KLEINFELDER

October 31, 1994

Project Number 60-1232-02

Mr. Peter Nelson
Tacoma-Pierce County Health Department
3629 South D Street
Tacoma, WA 98408

SUBJECT: FINAL INDEPENDENT CLEANUP REPORT
CENEX FEED PLANT
1801 TAYLOR WAY
TACOMA, WASHINGTON

Dear Mr. Nelson:

We are pleased to present the enclosed report of the completed Environmental Site Assessment of the subject property. We trust information presented in the report meets the needs of the Pierce County Health Department and the Department of Ecology.

Based on the findings presented in this report, Kleinfelder believes there is no need for further investigation and cleanup of this site at this time.

Should you require additional information or have any questions regarding this report, please contact us at your convenience.

Sincerely,

KLEINFELDER, INC.

Rory L. Galloway, RG
Senior Project Manager

Brad C. Kleinfelder
Principal

cc: Roger Tschida, Cenex
Bill Joyce, Ogden Murphy & Wallace
Lynn Gooding, WDOE SW Regional Office

KLEINFELDER 3380 146th Place SE, Suite 110, Bellevue, WA 98007-6472 (206) 562-4200

A Report Prepared For:

Mr. Peter Nelson
Tacoma-Pierce County Health Department
3629 South D Street
Tacoma, WA 98408

FINAL INDEPENDENT CLEANUP REPORT
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KLEINFELDER, INC.
3380 146th Place S.E., Suite 110
Bellevue, Washington 98007
(206) 562-4200

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APPENDICES

1.0 INTRODUCTION

Kleinfelder has completed a subsurface exploration of the subject property in accordance with the Kleinfelder workplan entitled *Workplan to Perform a Groundwater Exploration Program*, dated November 10, 1993. This workplan was amended by the Kleinfelder letter entitled *Addition of a Fourth Well to Kleinfelder Proposal*, dated May 3, 1994.

The site exploration work performed was required by the Tacoma-Pierce County Health Department in their October 11, 1993 and December 10, 1993 letters (written to Ogden, Murphy and Wallace).

2.0 BACKGROUND

The following subsections describe site background information and applicable regulatory requirements for this environmental assessment.

2.1 Site Background

Kleinfelder understands that the subject site is currently owned by CENEX. The site is located at 1801 Taylor Way in Tacoma, Washington (Plate 1). The site is approximately 8.6 acres in size with several grain silos, a maintenance building, a boiler house, and parking areas. The property fronts Taylor Way on the south, the Hylebos Waterway on the north, and is bounded on the west and east by lumber processing facilities (Plate 2). The property is generally level, but slopes north toward the Hylebos Waterway.

The main plant facilities are not currently in use. Portions of the site (outer warehouse, parking areas, and maintenance building) are being leased to a trucking firm (Miles Transport Services).

A preliminary subsurface exploration was performed at the site in August 1992. This work involved exploration for the possible presence of petroleum contaminated soils at six locations on the property where seven underground storage tanks were removed in 1991. Because of inconsistencies in analytical test methods and poor documentation by the tank removal contractor, questions remained regarding possible soil contamination in vicinity of the former tanks. As a result of the exploration work, Kleinfelder concluded that soils affected by fuel hydrocarbon compounds (at concentrations greater than regulatory cleanup levels) were present in vicinity of five of the six former tank locations. This work was summarized in the Kleinfelder report entitled *Report of Soil Sampling and Analyses*, dated August 12, 1992.

Based on the preliminary subsurface exploration performed in August 1992, remedial activities were required at the site. This work included excavation of soils affected by fuels released from the underground storage tanks. About 1,300 cubic yards of soil were transported off-site for disposal. Field observations and confirmatory soil sampling indicated approximately 300 cubic yards of contaminated soil likely remained under structures at the property. This work was summarized in the Kleinfelder report entitled *Remedial Action Report*, dated December 16, 1992.

2.2 Regulatory Background

The rules that guide the cleanup process at sites within Washington are known as the Model Toxics Control Act (MTCA), which is administered by the Washington Department of Ecology (Ecology).

As noted in the MTCA regulations, Method A Cleanup Levels provide conservative cleanup levels for sites with relatively few hazardous substances and may be inappropriate for all sites. The regulations also state Method A Cleanup Levels should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage, or similar purposes. Additionally, exceedances of Method A Cleanup Levels do not necessarily mandate a cleanup action for a site.

The subject site is an industrial property in the Tacoma tide flats. As a result, the use of Method A (residential) cleanup levels for this site is conservative. Unfortunately, the identified contaminants of concern at this site, Total Petroleum Hydrocarbons (TPH) and Lead presently do not have Ecology published industrial cleanup levels (Method B or C).

Based on the unavailability of industrial cleanup levels, we have compared the analytical laboratory results to the MTCA Method A Cleanup Levels for soil and groundwater.

3.0 SITE EXPLORATION ACTIVITIES

Presented below are the findings of the site exploration.

3.1 Soil Borings

The following summarizes the assessment activities and field observations during the soil boring stage of the assessment.

3.1.1 Assessment Activities

On May 24, 1994, four hollow-stem auger borings were drilled and completed as groundwater monitoring wells (KMW-01, KMW-02, KMW-03, and KMW-04). The boring locations (Plate 2) were selected to obtain information regarding the possible presence of residual subsurface soil and/or groundwater contamination.

During drilling, soil samples were collected for soil identification. Samples were collected using a 2.5-inch inner diameter (ID) Modified California split spoon sampler. A photoionization detector (PID) was used during drilling to screen for volatile organic compounds (VOCs) in collected soil samples, with the results measured in parts per million by volume (ppmv).

One "worst-case" soil sample was collected from each boring, submitted to the analytical laboratory (Analytical Technologies, Inc.) and analyzed for one or more of the following:

- hydrocarbon identification (Ecology Method WTPH-HCID)

- total petroleum hydrocarbons in the gasoline-, diesel-, and heavy-oil range, based on results of the HCID analyses (Ecology Methods WTPH-G, WTPH-D, and WTPH-418.1)
- benzene, ethylbenzene, toluene and total xylenes (BETX) by EPA Method 8020.
- total lead (EPA Method 7421)

Results of these analyses are presented in Section 3.3.1 of this report. Refer to Appendix A for a description of the site exploration methods, and Appendix B for the boring logs (including a boring log legend). Laboratory reports are presented in Appendix C.

3.1.2 Field Observations (Soil)

Four soil borings were drilled during site exploration and advanced to a depth of 15 feet. Kleinfelder observed asphalt concrete on the surface of KMW-01 and KMW-02, and gravel at the other two boring locations. Subsurface soils encountered included predominantly sand and gravel fill to a depth of about 12 feet and fine-grained sand, silts and clays from 12 feet to the maximum depth explored. The fill material included concrete rubble near the surface of KMW-03 and wood debris at a depth of 8 feet in KMW-04. Discolored soils and petroleum hydrocarbon odors were identified in KWM-02 and KMW-03. During drilling, groundwater was encountered in KMW-01 and KMW-02 at a depth of 7 feet, and 10 feet in KMW-03. No groundwater was observed during the drilling of KMW-04.

Boring locations are presented on Plate 2 and the boring logs are presented in Appendix B. Each log presents soil classifications and descriptions, and a schematic of the monitoring well installed in each boring.

3.2 Groundwater Monitoring Wells

The following summarizes the assessment activities and field observations during the groundwater monitoring well installation stage of the assessment.

3.2.1 Assessment Activities

The four soil borings were completed as 2-inch diameter groundwater monitoring wells to obtain information regarding possible groundwater flow direction and possible hydrocarbon contamination. Groundwater samples were collected from each of the four wells on May 25, 1994.

Groundwater samples collected were submitted to the analytical laboratory and analyzed for the potential presence of the following:

- total petroleum hydrocarbons in the gasoline-, diesel-, and heavy oil-range (Ecology Methods WTPH-G, WTPH-D, and WTPH-418.1)
- BETX (EPA Method 8020)
- total and dissolved lead (EPA Method 7421)

Results of these analyses are presented in Section 3.3.2 of this report. Appendix A presents details of well installation, development, and sampling.

3.2.2 Field Observations (Groundwater)

Groundwater depths were measured on May 25, 1994 in the four monitoring wells. This information has been presented below, based on elevation measurements from May 25, 1994 and a top of casing elevation survey performed on June 11, 1994.

Well #	Top of Casing Elevation (ft) June 11, 1994	Groundwater Elevation (ft) May 25, 1994
KMW-01	13.35	5.29
KMW-02	12.45	5.93
KMW-03	12.95	6.00
KMW-04	12.63	5.12

Based on these elevation measurements, it is inferred that groundwater flow direction is to the north.

3.3 Analytical Results

Presented below are the results of the soil and groundwater sample analyses.

3.3.1 Soil Samples

Total Petroleum Hydrocarbons (HCID)

The hydrocarbon identification analysis was performed on two samples. The analysis of sample KMW0405244B from soil boring KMW-04 indicated the presence of diesel and heavy oil hydrocarbons, but gasoline was not detected. The second sample, from soil boring KMW-01, did not have detectable gasoline, diesel or heavy oil. Table 1 summarizes these analytical results.

Total Petroleum Hydrocarbons (TPH G,D, and Oil)

According to the laboratory, gasoline-, diesel- and heavy oil-range hydrocarbons were identified in the soil sample collected from KMW-02 at a depth of 8.5 feet (KMW0205244A). Concentrations of TPH from this sample exceeded MTCA Method A soil cleanup levels. The laboratory results of the remaining samples analyzed (KMW-01, KMW-03 and KMW-04) were below the Method A soil cleanup levels.

Please refer to Table 2 to review a summary of laboratory test results for total petroleum hydrocarbons in the soil.

Benzene, Ethylbenzene, Toluene, Total Xylenes (BETX)

The laboratory did not identify BETX compounds above the Method A soil cleanup levels in any of the soil samples submitted for analysis.

Please refer to Table 3 to review a summary of laboratory test results for BETX compounds in the soil.

Total Lead

According to the laboratory, total lead was not identified above the Method A soil cleanup level in the four soil samples submitted for analysis.

Please refer to Table 4 to review a summary of laboratory test results for total lead.

3.3.2 Groundwater Samples

Total Petroleum Hydrocarbons

The four groundwater samples analyzed did not indicate the presence of total petroleum hydrocarbons in the gasoline-, diesel- or heavy oil-range above Method A groundwater cleanup levels.

Please refer to Table 5 to review a summary of laboratory test results for total petroleum hydrocarbons in the groundwater.

Benzene, Ethylbenzene, Toluene, Total Xylenes (BETX)

The four groundwater samples analyzed did not indicate the presence of BETX above the Method A groundwater cleanup levels.

Please refer to Table 6 to review a summary of laboratory test results for BETX compounds in the groundwater.

Total Lead

According to the laboratory, "total" lead was identified in the unfiltered groundwater sample analyzed from KMW-03 (KMW0305254) above the Method A groundwater cleanup level. However, the concentration of lead in the filtered sample of KMW-03 (dissolved concentration) was below detection levels. Other samples analyzed for "total" or "dissolved" lead did not exceed the Method A groundwater cleanup level.

The sample collected from well KMW-03 contained more suspended sediment than samples from the other wells. Based on our experience at similar sites and the results of non-detect in the filtered sample, the well sediment probably accounts for the elevated unfiltered total lead results. Please refer to Table 7 to review a summary of laboratory test results for total and dissolved lead in the groundwater.

4.0 CONCLUSIONS

The following conclusions are based on Kleinfelder's knowledge of the property, from findings of previous work, and work performed during this site exploration. These conclusions are subject to the limitations presented in Section 6.0 of this report, and may change if additional information becomes available.

1. Four soil borings were drilled to a maximum depth of 15 feet. Subsurface soils encountered generally contained predominantly sand and gravel fill to a depth of about 12 feet and then fine sand, silt and gravel to the maximum depth explored (15 feet).

2. Fill material included concrete rubble near the surface of KMW-03 and wood debris at a depth of 8 feet in KMW-04. Discolored soils and petroleum hydrocarbons were observed during drilling in KWM-02 and KMW-03.

3. During drilling, groundwater was encountered in KMW-01 and KMW-02 at a depth of 7 feet, and 10 feet in KMW-03. No groundwater was initially noted during the drilling of KMW-04. Based on elevation measurements collected on May 25, 1994, groundwater is interpreted to flow to the north.

4. Gasoline-, diesel- and heavy-oil range hydrocarbons were identified above the Method A soil cleanup levels at the 8.5 foot level of KMW-02. The groundwater sample from this well detected TPH, benzene, and xylenes, however these levels were below the Method A groundwater cleanup levels.

5. A small volume of water (less than 15 gallons within a two hour period) was collected from KMW-03 during well development. A significant amount of suspended solids remained after this development effort and during the purging for sampling. According to WDOE guidance, an unfiltered groundwater sample for "total" lead must be analyzed. If this sample indicates elevated lead, a second filtered sample can be analyzed for "dissolved" lead.

   As noted above, the unfiltered ground water sample from KMW-03 detected "total" lead above the Method A groundwater cleanup level. The filtered sample for "dissolved" lead from KMW-03 did not contain measurable concentrations of lead.

   Based on our experience and the filtered sample findings, the suspended solids noted during sample collection probably accounts for the initial lead levels (above Method A cleanup levels) identified in this unfiltered groundwater sample. Therefore, the filtered ("dissolved") water sample better represents groundwater quality in this well.

6. No other soil or groundwater samples exceeded the Method A soil and/or groundwater cleanup levels for the analyzed compounds.

7. Based on the site exploration findings, only a small volume of soil containing TPH above cleanup levels has been identified as remaining on the property. This soil also does not appear to be impacting groundwater. Additionally, this soil is located in an area covered by the building, thereby reducing the potential for leaching to groundwater.

5.0 RECOMMENDATIONS

1. The soil contamination identified at KMW-02 is directly adjacent to the maintenance building at the site. As noted in the background section of this report, a significant soil excavation program (see Plate 2) was completed at this site prior to the work effort described in this report. Based on this prior work and our recent site exploration, Kleinfelder believes the majority of contamination remaining in the area of KMW-02 is located underneath the maintenance building.

The observed TPH compounds in the soil sample collected from KMW-02 were primarily in the diesel to oil range. These compounds are less mobile than more volatile compounds such as gasoline. Although the concentrations noted exceed the MTCA Method A cleanup standards, it should be noted that this facility is an industrial property, and not a residential property.

Since groundwater test results from KMW-02 (located adjacent to remaining soil contamination) indicate that total petroleum hydrocarbon, BTEX, and lead concentrations were below the conservative Method A groundwater cleanup levels, it appears that the remaining soil contamination has not impacted groundwater at this location.

Additionally, given the presence of the building over the residual contaminated soils and the heavier nature of the identified hydrocarbons, the probability of migration of these compounds due to surface water infiltration likely will be small.

At this time, the only practical way to remove the remaining soil contamination in the vicinity of KMW-02 would be to demolish the existing structure and slab. This would require the abandonment of this property by the current leasee and the loss or income for the site until a future buyer can be found. Since the residual soil contamination has not apparently impacted the groundwater at this location, we believe the demolition of the building, to remove the remaining contaminated soils, is substantial and disproportionate to the level of environmental benefit that would be attained.

Given these findings, we do not see a need for further soil remediation in this area at this time. However, if future site renovations and/or building demolition allow for the economic removal of this soil, we would recommend this remaining contaminated soil be remediated at that time.

2. The elevated lead concentrations noted in the unfiltered groundwater sample from KMW-03 appear to be related to the suspended solids noted during the well development and sampling effort. Given the non-detectable readings for lead from the filtered sample, we do not believe that there is a groundwater lead problem at this location.

6.0 LIMITATIONS

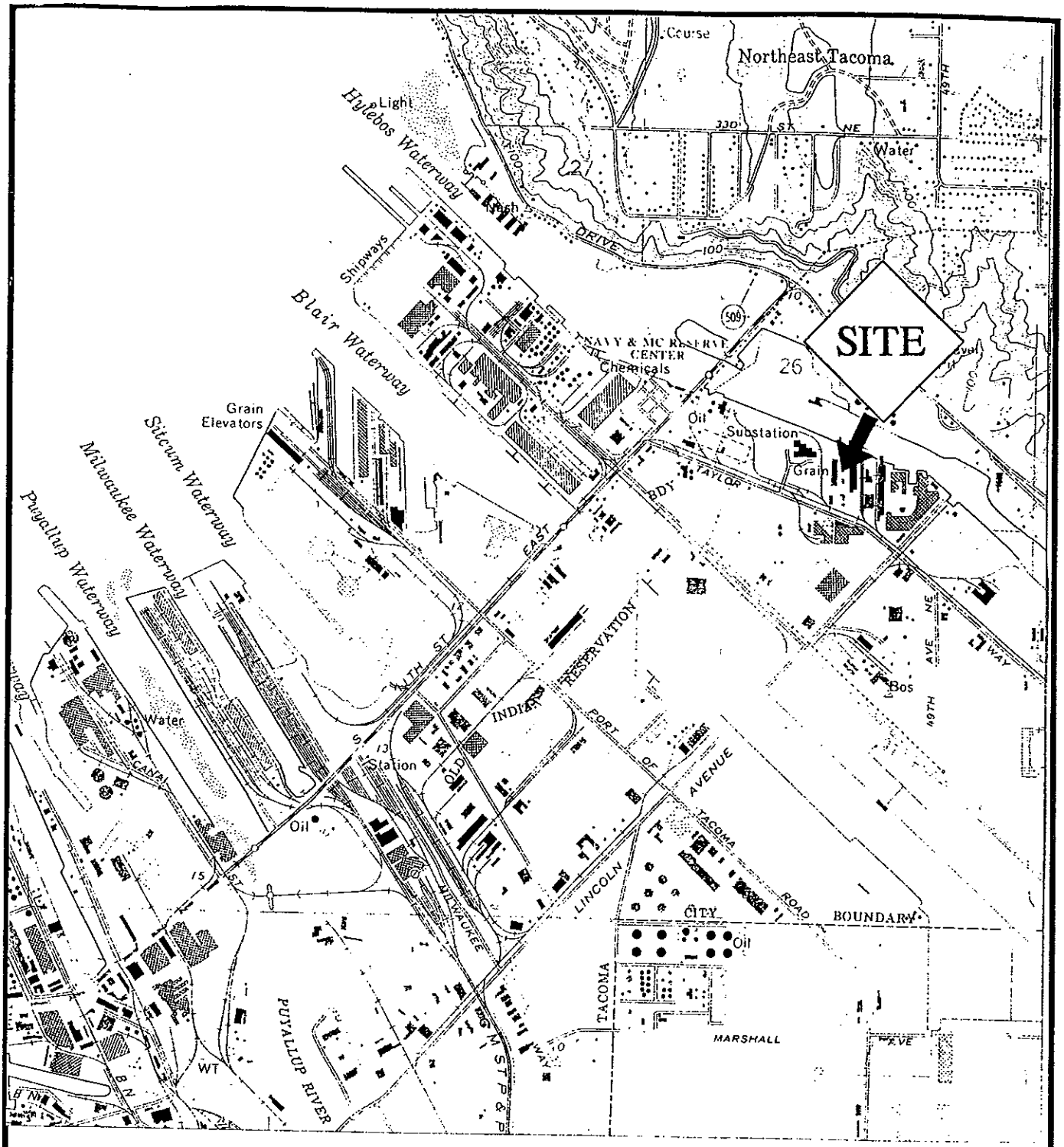
Judgments leading to conclusions and recommendations are generally made with available knowledge of the subsurface and historical conditions applicable to the study area. More extensive studies including additional site exploration, soil and groundwater sampling, and chemical analyses may be used to supplement the information presented in this study. Our assessment of the property may also change as new data become available during additional site exploration, remediation, or development.

Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings and opinions can be considered valid only as of the date of this report.

This report may be used only by the client, and only for the purposes stated within a reasonable time from its issuance. Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who would like to use this report shall notify Kleinfelder of such intended use by executing the "Application for Authorization to Use" form which follows

this document as an Appendix. Based on the intended use of this report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

No warranty, express or implied, is made.



REFERENCE: USGS TOPOGRAPHIC MAP
TACOMA NORTH, WASHINGTON QUADRANGLE
1961 PHOTOREVISED 1981

APPROXIMATE SCALE
ONE INCH = 2000 FEET

0 1000 2000

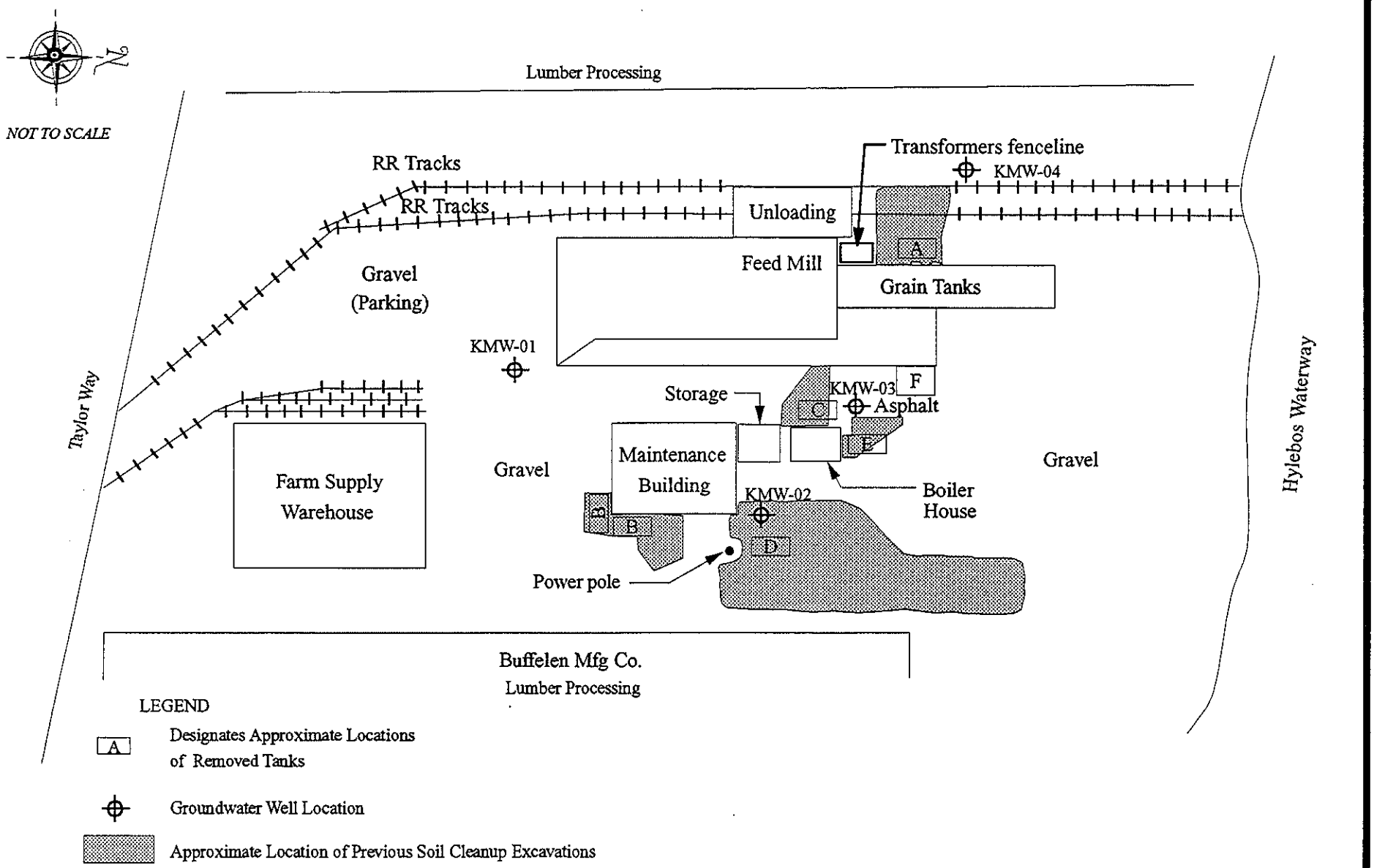
KLEINFELDER

123201P1.DRW

SITE LOCATION MAP - CENEX FEED PLANT
1801 TAYLOR WAY
TACOMA, WASHINGTON

Project # 60-123201

PLATE 1



REFERENCE:
ENVIROS SITE PLAN
PHASE I ENVIRONMENTAL AUDIT
MAY 31, 1991

KLEINFELDER

123202P2.pre

SITE DIAGRAM - CENEX FEED PLANT
1801 TAYLOR WAY
TACOMA, WASHINGTON

PROJECT # 60-1232-02

PLATE 2

TABLE 1
Soil Samples – Hydrocarbon Identification Analysis (1)
Date of Sample Collection: May 24, 1994
Cenex Feed Plant

Boring	KMW–01	KMW–04	
Sample Number	KMW0105244B	KMW0405244B	
Sample Depth (feet)	8.5	8.5	CLEANUP LEVELS (2)
(UNITS: mg/kg, milligrams/kilogram, dry weight)			
GASOLINE CONCENTRATION	<20	<20	100.0
DIESEL CONCENTRATION	<50	PRESENT	200.0
HEAVY OIL	<100	PRESENT	200.0

NOTES: Refer to site schematic map for sampling locations.
(1) WDOE Test Method WTPH–HCID.
(2) Method "A" Soil Cleanup Levels, MTCA, February 28, 1991. Exceedances of these levels do not necessarily trigger requirements for cleanup action under MTCA.
<. Concentration less than the laboratory method detection limit.

TABLE 2
Soil Samples -- Total Petroleum Hydrocarbon Analyses: Gasoline (1), Diesel (2), and Heavy Oil (3)
Date of Sample Collection: May 24, 1994
Cenex Feed Plant

Sample Location	KMW-02	KMW-03	KMW-04	
Sample Number	KMW0205244A	KMW0305244A	KMW0405244B	CLEANUP
Sample Depth (feet)	8.5	3.5	8.5	LEVEL (4)
(UNITS: mg/kg, milligrams/kilogram, dry weight)				
GASOLINE	190	13	NA	100.0
DIESEL	850	55	81	200.0
HEAVY OIL	870	93	95	200.0

TABLE 3
Soil Samples – Benzene, Ethylbenzene, Toluene, Xylenes Analyses (1)
Date of Sample Collection: May 24, 1994
Cenex Feed Plant

Sample Location	KMW–02	KMW–03	CLEANUP
Sample Number	KMW0205244A	KMW0305244A	LEVELS (2)
Sample Depth (feet)	8.5	3.5	
(UNITS: mg/kg, milligrams/kilogram, dry weight)			
BENZENE	<0.031	<0.028	0.5
ETHYLBENZENE	0.088	<0.028	20.0
TOLUENE	<0.031	<0.028	40.0
TOTAL XYLENES	0.30	0.038	20.0

NOTES: Refer to site schematic map for sampling locations.
(1) EPA Method 8020.
(2) Method 'A' Soil Cleanup Levels, MTCA, February 28, 1991. Exceedance of these levels do not necessarily trigger requirements for cleanup action under MTCA.
< Concentration less than the laboratory method detection limit.

TABLE 4
Soil Samples – Lead Analysis (1)
Date of Sample Collection: May 24, 1994
Cenex Feed Plant

Sample Location	KMW–01	KMW–02	KMW–03	KMW–04	CLEANUP
Sample Number	KMW0105244B	KMW0205244A	KMW0305244A	KMW0405244B	LEVELS (2)
(UNITS: mg/kg, milligrams/kilogram, dry weight)					
LEAD	<2.2	6.1	21	88	250

NOTES: Refer to site schematic map for sampling locations.
(1) EPA Method 6010.
(2) Method 'A' Soil Cleanup Levels, MTCA, February 28, 1991. Exceedance of these levels do not necessarily trigger requirements for cleanup action under MTCA.

TABLE 5
Groundwater Samples – Total Petroleum Hydrocarbon Analyses: Gasoline (1), Diesel (2), Heavy Oil (3)
Date of Sample Collection: May 25, 1994
Cenex Feed Plant

Monitoring Well Sample Number	KMW–01 KMW0105254	KMW–02 KMW0205254	KMW–03 KMW0305254	KMW–04 KMW0405254	CLEANUP LEVELS (4)
(UNITS: mg/l, milligrams/liter)					
GASOLINE CONCENTRATION	<0.1	0.31	<0.1	<0.1	1
DIESEL CONCENTRATION	<0.25	0.53	0.28	0.32	1
HEAVY OIL CONCENTRATION	<1	<1	<1	<1	1

NOTES: Refer to site schematic map for sampling locations.
(1) Ecology Test Method WTPH–G.
(2) Ecology Test Method WTPH–D.
(3) Ecology Test Method WTPH–418.1.
(4) Method "A" Cleanup Levels, MTCA, February 28, 1991. Exceedance of these levels do not necessarily trigger requirements for cleanup action under MTCA.
< Concentration less than the laboratory method detection limit.

