL 99 10:03 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\015F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.506	65225	MM T	0.115	1	44.384	Bromochlorobenzene $\div 50 \times 100 = 88.8\%$
21.618	31393	MM T	0.024	1	13.160	Pentacosane $\div 10 \times 100 = 132\%$

User Modified

$C = < 20 \text{ mg/kg}$

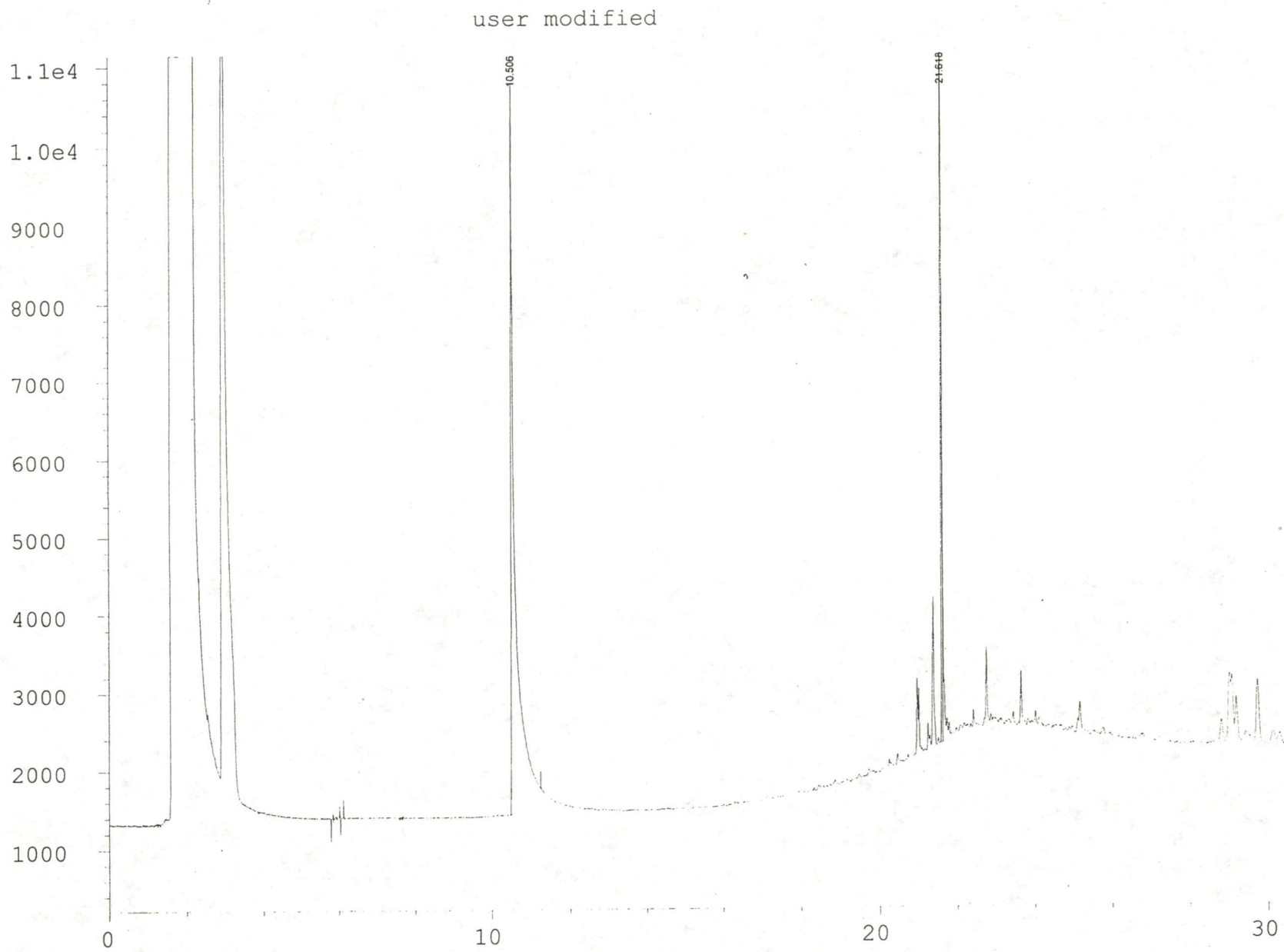
$D = < 50$

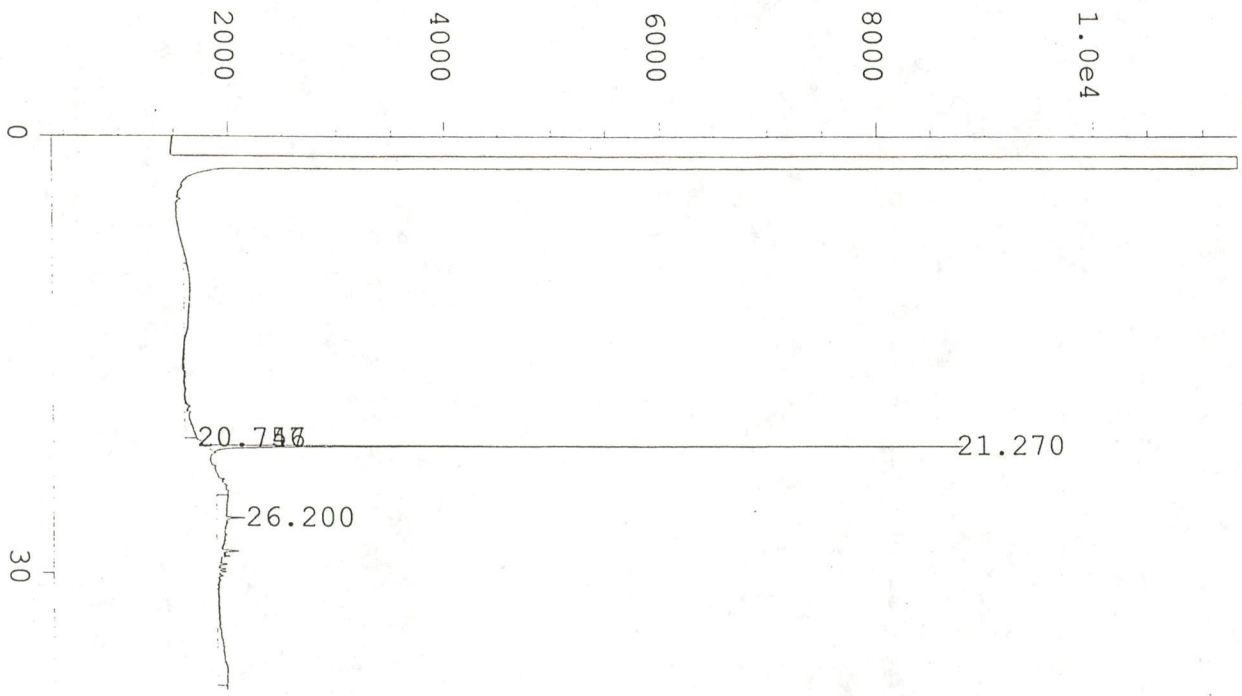
$m_0 = > 100 \downarrow$

motor Oil in Braker
type Braker

REVIEWED BY 7-23-99
& DATE

7.22.99 CH





External Standard Report

```

Data File Name   : D:\HPCHEM\4\DATA\49073001\021F0701.D
Operator        : CMH
Instrument       : DIESEL #2
Sample Name     : 907071-2
Run Time Bar Code:
Acquired on    : 30 Jul 99 11:46 PM
Report Created on: 05 Aug 99 08:52 AM
Last Recalib on : 04 AUG 99 11:23 AM
Multiplier     : 1
Page Number    : 1
Vial Number    : 21
Injection Number : 1
Sequence Line  : 7
Instrument Method: 4DXT0499.MTH
Analysis Method : 4DXT0899.MTH
Sample Amount  : 0
ISTD Amount    :
  
```

Sig. 1 in D:\HPCHEM\4\DATA\49073001\021F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
20.747	22445	MM	3.345	1	7.820	TPH-Dsl envelope
20.756	30920	MM R	0.070	1	55.182	MOTOR OIL
21.270	25357	MM T	0.059	1	8.941	nC-25 surrogate $\bar{x} = 83.820$
26.200	46384	MM	2.906	1	112.458	MOTOR OIL {2}

