Rec'd 12/18/91

Columbia Analytical Services INC.

December 17, 1991

Janet Jaufman
Versar Laboratories, Inc.
6850 Versar Ctr.
Springfield, VA 22151

Re: **O'Brien VLI Control 5800 Project**

Dear Janet:

Enclosed are the results of the sample submitted to our lab on November 15, 1991. For your reference, these analyses have been assigned our work order number K916703.

All analyses were performed in accordance with our laboratory's quality assurance program.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Abbie Spielman

Abbie Spielman
Project Chemist

AS/tlt

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Versar Laboratories, Inc.	**Date Received:**	11/15/91
Project:	O'Brien VLI Control 5800	**Work Order #:**	K916703
Sample Matrix:	Water		

CASE NARRATIVE SUMMARY

Initial analysis on November 18, 1991, for Sample 66204 also included a 5-point calibration curve. Unfortunately, analyte retention times had shifted and two of the five data points did not meet the acceptance criteria for fit to the line, therefore, another 5-point calibration and sample analysis was performed on November 19, 1991. Insufficient sample was left to allow a matrix spike and duplicate matrix spike to be run with the second set of analyses. The matrix spike results are therefore being calculated from the initial analyses performed on November 18, 1991.

Please note that the California DHS LUFT Method does not require a 5-point calibration curve.

Approved by Anne Spielman Date 12/17/91

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Versar Laboratories, Inc.	**Date Received:**	11/15/91
Project:	O'Brien VLI Control 5800	**Work Order #:**	K916703
Sample Matrix:	Water		

BTEX and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method
μg/L (ppb)

Sample Name:		66204	Method Blank
Lab Code:		K6703-1	K6703-MB
Date Analyzed:		11/19/91	11/19/91
Analyte	**MRL**		
Benzene	0.5	ND	ND
Toluene	1	ND	ND
Ethylbenzene	1	1	ND
Total Xylenes	1	5	ND
TPH as Gasoline	50	60	ND

TPH Total Petroleum Hydrocarbons
MRL Method Reporting Limit
ND None Detected at or above the method reporting limit

Approved by Anne Apielma Date 12/17/91

APPENDIX A

LABORATORY QC RESULTS

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Versar Laboratories, Inc.	**Date Received:**	11/15/91
Project:	O'Brien VLI Control 5800	**Date Analyzed:**	11/19,20/91
Sample Matrix:	Water	**Work Order #:**	K916703

QA/QC Report
Surrogate Recovery Summary
BTEX and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method

Sample Name	**Lab Code**	**Percent Recovery** 4-Bromofluorobenzene
66204	K6703-1	99.3
Method Blank	K6703-MB	99.7
Laboratory Control Sample - BTEX	K6703-LCS	98.6
Laboratory Control Sample - Gasoline	K6703-LCS	95.4
Method Blank	K6703-MB	102
66204	K6703-1	101
66204	K6703-1MS	101
66204	K6703-1DMS	99.8
	CAS Acceptance Criteria	60-120

TPH Total Petroleum Hydrocarbons

Approved by Ami Apilna Date 12/17/91

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Versar Laboratories, Inc.	**Date Received:**	11/15/91
Project:	O'Brien VLI Control 5800	**Date Analyzed:**	11/19/91
Sample Matrix:	Water	**Work Order #:**	K916703

QA/QC Report
Matrix Spike/Duplicate Matrix Spike Summary
BTEX and TPH as Gasoline
EPA Methods 5030/8020/California DHS LUFT Method
μg/L (ppb)

Sample Name: 66204
Lab Code: K6703-1

Analyte	Spike Level	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Criteria	Relative Percent Difference
Benzene	100	ND	107	107	107	107	39-150	<1
Toluene	100	ND	103	102	103	102	46-148	<1
Ethylbenzene	100	1	103	100	102	99	32-160	3

TPH Total Petroleum Hydrocarbons
ND None Detected at or above the method reporting limit

Approved by Annie Apelman Date 12/17/91

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Versar Laboratories, Inc.
Project: O'Brien VLI Control 5800
Sample Matrix: Water

Date Analyzed: 11/20/91
Work Order #: K916703

QA/QC Report
Laboratory Control Sample Summary
BTEX
EPA Methods 5030/8020
μg/L (ppb)

Sample Name: Laboratory Control Sample - BTEX

Analyte	Spike Level	Spike Result	Percent Recovery	CAS Percent Recovery Acceptance Criteria
Benzene	100	84.9	84.9	39-150
Toluene	100	88.1	88.1	46-148
Ethylbenzene	100	90.6	90.6	32-160

Approved by Ami Spielman Date 12/17/91

COLUMBIA ANALYTICAL SERVICES, INC.

Client: Versar Laboratories, Inc.
Project: O'Brien VLI Control 5800
Sample Matrix: Water

Date Analyzed: 11/20/91
Work Order #: K916703

QA/QC Report
Laboratory Control Sample Summary
TPH as Gasoline
California DHS LUFT Method
μg/L (ppb)

Sample Name: Laboratory Control Sample - Gasoline

Analyte	Spike Level	Spike Result	Percent Recovery	CAS Percent Recovery Acceptance Criteria
TPH as Gasoline	2,500	2,830	113	70-140

TPH Total Petroleum Hydrocarbons

Approved by Ami Spielman Date 12/17/91

APPENDIX B

CHAIN OF CUSTODY INFORMATION

Send to: Columbia Analytical
1317 S. 13th Street
Kelso, WA 98626
ATTN: Abbie Spielman

K670

Versar Laboratories INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	PARAMETERS	INDUSTRIAL HYGIENE SAMPLE Y / N
	O'Brien VLI Control 5800		

SAMPLERS: *(Signature)* (Printed)

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	* TPH as Gasoline								REMARKS VLI Lab No.
WB-2 (S)	11/12/91	17:02		X		4	4								666204 Do MS/MSD analysis on this sample also.

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Debbie Maxwell	11/14/91 4:30				
(Printed) Debbie Maxwell		(Printed)	(Printed)		(Printed)

Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks
		Ruth Allison	11/15/91 0900	* Analysis by California TPH method for gasoline (purge + trap 50ppb D.L.) - 30 day Turnaround - Full report (include raw data) - Call Janet Jaufman at 703-642-6816 w/ auc. stat
(Printed)		(Printed) Ruth Allison		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

APPENDIX C

RAW DATA

Printed: 13-DEC-1991 10:14

[illegible]1

[illegible] position

Channels: 2 Delay: 0.0 min
Trigger: External #1 Duration: 26.00 min
[illegible] /sec

[illegible]

Channel ID:	THING FID	THING FID
[illegible]	Yes	Yes
A/D Type:	WD24	WD24
[illegible] #:	16	16
Channel #:	0	1
[illegible]:	[illegible] 00	0-10.00
Resolution:	22-bit	22-bit
[illegible]	[illegible]	[illegible]
x-Axis Start:	0.000	0.000
[illegible]	[illegible]	[illegible]
y-Axis Units:	volts	volts
[illegible]	[illegible]	[illegible]
y-Axis Max:	1.000	10.000
[illegible]:	[illegible]	[illegible]
Offset:	0.00%	0.00%

Printed: 13-DEC-1991 10:14

X 111391

[illegible]

[illegible] 1
Channel 2
[illegible] 3

Detection Parameters

[illegible]: 10
Filter Window (in Points): 13
[illegible]
Integration Sensitivity (Fine): 20.00 microvolt/sec^2
[illegible]: No
Skim Ratio: 8.000

[illegible]

Minimum Area: 100.00 microvolt-sec
[illegible]
Minimum Width: 0.1500 sec

Printed: 13-DEC-1991 10:14

[illegible]1

[illegible]

[illegible] 3
Channel 4
[illegible] 5
Channel 6
[illegible] 7

Detection Parameters

[illegible]: 10
Filter Window (in Points): 13
[illegible] microvolt/sec
Integration Sensitivity (Fine): 2.00E+07 microvolt/sec^2
[illegible]: No
Skim Ratio: 8.000

[illegible]ia

Minimum Area: 1.00E+08 microvolt-sec
[illegible] microvolt
Minimum Width: 0.1500 sec

Printed: 13-DEC-1991 10:14

91

#	Component Name	Ret Time	Window	Ref	Det	Group	Cal	Basis	Curve	Orig	Wgting	Y-axis	Internal Std
												Conc	
2	BENZENE	6.43	0.02		1		Yes	Area	linear	No	none	Conc	
												Conc	
4	AAA-TFT	9.51	0.03	Y	1		Yes	Area	linear	Yes	none	Conc	
												Conc	
6	TOLUENE	12.14	0.04		1		Yes	Area	linear	No	none	Conc	
												Conc	
8	ETHYL BENZENE	16.07	0.07		1		Yes	Area	linear	No	none	Conc	
												Conc	
10	P&M-XYLENE	16.38	0.08		1		Yes	Area	linear	No	none	Conc	
												Conc	
12	O-XYLENE	17.30	0.10		1		Yes	Area	linear	No	none	Conc	
												Conc	
14	4-BFB	18.55	0.16	Y	1		Yes	Area	linear	Yes	none	Conc	

#	Group Name	Start	End	Ref	Det	Group	Cal	Basis	Curve	Orig	Wgting	Y-axis	Internal Std

MAXIMA 820 METHOD REPORT

BTEX 111891

Operating Conditions Gas Chromatography

Operator ID: MS

Injection Method: P&T

Column Type: Capillary

Temperature Information

Injector Temperature: 80 C

Column Temperature Program

INITIAL HOLD = 8.00 MIN

FINAL HOLD = 1.00 MIN

RUN TIME = 30.00 MIN

1

Column ID: DB624 Solid Support: N/A

Length: 30 METERS Liquid Phase: 1.0 uM FILM

Date Packed: INSTALLD 030591

1

Carrier Gas: HELIUM Make-Up Gas: HELIUM

Split Ratio: N/A

1	THING PID	PHOTOIONIZATION 0-1 VOLT

MAXIMA 820 METHOD REPORT

[illegible] 14

BTEX 111891

Custom Report Format

[illegible] Millipore

MAXIMA 820 CUSTOM REPORT

Printed:

SAMPLE:

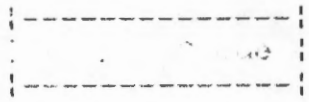
in Method:
Applied:
Rate:
Position:
Operator:

Type:
Instrument:
Filename:
Index:
Injection Volume:
Dilution:
Amount:

DETECTOR:

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name

Printed: 13-DEC-1991 10:14



File Path: C:\MAX\DATA1 Raw Sample Weight: 1.000

Stripchart Parameters

Peak Labels: Names, retention times y-Axis limits: 0.0-0.0

Options: baselines, starts/ends, maxima

1	1118STDX	UNKN	DISK	1118STDX	5.000E+00		
2	1118STD1	STND	DISK	1118STD1	5.000E+00		
3	1118STD2	STND	DISK	1118STD2	5.000E+00		
5	1118STD4	STND	DISK	1118STD4	5.000E+00		
7	1118STD6	STND	DISK	1118STD6	5.000E+00		
9	1118W2	UNKN	DISK	1118W2	5.000E+00		
11	118ERAQC	UNKN	DISK	ERAQC	5.000E+00		
13	1118W4	UNKN	DISK	1118W4	5.000E+00		
14	1118W5				5.000E+00		
15	1104REF.BLANK	UNKN	DISK	1104RFBK	5.000E+00		

19	1118LCSGAS	UNKN	DISK	LCSGAS	5.000E+00		
					[illegible]		
21	1118STD7	UNKN	DISK	1118STD7	5.000E+00		
					[illegible]		

Standard Concentrations

Component	1118STD1	1118STD2	1118STD3	1118STD4	1118STD5	1118STD6
						[illegible]
BENZENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
						[illegible]
AAA-TFT	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02
					[illegible]	[illegible]
TOLUENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
						[illegible]
ETHYL BENZENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
						[illegible]
P&M-XYLENE	4.000E+00	2.000E+01	2.000E+02	1.000E+03	2.000E+03	4.000E+03
					[illegible]	[illegible]
O-XYLENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	1.000E+03
						[illegible]
4-BFB	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02
					[illegible]	[illegible]

MAXIMA 820 METHOD REPORT

BTEX 111891

Data Acquisition

Channels: 2

Delay: 0.0 min
Duration: 26.00 min
Rate: 2.000 points/sec

Channel ID:	THING PID	THING FID
	Yes	Yes
A/D Type:	WD24	WD24
	16	16
Channel #:	0	1
	0-1.00	0-10.00
Resolution:	22-bit	22-bit
x-Axis Start:	0.000	0.000
	[illegible]	[illegible]
y-Axis Units:	volts	volts
	0.000	0.000
y-Axis Max:	1.000	10.000
	1.00	1.00
Offset:	0.00%	0.00%

Printed: 13-DEC-1991 10:14

[illegible]

[illegible]

Channel 1
Channel 2
Channel 8

Detection Parameters

[illegible]: 10
Filter Window (in Points): 13
[illegible]/sec
Integration Sensitivity (Fine): 20.00 microvolt/sec²
[illegible]: No
Skim Ratio: 8.000

[illegible]

Minimum Area: 100.00 microvolt-sec
[illegible]
Minimum Width: 0.1500 sec

Printed: 13-DEC-1991 10:14

[illegible]

[illegible] Parameters

[illegible] 3
Channel 4
[illegible] 5
Channel 6
[illegible] 7

Detection Parameters

[illegible] Points: 10
Filter Window (in Points): 13
[illegible] /sec
Integration Sensitivity (Fine): 2.00E+07 microvolt/sec^2
[illegible] Peaks: No
Skim Ratio: 8.000

[illegible] Criteria

Minimum Area: 1.00E+08 microvolt-sec
[illegible] Height [illegible] volt
Minimum Width: 0.1500 sec

Printed: 13-DEC-1991 10:14

Component Table

#	Component Name	Ret Time	Window	Ref	Det	Group	Cal	Basis	Curve	Orig	Wgting	Y-axis	Internal Std
												Conc	
2	BENZENE	6.43	0.02		1		Yes	Area	linear	No	none	Conc	
												Conc	
4	AAA-TFT	9.51	0.03	Y	1		Yes	Area	linear	Yes	none	Conc	
	[illegible]	[illegible]	[illegible]		2		Yes	Area	linear	No	[illegible]	Conc	
6	TOLUENE	12.14	0.04		1		Yes	Area	linear	No	none	Conc	
7	ETHYL BENZENE	16.07	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
8	ETHYL BENZENE	16.07	0.07		1		Yes	Area	linear	No	none	Conc	
							Yes	Area	linear	No	none	Conc	
10	P&M-XYLENE	16.38	0.08		1		Yes	Area	linear	No	none	Conc	
	[illegible]	17.30	0.10		2		Yes	Area	[illegible]	[illegible]	[illegible]	Conc	
12	O-XYLENE	17.30	0.10		1		Yes	Area	linear	No	none	Conc	
							Yes	Area	linear	Yes	none	Conc	
14	4-BFB	18.55	0.16	Y	1		Yes	Area	linear	Yes	none	Conc	

#	Group Name	Start	End	Ref	Det	Group	Cal	Basis	Curve	Orig	Wgting	Y-axis	Internal Std
							No						

MAXIMA 820 METHOD REPORT

BTEX 111891

Operating Conditions Gas Chromatography

Operator ID: MS

Injection Method: P&T

[illegible] mL

Sample Pr[illegible] N/A

Column Type: Capillary

Temperature Information

[illegible] m

Injector Temperature: 80 C

[illegible] 250 C

Column Temperature Program

[illegible] C/MIN

INITIAL HOLD = 8.00 MIN

FINAL HOLD = 1.00 MIN

[illegible] MIN

[illegible]

[illegible] 1

Column ID:	DB624	Solid Support:	N/A
		[illegible] Load:	N/A
Length:	30 METERS	Liquid Phase:	1.0 uM FILM
		[illegible]	N/A
Date Packed:	INSTALLD 030691		

[illegible] 1

Carrier Gas:	HELIUM	Make-Up Gas:	HELIUM
		[illegible] Flow:	10[illegible] ML/MIN
Split Ratio:	N/A		
[illegible]		[illegible]	ML/MIN

[illegible] Information

[illegible]	Name	[illegible]	[illegible]	Comment
1	THING PID	PHOTOIONIZATION 0-1 VOLT		
		[illegible] VOLT		

[illegible] Comments

[illegible] Comment

MAXIMA 820 METHOD REPORT

BTEX 111891

Custom Report Format

MAXIMA 820 CUSTOM REPORT

SAMPLE:

Type:

in Method:

Instrument:

Filename:

Rate:

Index:

Injection Volume:

Operator:

Dilution:

Amount:

DETECTOR:

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc (ppb)	Original Conc (ppm-soil)	Component Name

Printed: 13-DEC-1991 10:14

Sam[illegible]

[illegible]ions

File Path: C:\MAX\DATA1 Raw Sample Weight: 1.000

[illegible] 1.000

Stripchart Parameters

[illegible] 0.0-0.0

Peak Labels: Names, retention times y-Axis limits: 0.0-0.0

[illegible]s: 0

Options: baselines, starts/ends, maxima

[illegible]ble

							Dilution
1	1118STDX	UNKN	DISK	1118STDX	5.000E+00		
					[illegible]+00		
3	1118STD2	STND	DISK	1118STD2	5.000E+00		
					[illegible]+00		
5	1118STD4	STND	DISK	1118STD4	5.000E+00		
					[illegible]+00		
7	1118STD6	STND	DISK	1118STD6	5.000E+00		
					[illegible]+00		
9	1118W2	UNKN	DISK	1118W2	5.000E+00		
					[illegible]+00		
11	118ERAQC	UNKN	DISK	ERAQC	5.000E+00		
					[illegible]+00		
13	1118W4	UNKN	DISK	1118W4	5.000E+00		
					[illegible]+00		
15	1104REF.BLANK	UNKN	DISK	1104RFBK	5.000E+00		
					[illegible]+00		
17	6707.1MS	UNKN	DISK	6707.1MS	5.000E+00		

19	1118LCSGAS	UNKN	DISK	LCSGAS	5.000E+00		
21	1118STD7	UNKN	DISK	1118STD7	5.000E+00		

Standard Concentrations

Component	1118STD1	1118STD2	1118STD3	1118STD4	1118STD5	1118STD6
BENZENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
AAA-TFT	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02
TOLUENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
ETHYL BENZENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
P&M-XYLENE	4.000E+00	2.000E+01	2.000E+02	1.000E+03	2.000E+03	4.000E+03
O-XYLENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	1.000E+03
4-BFB	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02

Sample: 1118W5

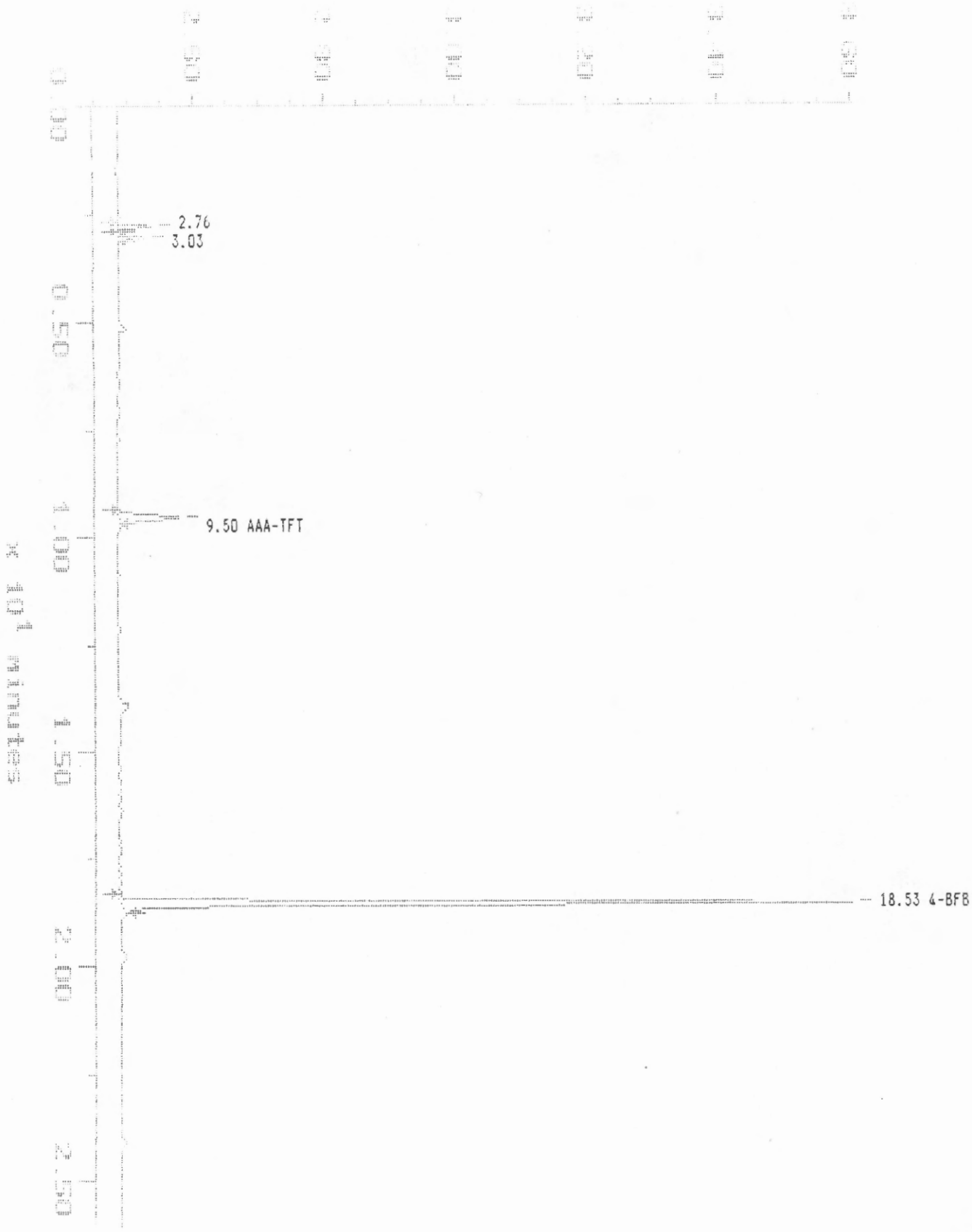
Inj Vol: 5.00

Channel: THING PID

Method:

Filename: 1118W5

Operator: MS



MAXIMA 820 CUSTOM REPORT

SAMPLE: 1118W5 Type: UNKN

#14 in Method: BTEX 111891 Instrument: THING

Rate: 2.0 points/sec Index: Disk

Operator: MS

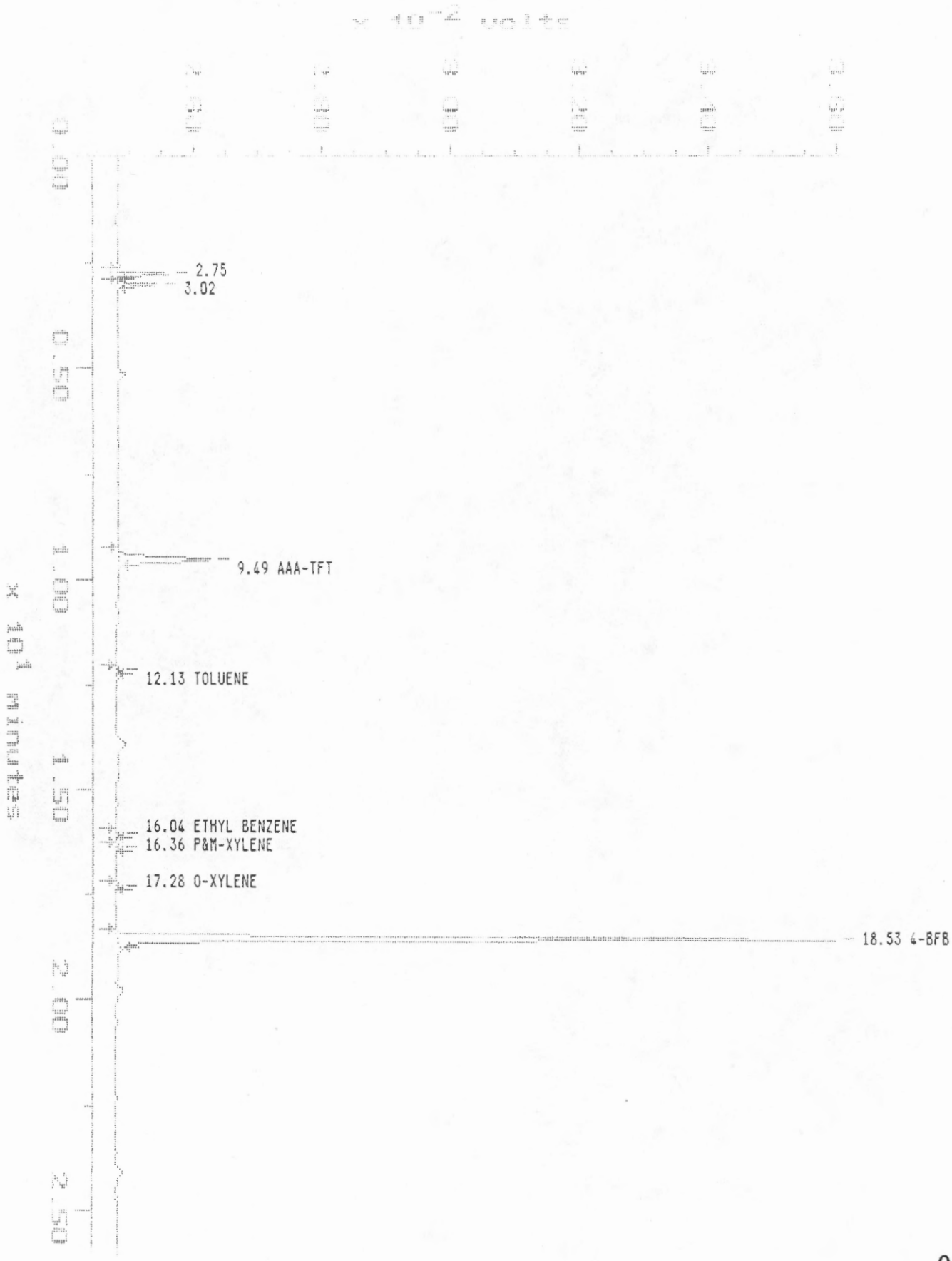
DETECTOR: FID

PK#	ID#	Retention Time (min)	Peak Area	Peak Height	Base	Response Factor	Solution Conc (ug/ml)	Original Conc ((ppm-soil))	Component Name
				520					
2		3.025	1808	385					
3	4	9.500	8810	902	AREA	0.061	106.95	106.95	AAA-TFT .
								4-BFB	
								106.87!	

! Result calculation based on peak response ratio outside of calibration range.

Filename: 1104RFBK
Operator: MS

Acquired: 19-NOV-91 1:27 Method: C:\MAX\DATA1\111891
Inj Vol: 00



MAXIMA 820 CUSTOM REPORT

SAMPLE: 1104REF.BLANK
#15 in Method: BTEX 111891

Type: UNKN
Instrument: THING

Rate: 2.0 points/sec

Index: Disk

Operator: MS

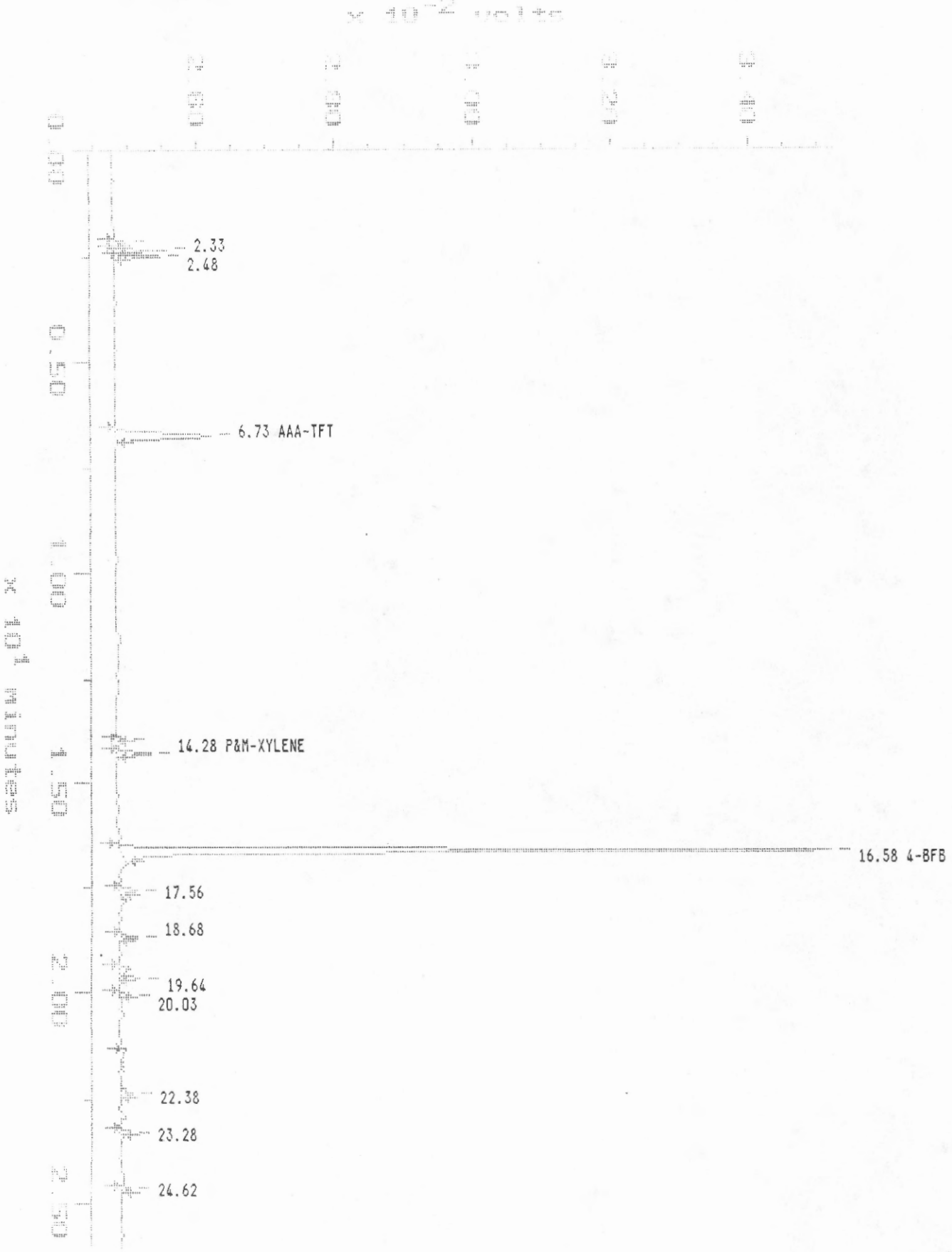
DETECTOR: FID

PK#	ID#	Retention Time	Peak Area	Peak Height	Base	Response Factor	Solution Conc (ppb)	Original Conc (ppm-soil)	Component Name
				793					
2		3.017	2779	587					
3	4	9.492	14069	1412	AREA	0.061	170.81!!	170.81!!	AAA-TFT
5	8	16.042	77	11	AREA	0.035	0.53!!	0.53!!	ETHYL BENZENE
		16.358	190				3.38!!		M&P-XYLENE
7	12	17.283	102	15	AREA	0.051	1.04!!	1.04!!	O-XYLENE
								.09!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

Sample: 6703-1 Channel: THING PID Filename: 6703-1

Inj Vol: 5.00 Operator: MS



MAXIMA Chromatographic Solutions, Division of Millipore

MAXIMA 820 CUSTOM REPORT

[illegible]:15

SAMPLE: 6703-1 Type: UNKN

#16 in Method: BTEX 111891 Instrument: THING

[illegible]03-1

Rate: 2.0 points/sec Index: Disk

[illegible] Injection Volume: 5.0

Operator: MS

DETECTOR: [illegible] PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
			[illegible]	172					
2		2.333	3069	784					
			[illegible]	658					
4	4	6.725	13882	1374	AREA	0.061	168.53!!	168.53!!	AAA-TFT
									[illegible]ZENE
6	10	14.275	3023	471	AREA	0.013	8.02!!	8.02!!	P&M-XYLENE
									[illegible]-BPB
8		17.558	1563	248					
9		18.675	1400	250					
10		19.642	2880	294					
		[illegible]	[illegible]	149					
12		22.375	810	165					
		[illegible]	[illegible]	154					
14		24.617	678	133					
			---	---			---	---	
			[illegible]	[illegible]			[illegible]	[illegible].23!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

[illegible] range.