TABLE 6
Groundwater Samples -- Total Petroleum Hydrocarbon Analyses:
Benzene, Ethylbenzene, Toluene and Xylenes (Total) (1) Analyses
Date of Sample Collection: April 6, 1994
Cenex Feed Plant

Monitoring Well Sample Number	KMW-01 KMW0105254	KMW-02 KMW0205254	KMW-03 KMW0305254	KMW-04 KMW0405254	CLEANUP LEVELS (2)
(UNITS: ug/l, milligrams/liter)					
BENZENE	<0.5	2.0	<0.5	<0.5	5.0
ETHYLBENZENE	<0.5	<0.5	<0.5	<0.5	30
TOLUENE	<0.5	<0.5	<0.5	<0.5	40
XYLENES (TOTAL)	<0.5	0.6	<0.5	<0.5	20

NOTES: Refer to site schematic map for sampling locations.
(1) EPA Method 8020.
(2) Method "A" Cleanup Levels, MTCA, February 28, 1991. Exceedance of these levels do not necessarily trigger requirements for cleanup action under MTCA.
< Concentration less than the laboratory method detection limit.

TABLE 7
Groundwater Samples – Lead Analysis (1)
Date of Sample Collection: May 25, 1994
Cenex Feed Plant

Monitoring Well	KMW–01		KMW–02		
Sample Number	KMW0105254		KMW0205254		CLEANUP
	TOTAL	DISSOLVED	TOTAL	DISSOLVED	LEVELS (2)
(UNITS: mg/l, milligrams/liter)					
LEAD	<0.0030	<0.0030	0.0035	<0.0030	0.005

Monitoring Well	KMW–03		KMW–04		
Sample Number	KMW0305254		KMW0405254		CLEANUP
	TOTAL	DISSOLVED	TOTAL	DISSOLVED	LEVELS (2)
(UNITS: mg/l, milligrams/liter)					
LEAD	0.011	<0.0030	<0.0030	<0.0030	0.005

NOTES: Refer to site schematic map for sampling locations.
(1) Analytical Methods Identified in Attached Laboratory Report.
(2) Method 'A' Groundwater Cleanup Levels, MTCA, February 28, 1991. Exceedances of these levels do not necessarily trigger requirements for cleanup action under MTCA.
< Concentration less than the laboratory method detection limit.

APPENDIX A

APPENDIX A
SITE EXPLORATION METHODS

1.0 Hollow-Stem Auger Borings

Soil borings were drilled using a truck-mounted hollow-stem auger drilling rig, provided by our drilling subcontractor. A Kleinfelder geologist was present during the drilling and assisted in obtaining samples of the subsurface materials, maintained a log of the borings, made detailed observations of site conditions, and provided technical assistance, as required.

All drilling and sampling equipment was steam cleaned prior to mobilization and between borings to reduce the potential for cross contamination. In addition, the sampling equipment was steam cleaned between each sampling interval prior to the collection of the next sample.

2.0 Hollow-Stem Auger Soil Sampling

Soil samples were collected by using a Modified California split-spoon sampler which contained three 6-inch-long brass liners (sample tubes) placed end-to-end. Sample collection was attempted at five-foot depth intervals by driving the sampler approximately 18 inches with a 140-pound hammer allowed to free-fall 30 inches. The number of blows required to drive the sampler each 6-inch interval was noted and recorded on the boring logs. Soils were classified according to the Unified Soil Classification System.

Collected soil samples were evaluated for evidence of contamination by visible discoloration and odor.

One brass liner from each sampling depth was sealed with Teflon film and plastic cap, and then placed into an ice chest containing frozen "blue ice" for preservation prior to being forwarded to the analytical laboratory for testing using proper Chain-of-Custody procedures. All soil sample containers were labeled with two sample identification numbers, the date, and the sampler's name.

3.0 Groundwater Monitoring Well Construction

Soil borings were completed as groundwater monitoring wells in the following manner:

The well casing materials consisted of 2-inch-diameter, flush-threaded, schedule 40 PVC pipe.

The screened interval of the well casing was perforated with 0.010-inch factory-cut slots.

The filter pack for the well consisted of clean 10/20 Colorado Silica Sand.

The annular seal of the well consisted of granulated Wyoming Bentonite.

All PVC casing materials were steam-cleaned prior to installation.

The bottom of the well casing was sealed with a threaded sediment cup. Blank (non-slotted) riser casing was used to extend the well from the top of the screened interval to

ground surface. The length of the screened interval was correlated so the top of the well screen was located about two feet above the static groundwater depth.

Well construction was accomplished by lowering the casing, into the completed boring, through the inside of the hollow-stem augers. The augers were withdrawn from the boring about three feet, and the resulting annular space around the well screen was backfilled with sand (poured through the top of the hollow-stem augers). This process was repeated until the filter pack was installed to about two feet above the top of the screened interval. The augers were completely withdrawn from the boring, and the annular space around the blank riser was backfilled with granulated bentonite to within one foot of the ground surface.

The well casing was sealed at the ground surface with a watertight expansion cap. After installation, the expansion cap was secured with a padlock.

A tamper-resistant steel cover was set over the well, flush to the ground surface. The cover was grouted in place with concrete.

A reference point was marked on the top of the PVC well casing for consistent groundwater depth measurements.

The well identification was written on a waterproof tag attached to the well cap.

4.0 Water Level Measurements

Water level measurements were referenced to the top of the well casing. The static water level was measured in each monitoring well using a conductivity type, water level probe (Solinst Model 101, Flat Tape Water Level Meter) and an engineer tape.

The conductivity probe on the water level meter was lowered into the well until the instrument detected water. The tape connected to the probe was used to obtain a depth-to-water measurement, from the reference point, to within 0.1 feet. The engineer tape was used to increase the precision of the measurement to 0.01 feet.

Groundwater depth measurements were compared with the results of the elevation survey performed. Groundwater elevations and the groundwater flow direction were then evaluated based on this information.

5.0 Monitoring Well Sampling

A Kleinfelder representative sampled groundwater wells in accordance with the following protocol:

The height of the water column within the well was calculated by subtracting the depth to water from the total depth of the well. The volume of this water column was calculated using the relationship $V=3.14r^2h$. Where V is the volume of water in cubic feet, r is the radius of the well in feet and h is the height of the water column in feet.

The contract laboratory prepared sample containers to conform with EPA-recommended preservation techniques for the analytes of concern.

Groundwater samples were collected with a clean disposable bailer. Sample containers were open only as long as necessary to collect the samples.

Sample bottles were labeled with a sample number, date, time, and geologist's name and were stored in an ice chest containing frozen "blue ice." Chain-of-custody procedures were followed to document sample handling.

Prior to use, the sampling equipment was washed in a trisodium phosphate solution, rinsed with tap water, and given a final rinse with distilled water.

APPENDIX B

LOG LEGEND

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS		LTR	DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well graded gravels or gravel sand mixtures, little or no fines
		GP	Poorly graded gravels or gravel sand mixtures, little or no fines
		GM	Silty gravels, gravel sand silt mixtures
		GC	Clayey gravels, gravel sand clay mixtures
	SAND AND SANDY SOILS	SW	Well graded sands or gravelly sands, little or no fines
		SP	Poorly graded sands or gravelly sands, little or no fines
		SM	Silty sands, poorly graded sand silt mixtures
		SC	Clayey sands, poorly graded sand clay mixtures

MAJOR DIVISIONS		LTR	DESCRIPTION
FINE GRAINED SOILS	SILTS AND CLAYS LL	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	SILTS AND CLAYS LL > 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

SOIL SAMPLES

- Disturbed, bag, bulk, or grab sample
- Standard penetration split spoon sample
- Modified California Sampler (Porter)
- Shelby Tube sample

FIELD MEASUREMENTS

- Water level observed during drilling
- Water level observed after drilling
- OVA — Organic Vapor Analyzer
- PID — Photoionization Detector
- ppmv — Parts Per Million by Volume

WELL CONSTRUCTION

- Blank casing
- Screened casing
- Cement grout
- Bentonite
- Sand pack or gravel pack
- Native material mixed with bentonite
- Native backfill or cavings
- Bentonite-cement grout

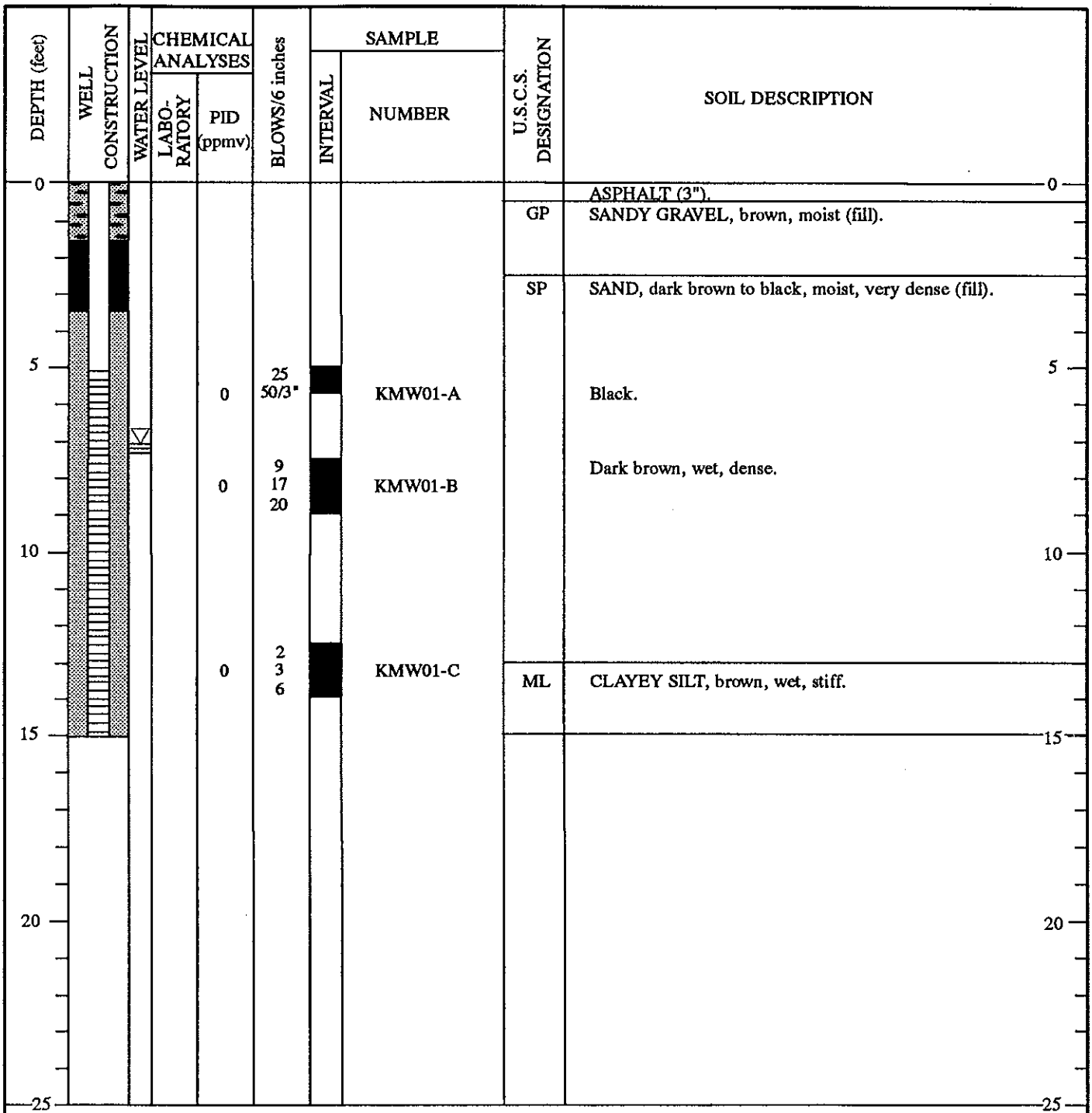
ANALYTICAL RESULTS

- ND ( ) — Not Detected (Detection Limit)
- NA — Not Analyzed
- TPH — Total Petroleum Hydrocarbons
- BTEX — Benzene, Toluene, Ethylbenzene, & Xylenes
- Herb. — Herbicides, EPA Method 8150
- Pest. — Pesticides, EPA Method 8080

Note: Blows per foot is the number of blows used to drive a sampler through the last 12 inches of an 18-inch sampling attempt. One blow is a 30-inch fall of a 140-pound hammer.

Note: The line separating strata on the logs represents approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of the strata between borings. Logs represent the soil section observed at the boring location on the date of drilling only.

LEGENDB1.DRW



LOGGED BY: MAW
DATE DRILLED: 5-24-94
CASING TYPE: Sch. 40 PVC
Comments:

WELL ELEVATION (feet):
TOTAL DEPTH (feet): 15
DIAMETER OF BORING: 8"

DRILLING METHOD: Hollow Stem Auger
SCREEN SIZE: 0.01"
CASING SIZE: 2"

KLEINFELDER

LOG OF GROUNDWATER WELL, KMW-01

CENEX

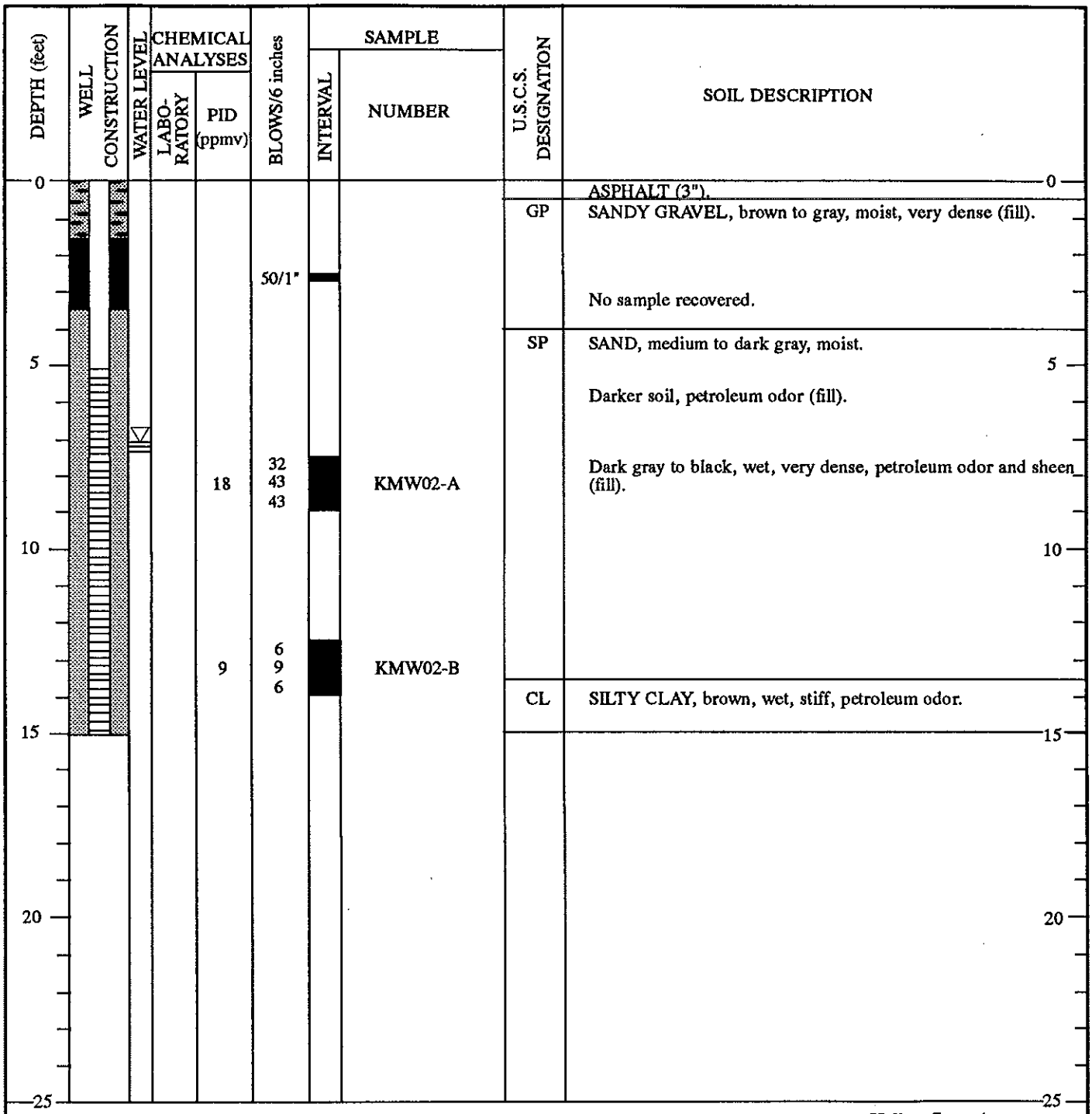
TACOMA, WASHINGTON

Project # 60-1232-02

PLATE B-2

123202BB.PRE

NOTE: Logs are to be used only for the designated purposes and in context with the attached report.



LOGGED BY: MAW
DATE DRILLED: 5-24-94
CASING TYPE: Sch. 40 PVC
Comments:

WELL ELEVATION (feet):
TOTAL DEPTH (feet): 15
DIAMETER OF BORING: 8"

DRILLING METHOD: Hollow Stem Auger
SCREEN SIZE: 0.01"
CASING SIZE: 2"

KLEINFELDER

LOG OF GROUNDWATER WELL, KMW-02

CENEX

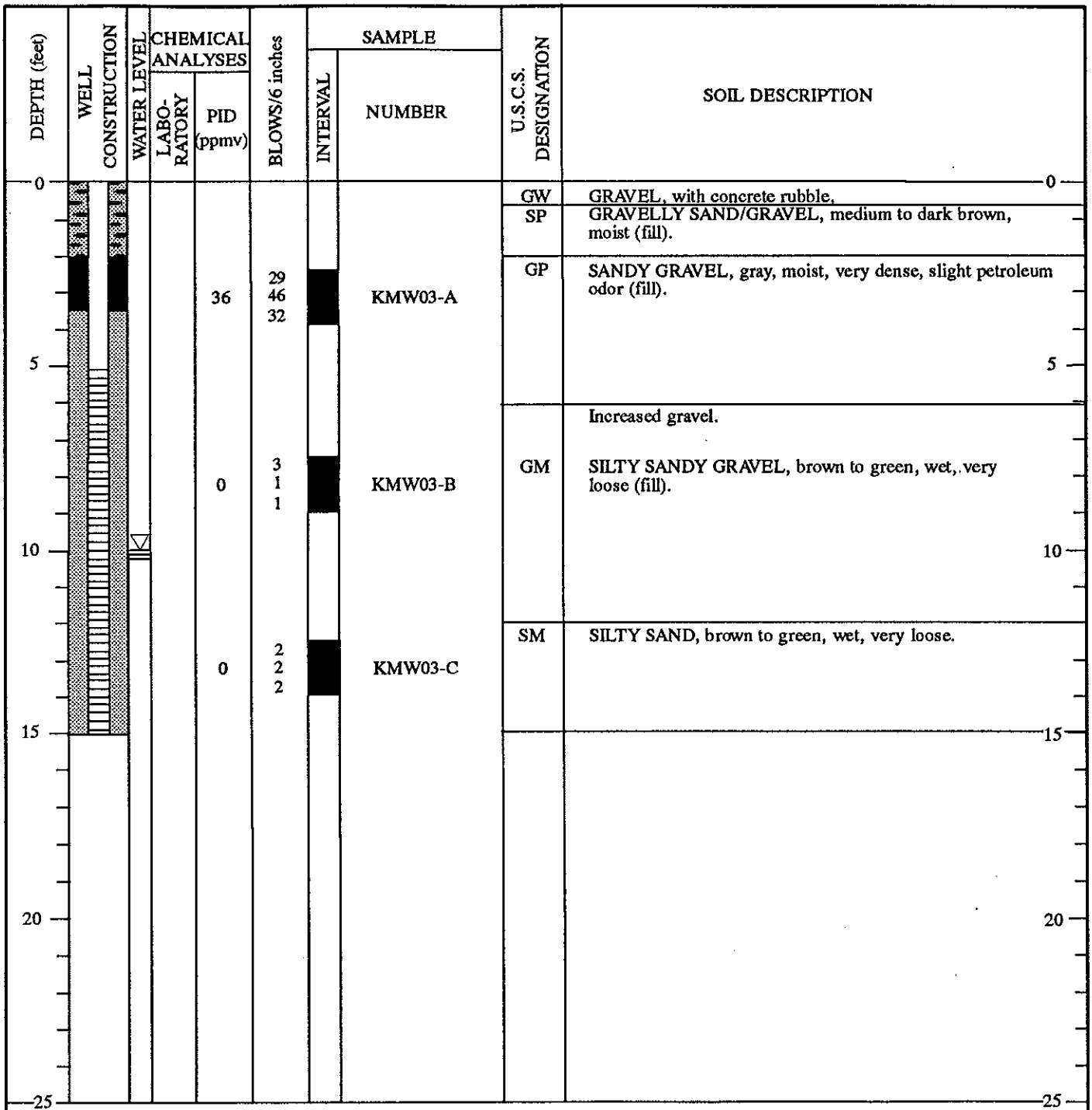
TACOMA, WASHINGTON

Project # 60-1232-02

PLATE B-3

123202BB.PRE

NOTE: Logs are to be used only for the designated purposes and in context with the attached report.



LOGGED BY: **MAW**
DATE DRILLED: **5-24-94**
CASING TYPE: **Sch. 40 PVC**
Comments:

WELL ELEVATION (feet):
TOTAL DEPTH (feet): **15**
DIAMETER OF BORING: **8"**

DRILLING METHOD: **Hollow Stem Auger**
SCREEN SIZE: **0.01"**
CASING SIZE: **2"**

KLEINFELDER

LOG OF GROUNDWATER WELL, KMW-03

CENEX

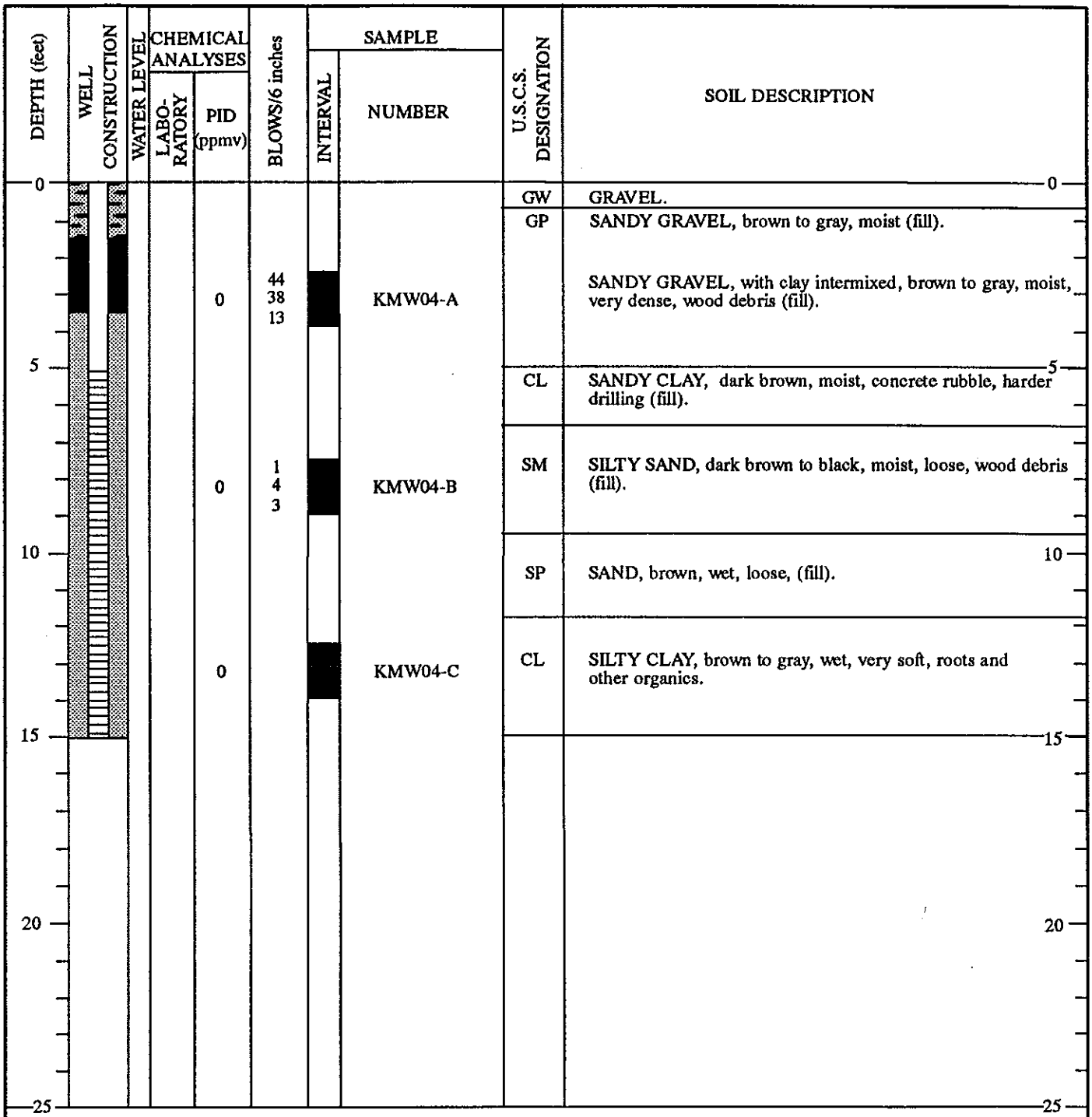
TACOMA, WASHINGTON

Project # 60-1232-02

PLATE B-4

123202BB.PRE

NOTE: Logs are to be used only for the designated purposes and in context with the attached report.



LOGGED BY: MAW
DATE DRILLED: 5-24-94
CASING TYPE: Sch. 40 PVC
Comments:

WELL ELEVATION (feet):
TOTAL DEPTH (feet): 15
DIAMETER OF BORING: 8"

DRILLING METHOD: Hollow Stem Auger
SCREEN SIZE: 0.01"
CASING SIZE: 2"

KLEINFELDER

LOG OF GROUNDWATER WELL, KMW-04

CENEX

TACOMA, WASHINGTON

123202BB.PRB

Project # 60-1232-02

PLATE B-5

NOTE: Logs are to be used only for the designated purposes and in context with the attached report.

APPENDIX C

Analytical**Technologies,**Inc. 560 Naches Avenue, S.W., Suite 101, Renton, WA 98055 (206) 228-8335

Karen L. Mixon, Laboratory Manager

ATI I.D. # 9405-203

June 16, 1994

Kleinfelder, Inc.
3380 146th Place S.E.
Suite 110
Bellevue WA 98007

Attention : Mark Wicklein

Project Number : 60-1232-02

Project Name : Cenex

Dear Mr. Wicklein:

On May 25, 1994, Analytical Technologies, Inc. (ATI), received four samples for analysis. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The results, sample cross reference, and quality control data are enclosed.

Sincerely,

Diana Spence

Diana Spence
Project Manager

DS/hal/mrj

Enclosure

Analytical Technologies, Inc.

ATI I.D. # 9405-203

SAMPLE CROSS REFERENCE SHEET

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

ATI #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
9405-203-1	KMW0105244B	05/24/94	SOIL
9405-203-2	KMW0205244A	05/24/94	SOIL
9405-203-3	KMW0305244A	05/24/94	SOIL
9405-203-4	KMW0405244B	05/24/94	SOIL

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of the report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ATI I.D. # 9405-203

ANALYTICAL SCHEDULE

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

ANALYSIS	TECHNIQUE	REFERENCE	LAB
BETX	GC/PID	EPA 8020	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-G	R
HYDROCARBON IDENTIFICATION	GC/FID	WA DOE WTPH-HCID	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-D	R
PETROLEUM HYDROCARBONS	IR	WA DOE WTPH-418.1 MODIFIED	R
LEAD	ICAP	EPA 6010	R
MOISTURE	GRAVIMETRIC	CLP SOW ILM01.0	R

R = ATI - Renton
SD = ATI - San Diego
PHX = ATI - Phoenix
PTL = ATI - Portland
ANC = ATI - Anchorage
PNR = ATI - Pensacola
FC = ATI - Fort Collins
SUB = Subcontract

AnalyticalTechnologies,Inc.

ATI I.D. # 9405-203

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
BENZENE	<0.025
ETHYLBENZENE	<0.025
TOLUENE	<0.025
TOTAL XYLENES	<0.025
FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	105	52 - 116
TRIFLUOROTOLUENE	98	50 - 150

AnalyticalTechnologies, Inc.