User Modified

Dry wt. = 24.33g

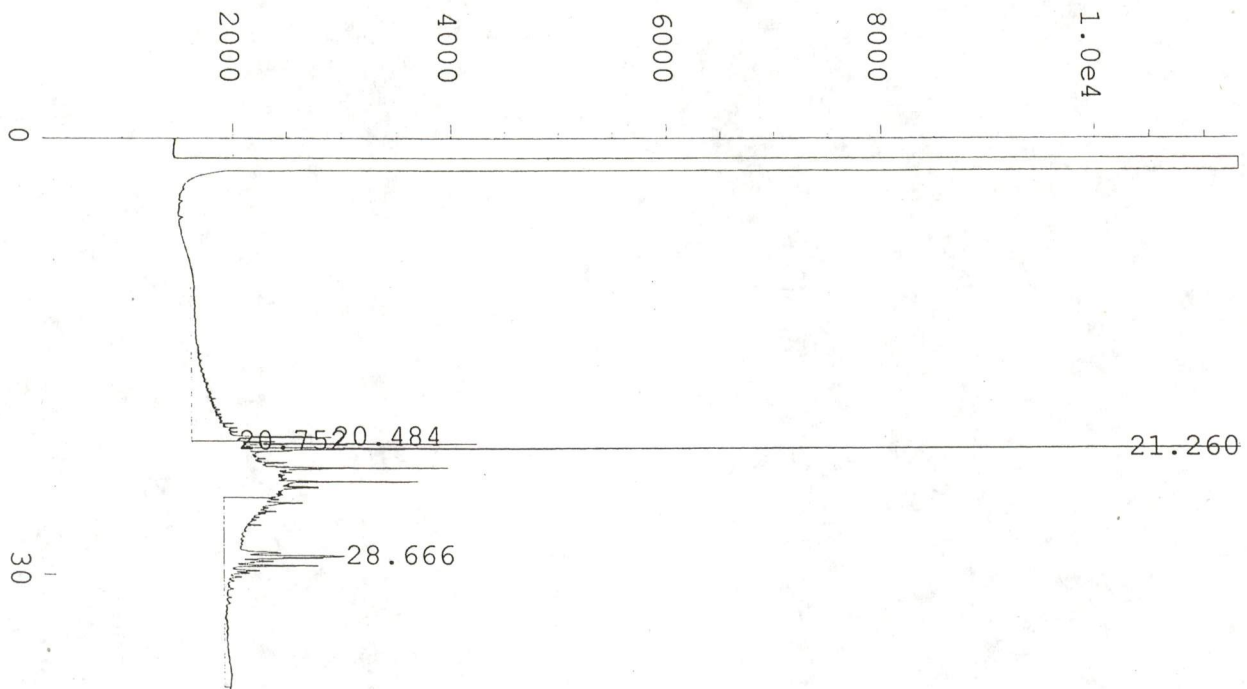
D = < 25 mg/kg

MO = < 50 mg/kg

Surr. = $\frac{8.941}{10} \times 100 = 89\%$

REVIEWED BY
& DATE

5
8.4.99 CW



External Standard Report

```

Data File Name   : D:\HPCHEM\4\DATA\49073001\022F0701.D
Operator        : CMH
Instrument       : DIESEL #2
Sample Name     : 907071-3
Run Time Bar Code:
Acquired on    : 31 Jul 99 00:30 AM
Report Created on: 05 Aug 99 08:54 AM
Last Recalib on : 04 AUG 99 11:23 AM
Multiplier    : 1
Page Number    : 1
Vial Number    : 22
Injection Number : 1
Sequence Line  : 7
Instrument Method: 4DXT0499.MTH
Analysis Method : 4DXT0899.MTH
Sample Amount  : 0
ISTD Amount    :
  
```

Sig. 1 in D:\HPCHEM\4\DATA\49073001\022F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
20.484	87539	MM	1.111	1	30.498	TPH-Dsl envelope
20.752	152534	MM R	0.150	1	269.544	MOTOR OIL
21.260	37222	MM T	0.038	1	12.981	nC-25 surrogate
28.666	113442	MM	1.701	1	260.468	MOTOR OIL {2}

User Modified

D = < 25 mg/kg

MO = 110 mg/kg

Surr. = $\frac{12.981}{10} \times 100 = 130\%$

Dry Wt. = 24.6g

REV 1
2 02

6594

3.4.99 CW

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\016F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 16
 Sample Name : 907071-4 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 03:09 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:22 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 19 JUL 99 10:03 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\016F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.508	73682	MM T	0.126	1	50.139	Bromochlorobenzene $\div 50 \times 100 = 100\%$
21.617	25938	MM T	0.021	1	10.873	Pentacosane $\div 10 \times 100 = 108\%$

User Modified

G = < 20 mg/kg

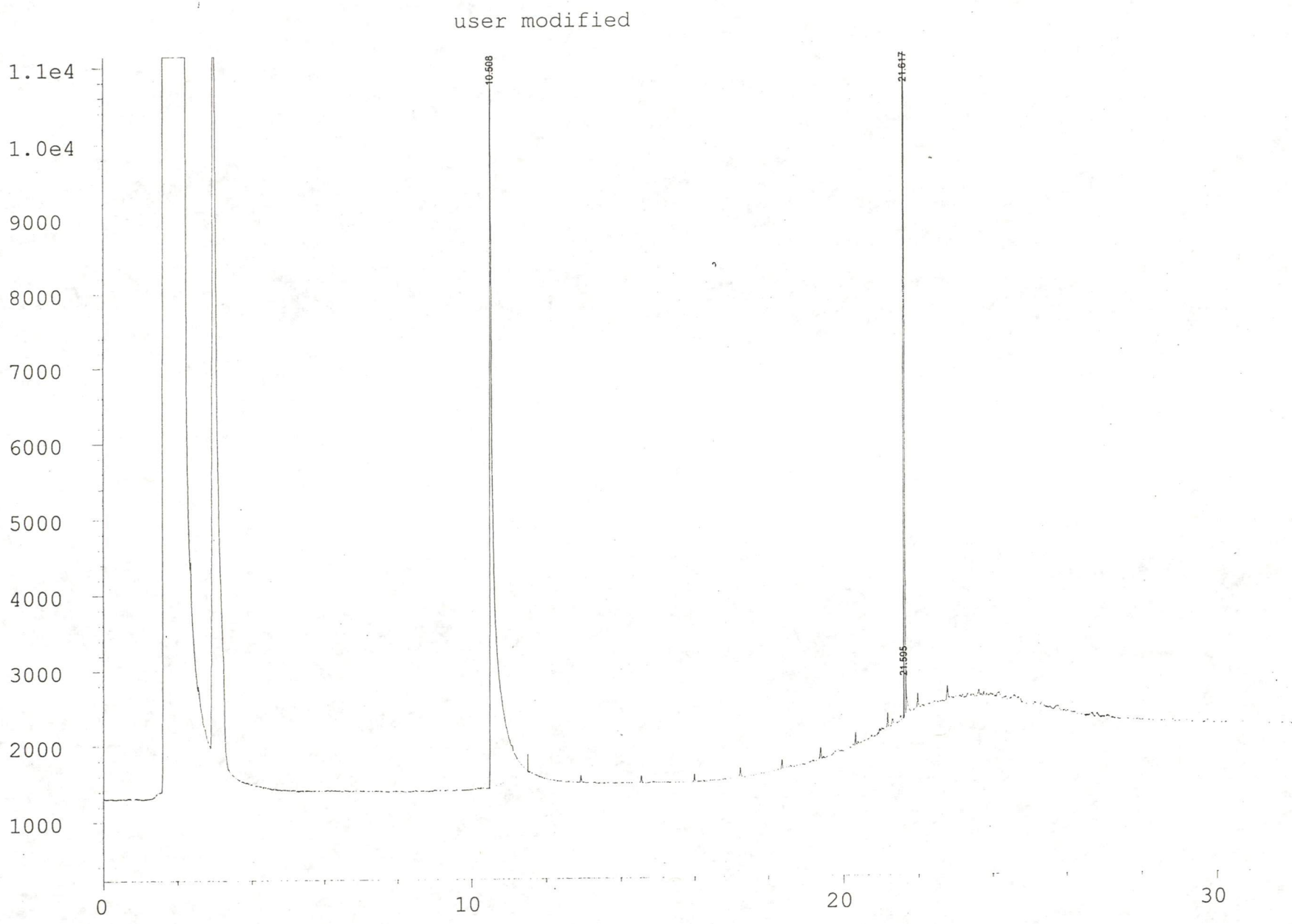
D = < 50

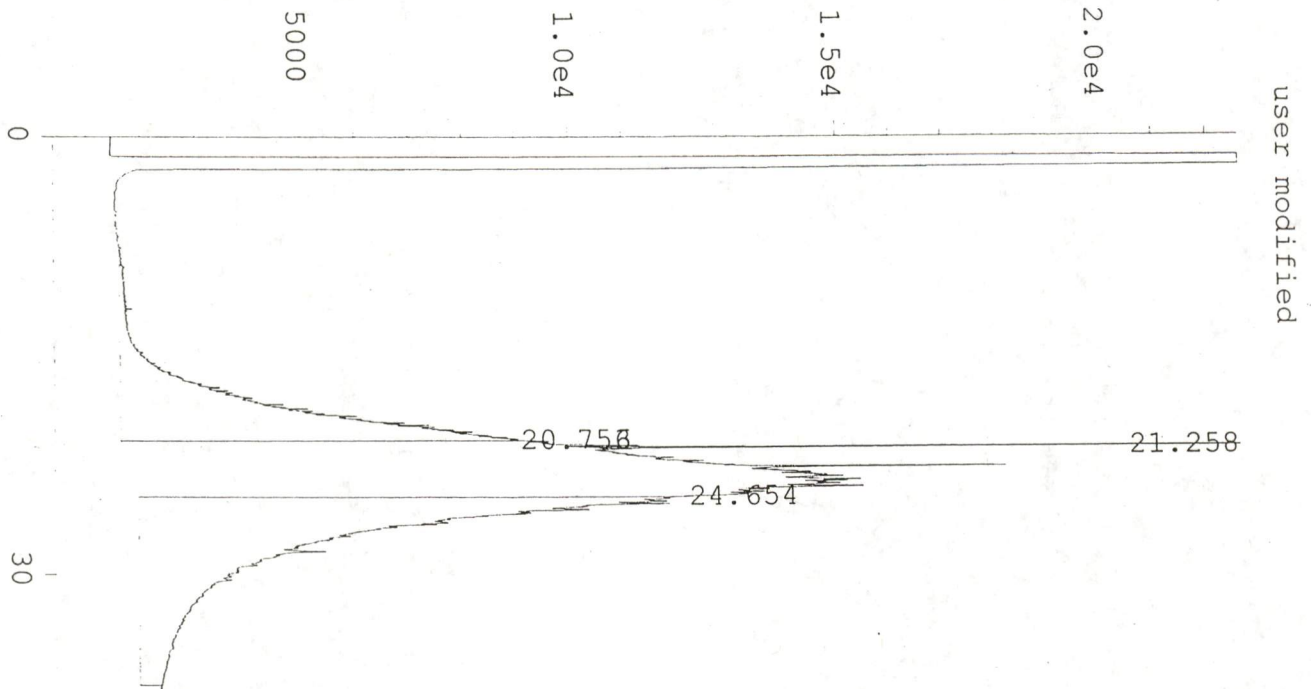
mo = > 100 ↓

motor oil or B.T.P.