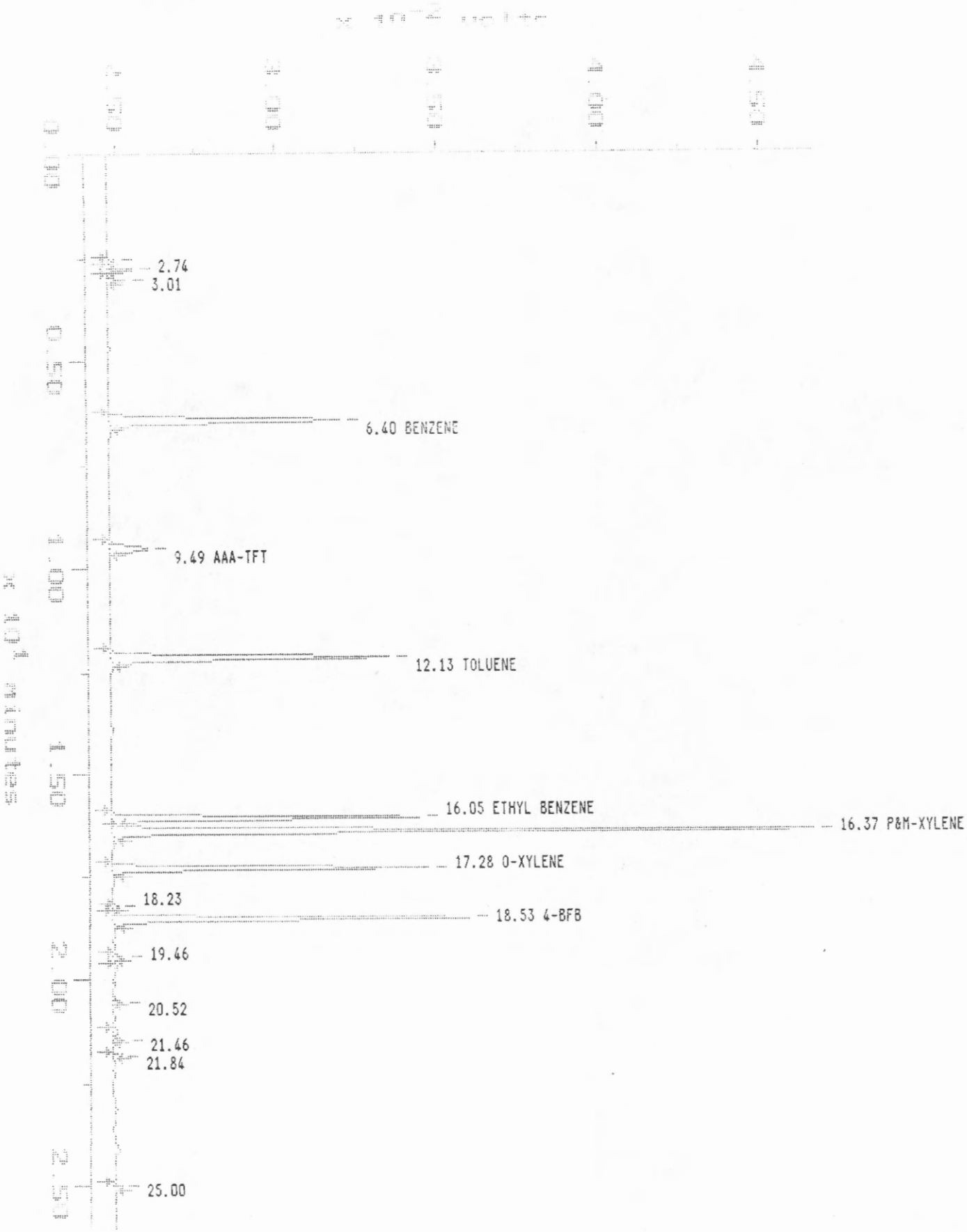
Sample: 6703-1MS

Channel: THING PID

Filename: 6703-1MS

Operator: MS

Inj Vol: 5.00



MAXIMA 820 CUSTOM REPORT

SAMPLE: 6703-1MS
#17 in Method: BTEX 111891
Rate: 2.0 points/sec
Operator: MS

Type: UNKN
Instrument: THING
Index: Disk

DETECTOR: FID

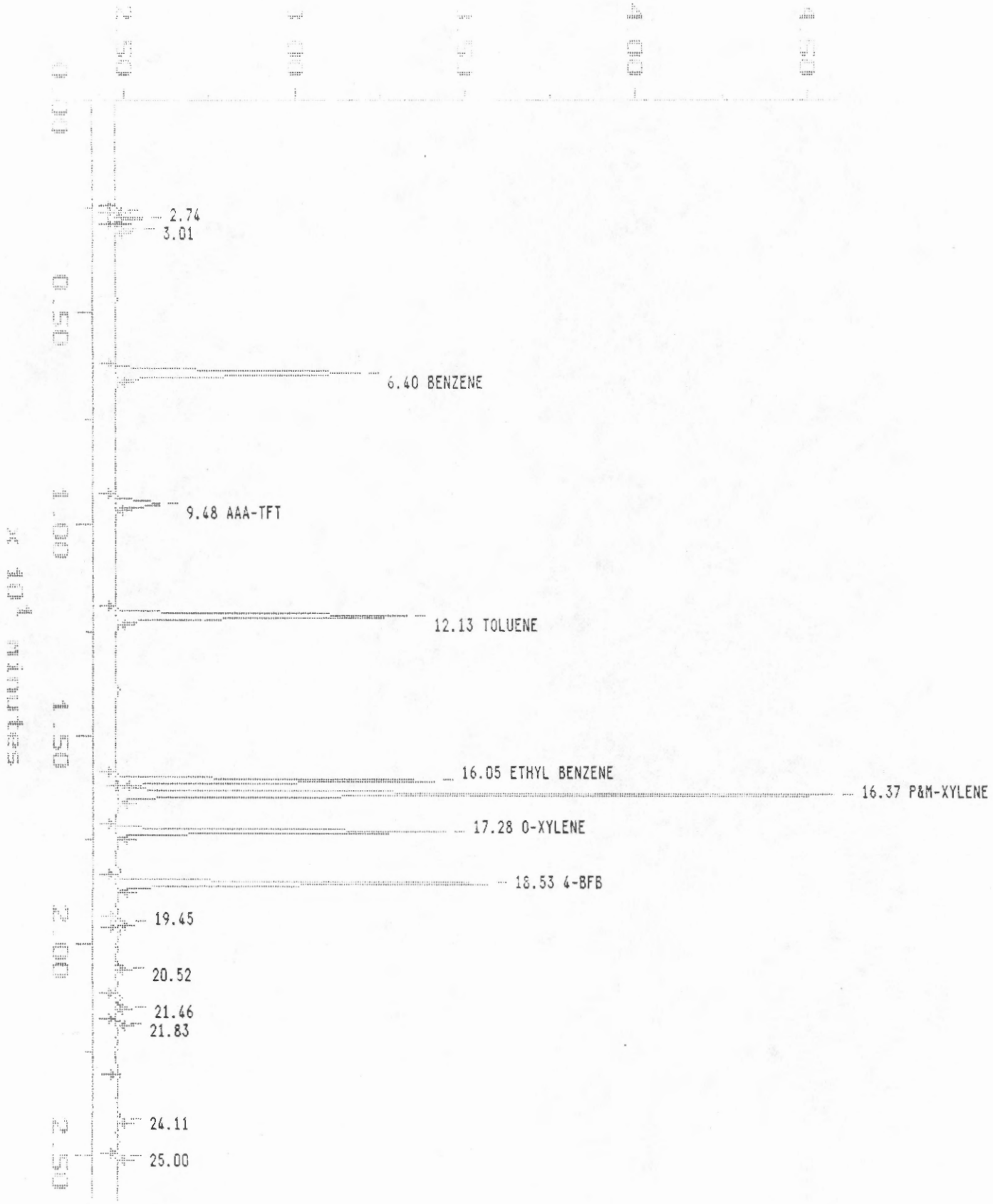
PK#	ID#	Retention Time	Peak Area	Peak Height	Base	Response Factor	Solution Conc	Original Conc (ppm-soil)	Component Name
1		[illegible]	880	190					
2		2.742	3303	764					
		[illegible]	[illegible]	573					
4	2	6.400	65032	7151	AREA	0.008	107.02	107.02	BENZENE
									AAA-IFT
6	6	12.125	64305	8559	AREA	0.008	102.90	102.90	TOLUENE
									[illegible]LUENE
8	10	16.367	134606	21679	AREA	0.007	200.49	200.49	P&M-XYLENE
									O-XYLENE
10		18.225	581	108					
									4-BFB
12		19.458	1590	263					
		[illegible]	1463	268					
14		21.458	2850	301					
15		[illegible]	814	154					
16		25.000	801	140					
TOTAL			478734	71637			857.50!	857.50!	

! Result calculation based on peak response ratio outside of calibration range.

Filename: [illegible]10S

Acquired: 19-NOV-91 3:16 Method: C:\MAX\DATA1\111891 Operator: MS

Inj Vol: [illegible].00



MAXIMA 820 CUSTOM REPORT

SAMPLE: 6703-1DMS
#18 in Method: BTEX 111891
3.16
Rate: 2.0 points/sec
Operator: MS

Type: UNKN
Instrument: THING
Filename: 6703-1DS
Index: Disk
5.0

DETECTOR: FID

PK#	ID#	Retention Time	Peak Area	Peak Height	Base	Response Factor	Solution Conc	Original Conc (ppm-soil)	Component Name
				154					
2		2.742	3520	819					
			2809	596					
4	2	6.400	65173	7164	AREA	0.008	107.25	107.25	BENZENE
									AA-1PT
6	6	12.125	63773	8482	AREA	0.008	102.06	102.06	TOLUENE
									XYLENE
8	10	16.367	130926	20948	AREA	0.007	195.11	195.11	P&M-XYLENE
	12			1507	AREA	0.008	97.51		O-XYLENE
10	14	18.525	64772	10870	AREA	0.008	99.80	99.80	4-BFB
			1487	252					
12		20.517	1588	261					
			2172	291					
14		21.833	787	151					
			1017	170					
16		25.000	932	159					
								859.49!!	

!! Result calculation based on peak response more than 10% outside of calibration range.

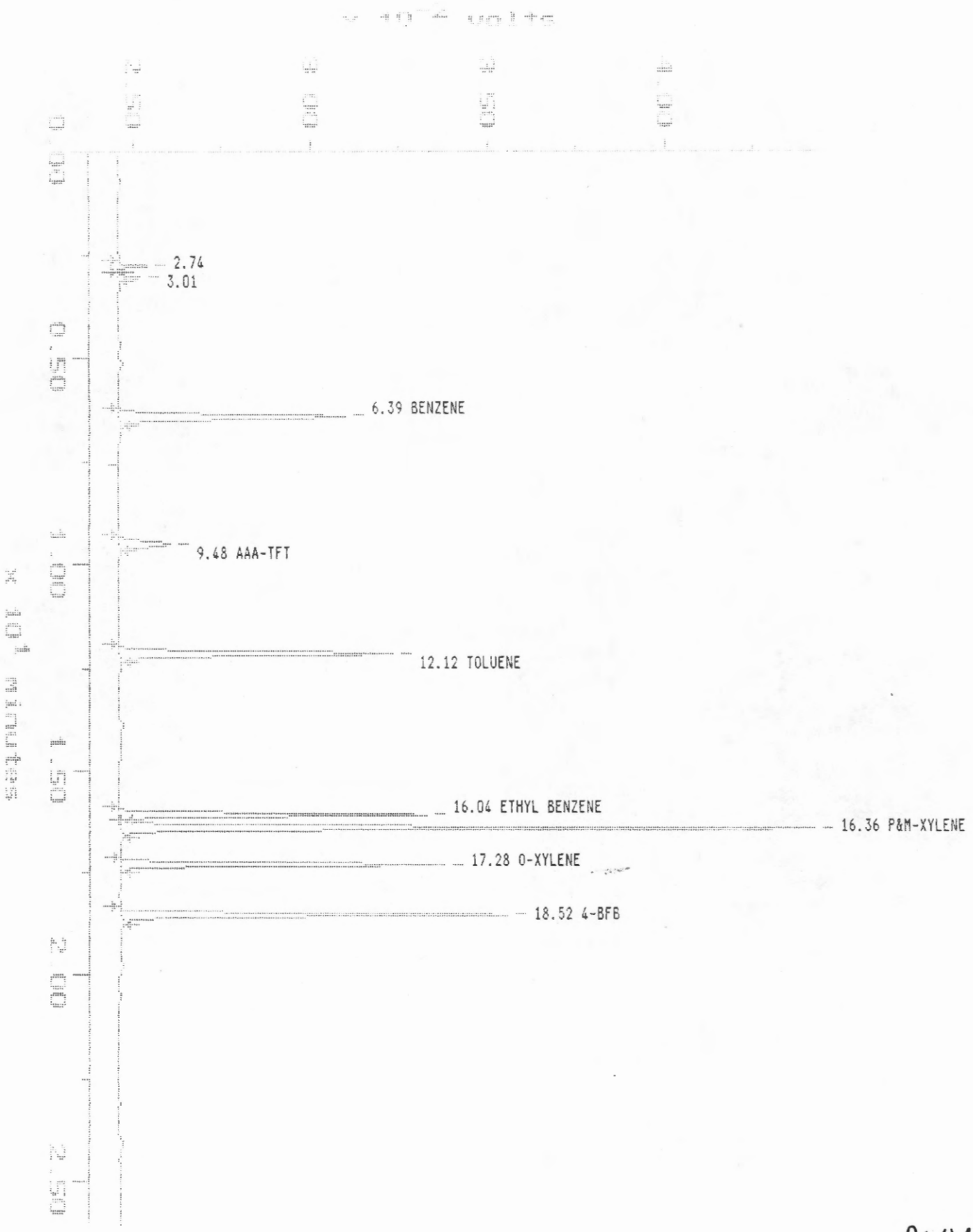
Channel: FID

Filename: 1118ST07

Acquired: 19-NOV-91 5:05 Method: C:\MAX\DATA1\111891

Operator: MS

Inj Vol: .00



Millipore

MAXIMA 820 CUSTOM REPORT

SAMPLE: 1118STD7

#21 in Method: BTEX 111891

Rate: 2.0 points/sec

Operator: MS

Type: UNKN

Instrument: THING

Index: Disk

DETECTOR: PID

PK#	ID#	Retention Time (min/sec)	Peak Area	Peak Height	Base	Response Factor	Solution Conc (ug/L)	Original Conc (ppm-soil)	Component Name
				802					
2		3.008	2806	595					
3	2	6.392	57580	6321	AREA	0.008	94.71	94.71	BENZENE
									MMA-IPT
5	6	12.117	57983	7692	AREA	0.008	92.85	92.85	TOLUENE
									ETHYLBENZENE
7	10	16.358	122034	19526	AREA	0.007	182.10	182.10	P&M-XYLENE
									O-XYLENE
9	14	18.517	64977	10897	AREA	0.008	100.12	100.12	4-BFB
TOTAL			436412	64991			827.40!!	827.40!!	

...ange.

OK BT 12/16/91

Cone + Ing Vol
x 10^-3
0.00
2.00
4.00
6.00
8.00
0.00
1.00
2.00
3.00
4.00
5.00
x 10^6
Normalized Peak Response

BENZENE Calibration Report

Quant Basis: Area Rejection Tolerance: None Internal Standard: None

Y-axis Label: Concentration

Corr. Coef. (r): 1.0000000 Coef. of Determination (r^2): [illegible]

Equation: [illegible] R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]
1118STD2	1118STD2	Y	1.000000E+01	4.0392883E+04	9.944786E+00	5.55E-01	1.237842E-03
							[illegible]
1118STD4	1118STD4	N	5.000000E+02	1.8492627E+06	4.540346E+02	1.01E+01	1.351890E-03
							[illegible]
1118STD6	1118STD6	N	2.000000E+03	0.0000000E+00	2.805886E-02	7.13E+06	Invalid

Conc * Inj Vol
x 10^4
0.00
0.00
0.00
0.00
0.00
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
x 10^5
MONZONE PEAK RESPONSE

Printed: 13-DEC-1991 10:37:58

Internal Standard: None

Curve Type: Linear

Weighting: None

Forced Through Origin: No

Corr. Coef. (r): 0.9999880

Coef. of Determination (r^2):

Equation:

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	1.000000E+01	7.7743545E+03	1.245059E+01	-1.97E+01	6.431402E-03
1118STD4	1118STD4	N	5.000000E+02	2.7030350E+05	4.460514E+02	-1.21E+01	9.248863E-03
1118STD6	1118STD6	N	2.000000E+03	0.0000000E+00	-3.897676E-01	-5.13E+05	Invalid

Conc * Inj Vol
x 10^2
2
1
0
-1
-2
0
0.20
0.40
0.60
0.80
1.00
1.20
x 10^5
Area Response
0000-0000

AAA-TFT Calibration Report

Quant Basis: Area

Rejection Tolerance: None

Internal Standard: None

Forced Through Origin: Yes

Y-axis Label: Concentration

Equation: Conc*(Inj Vol) = 6.453604E-03 * R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	1.000000E+02	1.0872306E+05	1.403311E+02	-2.87E+01	4.598840E-03
1118STD4	1118STD4	Y	1.000000E+02	5.4349906E+04	7.015055E+01	4.26E+01	9.199648E-03
1118STD6	1118STD6	N	1.000000E+02	0.0000000E+00	0.000000E+00		Invalid

Conc + Inj Vol
y 10^2
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
x 10^4
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
Chart-Test Peak Response

AAA-TFT Calibration Report

Quant Basis: Area

Rejection Tolerance: None

Internal Standard: None

Through Origin: Yes

Y-axis Label: Concentration

Equation: Conc*(Inj Vol) = 6.070338E-02 * R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	1.000000E+02	1.1394265E+04	1.383341E+02	2.77E+01	4.388173E-02
1118STD4	1118STD4	Y	1.000000E+02	5.9466074E+03	7.219583E+01	6.85E+01	8.408156E-02
1118STD6	1118STD6	N	1.000000E+02	0.0000000E+00	0.000000E+00		Invalid

Case = 1B1 Vol
Y axis
1.00
0.75
0.50
0.25
0.00
1.00
2.00
3.00
4.00
5.00
x 10^6
Volume Peak Measured

TOLUENE Calibration Report

Quant Basis: Area Rejection Tolerance: None Internal Standard: None

Y-axis Label: Concentration

Corr. Coef. (r): 1.0000000 Coef. of Determination (r^2):

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	1.000000E+01	4.0001578E+04	9.909524E+00	9.13E-01	1.249951E-03
1118STD4	1118STD4	N	5.000000E+02	1.8491026E+06	4.558496E+02	9.69E+00	1.352007E-03
1118STD6	1118STD6	N	2.000000E+03	0.0000000E+00	4.920760E-02	4.06E+06	Invalid

Conc = log (Mol)
x 10^-4
0.00
0.20
0.40
0.60
0.80
1.00
1.20
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
x 10^5
Molecular Peak Response

Printed: 13-DEC-1991 10:38:45

Internal Standard: None

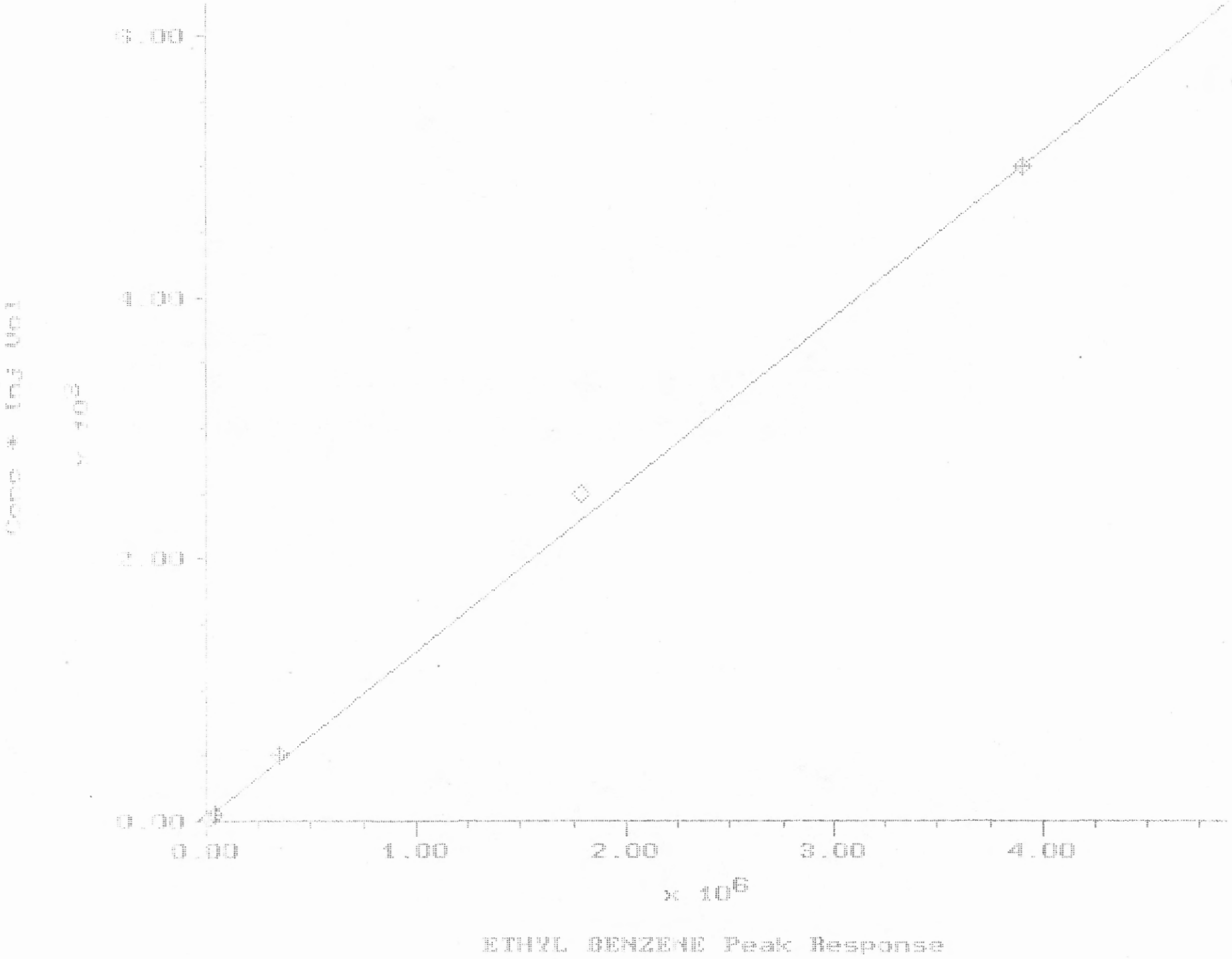
Curve Type: Linear Weighting: None Forced Through Origin: No

Model: [illegible]

Corr. Coef. (r): 0.9999732 Coef. of Determination (r²): [illegible]

Equation: [illegible] 03 * R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]-03
1118STD2	1118STD2	Y	1.000000E+01	7.8718379E+03	1.317909E+01	-2.61E+01	6.351757E-03
							[illegible]-03
1118STD4	1118STD4	N	5.000000E+02	2.7973681E+05	4.454159E+02	-1.23E+01	8.936972E-03
							[illegible]-03
1118STD6	1118STD6	N	2.000000E+03	0.0000000E+00	6.636919E-01	-3.01E+05	Invalid


4.00
3.00
2.00
1.00
0.00
0.00
1.00
2.00
3.00
4.00
x 10^6
ETHYL BENZENE Peak Response

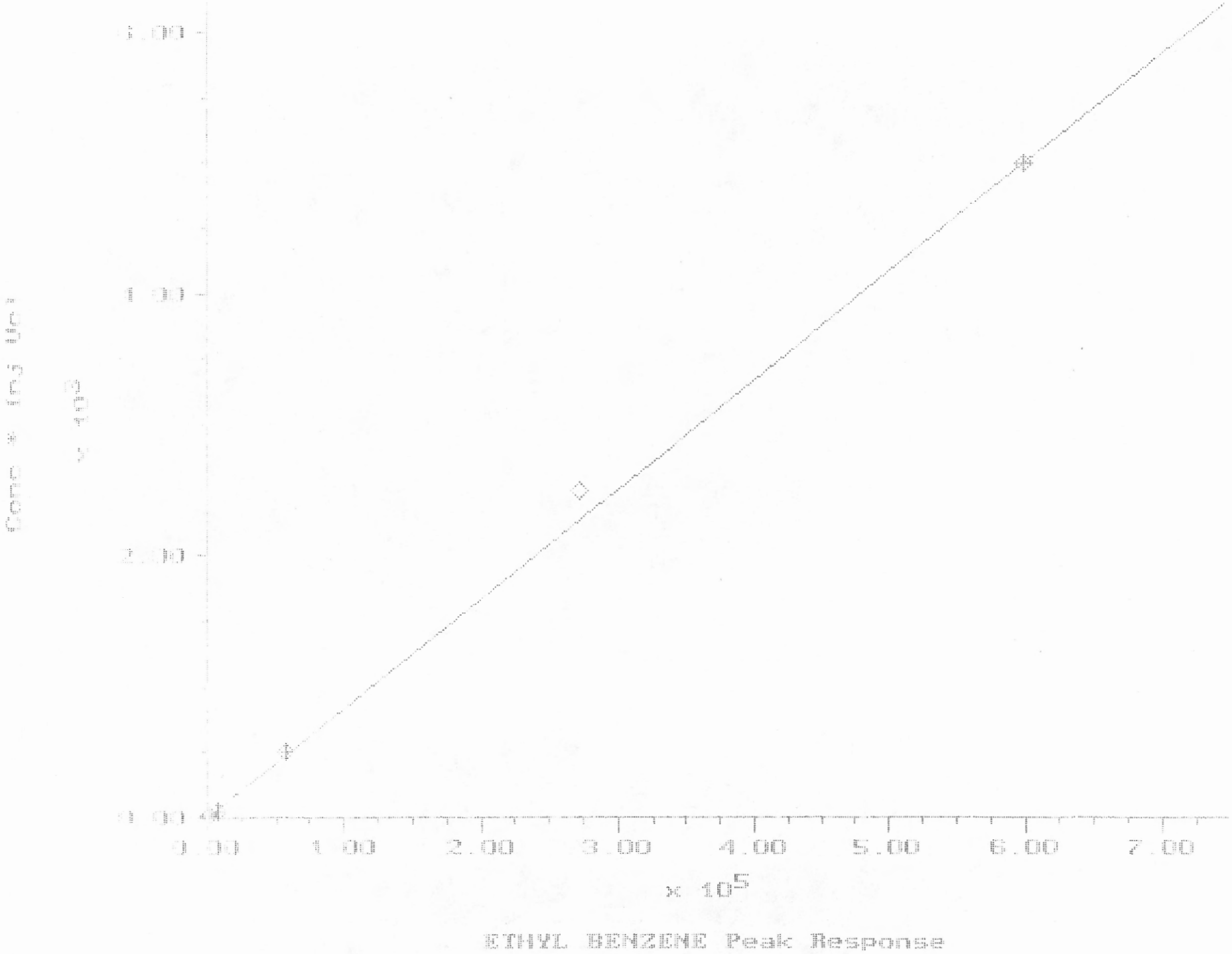
0:055

Printed: 13-DEC-1991 10:38:56

Curve Type: Linear Weighting: None Forced Through Origin: No

Corr. Coef. (r): 0.9999568 Coef. of Determination (r^2):