ATI I.D. # 9405-203-2

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: KMW0205244A	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
BENZENE	<0.031
ETHYLBENZENE	0.088
TOLUENE	<0.031
TOTAL XYLENES	0.30
FUEL HYDROCARBONS	190
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	93	52 - 116
TRIFLUOROTOLUENE	78	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203-3

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: KMW0305244A	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
BENZENE	<0.028
ETHYLBENZENE	<0.028
TOLUENE	<0.028
TOTAL XYLENES	0.038
FUEL HYDROCARBONS	13
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	101	52 - 116
TRIFLUOROTOLUENE	93	50 - 150

AnalyticalTechnologies,Inc.

ATI I.D. # 9405-203

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/26/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G/8020(BETX)		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
BENZENE	<0.0250	1.00	1.06	106	N/A	N/A	N/A
TOLUENE	<0.0250	1.00	1.07	107	N/A	N/A	N/A
TOTAL XYLENES	<0.0250	2.00	2.15	108	N/A	N/A	N/A
GASOLINE	<5.00	50.0	51.4	103	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
BENZENE	82 - 109	20
TOLUENE	86 - 116	20
TOTAL XYLENES	83 - 119	20
GASOLINE	78 - 115	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
BROMOFLUOROBENZENE	103	N/A	52 - 116
TRIFLUOROTOLUENE	100	N/A	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX
SAMPLE MATRIX : SOIL
METHOD : WA DOE WTPH-G/8020(BETX)

SAMPLE I.D. # : 9405-215-7
DATE EXTRACTED : 05/26/94
DATE ANALYZED : 05/27/94
UNITS : mg/Kg

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
GASOLINE	9.90	13.0	30H	N/A	N/A	N/A	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
GASOLINE	N/A	20

SURROGATE RECOVERIES	SAMPLE	SAMPLE DUP.	LIMITS
TRIFLUOROTOLUENE	81	87	50 - 150

H = Out of limits.

Analytical Technologies, Inc.

ATI I.D. # 9405-203

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-215-4
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/26/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G/8020(BETX)		

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
BENZENE	<0.0250	N/A	N/A	1.00	0.950	95	0.951	95	0
TOLUENE	<0.0250	N/A	N/A	1.00	0.997	100	1.00	100	0
TOTAL XYLENES	<0.0250	N/A	N/A	2.00	2.05	102	2.08	104	1
GASOLINE	<5.00	<5.00	NC	50.0	54.3	109	47.6	95	13

CONTROL LIMITS	% REC.	RPD
BENZENE	62 - 104	20
TOLUENE	63 - 115	20
TOTAL XYLENES	64 - 117	20
GASOLINE	59 - 111	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
BROMOFLUOROBENZENE	87	79	52 - 116
TRIFLUOROTOLUENE	85	81	50 - 150

NC = Not Calculable.

Analytical Technologies, Inc.

ATI I.D. # 9405-203

HYDROCARBON IDENTIFICATION
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-HCID	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

RESULTS

GASOLINE CONCENTRATION LESS THAN 20 mg/Kg BY WA DOE WTPH-HCID.

DIESEL CONCENTRATION LESS THAN 50 mg/Kg BY WA DOE WTPH-HCID.

PETROLEUM HYDROCARBONS >C24 CONCENTRATION LESS THAN 100 mg/Kg BY WA DOE WTPH-HCID.

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	102	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203-1

HYDROCARBON IDENTIFICATION
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: KMW0105244B	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-HCID	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

RESULTS

GASOLINE CONCENTRATION LESS THAN 20 mg/Kg BY WA DOE WTPH-HCID.

DIESEL CONCENTRATION LESS THAN 50 mg/Kg BY WA DOE WTPH-HCID.

PETROLEUM HYDROCARBONS >C24 CONCENTRATION LESS THAN 100 mg/Kg BY WA DOE WTPH-HCID.

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	106	50 - 150

Analytical**Technologies**, Inc.

ATI I.D. # 9405-203-4

HYDROCARBON IDENTIFICATION
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: KMW0405244B	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-HCID	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

RESULTS

GASOLINE CONCENTRATION LESS THAN 20 mg/Kg BY WA DOE WTPH-HCID.

DIESEL QUALITATIVELY IDENTIFIED BY WA DOE WTPH-HCID.

PETROLEUM HYDROCARBONS >C24 QUALITATIVELY IDENTIFIED BY WA DOE WTPH-HCID.

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	105	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<10
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	98	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: 06/02/94
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 06/02/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<10
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	96	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: 06/02/94
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 06/02/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<10
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	101	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203-2

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: KMW0205244A	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	850
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	109	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203-3

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/26/94
CLIENT I.D.	: KMW0305244A	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	55
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	105	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203-4

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/24/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 06/02/94
CLIENT I.D.	: KMW0405244B	DATE ANALYZED	: 06/02/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	81
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	92	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/26/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
DIESEL	<10.0	200	188	94	191	96	2

CONTROL LIMITS	% REC.	RPD
DIESEL	69 - 115	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
O-TERPHENYL	96	100	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 06/02/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 06/02/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
DIESEL	<10.0	200	207	103	183	92	12
CONTROL LIMITS				% REC.			RPD
DIESEL				69 - 115			20
SURROGATE RECOVERIES		SPIKE		DUP. SPIKE		LIMITS	
O-TERPHENYL		102		100		50 - 150	

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-207-3
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/26/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/30/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	3360	3340	1	N/A	N/A	N/A	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
DIESEL	N/A	20

SURROGATE RECOVERIES	SAMPLE	SAMPLE DUP.	LIMITS
O-TERPHENYL	112	112	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9406-024-3
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 06/02/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 06/02/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	2890	2790	4	N/A	N/A	N/A	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
DIESEL	N/A	20

SURROGATE RECOVERIES	SAMPLE	SAMPLE DUP.	LIMITS
O-TERPHENYL	155 G	149	50 - 150

G = Out of limits due to high levels of target analytes in sample.

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX
SAMPLE MATRIX : SOIL
METHOD : WA DOE WTPH-D

SAMPLE I.D. # : 9405-207-1
DATE EXTRACTED : 05/26/94
DATE ANALYZED : 05/27/94
UNITS : mg/Kg

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	520	532	2	200	740	110	673	77	9

CONTROL LIMITS	% REC.	RPD
DIESEL	61 - 120	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
O-TERPHENYL	100	92	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9406-024-2
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 06/02/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 06/02/94
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	19.2	17.1	12	200	227	104	226	103	0

CONTROL LIMITS	% REC.	RPD
DIESEL	61 - 120	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
O-TERPHENYL	102	99	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFLEDER, INC.	DATE EXTRACTED	: 05/27/94
PROJECT #	: 60-1232-02	DATE ANALYZED	: 05/31/94
PROJECT NAME	: CENEX	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-418.1 MODIFIED	SAMPLE MATRIX	: SOIL

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

ATI I.D. #	CLIENT I.D.	TOTAL PETROLEUM HYDROCARBONS	TOTAL PETROLEUM HYDROCARBONS*
9405-203-2	KMW0205244A	870	860
9405-203-3	KMW0305244A	93	90
METHOD BLANK	-	<20	<20

* Reanalyzed after second aliquot of silica gel added.

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE EXTRACTED	: 06/07/94
PROJECT #	: 60-1232-02	DATE ANALYZED	: 06/08/94
PROJECT NAME	: CENEX	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-418.1 MODIFIED	SAMPLE MATRIX	: SOIL

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

ATI I.D. #	CLIENT I.D.	TOTAL PETROLEUM HYDROCARBONS	TOTAL PETROLEUM HYDROCARBONS*
9405-203-4	KMW0405244B	95	85
METHOD BLANK	-	<20	<20

* Reanalyzed after second aliquot of silica gel added.

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFLEDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/27/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/31/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/Kg
SAMPLE MATRIX	: SOIL		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS (MOTOR OIL)	<20.0	N/A	N/A	400	487	122	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 06/07/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 06/08/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/Kg
SAMPLE MATRIX	: SOIL		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS (MOTOR OIL)	<20.0	N/A	N/A	400	542	136	526	132	3

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFLEDER, INC.	SAMPLE I.D. #	: 9405-217-2
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/27/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/31/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/Kg
SAMPLE MATRIX	: SOIL		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS (MOTOR OIL)	<20.0	<20.0	NC	N/A	N/A	N/A	N/A	N/A	N/A

NC = Not Calculable.

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9406-073-30
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 06/07/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 06/08/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/Kg
SAMPLE MATRIX	: SOIL		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS (MOTOR OIL)	1940	2150	10	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFLEDER, INC.	SAMPLE I.D. #	: 9405-217-5
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/27/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/31/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/Kg
SAMPLE MATRIX	: SOIL		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS (MOTOR OIL)	74.7	73.5	2	400	553	120	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-203-4
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 06/07/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 06/08/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/Kg
SAMPLE MATRIX	: SOIL		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS (MOTOR OIL)	33.9	31.6	7	400	581	137	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

METALS ANALYSIS

CLIENT : KLEINFELDER, INC. MATRIX : SOIL
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

ELEMENT	DATE PREPARED	DATE ANALYZED
LEAD	05/27/94	05/27/94

Analytical Technologies, Inc.

ATI I.D. # 9405-203

METALS ANALYSIS
DATA SUMMARY

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX
RESULTS ARE CORRECTED FOR MOISTURE CONTENT

MATRIX : SOIL
UNITS : mg/Kg

ATI I.D. #	CLIENT I.D.	LEAD
9405-203-1	KMW0105244B	<2.2
9405-203-2	KMW0205244A	6.1
9405-203-3	KMW0305244A	21
9405-203-4	KMW0405244B	88
METHOD BLANK	-	<1.5

Analytical Technologies, Inc.

ATI I.D. # 9405-203

METALS ANALYSIS
QUALITY CONTROL DATA

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

MATRIX : SOIL
UNITS : mg/Kg

ELEMENT	ATI I.D.	SAMPLE RESULT	DUP RESULT	RPD	SPIKED RESULT	SPIKE ADDED	% REC
LEAD	BLANK	<1.5	N/A	N/A	43.6	50.0	87
LEAD	9405-203-1	<2.2	<2.1	NC	74.4	84.2	88

NC = Not Calculable.

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Sample Result} - \text{Duplicate Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-203

GENERAL CHEMISTRY ANALYSIS

CLIENT : KLEINFLEDER, INC. MATRIX : SOIL
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

PARAMETER	DATE ANALYZED
MOISTURE	05/26/94

Analytical Technologies, Inc.

ATI I.D. # 9405-203

GENERAL CHEMISTRY ANALYSIS
DATA SUMMARY

CLIENT : KLEINFLEDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

MATRIX : SOIL
UNITS : %

ATI I.D. #	CLIENT I.D.	MOISTURE
9405-203-1	KMW0105244B	28
9405-203-2	KMW0205244A	19
9405-203-3	KMW0305244A	9.3
9405-203-4	KMW0405244B	60

Analytical Technologies, Inc.

ATI I.D. # 9405-203

GENERAL CHEMISTRY ANALYSIS
QUALITY CONTROL DATA

CLIENT : KLEINFLEDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

MATRIX : SOIL
UNITS : %

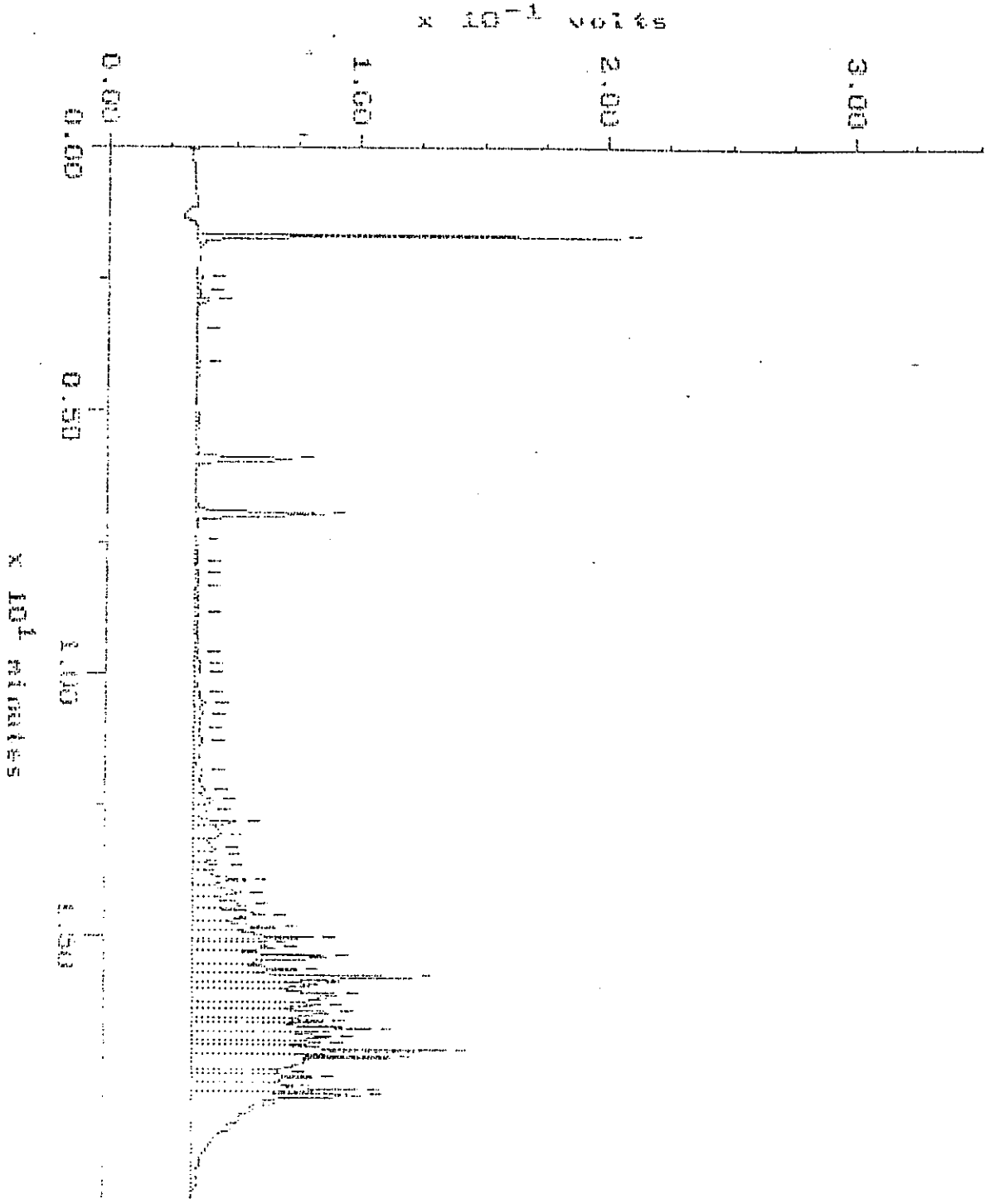
PARAMETER	ATI I.D.	SAMPLE RESULT	DUP RESULT	RPD	SPIKED RESULT	SPIKE ADDED	% REC
MOISTURE	9405-207-4	6.5	6.7	3	N/A	N/A	N/A
MOISTURE	9405-220-1	14	14	0	N/A	N/A	N/A

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Sample Result} - \text{Duplicate Result})|}{\text{Average Result}} \times 100$$

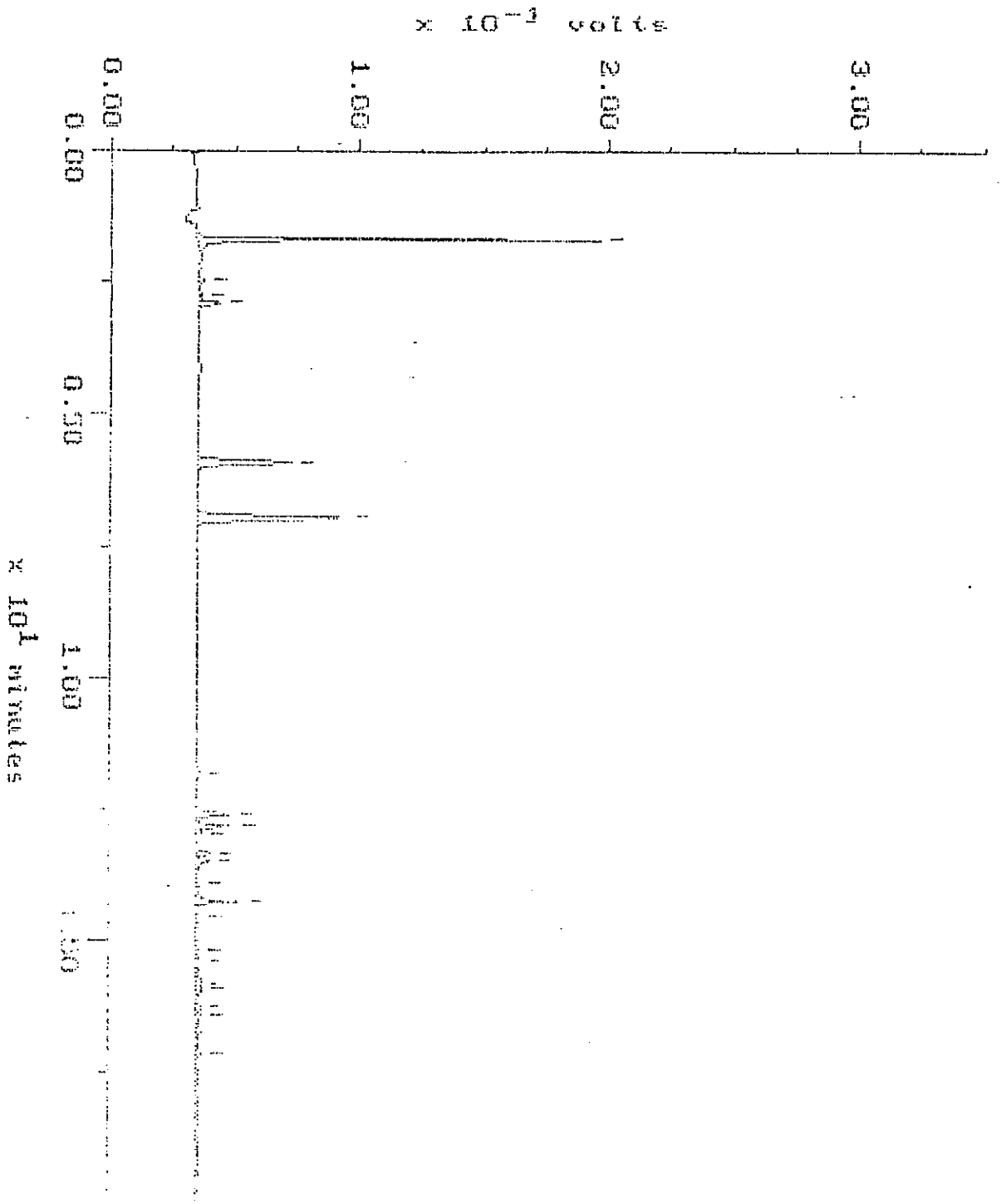
WA[illegible] WTPH-G

Sample: 9405-223-1 Channel: JEROME-FID Filename: R5279008
Acquired: 27-MAY-94 13:36 Method: F:\GROS\MAXDATA\JEROME\052794JR Operator: -



WA DOE WTPH-G

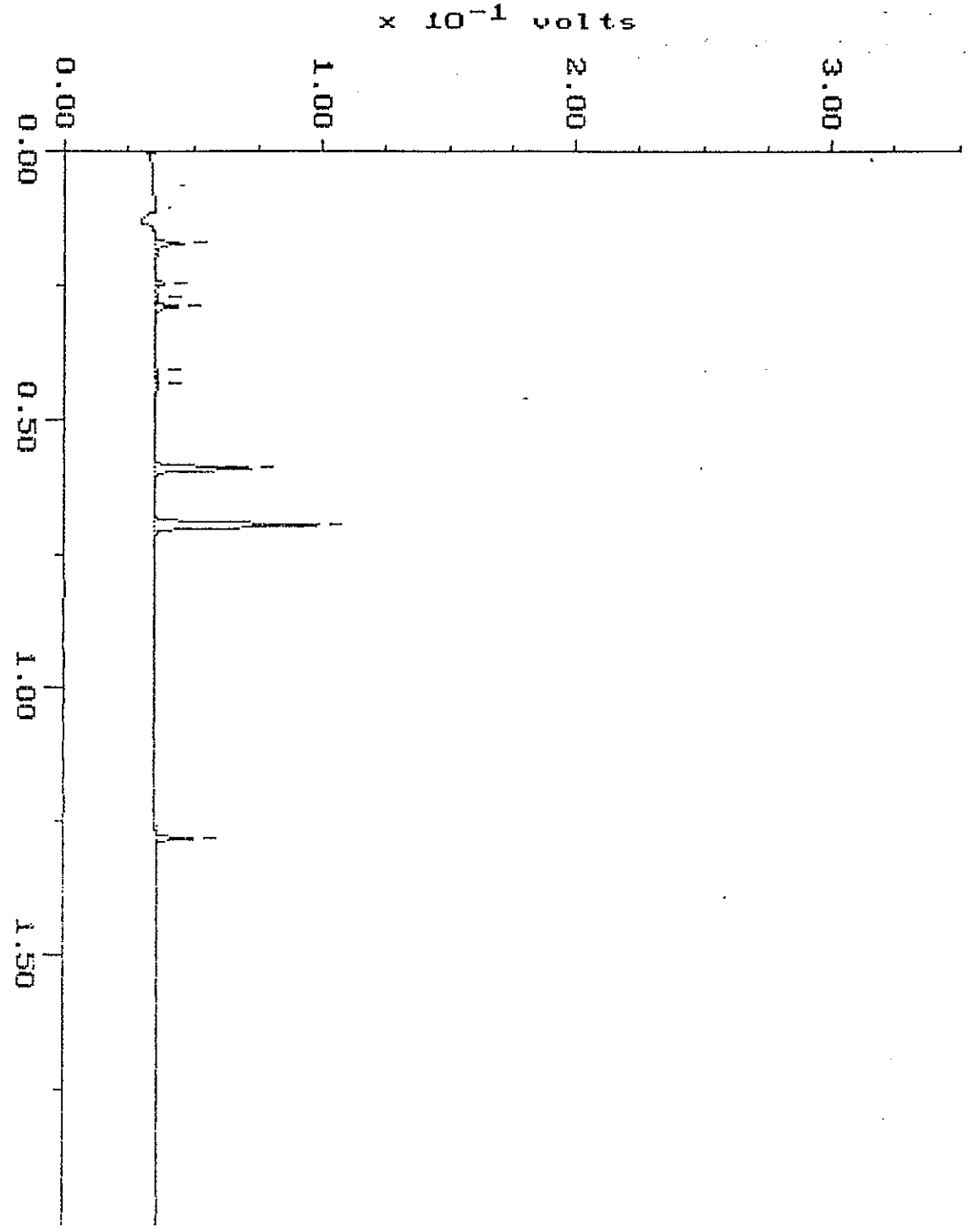
Sample: 9405-228-1 Channel: JEROME-PID Filename: RS27912
Acquired: 27-MAY-94 14:31 Method: F:\BRDE\MAXDATA\JEROME\052794JR Operator:



WA DOE WTPH-G

Blank

Sample: SRB-B 5-26 Channel: JEROME-FID Filename: R5269J05
Acquired: 26-MAY-94 12:52 Method: F:\BRO2\MAXDATA\JEROME\052694JR Operator:

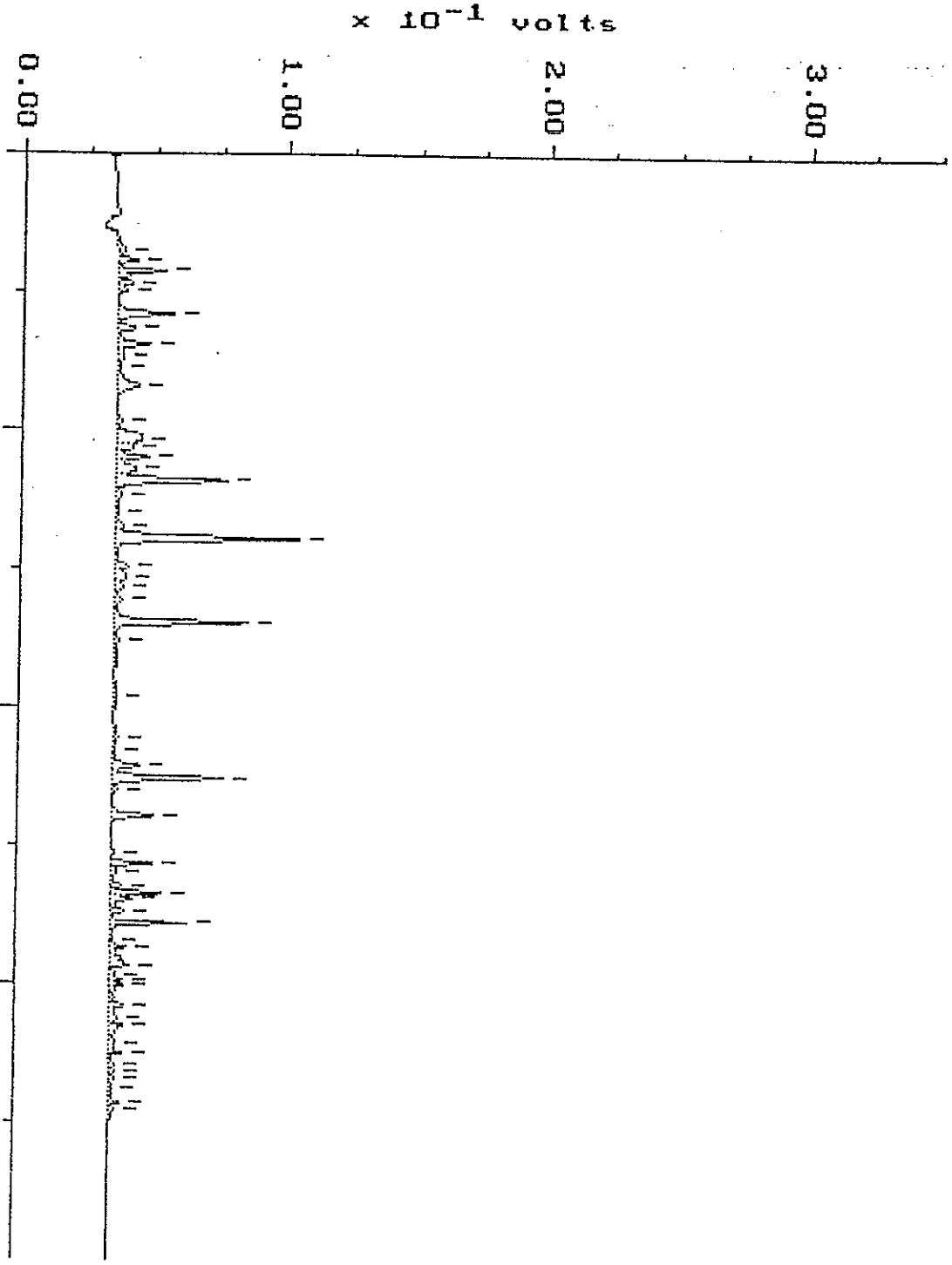


CONTINUING CALIBRATION

Sample: STD C G
Acquired: 26-MAY-94 11:19

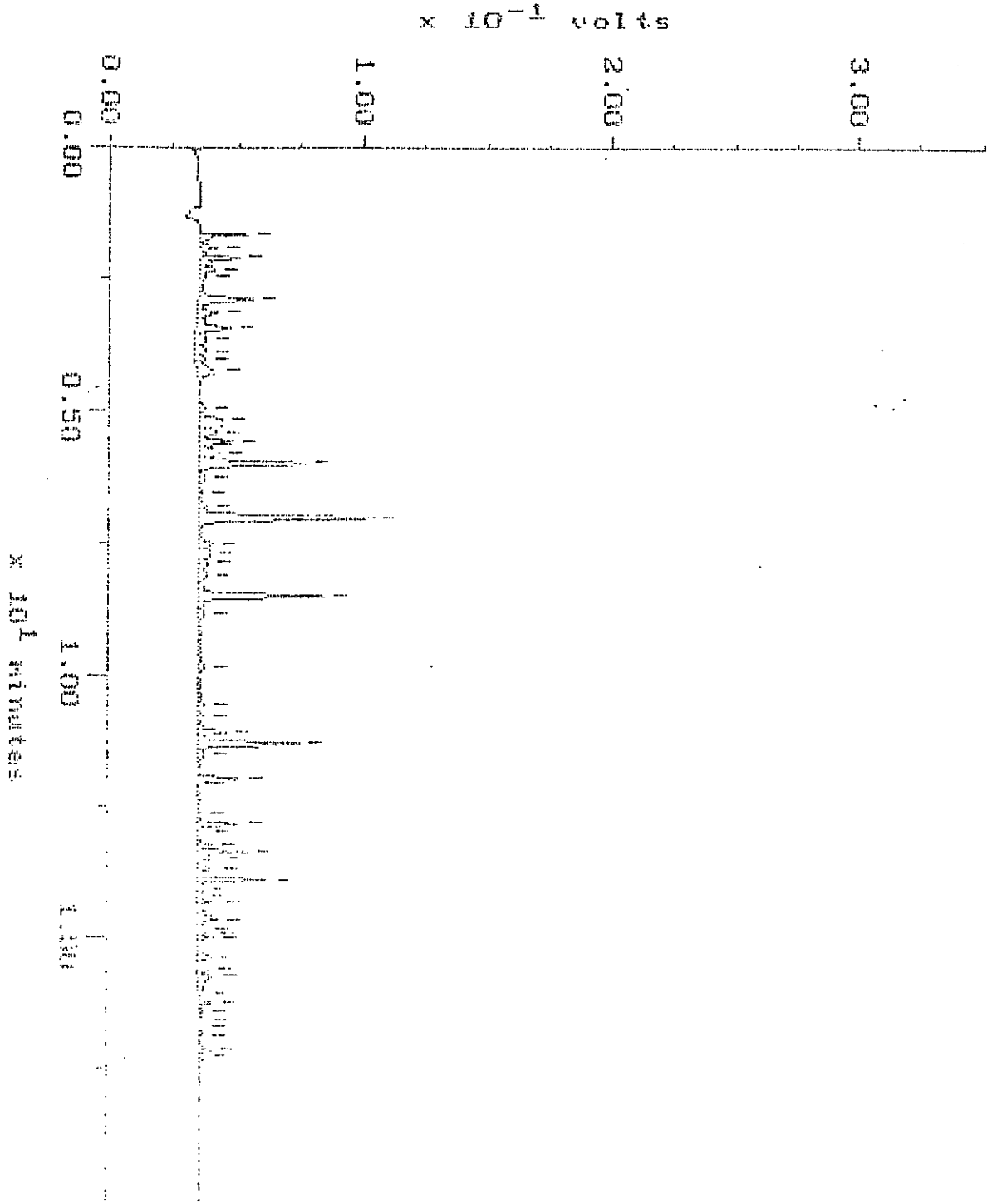
Channel: JEROME-FID
Method: F:\BRO2\MAXDATA\JEROME\052694JR