REVIEWED BY 7.23.99
& DATE

7.22.99 CW





External Standard Report

```

Data File Name   : D:\HPCHEM\4\DATA\49073001\023F0701.D
Operator        : CMH
Instrument       : DIESEL #2
Sample Name     : 907071-4
Run Time Bar Code:
Acquired on    : 31 Jul 99 01:14 AM
Report Created on: 05 Aug 99 08:57 AM
Last Recalib on : 04 AUG 99 11:23 AM
Multiplier     : 1
Page Number    : 1
Vial Number    : 23
Injection Number : 1
Sequence Line  : 7
Instrument Method: 4DXT0499.MTH
Analysis Method : 4DXT0899.MTH
Sample Amount   : 0
ISTD Amount    :
  
```

Sig. 1 in D:\HPCHEM\4\DATA\49073001\023F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
20.753	1061568	MM	2.366	1	369.929	TPH-Dsl envelope
20.756	2572262	MM R	1.749	1	4520.785	MOTOR OIL
21.258	42219	MM T	0.045	1	14.682	nC-25 surrogate $\sum x = 4298.650$
24.654	1842341	MM	2.989	1	4076.515	MOTOR OIL (2)

User Modified

D = 380 mg/kg due to predominantly oil range product

Dry wt = 9.750

MO = 4400 mg/kg

8.5944

Surrogate = $\frac{14.682}{10} \times 100 = 146\%$

5
8.499 CN

External Standard Report

```

Data File Name      : D:\HPCHEM\1\DATA\19072101\017F0201.D
Operator            : CMH
Instrument          : DIESEL #1
Sample Name        : 907071-5
Run Time Bar Code  :
Acquired on        : 22 Jul 99 03:53 AM
Report Created on  : 22 Jul 99 01:23 PM
Last Recalib on   : 19 JUL 99 10:03 AM
Multiplier         : 1
Page Number        : 1
Vial Number        : 17
Injection Number   : 1
Sequence Line      : 2
Instrument Method   : NWTPHCID.MTH
Analysis Method    : NWTPHCID.MTH
Sample Amount      : 0
ISTD Amount        :
  
```

Sig. 1 in D:\HPCHEM\1\DATA\19072101\017F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.510	73321	BB	0.103	1	49.893	Bromochlorobenzene
21.620	30748	BB	0.025	1	12.889	Pentacosane

$$G = 220 \text{ mg/kg}$$

$$D = 50$$

$$MA = 100$$

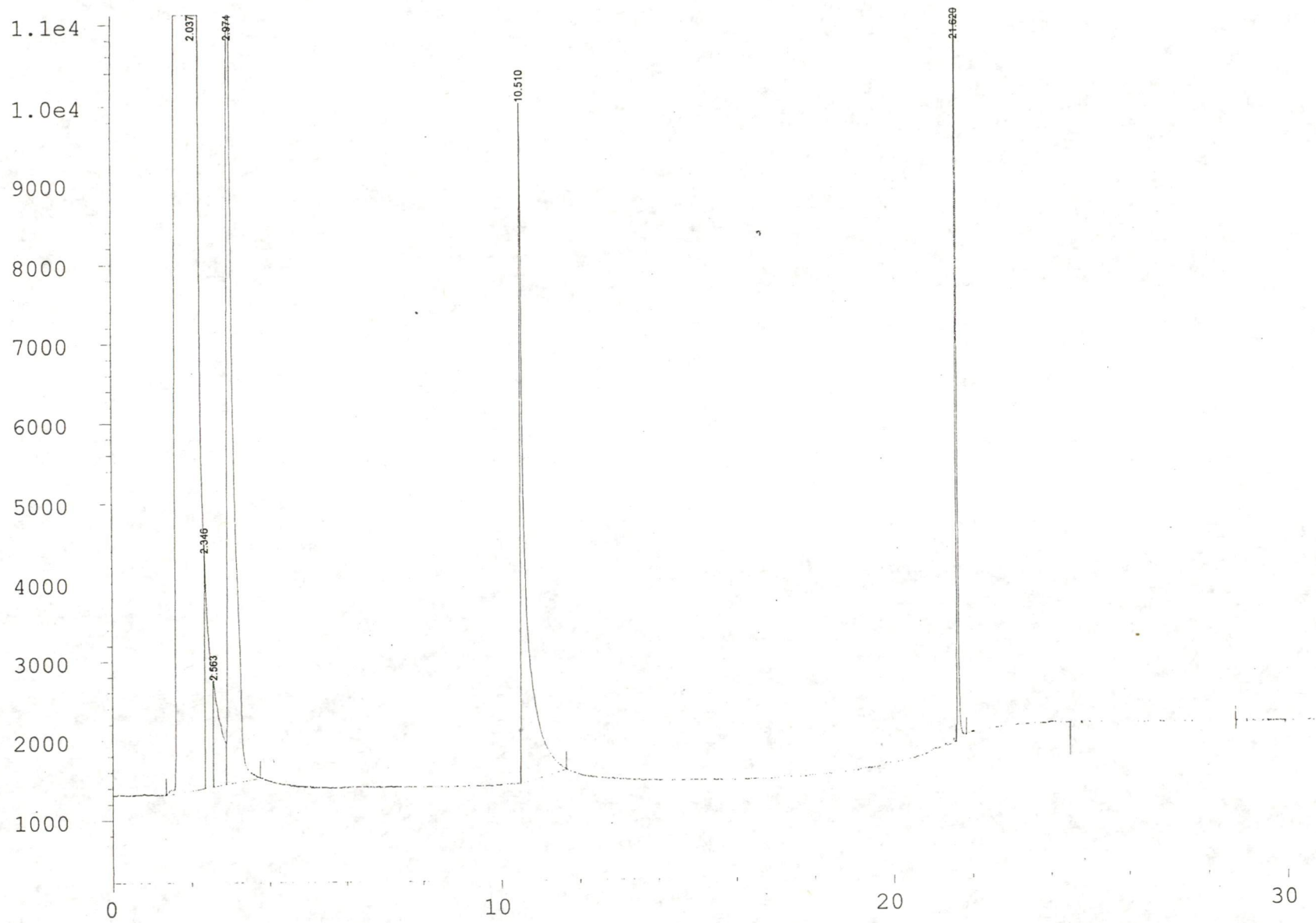


$$BCB = \frac{49.893}{50} \times 100 = 99\%$$

$$C_{25} = \frac{12.889}{10} \times 100 = 129\%$$

7-23-99

CH 7-22-99 CH
7-24



Sig. 1 in D:\HPCHEM\1\DATA\19072101\017F0201.D

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\019F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 19
 Sample Name : 907071-6 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 05:22 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:24 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 Jul 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\019F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.508	72710	BB	0.093	1	49.583	Bromochlorobenzene $\pm 50 \times 100 = 99\%$
21.619	33614	PV	0.024	1	10.932	Pentacosane $\pm 10 \times 100 = 109\%$