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	1.000000E+01	3.8583285E+04	1.287995E+01	2.24E+01	1.295898E-03
1118STD4	1118STD4	N	5.000000E+02	1.7893544E+06	4.600867E+02	8.68E+00	1.397152E-03
1118STD6	1118STD6	N	2.000000E+03	0.0000000E+00	3.024463E+00	6.60E+04	Invalid

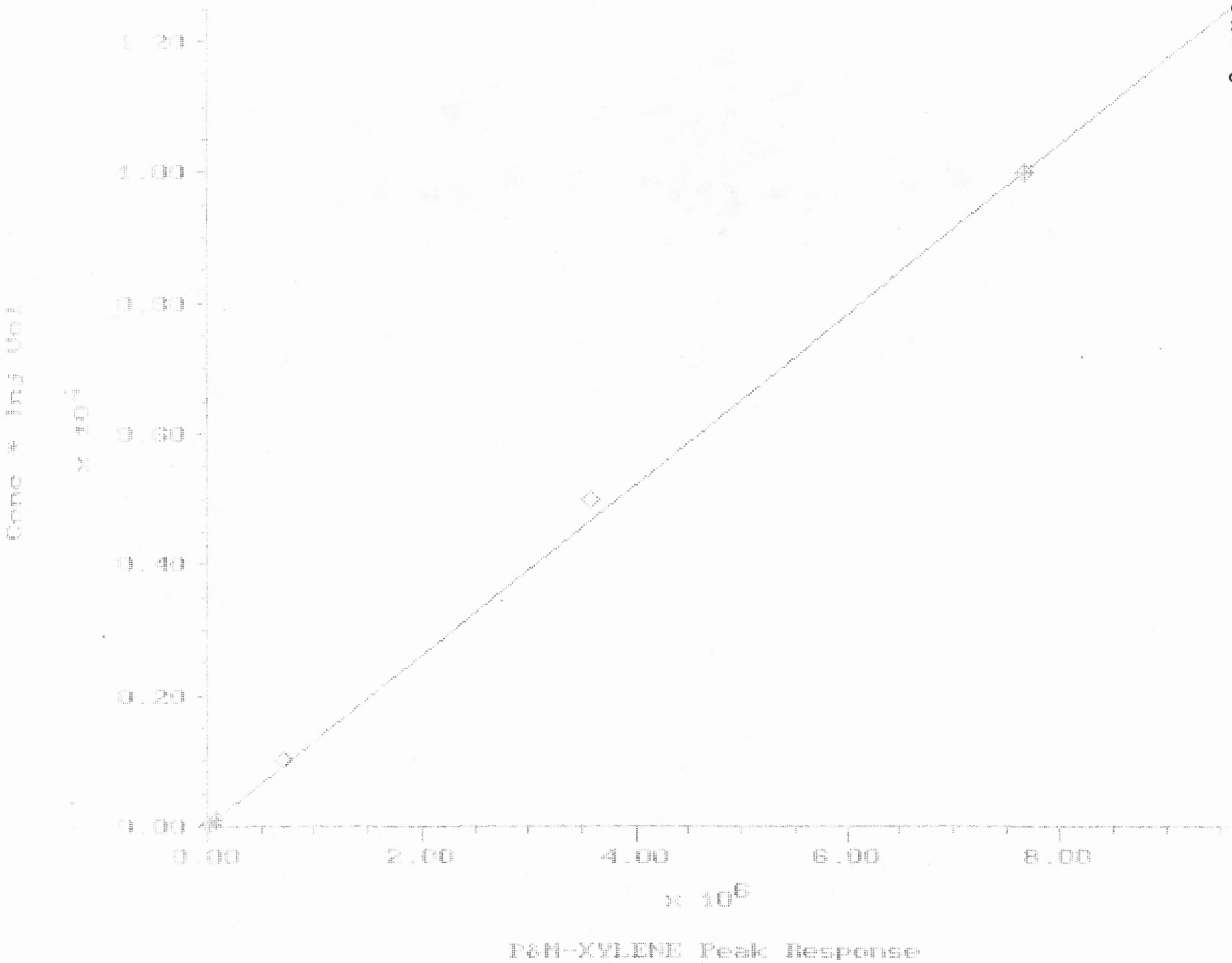

Conc * Inj Wgt
x 10^3
4.00
3.00
2.00
1.00
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
x 10^5
ETHYL BENZENE Peak Response

Printed: 13-DEC-1991 10:39:08

Curve Type: Linear Weighting: None Forced Through Origin: No

Corr. Coef. (r): 0.9999763 Coef. of Determination (r^2): [illegible]26

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]-03
1118STD2	1118STD2	Y	1.000000E+01	7.5590327E+03	1.303631E+01	-2.33E+01	6.614603E-03
							[illegible]-03
1118STD4	1118STD4	N	5.000000E+02	2.7182816E+05	4.546034E+02	9.99E+00	9.196987E-03
							[illegible]-03
1118STD6	1118STD6	N	2.000000E+03	0.0000000E+00	4.059269E-01	[illegible]93E+05	Invalid


1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
2.00
4.00
6.00
8.00
x 10^6
P&M-XYLENE Peak Response

Printed: 13-DEC-1991 10:39:19

Internal Standard: None

Curve Type: Linear Weighting: None Forced Through Origin: No

Y axis Label:

Corr. Coef. (r): 1.0000000 Coef. of Determination (r^2):

Equation:

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	2.000000E+01	7.6134812E+04	1.986283E+01	6.91E-01	1.313460E-03
1118STD4	1118STD4	N	1.000000E+03	3.5845225E+06	9.361305E+02	6.82E+00	1.394886E-03
1118STD6	1118STD6	N	4.000000E+03	0.0000000E+00	-2.090812E-02	1.91E+07	Invalid

Conc * Inj Vol
x 10^4
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
1.60
1.80
2.00
2.20
2.40
2.60
2.80
3.00
3.20
3.40
3.60
3.80
4.00
4.20
4.40
4.60
4.80
5.00
5.20
5.40
5.60
5.80
6.00
6.20
6.40
6.60
6.80
7.00
7.20
7.40
7.60
7.80
8.00
8.20
8.40
8.60
8.80
9.00
9.20
9.40
9.60
9.80
10.00
Peak Response
x 10^5
Peak Area Response

Printed: 13-DEC-1991 10:39:31

Internal Standard: None

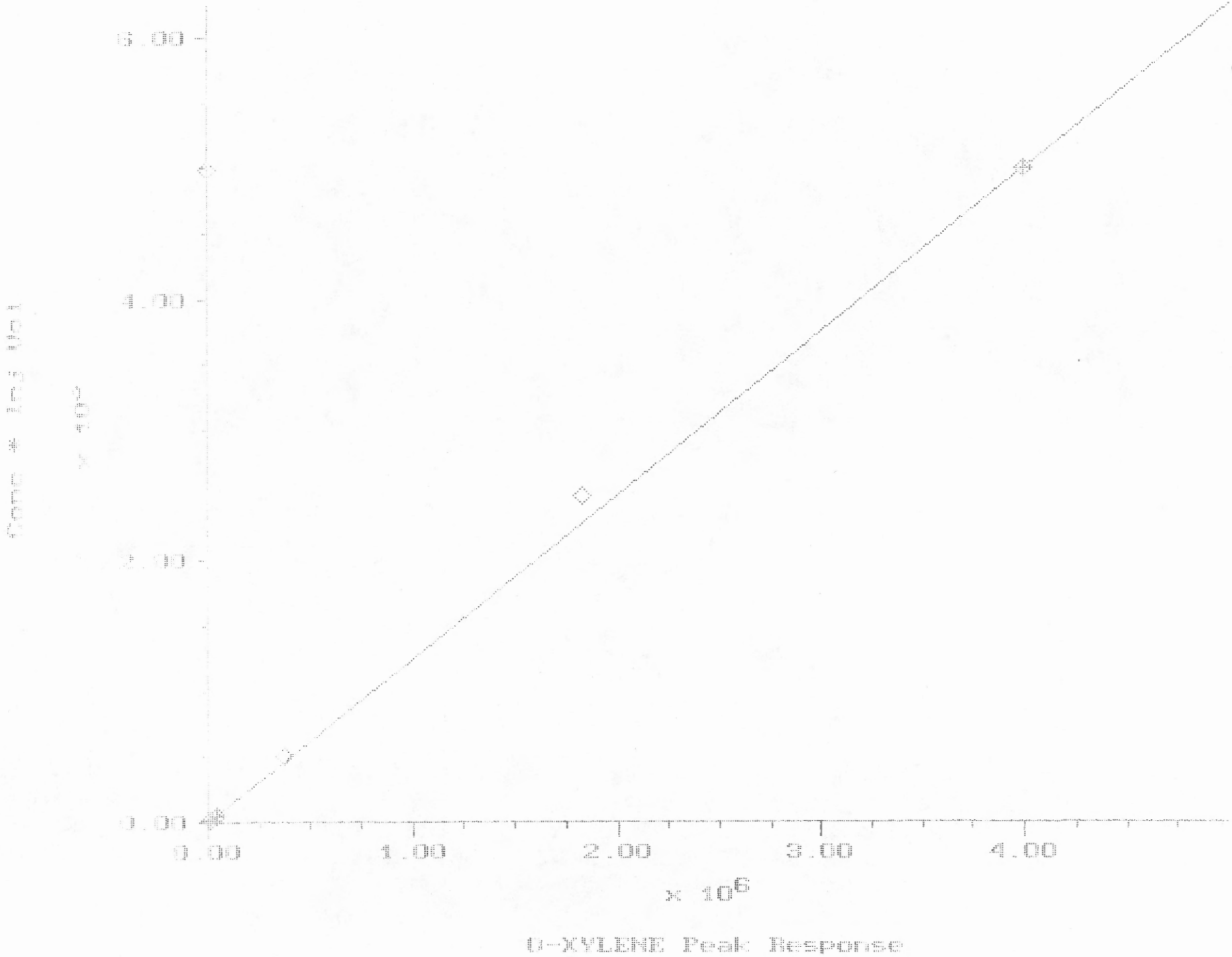
Curve Type: Linear Weighting: None Forced Through Origin: No

Y axis Label:

Corr. Coef. (r): 0.9999546 Coef. of Determination (r^2): [illegible]92

Equation: [illegible] R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]-03
1118STD2	1118STD2	Y	2.000000E+01	1.5990200E+04	2.698775E+01	-2.59E+01	6.253830E-03
							[illegible]-03
1118STD4	1118STD4	N	1.000000E+03	6.5579687E+05	9.628537E+02	3.86E+00	7.624312E-03
							[illegible]-03
1118STD6	1118STD6	N	4.000000E+03	0.0000000E+00	3.598362E+00	1.11E+05	Invalid


0.00
1.00
2.00
3.00
4.00
x 10^6
U-XYLENE Peak Response

Printed: 13-DEC-1991 10:39:40

Internal Standard: None

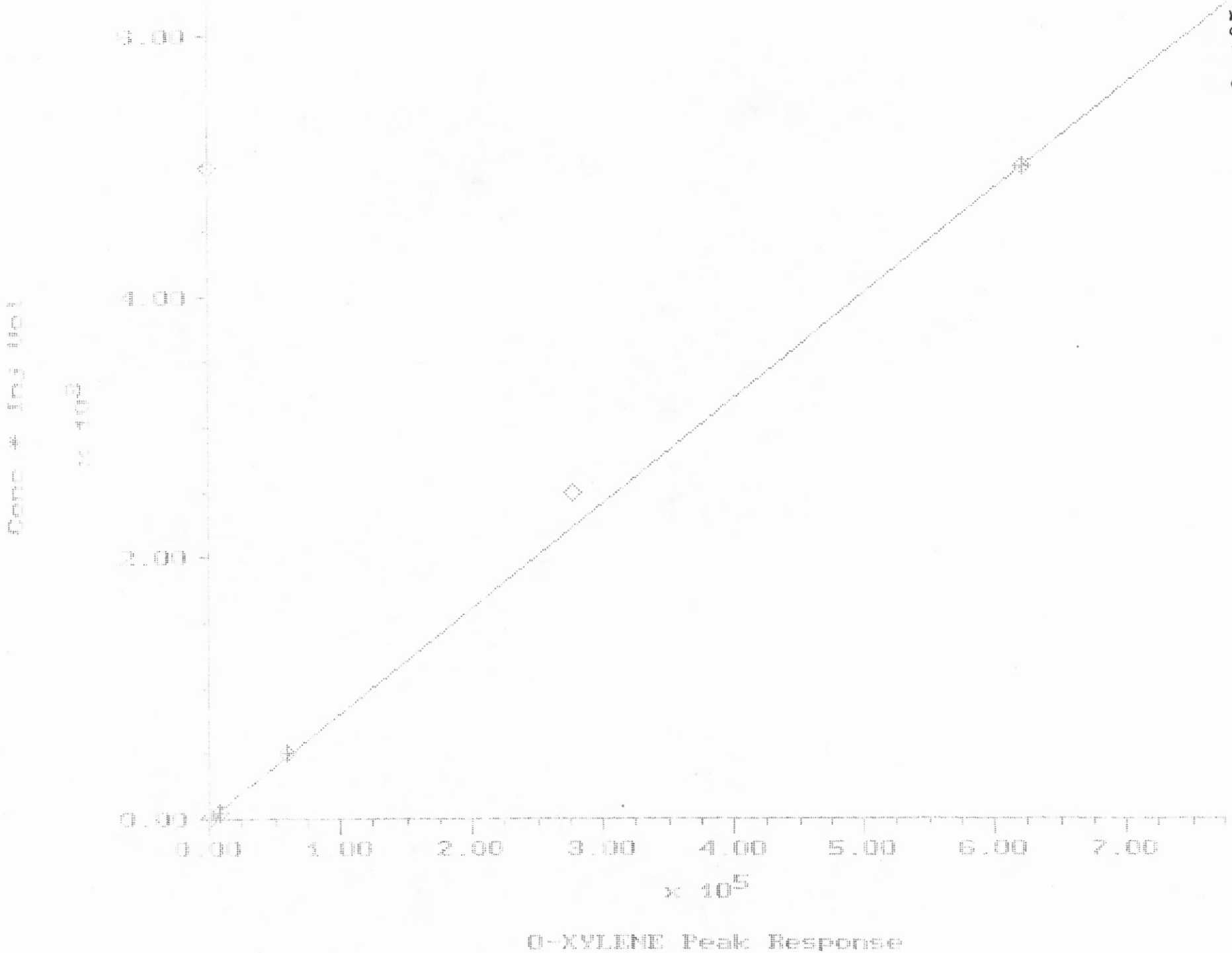
Curve Type: Linear Weighting: None Forced Through Origin: No

Y-axis Label: [illegible]

Corr. Coef. (r): 0.9999999 Coef. of Determination (r^2): [illegible]99

Equation: [illegible] R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]03
1118STD2	1118STD2	Y	1.000000E+01	3.9237445E+04	9.858855E+00	1.43E+00	1.274293E-03
						[illegible]	[illegible]03
1118STD4	1118STD4	N	5.000000E+02	1.8307062E+06	4.584534E+02	8.06E+00	1.365593E-03
						[illegible]	[illegible]03
1118STD6	1118STD6	N	1.000000E+03	0.0000000E+00	3.356178E-02	2.98E+06	Invalid


Conc # Inj lbl
x 10^2
0.00
2.00
4.00
6.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
x 10^5
O-XYLENE Peak Response

Printed: 13-DEC-1991 10:39:49

Curve Type: Linear Weighting: None Forced Through Origin: No

Corr. Coef. (r): 0.9999704 Coef. of Determination (r^2): [illegible]

[illegible] 03 * R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]-03
1118STD2	1118STD2	Y	1.000000E+01	7.6799702E+03	1.324599E+01	-2.45E+01	6.510442E-03
							[illegible]-03
1118STD4	1118STD4	N	5.000000E+02	2.7710244E+05	4.472976E+02	-1.18E+01	9.021934E-03
							[illegible]02E-03
1118STD6	1118STD6	N	1.000000E+03	0.0000000E+00	8.732118E-01	-1.14E+05	Invalid

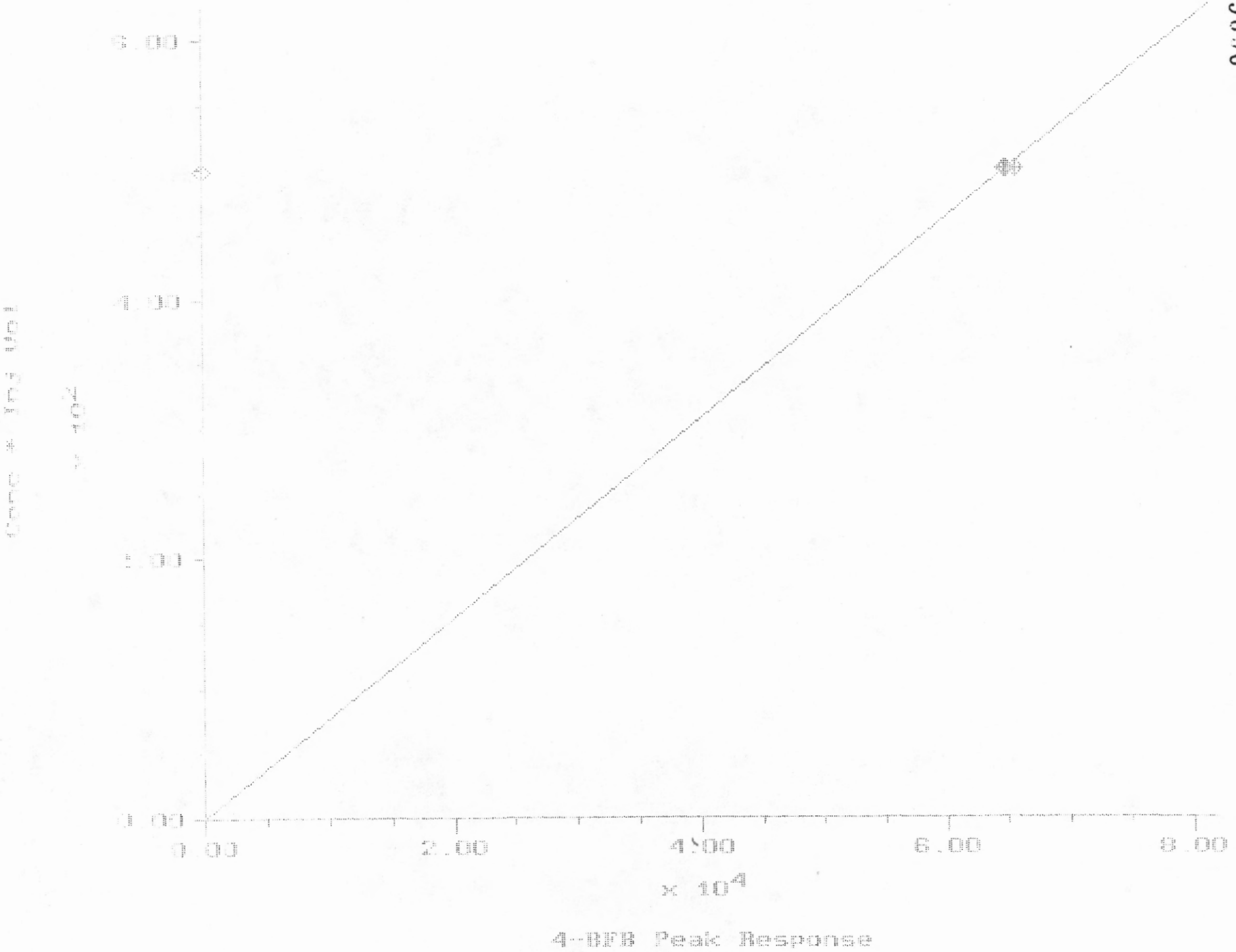
Conc + Inj Vol
x 4p2
0.00
0.50
1.00
1.50
2.00
x 4p5
4-DMA Peak Response

Printed: 13-DEC-1991 10:40:00

Curve Type: Linear Weighting: None Forced Through Origin: Yes

Equation: Conc*(Inj Vol) = 2.808894E-03 * R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
1118STD2	1118STD2	Y	1.000000E+02	1.7853381E+05	1.002965E+02	-2.96E-01	2.800590E-03
1118STD4	1118STD4	Y	1.000000E+02	1.7793003E+05	9.995730E+01	4.27E-02	2.810093E-03
1118STD6	1118STD6	N	1.000000E+02	0.0000000E+00	0.000000E+00		Invalid


6.00
4.00
2.00
0.00
0.00
2.00
4.00
6.00
8.00
x 10^4
4-DPB Peak Response

4-BFB Calibration Report

Quant Basis: Area Rejection Tolerance: None Internal Standard: None

Y-axis Label: Concentration

Equation: Conc*(Inj Vol) = 7.704279E-03 * R

Sample	File Name	Valid	Concentration	Response	Calc'd Concentration	% Deviation	Response Factor
							[illegible]E-03
1118STD2	1118STD2	Y	1.000000E+02	6.4858090E+04	9.993696E+01	6.31E-02	7.709139E-03
							[illegible]E-03
1118STD4	1118STD4	Y	1.000000E+02	6.4718078E+04	9.972123E+01	2.80E-01	7.725817E-03
				[illegible]	[illegible]E+01	3.49E-01	[illegible]E-03
1118STD6	1118STD6	N	1.000000E+02	0.0000000E+00	0.000000E+00		Invalid

[illegible] REPORT

Printed: 4-DEC-1991 15:39

BTEX 111991

Data Acquisition

Channels: 2
Trigger: External #1

Delay: 0.0 min
Duration: 26.00 min
Rate: 2,000 points/sec

Channel Parameters

Channel ID:	THING PID	THING FID
Detect Peaks:	Yes	Yes
A/D Type:	WD24	WD24
Slot #:	16	16
Channel #:	0	1
Range (volts):	0-1.00	0-10.00
Resolution:	22-bit	22-bit
x-Axis Units:	minutes	minutes
x-Axis Start:	0.000	0.000
x-Axis End:	26.000	26.000
y-Axis Units:	volts	volts
y-Axis Min:	0.000	0.000
y-Axis Max:	1.000	10.000
Expansion:	1.00	1.00
Offset:	0.00%	0.00%

Printed: 4-DEC-1991 15:39

[illegible] 1991

[illegible] gration Parameters

Channel 1
Channel 2
Channel 8

Detection Parameters

Baseline Points:	10	
Filter Window (in Points):	13	
[illegible] (Channel):	30.00	microvolt/sec
Integration Sensitivity (Fine):	20.00	microvolt/sec²
Detect Negative Peaks:	No	
Skim Ratio:	8.000	

Rejection Criteria

Minimum Area:	100.00	microvolt-sec
Minimum Height:	14.18	microvolt
Minimum Width:	0.1500	sec

Printed: 4-DEC-1991 15:39

[illegible] 111991

Peak Integration Parameters

Channel 3
Channel 4
Channel 5
Channel 6
Channel 7

Detection Parameters

Baseline Points:	10
Filter Window (in Points):	13
Integration Sensitivity (Coarse):	2.00E+07 microvolt/sec
Integration Sensitivity (Fine):	2.00E+07 microvolt/sec²
Detect Negative Peaks:	No
Skim Ratio:	8.000

Rejection Criteria

Minimum Area:	1.00E+08 microvolt-sec
Minimum Height:	1.00E+07 microvolt
Minimum Width:	0.1500 sec

Printed: 4-DEC-1991 15:39

[illegible] 1991

Component Table

#	Component Name	Ret Time	Window	Ref	Det	Group	Cal	Basis	Curve	Orig	Wgting	Y-axis	Internal Std
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
2	BENZENE	4.72	0.02		1		Yes	Area	linear	Yes	none	Conc	
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
4	AAA-TFT	6.74	0.03	Y	1		Yes	Area	linear	Yes	none	Conc	
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
6	TOLUENE	9.67	0.04		1		Yes	Area	linear	Yes	none	Conc	
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
8	ETHYL BENZENE	13.98	0.07		1		Yes	Area	linear	Yes	none	Conc	
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
10	P&M-XYLENE	14.31	0.08		1		Yes	Area	linear	Yes	none	Conc	
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
12	O-XYLENE	15.29	0.10		1		Yes	Area	linear	Yes	none	Conc	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Conc	
14	4-BFB	16.62	0.16	Y	1		Yes	Area	linear	Yes	none	Conc	

#	Group Name	Start	End	Ref	Det	Group	Cal	Basis	Curve	Orig	Wgting	Y-axis	Internal Std
[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		No						

MAXIMA 820 METHOD REPORT

[illegible] 15:39

BTEX 111991

Operating Conditions Gas Chromatography

Operator ID: MS

Injection Method: P&T

[illegible]

Sample Pressure: N/A

Column Type: Capillary

Temperature Information

[illegible] Temperature: Program

Injector Temperature: 80 C

[illegible] Temperature: 250 C

Column Temperature Program

[illegible] TEMP 40 C

RATE 6.0 C/MIN

INITIAL HOLD = 8.00 MIN

FINAL HOLD = 1.00 MIN

[illegible] TEMP 105 C

RUN TIME = 30.00 MIN

[illegible] Information

Column 1

Column ID:	DB624	Solid Support:	N/A
[illegible]	[illegible]	[illegible] Load:	N/A
Length:	30 METERS	Liquid Phase:	1.0 uM FILM
[illegible]	[illegible]	Mesh Size:	N/A
Date Packed:	INSTALLD 030591		

[illegible] Information for Column 1

Carrier Gas:	HELIUM	Make-Up Gas:	HELIUM
[illegible]	[illegible]	Make-Up Flow:	100 ml/MIN
Split Ratio:	N/A		
[illegible]	[illegible]	[illegible]	[illegible]ml/MIN

Detector Information

	Name	Type	Range	Comment
1	THING PID	PHOTOIONIZATION	0-1 VOLT	
[illegible]	[illegible]	[illegible]	0-10 VOLT	

General Comments

Stripchart Comment

MAXIMA 820 METHOD REPORT

[illegible] 15:39

BTEX 111991

| Custom Report Format |

[illegible] of Millipore

MAXIMA 820 CUSTOM REPORT

Printed:

SAMPLE:

		Type:	
# in Method:		Instrument:	
Acquired:		Filename:	
Rate:		Index:	
Duration:		Injection Volume:	
Operator:		Dilution:	
		Amount:	

DETECTOR:

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name

Printed: 4-DEC-1991 15:39

BTEX 111991

Queue

Queue Parameters

File Path: C:\MAX\DATA1 **Raw Sample Weight:** 1.000
Volume of Extract: 1.000

Stripchart Parameters

Scaling: Fit to highest valid peak x Axis limits: 0.0-0.0
Peak Labels: Names, retention times **y-Axis limits:** 0.0-0.0
Regions: 0
Options: baselines, starts/ends, maxima

Sample Queue Table

					Injection Volume	Amount	Dilution
1	1191119STDX	UNKN	DISK	1119STDX	5.000E+00		
					5.000E+00		
3	1119STD2	STND	DISK	1119STD2	5.000E+00		
					5.000E+00		
5	1119STD4	STND	DISK	1119STD4	5.000E+00		
					5.000E+00		
7	1119STD6	STND	DISK	1119STD6	5.000E+00		
					5.000E+00		
9	1119W1	UNKN	DISK	1119W1	5.000E+00		
					5.000E+00		
11	1119W3	UNKN	DISK	1119W3	5.000E+00		
					5.000E+00		
13	1119GST1	UNKN	DISK	1119GST1	5.000E+00		
					5.000E+00		
15	1119W5	UNKN	DISK	1119W5	5.000E+00		
					5.000E+00		
17	6703-1	UNKN	DISK	6703-1	5.000E+00		

19	1119W7	UNKN	DISK	1119W7	5.000E+00		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
21	1119STD7	UNKN	DISK	1119STD7	5.000E+00		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
23	1119GST2	UNKN	DISK	1119GST1	5.000E+00		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		