Filename: R5269J03
Operator:



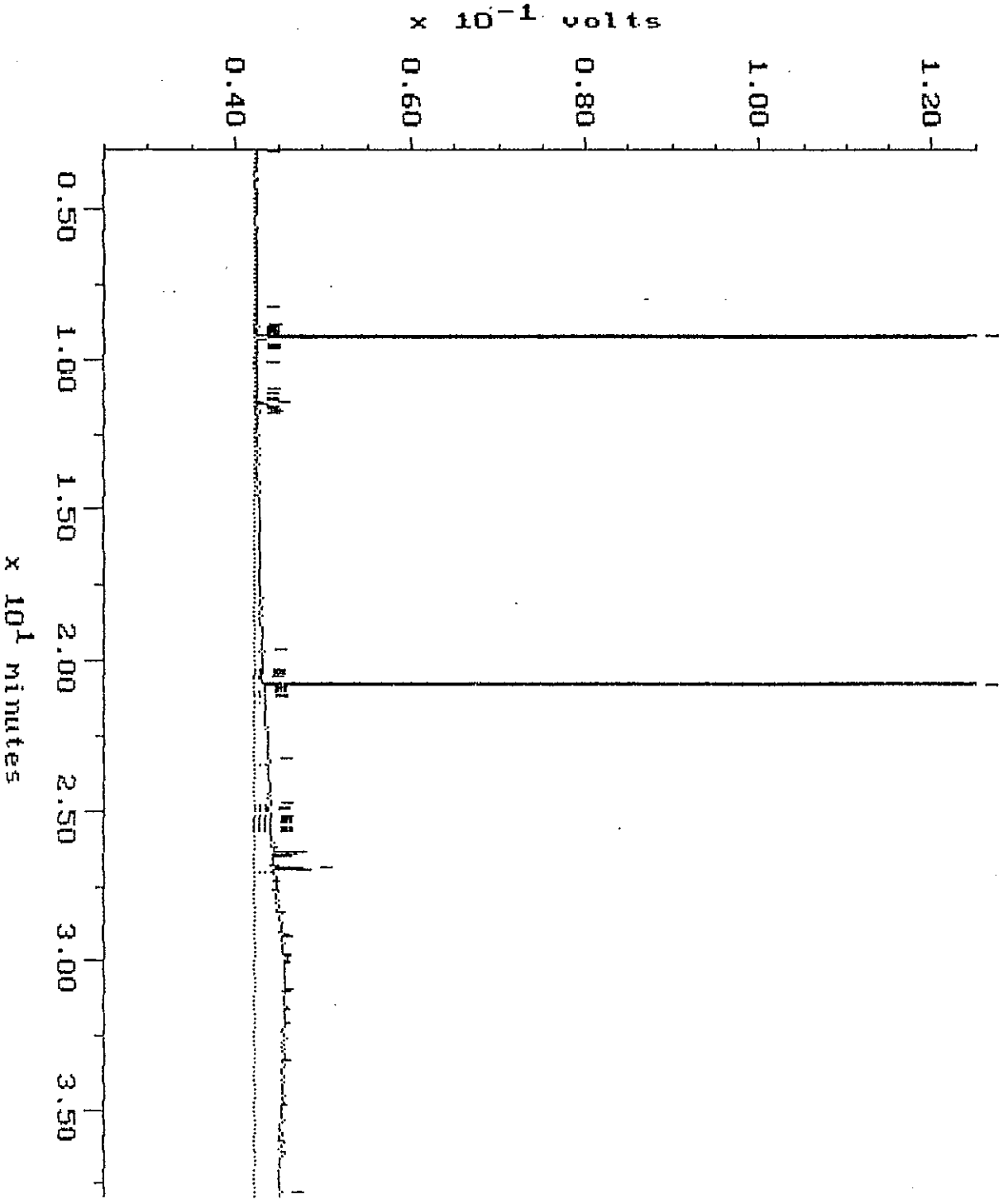
CONTINUING CALIBRATION

Sample: STD-2 6 Channel: JEROME-PID Filename: RS279J01
Acquired: 27-MAY-94 8:52 Method: F:\BROB\MAXDATA\JEROME\052794JR Operator:

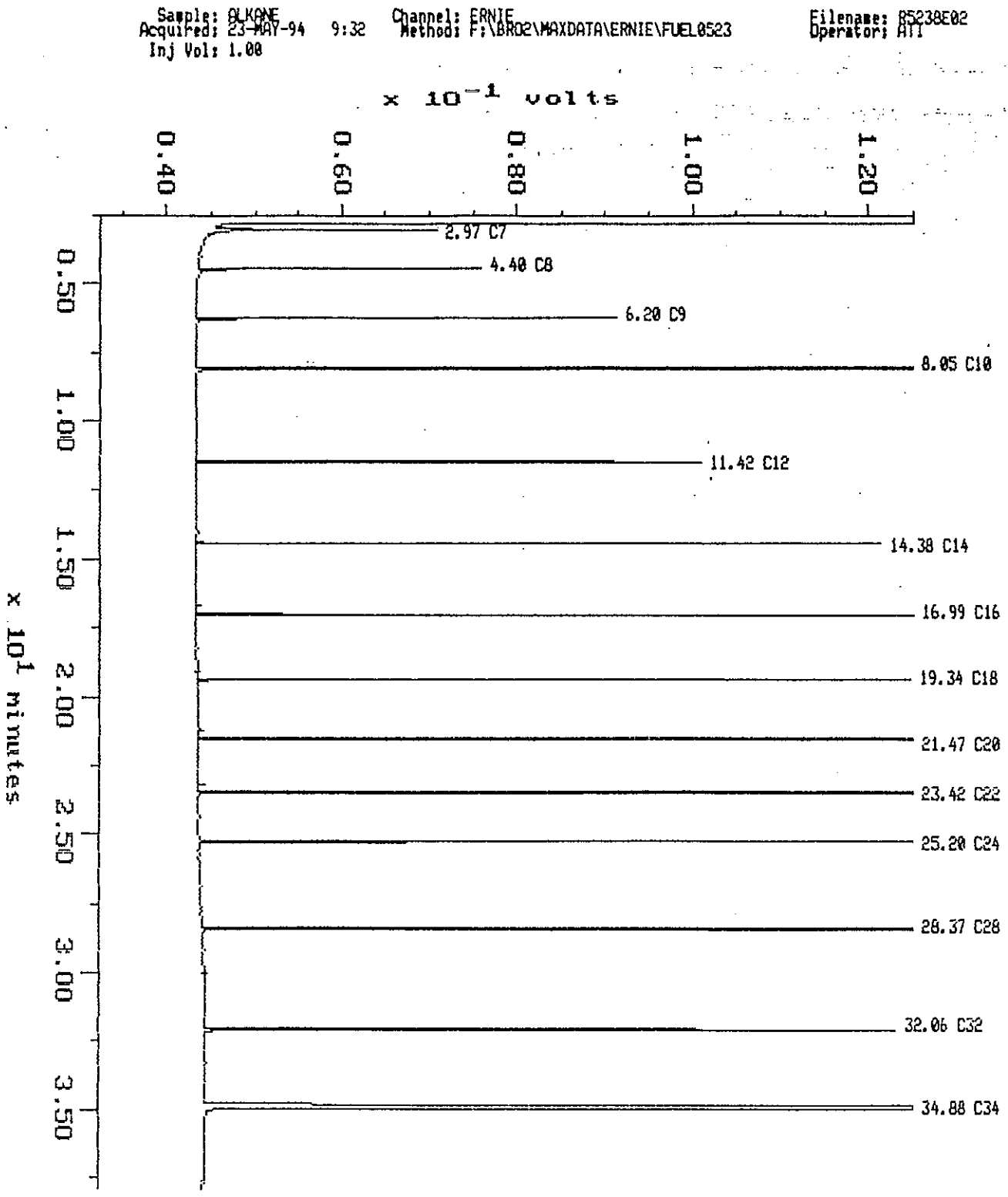


WA DOE WTPH-HCID

Sample: 9405-203-4 Channel: ERNIE Filename: R5268E19
Acquired: 27-MAY-94 5:22 Method: F:\BR02\MAXDATA\ERNIE\FUEL0526 Operator: ATI
Comments: ATI: THE QUALITY TEAM



Alkane

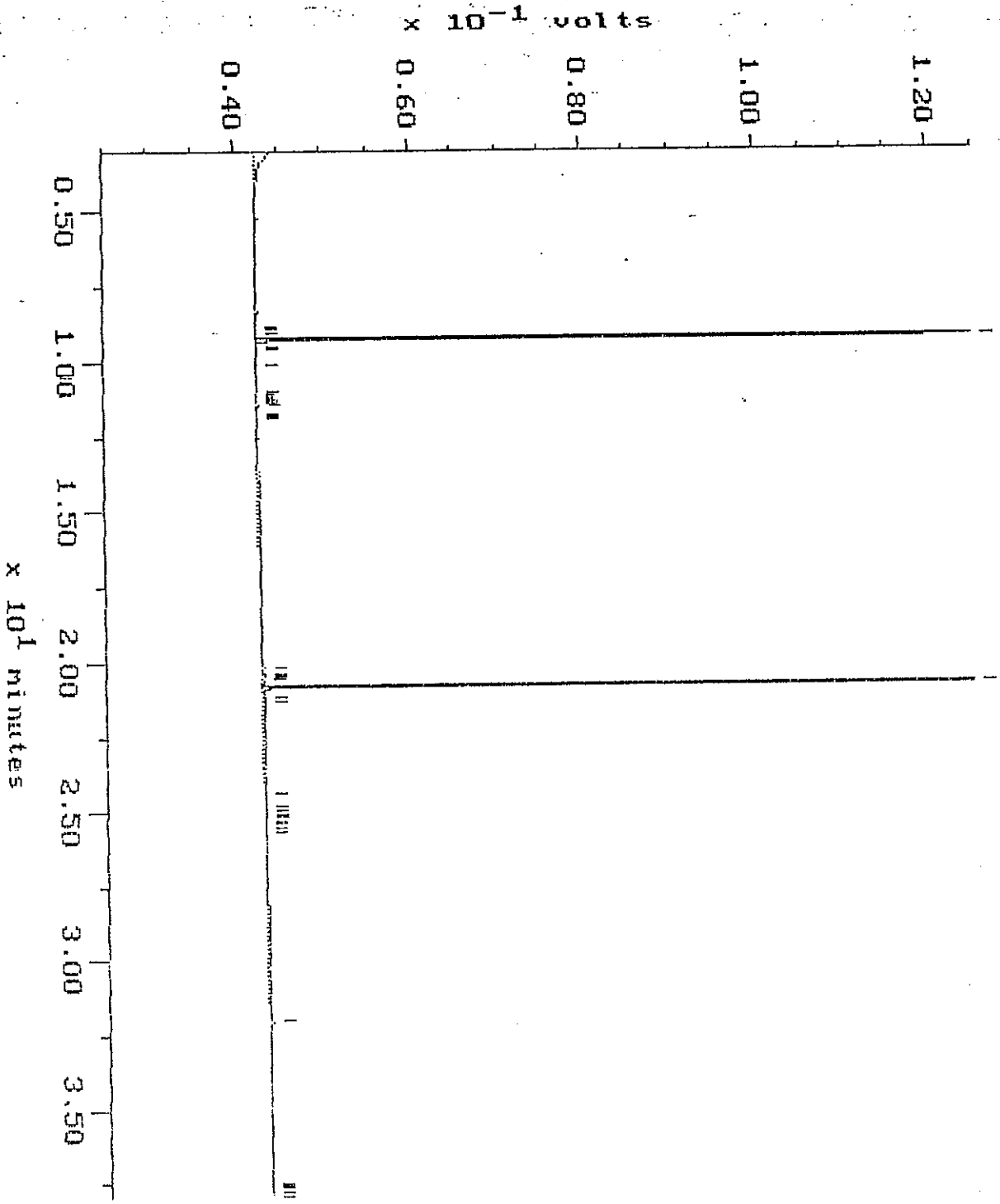

Sample: ALKANE
Acquired: 23-MAY-94 9:32
Inj Vol: 1.00
Channel: ERNIE
Method: F:\BR02\MAXDATA\ERNIE\FUEL0523
Filename: B5238E02
Operator: ATI
x 10⁻¹ volts
0.40
0.60
0.80
1.00
1.20
x 10¹ minutes
0.50
1.00
1.50
2.00
2.50
3.00
3.50
2.97 C7
4.40 C8
6.20 C9
8.05 C10
11.42 C12
14.38 C14
16.99 C16
19.34 C18
21.47 C20
23.42 C22
25.20 C24
28.37 C28
32.06 C32
34.88 C34

WA DOE WTPH-HCID

Blank

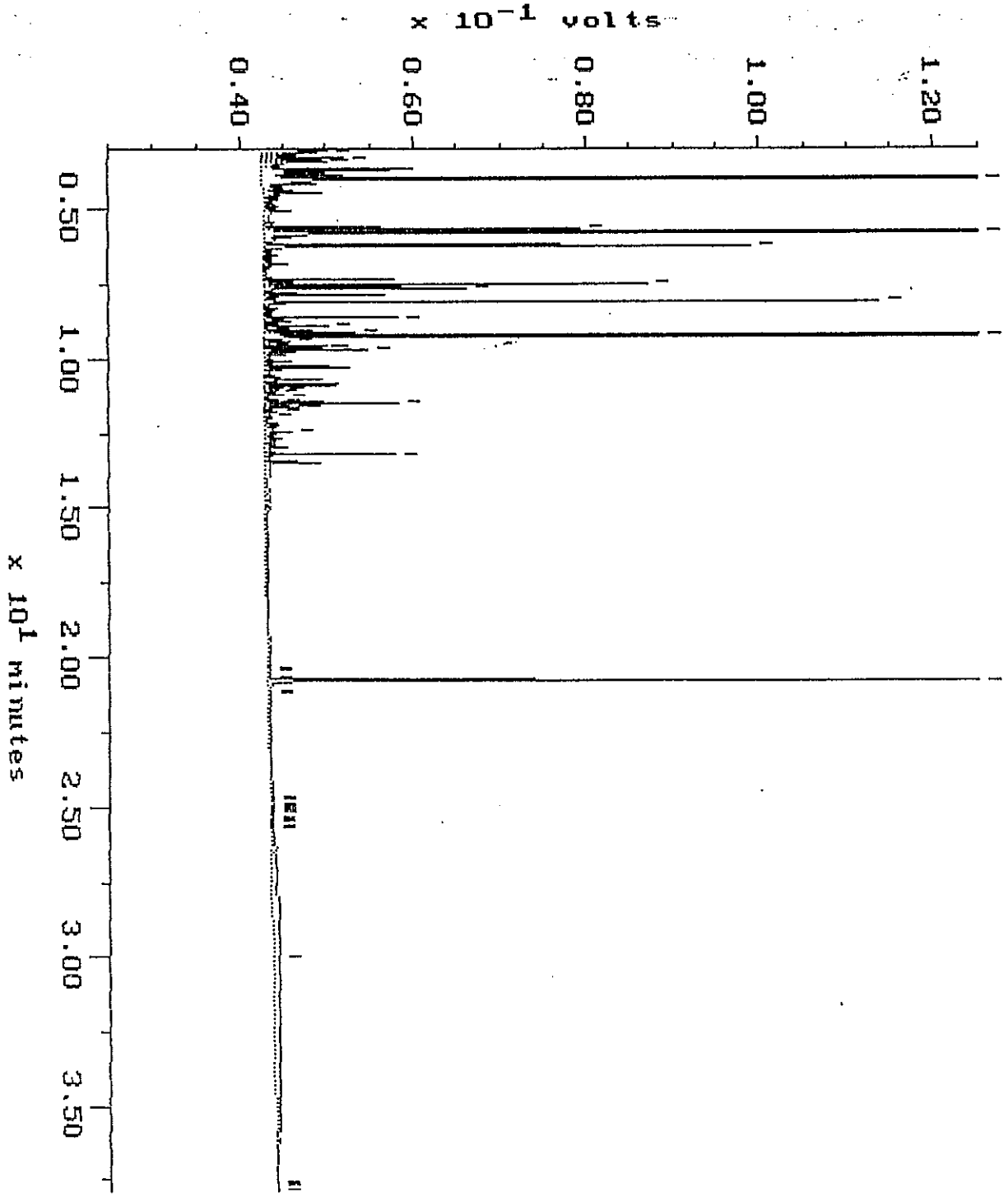
Sample: SRB 5-26 HCID Channel: ERNIE
Acquired: 27-MAY-94 3:04 Method: F:\BRD2\MAXDATA\ERNIE\FUEL0526
Comments: ATI: THE QUALITY TEAM

Filename: R5268E16
Operator: ATI



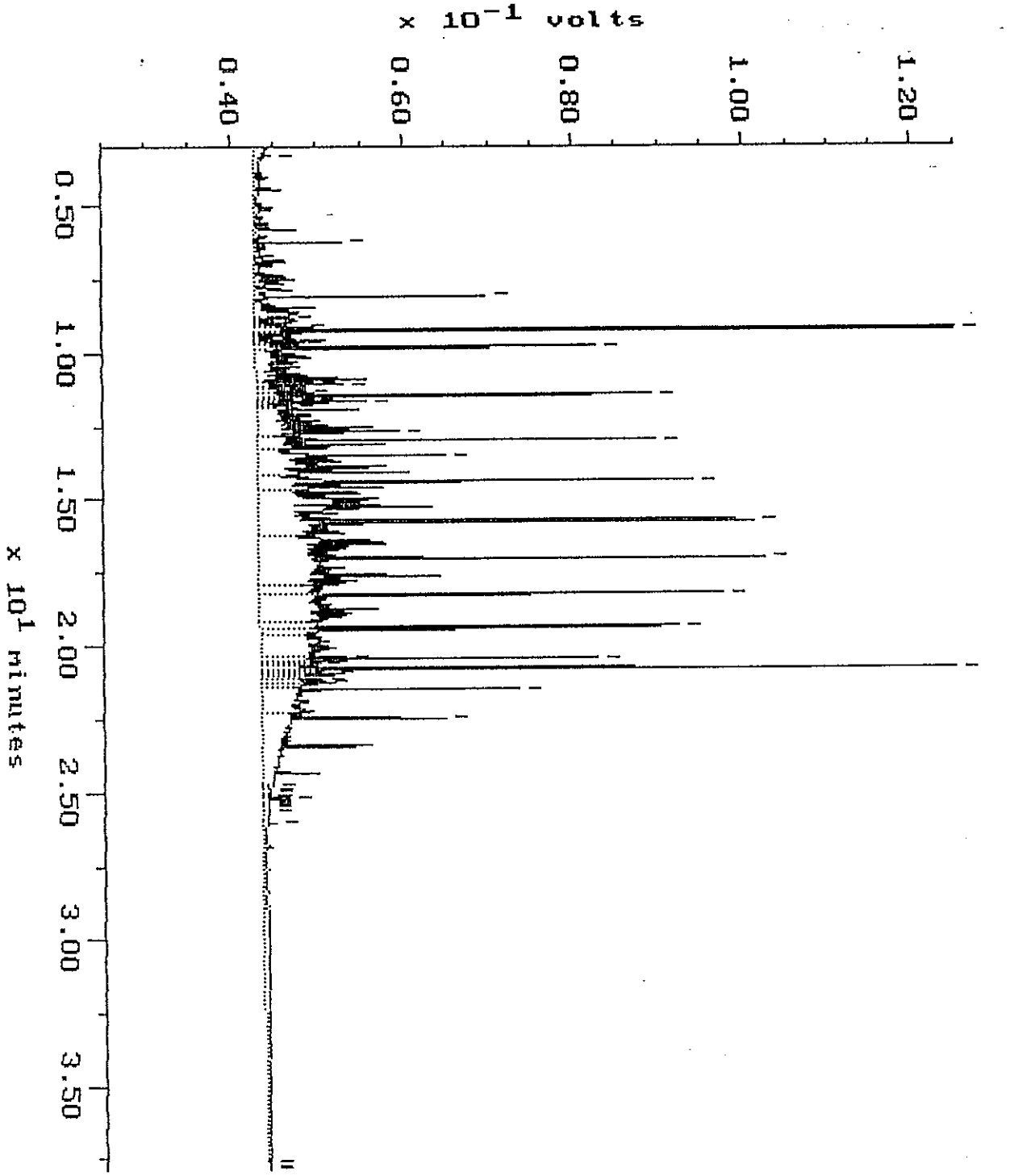
CONTINUING CALIBRATION

Sample: GAS 400 Channel: ERNIE Filename: R5268E03
Acquired: 26-MAY-94 17:07 Method: F:\BRO2\MAXDATA\ERNIE\FUEL0526 Operator: ATI
Comments: ATI: THE QUALITY TEAM



CONTINUING CALIBRATION

Sample: D 500 Channel: ERNIE Filename: R5268E04
Acquired: 26-MAY-94 17:53 Method: F:\BRO2\MAXDATA\ERNIE\FUEL0526 Operator: ATI
Comments: ATI: THE QUALITY TEAM

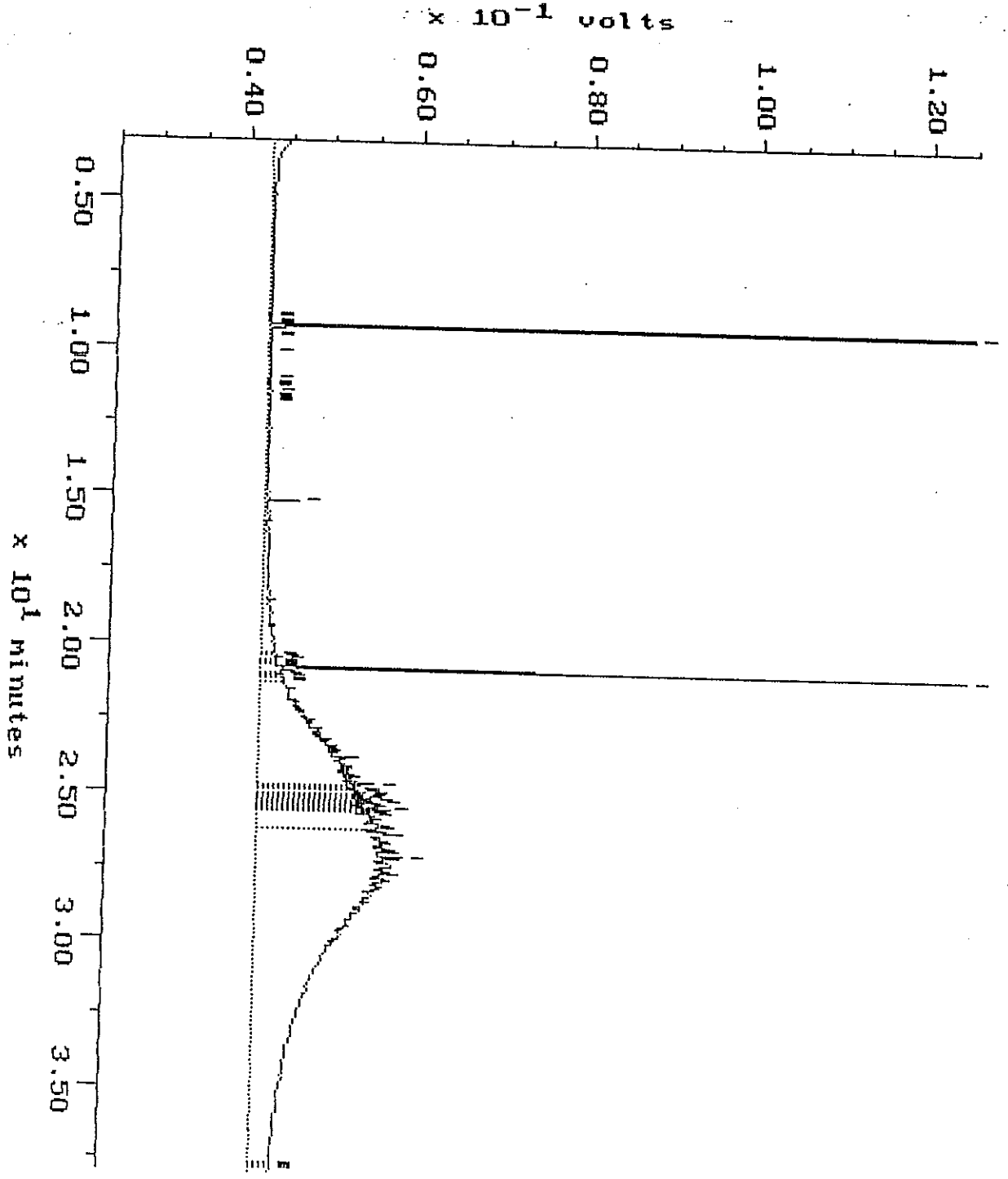


CONTINUING CALIBRATION

Sample: MO 500
Acquired: 26-MAY-94 16:11
Comments: ATI: THE QUALITY TEAM

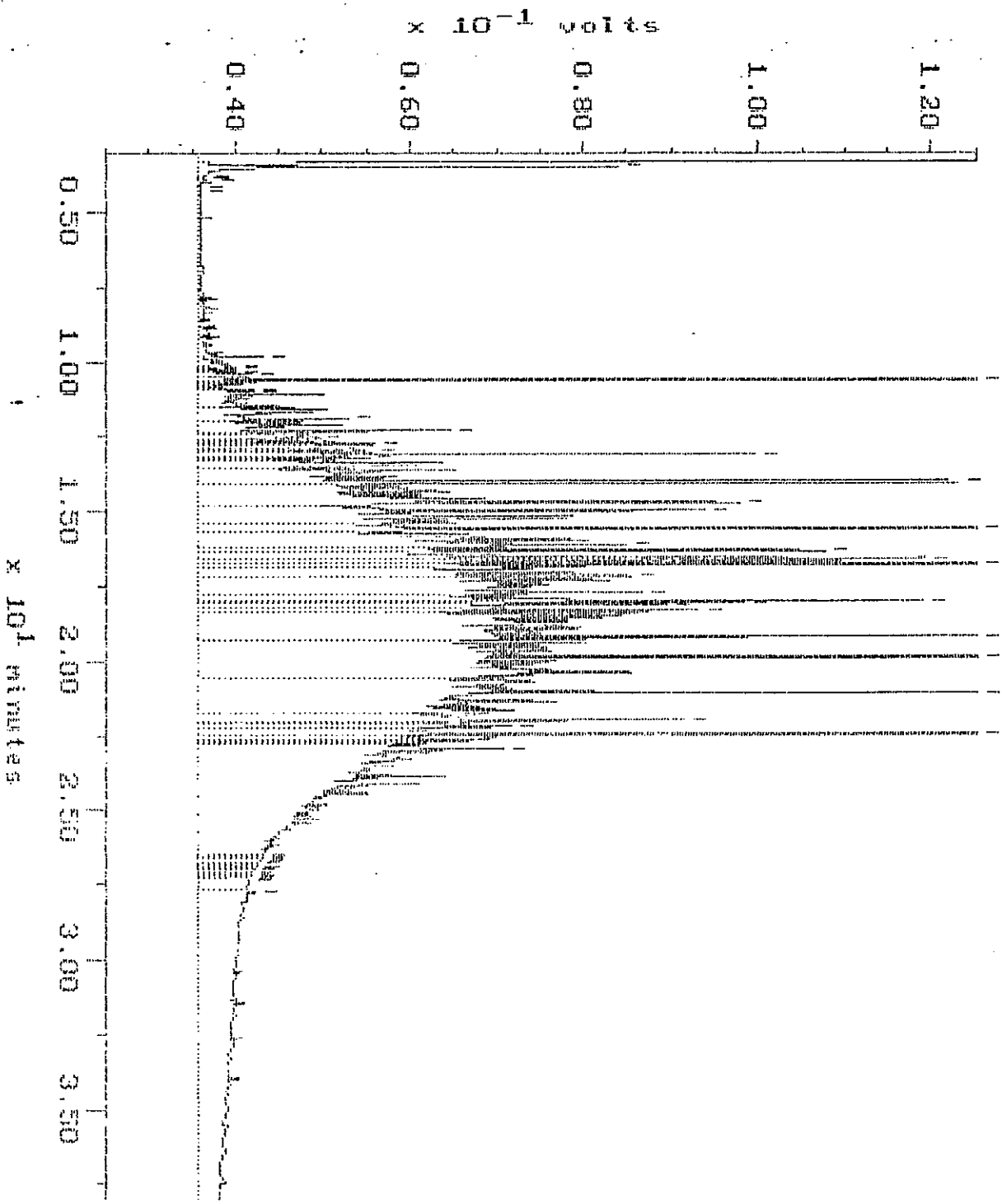
Channel: ERNIE
Method: F:\BRO2\MAXDATA\ERNIE\FUEL0526