G = < 20 mg/kg

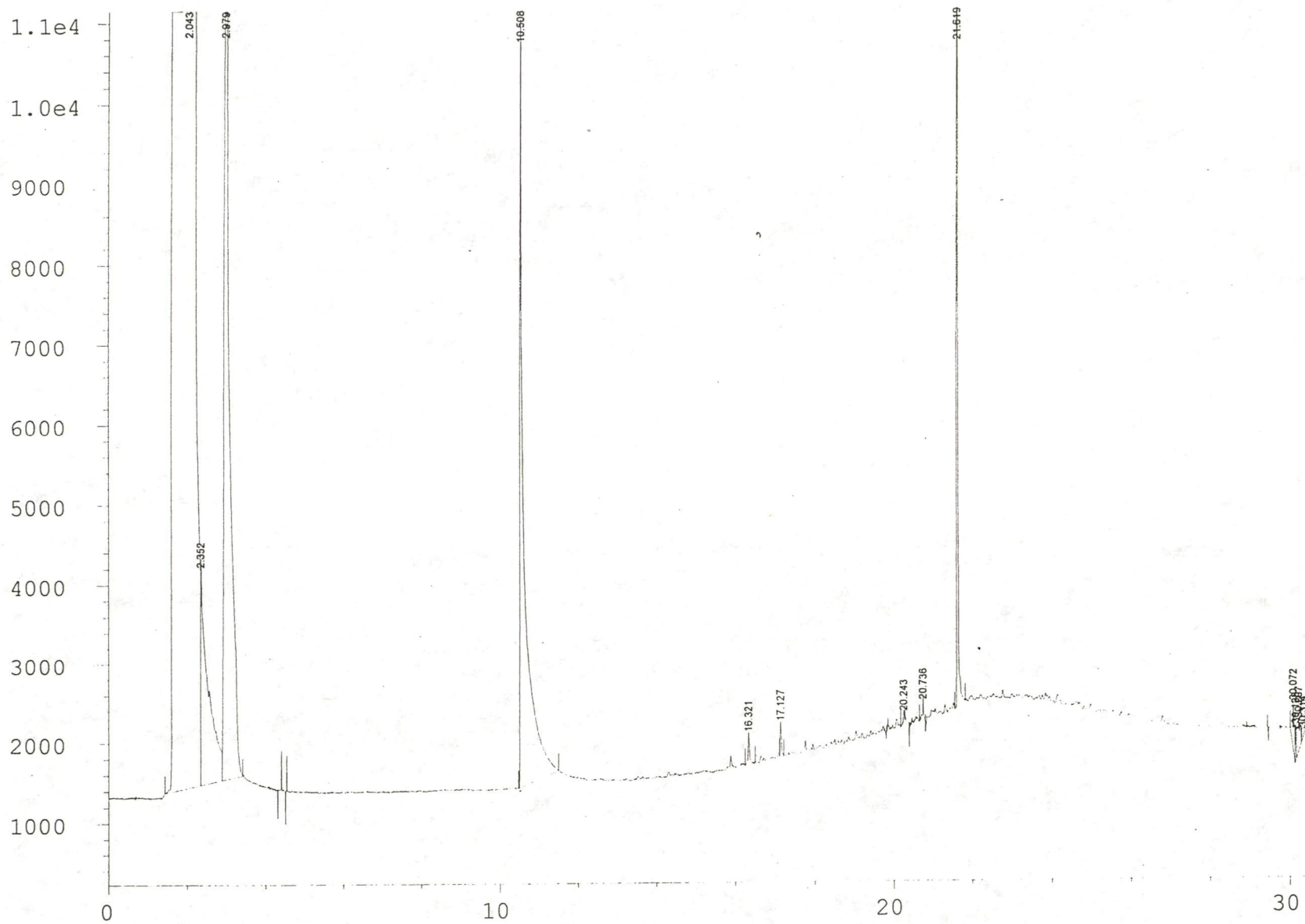
D = < 50

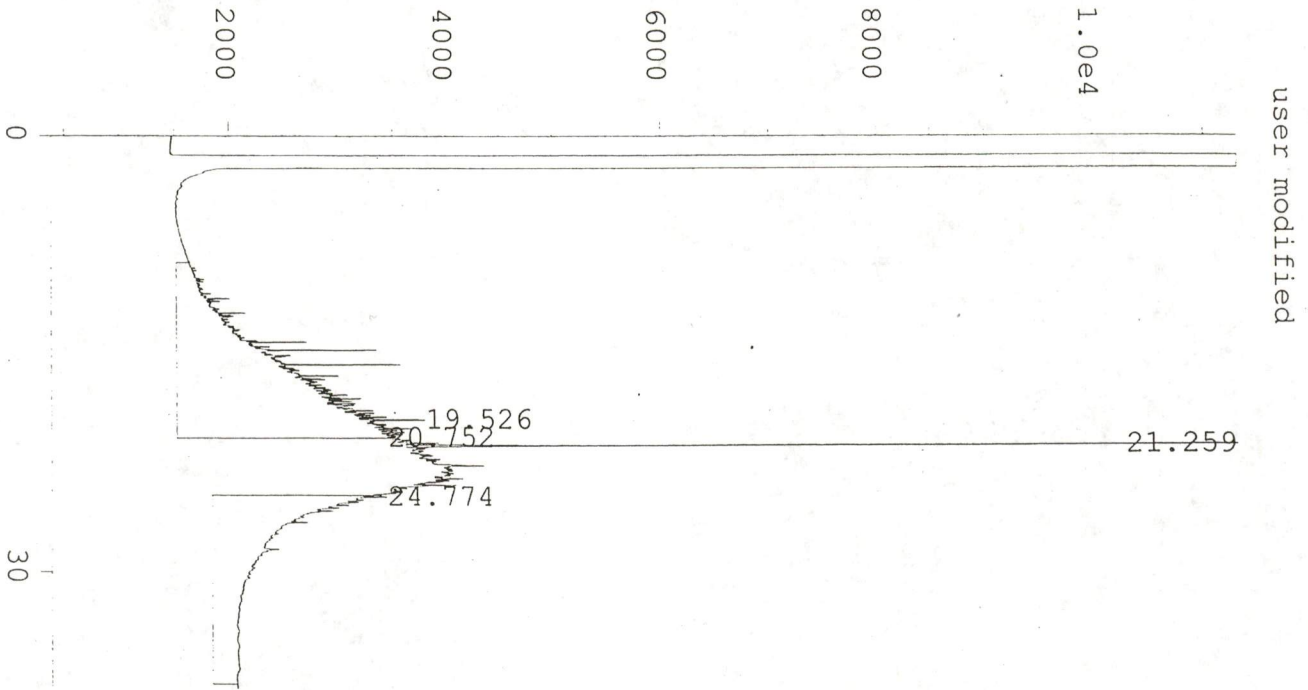
MO = > 100 ↓

Motor Oil as BII

REV: 7-23-96

7-22-99 CH





External Standard Report

```

Data File Name      : D:\HPCHEM\4\DATA\49073001\024F0701.D
Operator            : CMH
Instrument          : DIESEL #2
Sample Name        : 907071-6
Run Time Bar Code  :
Acquired on       : 31 Jul 99 01:57 AM
Report Created on : 05 Aug 99 08:58 AM
Last Recalib on  : 04 AUG 99 11:23 AM
Multiplier       : 1
Page Number       : 1
Vial Number      : 24
Injection Number : 1
Sequence Line    : 7
Instrument Method: 4DXT0499.MTH
Analysis Method  : 4DXT0899.MTH
Sample Amount    : 0
ISTD Amount      :
  
```

Fig. 1 in D:\HPCHEM\4\DATA\49073001\024F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
19.526	645946	MM	4.706	1	225.090	TPH-Dsl envelope
20.752	493799	MM R	0.465	1	869.115	MOTOR OIL
21.259	30529	MM T	0.033	1	10.702	nC-25 surrogate
24.774	341553	MM	3.541	1	763.957	MOTOR OIL {2}

User Modified

D = 120 mg/kg due to predominantly oil range product

DRY WT = 19.5%

MO = 420 mg/kg

APPROVED BY 6594
DATE

Surrogate = $\frac{10.702}{10} \times 100 = 107\%$

5
S. X 99 CW

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\020F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 20
 Sample Name : 907071-7 (X20) Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 06:06 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:27 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 Jul 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\020F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.495	2146	VV	0.053	1	* 1.463	Bromochlorobenzene
21.621	11639	MM T	0.048	1	* 3.785	Pentacosane