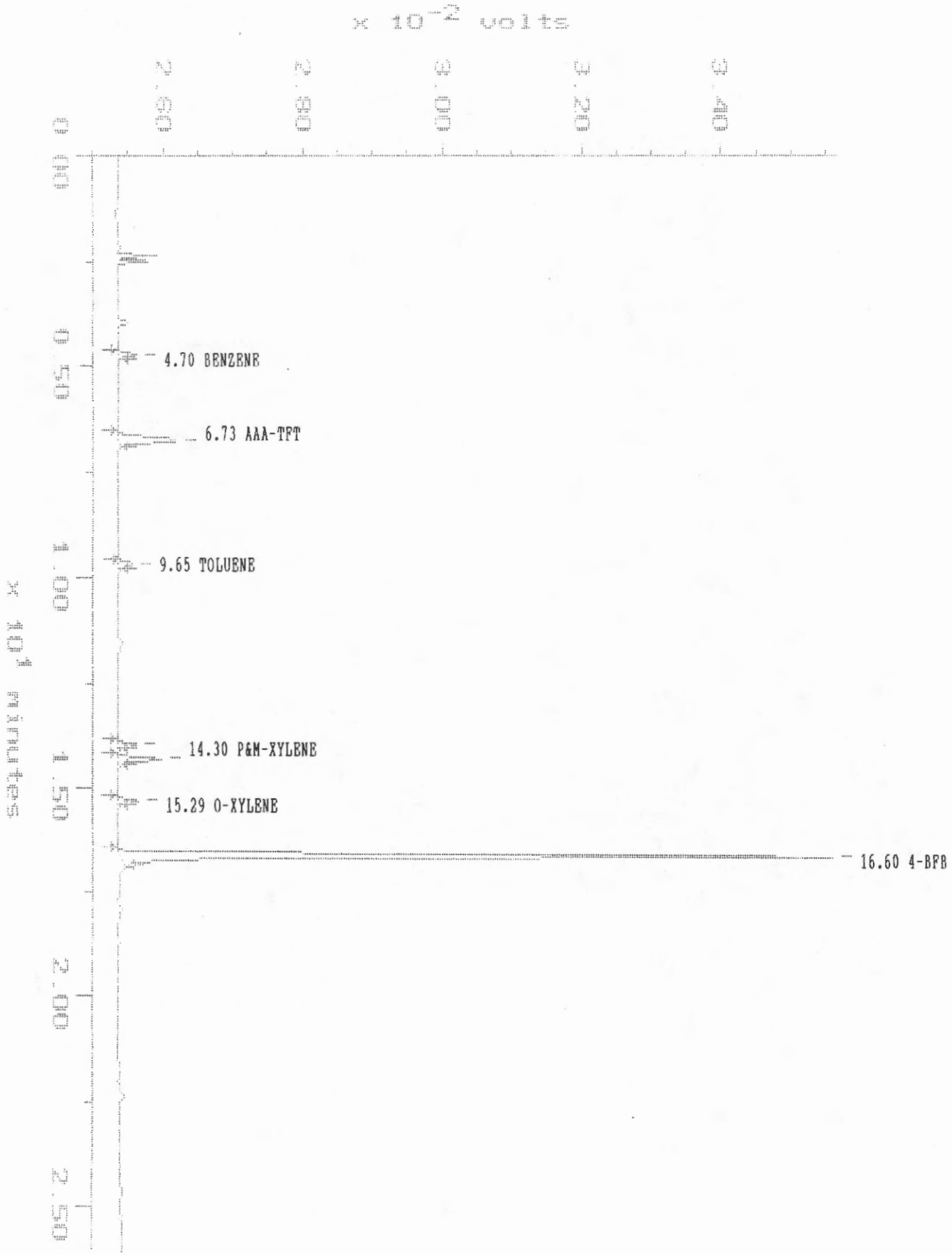
Standard Concentrations

Component	1119STD1	1119STD2	1119STD3	1119STD4	1119STD5	1119STD6
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BENZENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
[illegible]	[illegible]	[illegible]	1.000E+02	1.000E+02	1.000E+02	1.000E+02
AAA-TFT	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOLUENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ETHYL BENZENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
[illegible]	[illegible]	[illegible]	2.000E+02	1.000E+03	2.000E+03	4.000E+03
P&M-XYLENE	4.000E+00	2.000E+01	2.000E+02	1.000E+03	2.000E+03	4.000E+03
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
O-XYLENE	2.000E+00	1.000E+01	1.000E+02	5.000E+02	1.000E+03	2.000E+03
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4-BFB	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02	1.000E+02
[illegible]	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

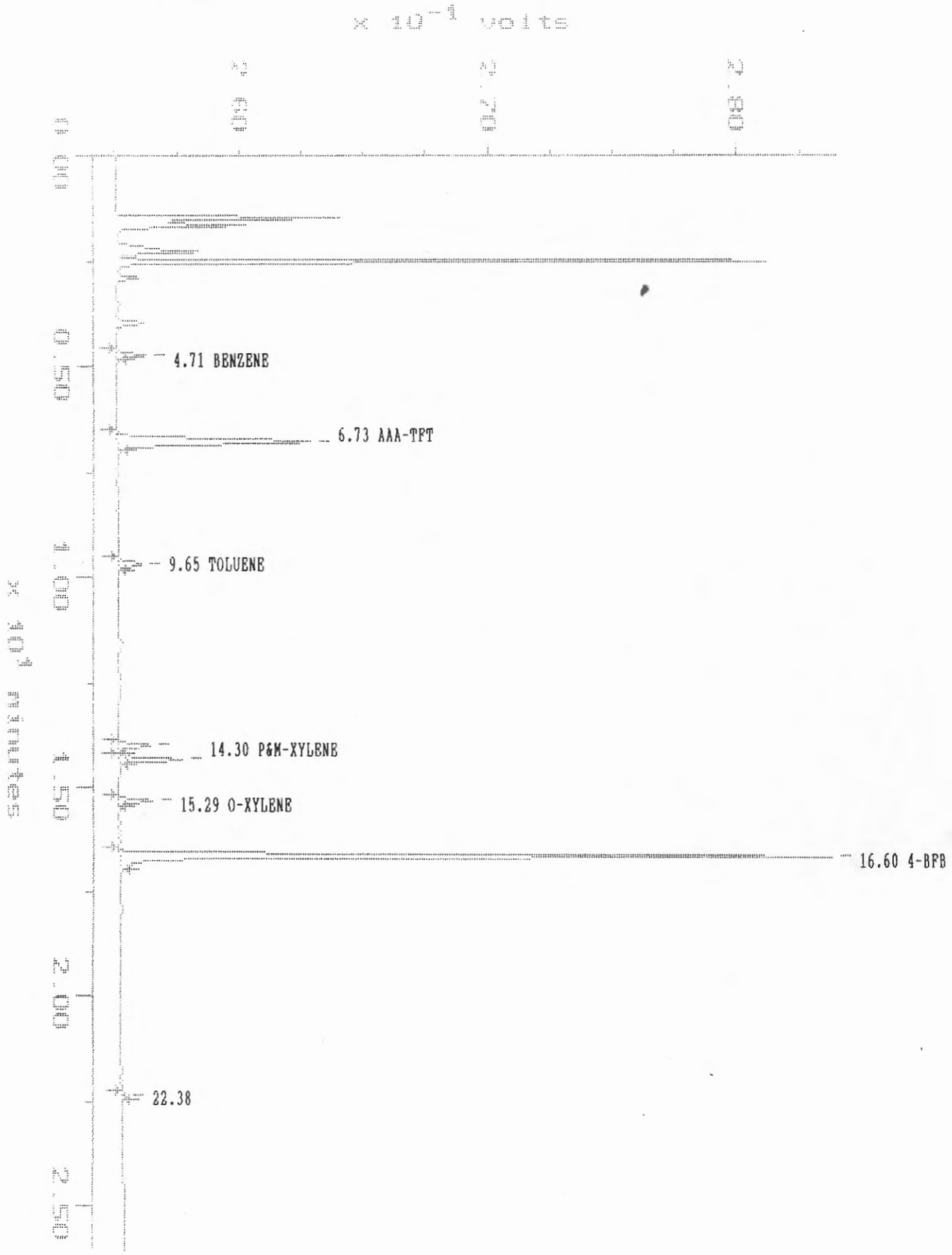
Sample:
Acquired: 19-NOV-91 12:49
Inj Vol: 5.00

Channel: [illegible] PID
Method: C:\MAX\DATA1\111991

Filename: 1119STD1
Operator: MS



Sample: 1119STD1 Channel: THING FID Filename: 1119STD1
Acquired: 19-NOV-91 12:49 Method: C:\MAX\DATA1\111991 Operator: MS
Inj Vol: 5.00



MAXIMA (R) 820 Dynamic Solutions, Division of Millipore

MAXIMA 820 CUSTOM REPORT

[illegible] 16:08:51

SAMPLE: 1119STD1
#2 in Method: BTEX 111991
[illegible]
Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: STND
Instrument: THING
[illegible]name: 1119STD1
Index: Disk
Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.006	2.00	2.00	BENZENE
2	4	6.733	8513	858	AREA	0.059	100.00	100.00	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.006	2.00	2.00	TOLUENE
4	8	13.967	1674	263	AREA	0.006	2.00	2.00	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
6	12	15.292	1756	283	AREA	0.006	2.00	2.00	O-XYLENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4-BFB
TOTAL			[illegible]5269	12677			212.00	212.00	

DETECTOR: THING FID

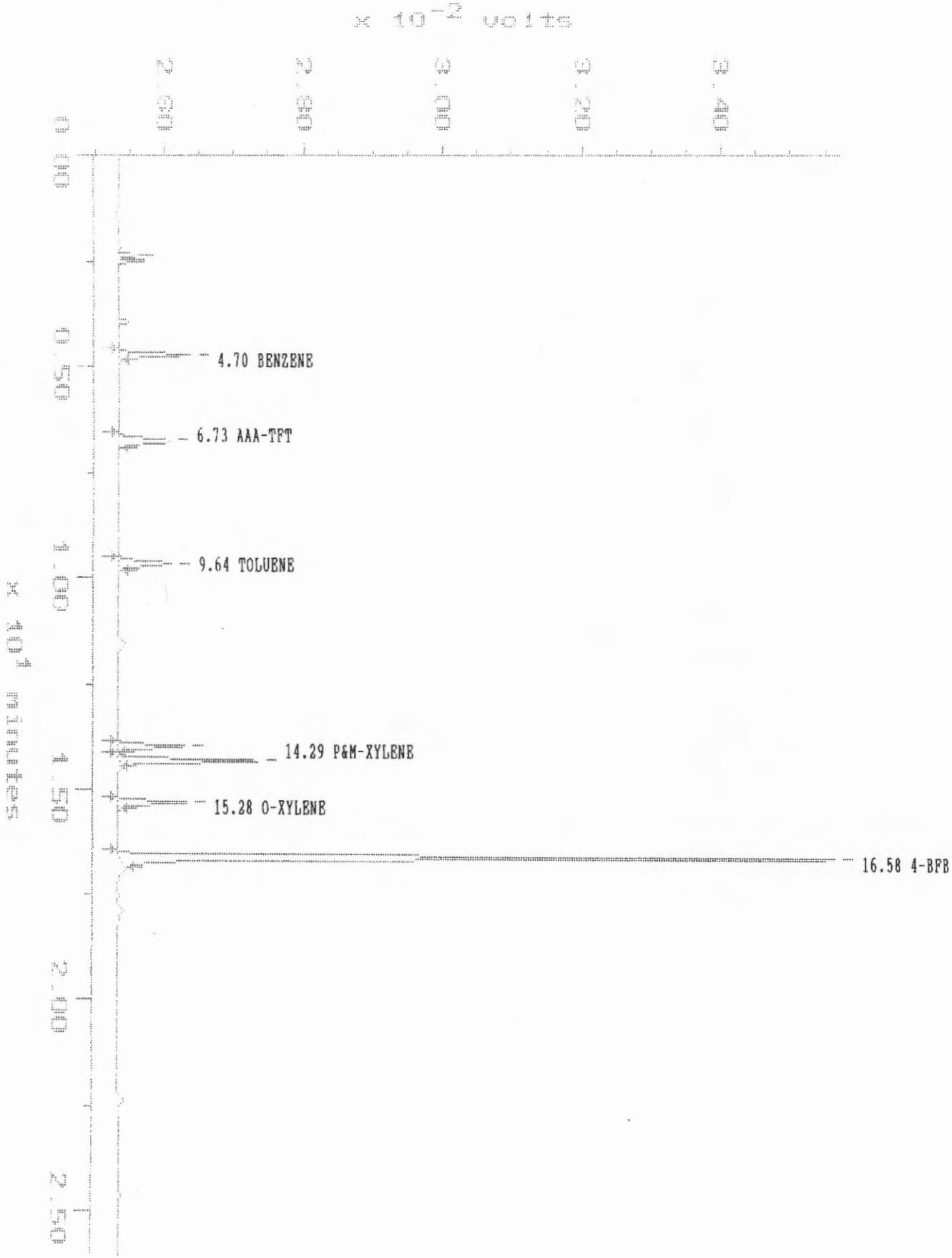
PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.001	2.00	2.00	BENZENE
2	3	6.733	76934	7751	AREA	0.006	100.00	100.00	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.001	2.00	2.00	TOLUENE
4	7	13.967	7990	1235	AREA	0.001	2.00	2.00	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
6	11	15.292	8454	1328	AREA	0.001	2.00	2.00	O-XYLENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.003	100.00	100.00	4-BFB
8		22.375	1129	155					
TOTAL			[illegible]	[illegible]			212.00	212.00	

GROUP SUMMARY: THING FID

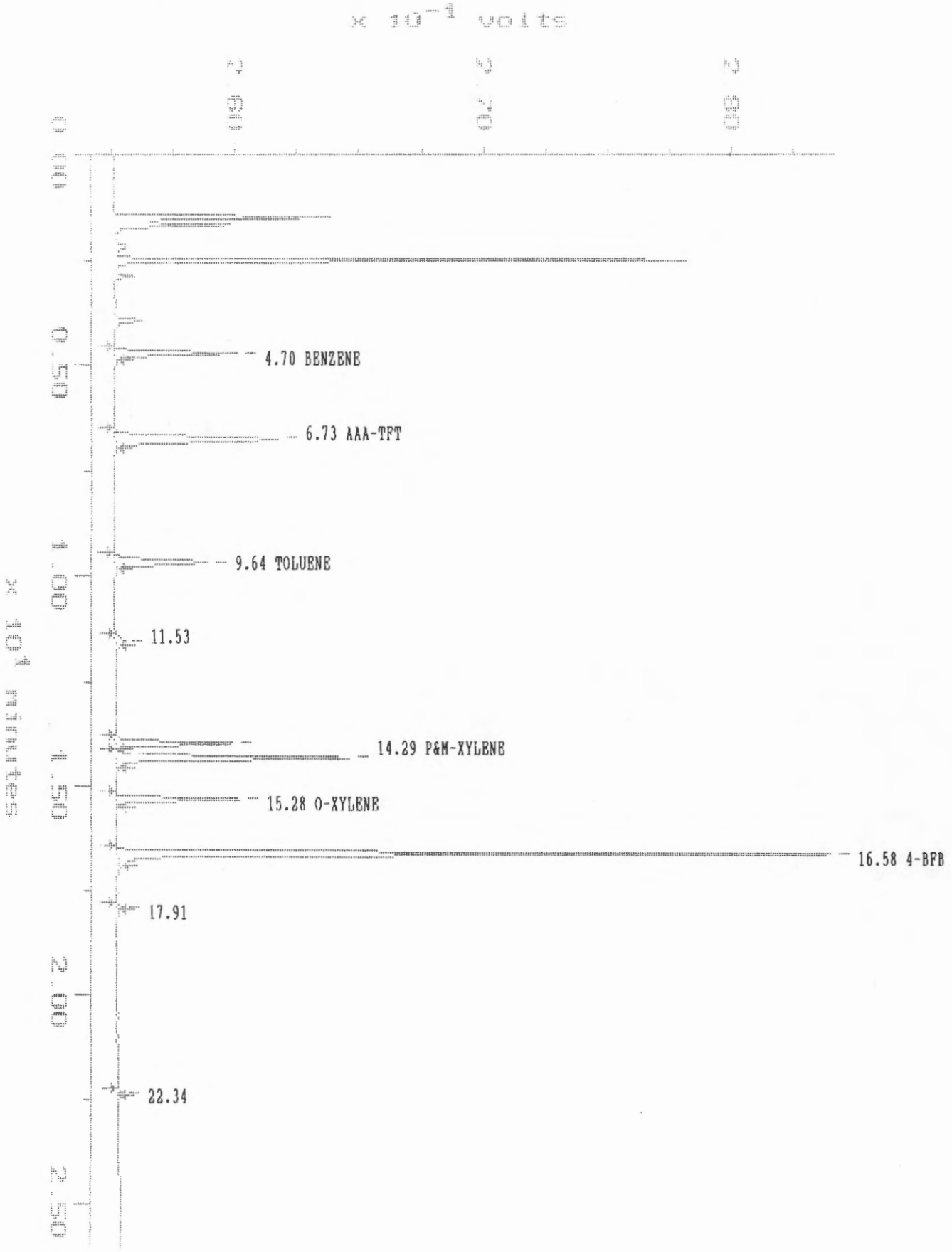
PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA				GASOLINE RANGE

[illegible]	[illegible]	[illegible]	0.00	0.00

Sample: 1119STD2 Channel: THING PID Filename: 1119STD2
Acquired: Method: Operator: MS
Inj Vol: 5.00



Sample: 1119STD2 Channel: THING FID Filename: 1119STD2
Acquired: Method: C:\MS\DATA\111991 Operator: MS
Inj Vol: 5.00



Dynamic Solutions, Division of Millipore

MAXIMA 820 CUSTOM REPORT

[illegible] 14:19:33

SAMPLE: 1119STD2
#3 in Method: BTEX 111991
Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: STND
Instrument: THING
[illegible]: 1119STD2
Index: Disk
Injection Volume: 5.0

DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	[illegible]	0.007	10.00	10.00	BENZENE
2	4	6.725	7365	741	AREA	0.068	100.00	100.00	AAA-TFT
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10.00	10.00	TOLUENE
4	8	13.950	6384	949	AREA	0.008	10.00	10.00	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible] XYLENE
6	12	15.275	6413	993	AREA	0.008	10.00	10.00	O-XYLENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	100.00	100.00	4-BFB
			---	---			---	---	
[illegible]		[illegible]	[illegible]	[illegible]			260.00	260.00	

DETECTOR: THING FID

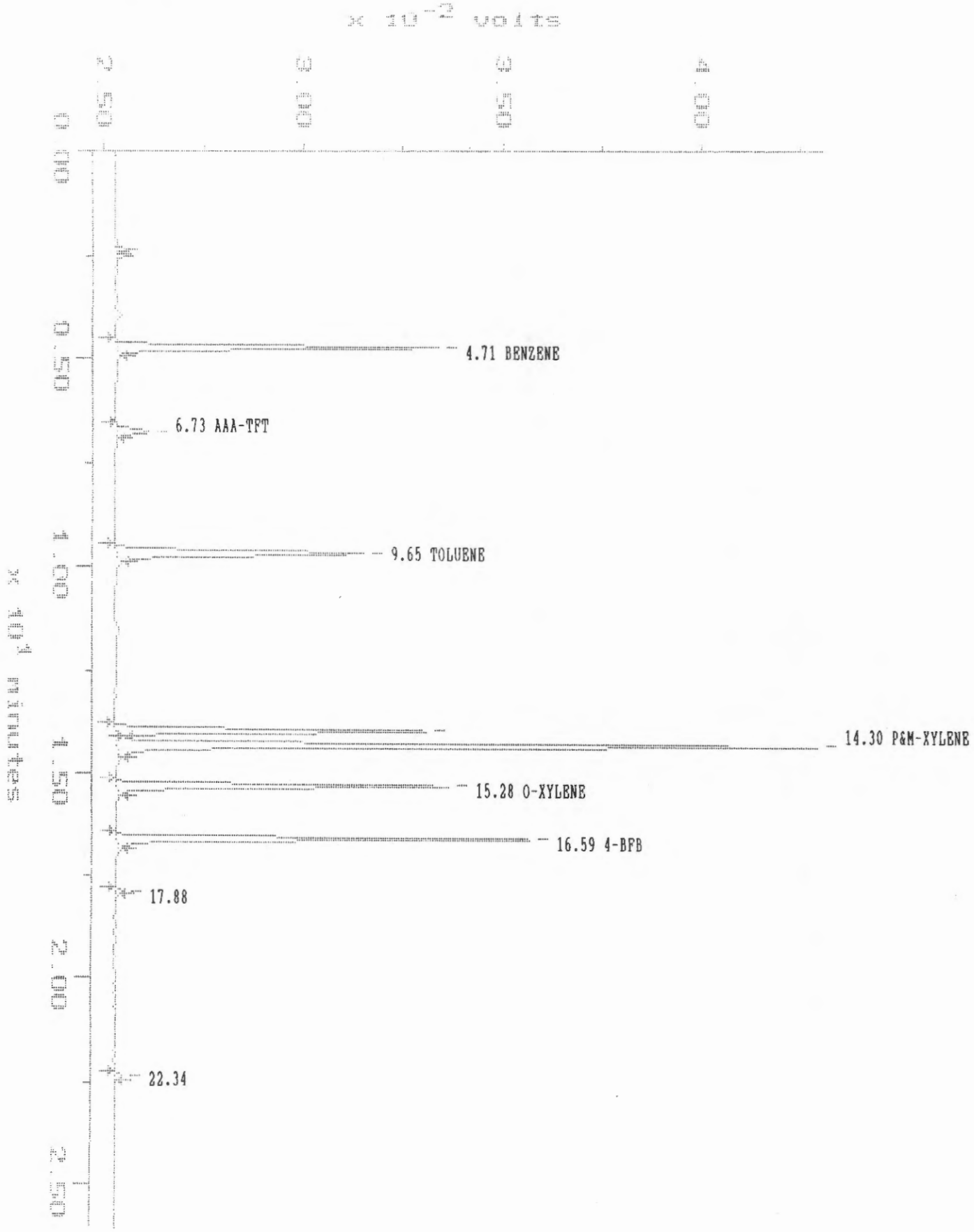
PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	[illegible]	0.002	10.00	10.00	BENZENE
2	3	6.725	65404	6605	AREA	0.008	100.00	100.00	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.002	10.00	[illegible]	TOLUENE
4		11.525	3004	303					
5	7	13.950	31243	4690	AREA	0.002	10.00	10.00	ETHYL BENZENE
	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.002	20.00	20.00	P&M-XYLENE
7	11	15.275	31724	4982	AREA	0.002	10.00	10.00	O-XYLENE
[illegible]	[illegible]	16.583	176098	28672	AREA	0.003	[illegible]	[illegible]	4-BFB
9		17.908	871	129					
10		22.342	886	129					
			---	---			---	---	
[illegible]			[illegible]	[illegible]			260.00	260.00	

GROUP SUMMARY: THING FID

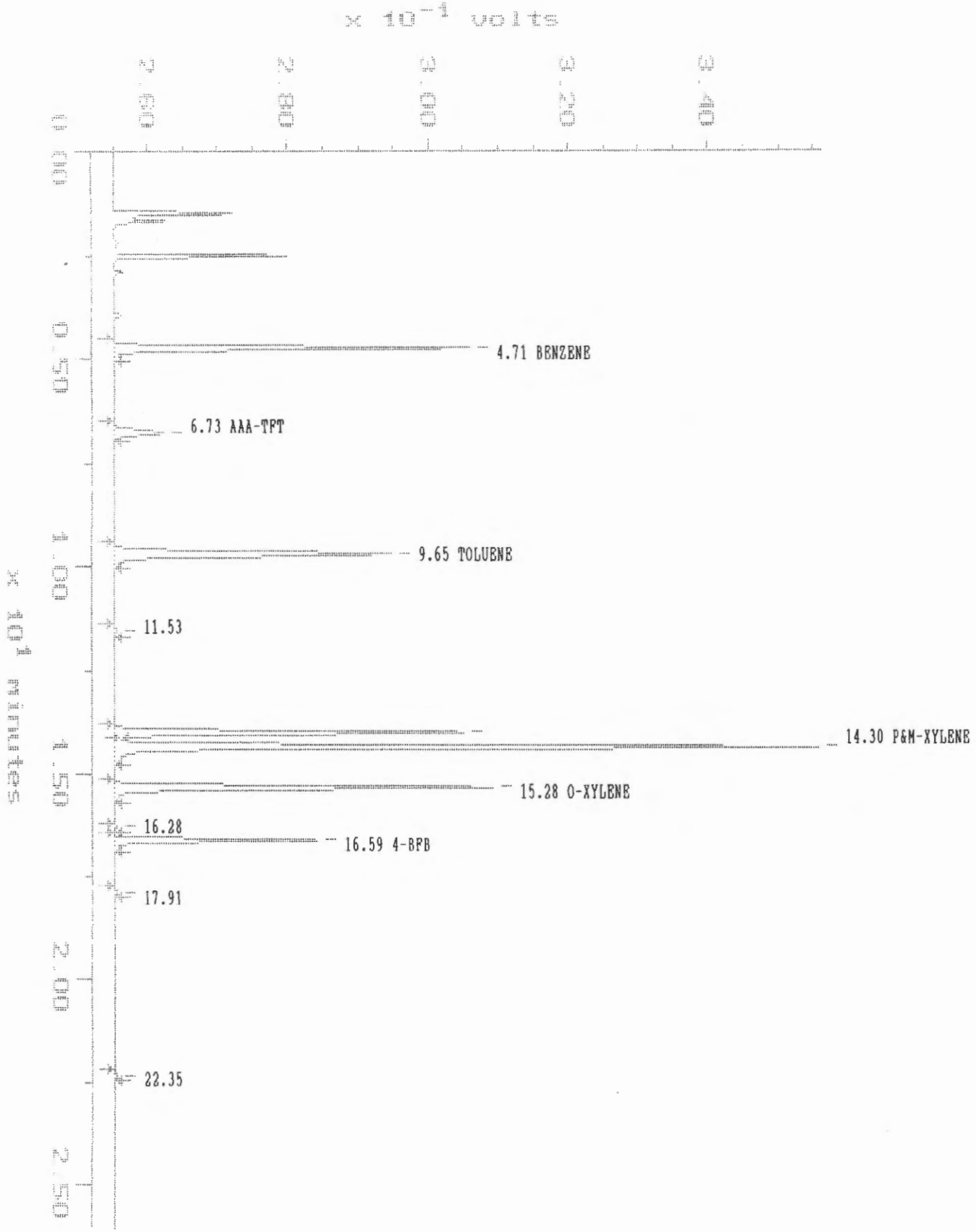
PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name

									RANGE
				63529			0.00	0.00	

Sample: 1119STD3 Channel: THING PID Filename: 1119STD3
Acquired: Method: Operator: MS
Inj Vol: 5.00



Sample: 1119STD3 Channel: THING FID Filename: 1119STD3
Injected: Method: Operator: MS
Inj Vol: 5.00



MAXIMA 820 CUSTOM REPORT

14:10:18

SAMPLE: 1119STD3
#4 in Method: BTEX 111991
14:02
Rate: 2.0 points/sec
Operator: MS

Type: STND
Instrument: THING
Filename: 1119STD3
Index: Disk
Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
									BENZENE
2	4	6.733	7751	787	AREA	0.065	100.00	100.00	AAA-TFT
									TOLUENE
4	8	13.958	55394	7807	AREA	0.009	100.00	100.00	ETHYL BENZENE
5	10	14.300	121332	17541	AREA	0.008	200.00	200.00	P&M-XYLENE
6	12	15.283	57103	8315	AREA	0.009	100.00	100.00	O-XYLENE
				10341	AREA	0.008	100.00	100.00	4-BFB
8		17.883	1064	142					
9		22.342	1249	170					
			125021	59409			800.00	800.00	

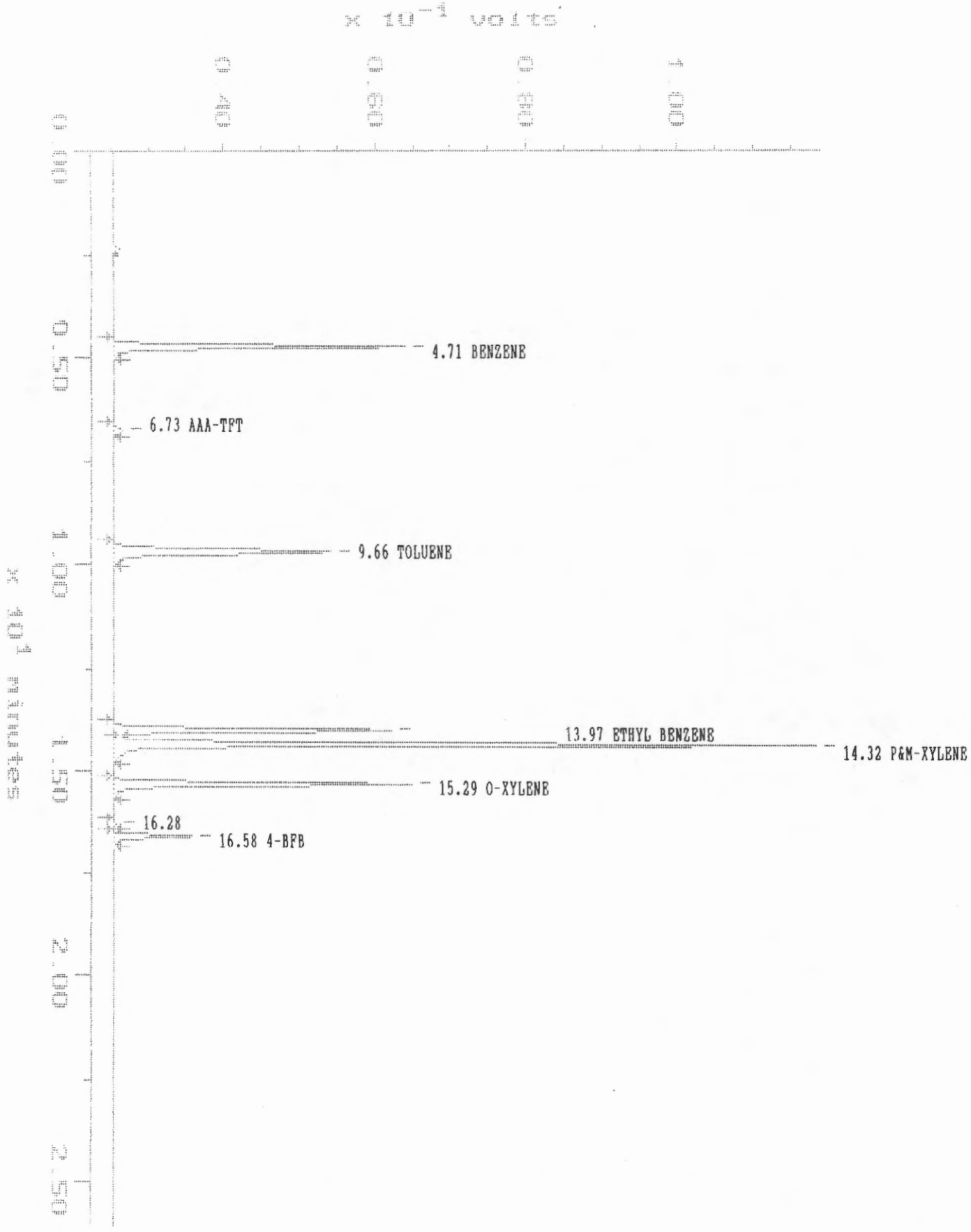
DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
									BENZENE
2	3	6.733	69340	7050	AREA	0.007	100.00	100.00	AAA-TFT
					AREA	0.001	100.00	100.00	TOLUENE
4		11.525	3527	331					
5	7	13.958	334834	49937	AREA	0.001	100.00	100.00	ETHYL BENZENE
									P&M-XYLENE
7	11	15.283	352891	53817	AREA	0.001	100.00	100.00	O-XYLENE
8		16.275	1578	263					
9	13	16.592	177610	29092	AREA	0.003	100.00	100.00	4-BFB
			2761	321					
11		22.350	2247	296					
				331693			800.00	800.00	

