

A Report Prepared For

GTE Northwest Incorporated  
1800 41st Street, WA0104LB  
Everett, Washington 98201

DEPARTMENT OF ECOLOGY  
UNDERGROUND STORAGE TANKS

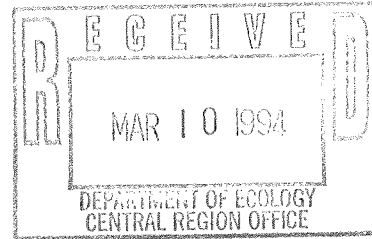
FEB 10 1994

CONTAMINATION ASSESSMENT REPORT  
GTE HIGHLAND GARAGE FACILITY  
GTE W.O. #4865-B02-7C001AA  
KENNEWICK, WASHINGTON

AGI Project No. 15,169.144

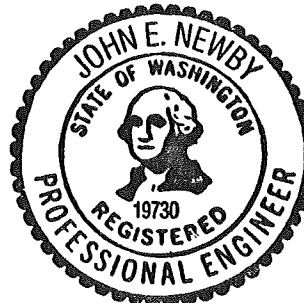
State ID# 012375

by:



*Jeffrey S. Thompson / GMB*  
Jeffrey S. Thompson  
Engineering Geologist

*John E. Newby*  
John E. Newby, P. E.  
President



EXPIRES 8/13/95

APPLIED GEOTECHNOLOGY INC.  
300 120th Avenue N.E.  
Building 4, Suite 215  
Bellevue, Washington 98005  
206/453-8383

February 7, 1994

## INTRODUCTION

### GENERAL

This report presents Applied Geotechnology Inc.'s (AGI) assessment of potential hydrocarbon contamination originating from three underground storage tanks (UST) and fuel dispensers located at the GTE Highland Garage Facility (site) in Kennewick, Washington.

AGI performed this assessment in accordance with the scope of services presented in our July 6, 1993 proposal for monitoring UST removal activities associated with existing 1,000-gallon waste oil, 3,000-gallon diesel, and 12,000-gallon gasoline USTs. UST removal activities and excavation of petroleum-contaminated soil (PCS) were conducted on November 10 and 11, 1993 under the observation of an AGI representative. Heritage Construction of Everett, Washington was the contractor for UST removal services.

### PURPOSE AND SCOPE OF SERVICES

The purpose of our contamination assessment was to observe and document the removal of three USTs and excavation of PCS associated with the UST systems. Our scope of services included the following tasks:

- ▶ Monitor removal of the USTs and associated fuel dispensers.
- ▶ Field screen soil samples for fuel hydrocarbons using an organic vapor meter equipped with a photoionization detector (OVM-PID).
- ▶ Monitor excavation of PCS using field screening and visual observations.
- ▶ Collect representative soil samples from the limits of the UST excavations.
- ▶ Submit soil samples for analysis of total petroleum hydrocarbons (TPH).
- ▶ Summarize our findings in this contamination assessment report.

## UST REMOVAL ACTIVITIES

### SITE DESCRIPTION

The site is located at 4916 West Clearwater in Kennewick, Washington. The three USTs are located in the northwest portion of the site near the west property boundary. Figure 1 shows the site location; Figure 2 shows the locations of buildings, USTs, and other site features.

A vehicle maintenance garage is located north of the USTs near the northwest corner of the property. The 1,000-gallon waste oil UST was located immediately south of the garage. A concrete-paved equipment and materials storage area (equipment area) is located south of the garage along the west property boundary. The 3,000-gallon diesel and 12,000-gallon unleaded gasoline USTs were located northeast of the equipment area.

A storage building is located north of the equipment area. One diesel fuel dispenser and one unleaded gasoline dispenser were located immediately north of the storage building. The ground surface above and surrounding the USTs consists of asphaltic and concrete pavement. The floor of the storage building and the equipment area is a 6-inch-thick concrete slab.

## **UST REMOVAL AND SOIL EXCAVATION**

### **Waste Oil UST**

The 1,000-gallon waste oil UST was found to be in good condition upon removal, with no holes or deep pitting. Soil samples from the bottom and sides of the UST cavity were field screened for organic vapor concentrations to evaluate the potential for hydrocarbon contamination. The total depth of the waste oil UST excavation was approximately 7 feet below ground surface (bgs). Figure 3 shows soil sample locations and limits of the waste oil UST excavation.

Field screening indicated no organic vapor concentrations in soil samples collected from the sides and bottom of the excavation, or in a sample collected from soil formerly overlying the UST. Additional soil samples were collected from the sides and bottom of the excavation and submitted to Analytical Technologies, Inc. (ATI) for petroleum hydrocarbon analysis. Soil samples from adjacent excavation sides (north/east and south/west) were combined. The excavation was backfilled using the overlying soil.

Table 1 presents laboratory analytical results for soil samples collected from the waste oil UST excavation. The results indicate no petroleum hydrocarbon concentrations above laboratory detection limits. ATI's laboratory reports and AGI's quality assurance (QA) reports are included in the appendix.

### **Diesel UST**

The 3,000-gallon diesel and 12,000-gallon unleaded gasoline USTs were removed from a single excavation located northeast of the storage building. The diesel UST was removed first, from the south portion of the excavation, and found to be in good condition, with no holes or deep pitting. The total depth of the diesel UST excavation was approximately 8 feet bgs.

Field screening of soil samples from the bottom, east, and west sides of the south portion of the excavation indicated no organic vapor concentrations; however, organic vapor concentrations were detected in a soil sample from the south side of the excavation near the diesel UST fill port. Between 5 and 10 cubic yards (cyd) of PCS was excavated from the south side of the UST cavity and temporarily stockpiled on site. Subsequent field screening of soil samples from the south side of the excavation indicated no organic vapor concentrations.

After PCS excavation, one discrete soil sample (D1) was collected from the bottom of the excavation beneath the diesel UST fill port, and a three-point composite sample (D2) was collected from the sides of the excavation adjacent to the diesel UST (east, south, and west sides). Figure 3 shows soil sample

locations and final limits of excavation. One additional discrete soil sample (D3) was collected from that portion of the stockpile which showed the highest organic vapor concentrations as indicated by field screening. Soil samples were submitted to ATI for petroleum hydrocarbon analysis.

Table 1 summarizes laboratory analytical results, which indicate no petroleum hydrocarbons above laboratory detection limits in soil samples collected from the sides and bottom of the excavation. Sample D3, collected from the diesel UST soil stockpile, contained 610 milligrams per kilogram (mg/kg) of diesel-range hydrocarbons as quantitated by Washington Department of Ecology (Ecology) method WTPH-D. This concentration exceeds the Model Toxics Control Act (MTCA)<sup>1</sup> Method A soil cleanup level of 200 mg/kg for diesel.

#### Gasoline UST

The 12,000-gallon unleaded gasoline UST was also found to be in good condition with no holes or deep pitting. Field screening of soil samples from the bottom and sides of the excavation indicated organic vapor concentrations in a soil sample from the east side, adjacent to the gasoline UST fill port. Approximately 10 cyd of PCS was excavated from the east side of the UST cavity and temporarily stored on site in a separate stockpile. The total depth of the gasoline UST excavation was approximately 12 to 14 feet bgs. Subsequent field screening of samples collected from the east side of the excavation indicated no organic vapor concentrations.

After PCS excavation, one discrete soil sample (G1) was collected from the bottom of the excavation beneath the gasoline UST fill port, and another three-point composite sample (G2) was collected from the three sides of the excavation adjacent to the gasoline UST (north, east, and west sides). Figure 3 shows soil sample locations and final limits of excavation. One three-point composite sample (G3) was collected from the excavated soil formerly overlying the diesel and gasoline USTs, and one discrete soil sample (G4) was collected from that portion of the gasoline PCS stockpile which showed the highest organic vapor concentrations as indicated by field screening. Soil samples were submitted to ATI for petroleum hydrocarbon analysis.

Table 1 summarizes laboratory analytical results, which indicate no petroleum hydrocarbon concentrations above laboratory detection limits in soil samples collected from the excavation, from the overlying soil, or from stockpiled soil excavated from around the gasoline fill port. The excavation was backfilled using the overlying soil and imported soil.

#### Dispenser Excavation

The unleaded gasoline and diesel dispensers formerly located north of the storage building were disassembled prior to our site visit, although the concrete support slabs beneath the dispensers were in-place and intact upon our arrival. Visible staining of the concrete support slab and adjacent soil

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<sup>1</sup> MTCA promulgated by Washington Administrative Code (WAC) 173-340.

*gasoline & diesel*

indicated potential hydrocarbon contamination in soil beneath the diesel dispenser. No staining of the gasoline dispenser support slab or adjacent soil was observed. After the dispenser support slabs were removed, field screening indicated organic vapor concentrations in soil samples collected from beneath the diesel dispenser.

Excavation was performed to remove apparently contaminated soil associated with the diesel dispenser. PCS excavation was limited by the storage building, but extended approximately 23 feet north and 17 feet east of the building where soil was removed to Method A cleanup levels. Field screening indicated organic vapor concentrations in samples collected between 3 and 9 feet bgs from the excavation side adjoining the north side of the storage building. The final depth of excavation, which included the area beneath both dispensers, was between 12 and 14 feet bgs. Figure 3 shows the final limits of the excavation.

No groundwater was encountered during excavation. The water table is likely many tens of feet bgs based on the difference in elevation of approximately 150 feet between the site and the Columbia River, located about 1 mile north.

After dispenser removal and PCS excavation, a series of soil samples were collected from the excavation sides and bottom. Samples DE1 through DE4 and part of DE7 represent soil at the limits of excavation adjacent to the building. Samples DE5, DE6, and part of DE7 represent soil on all other sides of the excavation. Two adjacent discrete samples, spaced between 10 and 20 feet apart, were combined to form DE5 through DE7. Samples DE8 and DE9 represent the bottom of the excavation. Samples DE10 and DE11 represent soil removed during excavation and stockpiled. Figure 3 shows sample locations. Samples were submitted to ATI for petroleum hydrocarbon analysis.

Table 2 summarizes analytical results. Petroleum hydrocarbons in excess of Method A cleanup levels were only detected in excavation samples DE1, DE3, and DE7. The results indicate hydrocarbon-contaminated soil remains in the excavation side that adjoins the north side of the storage building. Petroleum hydrocarbon concentrations in stockpiled soil also exceed Method A cleanup levels.

Between 125 and 150 cyd of soil was removed from the dispenser excavation and temporarily stored on site in a separate stockpile. Stockpile samples DE10 and DE11 indicate hydrocarbon concentrations above Method A cleanup levels.

#### SOIL DISPOSAL

A total of 140 to 170 cyd of hydrocarbon-contaminated soil was excavated during removal of the three USTs and the diesel dispenser. Stockpiled soil was transported off site for treatment and disposal by Remtech of Spokane, Washington on November 23, 1993.

#### CONCLUSIONS AND RECOMMENDATIONS

A 1,000-gallon waste oil UST, 3,000-gallon diesel UST, and a 12,000-gallon unleaded gasoline UST were excavated and removed from the site. Soils containing petroleum hydrocarbon concentrations above Method A cleanup levels were encountered during removal of the gasoline and diesel USTs and associated dispensers. These soils were excavated, except beneath the storage building, and transported off site for proper disposal.

The extent of hydrocarbon-contaminated soil remaining beneath the storage building appears to be limited. Hydrocarbon concentrations above MTCA Method A cleanup levels were detected in soil along the north side of the storage building at depths of 6 and 9 feet bgs; however, this contamination apparently does not extend to the east side of the building. Hydrocarbon contamination likely does not extend deeper beneath the storage building than the depth of excavation beneath the gasoline and diesel dispensers (12 to 14 feet bgs).

The remaining hydrocarbon-contaminated soil beneath the north side of the storage building does not pose an immediate threat to human health or the environment. This soil is apparently limited in vertical and horizontal extent and is covered by the storage building, which limits potential surface water infiltration and resultant contaminant migration. This soil is also likely many tens of feet above the regional groundwater level. We recommend the contaminated soil be removed when access is possible without impact to existing structures.

#### LIMITATIONS

Our conclusions are based on conditions encountered at the time of field observations, information provided by GTE, and our experience and field judgment. Our work has been performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the area. No other warranty, express or implied, is made.

DISTRIBUTION

3 Copies

GTE Northwest Incorporated  
1800 41st Street, WA0104LB  
Everett, Washington 98206

Attention: Mr. D. Scott Kindle

1 Copy

GTE Northwest Incorporated  
1800 41st Street, WA0105SS  
Everett, Washington 98206

Attention: Mr. Bill Westwood

Quality Assurance/Technical Review by:



Glen M. Bobnick, P.E.  
Senior Engineer

JST/JEN/jlh

**Table 1**  
**TPH Concentrations in Soil**  
**Waste Oil, Diesel, and Gasoline UST Excavations**  
 GTE/Kennewick Garage Facility  
 Kennewick, Washington

Sample I.D.	Sample Location	Test Method				
		Gasoline	WTPH-ID		WTPH-G	WTPH-D
			Diesel	Motor Oil	Gasoline	Diesel
		mg/kg			mg/kg	
<b>Waste Oil UST Excavation</b>						
WO1	Excavation bottom, 7' bgs	ND	ND	ND		
WO2	N & E sides, 5' bgs	ND	ND	ND		
WO3	S & W sides, 5' bgs	ND	ND	ND		
WO4	Overlying soil	ND	ND	ND		
<b>Diesel and Gasoline UST Excavation</b>						
D1	Excavation bottom, 8' bgs					ND
D2	S, E, & W sides, 5' bgs					ND
D3	Excavated soil					610
G1	Excavation bottom, 14' bgs				ND	
G2	N, E, & W sides, 7'bgs				ND	
G3	Overlying soil				ND	
G4	Excavated soil				ND	
Laboratory Detection Limits		20	50	100	6	12
State Cleanup Levels <sup>a</sup>		100	200	100	100	200

Notes:

- a) Method A suggested cleanup level for residential soil promulgated under Washington Administrative Code Chapter 173-340, Model Toxics Control Act Cleanup Regulation.
- bgs – Below ground surface.
- mg/kg – Milligrams per kilogram.
- ND – Not detected.

**Table 2**  
**TPH Concentrations in Soil**  
**Dispenser Excavation**  
 GTE/Kennewick Garage Facility  
 Kennewick, Washington

Sample I.D.	Sample Location	Test Method		
		WTPH-G	WTPH-D	Motor Oil
		Gasoline	Diesel	
		mg/kg		
DE1	N building side, 6' bgs	1,400	15,000	500
DE2	S building side, 6' bgs	ND	ND	ND
DE3	N building side, 9' bgs	950	15,000	510
DE4	S building side, 9' bgs	ND	ND	ND
DE5	S & E excavation sides, 9' bgs	ND	ND	ND
DE6	N & E excavation sides, 9' bgs	ND	ND	ND
DE7	W & S excavation sides 9' bgs	ND	43	290
DE8	S excavation bottom, 14' bgs	ND	12	ND
DE9	N excavation bottom, 12' bgs	ND	ND	ND
DE10	Soil stockpile	280	5,800	270
DE11	Soil stockpile	160	4,000	170
Laboratory Detection Limits		6	12	47
State Cleanup Limits <sup>a</sup>		100	200	200

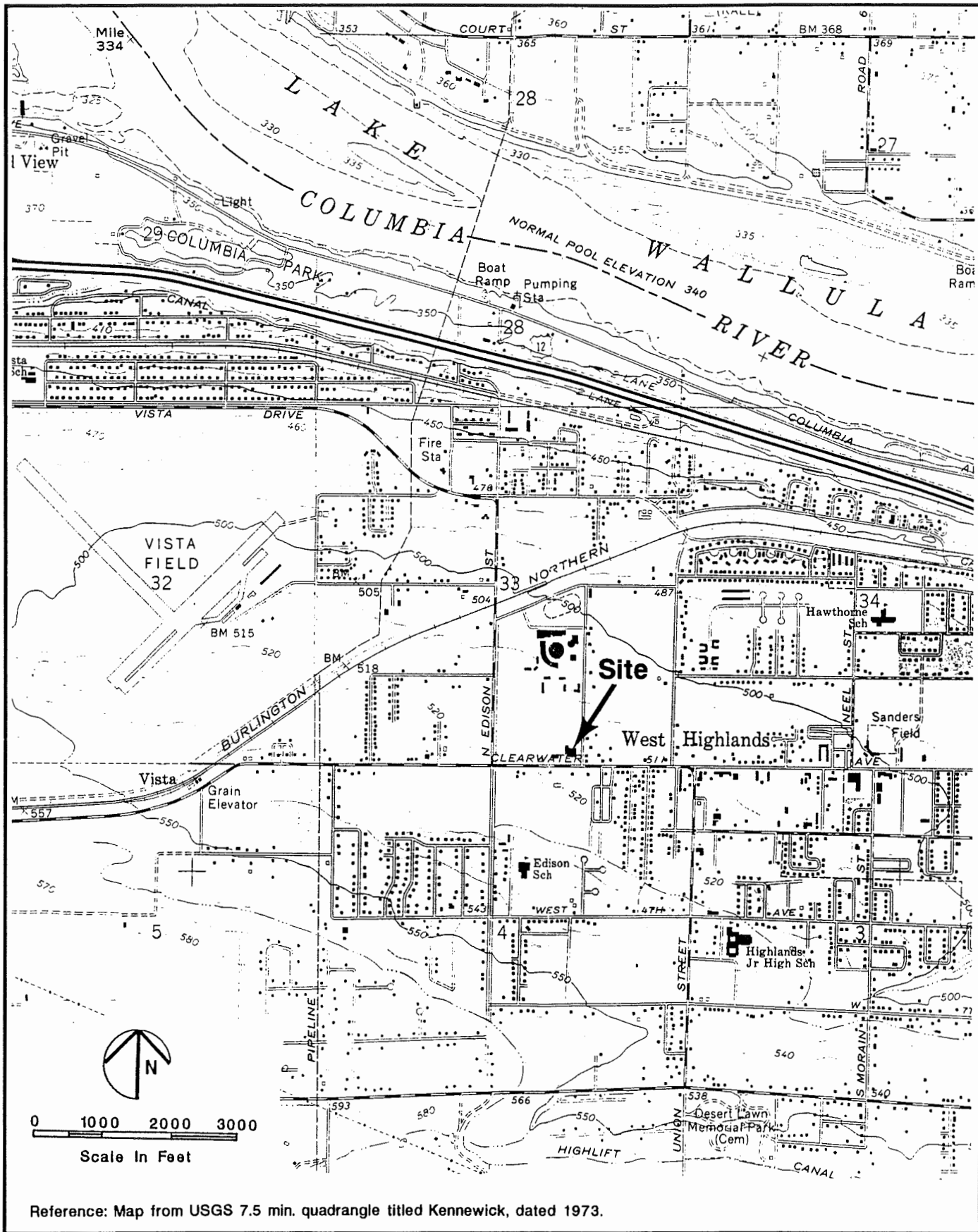
Notes:

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

bgs - Below ground surface.

mg/kg - Milligrams per kilogram.

ND - Not detected.



Reference: Map from USGS 7.5 min. quadrangle titled Kennewick, dated 1973.



**Applied Geotechnology Inc.**  
 Geotechnical Engineering  
 Geology & Hydrogeology

**Vicinity Map**  
 GTE/Kennewick Garage Facility  
 Kennewick, Washington

FIGURE

**1**

JOB NUMBER  
 15,169.144

DRAWN  
 DFF

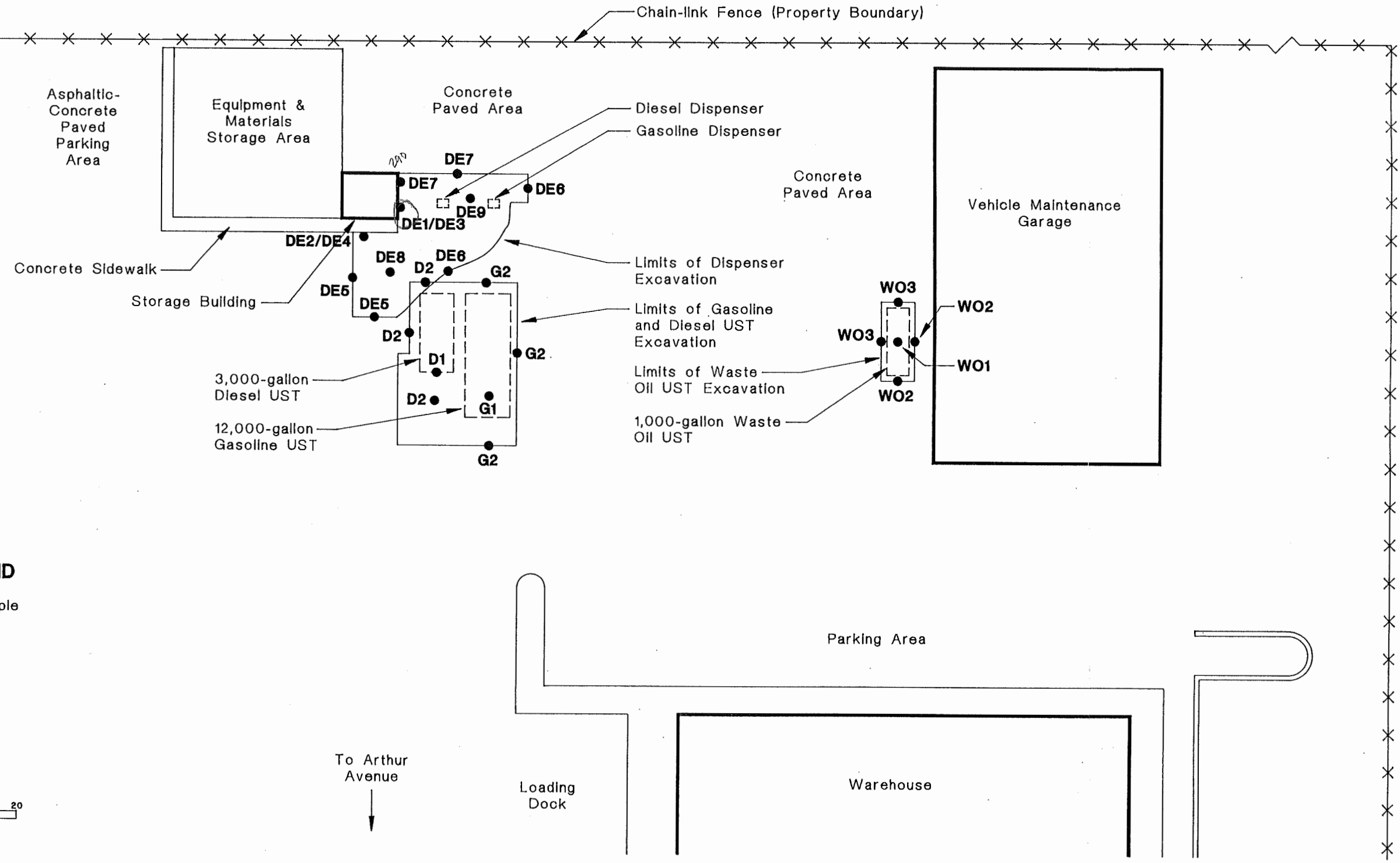
APPROVED

DATE  
 7 Feb. 94

REVISED

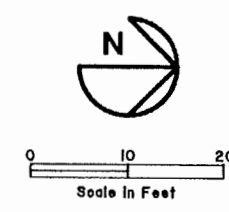
DATE

To West  
Clearwater  
←



**LEGEND**

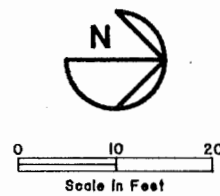
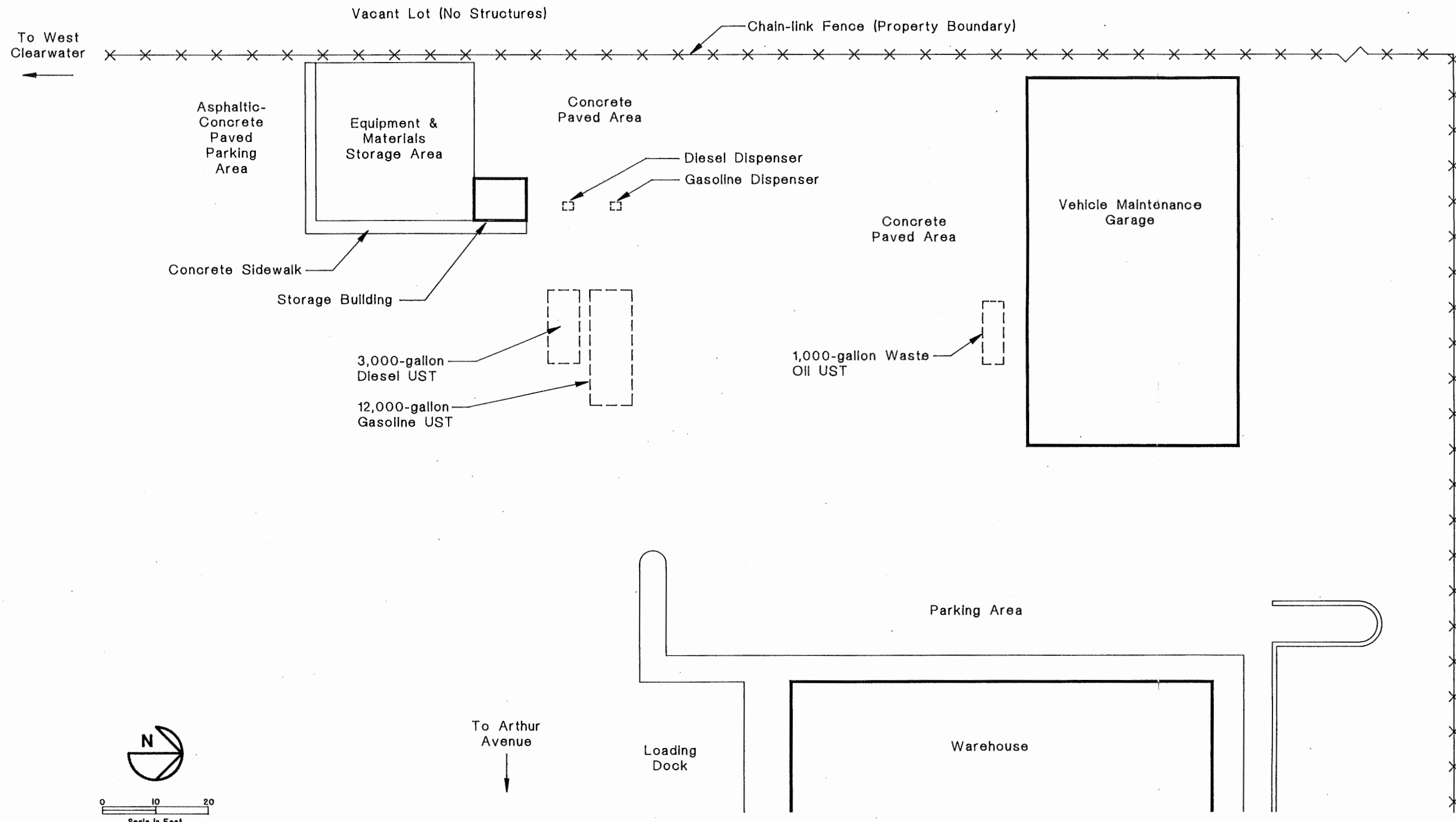
● Soil sample



To Arthur  
Avenue  
↓

<p><b>Applied Geotechnology Inc.</b> Geotechnical Engineering Geology &amp; Hydrogeology</p>	<p><b>UST and Dispenser Excavations</b> GTE/Kennewick Garage Facility Kennewick, Washington</p>		<p>FIGURE <b>3</b></p>
	<p>JOB NUMBER 15,169.144</p>	<p>DRAWN JFL</p>	<p>APPROVED <i>GMB</i></p>

552900



552900



**Applied Geotechnology Inc.**  
 Geotechnical Engineering  
 Geology & Hydrogeology

**Site Plan**  
 GTE/Kennewick Garage Facility  
 Kennewick, Washington

FIGURE  
**2**

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
15,169.144	JFL	<i>GMP</i>	7 Feb. 94		

**APPENDIX**

**Laboratory and Quality Assurance Reports**

QUALITY ASSURANCE REPORT

PROJECT AND SAMPLE INFORMATION

Project Name: GTE/Kennewick  
 Project No.: 15,169.144  
 Lab Name: Analytical Technologies, Inc. (ATI) - Renton, WA  
 Lab Number: 9311-129  
 Sample No.: WO1, WO2, WO3, WO4, D1, D2, D3, G1, G2, G3, G4, DE1, DE2, DE3, DE4, DE10, DE11  
 Matrix: Soil

QUALITY ASSURANCE SUMMARY

All data are of known quality and acceptable for use.