User Modified

Dry wt. = 11.42g

G = ^{CH} ~~20~~ < 400 mg/kg

D = < 1000 mg/kg

MO = > 2000 mg/kg

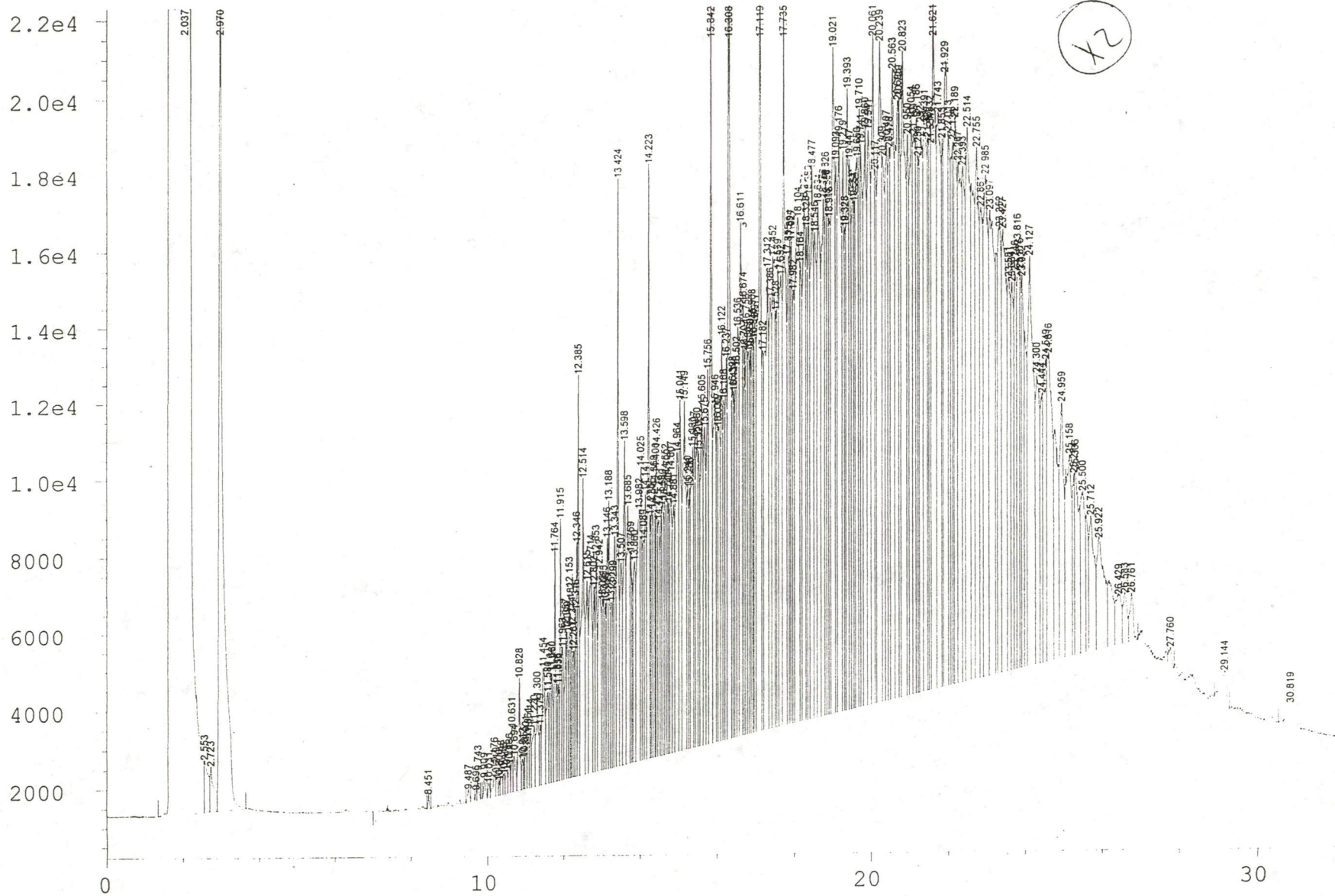
Bunker
product

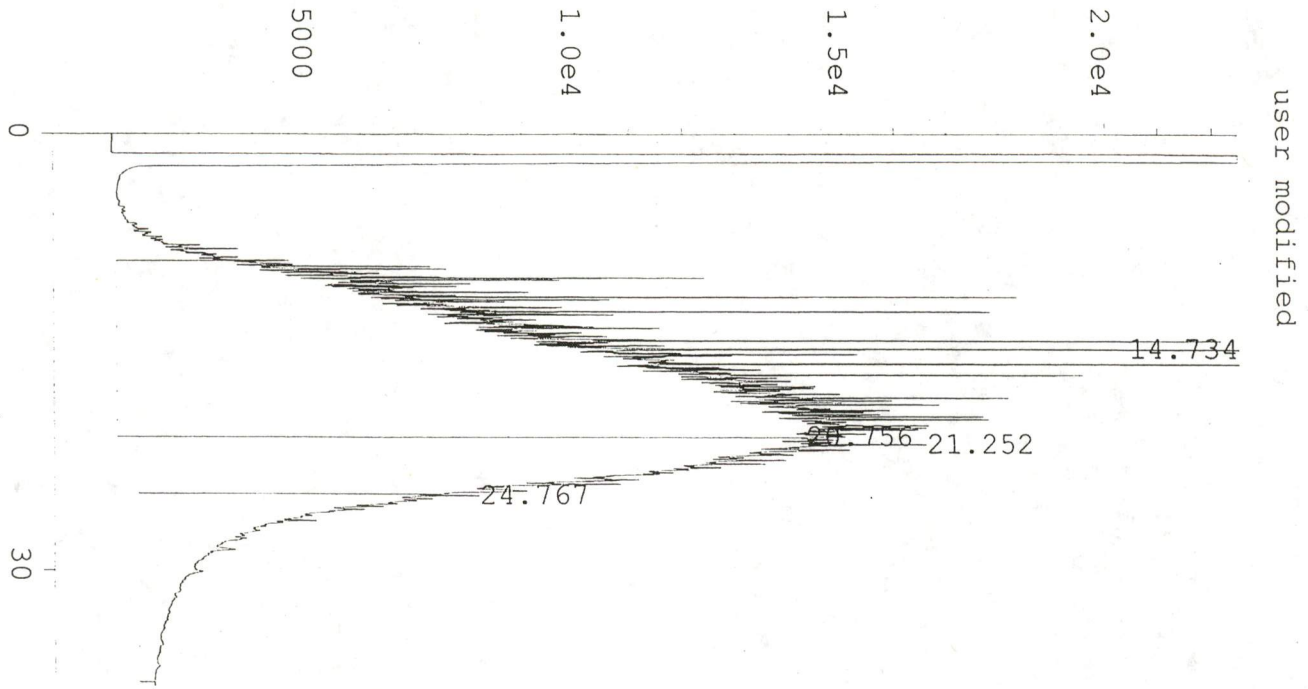
Surrogates low due to dilution.

7-23-99

7-22-99 CH

user modified





External Standard Report

```

Data File Name      : D:\HPCHEM\4\DATA\49080201\007F0401.D
Operator           : CMH
Instrument          : DIESEL #2
Sample Name        : 907071-7 X50
Run Time Bar Code  :
Acquired on       : 02 Aug 99 11:29 AM
Report Created on : 05 Aug 99 09:12 AM
Last Recalib on  : 04 AUG 99 11:23 AM
Multiplier        : 1
Page Number       : 1
Vial Number       : 7
Injection Number  : 1
Sequence Line     : 4
Instrument Method : 4DXT0499.MTH
Analysis Method   : 4DXT0899.MTH
Sample Amount     : 0
ISTD Amount       :
  
```

Fig. 1 in D:\HPCHEM\4\DATA\49080201\007F0401.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
14.734	6654125	MM	3.332	1	2318.862	TPH-Ds1 envelope
20.756	2386865	MM R	2.639	1	4195.059	MOTOR OIL
21.252	5683	MM T	0.043	1	2.242	nC-25 surrogate $\bar{x} = 3234.48$
24.767	1025653	MM	2.711	1	2273.912	MOTOR OIL {2}

User Modified

$D = 64,000 \text{ mg/kg}$ due to predominately oil range product Dry wt. = 17.9%

$D = 90,000 \text{ mg/kg}$ DATE BY 8/5/99

surrogate low due to dilution.

8.5.99 CIA

External Standard Report

Data File Name : D:\HPCHEM\2\DATA\29072201\022R0601.D
 Operator : LAH Page Number : 1
 Instrument : GAS/BTEX Vial Number : 22
 Sample Name : ~~907089-2 100UL~~ Injection Number : 1
 Run Time Bar Code: 907071-7 Rev'n 25ul Sequence Line : 6
 Acquired on : 22 Jul 99 09:53 PM Instrument Method: TPHG0699.MTH
 Report Created on: 22 Jul 99 10:16 PM Analysis Method : BTEX0399.MTH
 Last Recalib on : 17 MAR 99 11:11 AM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 2 in D:\HPCHEM\2\DATA\29072201\022R0601.D

Ret Time	Area	Type	Width	Ref#	ug/l	Name
7.159	11186	VB	0.111	1	0.152	Benzene
8.875	33190	PV	0.069	1	1.796	TFT surrogate low due to detection
10.875	8523	VV	0.067	1	0.121	Toluene ^{2.5}
13.753	18315	VV	0.081	1	0.316	Ethylbenzene 72%
13.867	1450	VV	0.053	1	0.0160	M+P-Xylene
14.512	13525	VV	0.062	1	0.202	O-Xylene

BTE < 0.4 mg/kg
 X < 1.2 mg/kg

Dry wt = 5.44

APPROVED BY 7-26-99
 DATE

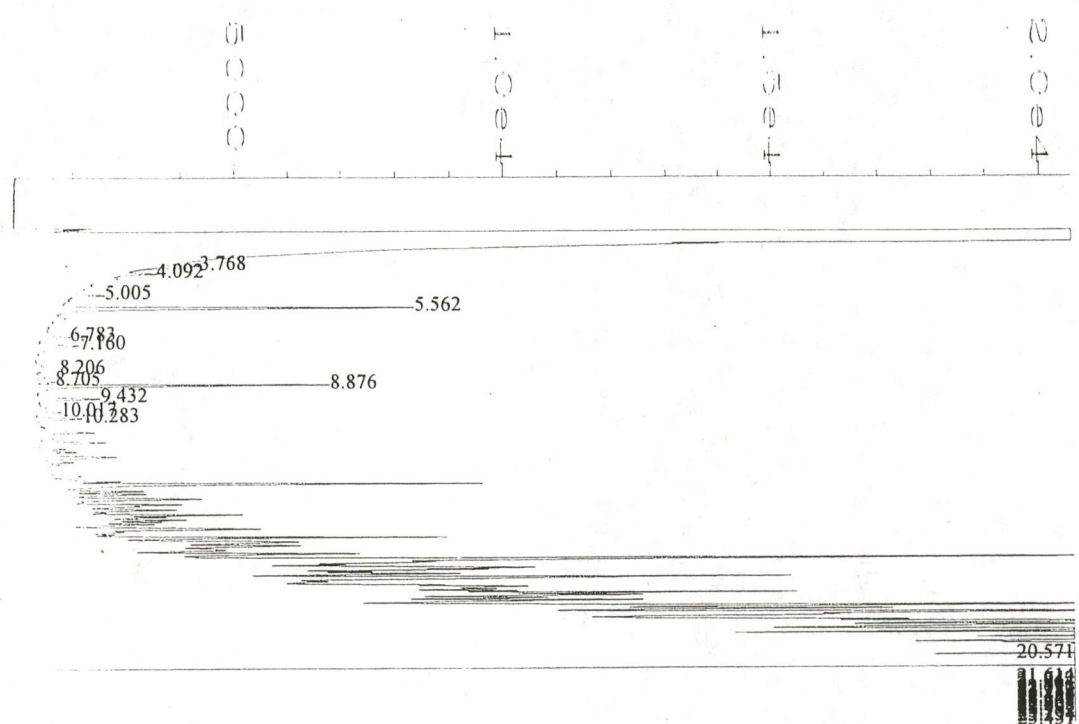
7-23-99 LAH

1. Oct
2. Oct
3. Oct
4. Oct
5. Oct
6. Oct
7. Oct

2.501
3.222
4.090

6.791
7.159

8.875
9.433
10.012
10.281
10.487
10.875
11.032
11.300
11.580
11.719
11.933
12.258
12.751
13.002
13.116
13.423
13.538
13.807
13.982
14.112
14.203
14.321
14.428
14.821
15.031
15.264
15.398
15.613
15.752
15.943
16.092
16.298
16.331
16.580
16.496
16.708
16.881
16.971
17.124
17.273
17.373
17.523
17.715
17.900
18.005
18.125
18.376
18.510
18.672
18.764
18.992
19.113
19.236
19.288
19.482
19.626
19.723
19.880
19.875
20.083
20.209
20.333
20.409
20.490
20.570
20.784
20.820
20.990
21.090
21.247
21.347
21.417
21.447
21.466
21.486
21.508
21.538
21.568
21.598
21.628