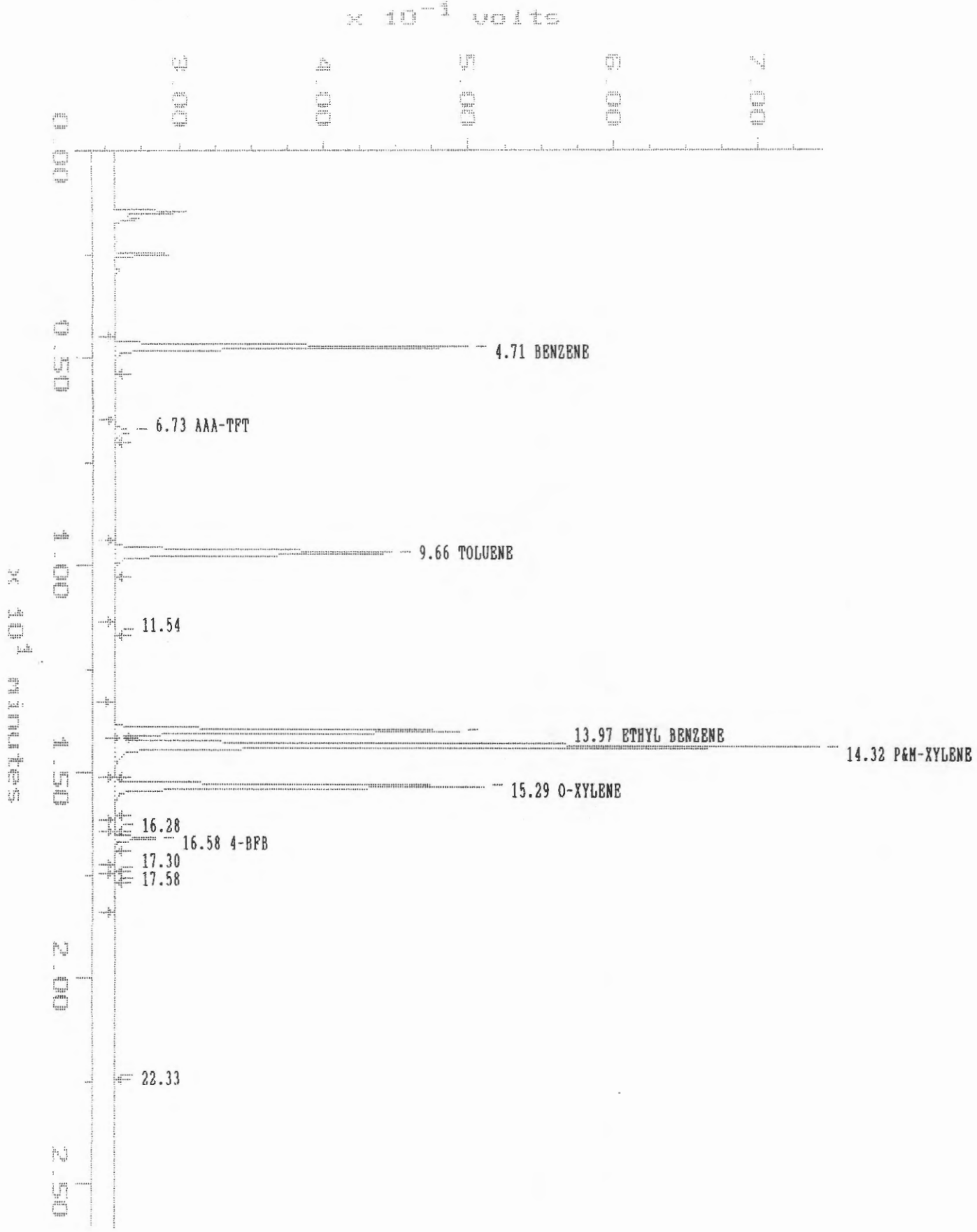
GROUP SUMMARY: THING FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
					AREA				RANGE
								0.00	

Sample: 1119STD4 Channel: THING PID Filename: 1119STD4
Operator: MS
Inj Vol: 5.00



Sample: 1119STD4 Channel: THING FID Filename: 1119STD4
Acquired: [illegible] Method: [illegible]DATA\111991 Operator: MS
Inj Vol: 5.00



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MAXIMA 820 CUSTOM REPORT

14:41:04

SAMPLE: 1119STD4
#5 in Method: BTEX 111991
[illegible]
Rate: 2.0 points/sec
[illegible]: 26.000 minutes
Operator: MS

Type: STND
Instrument: THING
[illegible]: 1119STD4
Index: Disk
Injection Volume: 5.0

DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	AREA	0.010	500.00	500.00	BENZENE
2	4	6.725	11444	1141	AREA	0.044	100.00	100.00	AAA-TFT
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	500.00	500.00	TOLUENE
4	8	13.967	251315	36890	AREA	0.010	500.00	500.00	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	M&M XYLENE
6	12	15.292	257375	39375	AREA	0.010	500.00	500.00	O-XYLENE
7		16.275	1563	249					
8	14	16.583	66338	10388	AREA	0.008	100.00	100.00	4-BFB
TOTAL			1718187	248407			3200.00	3200.00	

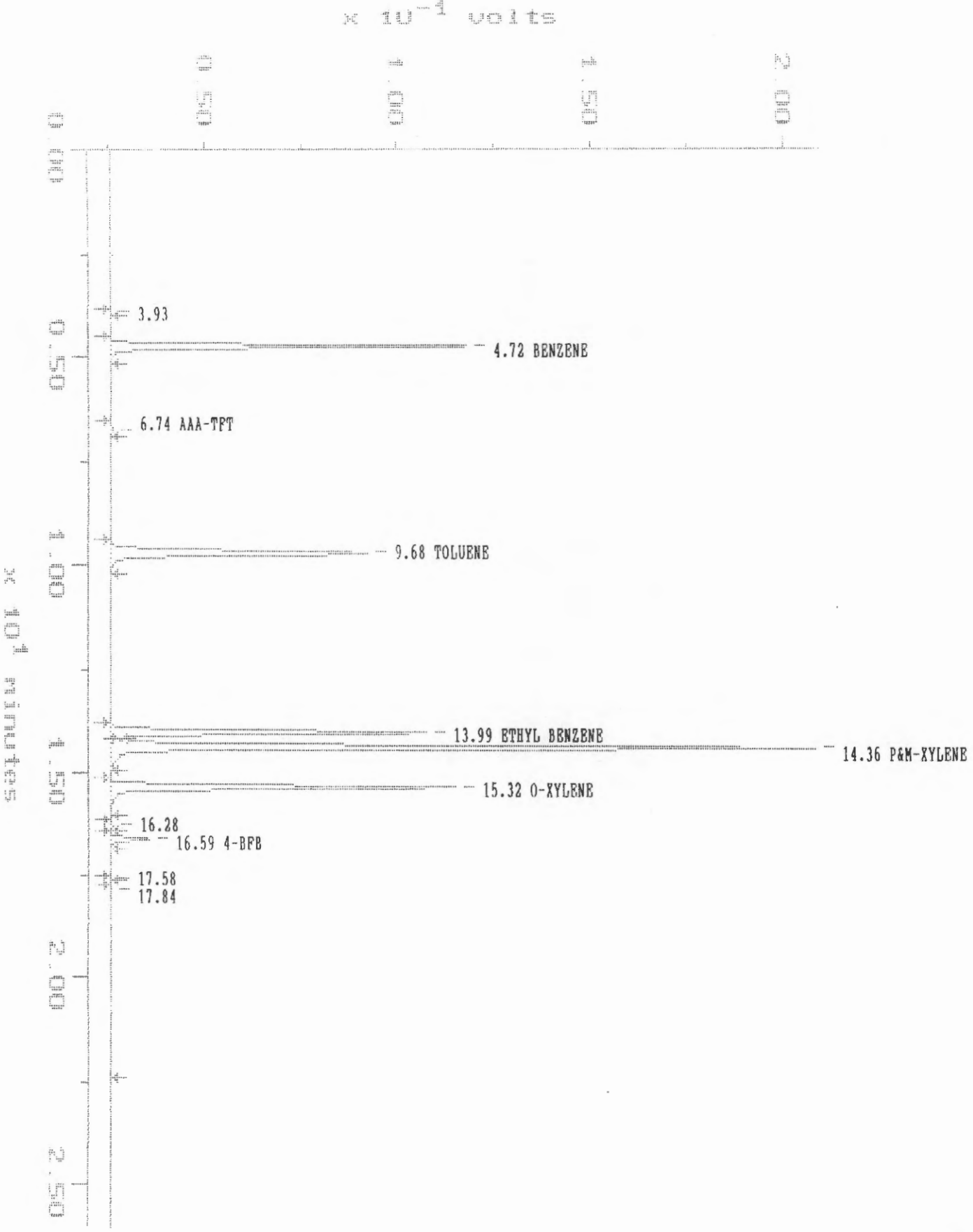
DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	500.00	500.00	BENZENE
2	3	6.725	103246	10443	AREA	0.005	100.00	100.00	AAA-TFT
		[illegible]	[illegible]	[illegible]	AREA	[illegible]	500.00	500.00	TOLUENE
4		11.542	3673	341					
5	7	13.967	1624599	238476	AREA	0.002	500.00	500.00	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.002	1000.00	1000.00	P&M-XYLENE
7	11	15.292	1682804	255034	AREA	0.001	500.00	500.00	O-XYLENE
8		16.275	8416	1333					
9	13	16.583	176758	29155	AREA	0.003	100.00	100.00	4-BFB
10		17.300	701	136					
11		17.575	1757	267					
12		22.333	797	207					
			[illegible]	[illegible]			[illegible]	3200.00	

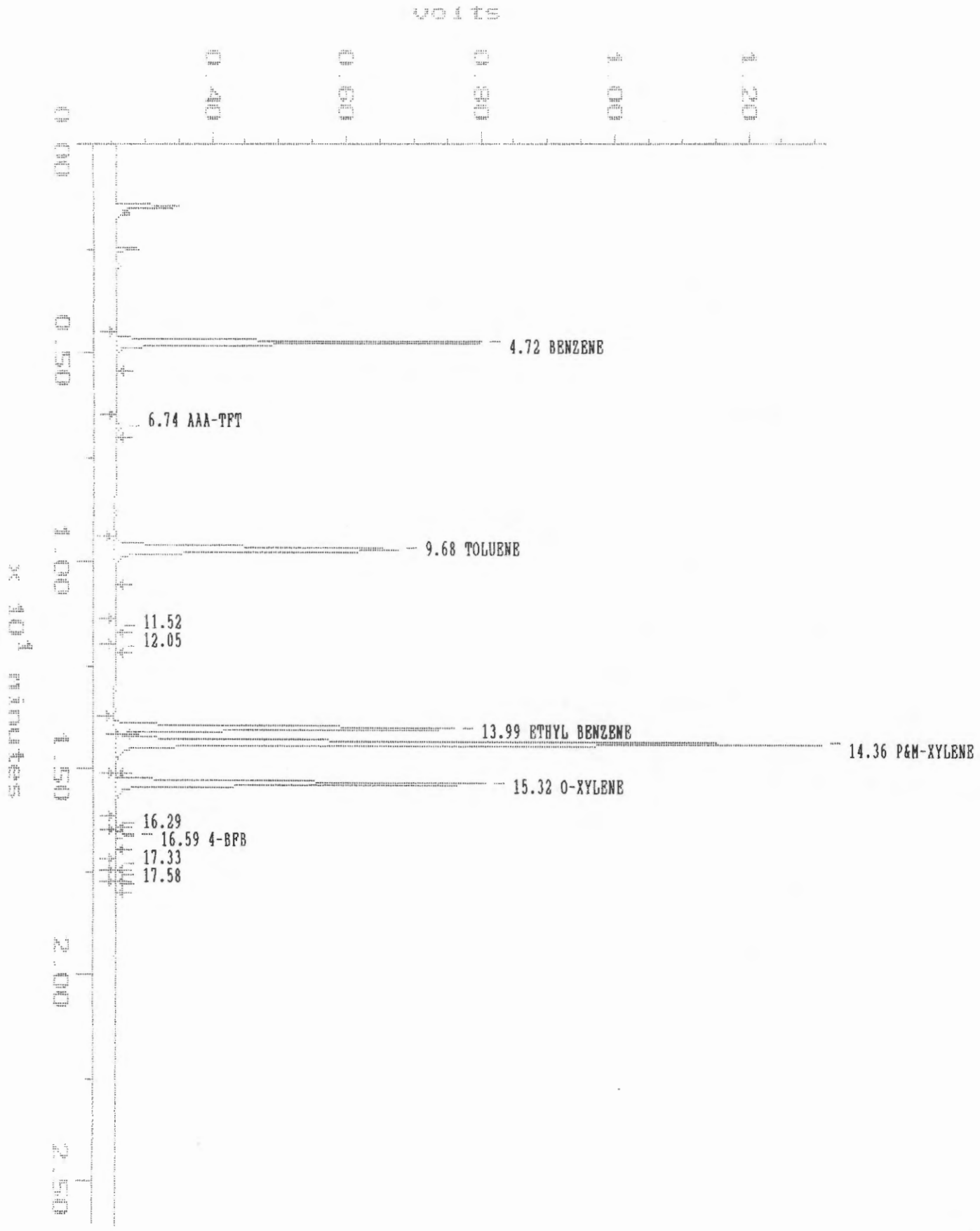
GROUP SUMMARY: THING FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
	15	14.861	10248453	1456977	AREA				GASOLINE RANGE
			[illegible]	[illegible]			0.00	0.00	

Sample: 1119STD5 Channel: THING PID Filename: 1119STD5
Acquired: Method: [illegible]\111991 Operator: MS
Inj Vol: 5.00



Sample: 1119STD5 Channel: THING FID Filename: 1119STD5
Acquired: Method: Operator: MS
Inj Vol: 5.00



MAXIMA 820 CUSTOM REPORT

[illegible] 11:41:50

SAMPLE: 1119STD5
#6 in Method: BTEX 111991
[illegible] 15:14
Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: STND
Instrument: THING
Filename: 1119STD5
Index: Disk
[illegible] Volume: 5.0

DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
1		3.925	728	137					
2	2	4.717	607651	92646	AREA	0.008	1000.00	1000.00	BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AAA-TFT
4	6	9.683	582901	66870	AREA	0.009	1000.00	1000.00	TOLUENE
[illegible]	[illegible]	[illegible]	570348	83909	AREA	0.009	1000.00	1000.00	ETHYL BENZENE
6	10	14.358	1335428	182880	AREA	0.007	2000.00	2000.00	P&M-XYLENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	[illegible]	[illegible]	[illegible]	O-XYLENE
8		16.283	3263	523					
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4-BFB
10		17.583	669	115					
11		17.842	4865	133					
			---	---			---	---	
TOTAL			3769692	525916			[illegible]	6200.00	

DETECTOR: THING FID

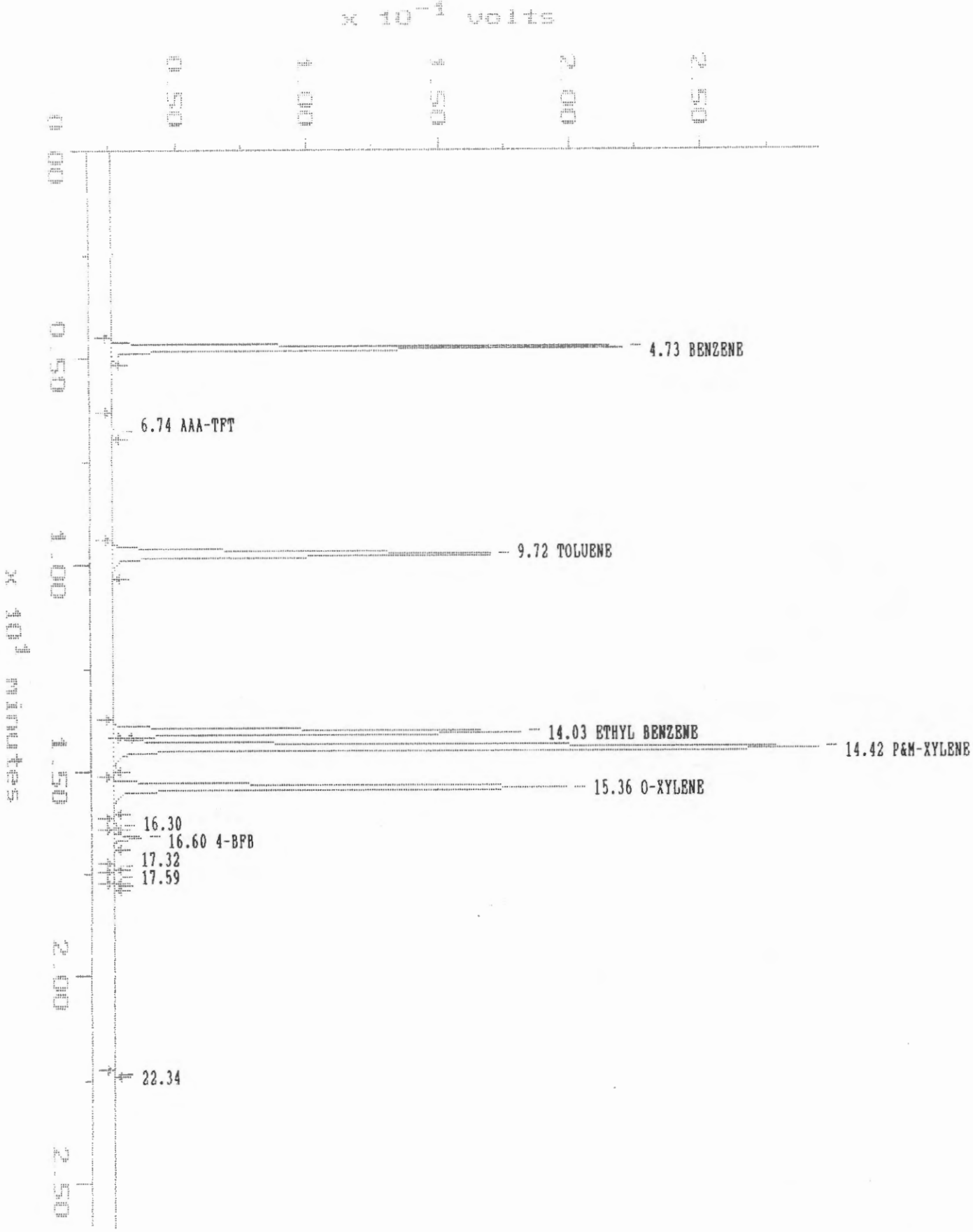
PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	BENZENE
2	3	6.742	82937	8361	AREA	0.006	100.00	100.00	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	[illegible]	[illegible]	[illegible]	TOLUENE
4		11.517	3769	379					
5		12.050	1739	252					
6	7	13.992	3594080	507263	AREA	0.001	1000.00	1000.00	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	[illegible]	2000.00	2000.00	P&M-XYLENE
8	11	15.317	3725145	554115	AREA	0.001	1000.00	1000.00	O-XYLENE
[illegible]		[illegible]	18126	2899					
10	13	16.592	175859	28572	AREA	0.003	100.00	100.00	4-BFB
[illegible]		[illegible]	1849	318					
12		17.583	3717	534					
[illegible]		[illegible]	3285	391					

			[illegible]	[illegible]				[illegible]	
[illegible]			[illegible]	[illegible]				[illegible].00	

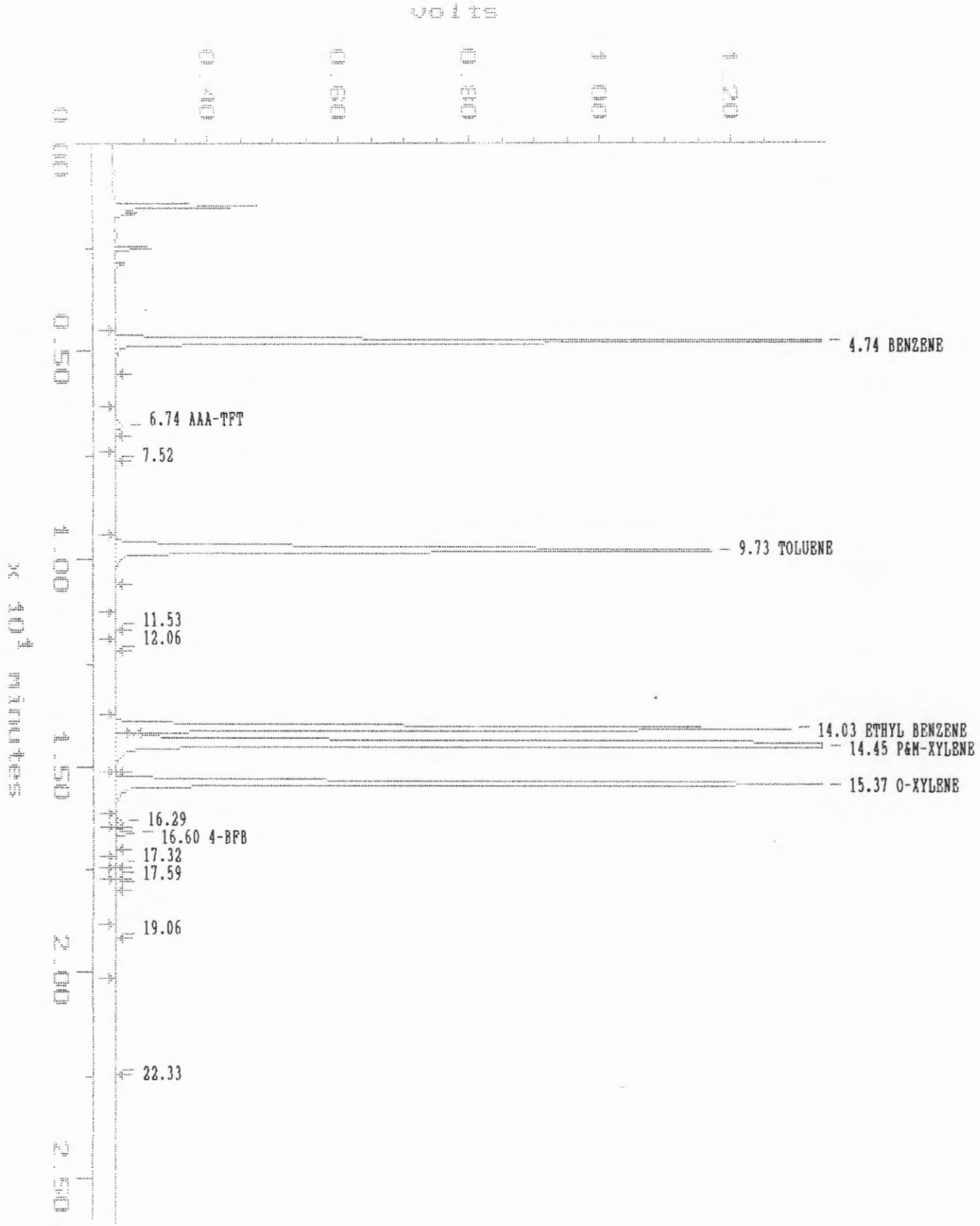
GROUP SUMMARY: THING FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
		[illegible]	[illegible]	[illegible]	AREA				[illegible] RANGE
			[illegible]	[illegible]			0.00	0.00	

Sample: 1119STD6 Channel: THING PID Filename: 1119STD6
Acquired: [illegible] 15:51 Method: [illegible] Operator: MS
Inj Vol: 5.00



Sample: 1119STD6 Channel: THING FID Filename: 1119STD6
Acquired: [illegible] NOV 91 [illegible] Method: [illegible]\111991 Operator: MS
Inj Vol: 5.00



[illegible], Division of Millipore

MAXIMA 820 CUSTOM REPORT

[illegible] 14:42:37

SAMPLE: 1119STD6
#7 in Method: BTEX 111991
[illegible]
Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: STND
Instrument: THING
[illegible]: 1119STD6
Index: Disk
Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	[illegible]	0.007	2000.00	2000.00	BENZENE
2	4	6.742	13925	1311	AREA	0.036	100.00	100.00	AAA-TFT
		[illegible]	[illegible]	[illegible]	[illegible]	0.008	2000.00	2000.00	TOLUENE
4	8	14.025	1229948	155222	AREA	0.008	2000.00	2000.00	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M XYLENE
6	12	15.358	1253621	172144	AREA	0.008	2000.00	2000.00	O-XYLENE
7		16.300	7057	1090					
8	14	16.600	65831	10242	AREA	0.008	100.00	100.00	4-BFB
9		17.317	812	149					
10		17.592	1727	259					
11		17.817	1420	222					
12		22.342	958	138					
			---	---			---	---	
[illegible]			[illegible]	[illegible]			12200.00	12200.00	

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	BENZENE
2	3	6.742	123065	11970	AREA	0.004	100.00	100.00	AAA-TFT
3		7.517	1429	178					
4	5	9.725	8300553	912902	AREA	0.001	2000.00	2000.00	TOLUENE
5		11.533	4312	396					
6		12.058	4396	556					
7	7	14.025	7949318	1035547	AREA	0.001	2000.00	2000.00	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M XYLENE
9	11	15.367	8092308	1080748	AREA	0.001	2000.00	2000.00	O-XYLENE
10		[illegible]	41156	6447					
11	13	16.600	176503	29023	AREA	0.003	100.00	100.00	4-BFB
12		17.317	4156	695					

13	17.592	8383	1193		
14	17.817	6100	793		
15	19.058	1894	219		
[illegible]	22.333	2164	254		
		[illegible]	5242601	12200.00	12200.00

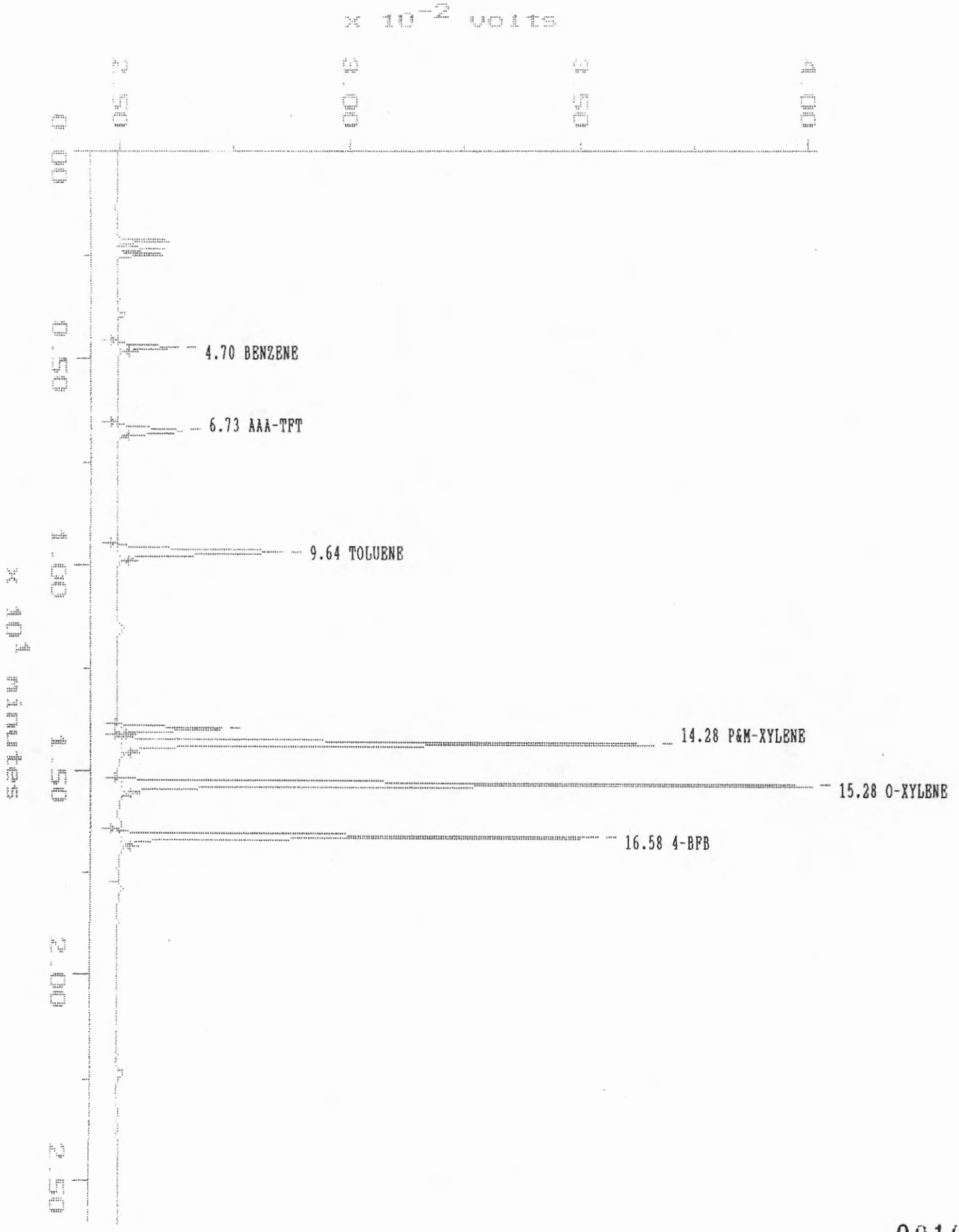
GROUP SUMMARY: THING FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]				[illegible] RANGE
[illegible]			[illegible]	5242601			0.00	0.00	