ANALYTICAL METHODS

<u>Parameter</u>	<u>Technique</u>	<u>Method</u>
TPH-HCID <sup>a</sup>	GC/FID	WTPH-HCID
TPH-G <sup>b</sup>	GC/FID	WTPH-G
TPH-D <sup>c</sup>	GC/FID	WTPH-D
Moisture	Gravimetric	CLP SOW ILM01.0

- a - Hydrocarbon identification; analyzed for samples WO1, WO2, WO3, and WO4 only.
- b - Quantify toluene to dodecane range petroleum hydrocarbons.
- c - Quantify diesel (C<sub>12</sub> - C<sub>24</sub>) and oil (C<sub>24</sub> - C<sub>34</sub>) range petroleum hydrocarbons; samples D1, D2, and D3 analyzed for diesel range TPH only.

TIMELINESS

<u>Parameter</u>	<u>Date Sampled</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Time Until Extraction</u>	<u>Time Until Analysis</u>
TPH-HCID	11/10/93	11/15/93	11/16/93	5 (14)	6 (21)
TPH-G	11/10/93	11/12/93	11/16/93 <sup>d</sup>	2 (14)	6 (21)
TPH-D	11/10/93	11/17/93 <sup>d</sup>	11/19/93 <sup>d</sup>	7 (14)	9 (30)
Moisture	11/10/93	NA	11/15/93	NA	5 (NA)

Samples were collected 11/10/93 and 11/11/93; 11/10/93 was used to verify holding time compliance.

d - The date on which the last sample extraction or analysis was completed has been used to verify holding time compliance.

NA - Not applicable.

() - Numbers in parentheses indicate recommended holding times in days.

All samples were extracted and analyzed within recommended holding times.

QUALITY ASSURANCE REPORT

PROJECT AND SAMPLE INFORMATION

Project Name: GTE/Kennewick  
Project No.: 15,169.144  
Lab Name: Analytical Technologies, Inc. (ATI) - Renton, WA  
Lab Number: 9311-129  
Sample No.: WO1, WO2, WO3, WO4, D1, D2, D3, G1, G2, G3, G4, DE1, DE2, DE3,  
DE4, DE10, DE11  
Matrix: Soil

FUEL HYDROCARBON CHROMATOGRAMS

Gasoline range TPH were detected in samples DE1, DE3, DE10, and DE11 by WTPH-G. Diesel range TPH were detected in sample D3; diesel and oil range TPH were detected in samples DE1, DE3, DE10, and DE11 by WTPH-D. These detections are supported by sample chromatograms for the methods.

FIELD QUALITY CONTROL SAMPLES

Field Duplicates: None collected.  
Rinsate: None collected.  
Trip Blank: None collected.

LAB QUALITY CONTROL SAMPLES

Method Blank: No analytes were detected at or above their method reporting limits (MRLs) in the method blanks for the following methods:

WTPH-HCID  
WTPH-G  
WTPH-D

Matrix Spikes: Matrix spike and matrix spike duplicate percent recoveries and relative percent differences (RPDs) are within ATI's control limit criteria for WTPH-G and WTPH-D.

Duplicates: Duplicate sample RPDs are within ATI's control limit criteria for the following methods:

WTPH-G  
WTPH-D  
CLP SOW ILM01.0

QUALITY ASSURANCE REPORT

PROJECT AND SAMPLE INFORMATION

Project Name: GTE/Kennewick  
Project No.: 15,169.144  
Lab Name: Analytical Technologies, Inc. (ATI) - Renton, WA  
Lab Number: 9311-129  
Sample No.: WO1, WO2, WO3, WO4, D1, D2, D3, G1, G2, G3, G4, DE1, DE2, DE3, DE4, DE10, DE11  
Matrix: Soil

**Blank Spike:** Blank spike and blank spike duplicate percent recoveries and RPDs are within ATI's control limit criteria for WTPH-G and WTPH-D.

**Surrogates:** Surrogate spike percent recoveries are within ATI's control limit criteria for WTPH-G and WTPH-HCID.

WTPH-D: Surrogate spike (o-terphenyl) recoveries from samples DE1, DE3, DE10, and DE11 ranging from 166 to 194 percent exceeded ATI's upper control limit criteria of 150 percent. These samples all contained high concentrations of TPH and were analyzed at a 20-fold dilution. Since other QC parameters associated with these analyses are all within acceptance criteria, sample results are not qualified on this basis.

SIGNATURES

Prepared by *Luigta Linn* Date 12/10/93  
Checked by *Katharine Bourbonais* Date 12/10/93

QUALITY ASSURANCE REPORT

PROJECT AND SAMPLE INFORMATION

Project Name: GTE/Kennewick  
 Project No.: 15,169.144  
 Lab Name: Analytical Technologies, Inc. (ATI) - Renton, WA  
 Lab Number: 9311-130  
 Sample No.: DE-5, DE-6, DE-7, DE-8, DE-9  
 Matrix: Soil

QUALITY ASSURANCE SUMMARY

All data are of known quality and acceptable for use.

ANALYTICAL METHODS

<u>Parameter</u>	<u>Technique</u>	<u>Method</u>
TPH-G <sup>a</sup>	GC/FID	WTPH-G
TPH-D <sup>b</sup>	GC/FID	WTPH-D
Moisture	Gravimetric	CLP SOW ILM01.0

- a - Quantify toluene to dodecane range petroleum hydrocarbons.
- b - Quantify diesel (C<sub>12</sub> - C<sub>24</sub>) range petroleum hydrocarbons; sample DE-7 also analyzed for oil (C<sub>24</sub> - C<sub>34</sub>) range TPH.

TIMELINESS

<u>Parameter</u>	<u>Date Sampled</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Time Until Extraction</u>	<u>Time Until Analysis</u>
TPH-G	11/11/93	11/12/93	11/13/93 <sup>c</sup>	1 (14)	2 (21)
TPH-D	11/11/93	11/16/93	11/17/93 <sup>c</sup>	5 (14)	6 (30)
Moisture	11/11/93	NA	11/12/93	NA	1 (NA)

- c - The date on which the last sample analysis was completed has been used to verify holding time compliance.
- NA - Not applicable.
- () - Numbers in parentheses indicate recommended holding times in days.

All samples were extracted and analyzed within recommended holding times.

FUEL HYDROCARBON CHROMATOGRAMS

Gasoline range TPH were not detected in any samples by WTPH-G. Diesel range TPH were detected in sample DE-8; diesel and oil range TPH were detected in sample DE-7 by WTPH-D. These detections are supported by sample chromatograms for the method.





Analytical **Technologies, Inc.**

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

Karen L. Mixon, Laboratory Manager

ATI I.D. # 9311-130

November 30, 1993

**RECEIVED**

**NOV 30 1993**

**APPLIED GEOTECHNOLOGY INC.**

Applied Geotechnology, Inc.  
P.O. Box 3885  
Bellevue WA 98009

Attention : Glen Bobnick

Project Number : 15169.144

Project Name : GTE/Kennewick

Dear Mr. Bobnick:

On November 12, 1993, Analytical Technologies, Inc. (ATI), received five 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,

Victoria L. Bayly  
Project Manager

VLB/hal/elf

Enclosure

## SAMPLE CROSS REFERENCE SHEET

CLIENT : APPLIED GEOTECHNOLOGY, INC.  
 PROJECT # : 15169.144  
 PROJECT NAME : GTE/KENNEWICK

ATI #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
9311-130-1	DE-5	11/11/93	SOIL
9311-130-2	DE-6	11/11/93	SOIL
9311-130-3	DE-7	11/11/93	SOIL
9311-130-4	DE-8	11/11/93	SOIL
9311-130-5	DE-9	11/11/93	SOIL

## ----- TOTALS -----

MATRIX	# SAMPLES
SOIL	5

## 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 SCHEDULE

CLIENT : APPLIED GEOTECHNOLOGY, INC.  
 PROJECT # : 15169.144  
 PROJECT NAME : GTE/KENNEWICK

ANALYSIS	TECHNIQUE	REFERENCE	LAB
TOTAL PETROLEUM HYDROCARBONS	GC/PID	WA DOE WTPH-G	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-D	R
MOISTURE	GRAVIMETRIC	CLP SOW ILM01.0	R

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

ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<5  
TOLUENE TO DODECANE  
GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
----------------------------	--	--------

TRIFLUOROTOLUENE

102

50 - 150



ATI I.D. # 9311-130-1

 TOTAL PETROLEUM HYDROCARBONS  
 DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE-5	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

 -----  
 COMPOUNDS

 -----  
 RESULTS
 -----

FUEL HYDROCARBONS  
 HYDROCARBON RANGE  
 HYDROCARBON QUANTITATION USING

<6  
 TOLUENE TO DODECANE  
 GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

87

50 - 150

ATI I.D. # 9311-130-2

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE-6	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<6  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

89

50 - 150



ATI I.D. # 9311-130-3

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE-7	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<6  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

86

50 - 150



Analytical Technologies, Inc.

ATI I.D. # 9311-130-4

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE-8	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

RESULTS

-----  
FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<6  
TOLUENE TO DODECANE  
GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

TRIFLUOROTOLUENE

87

50 - 150



ATI I.D. # 9311-130-5

 TOTAL PETROLEUM HYDROCARBONS  
 DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE-9	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

 -----  
 COMPOUNDS

 -----  
 RESULTS
 -----

 FUEL HYDROCARBONS  
 HYDROCARBON RANGE  
 HYDROCARBON QUANTITATION USING

 <6  
 TOLUENE TO DODECANE  
 GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

81

50 - 150



ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
GASOLINE	<5.00	50.0	51.8	104	52.3	105	1
CONTROL LIMITS				% REC.			RPD
GASOLINE				80 - 119			20
SURROGATE RECOVERIES		SPIKE		DUP. SPIKE		LIMITS	
TRIFLUOROTOLUENE		107		107		50 - 150	



ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-129-8
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G		

COMPOUND	SAMPLE RESULT	DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
GASOLINE	<5.00	<5.00	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				90		93		50 - 150	

NC = Not Calculable.



ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-130-5
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
GASOLINE	<5.00	<5.00	NC	50.0	40.0	80	38.4	77	4
CONTROL LIMITS						% REC.			RPD
GASOLINE						50 - 112			20
SURROGATE RECOVERIES				SPIKE		DUP. SPIKE		LIMITS	
TRIFLUOROTOLUENE				91		93			50 - 150

NC = Not Calculable.



ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/16/93
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	92	50 - 150
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ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/16/93
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	99	50 - 150
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ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/17/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

RESULTS

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<10  
C12 - C24  
DIESEL

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<40  
C24 - C34  
MOTOR OIL

SURROGATE PERCENT RECOVERY

LIMITS

O-TERPHENYL

92

50 - 150



ATI I.D. # 9311-130-1

 TOTAL PETROLEUM HYDROCARBONS  
 DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: DE-5	DATE ANALYZED	: 11/16/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----
 FUEL HYDROCARBONS  
 HYDROCARBON RANGE  
 HYDROCARBON QUANTITATION USING

 <12  
 C12 - C24  
 DIESEL

SURROGATE PERCENT RECOVERY

LIMITS

O-TERPHENYL

97

50 - 150



ATI I.D. # 9311-130-2

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: DE-6	DATE ANALYZED	: 11/16/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

RESULTS

FUEL HYDROCARBONS	<12
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

SURROGATE PERCENT RECOVERY

LIMITS

O-TERPHENYL	92	50 - 150
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ATI I.D. # 9311-130-3

 TOTAL PETROLEUM HYDROCARBONS  
 DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: DE-7	DATE ANALYZED	: 11/17/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

 -----  
 COMPOUNDS
   
 -----

## RESULTS

 FUEL HYDROCARBONS  
 HYDROCARBON RANGE  
 HYDROCARBON QUANTITATION USING

 43  
 C12 - C24  
 DIESEL

 FUEL HYDROCARBONS  
 HYDROCARBON RANGE  
 HYDROCARBON QUANTITATION USING

 290  
 C24 - C34  
 MOTOR OIL

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL

85

50 - 150

ATI I.D. # 9311-130-4

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: DE-8	DATE ANALYZED	: 11/17/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS	12
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL

94

50 - 150



ATI I.D. # 9311-130-5

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/16/93
CLIENT I.D.	: DE-9	DATE ANALYZED	: 11/16/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS	<12
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL	89	50 - 150
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ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-147-31
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/16/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/16/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	<10.0	<10.0	NC	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				98		102	50 - 150		

NC = Not Calculable.

ATI I.D. # 9311-130

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-155-2
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/16/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/16/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP.	DUP.	RPD
							SPIKED RESULT	% REC.	
DIESEL	<10.0	<10.0	NC	200	167	84	167	84	0
CONTROL LIMITS						% REC.			RPD
DIESEL						63 - 131			20
SURROGATE RECOVERIES				SPIKE		DUP. SPIKE		LIMITS	
O-TERPHENYL				98		98		50 - 150	

NC = Not Calculable.



ATI I.D. # 9311-130

## GENERAL CHEMISTRY ANALYSIS

CLIENT : APPLIED GEOTECHNOLOGY, INC.  
PROJECT # : 15169.144  
PROJECT NAME : GTE/KENNEWICK

MATRIX : SOIL

-----  
PARAMETER DATE ANALYZED  
-----

MOISTURE 11/12/93





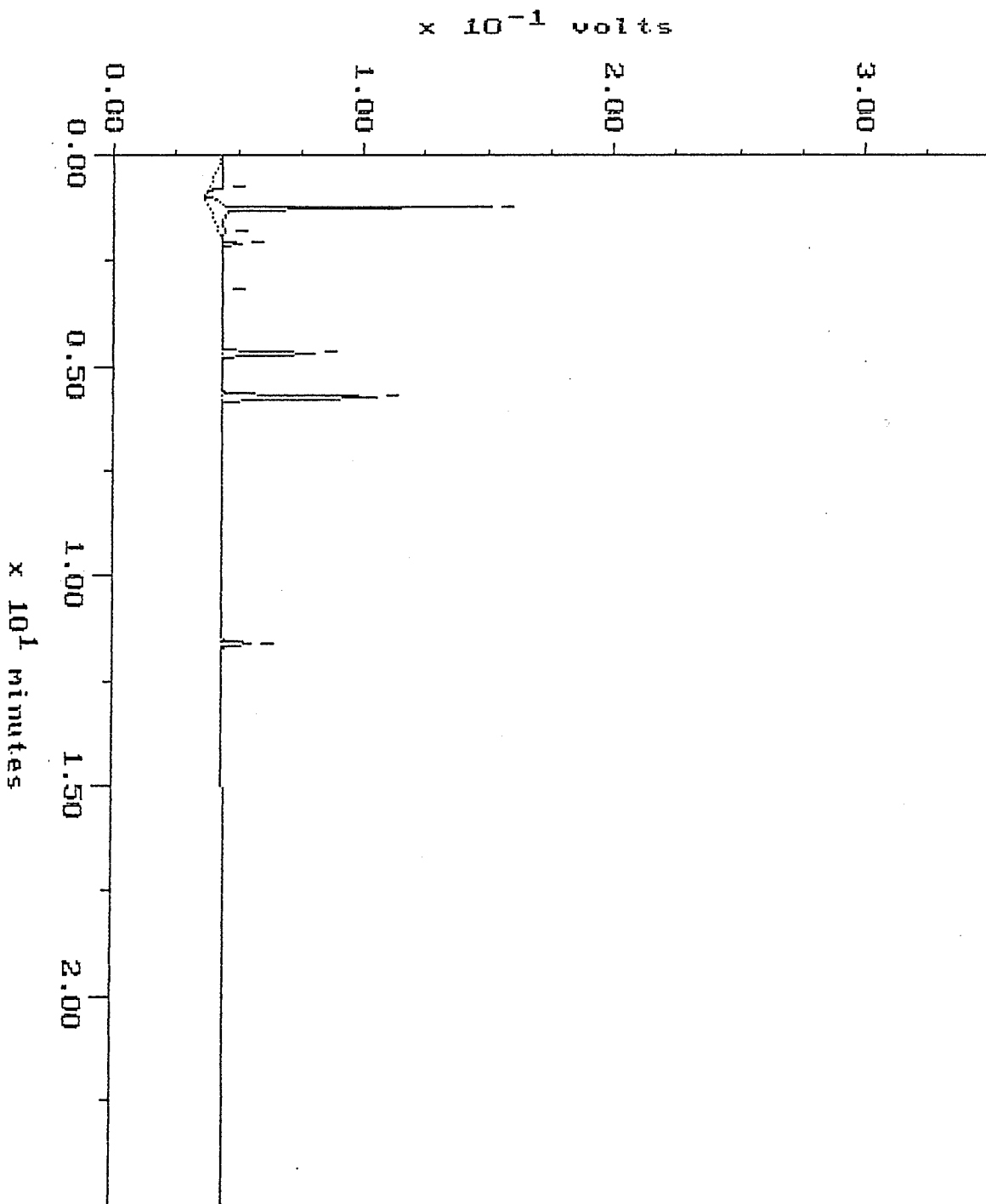
Blank

WA DOE WTPH-G

Sample: SRB-A 11-12  
Acquired: 12-NOV-93 17:53

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111293JR

Filename: RB129J06  
Operator:



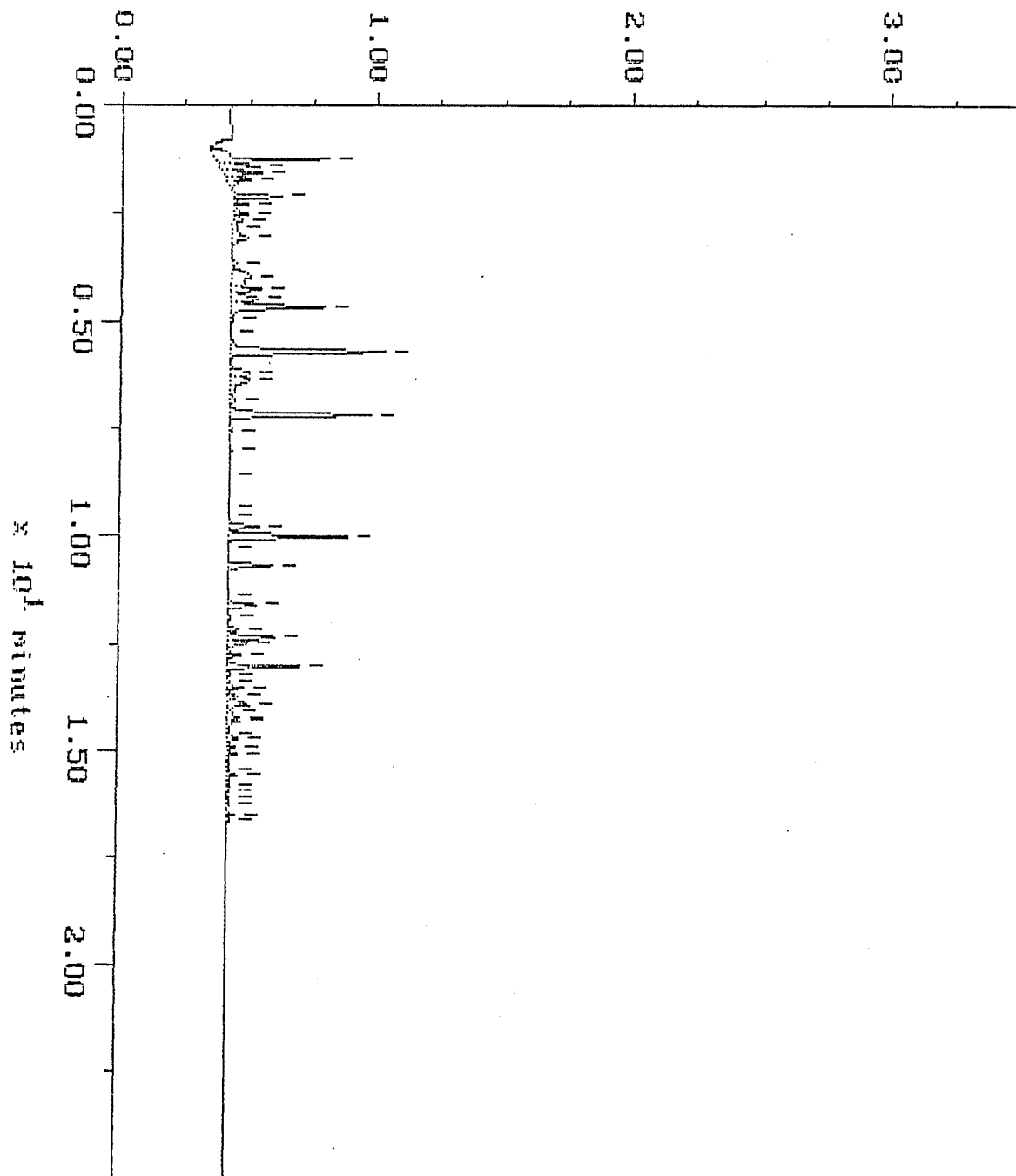
# Continuing Calibration

Sample: STD-C 6  
Acquired: 12-NOV-93 8:01

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111293JR

Filename: RB129J01  
Operator:

$\times 10^{-1}$  volts



M  
WA DOE WTPH-D

Sample: 9311-130-3

Channel: FRED

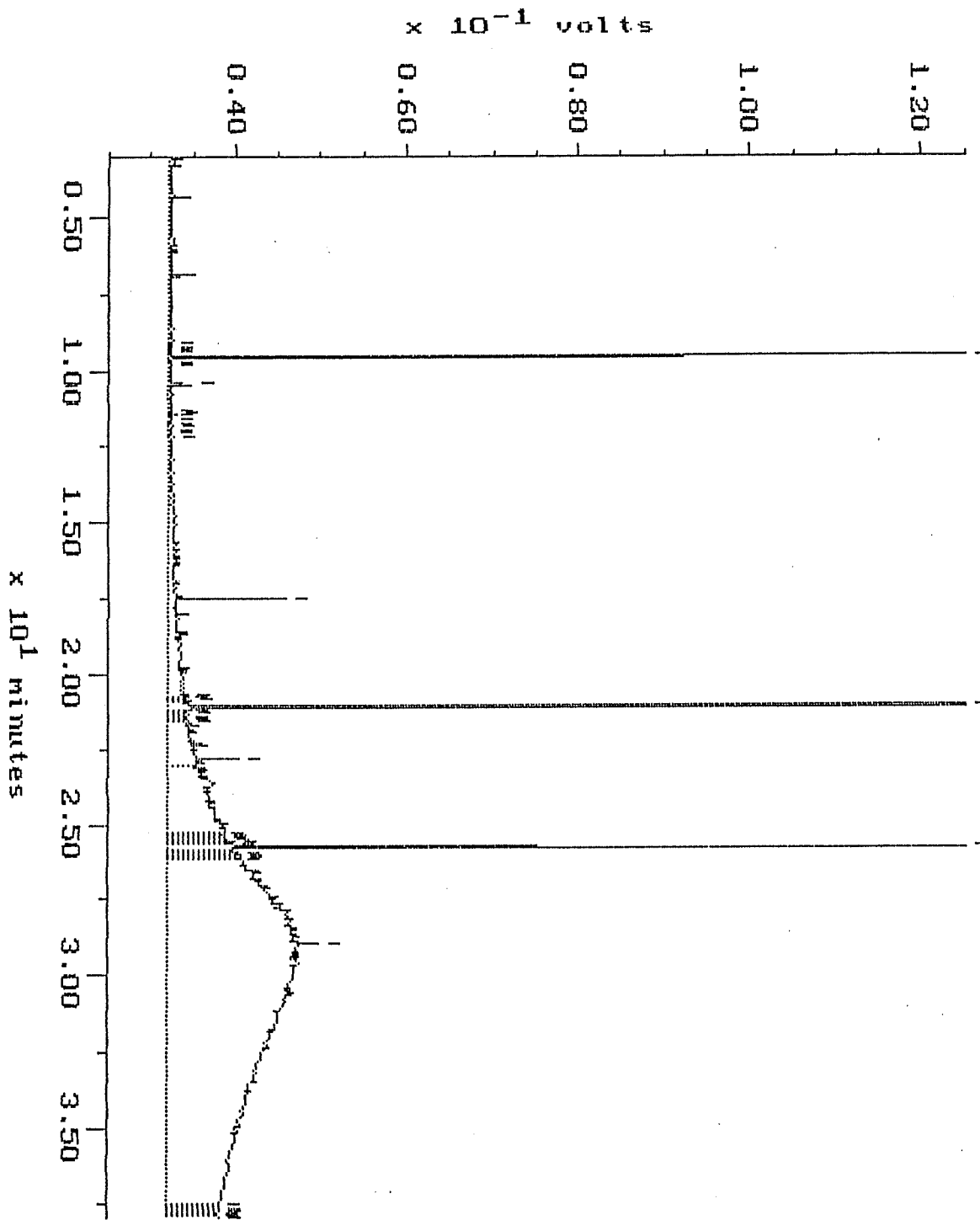
Filename: RB178F05

Acquired: 17-NOV-93 18:21

Method: F:\BRO2\MAXDATA\FRED\FUEL1117

Operator: ATI

Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY



# WA DOE WTPH-D

Sample: 9311-138-4

Channel: NANCY

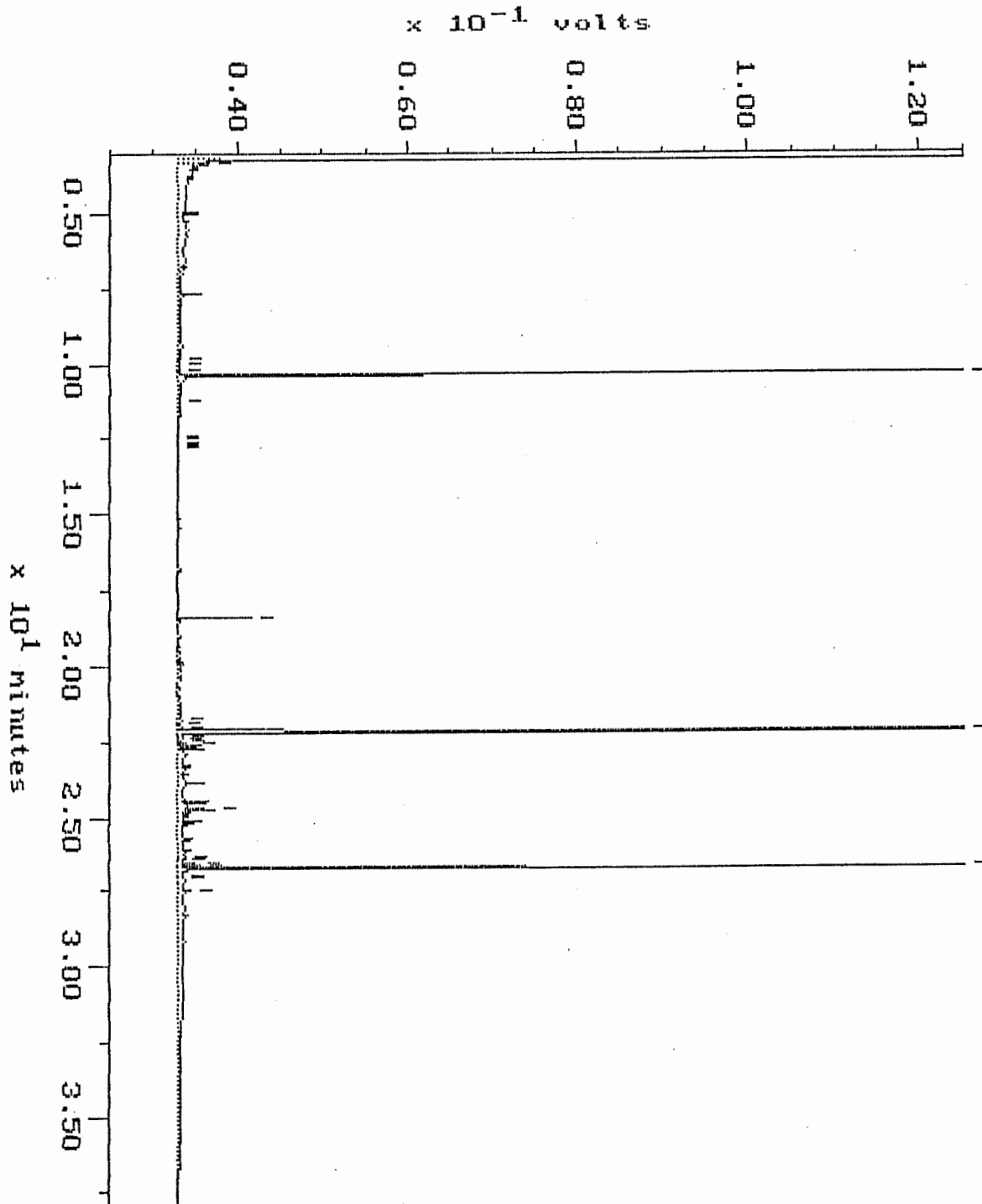
Filename: RB178H84

Acquired: 17-NOV-93 18:48

Method: F:\BRO2\MAXDATA\NANCY\FUEL1117

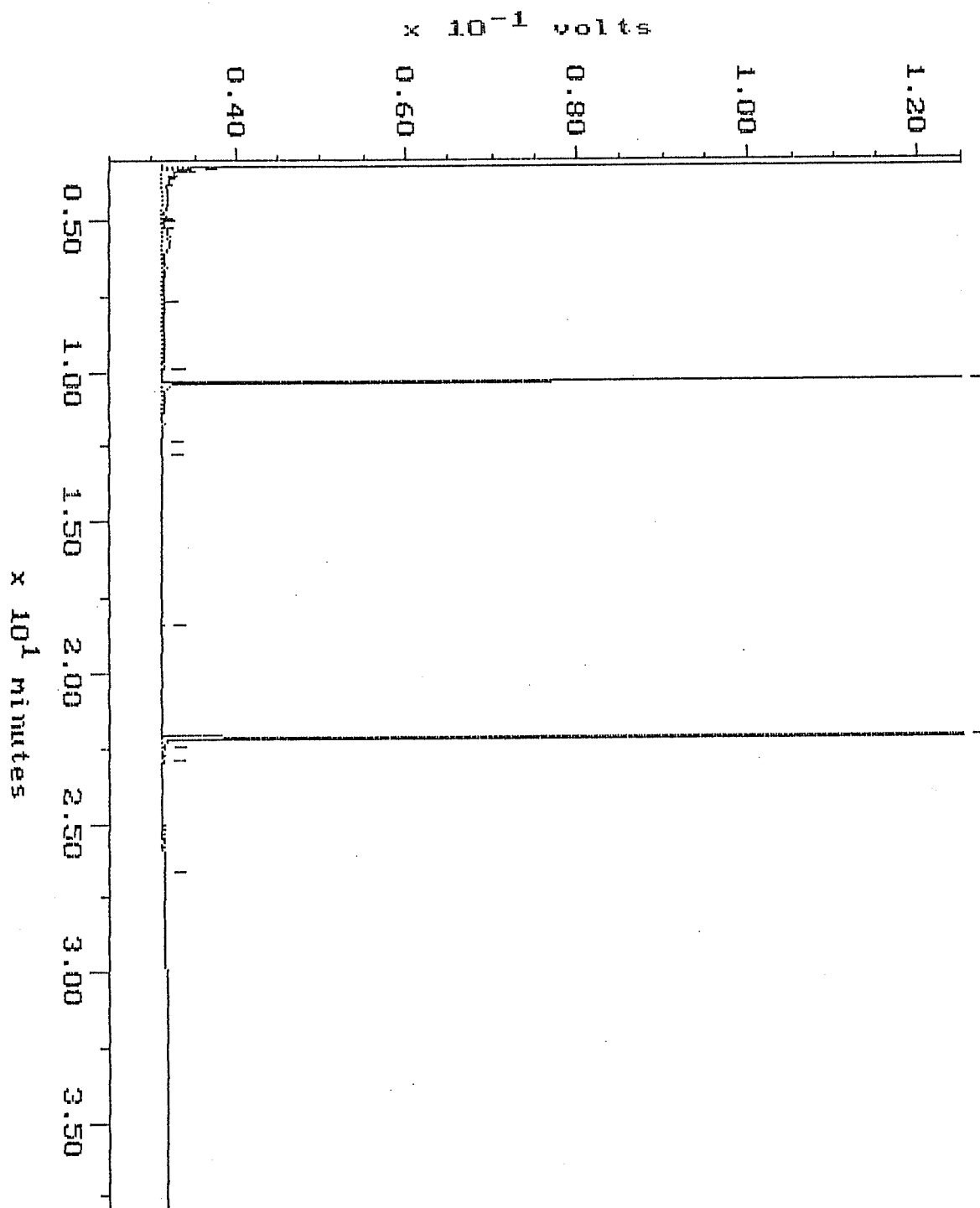
Operator: ATI

Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE



# Blank

Sample: SRB 11-16 Channel: NANCY Filename: RB168N08  
Acquired: 16-NOV-93 19:27 Method: F:\BRO2\MAXDATA\NANCY\FUEL1116 Operator: ATI  
Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE

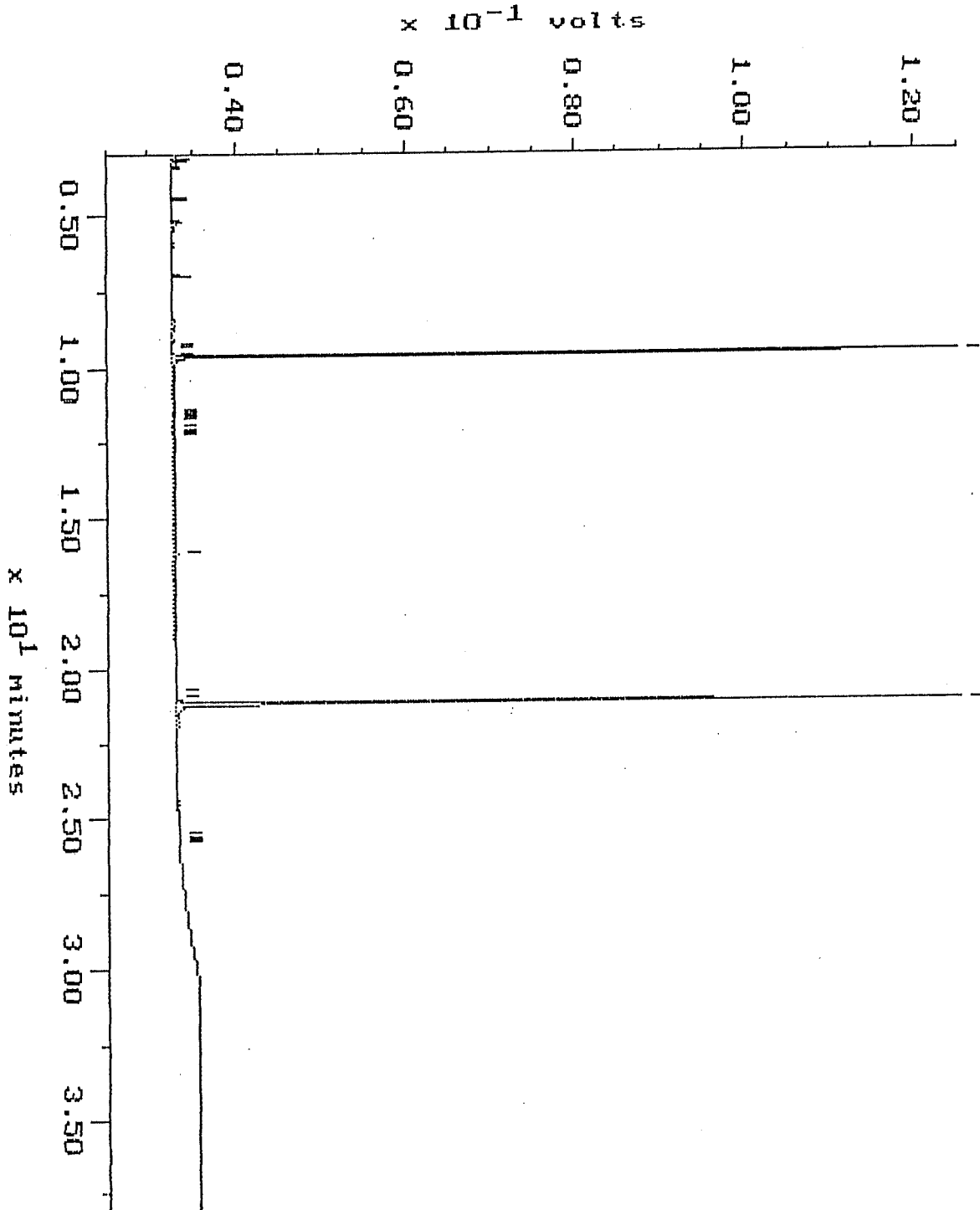


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Sample: SRB 11-16  
Acquired: 16-NOV-93 11:37

Channel: WILMA  
Method: F:\BR02\MAXDATA\WILMA\FUEL1116

Filename: RB168W04  
Operator: BRO



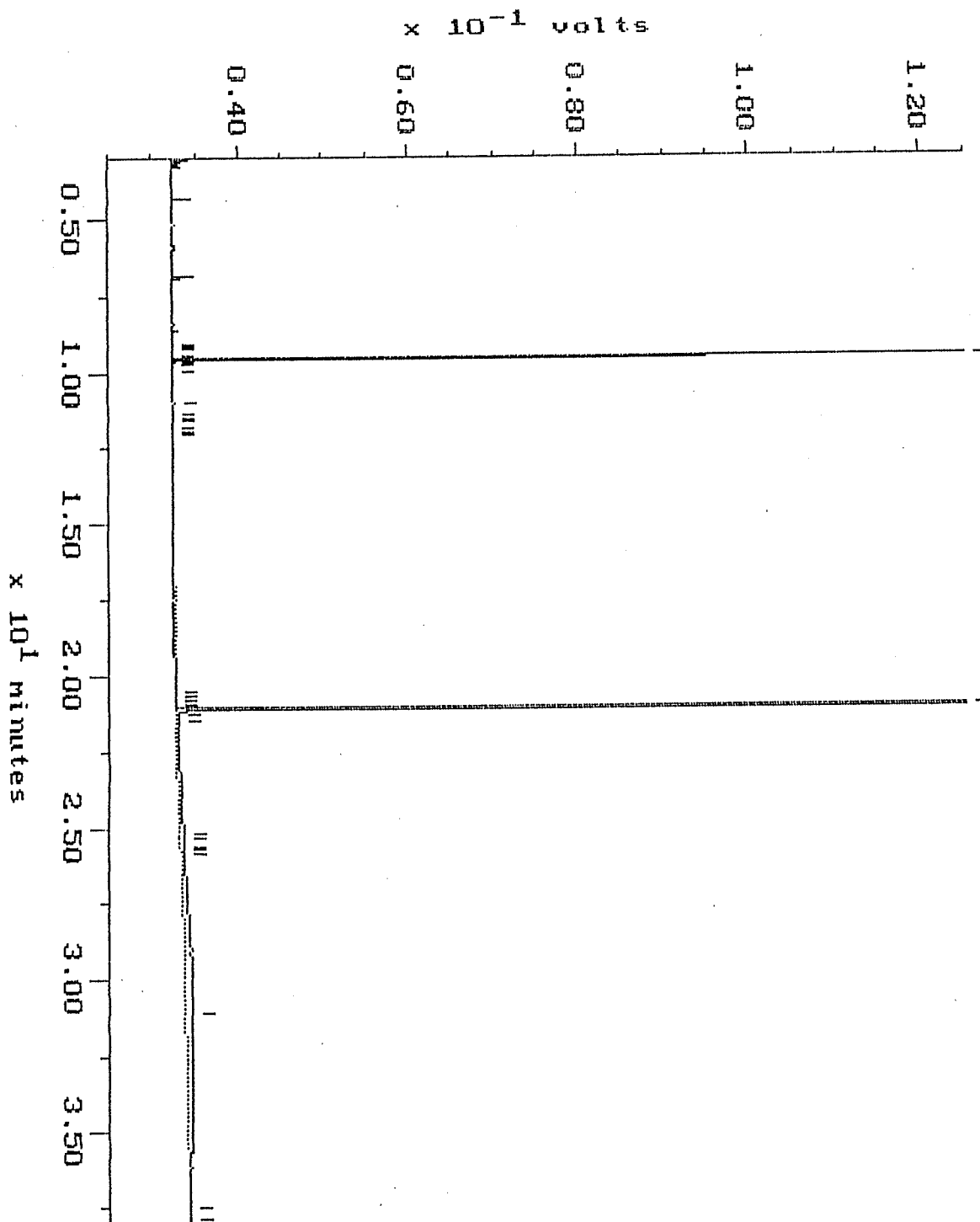
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no

Sample: SRB 11-16  
Acquired: 17-NOV-93 17:33  
Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY

Channel: FRED  
Method: F:\BR02\MAXDATA\FRED\FUEL1117

Filename: RB178F04  
Operator: ATI

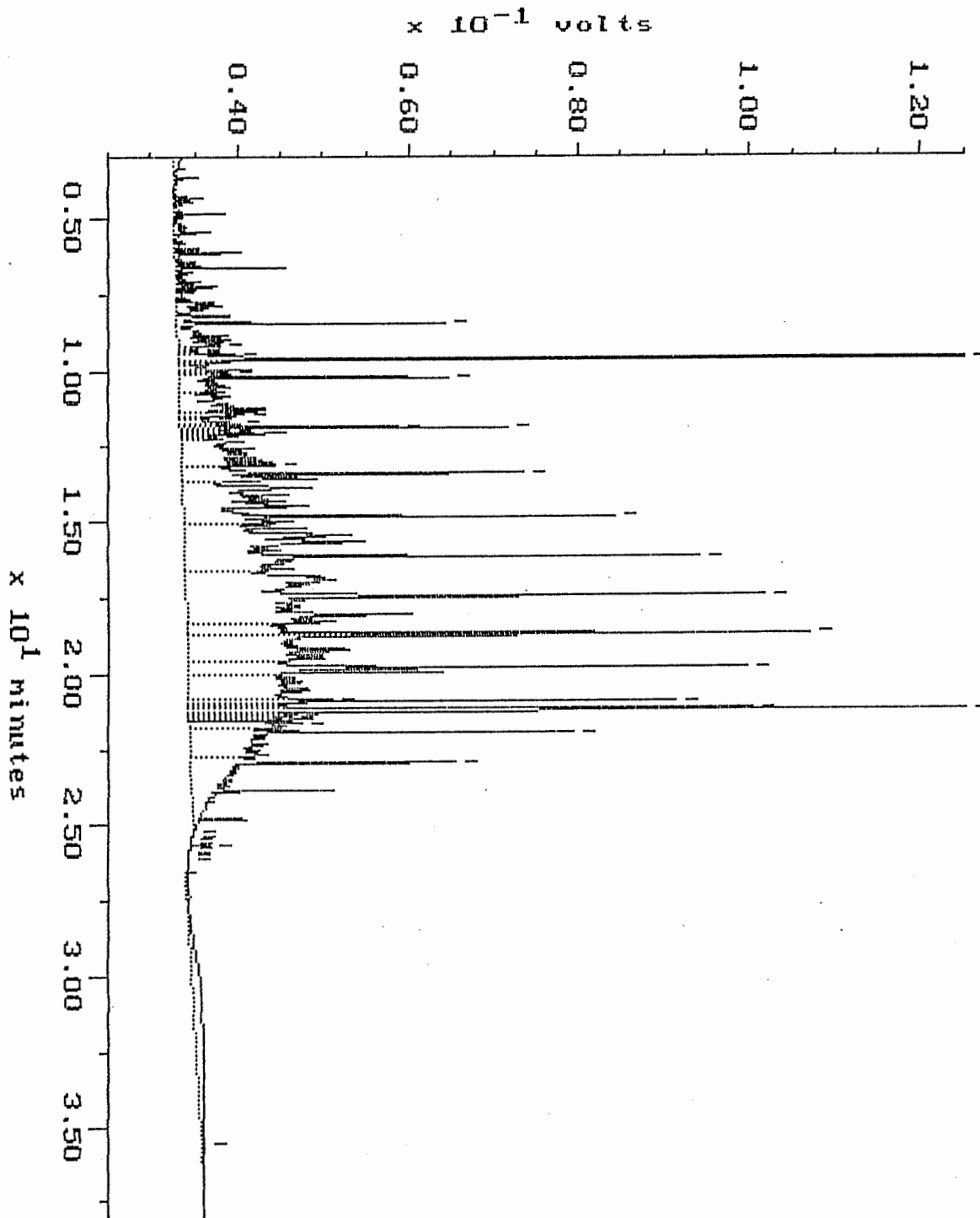


# Continuing Calibration

Sample: D 500  
Acquired: 16-NOV-93 9:14

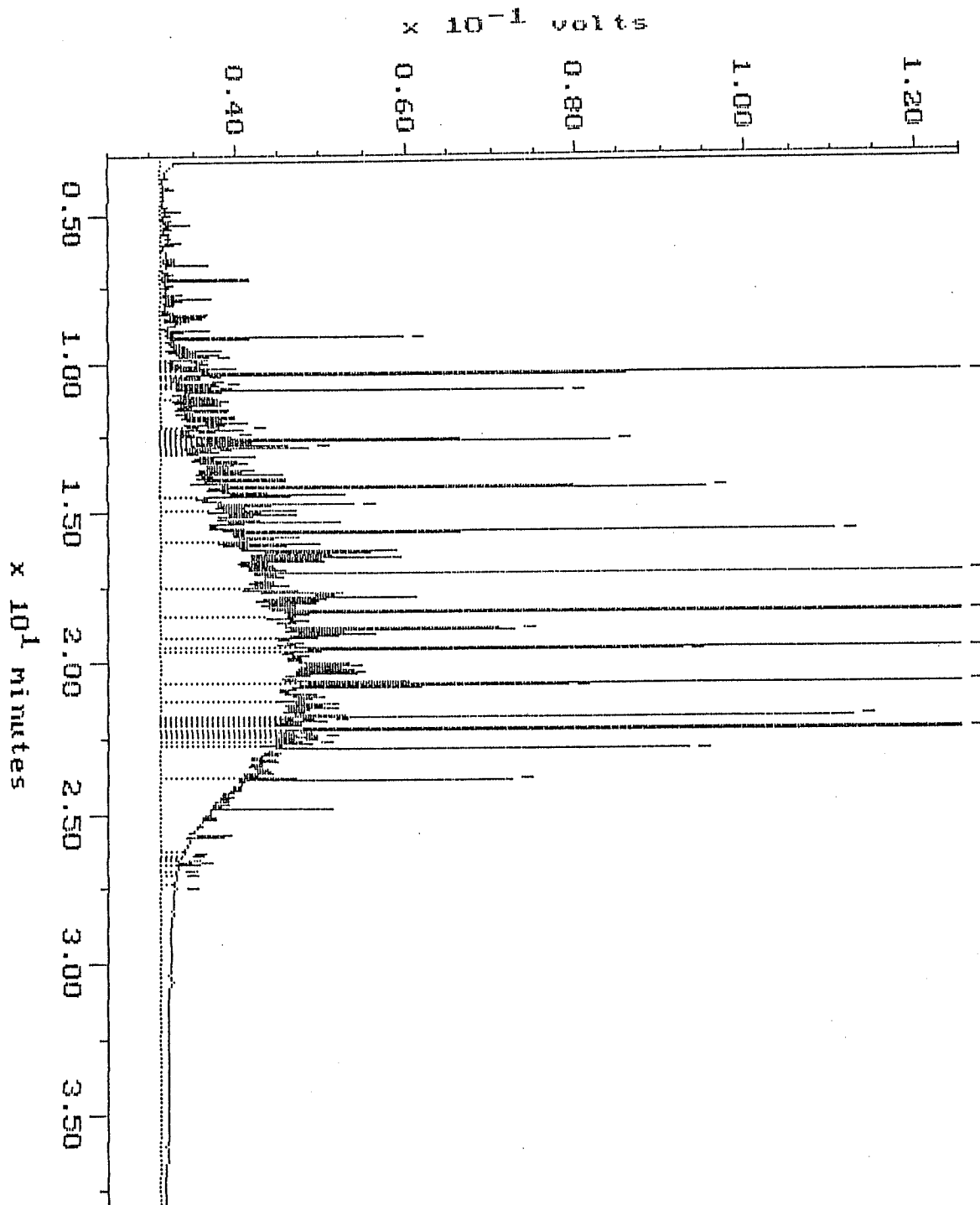
Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1116

Filename: RB168W02  
Operator: BRO



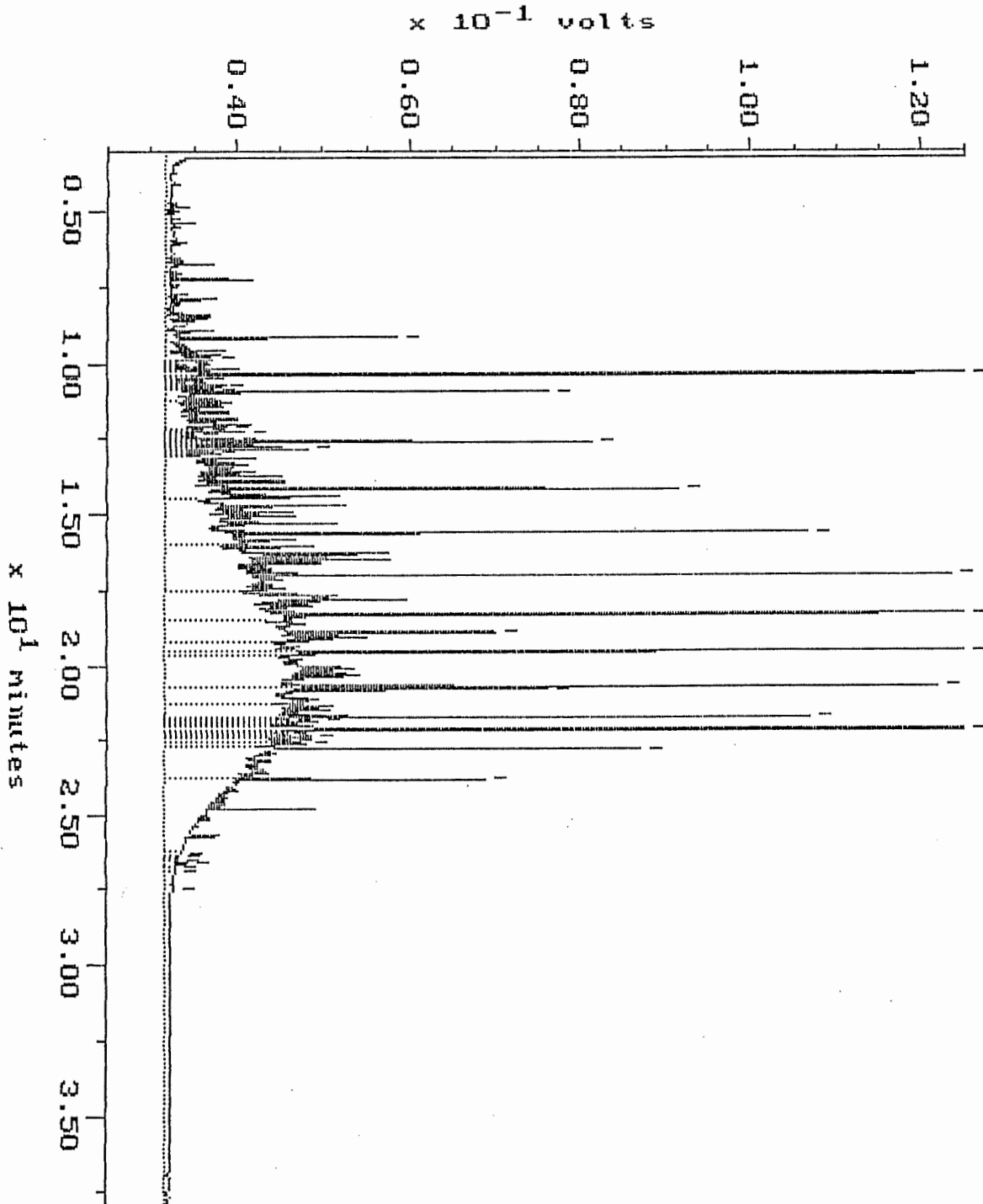
# Continuing Calibration

Sample: D 500 Channel: NANCY  
Acquired: 16-NOV-93 18:40 Method: F:\BR02\MAXDATA\NANCY\FUEL1116  
Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE  
Filename: RB168N87  
Operator: ATI



# Continuing Calibration

Sample: D 500 Channel: NANCY Filename: RB178N02  
Acquired: 17-NOV-93 9:06 Method: F:\BRO2\MAXDATA\NANCY\FUEL1117 Operator: ATI  
Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE

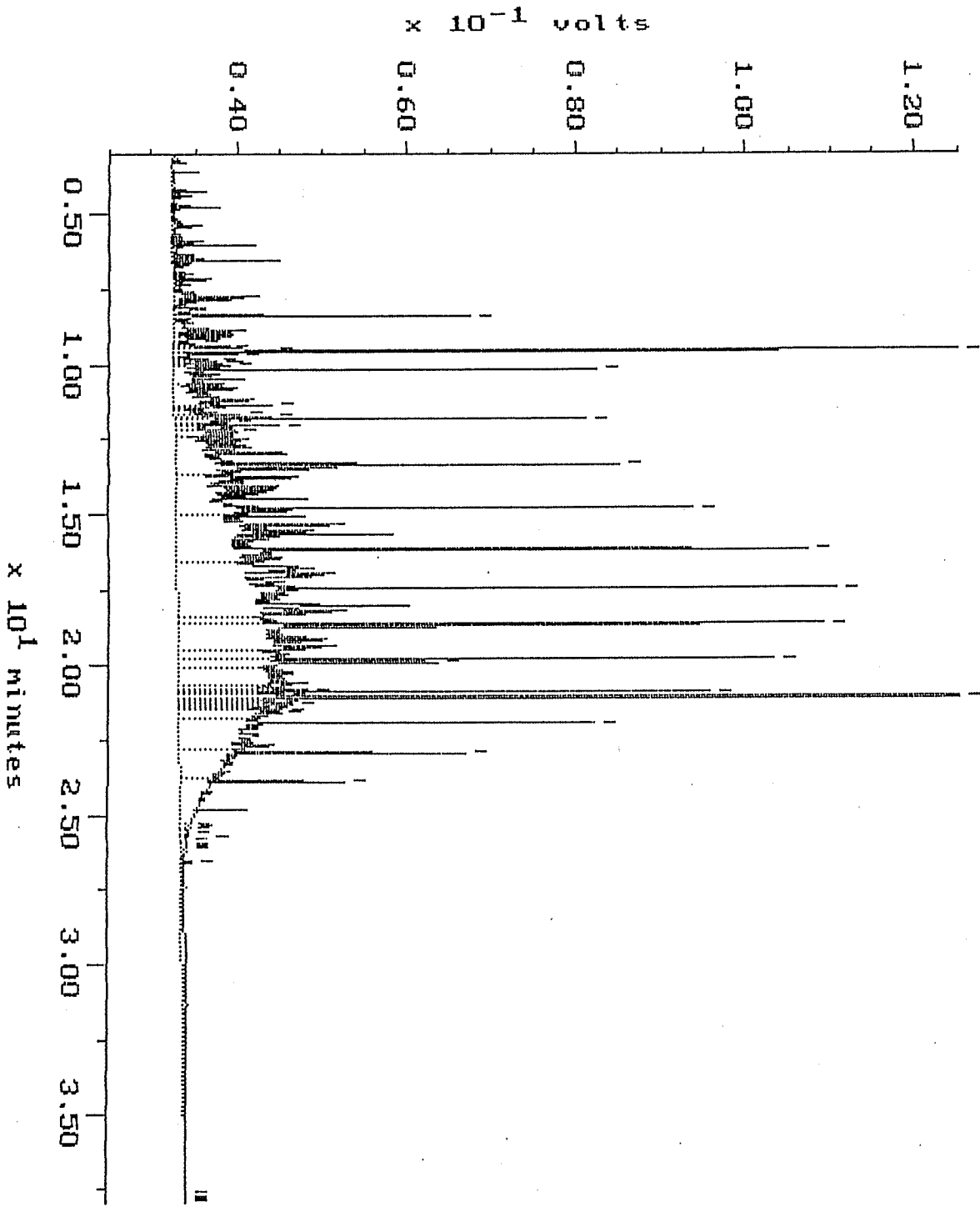


# Continuing Calibration

Sample: D 500  
Acquired: 17-NOV-93 15:58  
Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY

Channel: FRED  
Method: F:\BRO2\MAXDATA\FRED\FUEL1117

Filename: RB178F02  
Operator: ATI

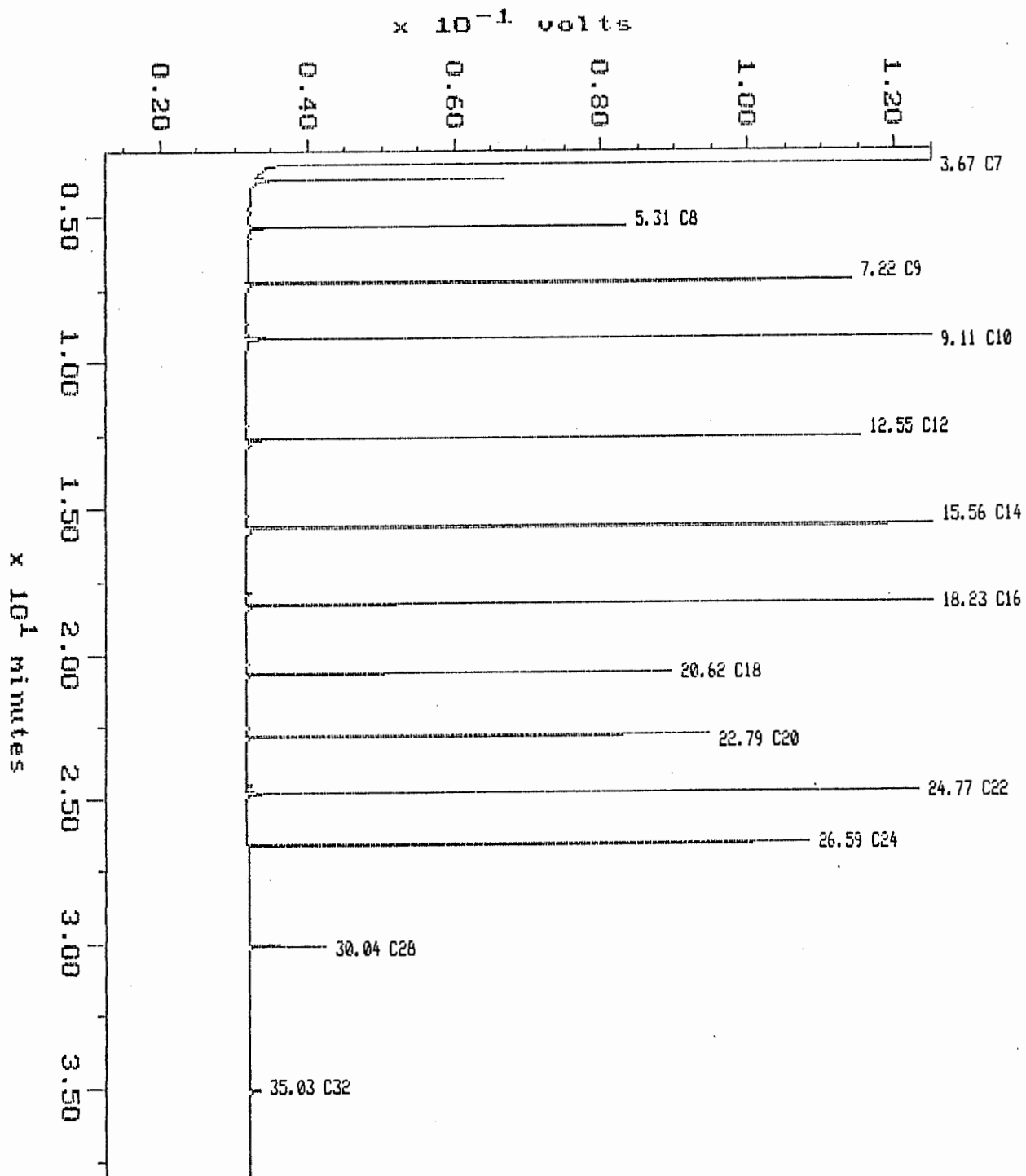


# Alkane

Sample: ALKANE  
Acquired: 08-NOV-93 12:57  
Inj Vol: 1.00

Channel: NANCY  
Method: F:\BRO2\MAXDATA\NANCY\FUEL1108

Filename: RB088B02  
Operator: ATI

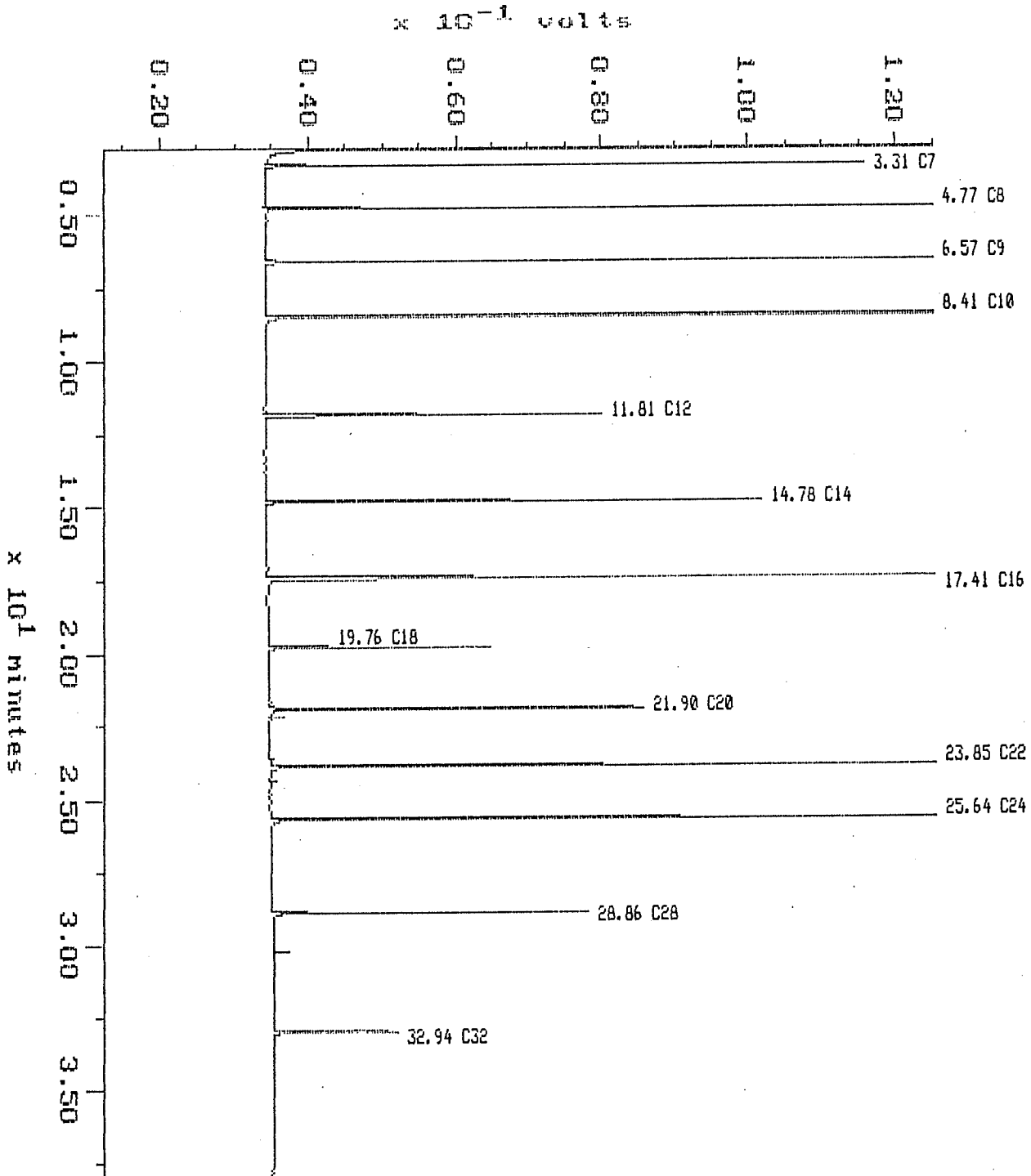


# Alkane

Sample: ALKANE  
Acquired: 08-NOV-93 11:11  
Inj Vol: 1.00

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1108

Filename: RB088W02  
Operator: BRO



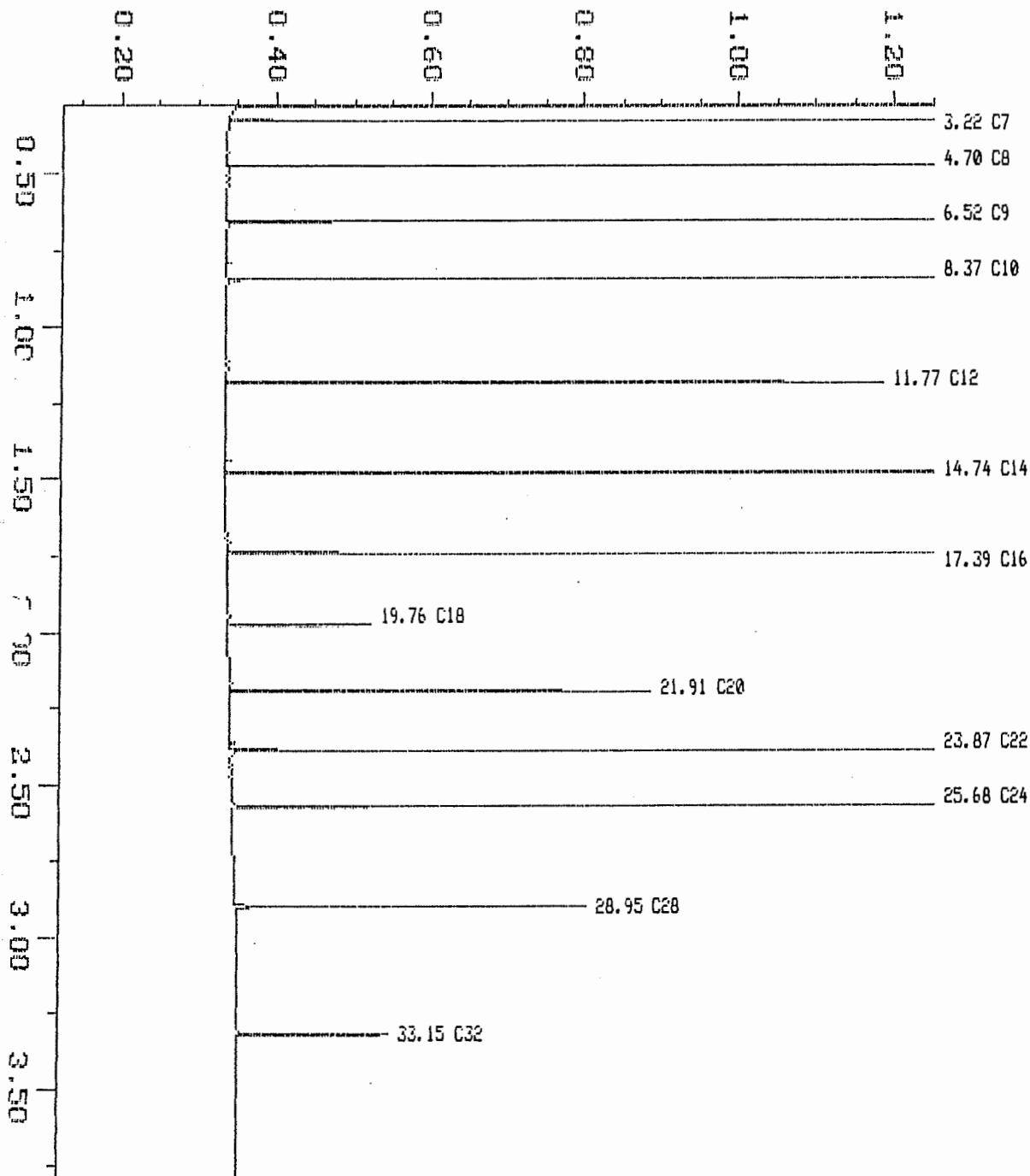
# Alkane

Sample: ALKANE  
Acquired: 08-NOV-93 11:11  
Inj Vol: 1.00

Channel: FRED  
Method: F:\BRO2\MAXDATA\FRED\FUEL1108

Filename: RB08BF02  
Operator: ATI

$\times 10^{-1}$  volts



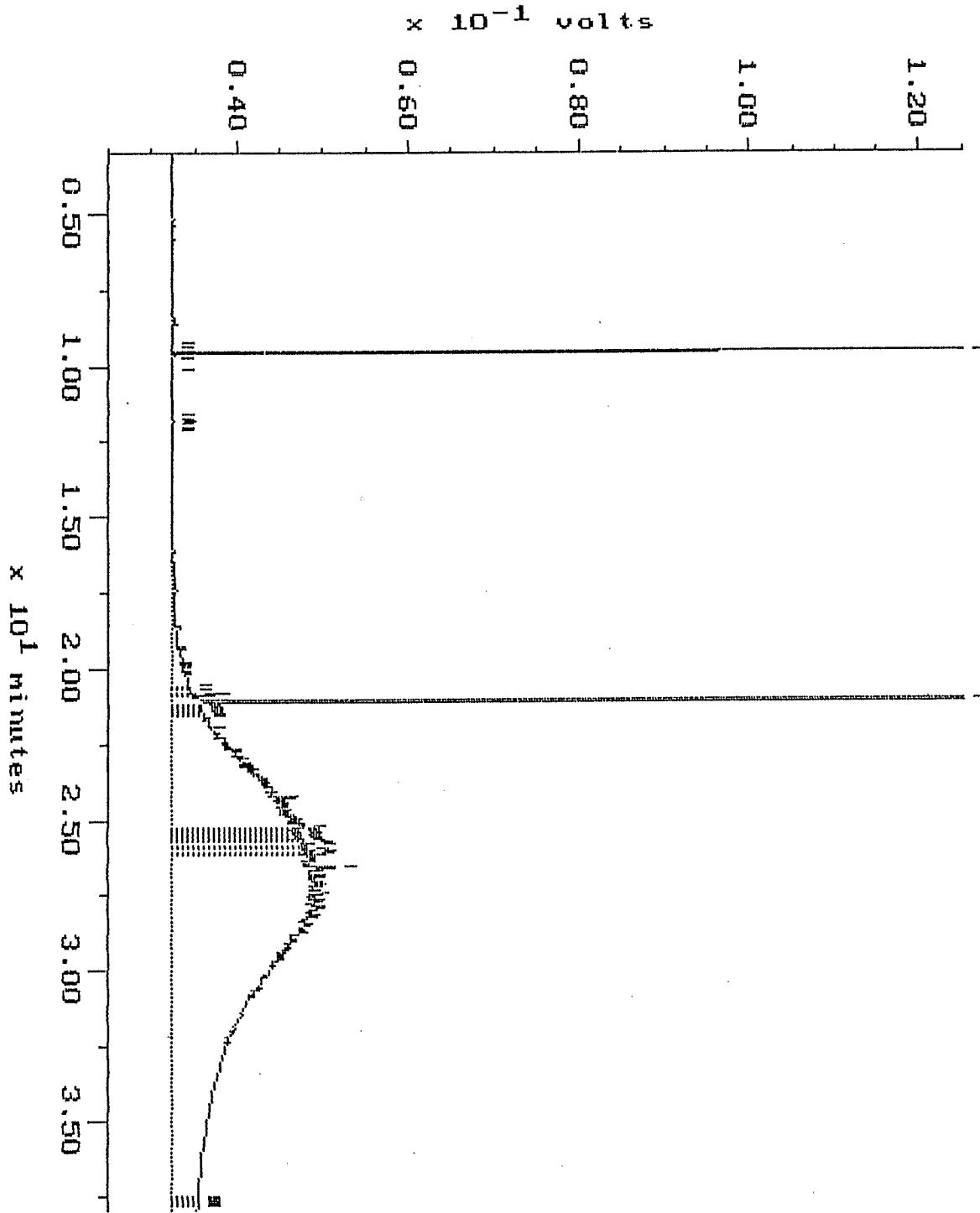
# Continuing Calibration

Sample: MO 500  
Acquired: 17-NOV-93 16:46

Channel: FRED  
Method: F:\BRO2\MAXDATA\FRED\FUEL1117

Filename: R0178F03  
Operator: ATI

Comments: ATI RUSH FUELS: A MISSION OF EXCELLENCE IN ANALYTICAL CHROMATOGRAPHY





Analytical **Technologies, Inc.**

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

Karen L. Mixon, Laboratory Manager

ATI I.D. # 9311-129

December 1, 1993

**RECEIVED**

DEC 02 1993

APPLIED GEOTECHNOLOGY INC.

Applied Geotechnology, Inc.  
P.O. Box 3885  
Bellevue WA 98009

Attention : Glen Bobnick

Project Number : 15169.144

Project Name : GTE/Kennewick

Dear Mr. Bobnick:

On November 12, 1993, Analytical Technologies, Inc. (ATI), received 17 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,

*Victoria L. Bayly*  
for

Victoria L. Bayly  
Project Manager

VLB/hal/elf

Enclosure

SAMPLE CROSS REFERENCE SHEET

CLIENT : APPLIED GEOTECHNOLOGY, INC.  
 PROJECT # : 15169.144  
 PROJECT NAME : GTE/KENNEWICK

ATI #	CLIENT DESCRIPTION	DATE SAMPLED	MATRIX
9311-129-1	WO1	11/10/93	SOIL
9311-129-2	WO2	11/10/93	SOIL
9311-129-3	WO3	11/10/93	SOIL
9311-129-4	WO4	11/10/93	SOIL
9311-129-5	D1	11/10/93	SOIL
9311-129-6	D2	11/10/93	SOIL
9311-129-7	D3	11/10/93	SOIL wTPH ~ 610
9311-129-8	G1	11/10/93	SOIL
9311-129-9	G2	11/10/93	SOIL
9311-129-10	G3	11/10/93	SOIL
9311-129-11	G4	11/10/93	SOIL
9311-129-12	DE1 <i>Dried?</i>	11/11/93	SOIL 1400 15,000 wTPH-D wTPH-G
9311-129-13	DE2	11/11/93	SOIL
9311-129-14	DE3	11/11/93	SOIL 950 (15,000) wTPH-D
9311-129-15	DE4	11/11/93	SOIL
9311-129-16	DE10	11/11/93	SOIL 280 3800 wTPH-D " "
9311-129-17	DE11	11/11/93	SOIL 160 4000 wTPH-D " "

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	17

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 SCHEDULE

CLIENT : APPLIED GEOTECHNOLOGY, INC.  
 PROJECT # : 15169.144  
 PROJECT NAME : GTE/KENNEWICK

ANALYSIS	TECHNIQUE	REFERENCE	LAB
HYDROCARBON IDENTIFICATION	GC/FID	WA DOE WTPH-HCID	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-G	R
TOTAL PETROLEUM HYDROCARBONS	GC/FID	WA DOE WTPH-D	R
MOISTURE	GRAVIMETRIC	CLP SOW ILM01.0	R

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

ATI I.D. # 9311-129

HYDROCARBON IDENTIFICATION  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/15/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/15/93
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

103

50 - 150

ATI I.D. # 9311-129-1

HYDROCARBON IDENTIFICATION  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/15/93
CLIENT I.D.	: WO1	DATE ANALYZED	: 11/16/93
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	101	50 - 150

ATI I.D. # 9311-129-2

HYDROCARBON IDENTIFICATION  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/15/93
CLIENT I.D.	: WO2	DATE ANALYZED	: 11/16/93
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

101

50 - 150

ATI I.D. # 9311-129-3

HYDROCARBON IDENTIFICATION  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/15/93
CLIENT I.D.	: WO3	DATE ANALYZED	: 11/16/93
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

105

50 - 150

ATI I.D. # 9311-129-4

HYDROCARBON IDENTIFICATION  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/15/93
CLIENT I.D.	: WO4	DATE ANALYZED	: 11/16/93
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

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS	<5
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE	102	50 - 150
------------------	-----	----------

ATI I.D. # 9311-129-8

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: G1	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<5  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

90

50 - 150

ATI I.D. # 9311-129-9

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: G2	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<6  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

88

50 - 150

ATI I.D. # 9311-129-10

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: G3	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<7  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

90

50 - 150

ATI I.D. # 9311-129-11

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: G4	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

## RESULTS

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<6  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

92

50 - 150

ATI I.D. # 9311-129-12

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE1	DATE ANALYZED	: 11/15/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 20

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

1400  
TOLUENE TO DODECANE  
GASOLINE

SURROGATE PERCENT RECOVERY

LIMITS

TRIFLUOROTOLUENE

103

50 - 150

ATI I.D. # 9311-129-13

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE2	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS	<6
HYDROCARBON RANGE	TOLUENE TO DODECANE
HYDROCARBON QUANTITATION USING	GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE	82	50 - 150
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ATI I.D. # 9311-129-15

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE4	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<6  
TOLUENE TO DODECANE  
GASOLINE

## SURROGATE PERCENT RECOVERY

## LIMITS

TRIFLUOROTOLUENE

85

50 - 150

ATI I.D. # 9311-129-17

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: DE11	DATE ANALYZED	: 11/15/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G	DILUTION FACTOR	: 5

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

160  
TOLUENE TO DODECANE  
GASOLINE

SURROGATE PERCENT RECOVERY		LIMITS
----------------------------	--	--------

TRIFLUOROTOLUENE

90

50 - 150

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G		

COMPOUNDS	SAMPLE RESULT	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
GASOLINE	<5.00	50.0	51.8	104	52.3	105	1
CONTROL LIMITS				% REC.			RPD
GASOLINE				80 - 119			20
SURROGATE RECOVERIES		SPIKE		DUP. SPIKE		LIMITS	
TRIFLUOROTOLUENE		107		107		50 - 150	

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-129-8
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/13/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
GASOLINE	<5.00	<5.00	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				90		93		50 - 150	

NC = Not Calculable.

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-130-5
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-G		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
GASOLINE	<5.00	<5.00	NC	50.0	40.0	80	38.4	77	4
CONTROL LIMITS						% REC.			RPD
GASOLINE						50 - 112			20
SURROGATE RECOVERIES				SPIKE		DUP. SPIKE		LIMITS	
TRIFLUOROTOLUENE				91		93			50 - 150

NC = Not Calculable.

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

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

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL	100	50 - 150
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ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: N/A
PROJECT #	: 15169.144	DATE RECEIVED	: N/A
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: METHOD BLANK	DATE ANALYZED	: 11/17/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<10  
C12 - C24  
DIESEL

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<40  
C24 - C34  
MOTOR OIL

## SURROGATE PERCENT RECOVERY

## LIMITS

D-TERPHENYL

105

50 - 150



ATI I.D. # 9311-129-5

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: D1	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

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

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL

94

50 - 150



ATI I.D. # 9311-129-6

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: D2	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS	<11
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL	100	50 - 150
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ATI I.D. # 9311-129-7

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/10/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/12/93
CLIENT I.D.	: (D3)	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS	610
HYDROCARBON RANGE	C12 -C24
HYDROCARBON QUANTITATION USING	DIESEL

## SURROGATE PERCENT RECOVERY

## LIMITS

O-TERPHENYL	105	50 - 150
-------------	-----	----------

ATI I.D. # 9311-129-12

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: DE1	DATE ANALYZED	: 11/18/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 20

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

RESULTS

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

15000  
C12 - C24  
DIESEL

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

500 D1  
C24 - C34  
MOTOR OIL

SURROGATE PERCENT RECOVERY

LIMITS

2-TERPHENYL

170 F

50 - 150

D1 = Value from a two fold diluted analysis.  
F = Out of limits due to matrix interference.