External Standard Report

```

Data File Name      : D:\HPCHEM\2\DATA\29072201\022F0601.D
Operator            : LAH
Instrument           : GAS/BTEX
Sample Name         : 907089-2 100UL LH
Run Time Bar Code  : 907071-7 Rems 25ul
Acquired on        : 22 Jul 99 09:53 PM
Report Created on   : 23 Jul 99 08:16 AM
Last Recalib on    : 29 JUN 99 05:16 PM
Multiplier         : 1
Page Number         : 1
Vial Number         : 22
Injection Number    : 1
Sequence Line       : 6
Instrument Method    : TPHG0699.MTH
Analysis Method     : TPHG0699.MTH
Sample Amount       : 0
ISTD Amount         :
  
```

Sig. 1 in D:\HPCHEM\2\DATA\29072201\022F0601.D

Ret Time	Area	Type	Width	Ref#	ug/l	Name
8.876	24919	PV	0.070	1	1.515	TFT-surrogate
20.571	5209883	MM	1.500	1	753.892	gasoline envelop

User Modified

$$\text{Gas} = 753.892 \times \frac{5\text{mL}}{0.025\text{mL}} \times \frac{0.01\text{L}}{5.44} = 280\text{mg/kg}$$

likely due to Bunker Bending
 CR
 7-23-99 LH

REVIEWED 7-26-99

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\021F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 21
 Sample Name : 907071-8 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 06:50 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 05:03 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\021F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.495	81109	MM T	0.099	1	55.311	Bromochlorobenzene $\div 50 \times 100 = 111\%$
21.618	37946	MM T	0.017	1	12.341	Pentacosane $\div 10 \times 100 = 123\%$

User Modified

E = < 20 mg/kg

D = < 50

MO = > 100

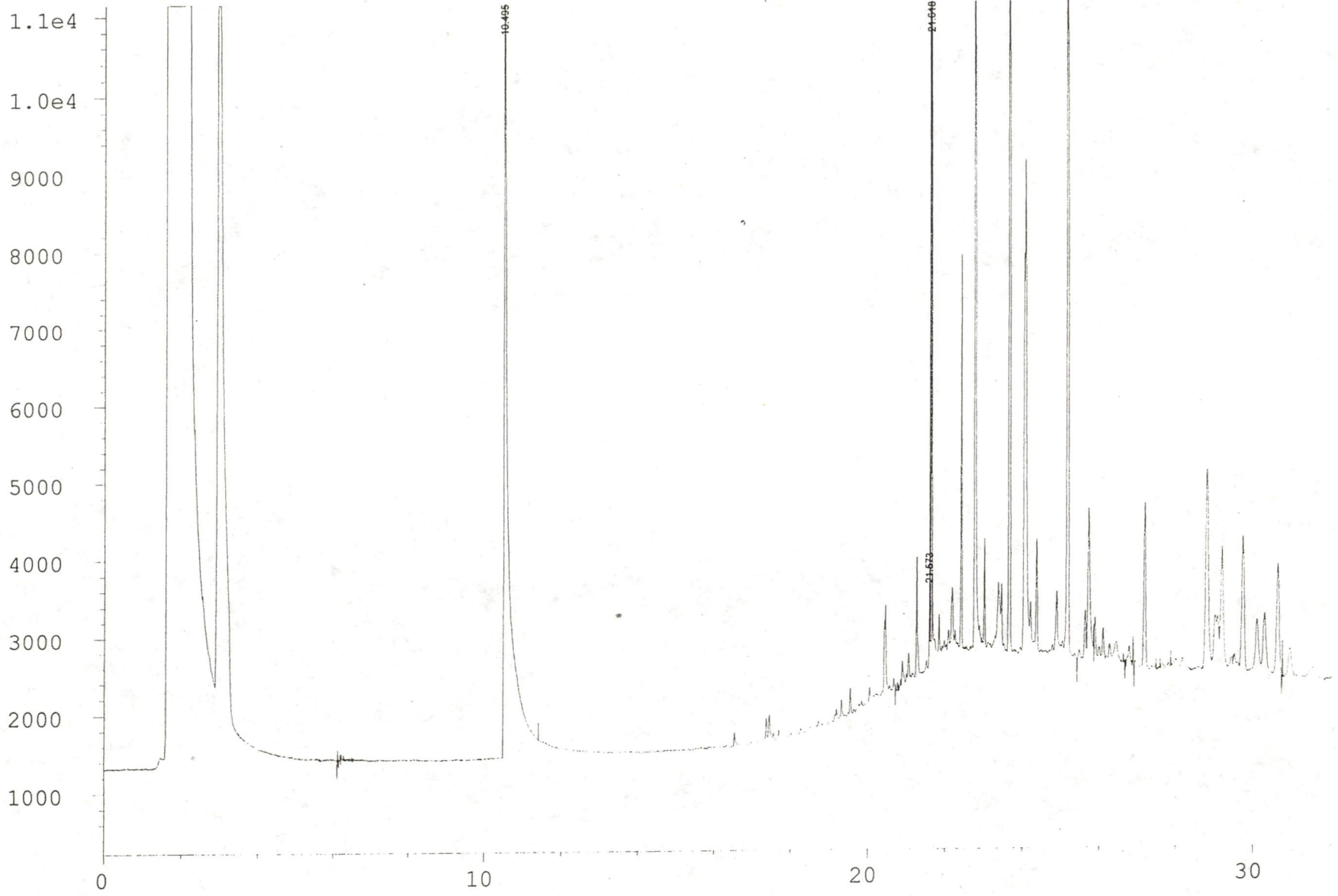


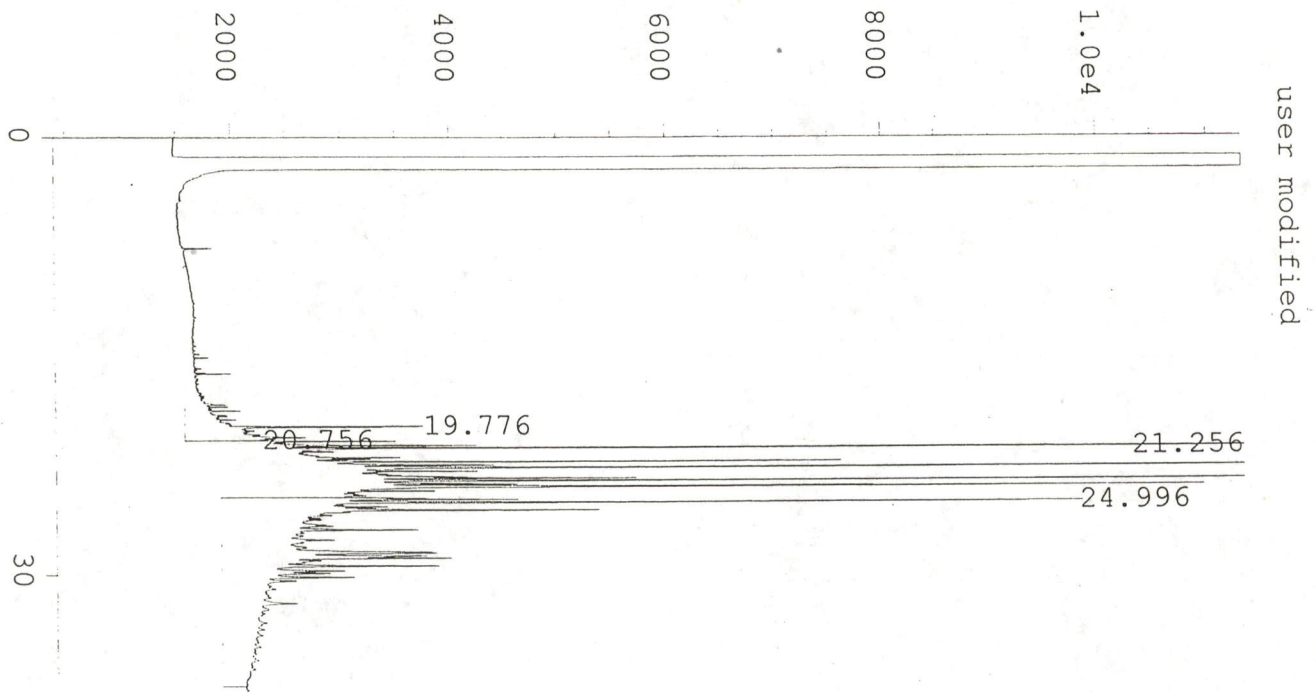
motor oil as B.T.F.