Sample: 1119ERAQC
Acquired:
Inj Vol: 5.00

Channel: THING PID
Method: [illegible]

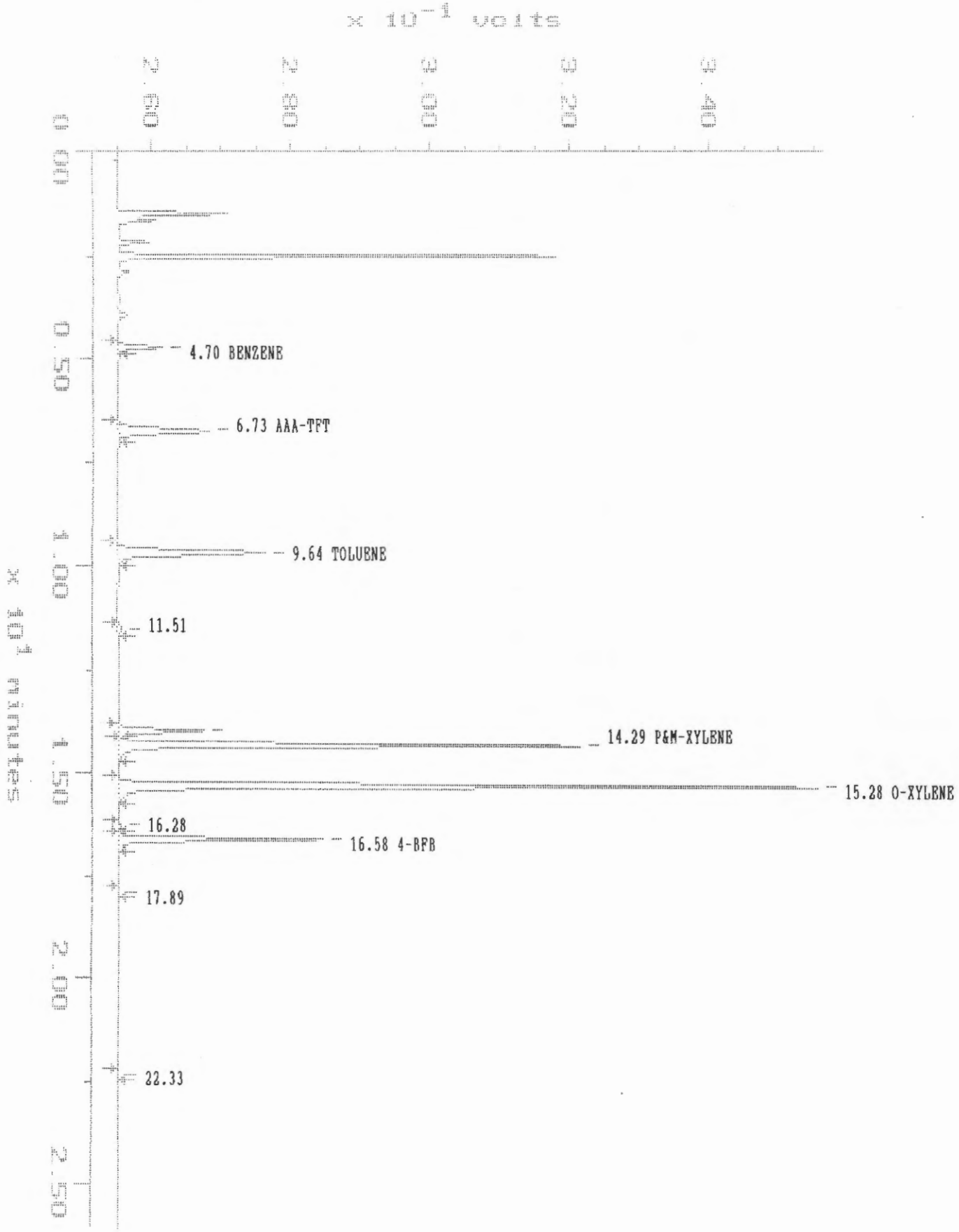
Filename: 1119ERAC
Operator: MS



Sample: 1119ERAQC
Acquired:
Inj Vol: 5.00

Channel: THING FID
Method: [illegible]\DATA1\111991

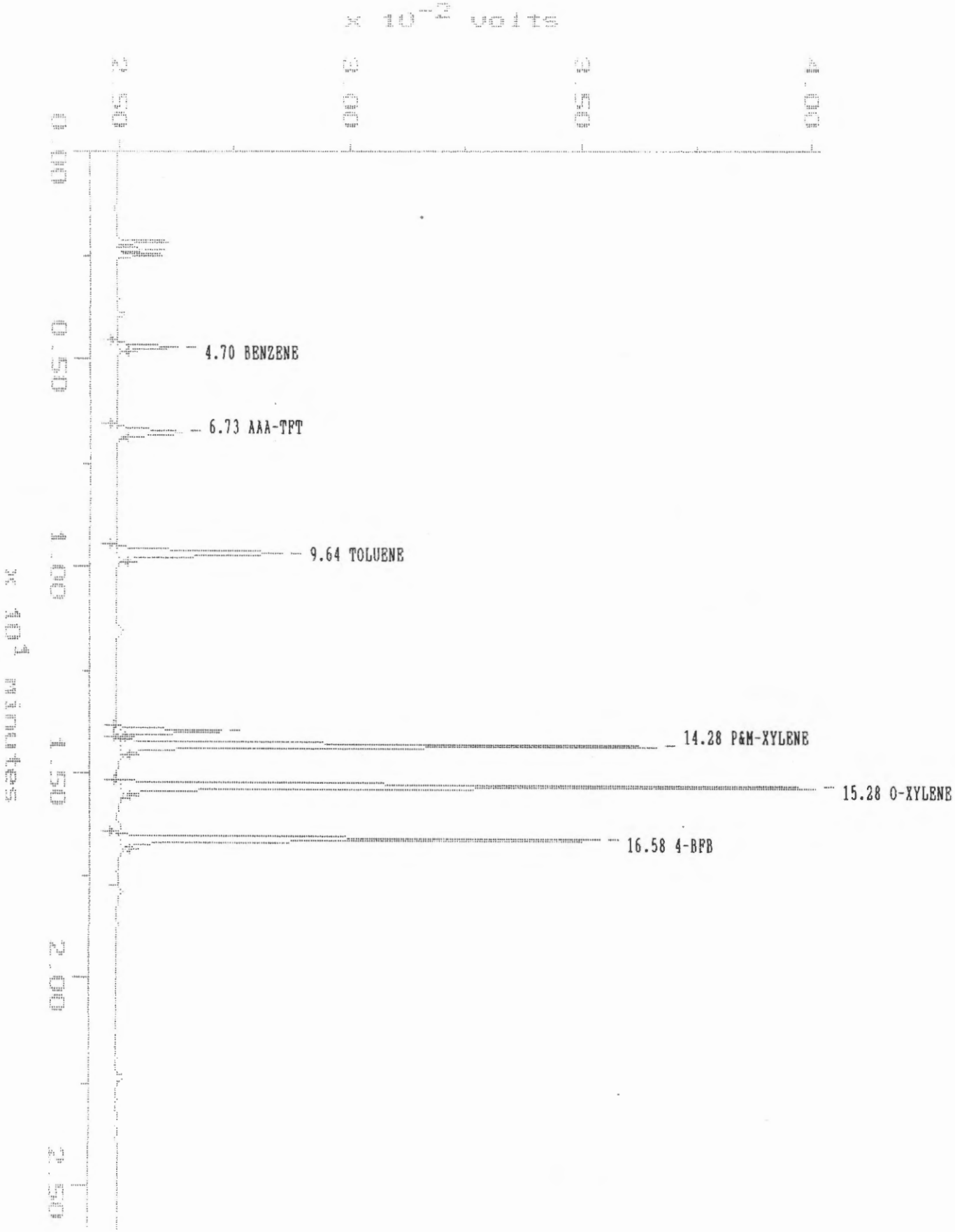
Filename: 1119ERAC
Operator: MS



Sample: 1119ERAQC
Injected:
Inj Vol: 5.00

Channel: THING PID
Method:

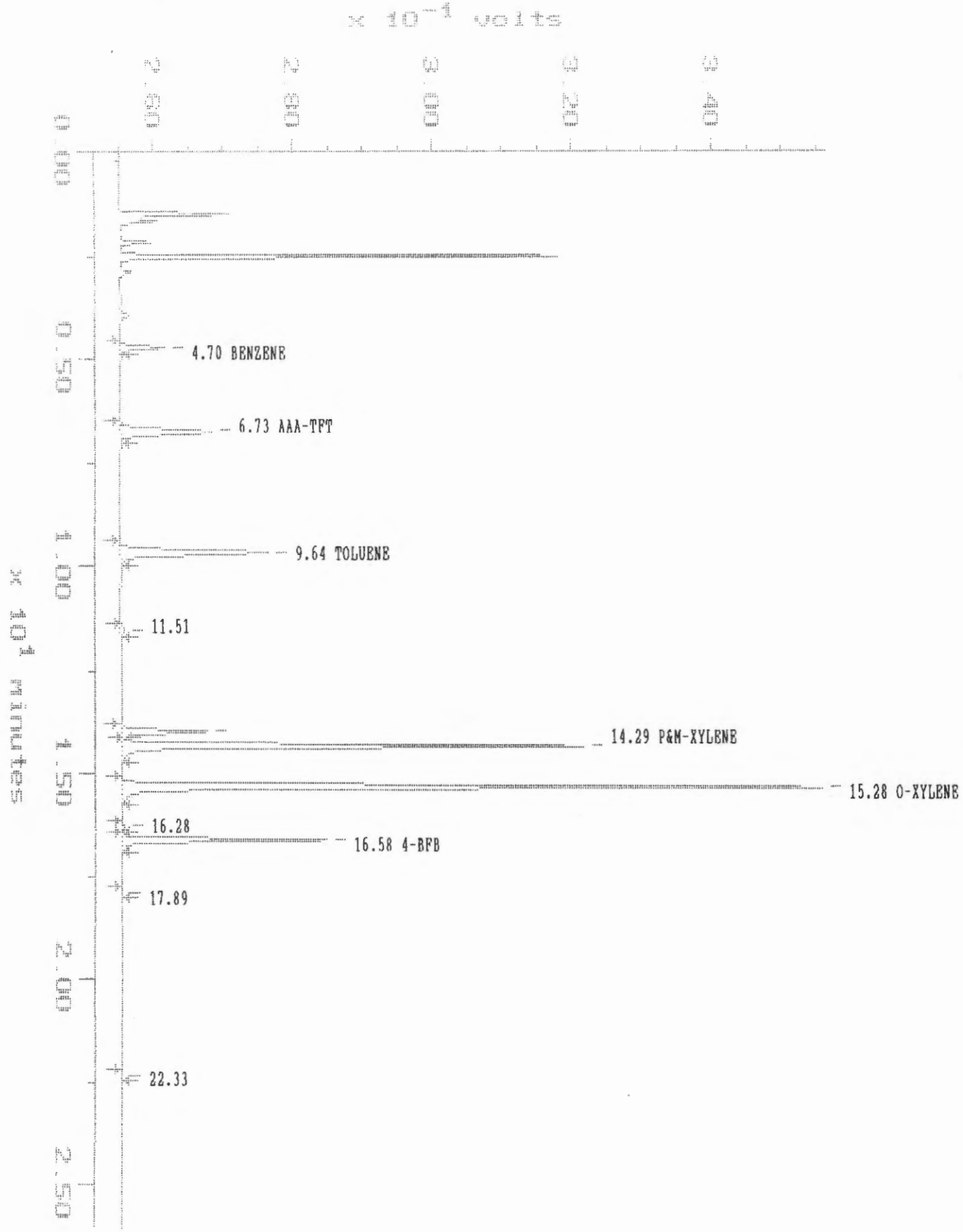
Filename: 1119ERAC
Operator: MS



Sample: 1119ERAQC
Inj Vol: 5.00

Channel: THING FID

Filename: 1119ERAC
Operator: MS



Millipore

MAXIMA 820 CUSTOM REPORT

[illegible]:45:58

SAMPLE: 1119ERAQC
#12 in Method: BTEX 111991
[illegible] NOV 1991 19:13
Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: UNKN
Instrument: THING
Filename: 1119ERAC
Index: Disk
[illegible] Time: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	BENZENE
2	4	6.725	12865	1337	AREA	0.049	125.01	125.01	AAA-TFT
[illegible]	[illegible]	9.642	32732	3570	AREA	0.008	51.46	51.46	TOLUENE
4	8	13.950	14464	2186	AREA	0.008	24.01	24.01	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
6	12	15.275	99191	14956	AREA	0.008	161.23	161.23	O-XYLENE
			[illegible]		[illegible]	[illegible]	99.99	99.99	4-BFB
			---	---			---	---	
TOTAL			313729	45215			600.57	600.57	

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	BENZENE
2	3	6.725	128748	13046	AREA	0.005	140.64!	140.64!	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.001	45.87	45.87	TOLUENE
4		11.508	3903	377					
5	7	13.950	82976	12431	AREA	0.001	21.40	21.40	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
7	11	15.275	654063	100334	AREA	0.001	165.16	165.16	O-XYLENE
8		16.275	3360	530					
9	13	16.583	177820	29325	AREA	0.003	100.78!	100.78!	4-BFB
[illegible]		17.892	1470	187					
11		22.333	1594	204					
			---	---			---	---	
[illegible]			[illegible]	250319			651.47!	651.47!	

! Result calculation based on peak response ratio outside of calibration range.

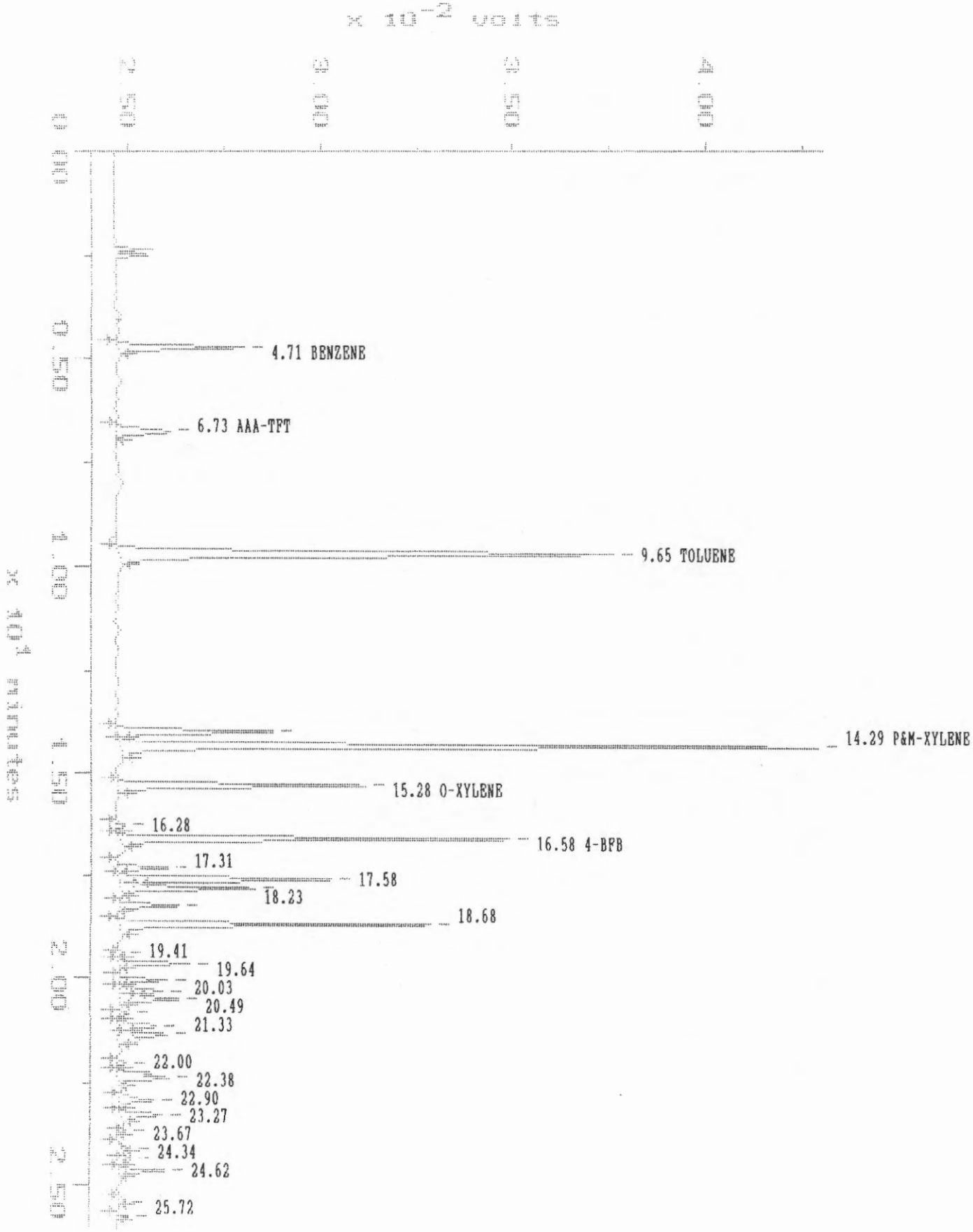
GROUP SUMMARY: THING PID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc (ppb)	Original Conc (ppm-soil)	Group Name
					AREA				[illegible] NE RANGE
[illegible]			[illegible]84	250119			0.00	0.00	

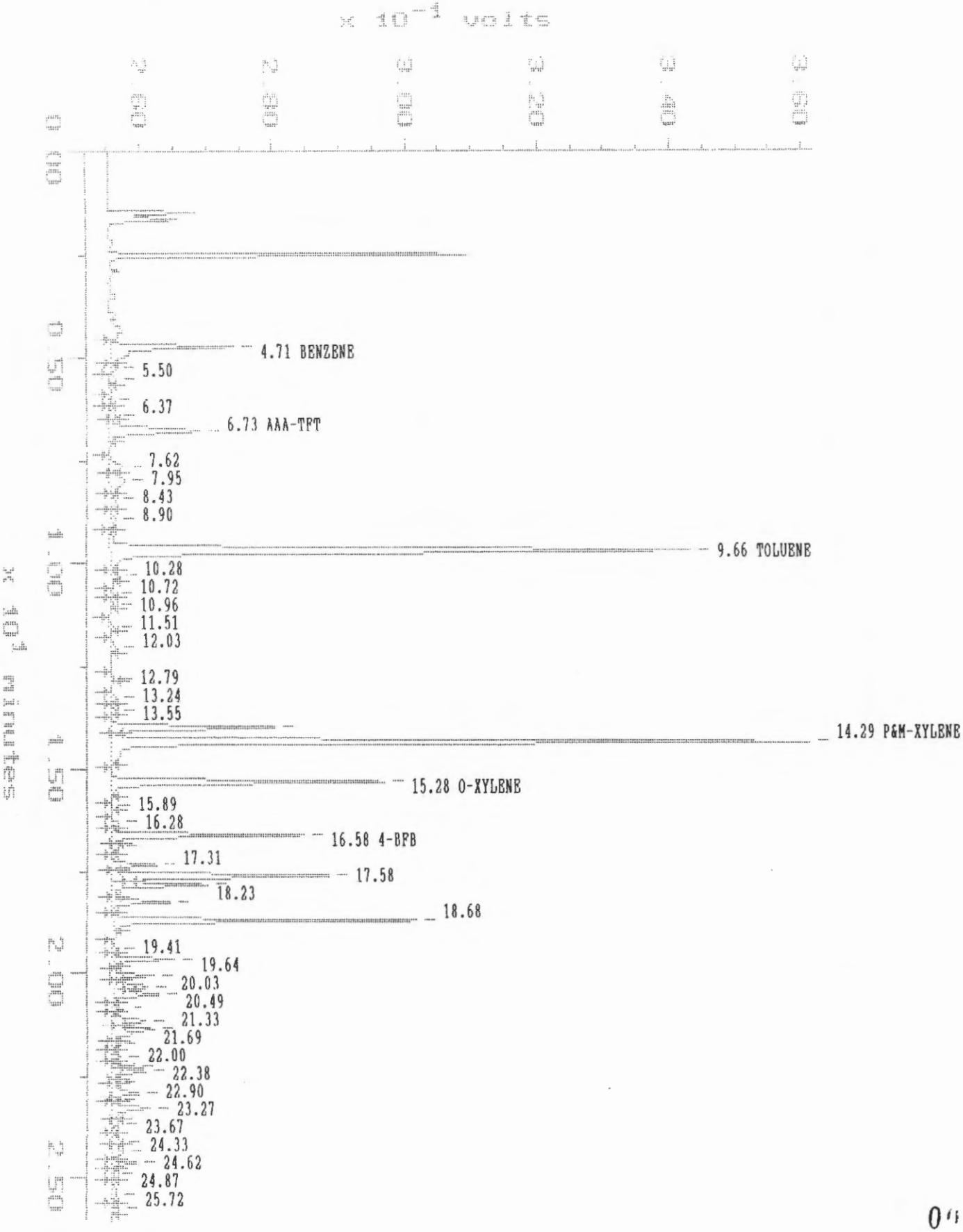
Sample: 1119GST1
Acquired:
Inj Vol: 5.00

Channel: THING PID
Method:

Filename: 1119GST1
Operator: MS



Sample: 1119GST1 Channel: THING FID Filename: 1119GST1
Acquired: [illegible] Method: C:\MAX\DATA1\111991 Operator: MS
Inj Vol: 5.00



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MAXIMA 820 CUSTOM REPORT

11:46:47

SAMPLE: 1119GST1
#13 in Method: BTEX 111991

Rate: 2.0 points/sec
Operator: MS

Type: UNKN
Instrument: THING
1119GST1
Index: Disk
Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
							36.84	36.84	BENZENE
2	4	6.725	14179	1401	AREA	0.049	137.78!	137.78!	AAA-TFT
							182.52	182.52	TOLUENE
4	8	13.950	28673	4062	AREA	0.008	47.60	47.60	ETHYL BENZENE
5	10	14.292	[illegible]	[illegible]	AREA	0.008	[illegible]	[illegible]	P&M XYLENE
6	12	15.275	43916	6431	AREA	0.008	71.38	71.38	O-XYLENE
7		16.275	1449	237					
8	14	16.583	63502	10141	AREA	0.008	95.97	95.97	4-BFB
9		17.408	7737	1281					
10		17.575	40513	5495					
11		17.808	23527	3494					
12		18.233	9624	1546					
13		18.675	51421	8112					
14		19.408	321	79					
15		19.642	10883	1828					
16		20.033	6847	1213					
17		20.300	7795	1081					
18		20.492	12108	1534					
19		20.842	1377	266					
20		21.133	8069	988					
21		21.333	10634	1256					
22		22.000	1403	254					
23		22.375	12978	1309					
24		22.900	7195	872					
25		23.267	8037	1096					
26		23.667	592	115					
27		24.100	1395	218					
28		24.342	1996	205					
29		24.617	6946	1199					
30		25.350	842	112					
31		25.717	1618	291					
			448896	90331			763.11!	763.11!	

! Result calculation based on peak response ratio outside of calibration range.

DETECTOR: [illegible] PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67.21	BENZENE
2		5.217	16719	986					
3		5.500	9412	1031					
4		5.983	2834	381					
5		6.367	12088	1113					
6	3	6.733	142746	13698	AREA	0.005	155.93!!	155.93!!	AAA-TPT
7		[illegible]	21732	1743					
8		7.950	38796	2185					
9		8.425	8669	689					
10		8.900	10573	716					
11	5	9.658	779932	87539	AREA	0.001	192.61	192.61	TOLUENE
12		[illegible]	7040	808					
13		10.717	1744	285					
14		10.958	4024	501					
15		11.508	3130	328					
16		12.025	5910	622					
17		12.792	1712	182					
18		13.242	5837	806					
19		13.550	5111	759					
20	7	13.950	167338	24611	AREA	0.001	43.16	43.16	ETHYL BENZENE
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
22	11	15.275	272656	41425	AREA	0.001	68.85	68.85	O-XYLENE
23		15.892	762	148					
24		16.275	7565	1239					
[illegible]	[illegible]	[illegible]	[illegible]	39041	AREA	[illegible]	99.76	99.76	4-BFB
26		16.883	11616	1231					
27		17.308	43190	6770					
28		17.583	232818	32681					
29		17.808	100139	14426					
30		18.233	56254	8928					
[illegible]		[illegible]	[illegible]	45661					
32		19.408	5160	627					
33		19.642	52833	9336					
34		20.033	31282	5757					
35		20.300	36159	5096					
36		20.492	55489	6938					
37		20.842	7500	1391					
38		21.133	40947	4895					
[illegible]		[illegible]	57809	6450					
40		21.692	3769	534					
[illegible]		[illegible]	7569	1281					

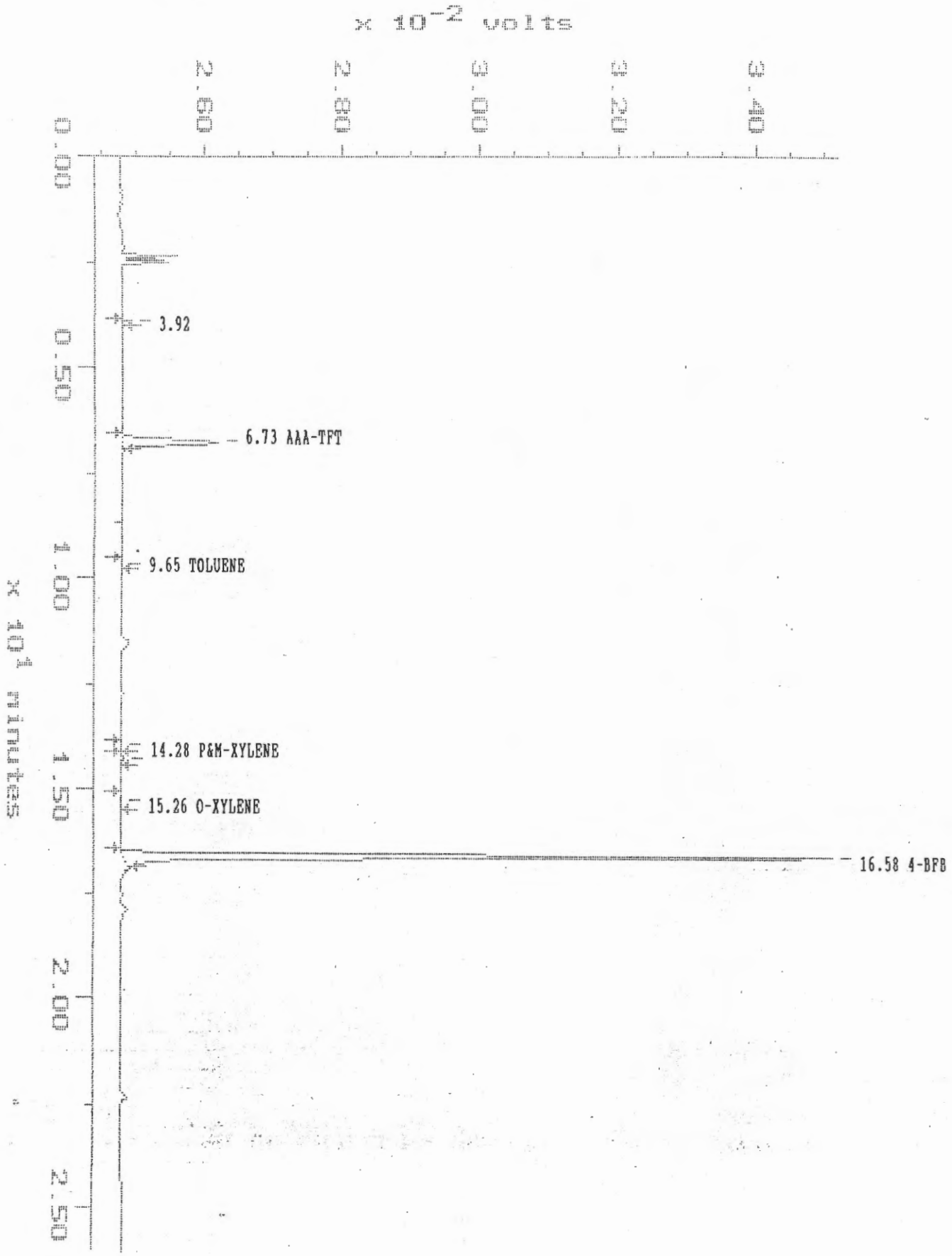
42	22.258	18420	3397		
43	22.375	32191	5025		
44	22.642	4767	743		
45	22.900	47096	4145		
46	23.067	1476	409		
47	23.267	52623	5647		
48	23.667	10393	1233		
[illegible]	[illegible]	12850	1580		
50	24.333	23794	1688		
51	24.617	23692	3835		
52	24.867	4857	528		
53	25.358	11259	833		
54	25.717	6105	1099		
		---	---	---	---
[illegible]		[illegible]	[illegible]	850.47!!	850.47!!

!! Result calculation based on peak response more than 10% outside of calibration range.