Filename: R5268E02
Operator: ATI



WA DOE WTPH-D

Sample: 9405-283-2 Channel: WILMA Filename: R5268W25
Acquired: 27-MAY-94 13:04 Method: F:\BRO2\MAXDATA\WILMA\FUEL0526 Operator: BRO

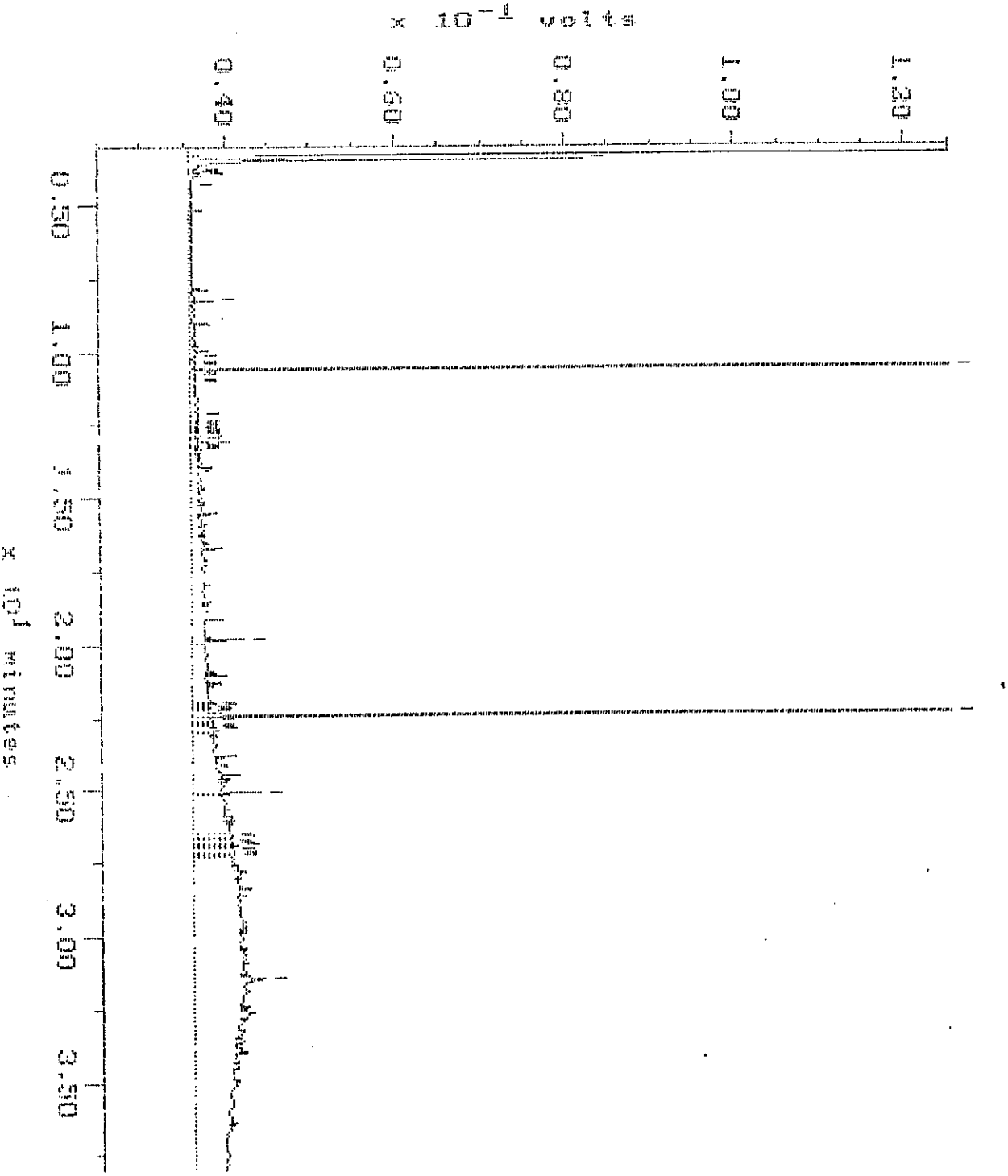


WA DOE WTPH-D

Sample: 9405-203-3
Acquired: 27-MAY-94 19:26

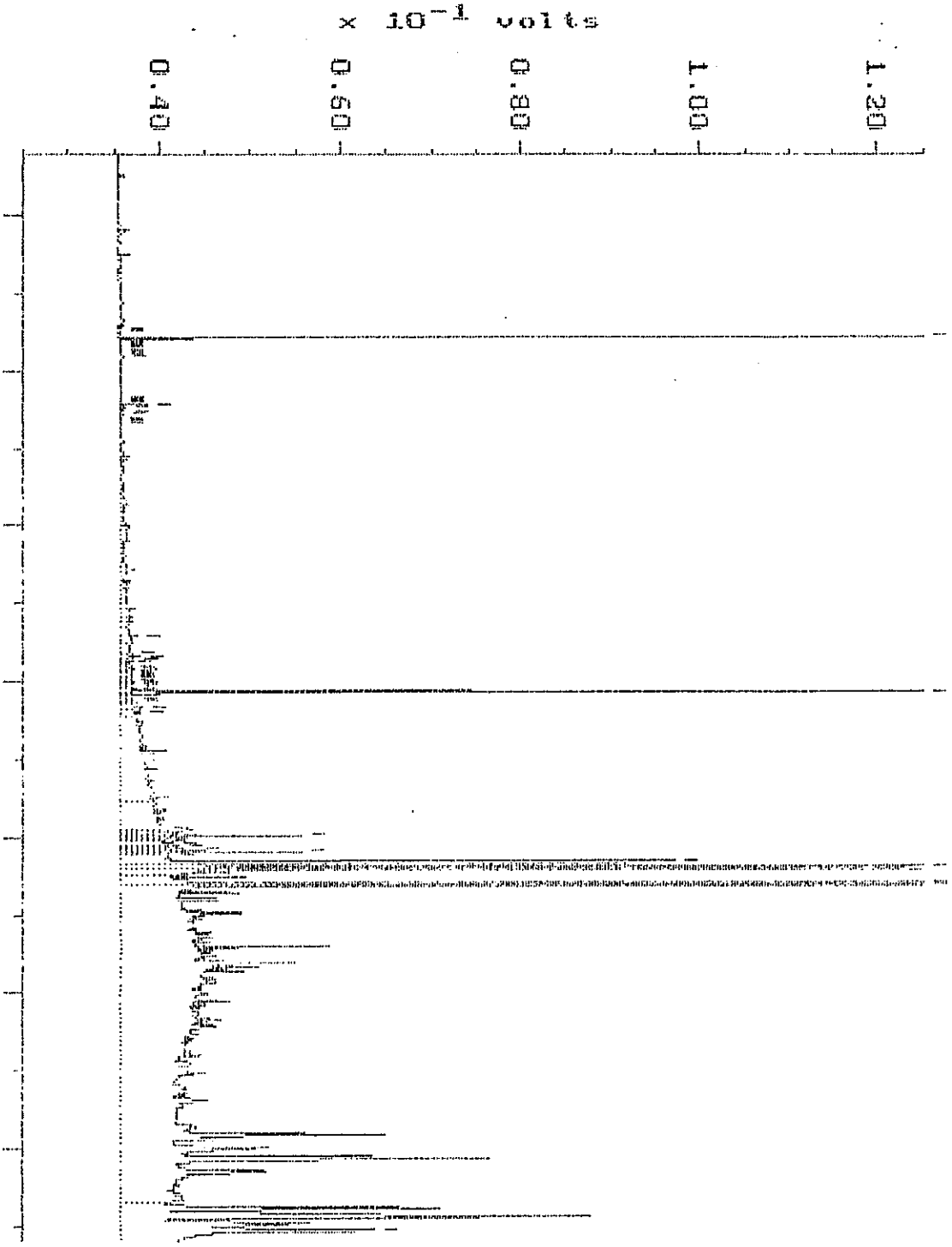
Channel: WILMA
Method: F:\BR02\MAXDATA\WILMA\FUEL0526

Filename: R5268W33
Operator: BRO

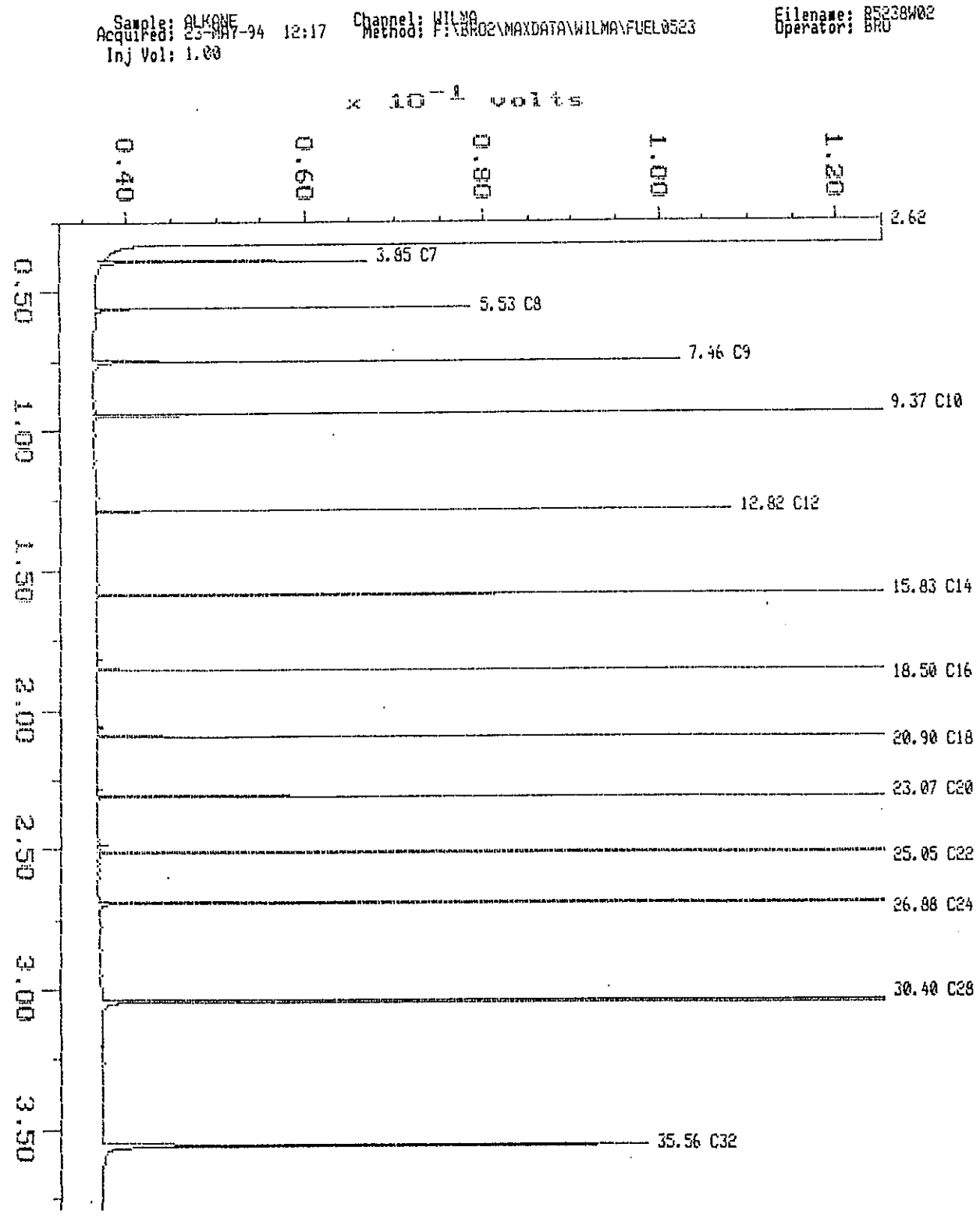


WA DOE WTPH-D

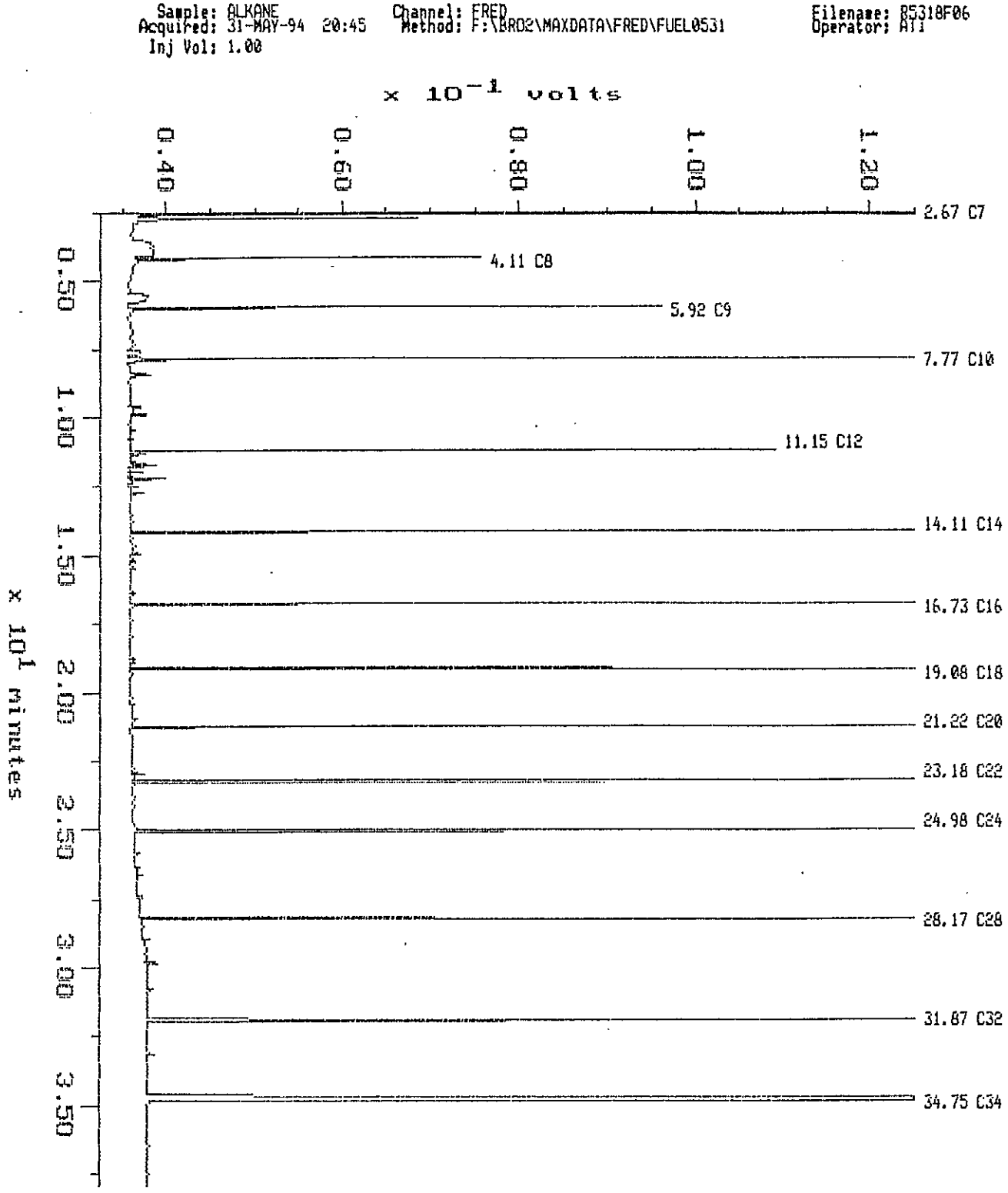
Sample: 9405-203-4 Channel: FRED Filename: R602SF11
Acquired: 02-JUN-94 20:41 Method: F:\BR02\MAXDATA\FRED\FUEL0602 Operator: ATI
Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY



Alkane


Sample: ALKANE
Acquired: 23-MAY-94 12:17
Inj Vol: 1.00
Channel: WILMA
Method: F:\BRO2\MAXDATA\WILMA\FUEL0523
Filename: B5238W02
Operator: BRU
x 10⁻¹ volts
0.40
0.60
0.80
1.00
1.20
2.62
3.95 C7
5.53 C8
7.46 C9
9.37 C10
12.82 C12
15.83 C14
18.50 C16
20.90 C18
23.07 C20
25.05 C22
26.88 C24
30.40 C28
35.56 C32
0.50
1.00
1.50
2.00
2.50
3.00
3.50
minutes
x 10⁻¹ volts

Alkane

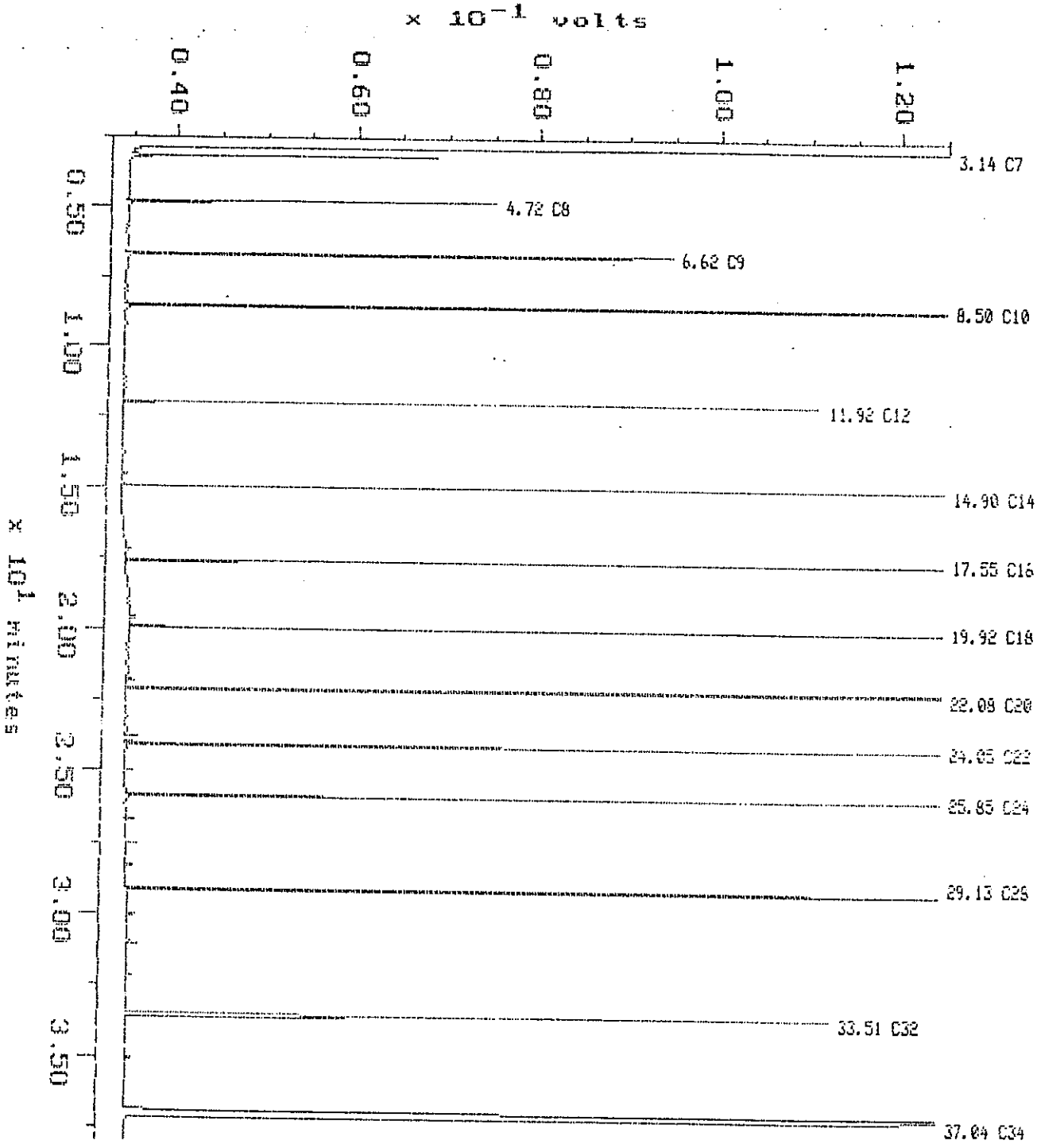

Sample: ALKANE
Acquired: 31-MAY-94 20:45
Inj Vol: 1.00
Channel: FRED
Method: F:\BRO2\MAXDATA\FRED\FUEL0531
Filename: R5318F06
Operator: ATI
x 10⁻¹ volts
0.40
0.60
0.80
1.00
1.20
2.67 C7
4.11 C8
5.92 C9
7.77 C10
11.15 C12
14.11 C14
16.73 C16
19.08 C18
21.22 C20
23.18 C22
24.98 C24
28.17 C28
31.87 C32
34.75 C34
0.50
1.00
1.50
2.00
2.50
3.00
3.50
x 10¹ minutes

Alkane

Sample: ALKANE
Acquired: 31-MAY-94 17:09
Inj Vol: 1.00

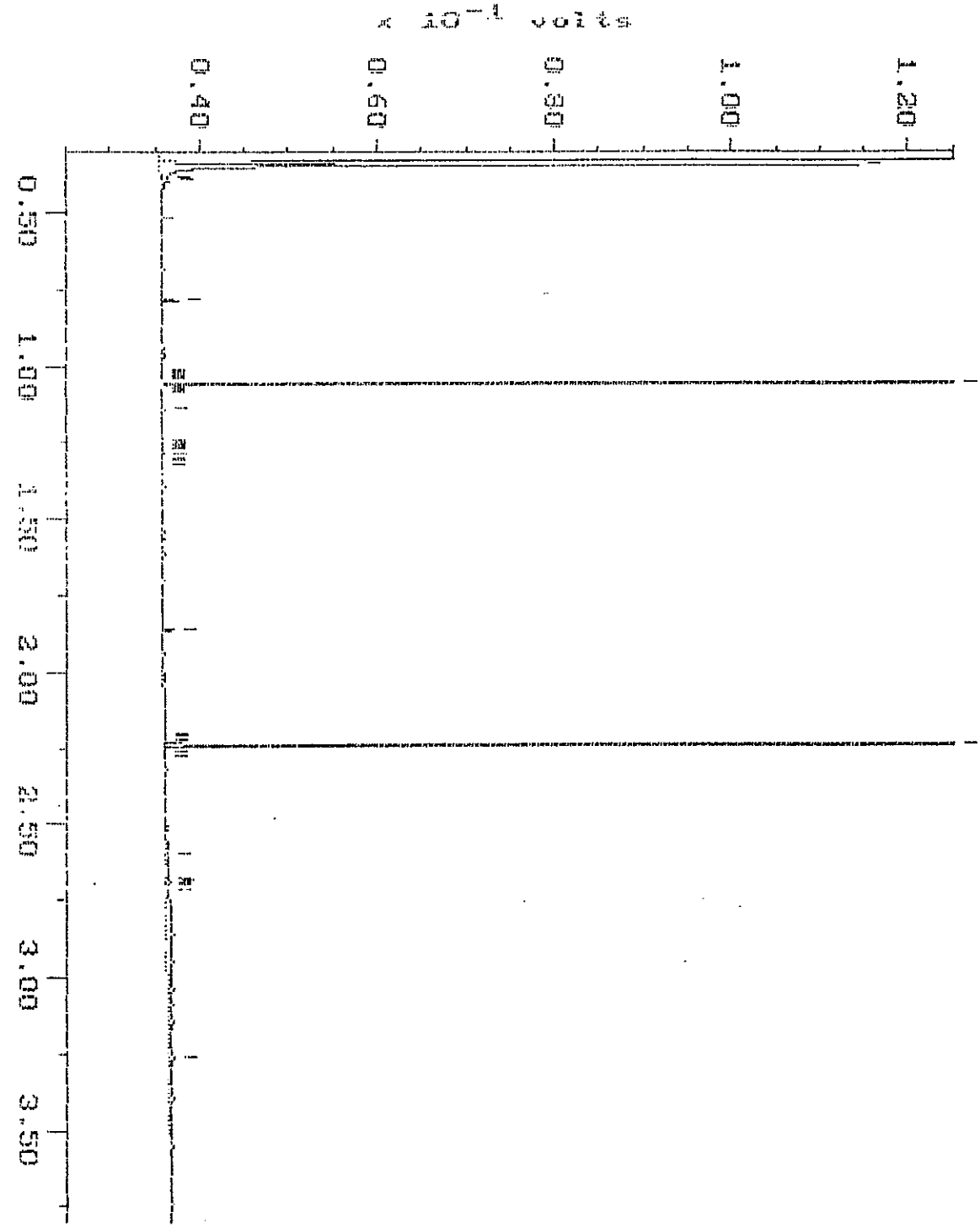
Channel: ANN
Method: F:\BRD2\MAXDATA\ANN\FUEL0531