7-23794

7-22 991 CH

user modified





External Standard Report

```

Data File Name   : D:\HPCHEM\4\DATA\49073001\026F0701.D
Operator        : CMH
Instrument       : DIESEL #2
Sample Name     : 907071-8
Run Time Bar Code:
Acquired on    : 31 Jul 99 03:25 AM
Report Created on: 05 Aug 99 09:02 AM
Last Recalib on : 04 AUG 99 11:23 AM
Multiplier     : 1
Page Number    : 1
Vial Number    : 26
Injection Number : 1
Sequence Line  : 7
Instrument Method: 4DXT0499.MTH
Analysis Method : 4DXT0899.MTH
Sample Amount  : 0
ISTD Amount    :
  
```

Sig. 1 in D:\HPCHEM\4\DATA\49073001\026F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
19.776	123791	MM	0.927	1	43.128	TPH-Dsl envelope
20.756	489098	MM R	0.233	1	860.856	MOTOR OIL
21.256	36119	MM T	0.017	1	12.605	nC-25 surrogate
24.996	504220	MM	1.037	1	1122.998	MOTOR OIL {2}

User Modified

D = < 25 mg/kg

MO = 370 mg/kg

$$\text{Surr.} = \frac{12.605}{10} \times 100 = 126\%$$

DRY WT = 27.0 g

5.599 CH

5.599 CH

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\022F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 22
 Sample Name : 907071-9 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 07:34 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:35 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

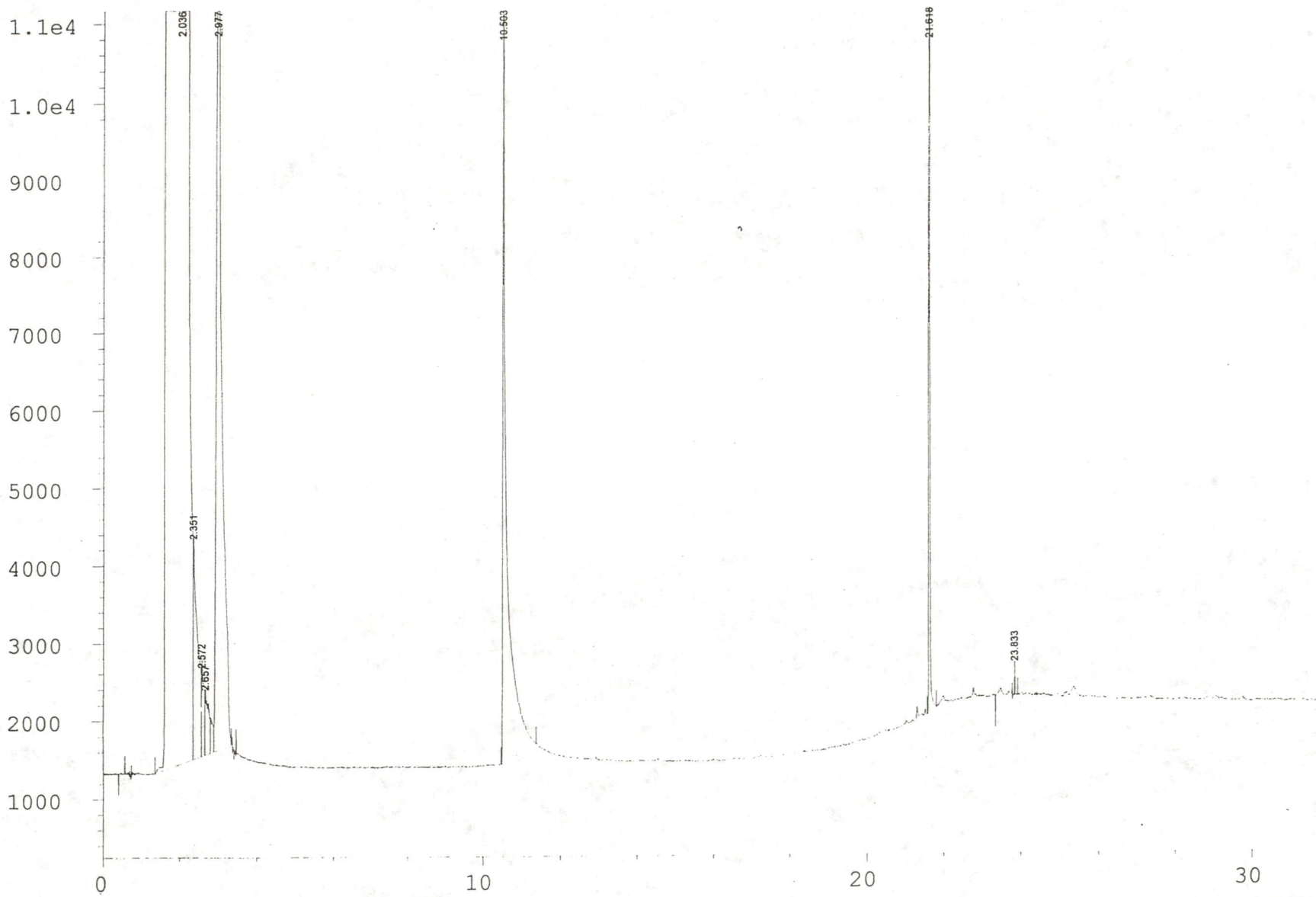
Sig. 1 in D:\HPCHEM\1\DATA\19072101\022F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.503	68890	BB	0.098	1	46.978	Bromochlorobenzene / 50 x 100 = 94%
21.618	32324	BV	0.024	1	10.512	Pentacosane / 10 x 100 = 105%

E = 220 mg/kg
 D = < 50
 MO = < 100 ↓

7-23-99

7-22-99 C11



Sig. 1 in D:\HPCHEM\1\DATA\19072101\022F0201.D

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\023F0401.D
Operator : CMH Page Number : 1
Instrument : DIESEL #1 Vial Number : 23
Sample Name : 907071-10 Injection Number : 1
Run Time Bar Code: Sequence Line : 4
Acquired on : 22 Jul 99 05:22 PM Instrument Method: NWTPHCID.MTH
Report Created on: 23 Jul 99 08:07 AM Analysis Method : NWTPHCID.MTH
Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\023F0401.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.528	66078	MM T	0.184	1	45.061	Bromochlorobenzene $\cdot 50 \times 100 = 90\%$
21.617	27656	BV	0.026	1	8.994	Pentacosane $\cdot 0 \times 100 = 90\%$

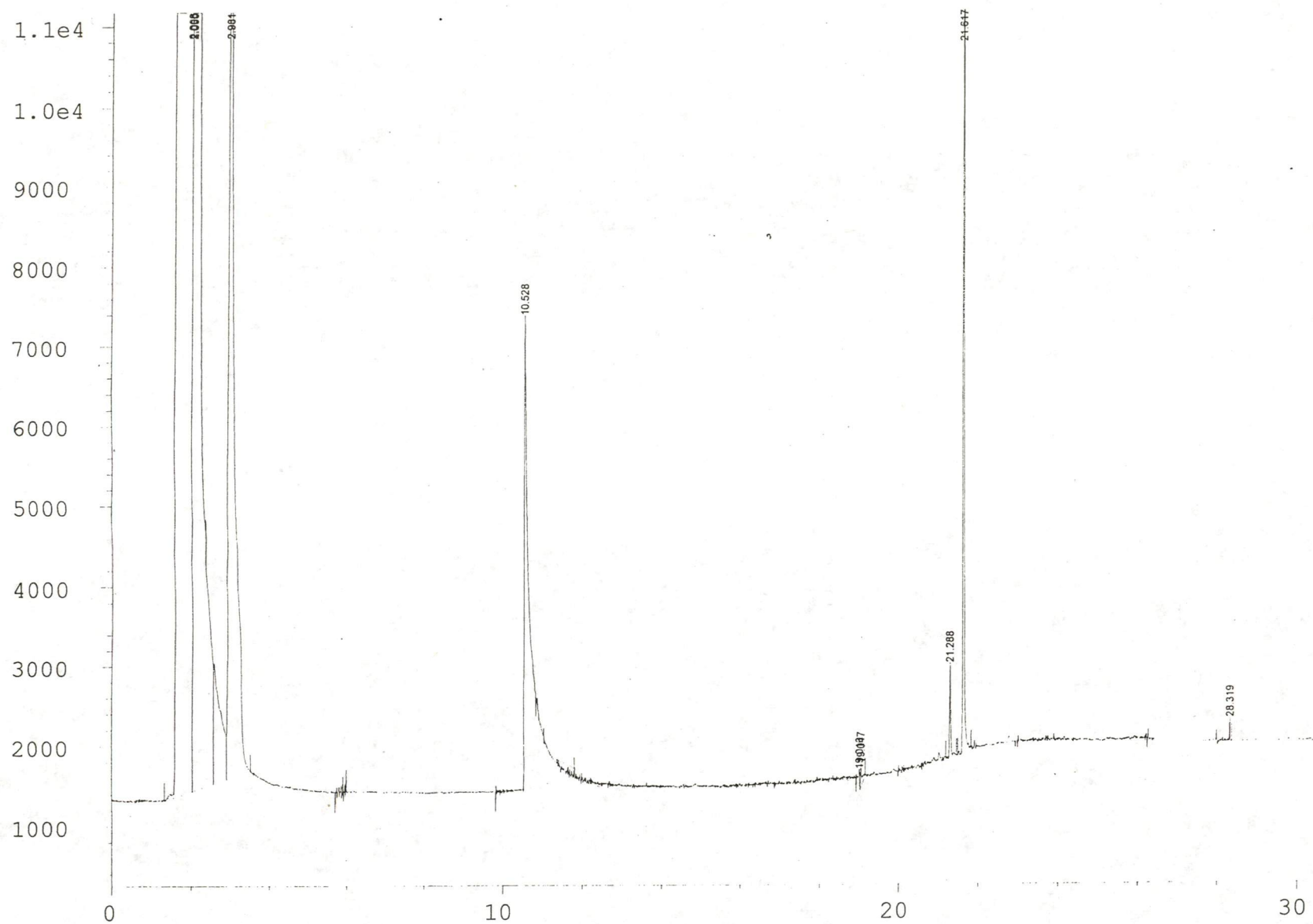
User Modified

G = 220 mg/kg
D = 250
MO = 2100 ↓

7-23-99

7-23-99

user modified



Sig. 1 in D:\HPCHEM\1\DATA\19072101\023F0401.D

External Standard Report

Data File Name : D:\HPCHEM\1\DATA\19072101\024F0201.D
 Operator : CMH Page Number : 1
 Instrument : DIESEL #1 Vial Number : 24
 Sample Name : 907071-11 Injection Number : 1
 Run Time Bar Code: Sequence Line : 2
 Acquired on : 22 Jul 99 09:02 AM Instrument Method: NWTPHCID.MTH
 Report Created on: 22 Jul 99 01:40 PM Analysis Method : NWTPHCID.MTH
 Last Recalib on : 22 JUL 99 01:23 PM Sample Amount : 0
 Multiplier : 1 ISTD Amount :