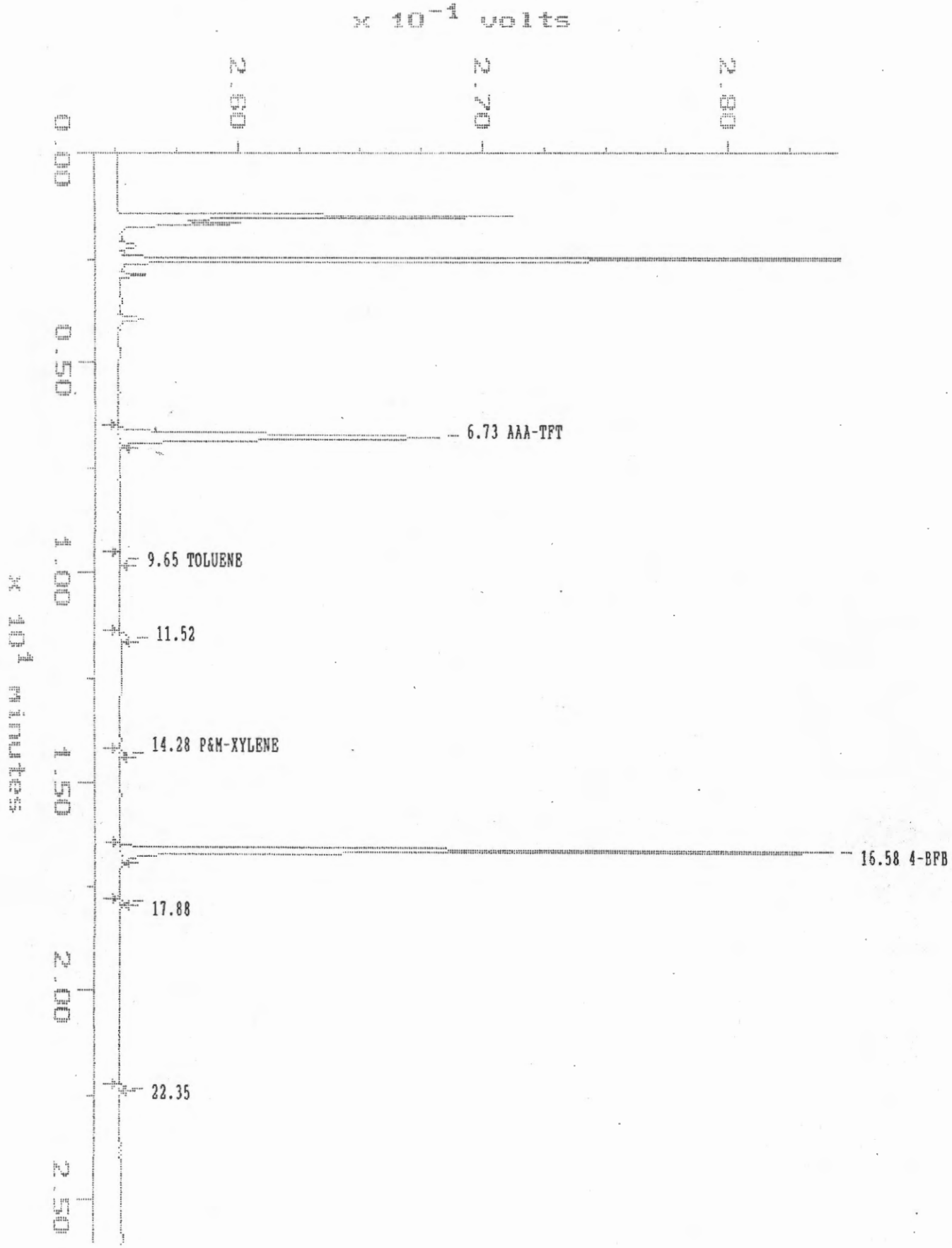
GROUP SUMMARY: [illegible] FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
		[illegible]	[illegible]	[illegible]	[illegible]				[illegible] RANGE
			---	---			---	---	
			[illegible]	[illegible]			0.00	0.00	

Sample: 1119W6 Channel: THING PID Filename: 1119W6
Acquired: 19-NOV-91 21:39 Method: C:\MAZ\DATA1\111991 Operator: MS
Inj Vol: 5.00



Sample: 1119W6 Channel: THING FID Filename: 1119W6
Acquired: [illegible] Method: C:\MAX\DATA1\111991 Operator: MS
Inj Vol: 5.00



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MAXIMA 820 CUSTOM REPORT

Printed: 20 NOV-1991 11:08:16

SAMPLE: 1119W6
#16 in Method: BTEX 111991
[illegible]
Rate: 2.0 points/sec
Duration: 25.000 minutes
Operator: MS

Type: UNKN
Instrument: THING
Filename: 1119W6
Index: Disk
Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
1		3.917	645	122					
2	4	6.725	14161	1389	AREA	0.049	137.61!	137.61!	AAA-TFT
3	6	9.650	99	13	AREA	0.008	0.15	0.15	TOLUENE
4	8	13.958	78	13	AREA	0.008	0.13	0.13	ETHYL BENZENE
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.50	P&M-XYLENE } 0.79
6	12	15.258	176	18	AREA	0.008	0.29	0.29	O-XYLENE
7	14	16.575	65969	10278	AREA	0.008	99.70	99.70	4-BFB
TOTAL			81444	11878			238.38!	238.38!	

! Result calculation based on peak response ratio outside of calibration range.

DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
1	3	6.725	130817	14071	AREA	0.005	142.90!	142.90!	AAA-TFT
2	5	9.650	521	61	AREA	0.001	0.13	0.13	TOLUENE
3		11.517	3218	311					
4	9	14.283	1035	180	AREA	0.002	0.32	0.32	P&M-XYLENE
[illegible]		[illegible]	[illegible]	[illegible]	AREA	[illegible]	[illegible]	100.21	4-BFB
6		17.875	899	143					
7		22.350	1053	150					
TOTAL			314361	42961			243.56!	243.56!	

! Result calculation based on peak response ratio outside of calibration range.

GROUP SUMMARY: THING FID

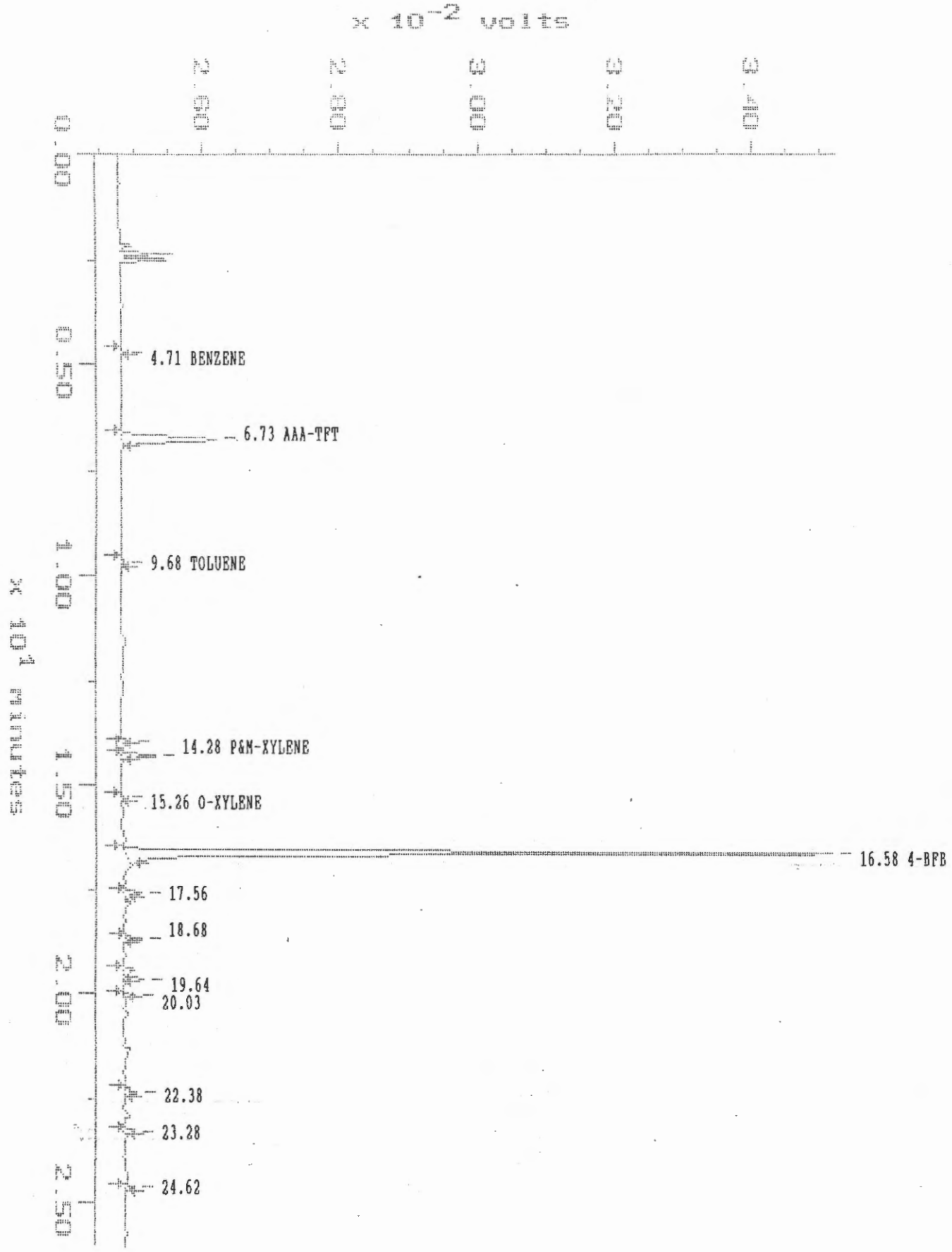
PK#	ID#	Group Center	Peak Area	Peak Height	Base	Response Factor	Solution Conc	Original Conc	Group Name

		(minutes)					(ppb)	(ppm-soil)	
	15	[illegible]	[illegible]	[illegible]	AREA				GASOLINE RANGE
[illegible]			[illegible]	[illegible]			0.00	0.00	

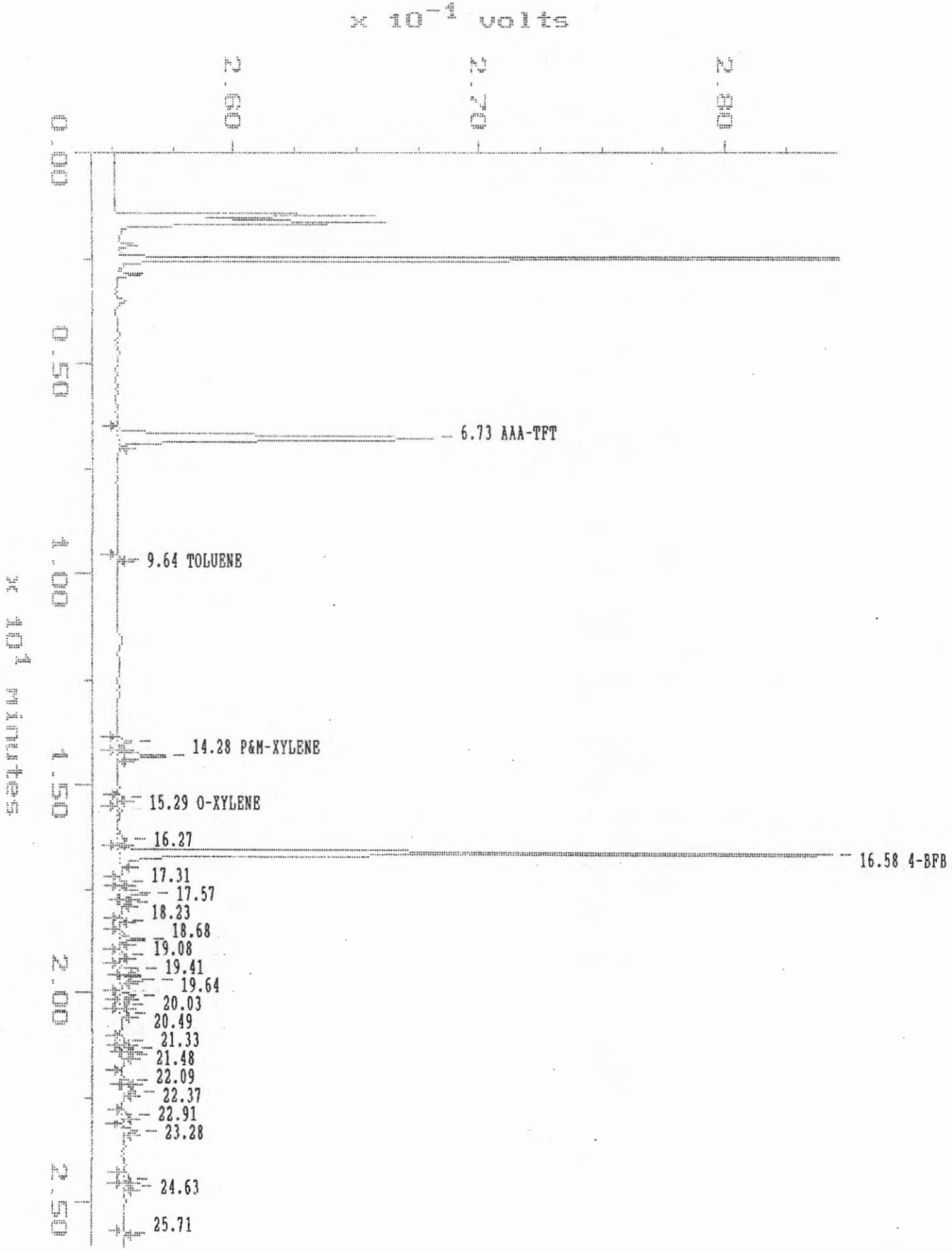
Sample: 6703-1
Acquired: [illegible]
Inj Vol: 5.00

Channel: THING PID
Method: C:\MAX\DATA1\111991

Filename: 6703-1
Operator: MS



Sample: 6703-1 Channel: THING FID Filename: 6703-1
Acquired: [illegible] Method: C:\MAX\DATA1\111991 Operator: MS
Inj Vol: 5.00



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MAXIMA 820 CUSTOM REPORT

Printed: 20-NOV-1991 11:03:04

SAMPLE: 6703-1

#17 in Method: BTEX 111991
Acquired: 19-NOV-1991 22:15
Rate: 2.0 points/sec
Duration: 20.000 minutes
Operator: MS

Type: UNKN
Instrument: THING
Filename: 6703-1
Index: Disk
Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
1	2	4.708	190	31	AREA	0.008	0.29	0.29	BENZENE
2	4	6.725	13882	1374	AREA	0.049	134.89	134.89	AAA-TFT
3	6	9.633	251	38	AREA	0.008	0.40	0.40	TOLUENE
4	8	13.950	621	113	AREA	0.008	1.03	1.03	ETHYL BENZENE
								4.77	P&M-XYLENE } 5.06
6	12	15.258	176	28	AREA	0.008	0.29	0.29	O-XYLENE
7	14	16.583	65700	10295	AREA	0.008	99.30	99.30	4-BFB
8		17.558	1563	248					
9		18.675	1400	250					
10		19.642	2880	294					
11		20.033	801	149					
12		22.375	1311	164					
13		23.275	951	154					
14		24.617	678	133					
TOTAL			90841	13192			240.97	240.97	

MS

DETECTOR: THING FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
1	1	4.725	125200	2086	AREA	0.009	139.041	139.041	AAA-TFT
2	5	9.642	856	126	AREA	0.001	0.21	0.21	TOLUENE
3	7	13.950	3723	538	AREA	0.001	0.96	0.96	ETHYL BENZENE
4	9	14.283	12719	1949	AREA	0.002	3.96	3.96	P&M-XYLENE
5	11	15.621	286	138	AREA	0.001	0.20	0.20	O-XYLENE
6		16.267	4284	323					
7	13	16.583	178581	29079	AREA	0.003	101.21!	101.21!	4-BFB
8		17.308	1118	182					
9		17.567	9233	1168					
10		17.800	1782	304					

11	18.225	723	148
12	18.675	7522	1074
13	19.083	1247	149
14	19.408	6191	756
15	19.642	7726	1332
16	20.025	3605	644
17	20.267	1114	170
18	20.492	1482	255
19	21.133	1205	163
20	21.333	2394	441
21	21.475	2024	300
22	22.092	2442	274
23	22.367	4827	511
24	22.908	1953	299
25	23.275	4495	662
26	24.425	1802	194
27	24.625	2116	390 – Nap
28	25.708	541	126

245.58! 245.58!

~~=310320~~ -306402 ~~8918378~~ × 7.17×10⁻⁴ = 62.6 ppb

! Result calculation based on peak response ratio outside of calibration range.

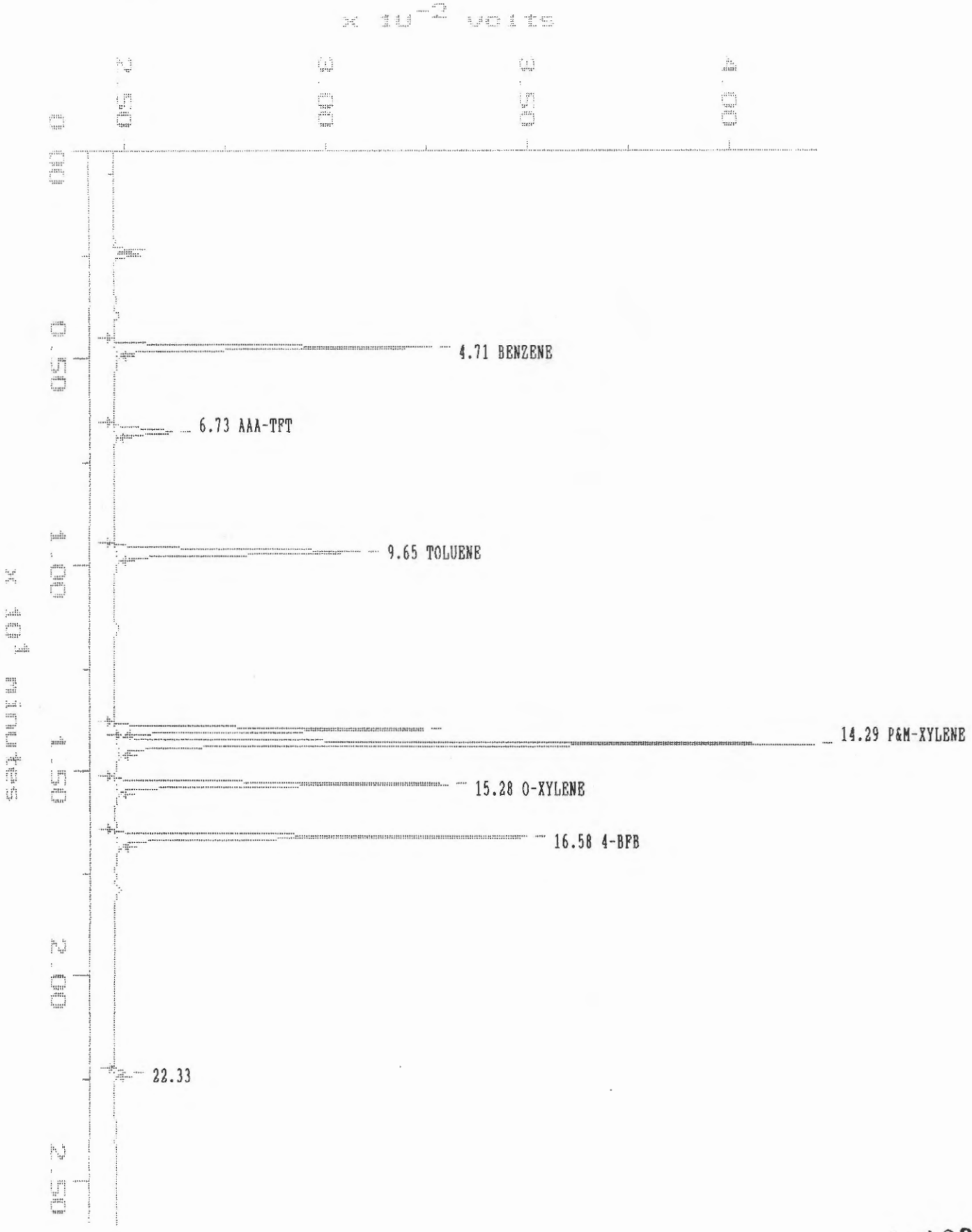
GROUP SUMMARY: THING FID ~~83454 × 7.93×10⁻⁴ = 66 ppb~~ ~~JB~~

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
		[illegible]	[illegible]	54504	AREA				GASOLINE RANGE
TOTAL			394233	54504			0.00	0.00	

Sample: LCMS
Acquired:
Inj Vol: 5.00

Channel: THING PID
Method: [illegible]

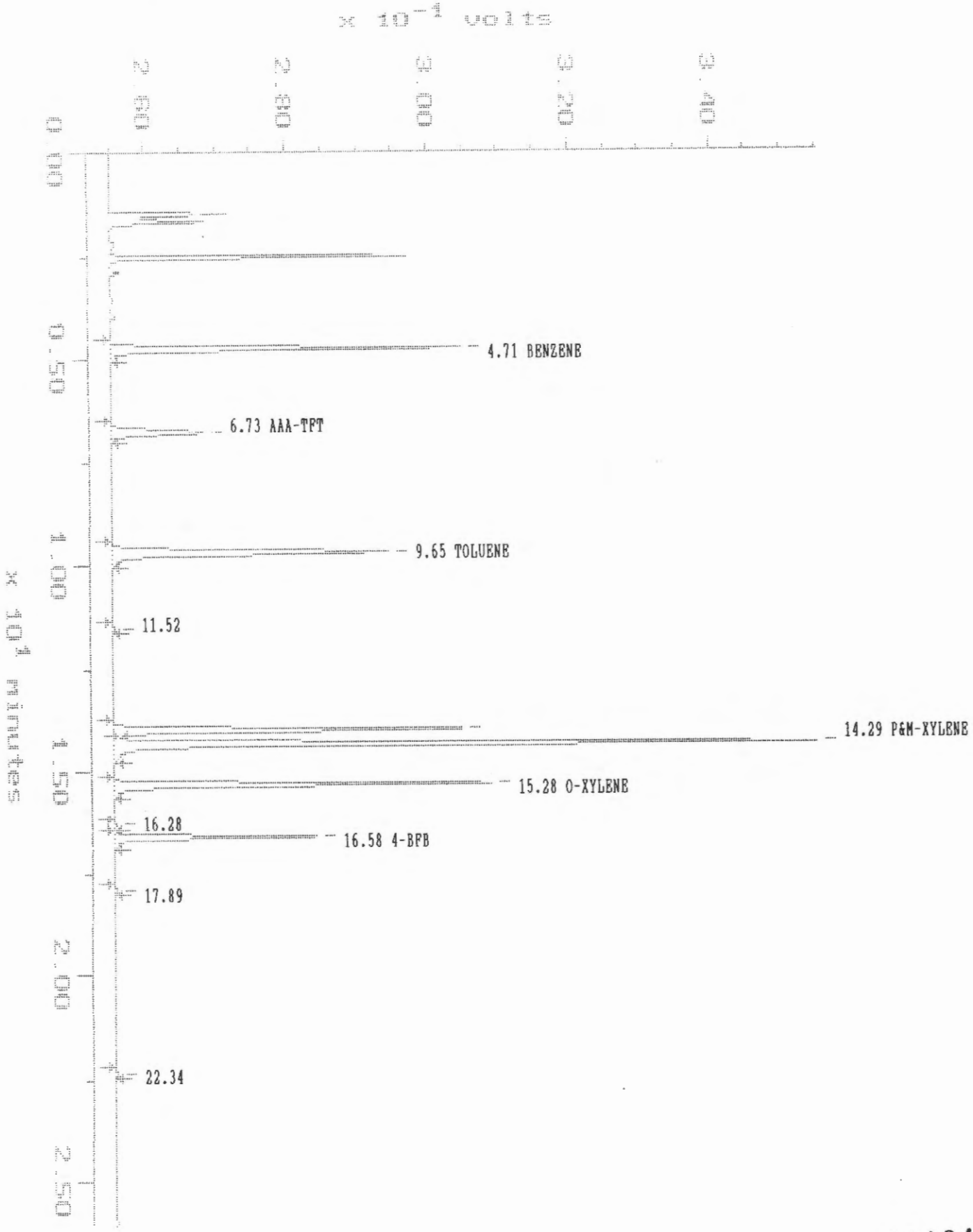
Filename: LCMS
Operator: MS



Sample: LCMS
Acquired: [illegible]
Inj Vol: 5.00

Channel: THING FID
Method: [illegible]

Filename: LCMS
Operator: MS



Millipore

MAXIMA 820 CUSTOM REPORT

[illegible] 14:47:43

SAMPLE: LCMS

#20 in Method: BTEX 111991

Rate: 2.0 points/sec

[illegible] minutes

Operator: MS

Type: UNKN

Instrument: THING

[illegible]: LCMS

Index: Disk

Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.008	84.94	84.94	BENZENE
2	4	6.733	14125	1401	AREA	0.049	137.26!	137.26!	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	88.11	88.11	TOLUENE
4	8	13.958	54556	7659	AREA	0.008	90.57	90.57	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
6	12	15.275	56125	8220	AREA	0.008	91.23	91.23	O-XYLENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	58.57	58.57	4-BFB
8		22.333	1741	227					
[illegible]			[illegible]	[illegible]			778.82!	778.82!	

! Result calculation based on peak response ratio outside of calibration range.

DETECTOR: THING PID

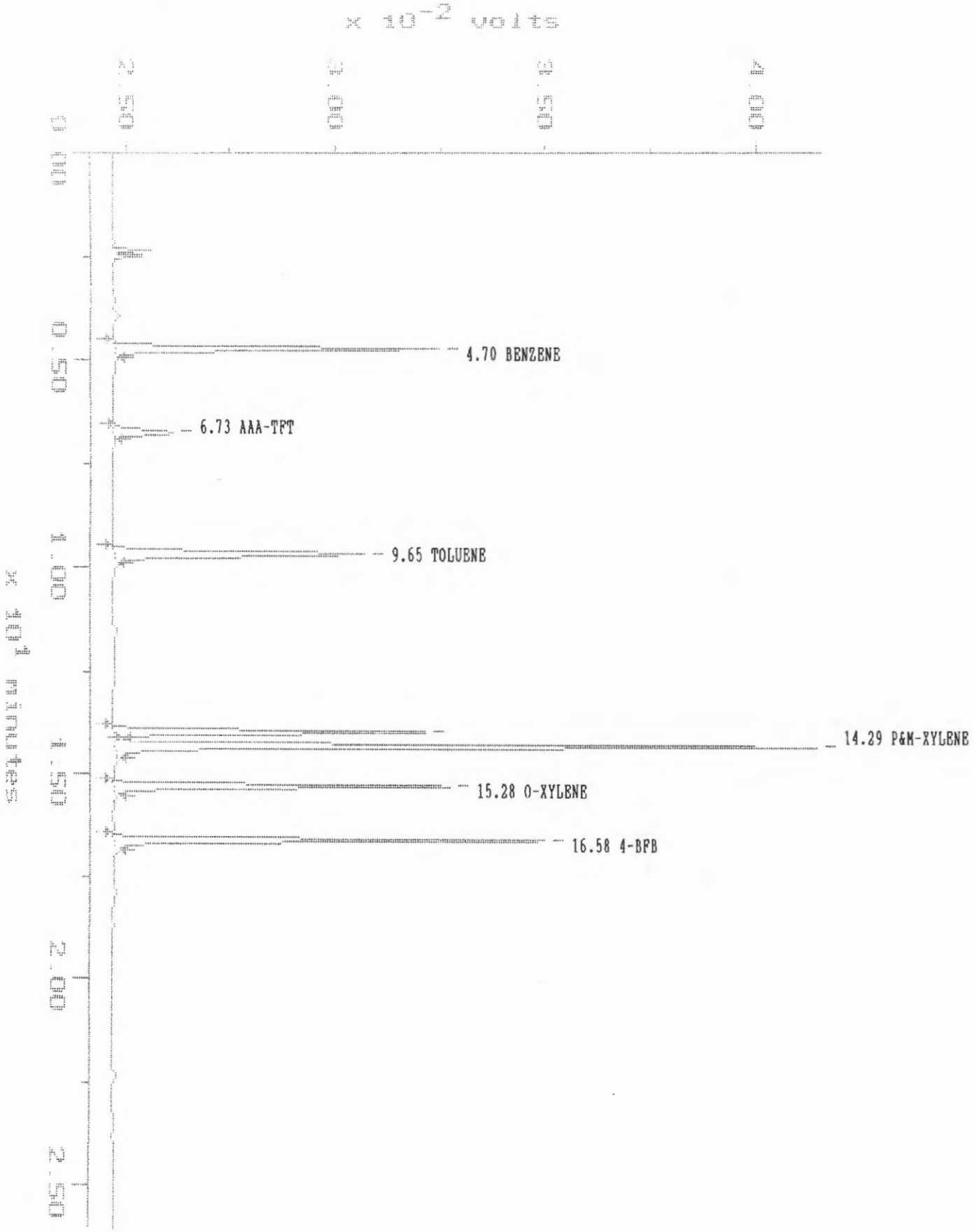
PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.002	112.42	112.42	BENZENE
2	3	6.733	131067	13272	AREA	0.005	143.17!	143.17!	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	85.02	85.02	TOLUENE
4		11.517	3193	327					
5	7	13.958	333517	49520	AREA	0.001	86.02	86.02	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	59430	AREA	0.002	209.34	209.34	P&M-XYLENE
7	11	15.275	349382	53554	AREA	0.001	88.22	88.22	O-XYLENE
[illegible]	[illegible]	16.274	1552	257					
9	13	16.583	175550	28777	AREA	0.003	99.49	99.49	4-BFB
[illegible]	[illegible]	[illegible]	2094	263					
11		22.342	3271	401					
[illegible]			[illegible]	[illegible]			[illegible]	823.69!	