Filename: B5318A03
Operator: ANN



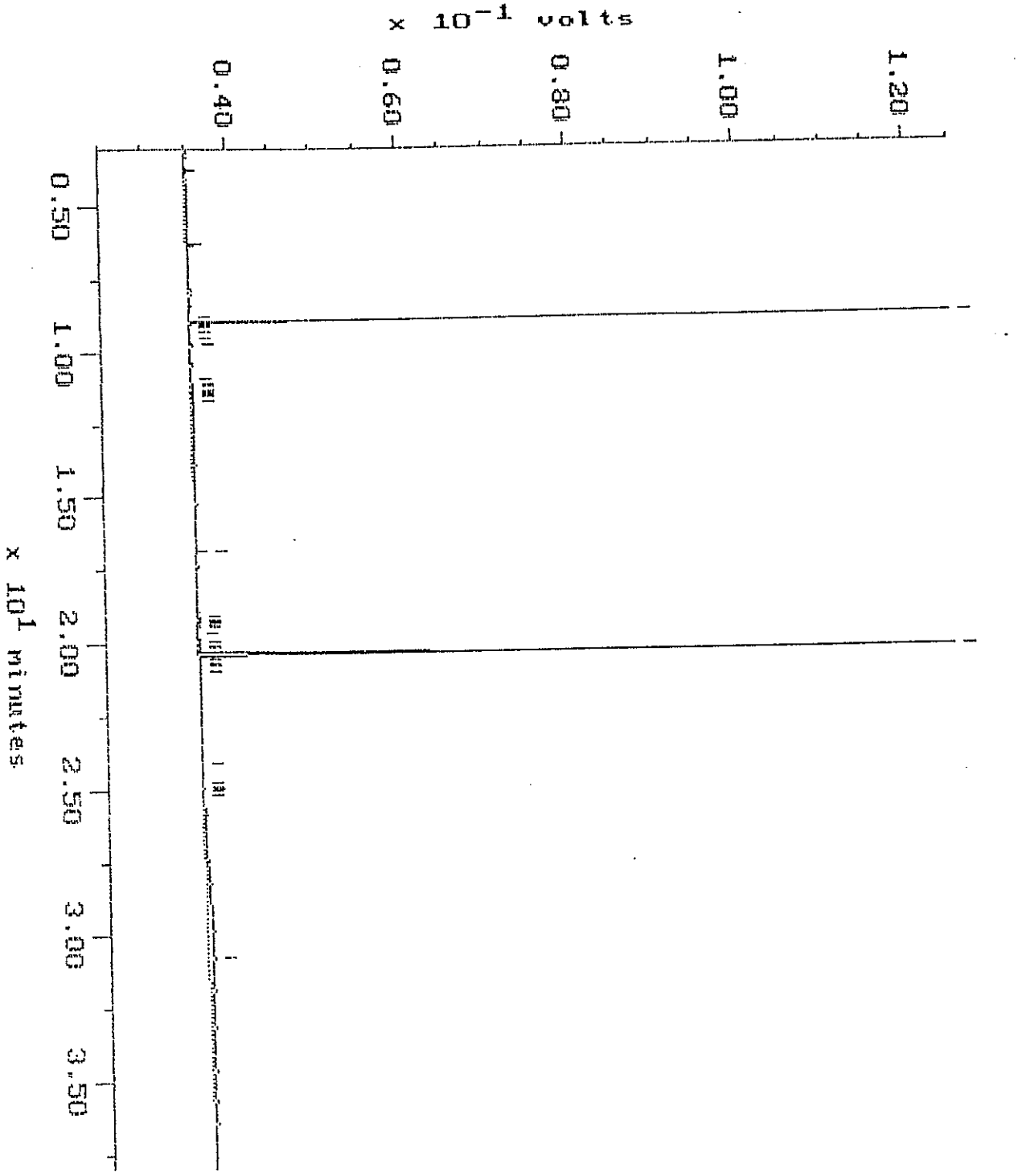
WA DOE WTPH-D Blank

Sample: SRB-A 5-26 Channel: WILMA Filename: R5268W13
Acquired: 27-MAY-94 3:34 Method: F:\BRO2\MAXDATA\WILMA\FUEL0526 Operator: BRO



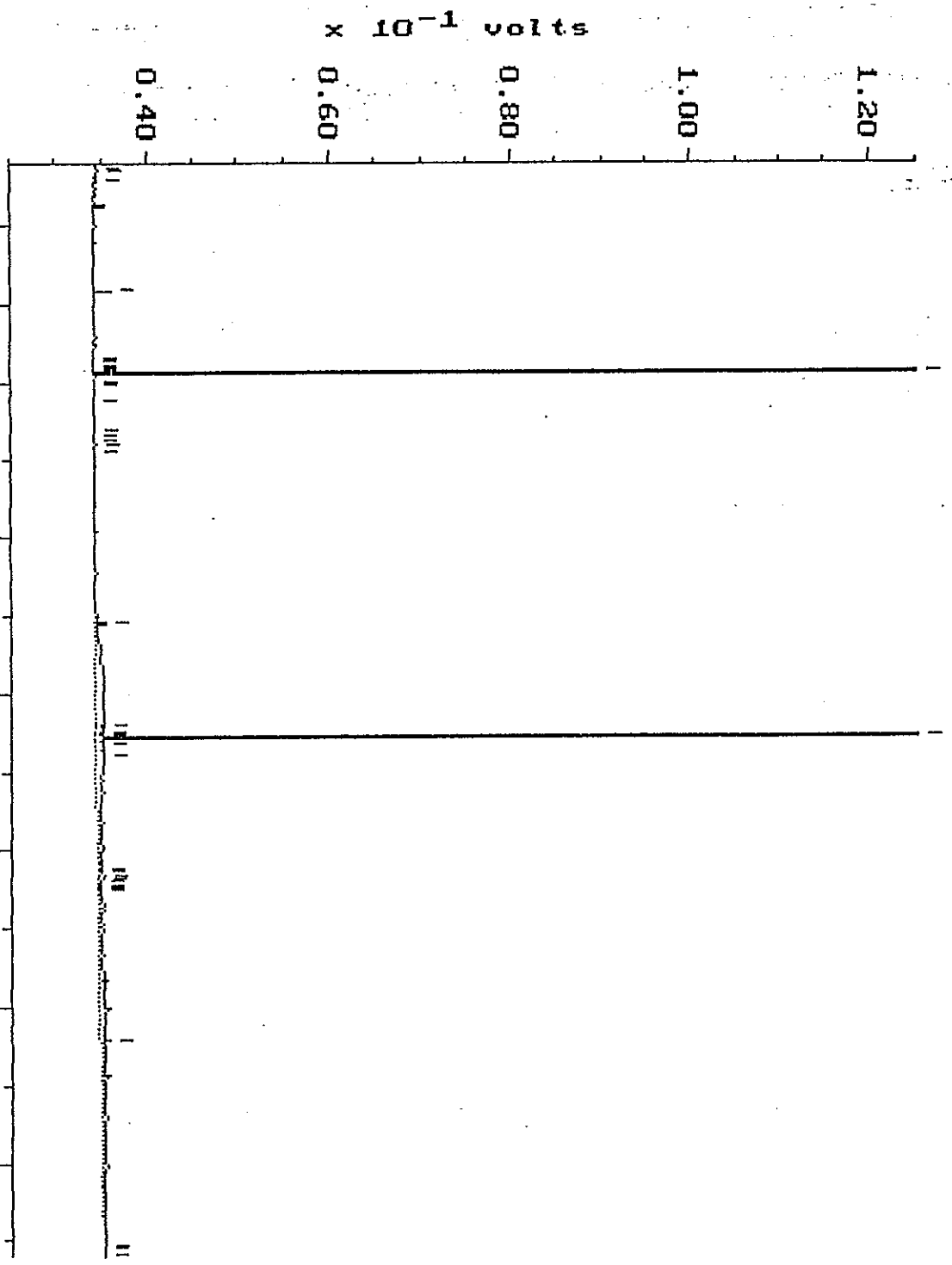
Blank

Sample: SRB-A 6-2 Channel: FRED Filename: R6028F07
Acquired: 02-JUN-94 17:28 Method: F:\BRD2\MAXDATA\FRED\FUEL0602 Operator: ATI
Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY



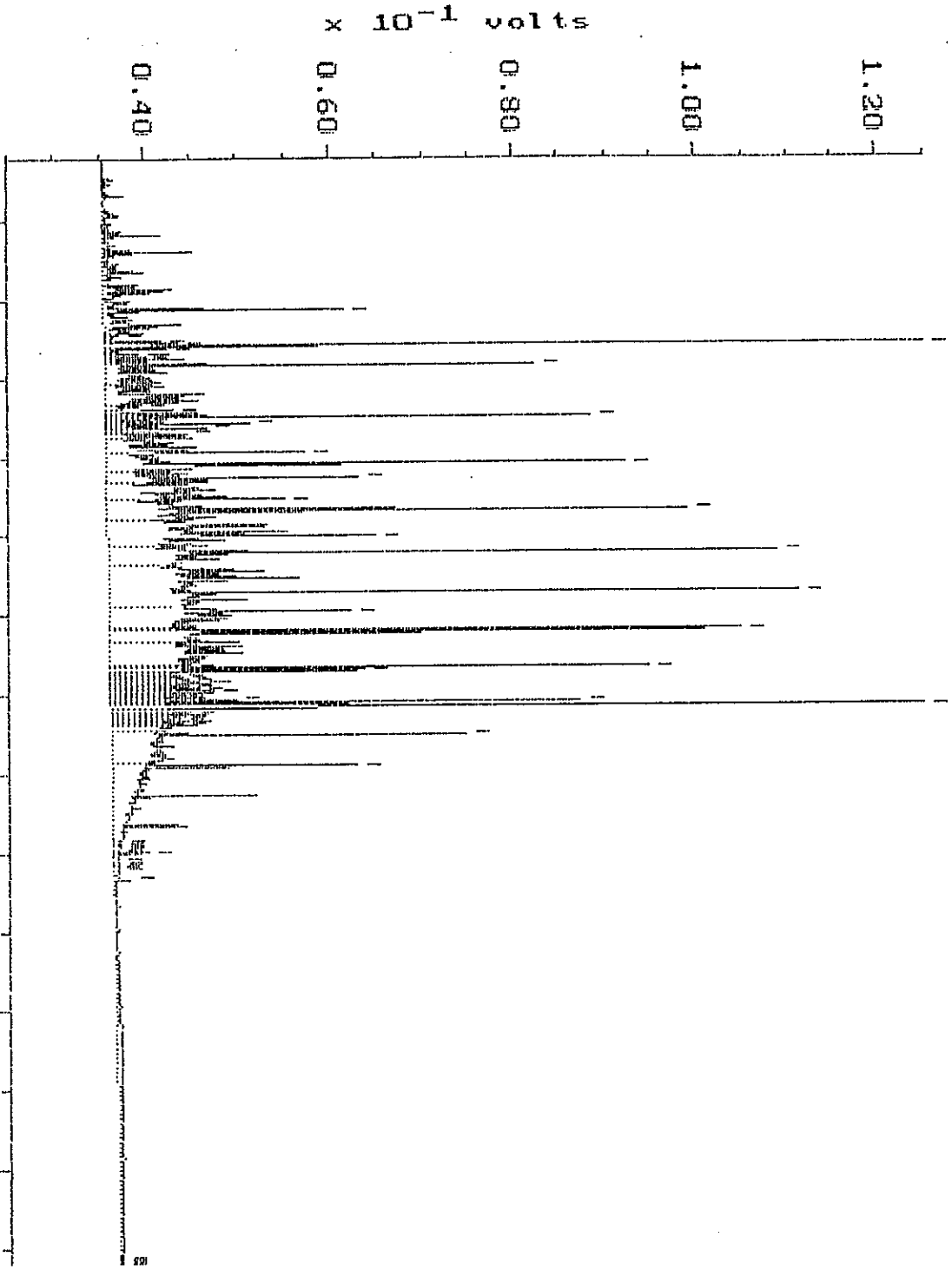
Blank

Sample: SRB-A 6-2 Channel: ANN Filename: R6028A05
Acquired: 02-JUN-94 14:29 Method: F:\BRO2\MAXDATA\ANN\FUEL0602 Operator: ANN



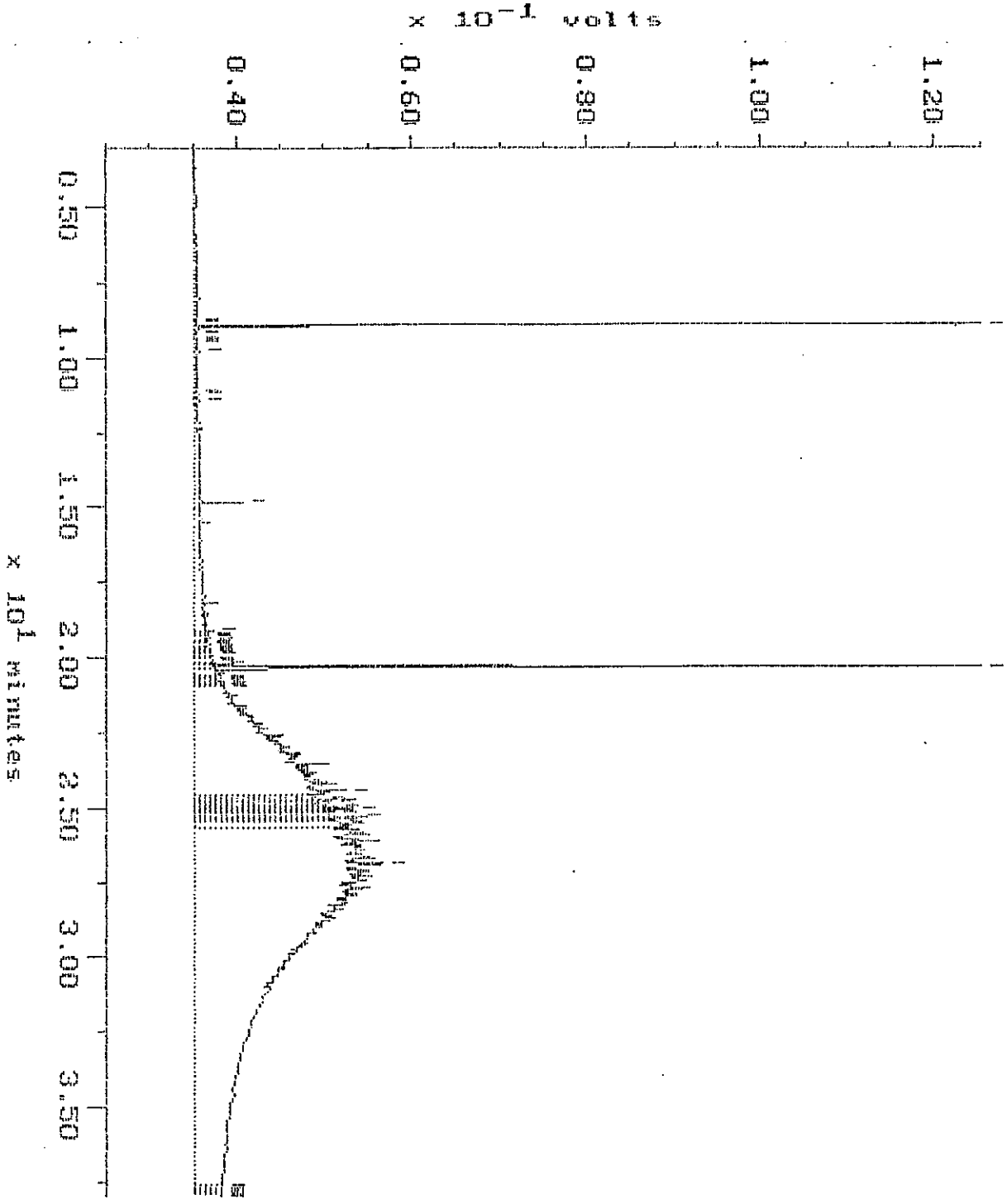
CONTINUING CALIBRATION

Sample: D 500 Channel: FRED Filename: R6020F03
Acquired: 02-JUN-94 14:15 Method: F:\BRO2\MAXDATA\FRED\FUEL0602 Operator: ATI
Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY



CONTINUING CALIBRATION

Sample: MO 500 **Channel:** FRED **Filename:** R6028F04
Acquired: 02-JUN-94 15:04 **Method:** F:\BRO2\MAXDATA\FRED\FUEL0602 **Operator:** ATI
Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY

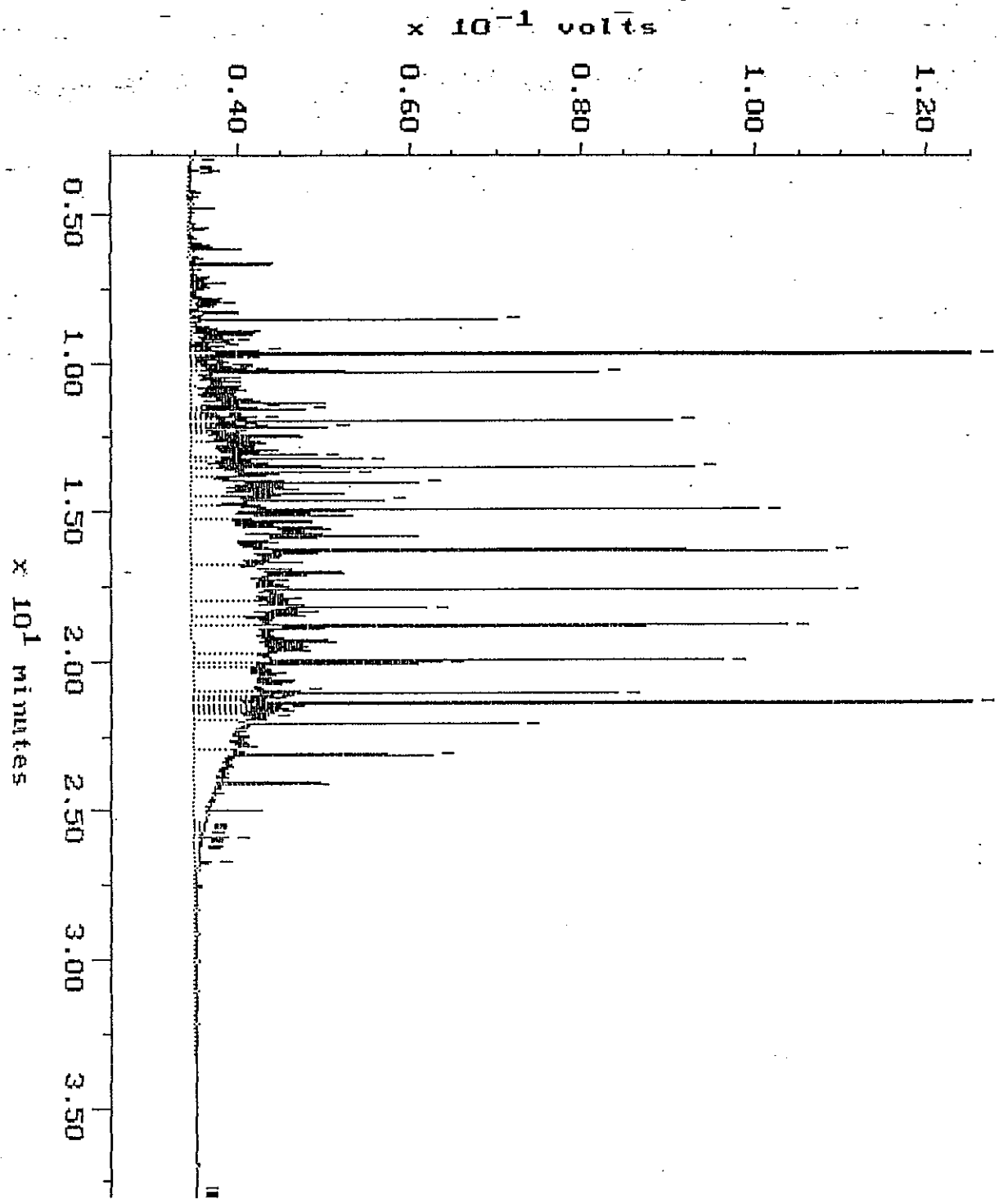


CONTINUING CALIBRATION

Sample: D 500
Acquired: 02-JUN-94 12:05

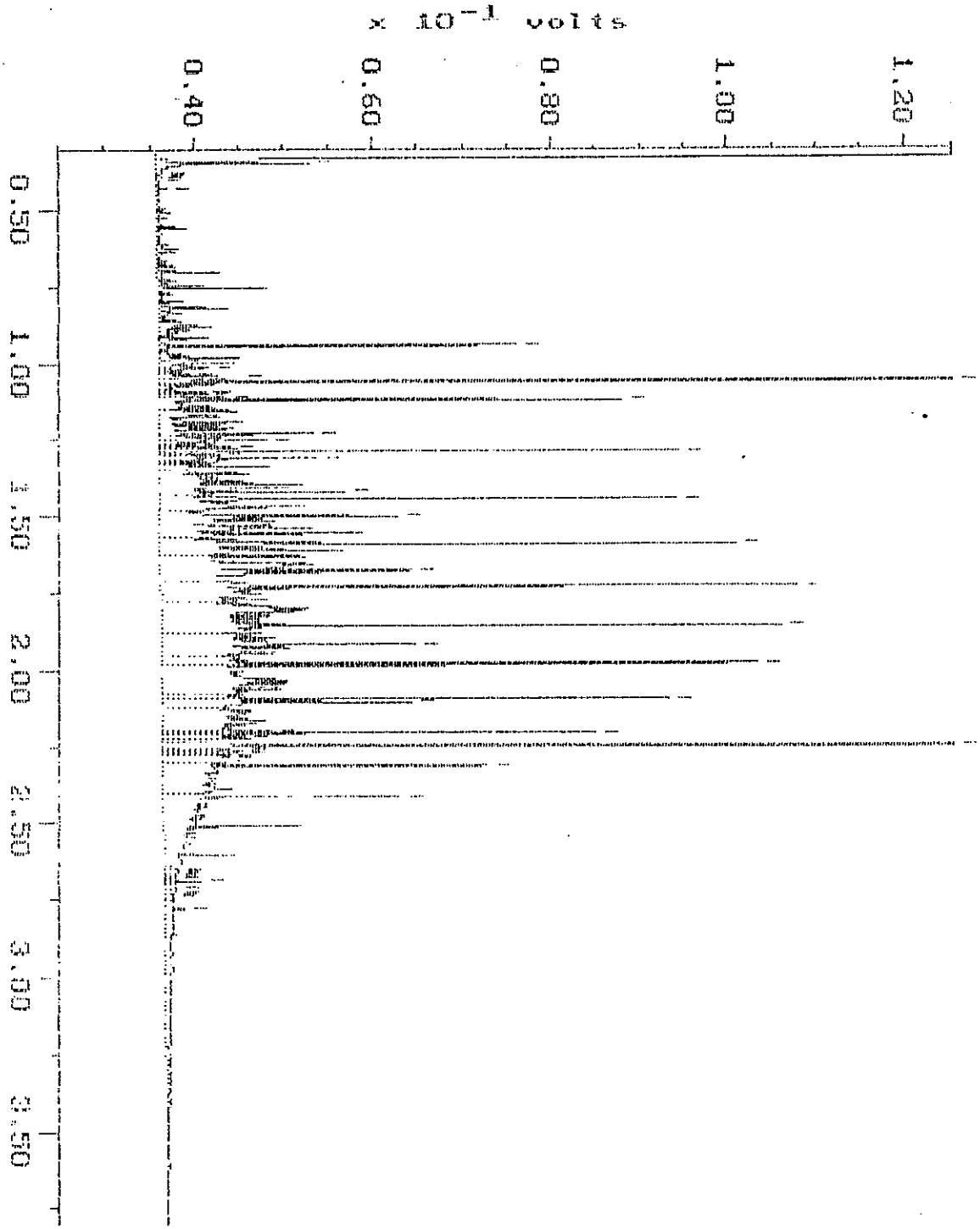
Channel: ANN
Method: F:\BRD2\MAXDATA\ANN\FUEL0602

Filename: R6028A02
Operator: ANN



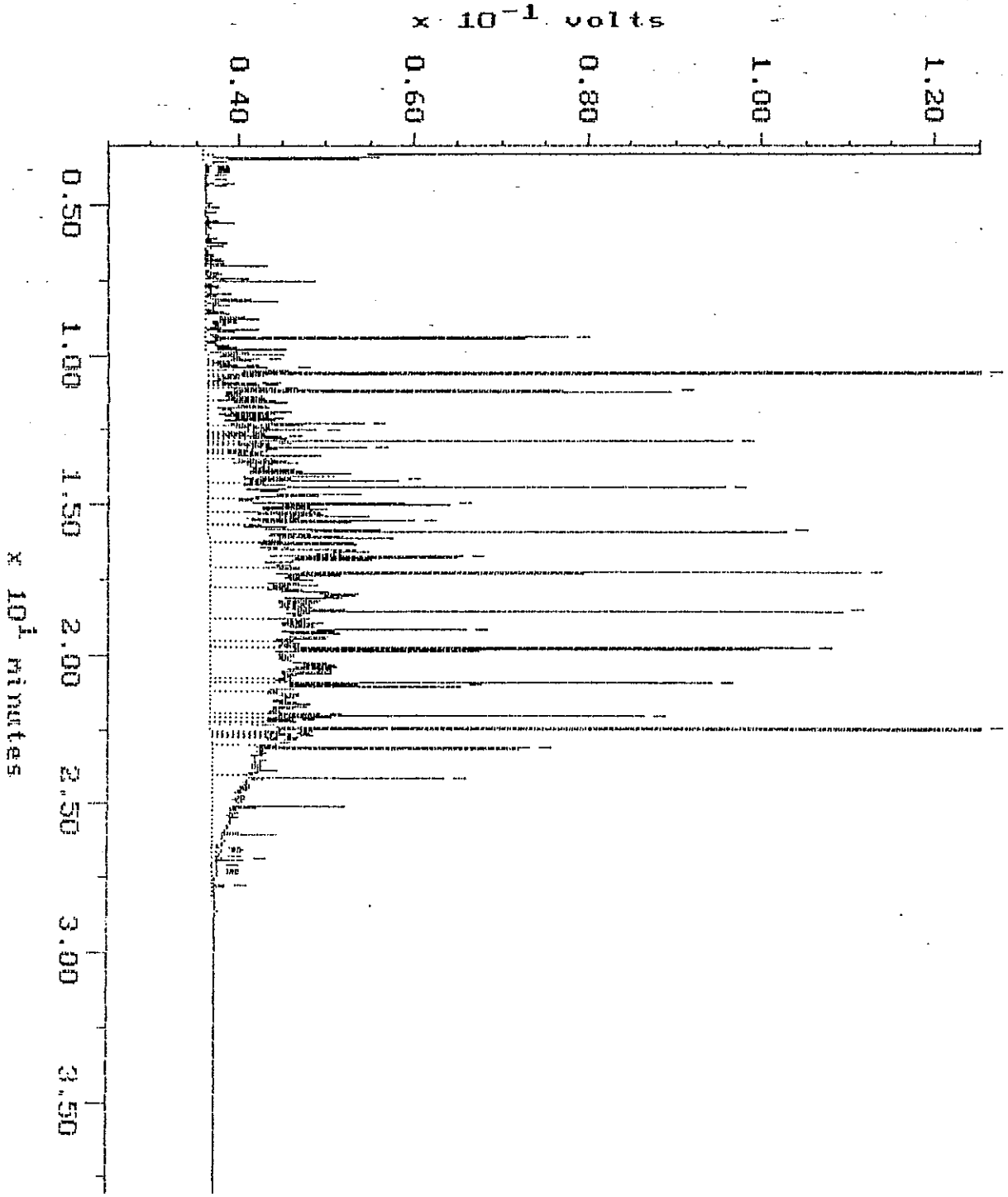
CONTINUING CALIBRATION

Sample: D 500
Acquired: 27-MAY-94 2:46
Channel: WILMA
Method: F:\BRO2\MAXDATA\WILMA\FUEL0526
Filename: B5268W12
Operator: BRO



CONTINUING CALIBRATION

Sample: D 500 Channel: WILMA Filename: B5308W03
Acquired: 30-MAY-94 12:53 Method: F:\BRO2\MAXDATA\WILMA\FUEL0530 Operator: BRO



AnalyticalTechnologies, Inc.
560 Naches Avenue, S.W., Suite 101, Renton, WA 98055 (206) 228-8335

DATE: 5/25/94 Page 1 of 1 ATI ACCESSION # 9405-203

COMPANY: K Cinkelder
REPORT TO: Mark Wicklein
ADDRESS: 3380 140th Pl SE
Bellevue, WA 98007
PHONE: (206)5624200 FAX: (562)4201
PROJECT MANAGER: Mark Wicklein
PROJECT NUMBER: 60-1232-02
PROJECT NAME: Carex

ATI will DISPOSE / RETURN samples (circle one)

Sample ID	Date	Time	Matrix	LabID	FUELS: TPH-HCID WA/OR	BETX/TPH-G combo WA/OR	BETX (by 8020) WA/OR	TPH-G WA/OR	TPH-D WA/OR	8015 modified WA/OR	418.1	413.2	AK-GRO	AK-DRO	ORGANIC COMPOUNDS: 8240 GCMS Volatiles	8270 GCMS Semivolatiles	8080 Pesticides/PCBs	PCB only (by 8080) STD/lo level	8010 Halogenated VOCs	8020 Aromatic VOCs	8310 HPLC PAHs	8040 Phenols	8140 OP Pesticides	8150 OC Herbicides	METALS: Metals (Indicate below *)	Total Lead	Priority Pollutant Metals (13)	TAL Metals (23)	TCLP: TCLP-Volatiles (ZHE-8240)	TCLP-Semivolatiles (8270)	TCLP-Pesticides (8080)	TCLP-Herbicides (8150)	TCLP-Metals (8 metals)	OTHER: % Moisture (please indicate)					Total # of Containers/Sample
Kmw0105244B	5/24	Pm	Soil	1	X																					X													1
Kmw0205244A	↓	↓	↓	2		X			X		X															X													1
Kmw0305244A				3		X			X		X															X													1
Kmw0405244B				4	X																					X													1

Turnaround Time		Sample Receipt	
STANDARD TAT	X	TOTAL # CONTAINERS RECVD	4
1 WEEK TAT		COC SEALS PRESENT?	N
4 WORK DAY TAT		COC SEALS INTACT?	NA
3 WORK DAY TAT		RECEIVED COLD?	Y
2 WORK DAY TAT		RECEIVED INTACT?	Y
24 HOUR TAT		RECEIVED VIA:	COURIER

Special Instructions:
Please fax results ASAP
* Metals needed: Call on HCID results

Relinquished By:	Relinquished By:	Relinquished By:
Mark Wicklein Date: 5/25/94	Date:	Date:
Mark Wicklein Time: 0900	Time:	Time:
Received By:	**Received By:**	**Received By:**
M. LoSTIMA Date: 5/25/94	Date:	Date:
M. LoSTIMA Time: 1200	Time:	Time:

Analytical Technologies, Inc.