Sig. 1 in D:\HPCHEM\1\DATA\19072101\024F0201.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
10.476	157054	BB	0.043	1	107.100	Bromochlorobenzene $\div 100 \times 100 = 107\%$
21.620	76282	VV	0.025	1	24.809	Pentacosane $\div 20 \times 100 = 124\%$

Double Surrogate

G = 220 mg/kg

D = < 50

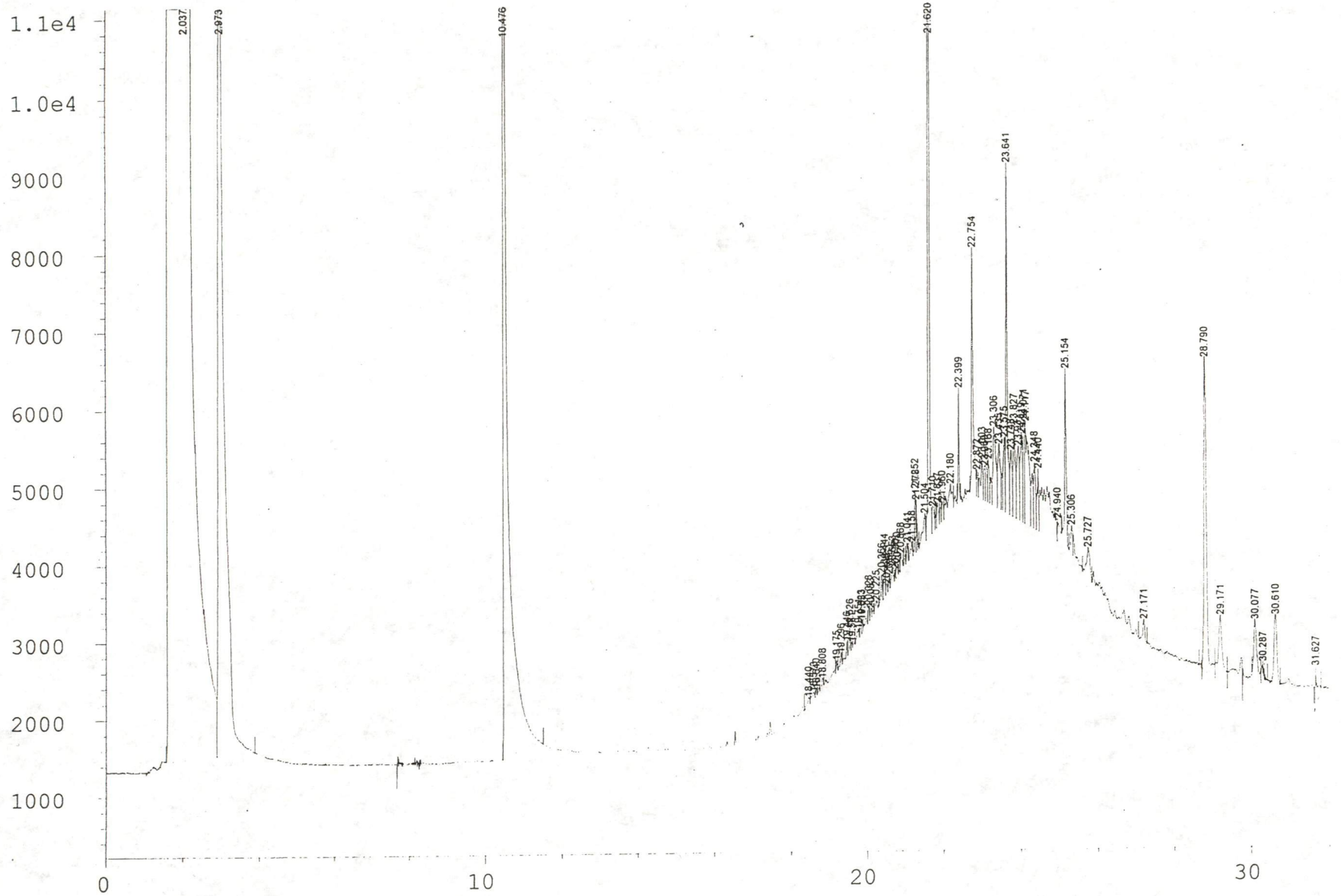
MO = > 100

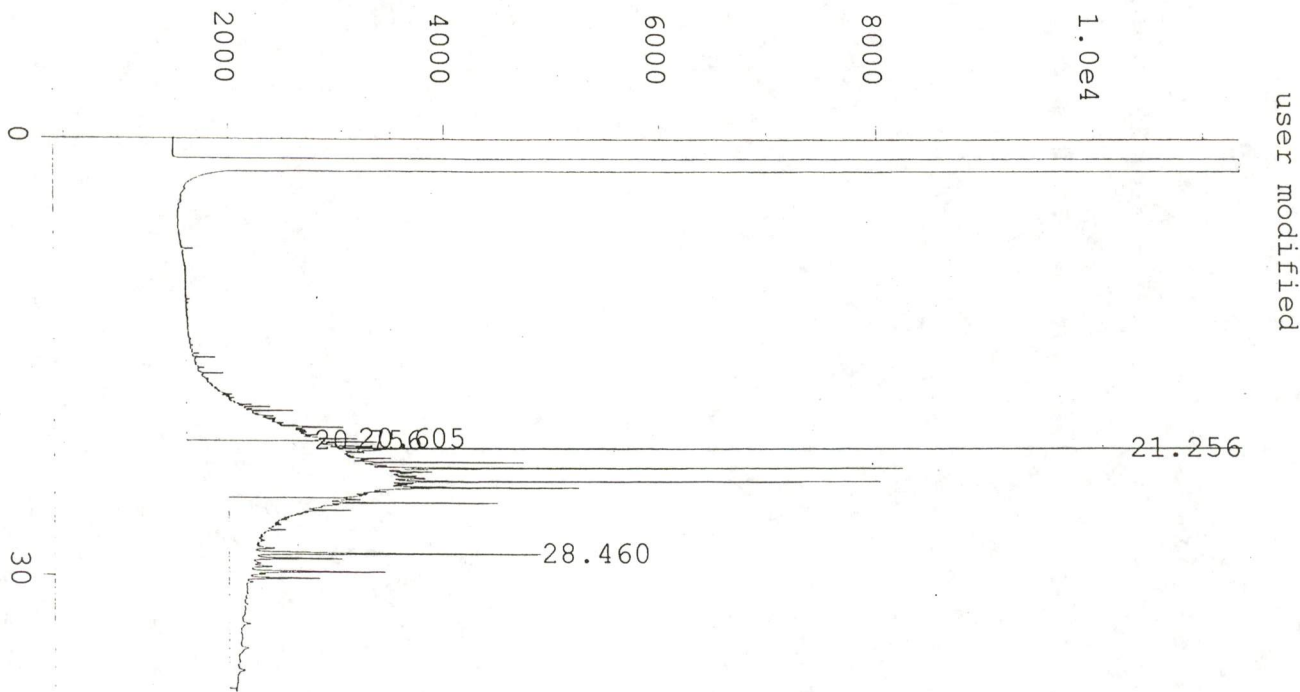


motor oil or B.T.P.

7-23-99

7-22-99 CA





External Standard Report

```

Data File Name   : D:\HPCHEM\4\DATA\49073001\027F0701.D
Operator        : CMH
Instrument       : DIESEL #2
Sample Name     : 907071-11
Run Time Bar Code:
Acquired on    : 31 Jul 99 04:09 AM
Report Created on: 05 Aug 99 09:05 AM
Last Recalib on : 04 AUG 99 11:23 AM
Multiplier     : 1
Page Number    : 1
Vial Number    : 27
Injection Number : 1
Sequence Line  : 7
Instrument Method: 4DXT0499.MTH
Analysis Method : 4DXT0899.MTH
Sample Amount  : 0
ISTD Amount    :
  
```

Sig. 1 in D:\HPCHEM\4\DATA\49073001\027F0701.D

Ret Time	Area	Type	Width	Ref#	ug/ml	Name
20.605	182728	MM	1.914	1	63.665	TPH-Dsl envelope
20.756	398732	MM R	0.285	1	702.090	MOTOR OIL
21.256	36707	MM T	0.028	1	12.805	nC-25 surrogate $\bar{x} = 614.369$
28.460	234037	MM	1.341	1	526.648	MOTOR OIL {2}

User Modified

$D = 32 \text{ mg/kg}$ Dry wt. = 19.516g
 $MO = 310 \text{ mg/kg}$
 $\frac{12.805}{10} \times 100 = 128\%$
8.5.99 CM

IS BY 85549A
 DATE