ATI I.D. # 9311-129-13

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: DE2	DATE ANALYZED	: 11/18/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----

COMPOUNDS

RESULTS

-----

FUEL HYDROCARBONS	<12
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL
FUEL HYDROCARBONS	<47
HYDROCARBON RANGE	C24 - C34
HYDROCARBON QUANTITATION USING	MOTOR OIL

SURROGATE PERCENT RECOVERY

LIMITS

1,2,4-TERPHENYL	101	50 - 150
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ATI I.D. # 9311-129-14

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: DE3	DATE ANALYZED	: 11/18/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 20

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

15000  
C12 - C24  
DIESEL

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

510 D1  
C24 - C34  
MOTOR OIL

## SURROGATE PERCENT RECOVERY

## LIMITS

)-TERPHENYL

170 F

50 - 150

D1 = Value from a two fold diluted analysis.  
F = Out of limits due to matrix interference.

ATI I.D. # 9311-129-15

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: DE4	DATE ANALYZED	: 11/17/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 1

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

RESULTS

-----  
FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<11  
C12 - C24  
DIESEL

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

<46  
C24 - C34  
MOTOR OIL

SURROGATE PERCENT RECOVERY

LIMITS

-TERPHENYL

100

50 - 150

ATI I.D. # 9311-129-16

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: DE10	DATE ANALYZED	: 11/18/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 20

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDSRESULTS  
-----

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

5800  
C12 - C24  
DIESEL

FUEL HYDROCARBONS  
HYDROCARBON RANGE  
HYDROCARBON QUANTITATION USING

270 D0  
C24 - C34  
MOTOR OIL

## SURROGATE PERCENT RECOVERY

## LIMITS

N-TERPHENYL

194 F

50 - 150

D0 = Value from a one fold diluted analysis.  
F = Out of limits due to matrix interference.



ATI I.D. # 9311-129-17

TOTAL PETROLEUM HYDROCARBONS  
DATA SUMMARY

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	DATE SAMPLED	: 11/11/93
PROJECT #	: 15169.144	DATE RECEIVED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE EXTRACTED	: 11/17/93
CLIENT I.D.	: DE11	DATE ANALYZED	: 11/19/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D	DILUTION FACTOR	: 20

RESULTS ARE CORRECTED FOR MOISTURE CONTENT

-----  
COMPOUNDS

RESULTS

FUEL HYDROCARBONS	4000
HYDROCARBON RANGE	C12 - C24
HYDROCARBON QUANTITATION USING	DIESEL
FUEL HYDROCARBONS	170 D0
HYDROCARBON RANGE	C24 - C34
HYDROCARBON QUANTITATION USING	MOTOR OIL

SURROGATE PERCENT RECOVERY

LIMITS

o-TERPHENYL	166	F	50 - 150
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D0 = Value from a one fold diluted analysis.  
F = Out of limits due to matrix interference.

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/12/93
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	174	87	190	95	9
CONTROL LIMITS				% REC.			RPD
DIESEL				69 - 122			20
SURROGATE RECOVERIES		SPIKE		DUP. SPIKE		LIMITS	
O-TERPHENYL		90		99		50 - 150	

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: BLANK
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/17/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/17/93
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	205	102	N/A	N/A	N/A
CONTROL LIMITS				% REC.			RPD
DIESEL				69 - 122			20
SURROGATE RECOVERIES		SPIKE		DUP. SPIKE		LIMITS	
O-TERPHENYL		114		N/A		50 - 150	

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-129-5
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/12/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/12/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	<10.0	<10.0	NC	200	188	94	191	96	2
	CONTROL LIMITS					% REC.			RPD
DIESEL						63 - 131			20
	SURROGATE RECOVERIES			SPIKE		DUP. SPIKE		LIMITS	
O-TERPHENYL				95		99		50 - 150	

NC = Not Calculable.

ATI I.D. # 9311-129

TOTAL PETROLEUM HYDROCARBONS  
QUALITY CONTROL DATA

CLIENT	: APPLIED GEOTECHNOLOGY, INC.	SAMPLE I.D. #	: 9311-129-15
PROJECT #	: 15169.144	DATE EXTRACTED	: 11/17/93
PROJECT NAME	: GTE/KENNEWICK	DATE ANALYZED	: 11/17/93
SAMPLE MATRIX	: SOIL	UNITS	: mg/Kg
METHOD	: WA DOE WTPH-D		

COMPOUND	SAMPLE RESULT	SAMPLE DUP. RESULT	RPD	SPIKE ADDED	SPIKED RESULT	% REC.	DUP. SPIKED RESULT	DUP. % REC.	RPD
DIESEL	<10.0	<10.0	NC	200	201	100	212	106	5
	CONTROL LIMITS					% REC.			RPD
DIESEL						63 - 131			20
	SURROGATE RECOVERIES			SPIKE		DUP. SPIKE		LIMITS	
O-TERPHENYL				103		101		50 - 150	

NC = Not Calculable.

ATI I.D. # 9311-129

## GENERAL CHEMISTRY ANALYSIS

CLIENT : APPLIED GEOTECHNOLOGY, INC. MATRIX : SOIL  
PROJECT # : 15169.144  
PROJECT NAME : GTE/KENNEWICK

-----  
PARAMETER DATE ANALYZED  
-----

MOISTURE 11/15/93



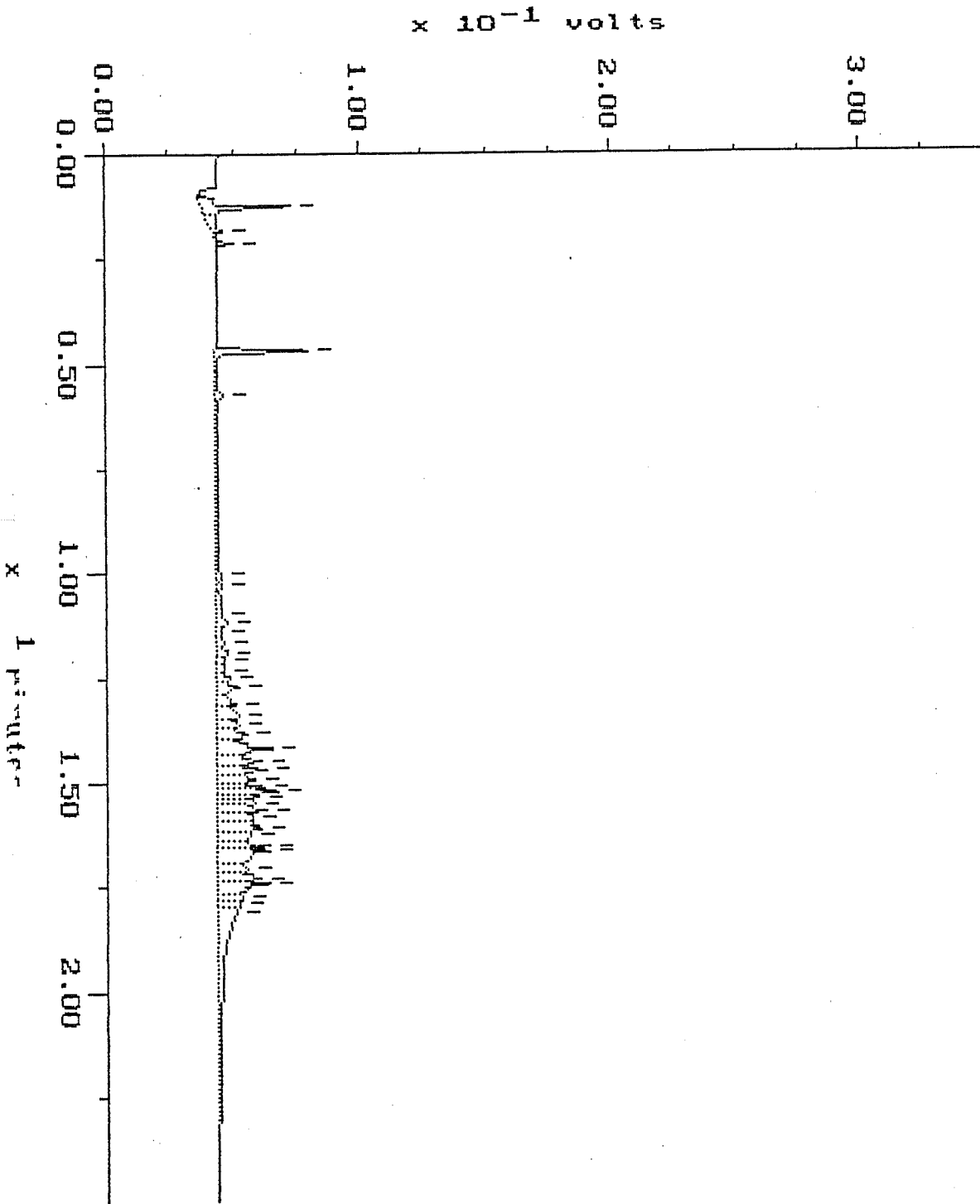


# WA DOE WTPH-G

Sample: 9311-129-12 DIL  
Acquired: 15-NOV-93 12:49  
Dilution: 1 : 20.000

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111593JR

Filename: RB159J08  
Operator:



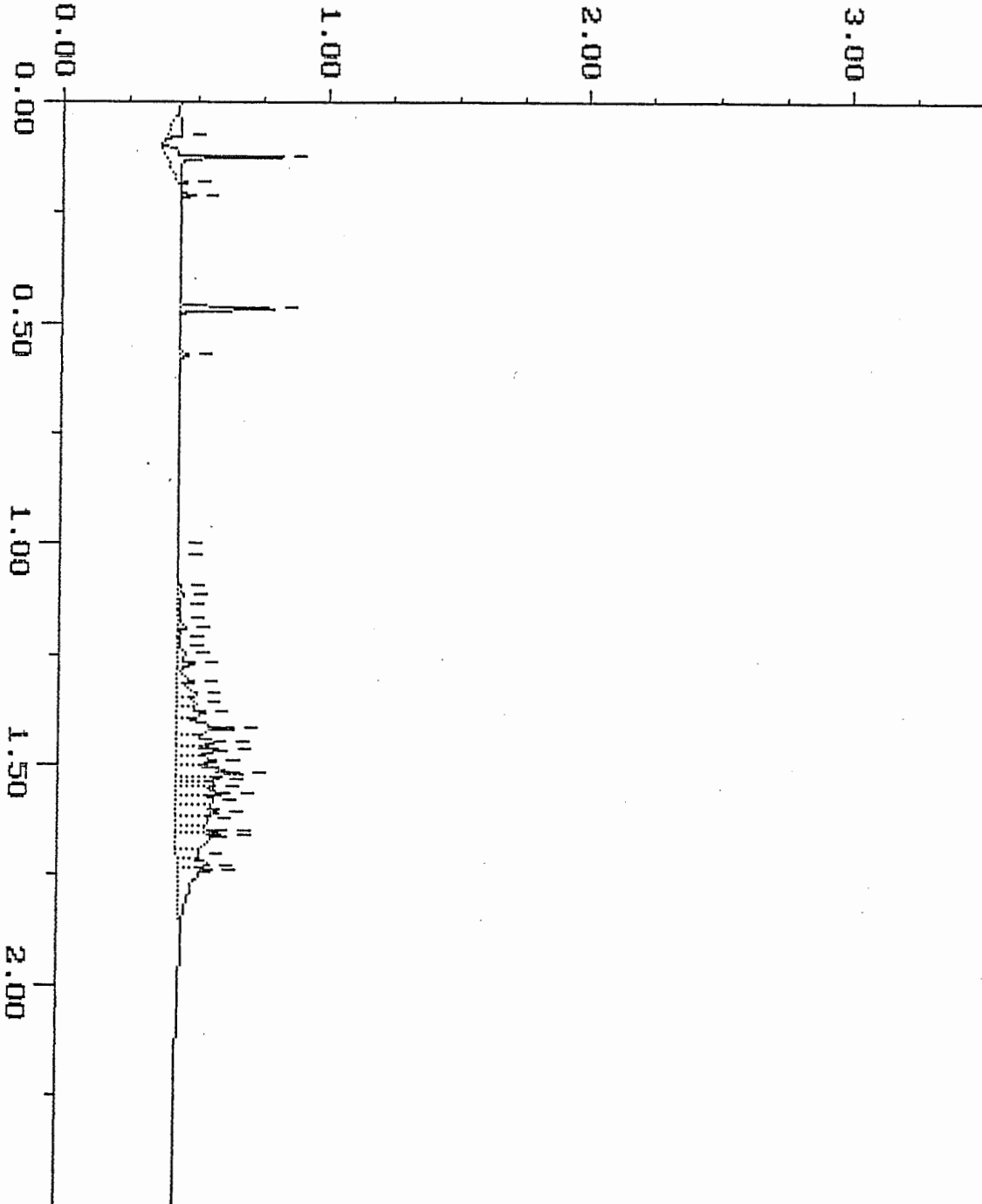
# WA DOE WTPH-G

Sample: 9311-129-14 DIL  
Acquired: 15-NOV-93 13:18  
Dilution: 1 : 20.000

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111593JR

Filename: RB159J09  
Operator:

$\times 10^{-1}$  volts

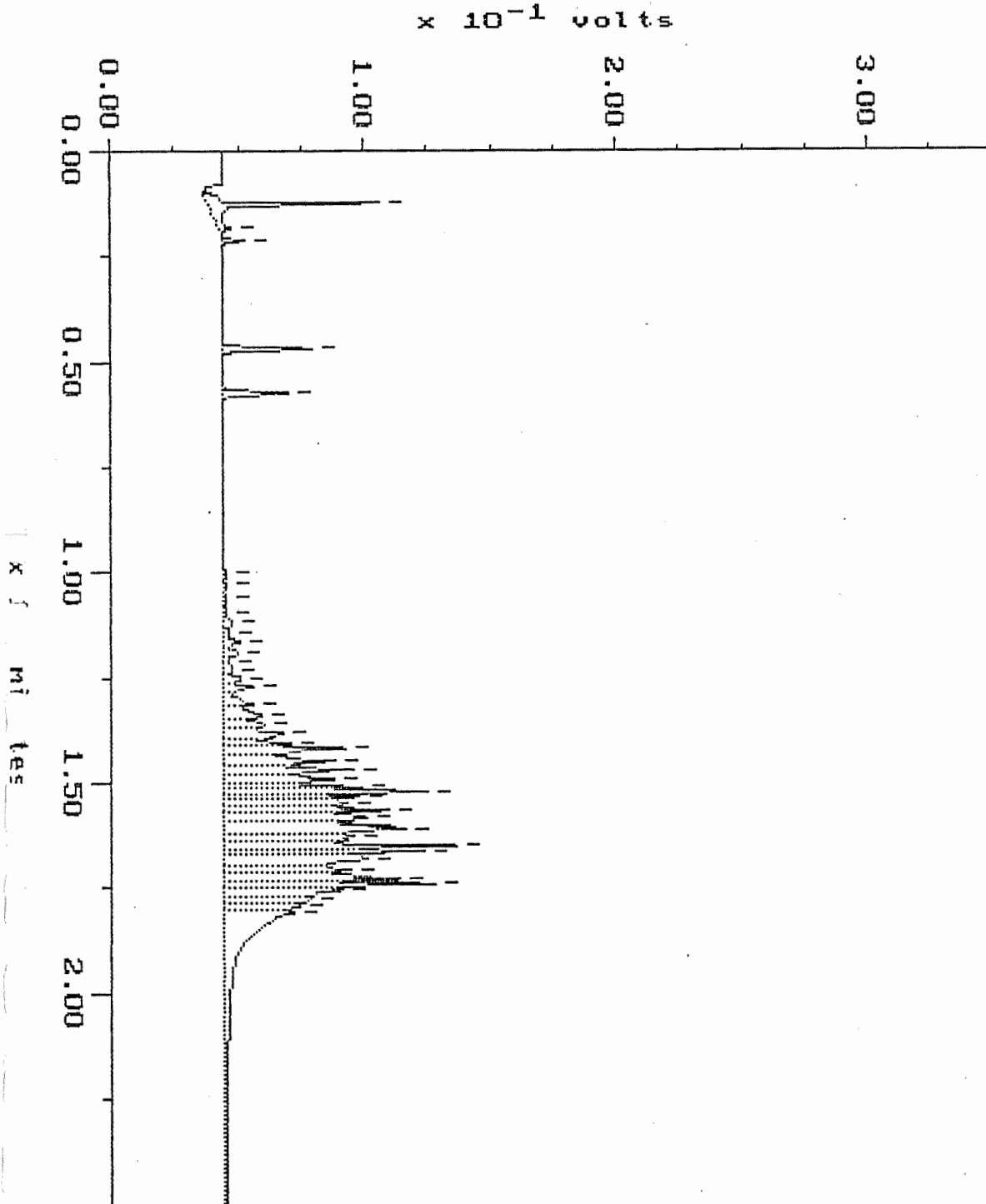


# WA DOE WTPH-G

Sample: 9311-129-16 DIL  
Acquired: 16-NOV-93 4:50  
Dilution: 1 : 2.000

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111593JR

Filename: RB159J36  
Operator:



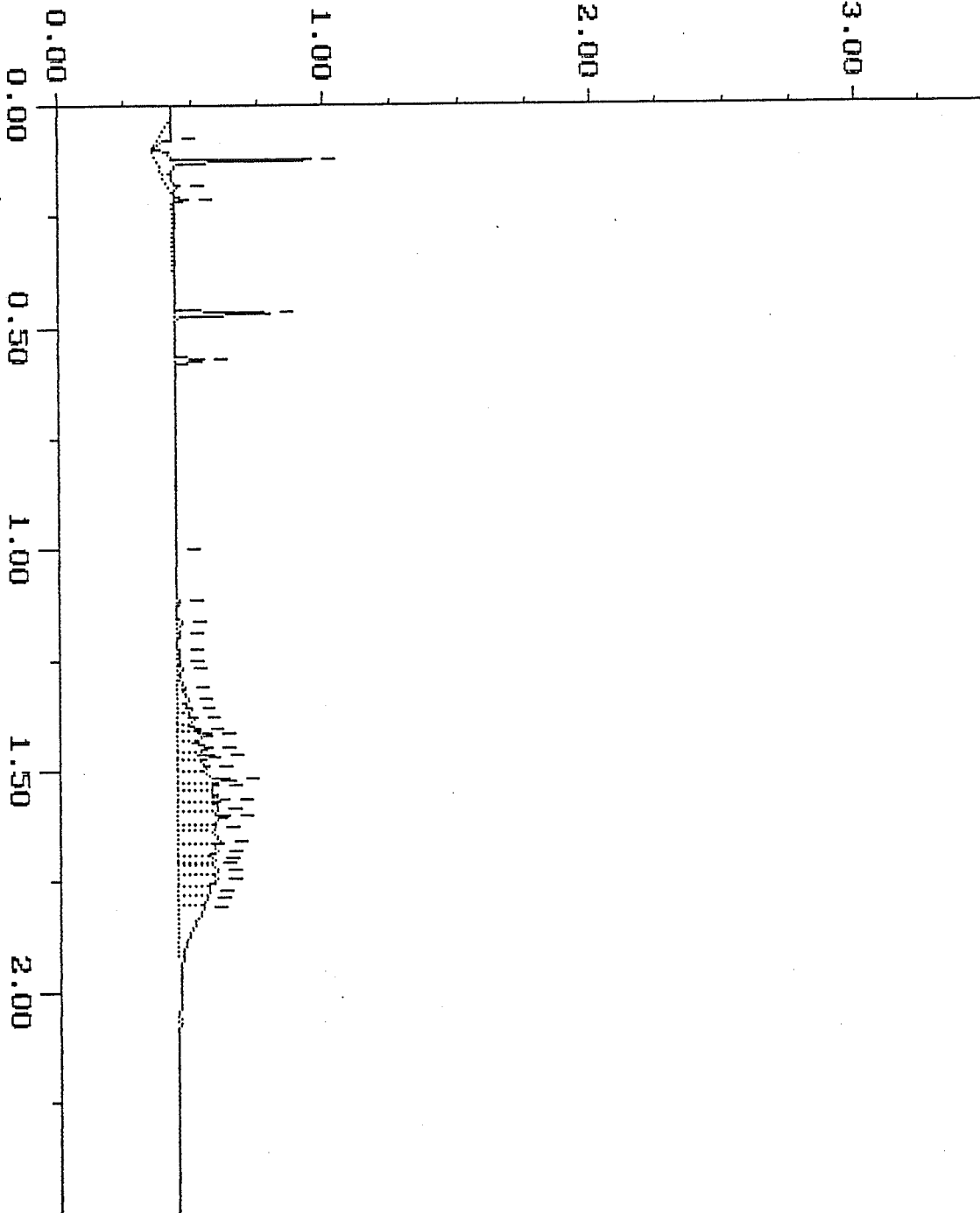
# WA DOE WTPH-G

Sample: 9311-129-17 DIL  
Acquired: 15-NOV-93 14:16  
Dilution: 1 : 5.000

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111593JR

Filename: RB159J11  
Operator:

$\times 10^{-1}$  volts



Blank

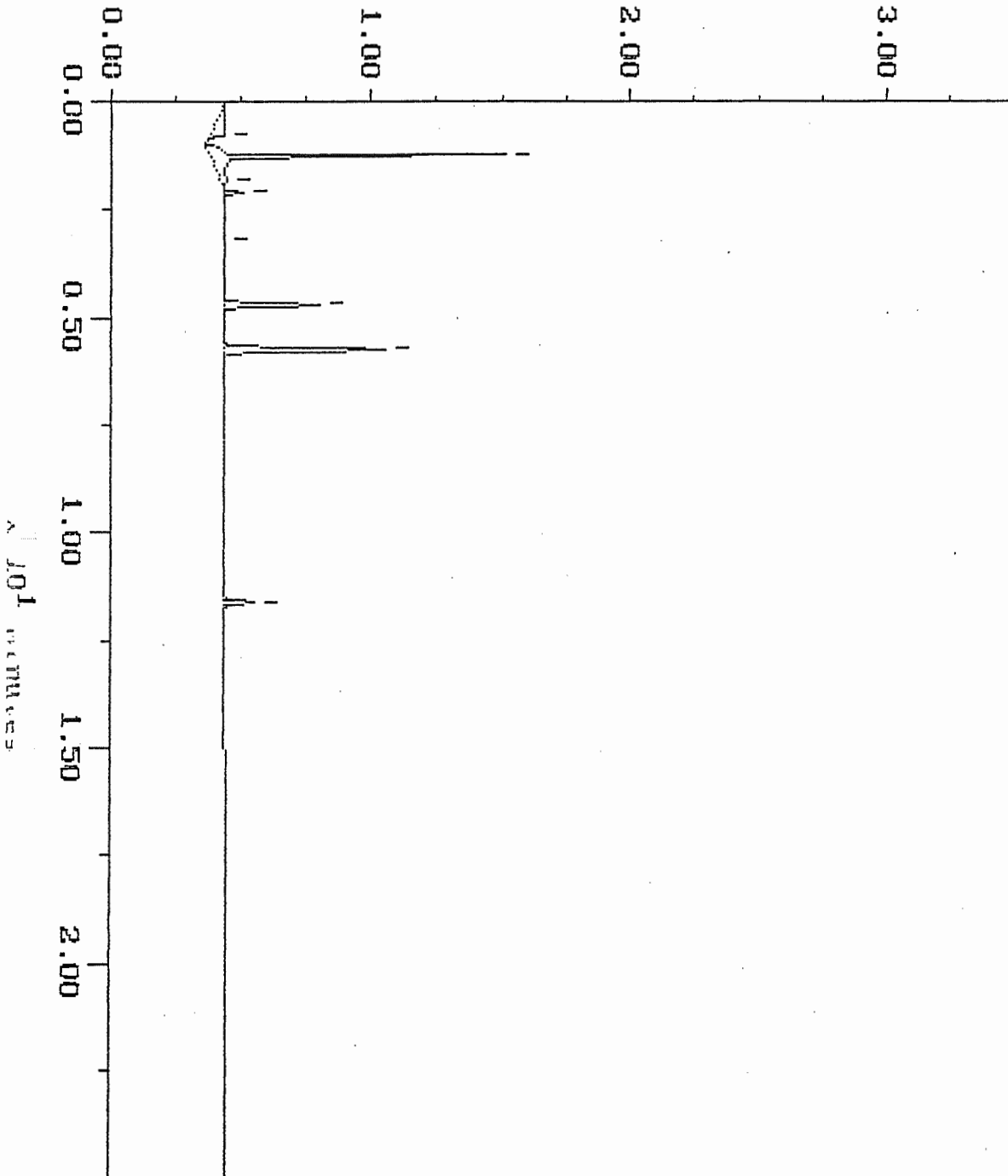
WA DOE WTPH-G

Sample: SRB-A 11-12  
Acquired: 12-NOV-93 17:53

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111293JR

Filename: RB129J06  
Operator:

$\times 10^{-1}$  volts



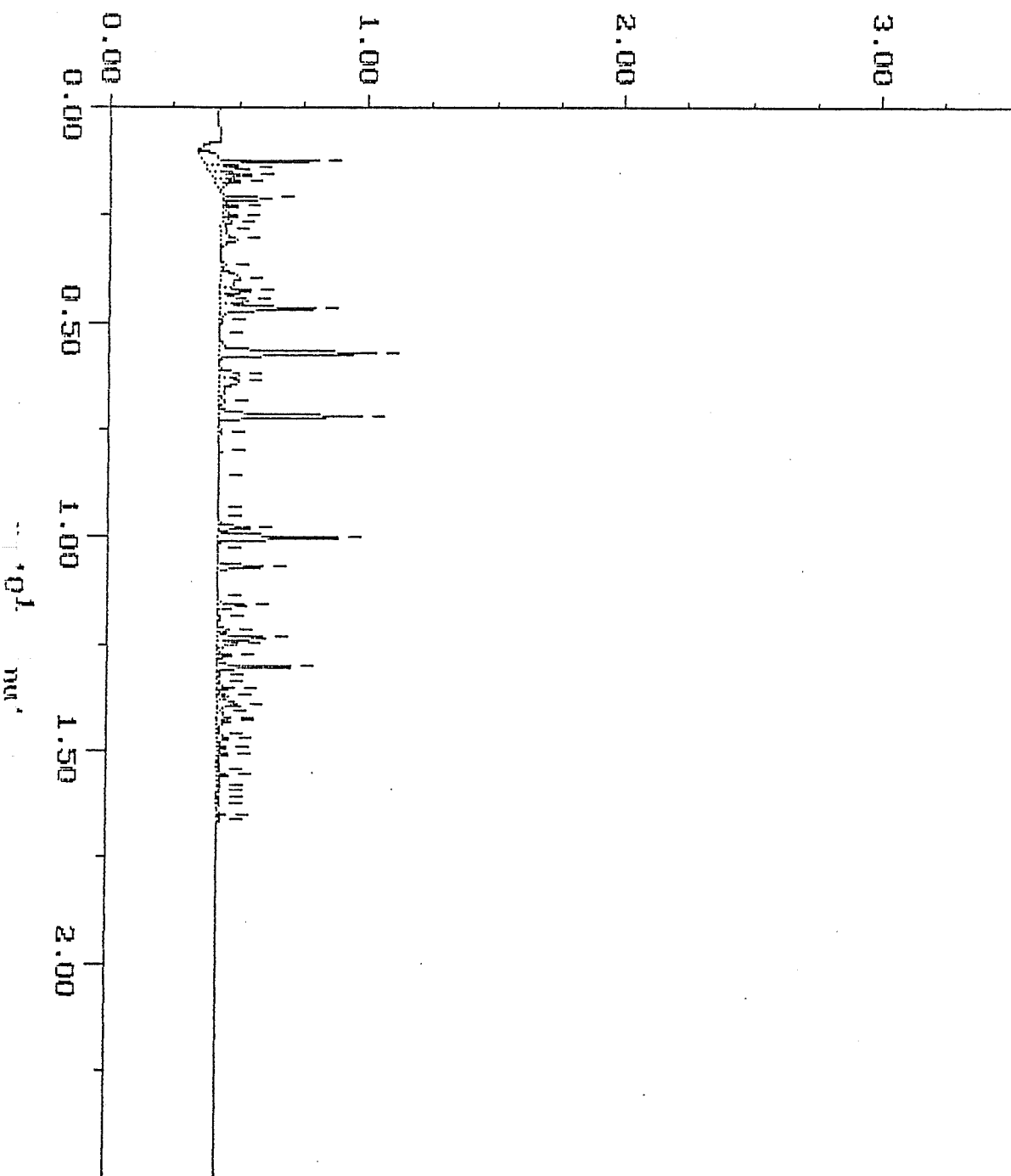
# Continuing Calibration

Sample: STD-C G  
Acquired: 12-NOV-93

Channel: JEROME-FID  
8:01 Method: F:\BRO2\MAXDATA\JEROME\111293JR

Filename: RB129J01  
Operator:

$\times 10^{-1}$  volts



# Continuing Calibration

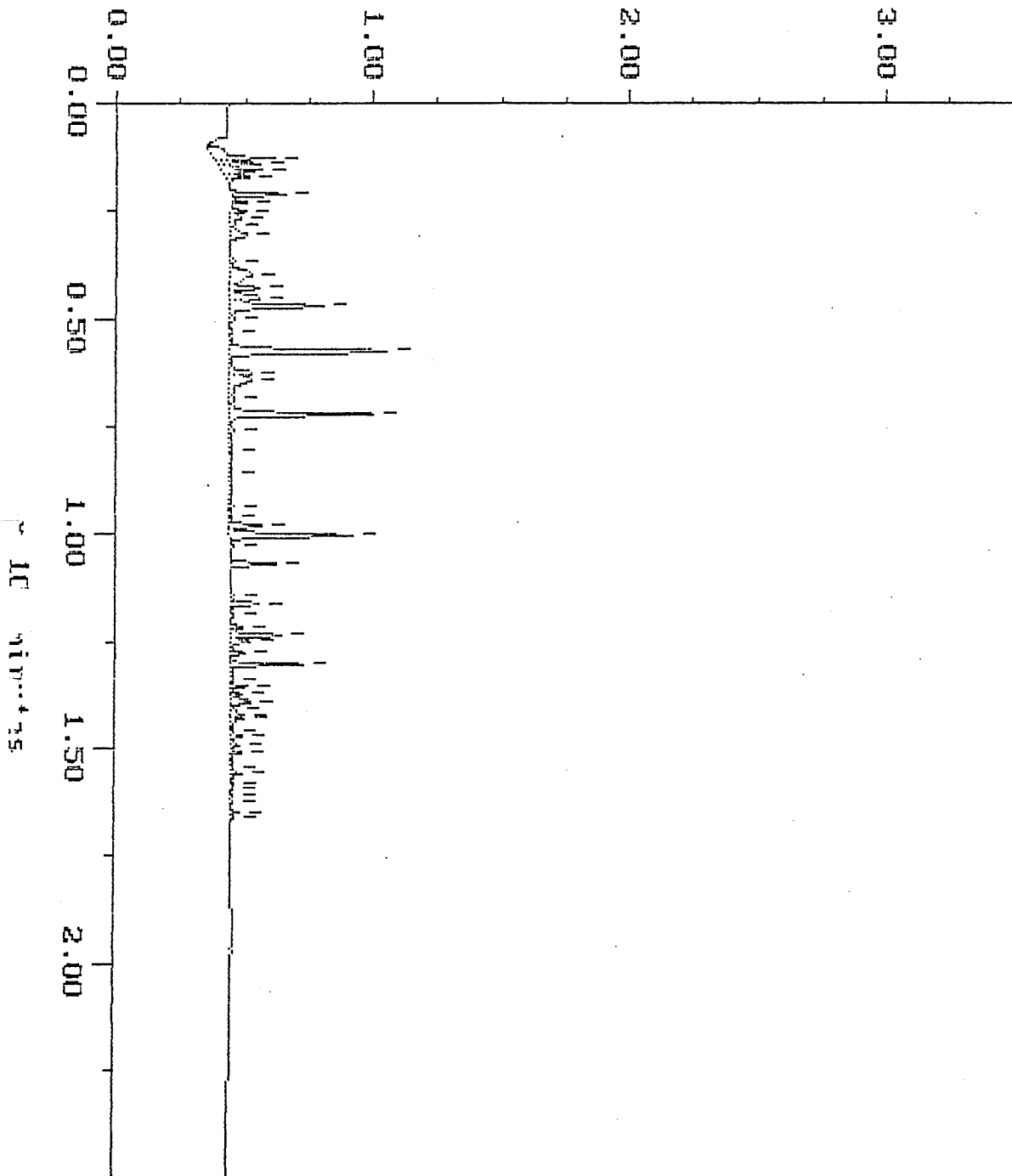
Sample: STD-C 6  
Acquired: 15-NOV-93

8:33

Channel: JEROME-FID  
Method: F:\BRO2\MAXDATA\JEROME\111593JR

Filename: RB159J01  
Operator:

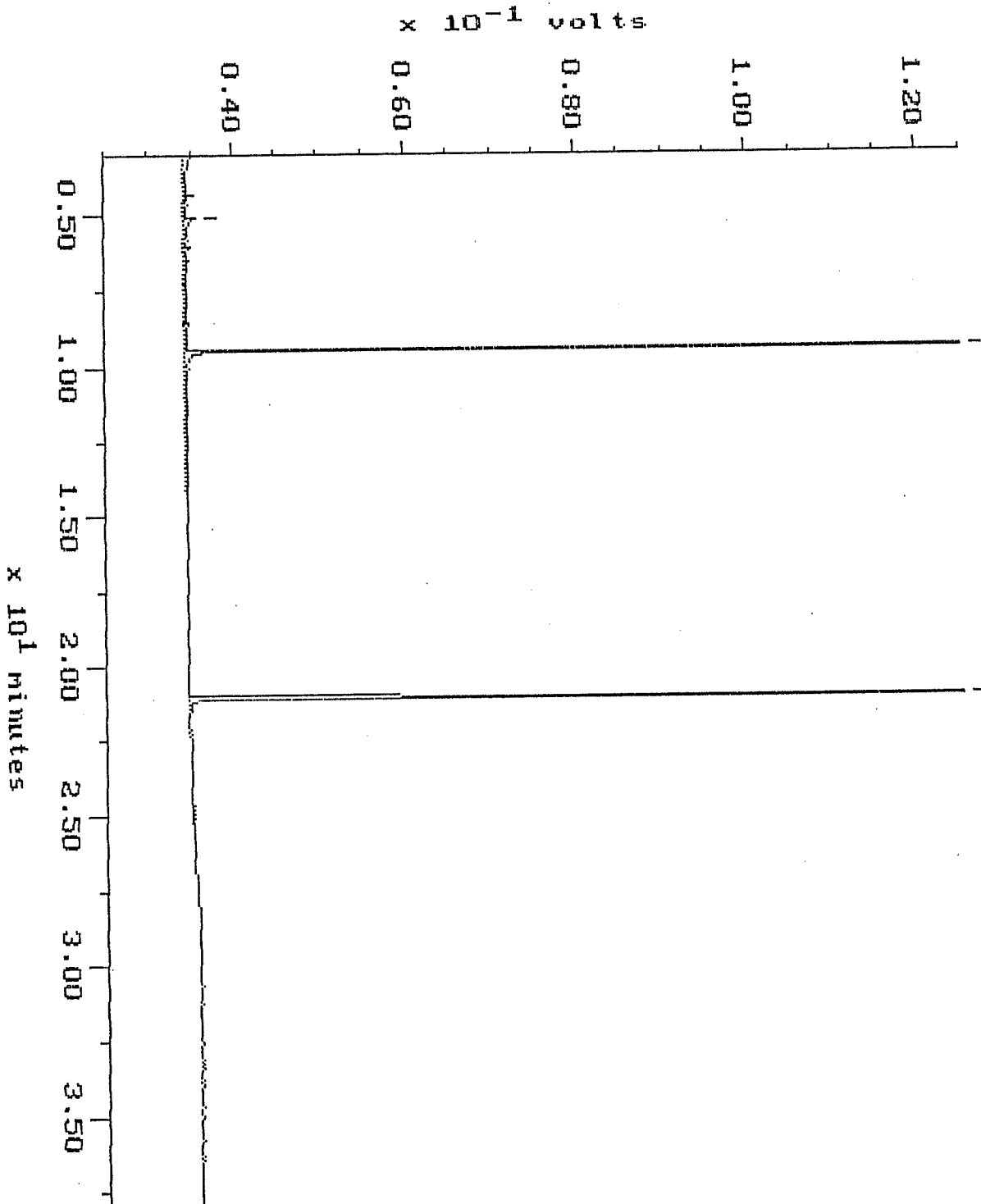
$\times 10^{-1}$  volts



# Blank

Sample: SRB 11-15 HClD Channel: ERNIE  
Acquired: 15-NOV-93 17:43 Method: F:\BRO2\MAXDATA\ERNIE\FUEL1115  
Comments: ATI: THE QUALITY TEAM

Filename: RB159E05  
Operator: ATI



# Continuing Calibration

Sample: DG 400

Channel: ERNIE

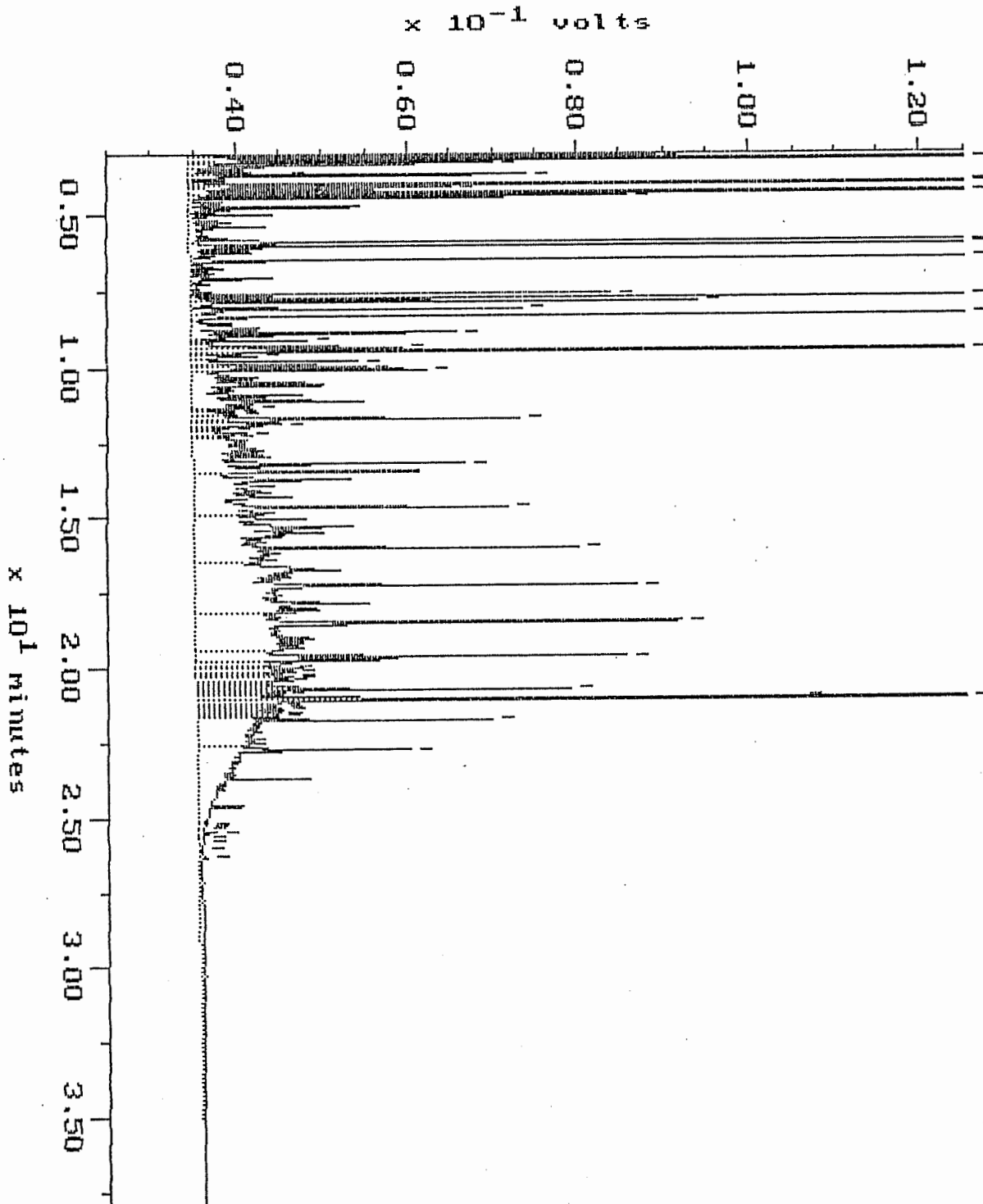
Filename: RB159E04

Acquired: 15-NOV-93 16:58

Method: F:\BRO2\MAXDATA\ERNIE\FUEL1115

Operator: ATI

Comments: ATI: THE QUALITY TEAM

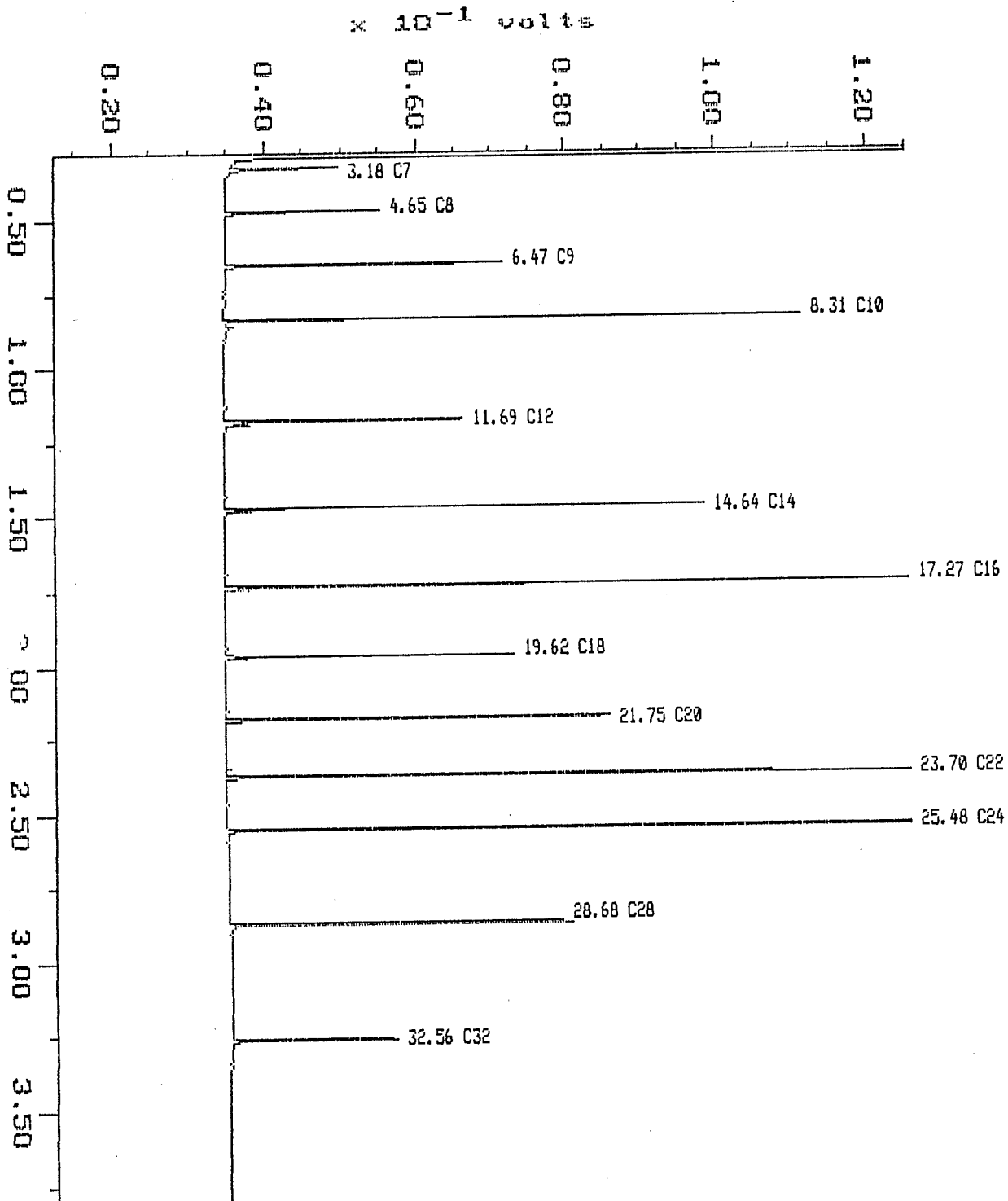


# Alkane

Sample: ALKANE  
Acquired: 08-NOV-93 12:55  
Inj Vol: 1.00

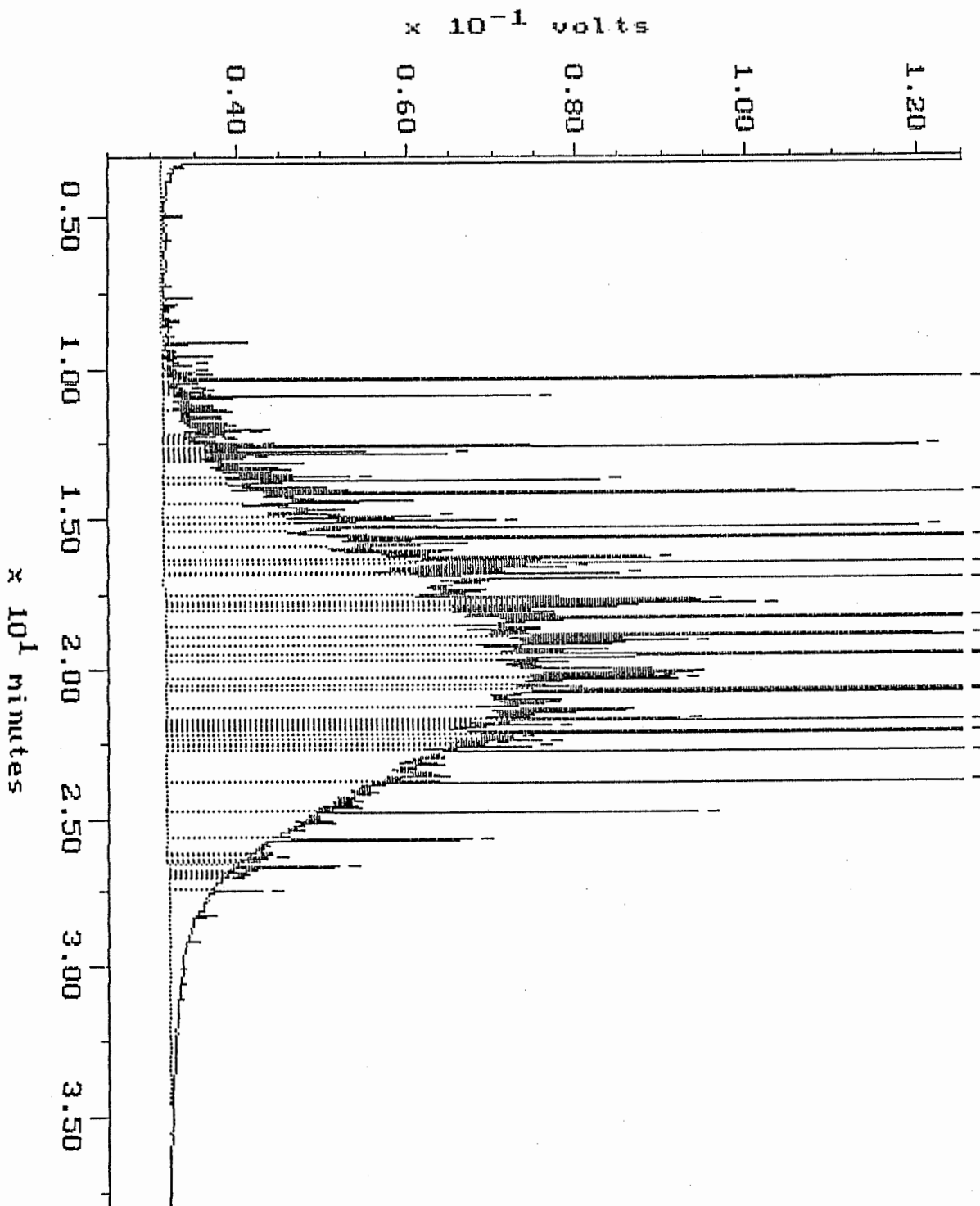
Channel: ERNIE  
Method: F:\BRO2\MAXDATA\ERNIE\FUEL1108

Filename: RB088E02  
Operator: ATI



# WA DOE WTPH-D

Sample: 9311-129-7 Channel: NANCY Filename: RB128N16  
Acquired: 12-NOV-93 21:24 Method: F:\BRO2\MAXDATA\NANCY\FUEL1112 Operator: ATI  
Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE

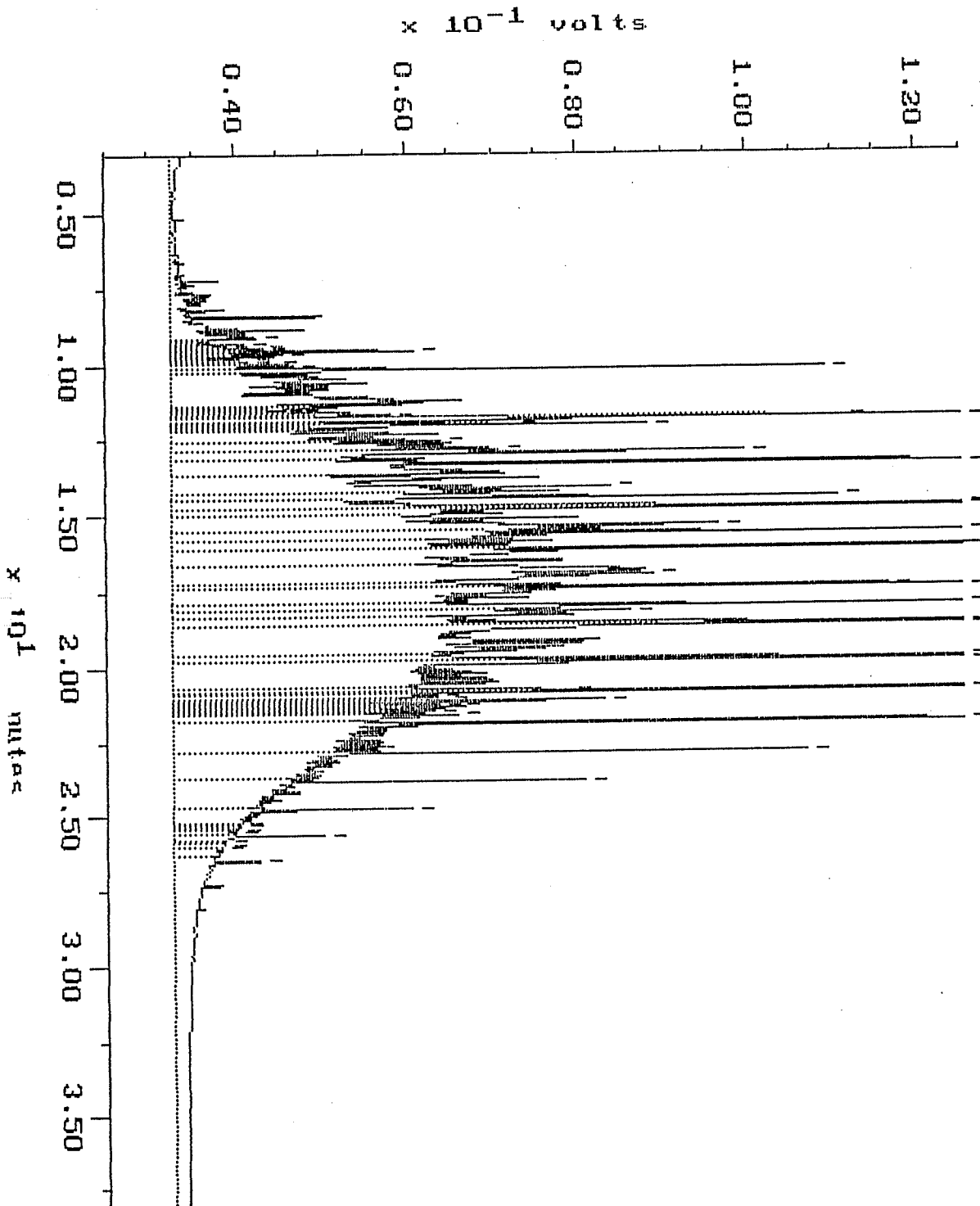


# WA DOE WTPH-D

Sample: 9311-129-12 DIL  
Acquired: 18-NOV-93 17:18  
Dilution: 1 : 20.000

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1118

Filename: RB188W08  
Operator: BRO



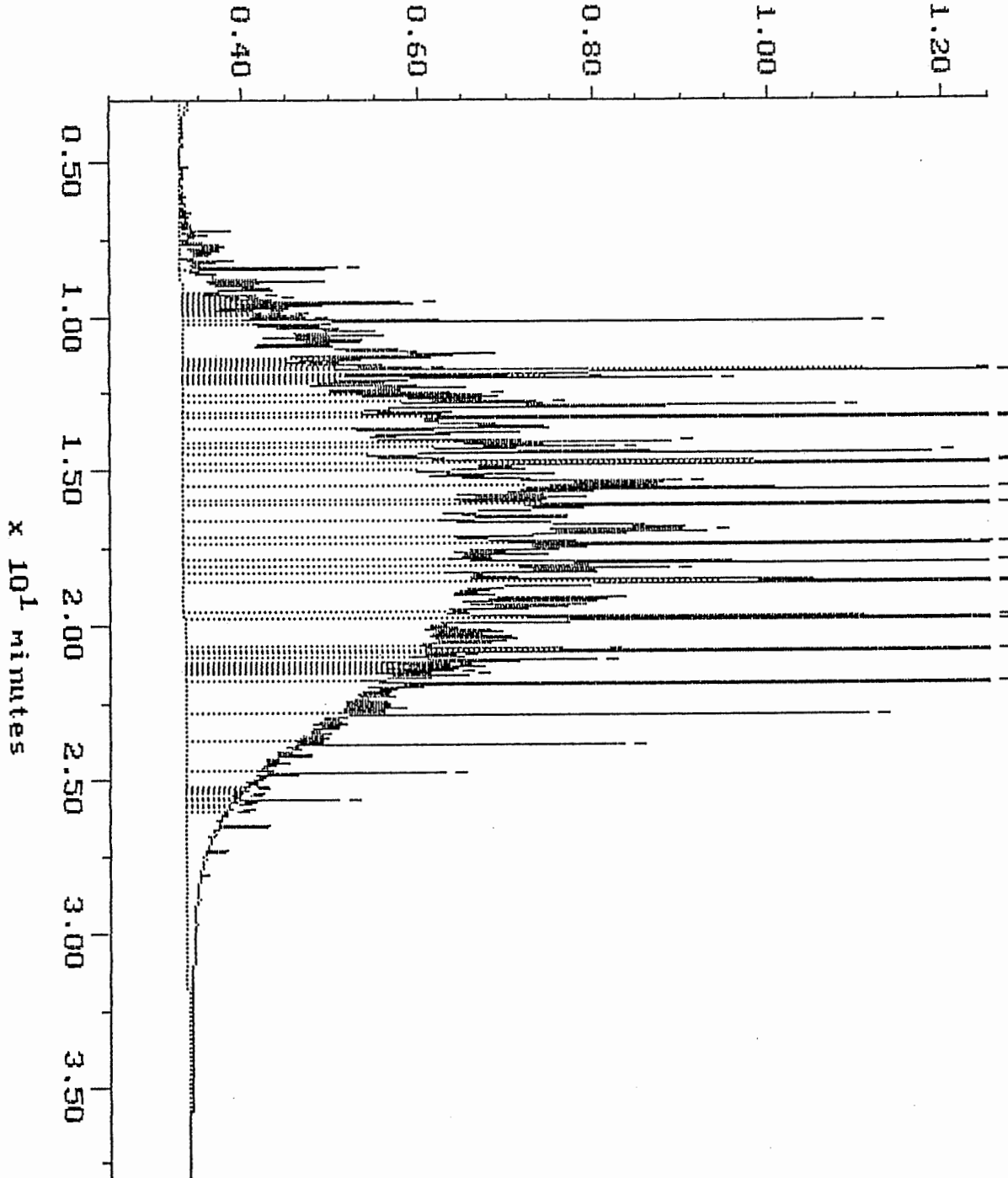
# WA DOE WTPH-D

Sample: 9311-129-14 DIL  
Acquired: 18-NOV-93 18:05  
Dilution: 1 : 20.000

Channel: WILMA  
Method: F:\BKG2\MAXDATA\WILMA\FUEL1118

Filename: RB188W09  
Operator: BRU

$\times 10^{-1}$  volts

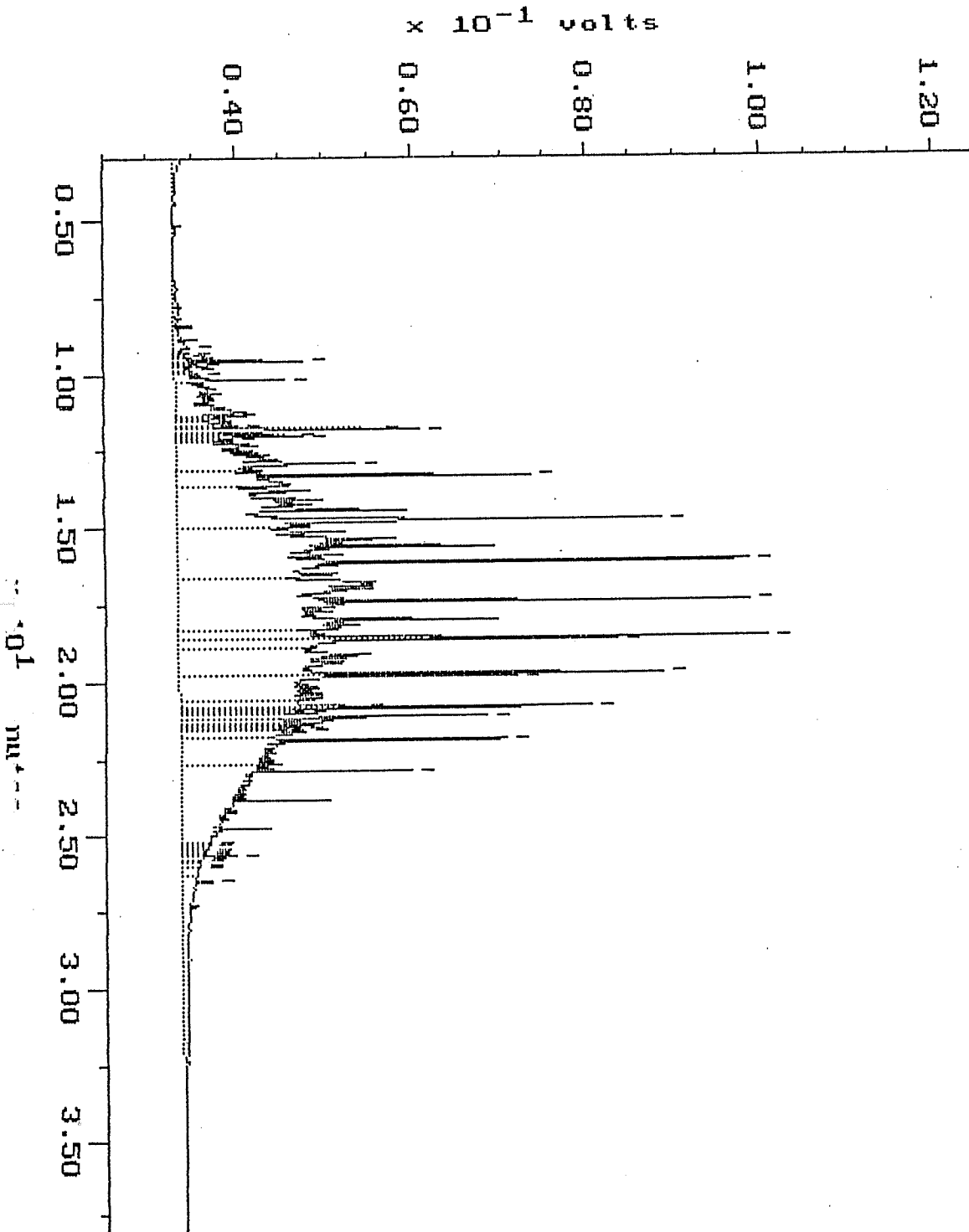


# WA DOE WTPH-D

Sample: 9311-129-16 DIL  
Acquired: 18-NOV-93 18:52  
Dilution: 1 : 20.000

Channel: WILMA  
Method: F:\BKG2\MAXDATA\WILMA\FUEL1118

Filename: RB188W10  
Operator: BKO

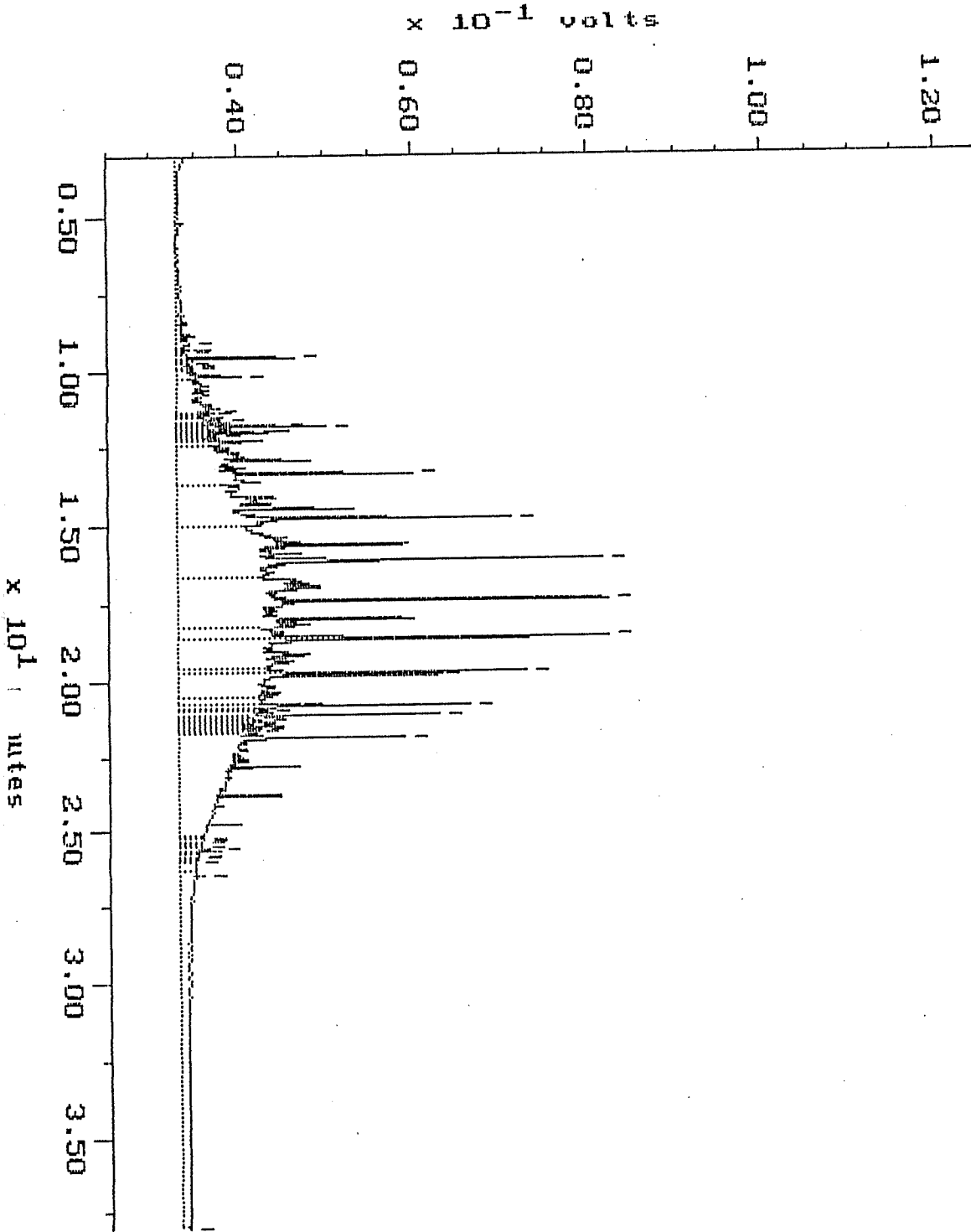


# WA DOE WTPH-D

Acquisition: 9711-129-17.D  
Date: 13-NOV-93 12:06  
Dilution: 1 : 20.000

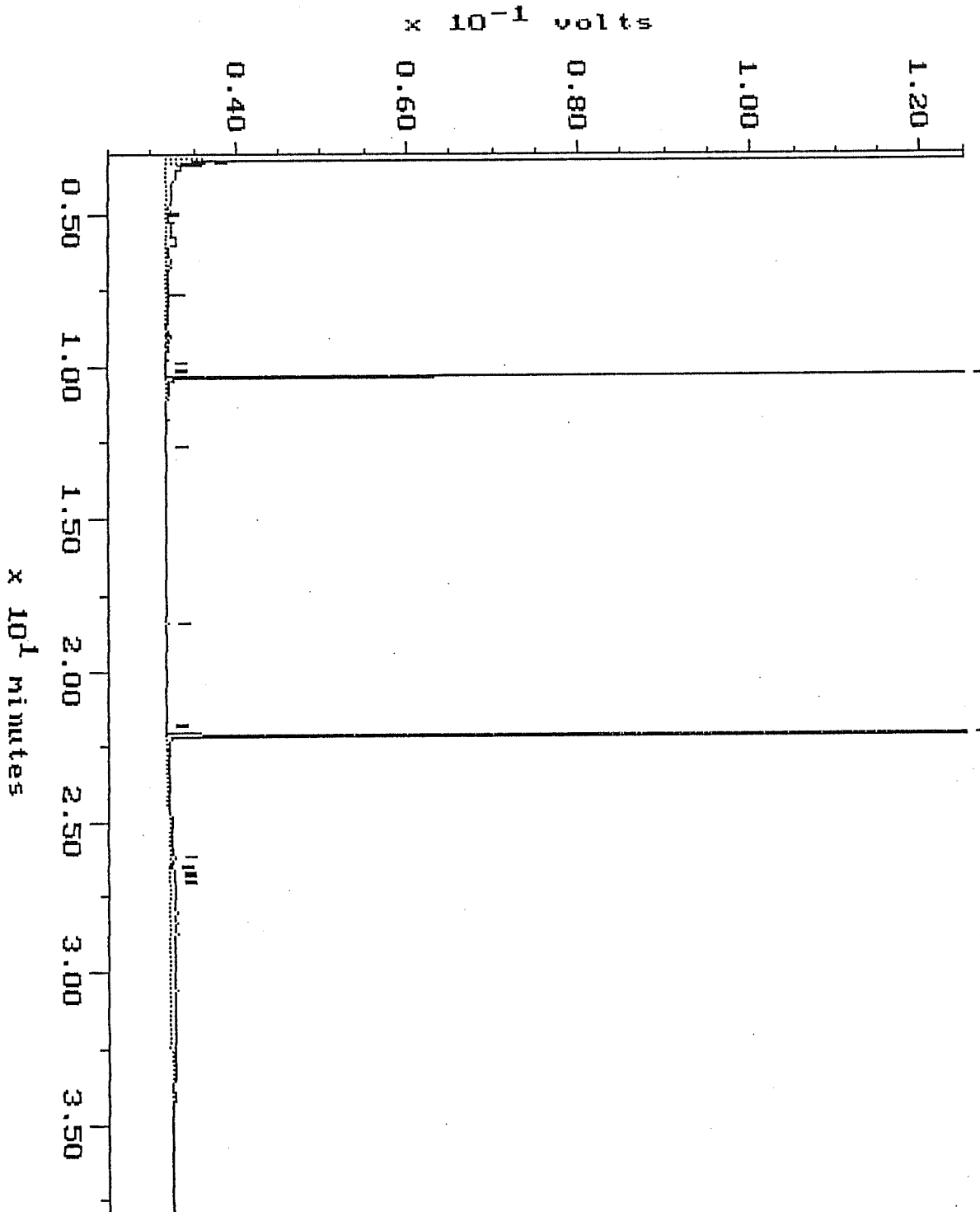
Channel: WILMA  
Method: F:\BR02\MAXDATA\WILMA\FUEL1119

Filename: 88198W04  
Operator: BRU



# Blank

Sample: SRB 11-12 Channel: NANCY Filename: RB129N04  
Acquired: 12-NOV-93 11:58 Method: F:\BR02\MAXDATA\NANCY\FUEL1112 Operator: ATI  
Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE

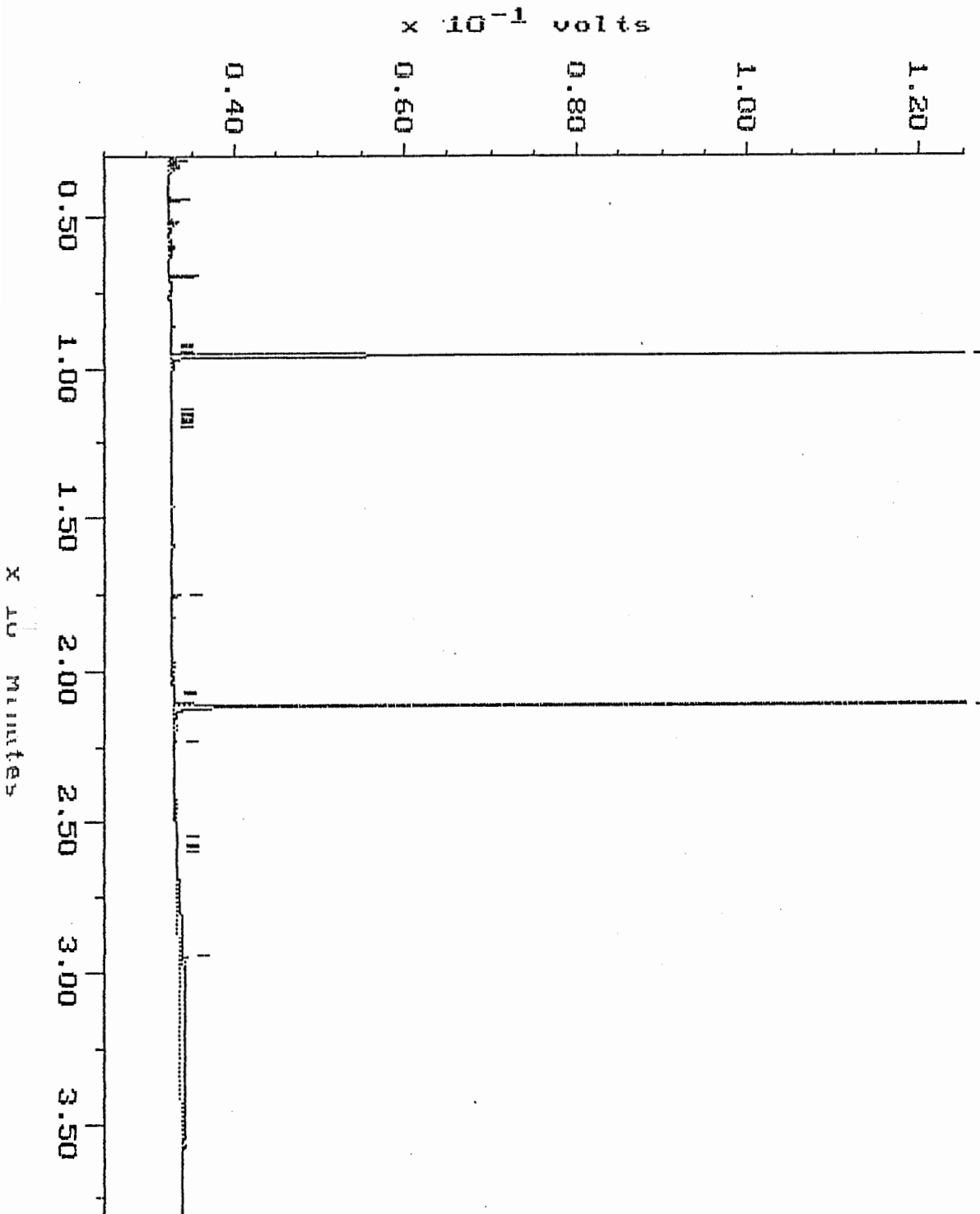


# Blank

Sample: SRB 11-17  
Acquired: 17-NOV-93 17:33

Channel: WILMA  
Method: F:\SR02\MAXDATA\WILMA\FUEL1117

Filename: RB178W04  
Operator: BRO

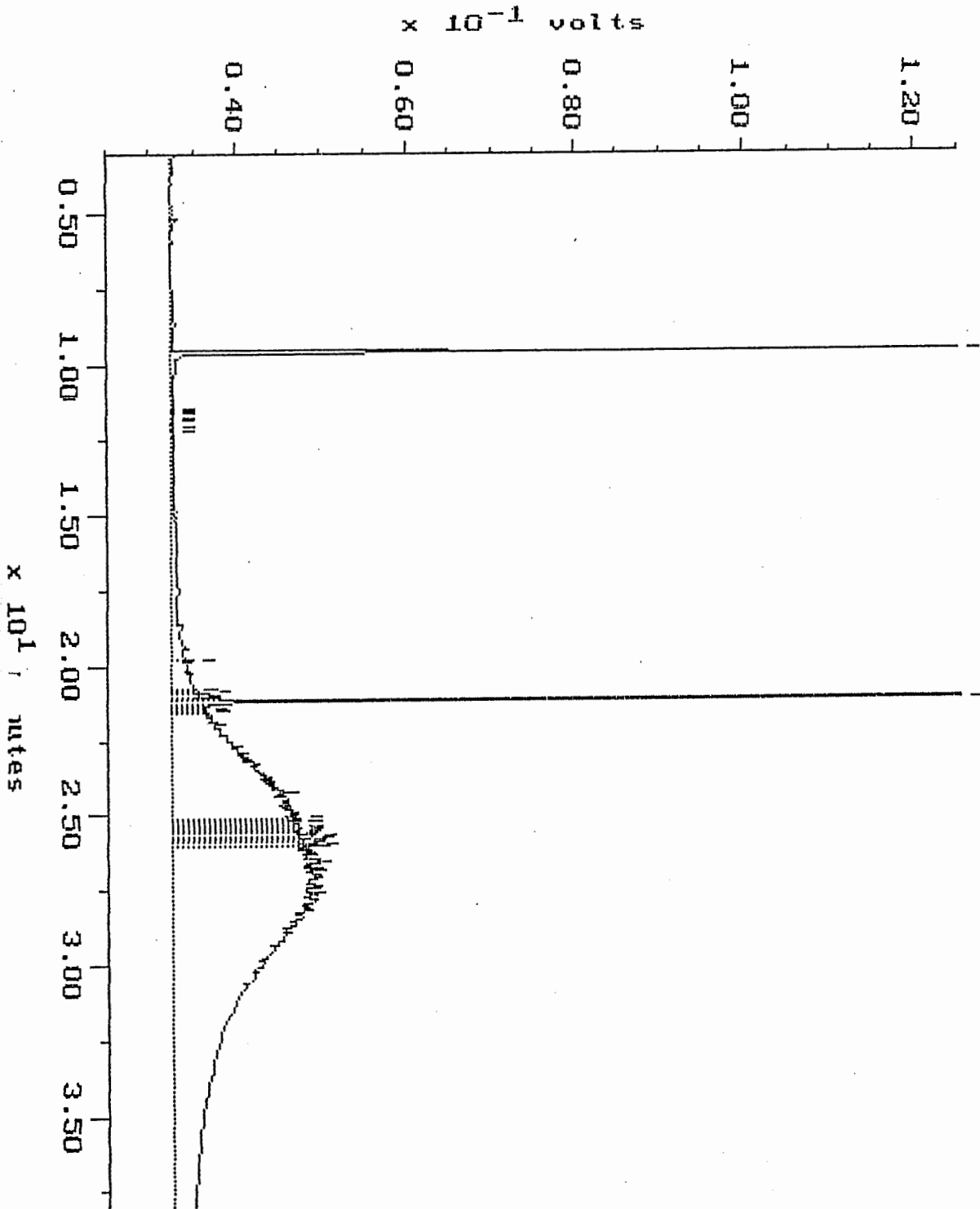


# Continuing Calibration

Sample: MD 588  
Acquired: 17-NOV-93 16:46

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1117

Filename: RB178483  
Operator: BRD



# Continuing Calibration

Sample: D 500

Channel: NANCY

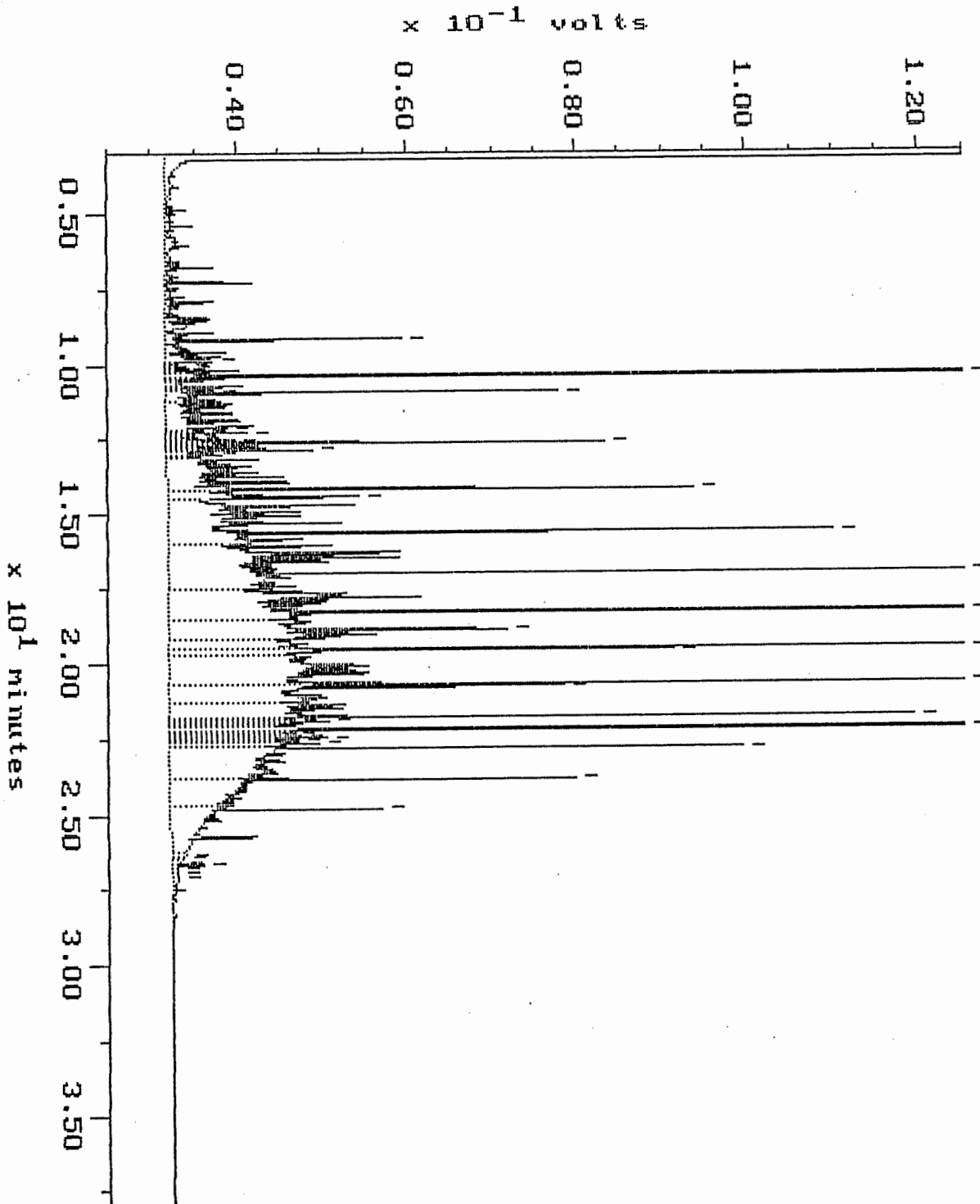
Filename: RB128N02

Acquired: 12-NOV-93 9:56

Method: F:\BRO2\MAXDATA\NANCY\FUEL1112

Operator: ATI

Comments: ATI RUSH FUELS: PROVIDERS OF EXCELLENCE AND QUALITY IN CLIENT SERVICE

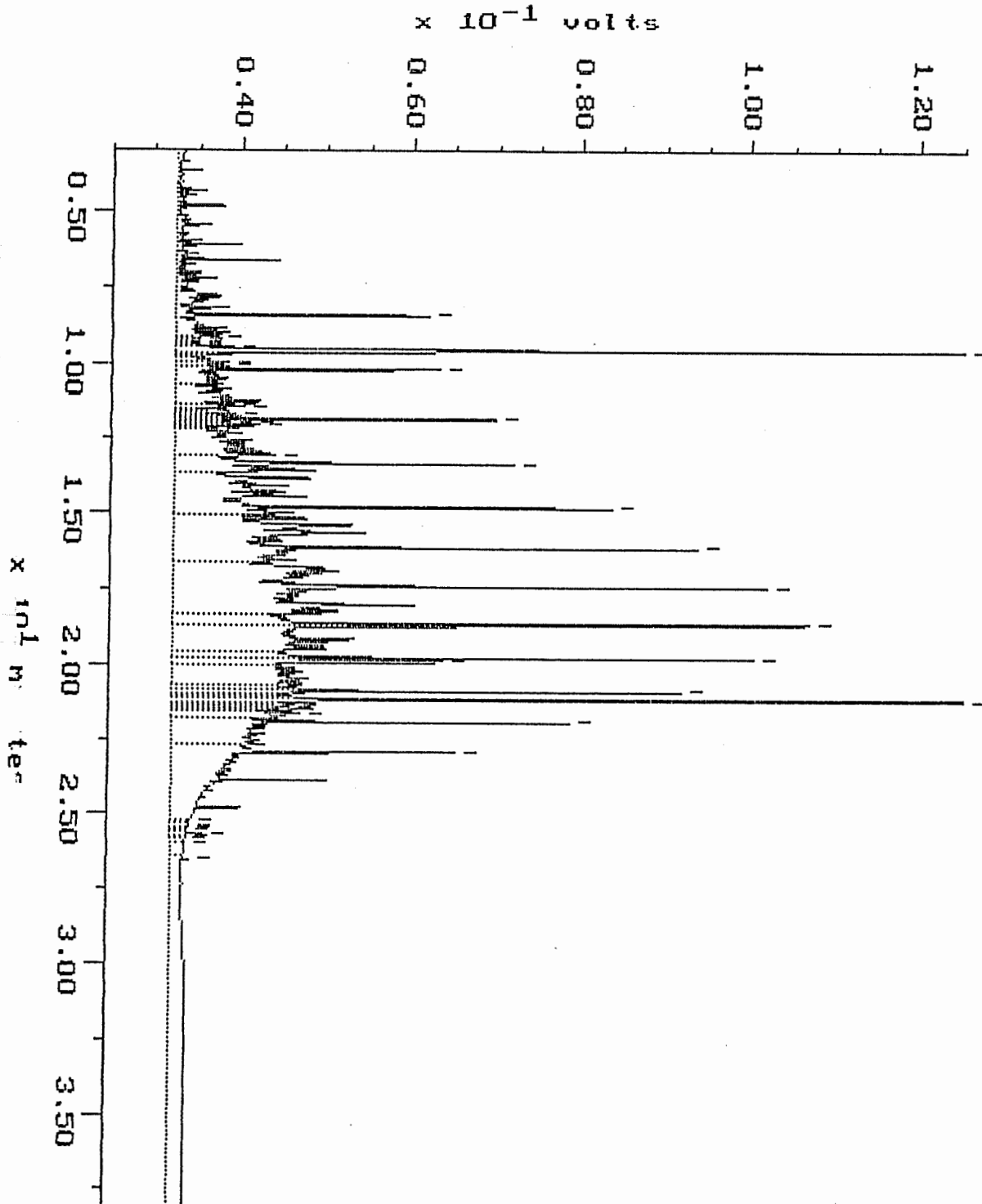


# Continuing Calibration

Sample: D 588  
Acquired: 17-NOV-93 15:58

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1117

Filename: RB178W02  
Operator: BRO

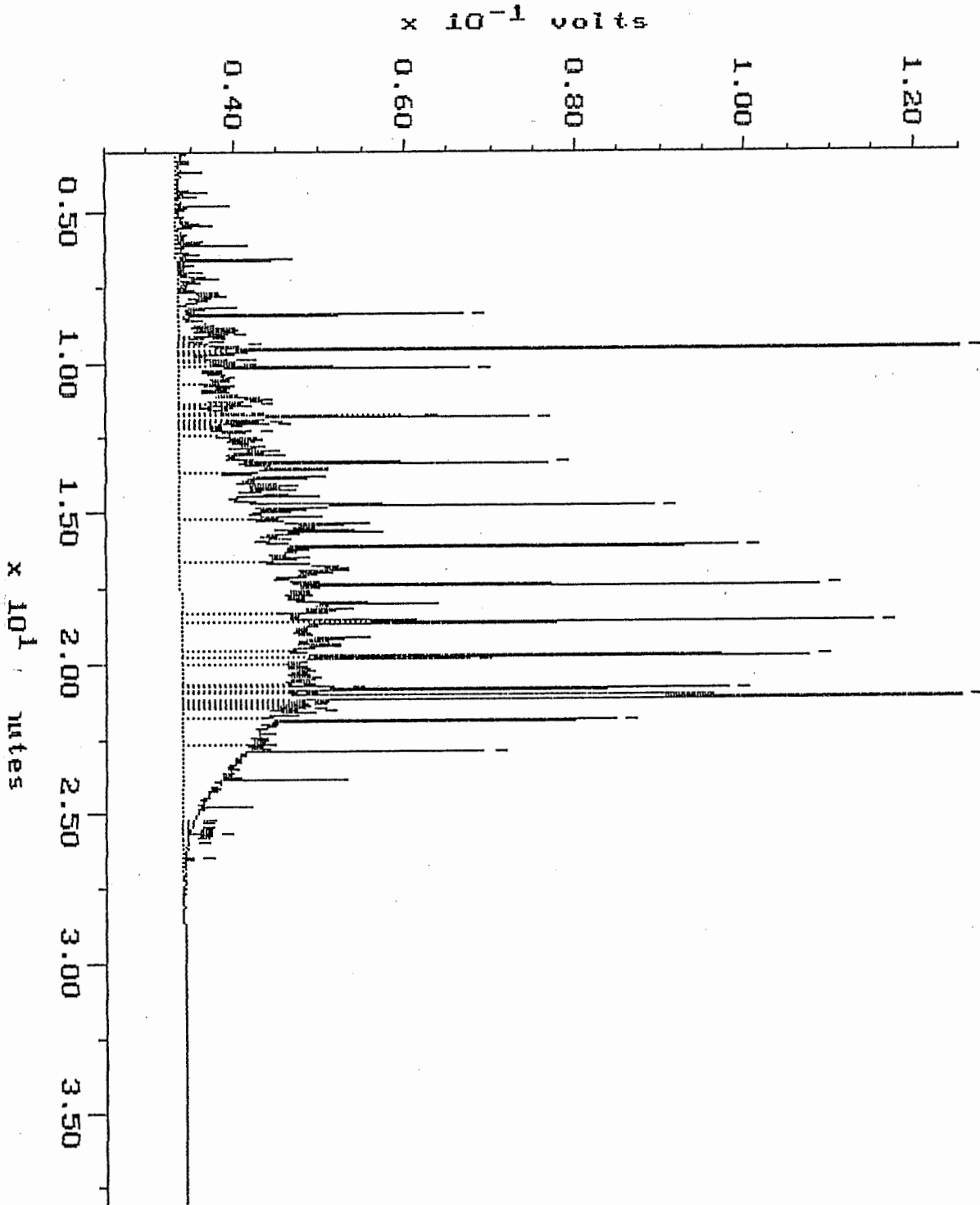


# Continuing Calibration

Sample: D 500  
Acquired: 18-NOV-93 12:33

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1118

Filename: RB188W02  
Operator: BRO

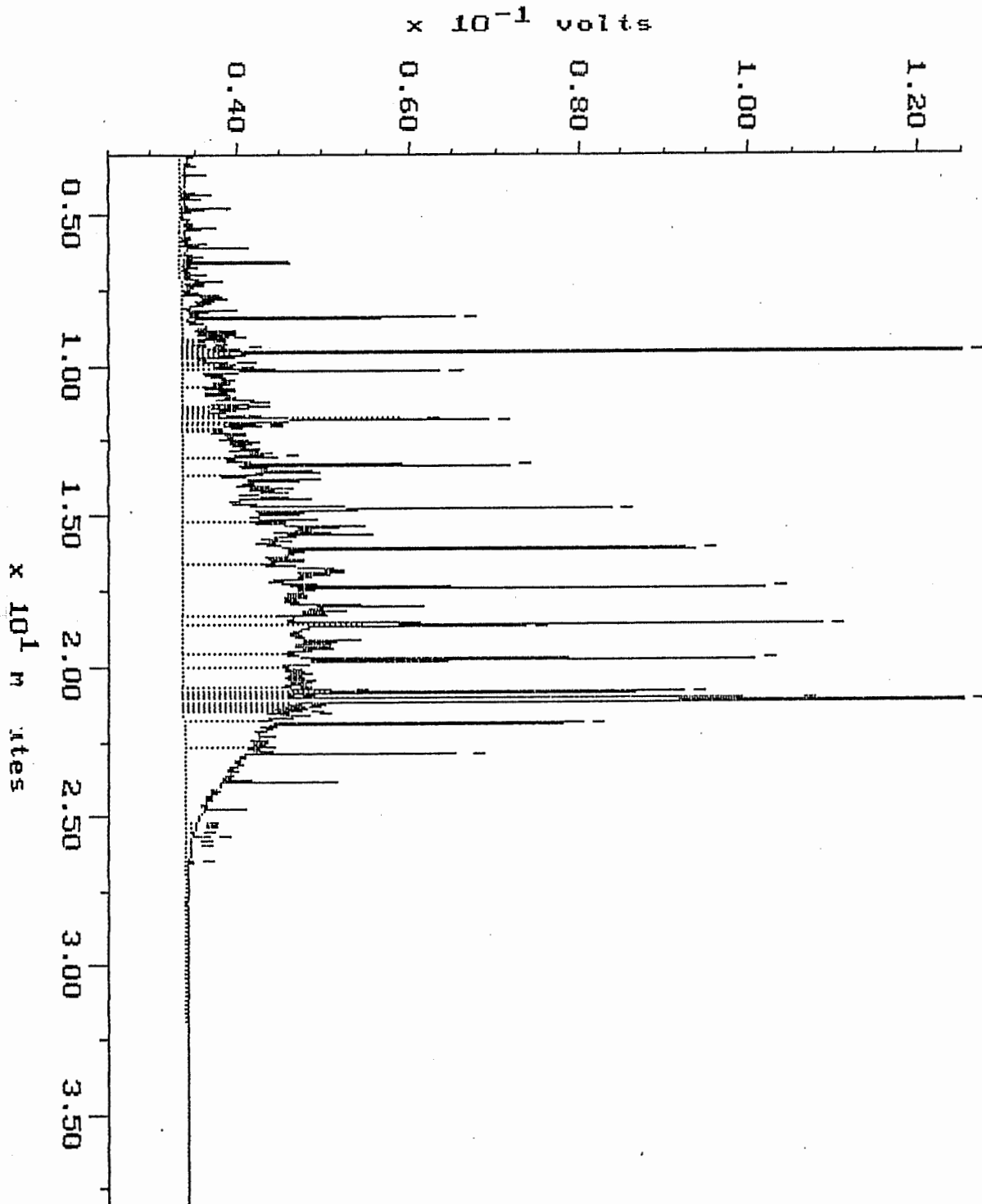


# Continuing Calibration

Sample: D 500  
Acquired: 19-NOV-93 10:31

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1119

Filename: RB198W02  
Operator: BRO



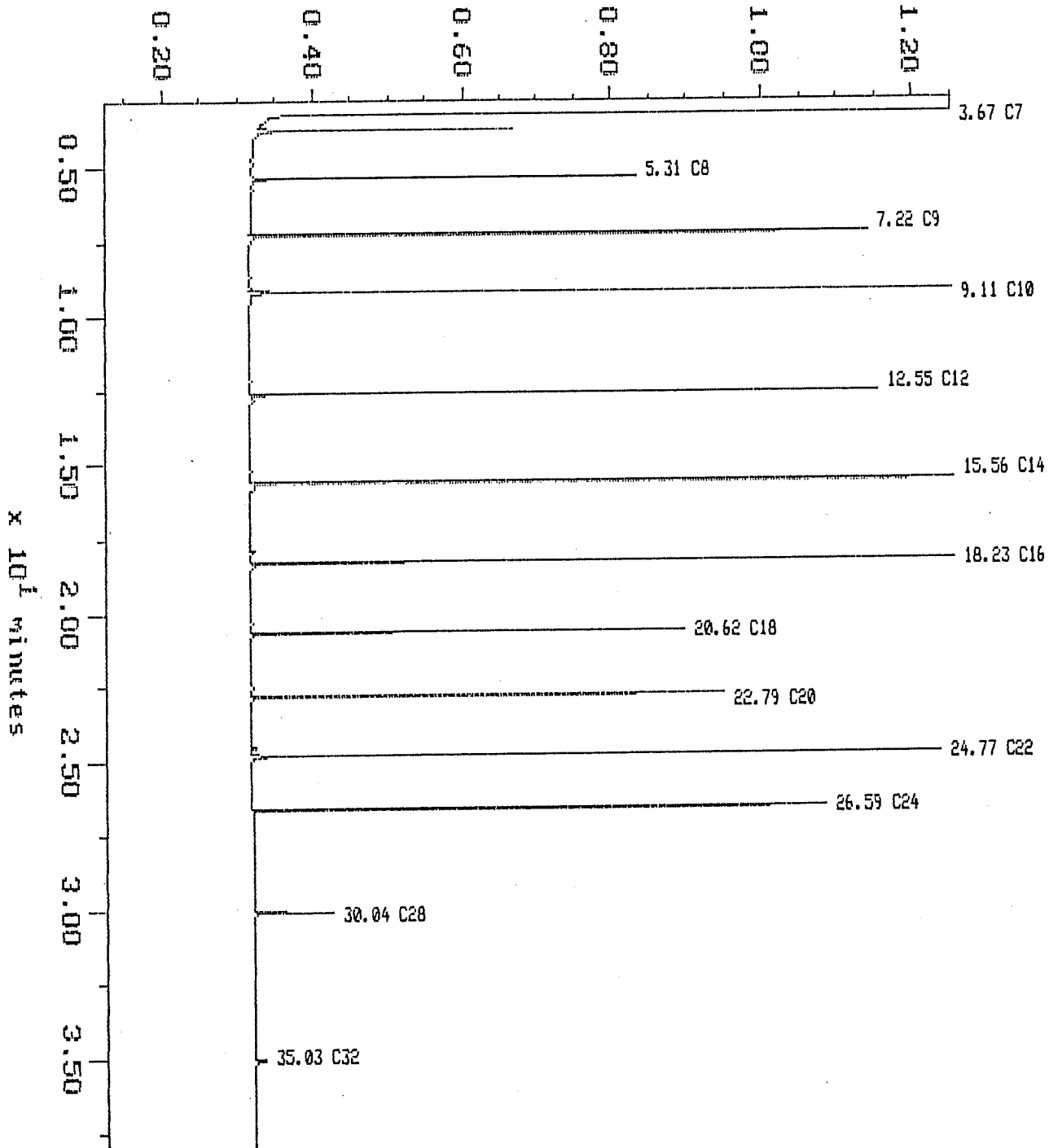
# Alkane

Sample: ALKANE  
Acquired: 08-NOV-93 12:57  
Inj Vol: 1.00

Channel: NANCY  
Method: F:\BRO2\MAXDATA\NANCY\FUEL1108

Filename: RB088B02  
Operator: ATI

$\times 10^{-1}$  volts

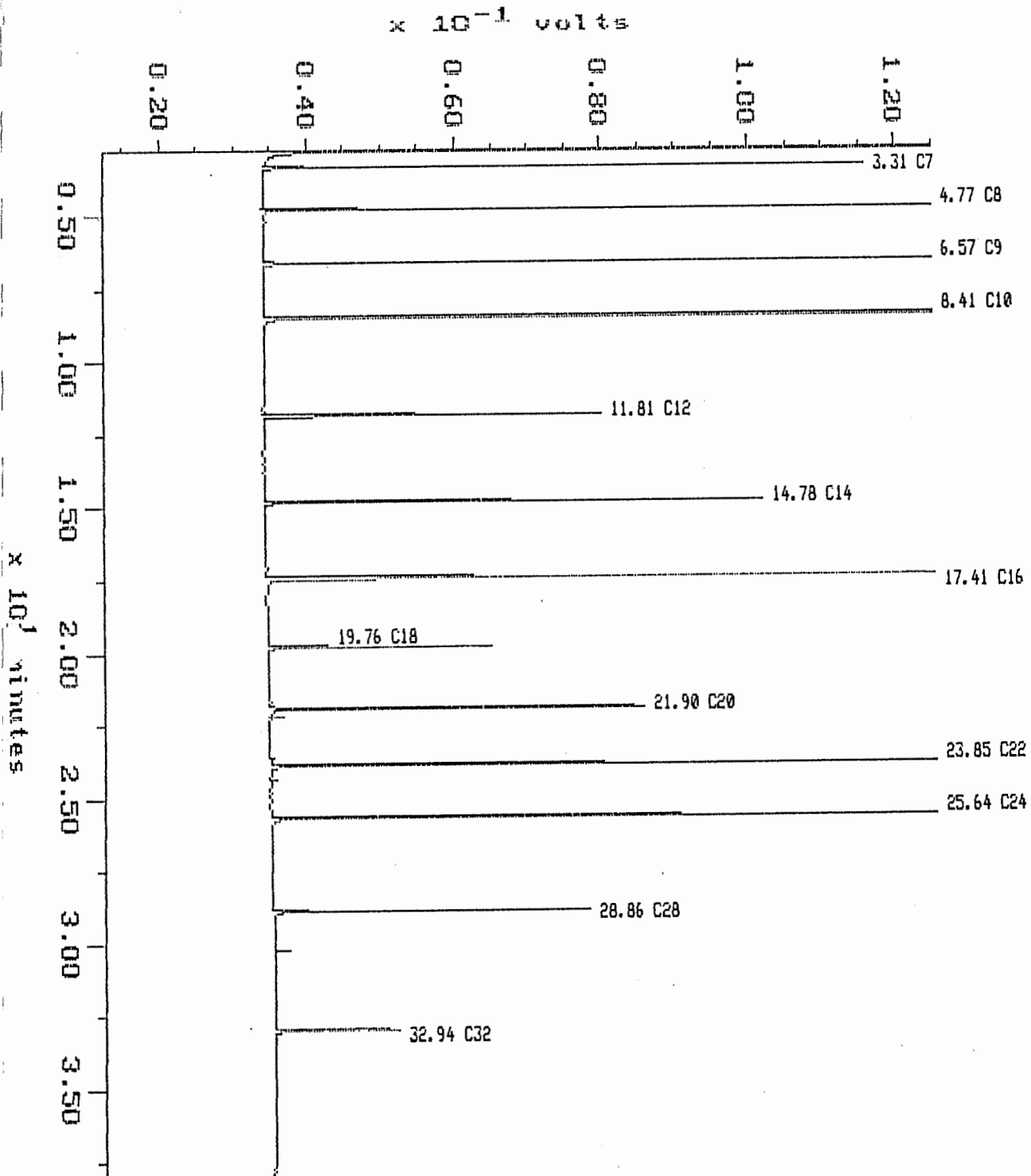


# Alkane

Sample: ALKANE  
Acquired: 08-NOV-93 11:11  
Inj Vol: 1.00

Channel: WILMA  
Method: F:\BRO2\MAXDATA\WILMA\FUEL1100

Filename: RB088W02  
Operator: BRO



**PROJECT INFORMATION**  
 Laboratory Number: 93M-1291  
 Project Manager: Glen Bobnick  
 Project Name: GTE/Kennebec  
 Project Number: 15169.144  
 Site Location: Kennebec WA Sampled By: SS1

**DISPOSAL INFORMATION**  
 Lab Disposal (return if not indicated)  
 Disposal Method: \_\_\_\_\_ Disposal Date: \_\_\_\_\_  
 Disposed by: \_\_\_\_\_

**QC INFORMATION (check one)**  
 SW-846  CLP  Screening  AGI Std.  Special

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
GZ	11/10/93	1410	Soil	-9
G3	↓	1335	↓	-10
G4	↓	1340	↓	-1B
				-1
				-5
				-6
				-7
				-8

**ANALYSIS REQUEST**

PETROLEUM HYDROCARBONS	ORGANIC COMPOUNDS	PESTS/PCB's	METALS	LEACHING TESTS	OTHER
8015M	DWS - Volatiles and Semivol.	DWS - Herb/pest	MFSP - Metals (Wa)	TCLP - Metals	
418.1 State:	8040 Phenols	8150 OC Herbicides	DWS - Metals	TCLP - Pesticides	
TPH Special Instructions	8310 HPLC PAHs	8140 OP Pesticides	Priority Poll. Metals (13)	TCLP - Semivolatiles	
TPH-D State:	8270 GCMS Semivol.	8080M PCBs only	TCL Metals (23)	TCLP - Volatiles (ZHE)	
TPH-G State: <u>WA</u>	8240 GCMS Volatiles	8080 OC Pest/PCBs	Organic Lead (Ca)		
TPH-ID State:	8020M - BETX only		Total Lead (Wa)		
	8020 Aromatic VOCs		Selected metals: list		
	8010 Halogenated VOCs				

NUMBER OF CONTAINERS: 1

**LAB INFORMATION**  
 Lab Name: ATI  
 Lab Address: 560 Naches Ave Renton WA  
 Via: Courier

**SAMPLE RECEIPT**  
 Total Number of Containers: 3  
 Chain of Custody Seals: Y/N/A  
 Intact?: Y/N/A  
 Received in Good Condition/Cold: Y

Turn Around Time:  Standard  24 hr.  48 hr.  72 hr.  1 wk.

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DATA**

Special Instructions:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: <u>[Signature]</u> Time: <u>1700</u>	Signature: _____ Time: _____	Signature: _____ Time: _____
Printed Name: <u>Jeff Thompson</u> Date: <u>11/10/93</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
Company: <u>AGI</u>	Company: _____	Company: _____
<b>RECEIVED BY: 1.</b> Signature: <u>[Signature]</u> Time: <u>10:15</u>	<b>RECEIVED BY: 2.</b> Signature: _____ Time: _____	<b>RECEIVED BY: 3.</b> Signature: _____ Time: _____
Printed Name: <u>H. SWEENEY</u> Date: <u>11/10/93</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
Company: <u>ATI WA</u>	Company: _____	Company: _____

**PROJECT INFORMATION**  
 Laboratory Number: 9311129

**ANALYSIS REQUEST**

PETROLEUM HYDROCARBONS	ORGANIC COMPOUNDS	PESTS/PCB's	METALS	LEACHING TESTS	OTHER
8015M	DWS - Volatiles and Semivol.	DWS - Herb/pest	MFSP - Metals (Wa)	TCLP - Metals	
418.1 State:	8040 Phenols	8150-OC Herbicides	DWS - Metals	TCLP - Pesticides	
TPH Special Instructions	8310 HPLC PAHs	8140 OP Pesticides	Priority Poll. Metals (13)	TCLP - Semivolatiles	
TPH-D State:	8270 GCMS Semivol.	8080M PCBs only	TCL Metals (23)	TCLP - Volatiles (ZHE)	
TPH-G State: <u>WA</u>	8240 GCMS Volatiles	8080 OC Pest/PCBs	Organic Lead (Ca)		
TPH-ID State:	8020M - BETX only	8010 Halogenated VOCs	Total Lead (Wa)		
	8020 Aromatic VOCs	Selected metals: list			
	8010 Halogenated VOCs				

**DISPOSAL INFORMATION**  
 Lab Disposal (return if not indicated)  
 Disposal Method: \_\_\_\_\_ Disposal Date: \_\_\_\_\_  
 Disposed by: \_\_\_\_\_

**QC INFORMATION (check one)**  
 SW-846  CLP  Screening  AGI Std:  Special

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
D51-DE1	11/11/93	1115	Soil	-12
D52-DE2		1620		-13
D53-DE3		1015		-14
D54-DE4		1625		-15
DE10		1530		-16
DE11		1535		-17

**LAB INFORMATION**  
 Lab Name: ATI  
 Lab Address: 560 Neches Ave  
 Via: Renton WA

**SAMPLE RECEIPT**  
 Total Number of Containers: 60  
 Chain of Custody Seals: Y/N/A  
 Intact?: Y/N/A  
 Received in Good Condition/Cold: Y

Turn Around Time:  Standard  24 hr.  48 hr.  72 hr.  1 wk.

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DATA**

Special Instructions:

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: <u>[Signature]</u> Printed Name: <u>Jeff Thompson</u> Company: _____	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Time: <u>1:50</u> Date: <u>11/11/93</u>	Time: _____ Date: _____	Time: _____ Date: _____
<b>RECEIVED BY: 1.</b> Signature: <u>[Signature]</u> Printed Name: <u>JANE EURY</u> Company: <u>ATI WA</u>	<b>RECEIVED BY: 2.</b> Signature: _____ Printed Name: _____ Company: _____	<b>RECEIVED BY: 3.</b> Signature: _____ Printed Name: _____ Company: _____
Time: <u>10:15</u> Date: <u>11/11/93</u>	Time: _____ Date: _____	Time: _____ Date: _____

**PROJECT INFORMATION**

Project Manager: Glen Bobrick  
Project Name: 67E/Kennecott  
Project Number: 15169.1414  
Site Location: Kennecott WA Sampled By: JSI

**DISPOSAL INFORMATION**

Lab Disposal (return if not indicated)

Disposal Method: \_\_\_\_\_ Disposal Date: \_\_\_\_\_  
Disposed by: \_\_\_\_\_

**QC INFORMATION (check one)**

SW-846  CLP  Screening  AGI Std.  Special

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
DES	11/11/93	1600	Soil	-1
DE6		0800		-2
DE7		0830		-3
DE8		1545		-4
DE9		0815		-5

Laboratory Number: 9311130

**ANALYSIS REQUEST**

PETROLEUM HYDROCARBONS	ORGANIC COMPOUNDS	PESTS/PCB's	METALS	LEACHING TESTS	OTHER
8015M	DWS - Volatiles and Semivol.	DWS - Herb/pest	MFSP - Metals (Wa)	TCLP - Metals	<i>Re grant against Mo</i>
418.1 State:	8040 Phenols	8150 OC Herbicides	DWS - Metals	TCLP Pesticides	
TPH Special Instructions	8310 HPLC PAHs	8140 OP Pesticides	Priority Poll. Metals (13)	TCLP Semivolatiles	
TPH-D State: <u>WA</u>	8270 GCMS Semivol.	8080M PCBs only	TCL Metals (23)	TCLP Volatiles (ZHE)	
TPH-G State: <u>WA</u>	8240 GCMS Volatiles	8080 OC Pest/PCBs	Organic Lead (Ca)		
TPH-ID State: _____	8020M - BETX only		Total Lead (Wa)		
	8020 Aromatic VOCs		Selected metals: list		
	8010 Halogenated VOCs				

**SAMPLE RECEIPT**

Lab Name: ATI Total Number of Containers: 5  
Lab Address: 560 Naches Ave Chain of Custody Seals: Y/N/A  
Via: Carrier Intact?: Y/N/A  
Received in Good Condition/Cold: X

Turn Around Time:  Standard  24 hr.  48 hr.  72 hr.  1 wk.

**PRIOR AUTHORIZATION IS REQUIRED FOR RUSH DATA**

Special Instructions: \_\_\_\_\_

RELINQUISHED BY: 1.	RELINQUISHED BY: 2.	RELINQUISHED BY: 3.
Signature: <u>[Signature]</u> Time: <u>1:00</u>	Signature: _____ Time: _____	Signature: _____ Time: _____
Printed Name: <u>Scott Thompson</u> Date: <u>11/11/93</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
Company: <u>AGI</u>	Company: _____	Company: _____
RECEIVED BY: 1. Signature: <u>[Signature]</u> Time: <u>10:15</u>	RECEIVED BY: 2. Signature: _____ Time: _____	RECEIVED BY: 3. Signature: _____ Time: _____
Printed Name: <u>Scott Thompson</u> Date: <u>11/11/93</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
Company: <u>ATI WA</u>	Company: _____	Company: _____