Karen L. Mixon, Laboratory Manager

ATI I.D. # 9405-204

June 13, 1994

Kleinfelder, Inc.
3380 146th Place S.E.
Suite 110
Bellevue WA 98007

Attention : Mark Wicklein

Project Number : 60-1232-02

Project Name : Cenex

Dear Mr. Wicklein:

On May 25, 1994, Analytical Technologies, Inc. (ATI), received four samples for analysis. The samples were analyzed with EPA methodology or equivalent methods as specified in the attached analytical schedule. The results, sample cross reference, and quality control data are enclosed.

Sincerely,

Diana Spence

Diana Spence
Project Manager

DS/hal/mrj

Enclosure

Analytical Technologies, Inc.

ATI I.D. # 9405-204

SAMPLE CROSS REFERENCE SHEET

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

ATI #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
9405-204-1	KMW0105254	05/25/94	WATER
9405-204-2	KMW0205254	05/25/94	WATER
9405-204-3	KMW0305254	05/25/94	WATER
9405-204-4	KMW0405254	05/25/94	WATER

----- TOTALS -----

MATRIX	# SAMPLES
WATER	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of the report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

Analytical Technologies, Inc.

ATI I.D. # 9405-204

ANALYTICAL SCHEDULE

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

ANALYSIS	TECHNIQUE	REFERENCE	LAB
BETX	GC/PID	EPA 8020	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-G	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-D	R
PETROLEUM HYDROCARBONS	IR	WA DOE WTPH-418.1 MODIFIED	R
LEAD	AA/GF	EPA 7421	R

R = ATI - Renton
SD = ATI - San Diego
PHX = ATI - Phoenix
PTL = ATI - Portland
ANC = ATI - Anchorage
PNR = ATI - Pensacola
FC = ATI - Fort Collins
SUB = Subcontract

Analytical Technologies, Inc.

ATI I.D. # 9405-204

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: N/A
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: ug/L
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
FUEL HYDROCARBONS	<100
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	99	76 - 120
TRIFLUOROTOLUENE	109	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204-1

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: N/A
CLIENT I.D.	: KMW0105254	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: ug/L
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
FUEL HYDROCARBONS	<100
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	99	76 - 120
TRIFLUOROTOLUENE	106	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204-2

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: N/A
CLIENT I.D.	: KMW0205254	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: ug/L
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	2.0
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	0.6
FUEL HYDROCARBONS	310
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	97	76 - 120
TRIFLUOROTOLUENE	106	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204-3

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: N/A
CLIENT I.D.	: KMW0305254	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: WATER	UNITS	: ug/L
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
FUEL HYDROCARBONS	<100
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	100	76 - 120
TRIFLUOROTOLUENE	106	50 - 150

Analytical**Technologies,**Inc.

ATI I.D. # 9405-204-4

BETX - GASOLINE
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: N/A
CLIENT I.D.	: KMW0405254	DATE ANALYZED	: 05/27/94
SAMPLE MATRIX	: WATER	UNITS	: ug/L
METHOD	: WA DOE WTPH-G/8020(BETX)	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.5
ETHYLBENZENE	<0.5
TOLUENE	<0.5
TOTAL XYLENES	<0.5
FUEL HYDROCARBONS	<100
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
BROMOFLUOROBENZENE	100	76 - 120
TRIFLUOROTOLUENE	106	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: N/A
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: ug/L
METHOD	: WA DOE WTPH-G/8020(BETX)		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
BENZENE	<0.500	20.0	19.0	95	18.9	95	1
TOLUENE	<0.500	20.0	19.1	96	19.1	96	0
TOTAL XYLENES	<0.500	40.0	37.8	95	37.8	95	0
GASOLINE	<100	1000	997	100	1000	100	0

CONTROL LIMITS	% REC.	RPD
BENZENE	89 - 110	10
TOLUENE	89 - 113	10
TOTAL XYLENES	89 - 111	10
GASOLINE	78 - 116	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
BROMOFLUOROBENZENE	99	100	76 - 120
TRIFLUOROTOLUENE	111	109	50 - 150

Analytical**Technologies,**Inc.

ATI I.D. # 9405-204

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX
SAMPLE MATRIX : WATER
METHOD : WA DOE WTPH-G/8020(BETX)

SAMPLE I.D. # : 9405-208-20
DATE EXTRACTED : N/A
DATE ANALYZED : 05/27/94
UNITS : ug/L

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
GASOLINE	<100	<100	NC	N/A	N/A	N/A	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
GASOLINE	N/A	20

SURROGATE RECOVERIES	SAMPLE	SAMPLE DUP.	LIMITS
TRIFLUOROTOLUENE	105	106	50 - 150

NC = Not Calculable.

Analytical Technologies, Inc.

ATI I.D. # 9405-204

BETX - GASOLINE
QUALITY CONTROL DATA

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX
SAMPLE MATRIX : WATER
METHOD : WA DOE WTPH-G/8020(BETX)

SAMPLE I.D. # : 9405-204-1
DATE EXTRACTED : N/A
DATE ANALYZED : 05/26/94
UNITS : ug/L

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
BENZENE	<0.500	N/A	N/A	20.0	18.9	95	18.6	93	2
TOLUENE	<0.500	N/A	N/A	20.0	18.7	94	18.9	95	1
TOTAL XYLENES	<0.500	N/A	N/A	40.0	37.4	94	37.3	93	0
GASOLINE	<100	<100	NC	1000	1040	104	941	94	10

CONTROL LIMITS	% REC.	RPD
BENZENE	86 - 113	10
TOLUENE	87 - 114	10
TOTAL XYLENES	85 - 113	10
GASOLINE	80 - 113	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
BROMOFLUOROBENZENE	100	100	76 - 120
TRIFLUOROTOLUENE	104	106	50 - 150

NC = Not Calculable.

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: N/A
PROJECT #	: 60-1232-02	DATE RECEIVED	: N/A
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/25/94
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 05/25/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<0.25
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	96	50 - 150

Analytical**Technologies**, Inc.

ATI I.D. # 9405-204-1

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/25/94
CLIENT I.D.	: KMW0105254	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	<0.25
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	108	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204-2

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/25/94
CLIENT I.D.	: KMW0205254	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	0.53
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	105	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204-3

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/25/94
CLIENT I.D.	: KMW0305254	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	0.28
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	107	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204-4

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE SAMPLED	: 05/25/94
PROJECT #	: 60-1232-02	DATE RECEIVED	: 05/25/94
PROJECT NAME	: CENEX	DATE EXTRACTED	: 05/25/94
CLIENT I.D.	: KMW0405254	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
FUEL HYDROCARBONS	0.32
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY		LIMITS
O-TERPHENYL	96	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/25/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/25/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
DIESEL	<0.250	2.50	2.15	86	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
DIESEL	70 - 114	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
O-TERPHENYL	92	N/A	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-194-7
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/25/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	1.31	0.699	61F	N/A	N/A	N/A	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
DIESEL	N/A	20

SURROGATE RECOVERIES	SAMPLE	SAMPLE DUP.	LIMITS
O-TERPHENYL	108	98	50 - 150

F = Out of limits due to matrix interference.

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-194-9
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/25/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D		

COMPOUNDS	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	0.266	0.301	12	N/A	N/A	N/A	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
DIESEL	N/A	20

SURROGATE RECOVERIES	SAMPLE	SAMPLE DUP.	LIMITS
O-TERPHENYL	100	97	50 - 150

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-194-1
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/25/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/26/94
SAMPLE MATRIX	: WATER	UNITS	: mg/L
METHOD	: WA DOE WTPH-D		

COMPOUND	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	9.35	2.65	21.0	F	N/A	N/A	N/A

CONTROL LIMITS	% REC.	RPD
DIESEL	56 - 135	20

SURROGATE RECOVERIES	SPIKE	DUP. SPIKE	LIMITS
O-TERPHENYL	116	N/A	50 - 150

F = Out of limits due to matrix interference.

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
DATA SUMMARY

CLIENT	: KLEINFELDER, INC.	DATE EXTRACTED	: 05/26/94
PROJECT #	: 60-1232-02	DATE ANALYZED	: 05/31/94
PROJECT NAME	: CENEX	UNITS	: mg/L
METHOD	: WA DOE WTPH-418.1 MODIFIED	SAMPLE MATRIX	: WATER

ATI I.D. #	CLIENT I.D.	TOTAL PETROLEUM HYDROCARBONS
9405-204-1	KMW0105254	<1
9405-204-2	KMW0205254	<1
9405-204-3	KMW0305254	<1
9405-204-4	KMW0405254	<1
METHOD BLANK	-	<1

Analytical Technologies, Inc.

ATI I.D. # 9405-204

TOTAL PETROLEUM HYDROCARBONS
QUALITY CONTROL DATA

CLIENT	: KLEINFELDER, INC.	SAMPLE I.D. #	: 9405-214-1
PROJECT #	: 60-1232-02	DATE EXTRACTED	: 05/26/94
PROJECT NAME	: CENEX	DATE ANALYZED	: 05/31/94
METHOD	: WA DOE WTPH-418.1 MODIFIED	UNITS	: mg/L
SAMPLE MATRIX	: WATER		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
PETROLEUM HYDROCARBONS	<1.00	<1.00	NC	N/A	N/A	N/A	N/A	N/A	N/A

NC = Not Calculable.

$$\% \text{ Recovery} = \frac{(\text{Spiked Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Spike Result} - \text{Dup. Spike Result})|}{\text{Average Result}} \times 100$$

Analytical Technologies, Inc.

ATI I.D. # 9405-204

METALS ANALYSIS

CLIENT : KLEINFELDER, INC. MATRIX : WATER
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

ELEMENT	DATE PREPARED	DATE ANALYZED
LEAD (SAMPLES -1D, -3D, -4D)	05/31/94	06/01/94
LEAD (SAMPLES -1T THROUGH -4T, -2D)	06/02/94	06/02/94

Analytical Technologies, Inc.

ATI I.D. # 9405-204

METALS ANALYSIS
DATA SUMMARY

CLIENT : KLEINFELDER, INC. MATRIX : WATER
PROJECT # : 60-1232-02
PROJECT NAME : CENEX UNITS : mg/L

ATI I.D. #	CLIENT I.D.	LEAD (TOTAL)	LEAD (DISSOLVED)
9405-204-1	KMW0105254	<0.0030	<0.0030
9405-204-2	KMW0205254	0.0035	<0.0030
9405-204-3	KMW0305254	0.011	<0.0030
9405-204-4	KMW0405254	<0.0030	<0.0030
METHOD BLANK	-	<0.0030	<0.0030
METHOD BLANK	-	-	<0.0030

Analytical Technologies, Inc.

ATI I.D. # 9405-204

METALS ANALYSIS
QUALITY CONTROL DATA

CLIENT : KLEINFELDER, INC.
PROJECT # : 60-1232-02
PROJECT NAME : CENEX

MATRIX : WATER
UNITS : mg/L

ELEMENT	ATI I.D.	SAMPLE RESULT	DUP RESULT	RPD	SPIKED RESULT	SPIKE ADDED	% REC
LEAD	BLANK	<0.0030	N/A	N/A	0.0253	0.0250	101
LEAD	BLANK	<0.0030	N/A	N/A	0.0234	0.0250	94
LEAD	9405-204-1D	<0.0030	<0.0030	NC	N/A	N/A	N/A
LEAD	9405-204-2D	0.0040	N/A	N/A	0.0284	0.0250	98
LEAD	9405-234-1D	0.0033	0.0036	9	0.0289	0.0250	102

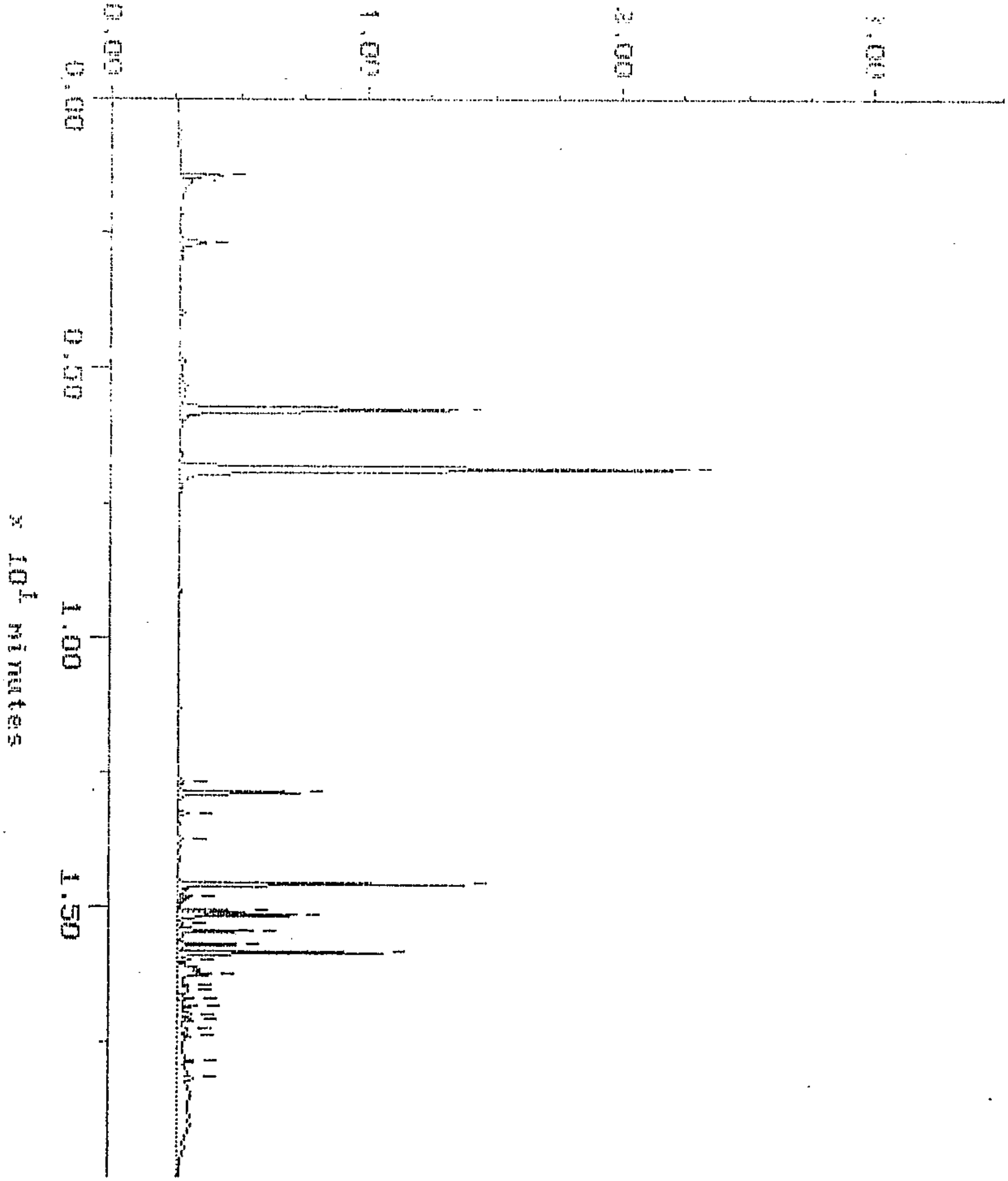
NC = Not Calculable.

$$\%\ \text{Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{|(\text{Sample Result} - \text{Duplicate Result})|}{\text{Average Result}} \times 100$$

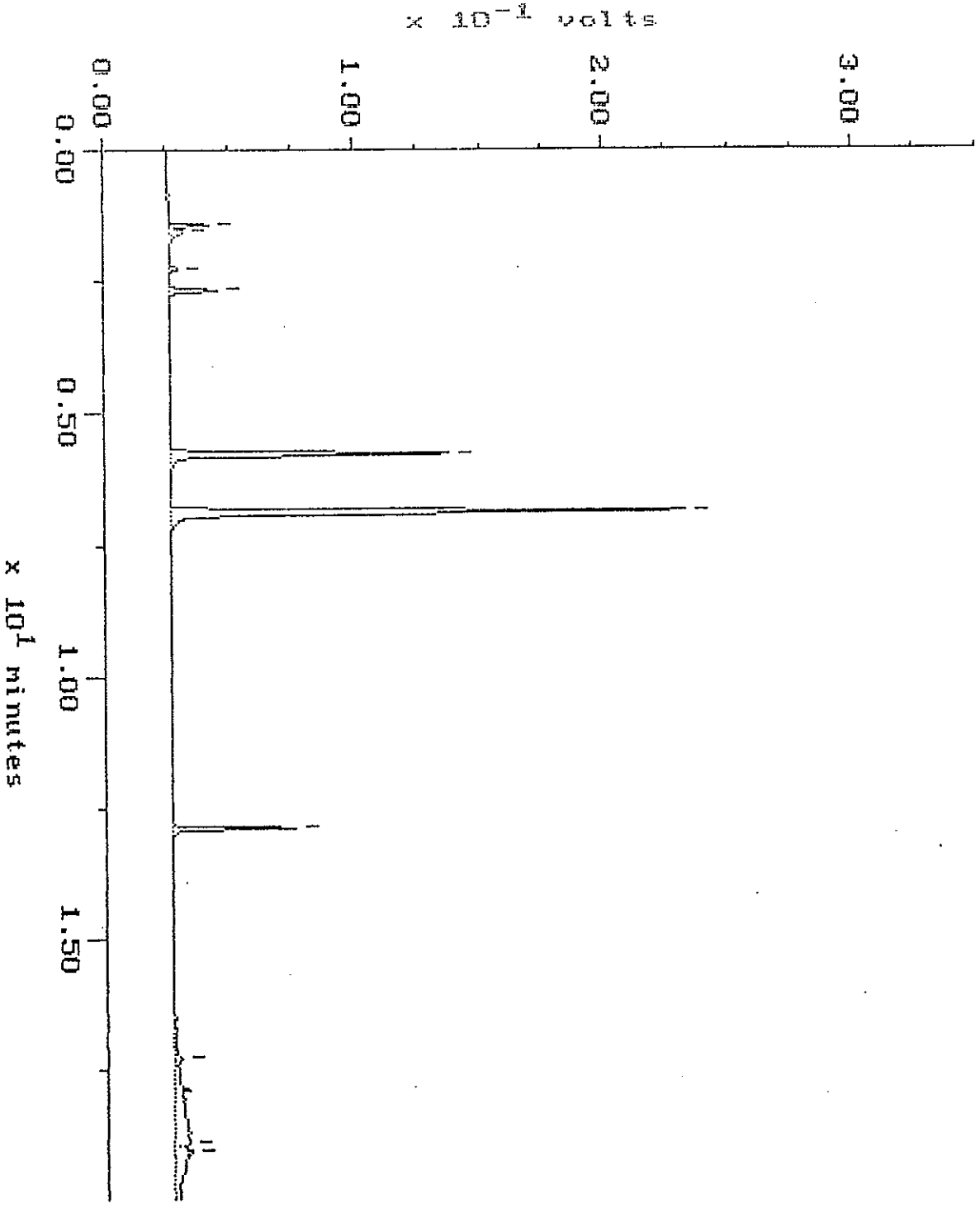
WA [illegible] WTPH-G

Sample: 9405-294-2 Channel: FID Filename: RE259P22
Acquired: 23-MAY-94 11:31 Method: [illegible] Operator: ATI
Comments: ATI FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY.



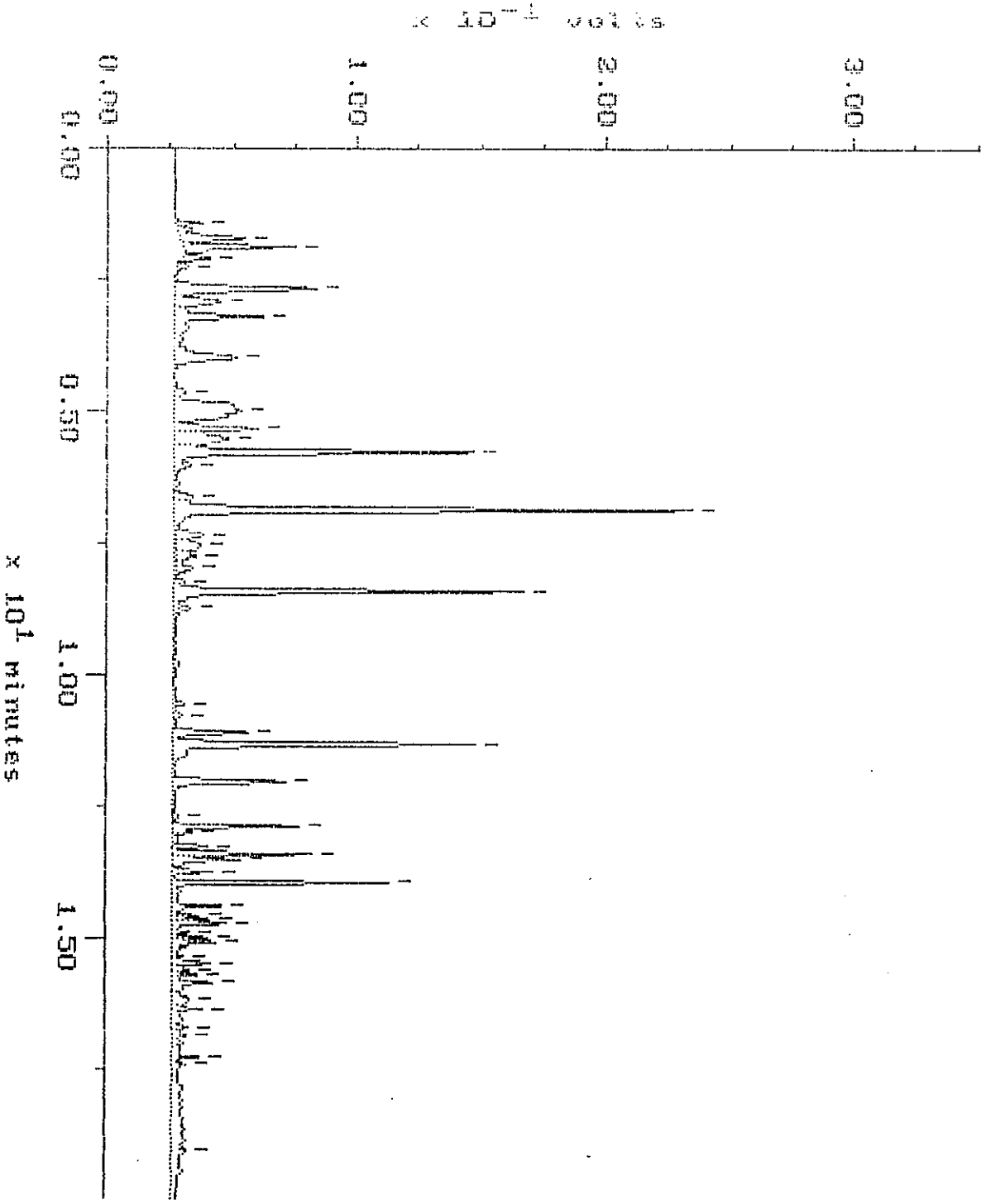
WA DOE WTPH-G Blank

Sample: WRB 5-26 Channel: FID Filename: R5269P03
Acquired: 26-MAY-94 11:18 Method: F:\BRD2\MAXDATA\PICARD\052694PC Operator: ATI
Comments: ATI FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY.

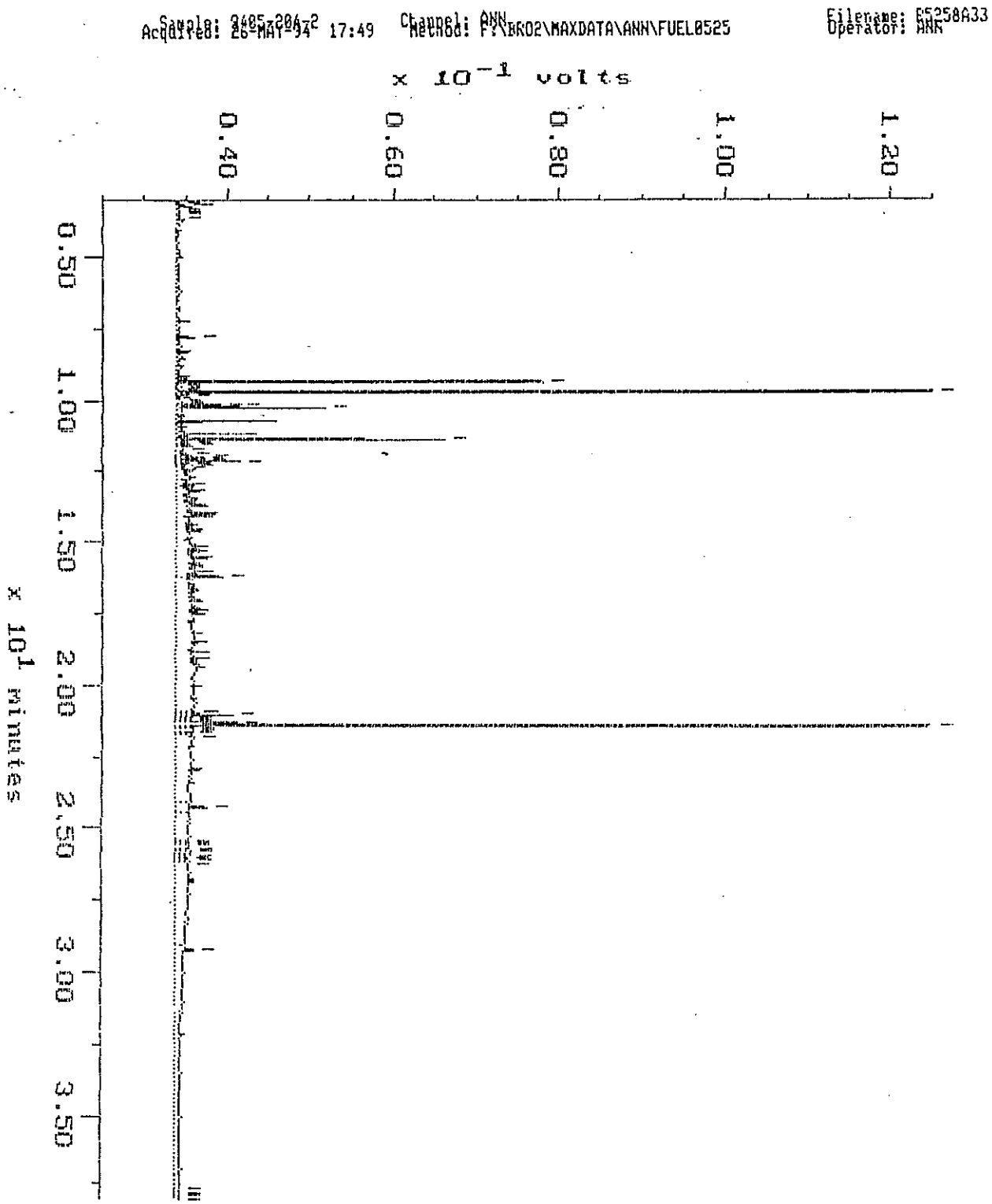


CONTINUING CALIBRATION

Sample: STD C 3 Channel: FID Filename: R5283P01
Acquired: 28-MAY-94 9:41 Method: F:\BRO2\MAXDATA\PICARD\052894PC Operator: ATI
Comments: ATI FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY.

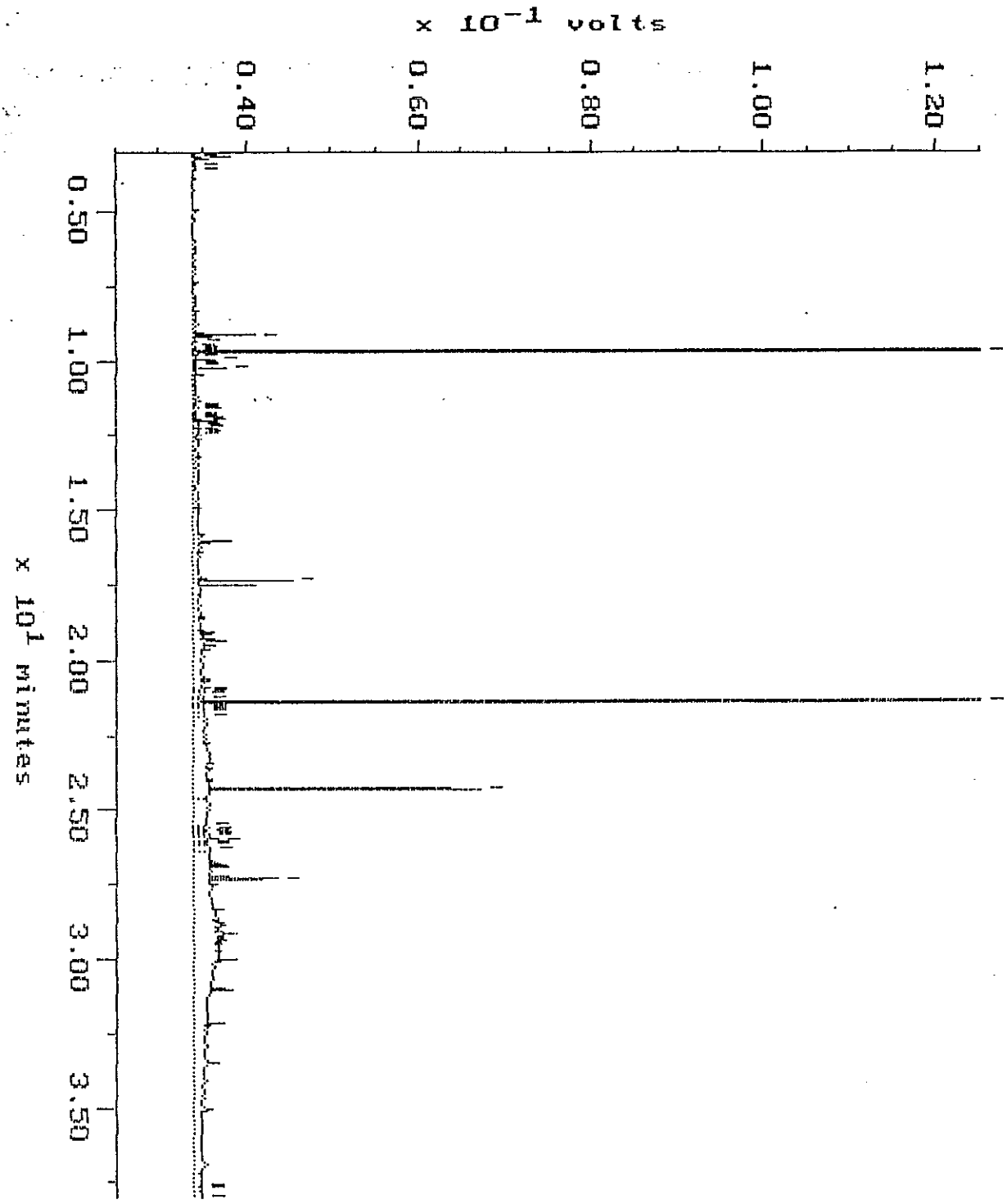


WA DOE WTPH-D


Sample: 9405z20A-2
Acquired: 26-MAY-94 17:49
Channel: ANN
Method: F:\BRO2\MAXDATA\ANN\FUEL0525
Filename: 05250A33
Operator: ANN
x 10⁻¹ volts
0.40
0.60
0.80
1.00
1.20
0.50
1.00
1.50
2.00
2.50
3.00
3.50
x 10¹ minutes

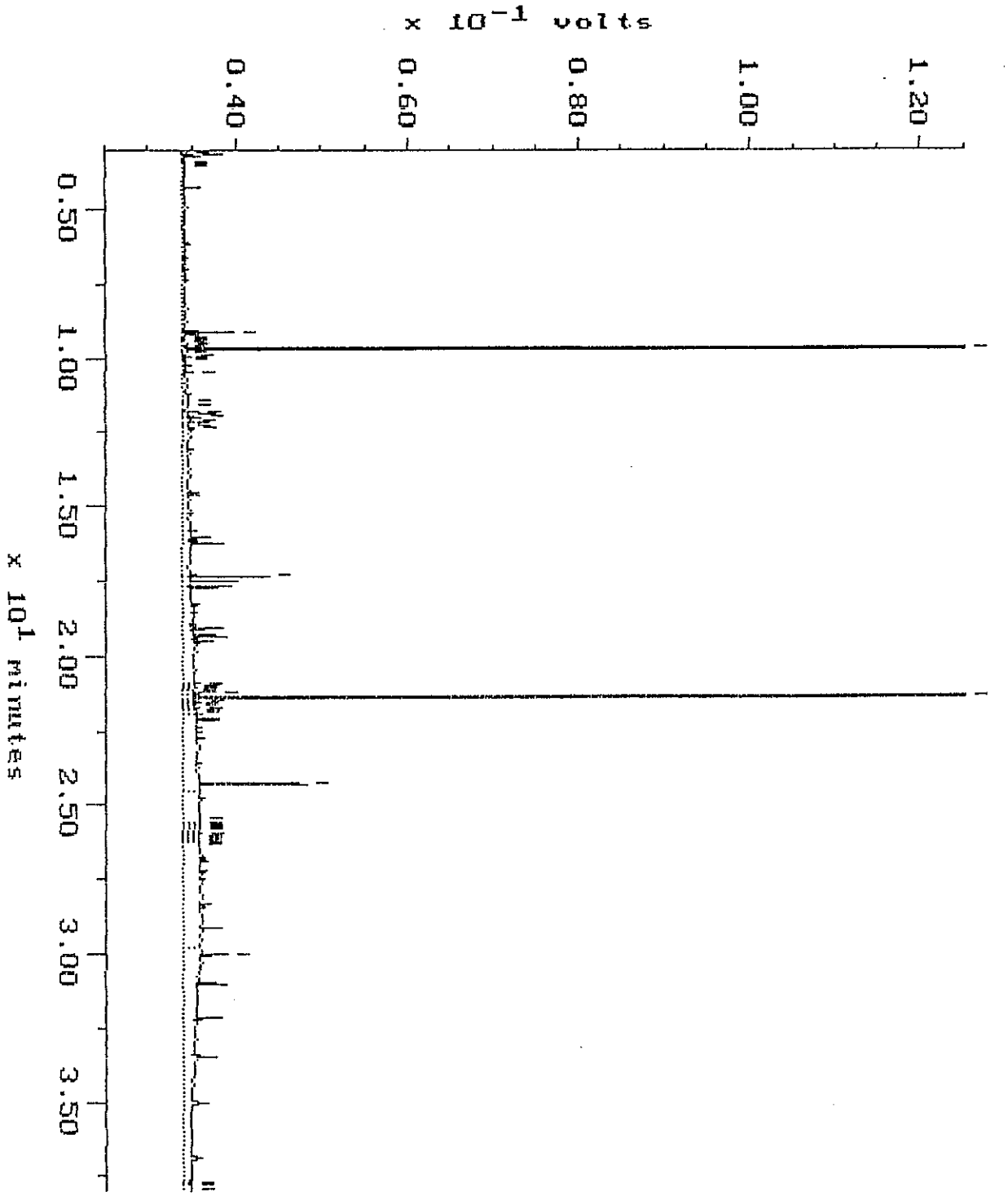
WA DOE WTPH-D

Sample: 9405-204-3 Channel: ANN Filename: R5268A02
Acquired: 26-MAY-94 19:27 Method: F:\BRO2\MAXDATA\ANN\FUEL0526 Operator: ANN

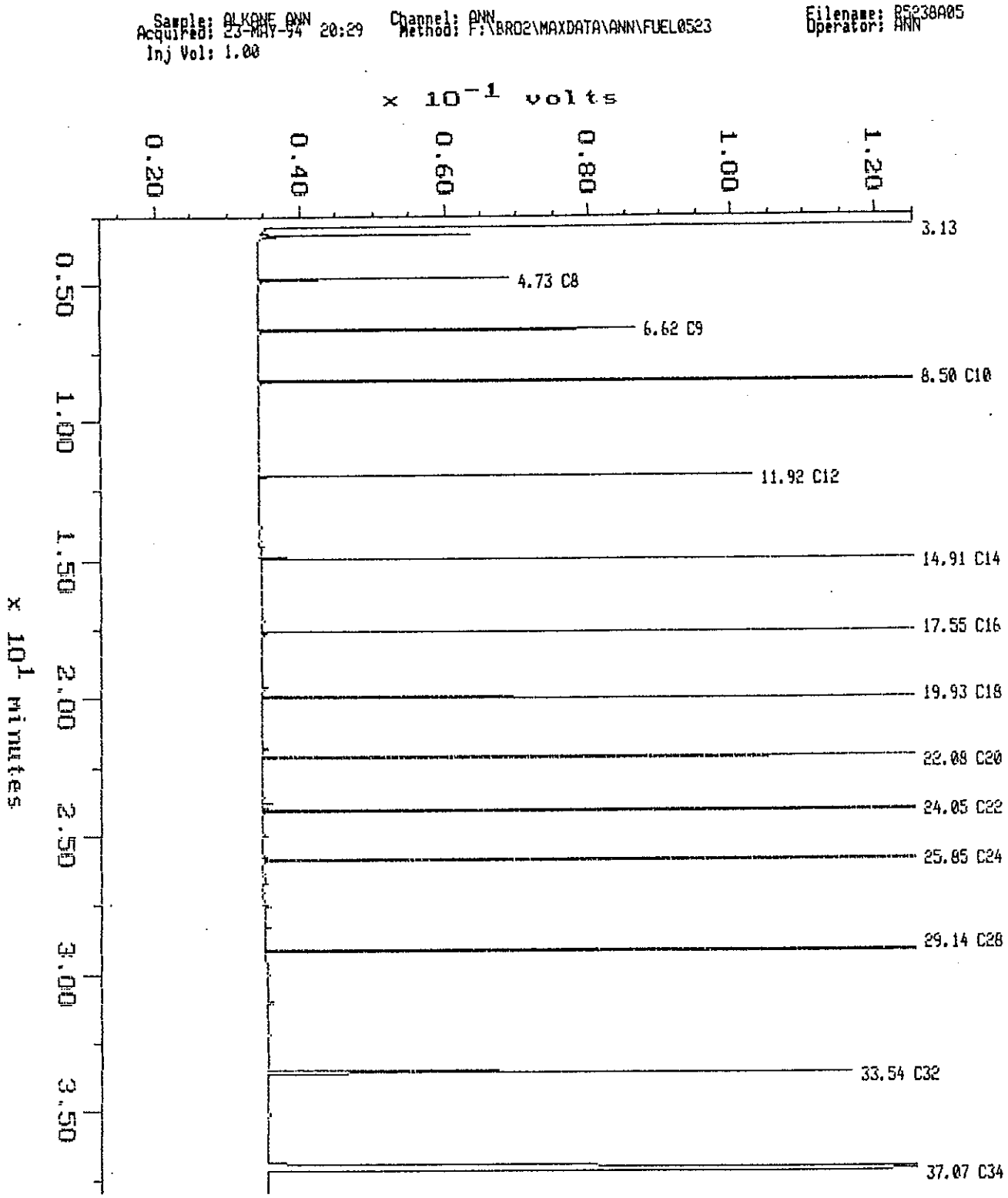


WA DOE WTPH-D

Sample: 9405-204-4 Channel: ANN Filename: R5268A03
Acquired: 26-MAY-94 20:15 Method: F:\BR02\MAXDATA\ANN\FUEL0526 Operator: ANN



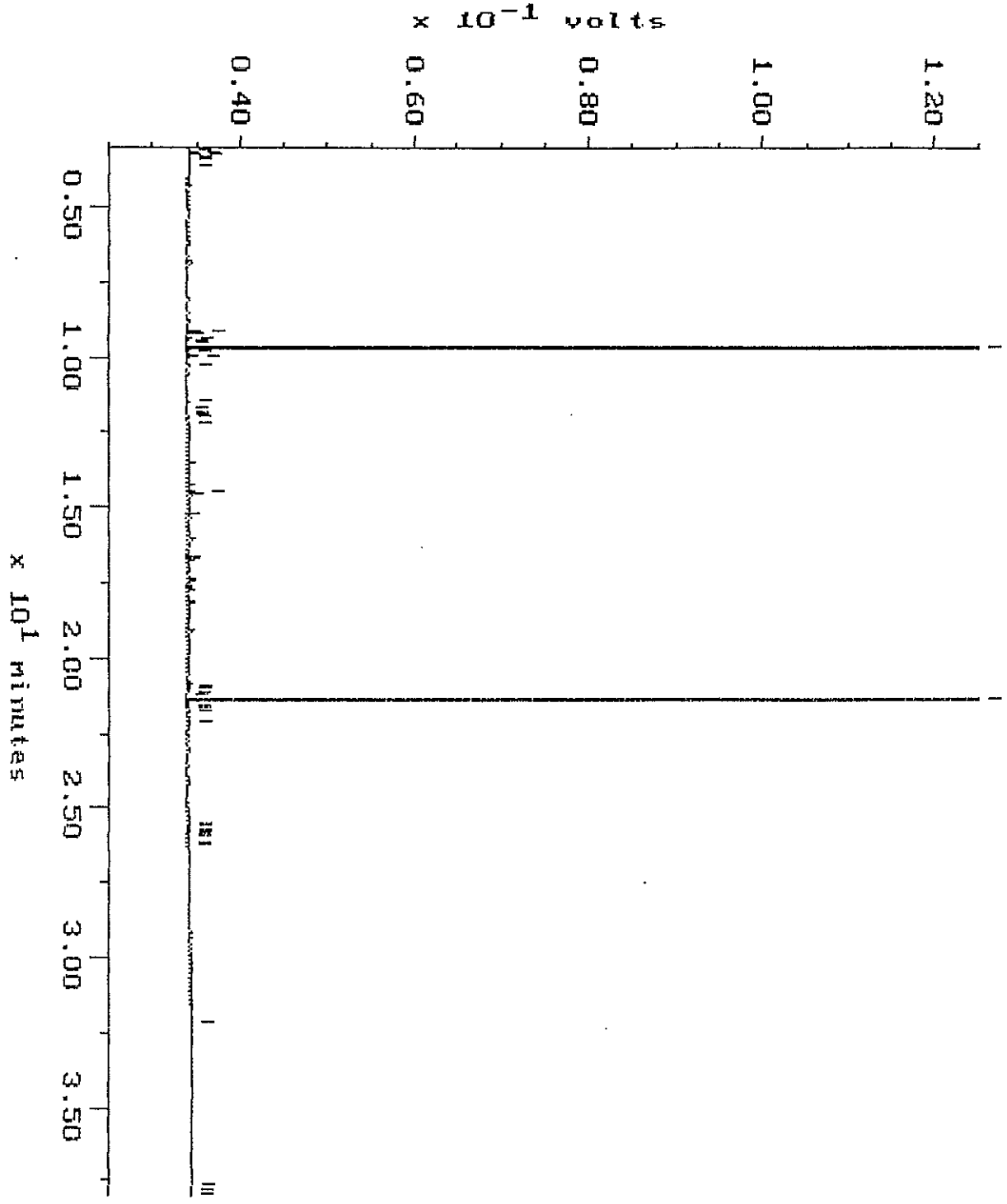
Alkane


Sample: ALKANE ANN
Acquired: 23-MAY-94 20:29
Inj Vol: 1.00
Channel: ANN
Method: F:\BRO2\MAXDATA\ANN\FUEL0523
Filename: R5038A05
Operator: ANN
x 10⁻¹ volts
0.20
0.40
0.60
0.80
1.00
1.20
0.50
1.00
1.50
2.00
2.50
3.00
3.50
x 10¹ minutes
3.13
4.73 C8
6.62 C9
8.50 C10
11.92 C12
14.91 C14
17.55 C16
19.93 C18
22.08 C20
24.05 C22
25.85 C24
29.14 C28
33.54 C32
37.07 C34

Blank

WA DOE WTPH-D

Sample: WRB 5-25 Channel: ANN Filename: R5258A10
Acquired: 25-MAY-94 21:17 Method: F:\BRO2\MAXDATA\ANN\FUEL0525 Operator: ANN

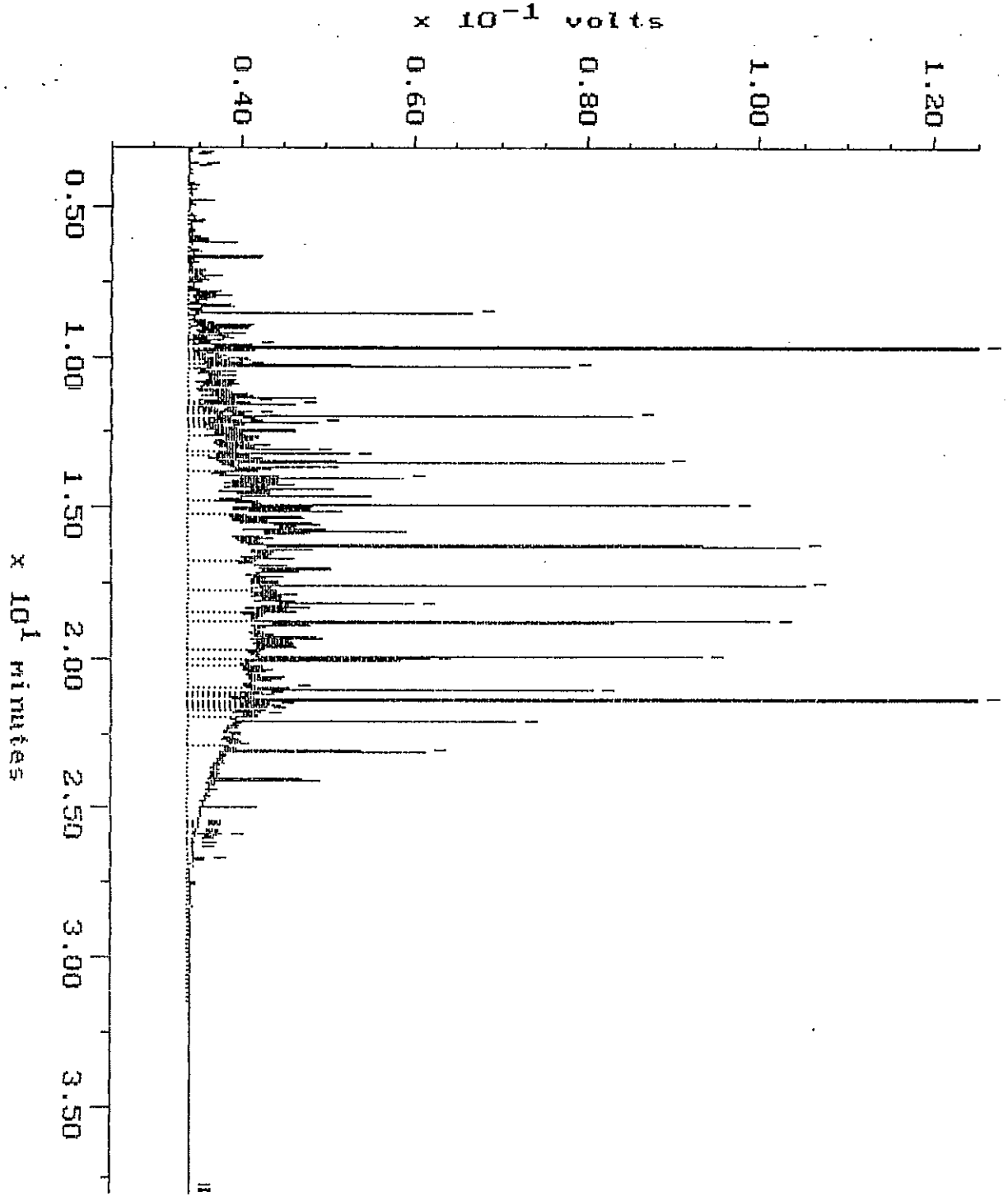


CONTINUING CALIBRATION

Sample: D 500
Acquired: 25-MAY-94 14:52

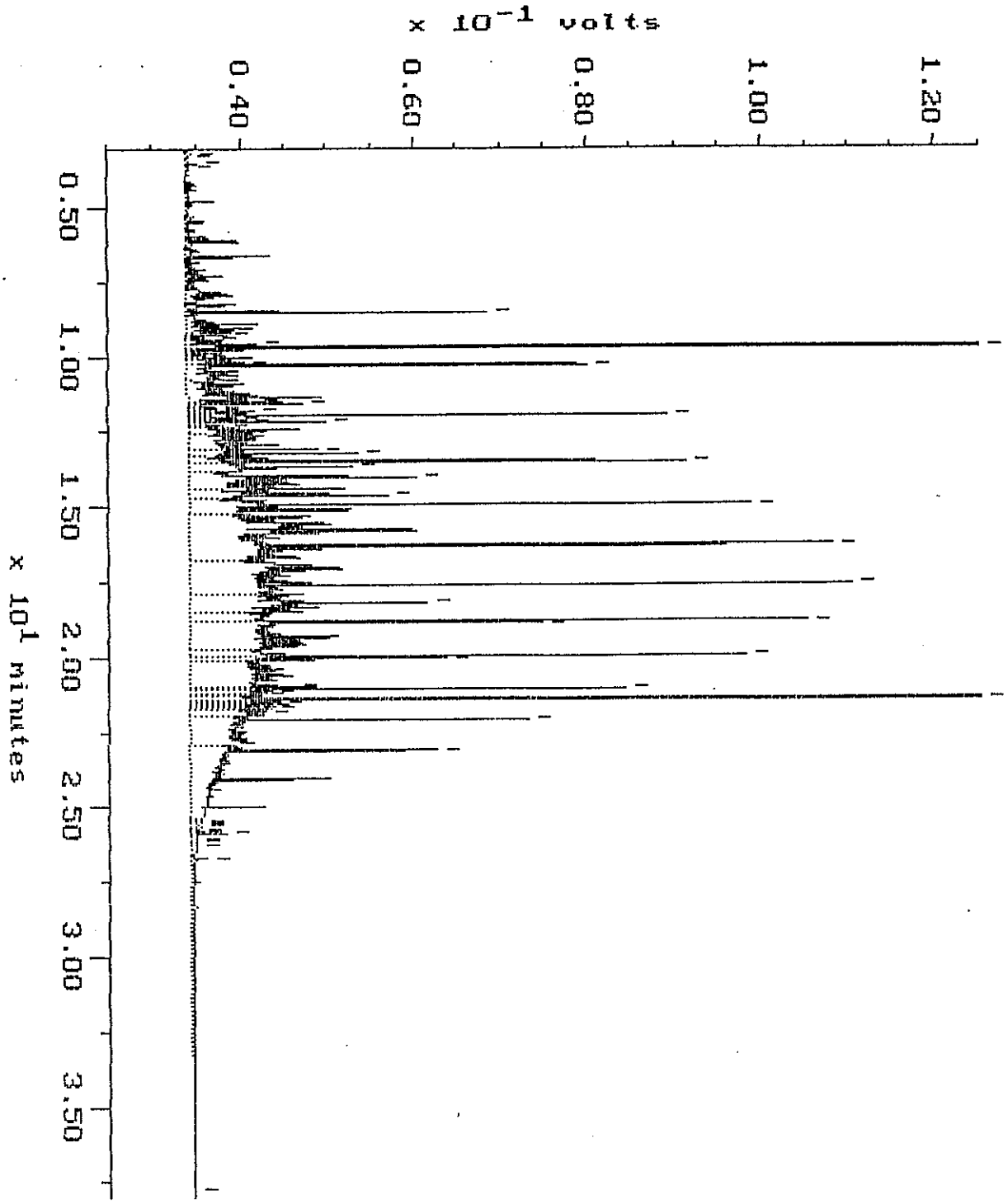
Channel: ANN
Method: F:\BRO2\MAXDATA\ANN\FUEL0525

Filename: R5258A02
Operator: ANN



CONTINUING CALIBRATION

Sample: D-500
Acquired: 26-MAY-94 18:38
Channel: ANN
Method: F:\BR02\MAXDATA\ANN\FUEL0526
Filename: R5268A01
Operator: ANN



AnalyticalTechnologies,Inc.
560 Naches Avenue, S.W., Suite 101, Renton, WA 98055 (206) 228-8335

DATE: 5/25/94 Page 1 of 1 ATI ACCESSION # 9405-204

COMPANY: Kleinfelder
REPORT TO: Mark Wicklein
ADDRESS: 3350 146th Place SE
Bellevue, WA 98007
PHONE: (206) 562-4200 FAX: (206) 562 4201
PROJECT MANAGER: Mark Wicklein
PROJECT NUMBER: 10-1232-02
PROJECT NAME: [illegible]

ATI will DISPOSE / RETURN samples (circle one)

Sample ID	Date	Time	Matrix	LabID
KMW0105254	5/25	AM	H_2O	1
KMW0205254	↓	↓	↓	2
KMW0305254	↓	↓	↓	3
KMW0405254	↓	↓	↓	4

FUELS

LabID	TPH-HCID WA/OR	BETX/TPH-G combo WA/OR	BETX (by 8020)	TPH-G WA/OR	TPH-D WA/OR	8015 modified	418.1 WA/OR	413.2	AK-GRO	AK-DRO
1		X			X		X			
2		X			X		X			
3		X			X		X			
4		X			X		X			

ORGANIC COMPOUNDS

LabID	8240 GCMS Volatiles	8270 GCMS Semivolatiles	8080 Pesticides/PCBs	PCB only (by 8080) STD/lo level	8010 Halogenated VOCs	8020 Aromatic VOCs	8310 HPLC PAHs	8040 Phenols	8140 OP Pesticides	8150 OC Herbicides
1										
2										
3										
4										

METALS / TCLP

LabID	Metals (Indicate below *)	Total Lead	Priority Pollutant Metals (13)	TAL Metals (23)	TCLP-Volatiles (ZHE-8240)	TCLP-Semivolatiles (8270)	TCLP-Pesticides (8080)	TCLP-Herbicides (8150)	TCLP-Metals (8 metals)
1		X							
2		X							
3		X							
4		X							

OTHER

LabID	% Moisture (please indicate)	Dissolved lead	(lab needs to filter)			Total # of Containers/sample
1		X				6
2		X				6
3		X				6
4		X				6

Turnaround Time	
STANDARD TAT	X
1 WEEK TAT	
4 WORK DAY TAT	
3 WORK DAY TAT	
2 WORK DAY TAT	
24 HOUR TAT	

Sample Receipt	
TOTAL # CONTAINERS RECVD	24
COC SEALS PRESENT?	Y
COC SEALS INTACT?	Y
RECEIVED COLD?	Y
RECEIVED INTACT?	Y
RECEIVED VIA:	Air[illegible]

Special Instructions: Please [illegible] [illegible] 4/30, ATI needs to filter samples for dissolved lead
* Metals needed:

Relinquished By:	Relinquished By:	Relinquished By:
Mark Wicklein [signature] Date: 5/25/94 Time: 1440	Date: Time:	Date: Time:
Received By:	**Received By:**	**Received By:**
[signature] M. Postma Date: 5/25/94 Time: 1410	Date: Time:	Date: Time:

APPENDIX D

APPLICATION FOR AUTHORIZATION TO USE

ENVIRONMENTAL SITE ASSESSMENT
CENEX FEED PLANT
1801 TAYLOR WAY
TACOMA, WASHINGTON

KLEINFELDER PROJECT NUMBER 60-1232-02

Dated October 31, 1994

TO: Kleinfelder, Inc.
3380 146th Place S.E., Suite 110
Bellevue, Washington 98007

FROM:

Gentlemen:

Applicant _____ hereby applies for permission to:
[State here the use(s) contemplated]

for the purpose(s) of:
[State here why you wish to do what is contemplated as set forth above]

Applicant understands and agrees that the above identified document is a copyrighted document, that Kleinfelder, Inc. and Kleinfelder's client are the copyright owner and that unauthorized use or copying of this document is strictly prohibited without the express written permission of Kleinfelder, Inc. Applicant understands that Kleinfelder, Inc. or Kleinfelder's client may withhold such permission at its sole discretion, or grant such permission upon such terms and conditions as it deems acceptable.

Dated: _____

_____
Applicant

by_____

its_____