! Result calculation based on peak response ratio outside of calibration range.

GROUP SUMMARY: [illegible] FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
---	---	---	---	---	---	---	---	---	---
				[illegible]	[illegible]				[illegible] RANGE
			---	---			---	---	
TOTAL			2351337	[illegible]			0.00	0.00	

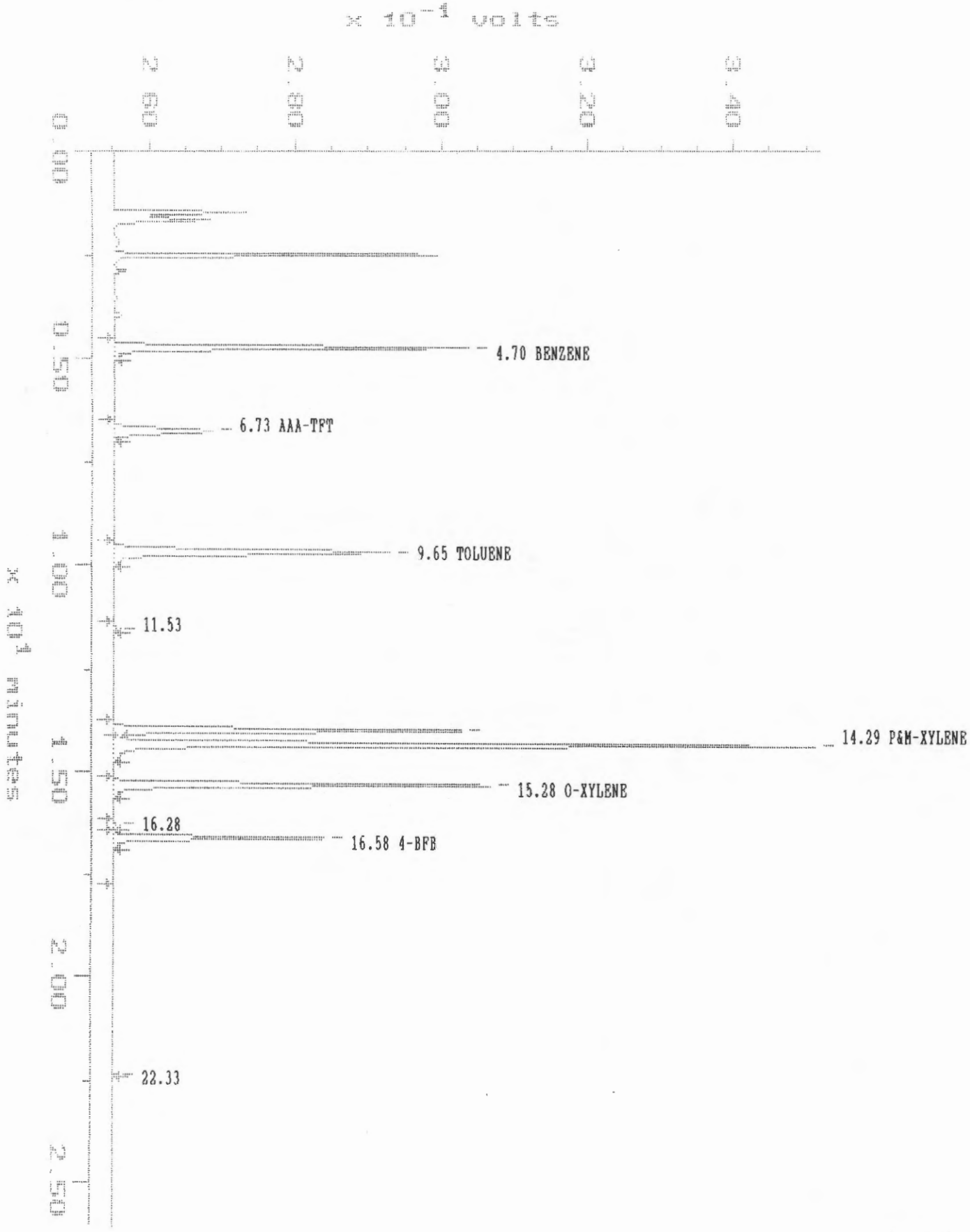
Sample: 1119STD7 Channel: THING PID Filename: 1119STD7
Acquired: Method: Operator: MS
Inj Vol: 5.00



Sample: 1119STD7
Inj Vol: 5.00

Channel: THING FID
Method: C:\MAX\DATA1\111991

Filename: 1119STD7
Operator: MS



MAXIMA 820 CUSTOM REPORT

[illegible] 14:48:29

SAMPLE: 1119STD7
#21 in Method: BTEX 111991
[illegible] 0:40
Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: UNKN
Instrument: THING
Filename: 1119STD7
Index: Disk
Injection Volume: 5.0

DETECTOR: [illegible] PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
									BENZENE
2	4	6.725	14513	1436	AREA	0.049	141.02!	141.02!	AAA-TFT
									TOLUENE
4	8	13.950	52822	7424	AREA	0.008	87.69	87.69	ETHYL BENZENE
5	10	14.292	115076	16648	AREA	0.008	181.47	181.47	P&M XYLENE
6	12	15.275	54367	7956	AREA	0.008	88.37	88.37	O-XYLENE
									4 BFB
			---	---			---	---	
							765.99!	765.99!	

! Result calculation based on peak response ratio outside of calibration range.

DETECTOR: [illegible] PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
		[illegible]	[illegible]	[illegible]	AREA	0.002	110.43	110.43	BENZENE
2	3	6.725	133772	13562	AREA	0.005	146.13!	146.13!	AAA-TFT
		[illegible]	[illegible]	[illegible]	AREA	0.001	82.30	82.30	TOLUENE
4		11.525	3616	353					
5	7	13.958	321223	47666	AREA	0.001	82.85	82.85	ETHYL BENZENE
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M XYLENE
7	11	15.275	337429	51680	AREA	0.001	85.21	85.21	O-XYLENE
8		16.275	1538	257					
9	13	16.583	175520	28828	AREA	0.003	99.48	99.48	4-BFB
[illegible]		[illegible]	2246	149					
			---	---			---	---	
TOTAL			2254266	324943			808.30!	808.30!	

! Result calculation based on peak response ratio outside of calibration range.

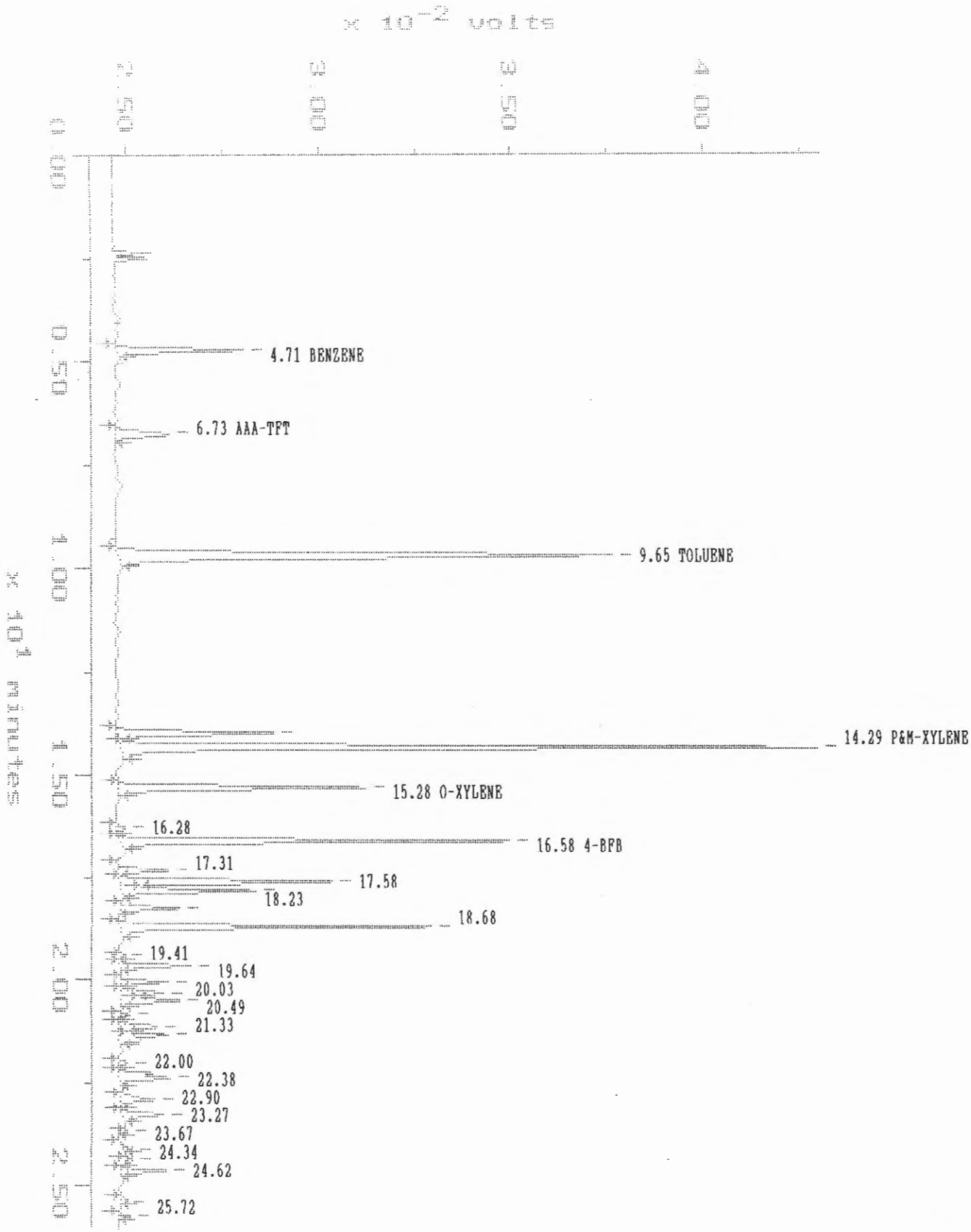
GROUP SUMMARY: [illegible] PID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
---	---	---	---	---	---	---	---	---	---
	15	14.861	2283820	324943	AREA				GASOLINE RANGE
			[illegible]	[illegible]			0.00	0.00	

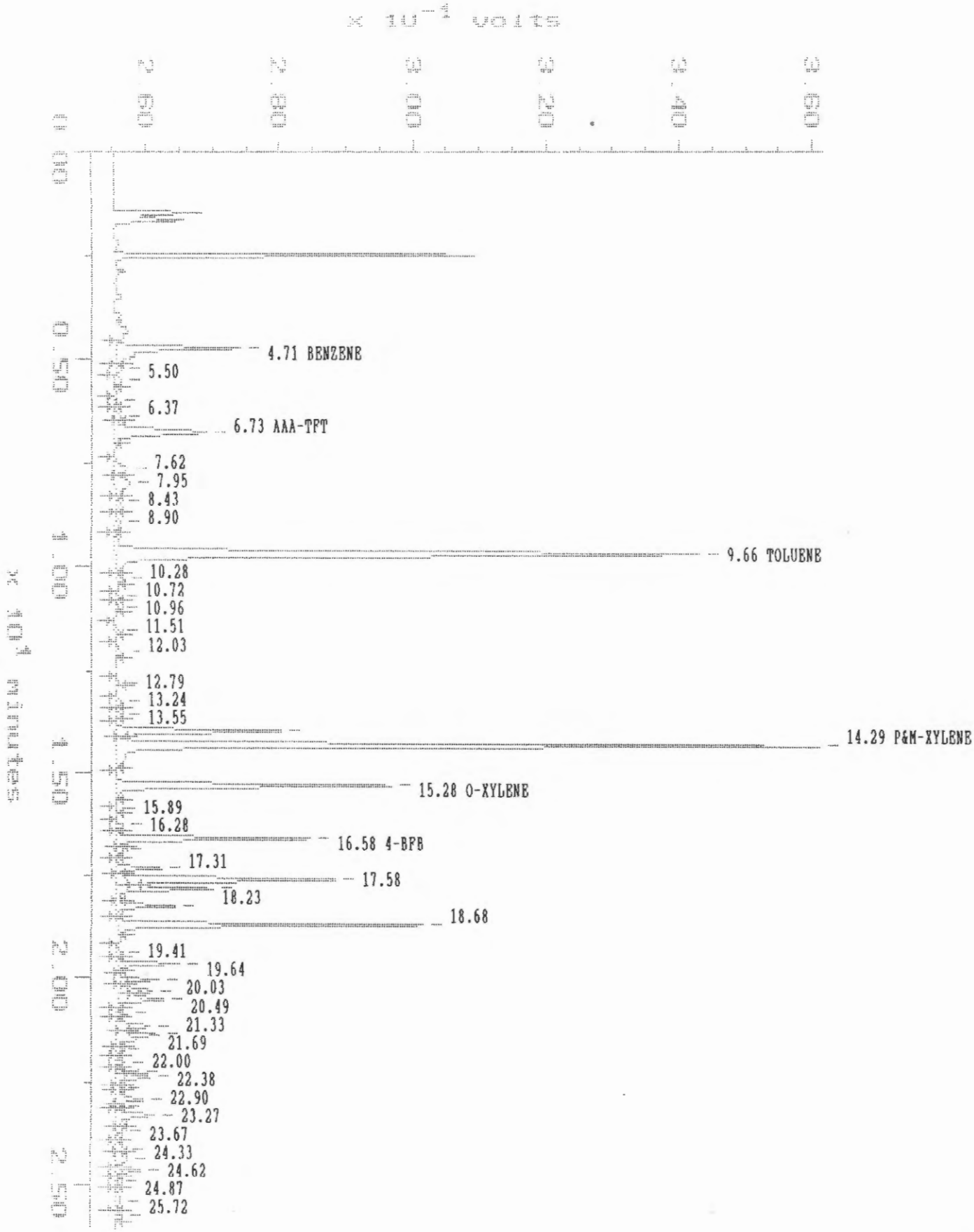
Sample: 1119GST2
Inj Vol: 5.00

Channel: THING PID
Method:

Filename: 1119GST1
Operator: MS



Sample: 1119GST2 Channel: THING FID Filename: 1119GST1
Acquired: Method: Operator: MS
Inj Vol: 5.00



Division of Millipore

MAXIMA 820 CUSTOM REPORT

[illegible] 14:49:21

SAMPLE: 1119GST2
#23 in Method: BTEX 111991

Rate: 2.0 points/sec
[illegible] minutes
Operator: MS

Type: UNKN
Instrument: THING
[illegible]: 1119GST1
Index: Disk
Injection Volume: 5.0

DETECTOR: THING PID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.008	34.83	34.83	BENZENE
2	4	6.725	14179	1401	AREA	0.049	137.78!	137.78!	AAA-TFT
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	182.52	182.52	TOLUENE
4	8	13.950	28673	4062	AREA	0.008	47.60	47.60	ETHYL BENZENE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	P&M-XYLENE
6	12	15.275	43916	6431	AREA	0.008	71.38	71.38	O-XYLENE
[illegible]	[illegible]	[illegible]	1449	237					
8	14	16.583	63502	10141	AREA	0.008	95.97	95.97	4-BFB
[illegible]	[illegible]	[illegible]	7747	1281					
10		17.575	40513	5495					
[illegible]	[illegible]	[illegible]	23527	3494					
12		18.233	9624	1546					
13		18.675	51421	8112					
14		19.408	321	79					
15		19.642	10883	1828					
16		20.033	6847	1213					
17		20.300	7795	1081					
18		20.492	12108	1534					
19		20.842	1377	266					
20		21.133	8069	988					
[illegible]		[illegible]	10634	1256					
22		22.000	1403	254					
[illegible]		[illegible]	12978	1309					
24		22.900	7195	872					
25		23.267	8037	1096					
26		23.667	592	115					
27		24.100	1395	218					
28		24.342	1996	205					
29		24.617	6946	1199					
30		25.350	842	112					
[illegible]		[illegible]	1618	291					
TOTAL			646896	90331			763.11!	763.11!	

! Result calculation based on peak response ratio outside of calibration range.

DETECTOR: [illegible] FID

PK#	ID#	Retention Time (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Component Name
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	67.21	67.21	BENZENE
2		5.217	16719	986					
3		5.500	9412	1031					
4		5.983	2834	381					
[illegible]		[illegible]	[illegible]	1113					
6	3	6.733	142746	13698	AREA	0.005	155.93!!	155.93!!	AAA-TFT
[illegible]		[illegible]	[illegible]	1743					
8		7.950	38796	2185					
9		8.425	8669	689					
10		8.900	10573	716					
11	5	9.658	779932	87539	AREA	0.001	192.61	192.61	TOLUENE
[illegible]		[illegible]	[illegible]	808					
13		10.717	1744	285					
14		[illegible]	1024	501					
15		11.508	3130	328					
16		12.025	5910	622					
17		12.792	1712	182					
18		13.242	5837	806					
19		13.550	5111	759					
20	7	13.950	167338	24611	AREA	0.001	43.16	43.16	ETHYL BENZENE
		[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	PAM-XYLENE
22	11	15.275	272656	41425	AREA	0.001	68.85	68.85	O-XYLENE
[illegible]		15.892	762	148					
24		16.275	7565	1239					
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	AREA	0.003	99.76	99.76	4-BFB
26		16.883	11616	1231					
27		17.308	43190	6770					
28		17.583	232818	32681					
29		17.808	100139	14426					
30		18.233	56254	8928					
31		18.675	273498	45661					
32		19.408	5160	627					
33		19.642	52833	9336					
34		20.033	31282	5757					
35		20.300	36159	5096					
36		20.492	55489	6938					
37		20.842	7500	1391					
38		21.133	40947	4895					
[illegible]		[illegible]	[illegible]	6450					
40		21.692	3769	534					
[illegible]		[illegible]	7569	1281					

42	22.258	18420	3397		
43	22.375	32191	5025		
44	22.642	4767	743		
[illegible]	[illegible]	[illegible]	4145		
46	23.067	1476	409		
[illegible]	[illegible]	[illegible]	5647		
48	23.667	10393	1233		
[illegible]	[illegible]	[illegible]	1580		
50	24.333	23794	1688		
[illegible]	[illegible]	[illegible]	3835		
52	24.867	4857	528		
[illegible]	[illegible]	11259	833		
54	25.717	6105	1099		
		---	---	---	---
		[illegible]	[illegible]	850.47!!	850.47!!

!! Result calculation based on peak response more than 10% outside of calibration range.

GROUP SUMMARY: [illegible] FID

PK#	ID#	Group Center (minutes)	Peak Area	Peak Height	Base	Response Factor	Solution Conc ((ppb))	Original Conc ((ppm-soil))	Group Name
---	---	---	---	---	---	---	---	---	---
	15	[illegible]	[illegible]	[illegible]	AREA				GASOLINE RANGE
			---	---			---	---	
[illegible]			[illegible]	[illegible]			0.00	0.00	

Versar Laboratories INC.

ANALYTICAL DATA PACKAGE
Metals Section

CLIENT: VERSAR A&E
SITE: O'BRIEN
CODE-BATCH: VEOBRIEN - 1,2
CONTROL #: 5800,5806
CASE-SDG: R09042 -
DATE: 30-DEC-91

6850 Versar Center • P. O. Box 1549 • Springfield, Virginia 22151 • Telephone: (703) 750-3000 • 1-800-283-7727

TRACE METALS SECTION
ANALYSIS NARRATIVE

Versar Code: VEOBRIEN - 1, 2
Client: Versar A&E
Control Number: 5800, 5806

Date: December 23, 1991
Site: O'Brien

This report contains total metals and TCLP analytical results for fourteen water and three soil samples which were received at Versar Laboratories, Inc. on November 14 and 15, 1991. The soil samples were analyzed for the following elements:

Antimony	Beryllium	Cadmium	Chromium
Copper	Nickel	Lead	Silver
Zinc			

In addition, eight of the water samples were also analyzed for arsenic, mercury, selenium, and thallium. The remaining six waters were analyzed for lead only.

Two of the soil samples were also extracted by the toxicity characteristic leachate procedure and analyzed for lead. The toxicity characteristic leachate procedure regulatory level for lead is 5000 ug/L.

Analytical The percent solids were prepared and analyzed by the US EPA Contract Laboratory Program (CLP) Statement of Work (SOW) 7/87. The following is a summary of the methods:

Soil Preparation	Method: ICP - 3050, 7.5 GFAA - 3050, 7.6
Water Preparation	Method: ICP - 3010 GFAA (As, Se) - 7060/7740 GFAA (Pb, Tl) - 3020
ICP Analysis	Method: 6010

GFAA Analysis	Method:
Arsenic	7060
Selenium	7740
Lead	7421
Thallium	7841
Mercury - Water/Soil Preparation/Analysis	Method: Water - 7470 Soil - 7471
Percent Solids Determination	Method: Exhibit D, Sec. IV, Part F, D-84

The soil samples were extracted by the Federal Register, Toxicity Characteristic Leaching Procedure (TCLP) Volume 55, No. 126, June 1990, method 1311, appendix II. The leachates were then prepared and analyzed by the US EPA Test Methods for Evaluating Solid Waste, SW 846, third edition. The following is a summary of the methods:

Extract Preparation	Method: ICP - 3005 GFAA - 7740
ICP Analysis	Method: 6010
GFAA Analysis Lead	Method: 7421

Analytical Results

The report is divided into the following sections. A description of each part and any comments concerning them is provided below:

Cover Page - Cross reference list of the laboratory sample number and the field sample number.

Form I - Summary of results for each sample.

Form IIA - Initial and continuing calibration verification results. All ICP recoveries were within the 10 % control limits. All graphite furnace atomic absorption (GFAA) and cold vapor atomic absorption (CVAA) recoveries were within the 20 % control limits.

Form III - Initial and continuing calibration blanks and preparation blank results. All blanks were less than the instrumental detection limit (IDL) except for:

Water Preparation Blank - Cu, Zn

Soil Preparation Blank - Cu, Zn

Form IV - ICP interference check sample. All recoveries were within the 20 % control limits.

Form VA - Spike sample recovery results. All spike recoveries were within 25 % control limits for all elements except for:

SWB-2 - Sb, Cr, Cu, Pb, Hg, Ni, Se, Tl, Zn

SWB-2-F - Tl

Form VI - Duplicate Results. All relative percent differences (RPD) between the sample and the duplicate were within 20 % control limits except for:

SWB-2 - As

SWB-2-F - Ni

Form IX - ICP serial dilution results. All serial dilutions agreed with the original sample results within 10 % control limits except for:

SWB-2 - Cu

SWB-2-F - Cu, Ni

Raw Data - Copies of all raw data associated with this report.

General Discussion

The elemental concentrations detected above the IDL in the various blanks may be considered typical of the method of analysis. All analyses were performed within the required holding times for metals.

The poor antimony spike recovery was probably the result of losses incurred by the volatization of antimony during the acid digestion. The spike recoveries for lead and nickel were low because the level of the spike was too low in comparison to the sample concentration. The low spike recoveries for chromium, copper, mercury, selenium, thallium, and zinc were probably due to matrix interferences.

The high duplicate RPD for nickel may be attributed to the greater amount of variance encountered when the sample concentration is at or near the instrumental detection limit. The poor arsenic duplicate precision is probably due to the variation between the two techniques used to analyze the sample and the sample duplicate. In accordance with the method of analysis, the sample concentration was determined from the calibration curve. Due to analytical difficulties, the duplicate sample concentration required determination by a four point method of standard addition. The differences between these two methods of concentration determination cause a greater variance in the final calculated concentration.

If there are any questions concerning this report, please contact Janet Jaufmann at (703) 750-3000.

Prepared by: JJ for Janice Scott

Reviewed by: Lisa D. Sa

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch:1,2___

SOW No.: SW_846,3RD_ED___

Sample No.	Lab Sample ID
BACKGROUND	66320
SB-1(.0-.5)	66319
SB-1(.0-.5)	66319E
SWB-1	66315
SWB-1(.0-.5)	66318E
SWB-1(.0-.5)	66318
SWB-1-F	66314
SWB-2	66317
SWB-2 D	66317D
SWB-2 S	66317S
SWB-2-F	66316
SWB-2-F D	66316D
SWB-2-F S	66316S
WB-1(S)	66192
WB-1(S)-F	66190
WB-3(S)	66193
WB-3(S)-F	66191
WB-4(S)	66197
WB-4(S)-F	66194
WB-5(S)	66198

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Lisa S. Lea Name: Lisa S. Lea

Date: December 30, 1991 Title: Data Entry Spec.

COVER PAGE - IN

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch:1,2___

SOW No.: SW_846,3RD_ED___

Sample No.	Lab Sample ID
_WB-5(S)-F____	__66195_____
_WB-6(S)_____	__66199_____
_WB-6(S)-F____	__66196_____

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

COVER PAGE - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

BACKGROUND

Client : NUS Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : SOIL Lab Sample ID: 66320

% Solids: 91.4 Date Received: 11/15/91

Concentration Units: MG/KG

CAS No.	Analyte	Conc.	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium				NR
7440-47-3	Chromium				NR
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	6.2			F
7440-09-7	Potassium				NR
7440-62-2	Vanadium				NR
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SWB-1

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66315

% Solids: 0.0 Date Received: 11/15/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	20.3			F
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	42.4			P
7440-47-3	Chromium	2820			P
7440-50-8	Copper	529			P
7439-92-1	Lead	152000			P
7439-97-6	Mercury	3.2			CV
7440-02-0	Nickel	3580			P
7782-49-2	Selenium	20.0	U		F
7440-22-4	Silver	2.0	U		P
7440-28-0	Thallium	2.3			F
7440-66-6	Zinc	5080			P

Comments:

FORM I - IN

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SWB-1-F

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66314

% Solids: 0.0 Date Received: 11/15/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	2.4			F
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-47-3	Chromium	4.0	U		P
7440-50-8	Copper	12.3			P
7439-92-1	Lead	14.1			F
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	9.0			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.0	U		P
7440-28-0	Thallium	1.0	U		F
7440-66-6	Zinc	2.0	U		P

Comments:

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SWB-2

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66317

% Solids: 0.0 Date Received: 11/15/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	850	U		P
7440-38-2	Arsenic	45.0			F
7440-41-7	Beryllium	100	U		P
7440-43-9	Cadmium	250	U		P
7440-47-3	Chromium	38200			P
7440-50-8	Copper	5810			P
7439-92-1	Lead	643000			P
7439-97-6	Mercury	8.7			CV
7440-02-0	Nickel	61100			P
7782-49-2	Selenium	20.0	U		F
7440-22-4	Silver	100	U		P
7440-28-0	Thallium	6.6			F
7440-66-6	Zinc	29600			P

Comments:

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SWB-2-F

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66316

% Solids: 0.0 Date Received: 11/15/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	22.4			F
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-47-3	Chromium	4.0	U		P
7440-50-8	Copper	28.9			P
7439-92-1	Lead	13.1			F
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	8.2			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.0	U		P
7440-28-0	Thallium	1.0	U		F
7440-66-6	Zinc	2.0	U		P

Comments:

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-1(S)

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66192

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	170	U		P
7440-38-2	Arsenic	9.2			F
7440-41-7	Beryllium	20.0	U		P
7440-43-9	Cadmium	50.0	U		P
7440-47-3	Chromium	1420			P
7440-50-8	Copper	169			P
7439-92-1	Lead	908			P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	3410			P
7782-49-2	Selenium	20.0	U		F
7440-22-4	Silver	20.0	U		P
7440-28-0	Thallium	1.0	U		F
7440-66-6	Zinc	2660			P

Comments:

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-1(S)-F

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66190

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	5.2			F
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-47-3	Chromium	4.0	U		P
7440-50-8	Copper	13.8			P
7439-92-1	Lead	2.0	U		F
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	12.2			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.0	U		P
7440-28-0	Thallium	1.0	U		F
7440-66-6	Zinc	16.4			P

Comments:

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-3(S)

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66193

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	170	U		P
7440-38-2	Arsenic	81.7			F
7440-41-7	Beryllium	20.0	U		P
7440-43-9	Cadmium	50.0	U		P
7440-47-3	Chromium	13600			P
7440-50-8	Copper	1530			P
7439-92-1	Lead	7370			P
7439-97-6	Mercury	4.5			CV
7440-02-0	Nickel	23900			P
7782-49-2	Selenium	20.0	U		F
7440-22-4	Silver	20.0	U		P
7440-28-0	Thallium	1.6			F
7440-66-6	Zinc	3510			P

Comments:

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-3(S)-F

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66191

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	17.0	U		P
7440-38-2	Arsenic	11.4			F
7440-41-7	Beryllium	2.0	U		P
7440-43-9	Cadmium	5.0	U		P
7440-47-3	Chromium	12.8			P
7440-50-8	Copper	14.2			P
7439-92-1	Lead	9.4			F
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	34.6			P
7782-49-2	Selenium	2.0	U		F
7440-22-4	Silver	2.0	U		P
7440-28-0	Thallium	1.0	U		F
7440-66-6	Zinc	6.8			P

Comments:

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SB-1(.0-.5)

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : SOIL Lab Sample ID: 66319

% Solids: 78.9 Date Received: 11/15/91

Concentration Units: MG/KG

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony	9.4	U		P
7440-38-2	Arsenic				NR
7440-41-7	Beryllium	0.25			P
7440-43-9	Cadmium	0.55	U		P
7440-47-3	Chromium	106			P
7440-50-8	Copper	24.4			P
7439-92-1	Lead	179			P
7439-97-6	Mercury				NR
7440-02-0	Nickel	109			P
7782-49-2	Selenium				NR
7440-22-4	Silver	0.22	U		P
7440-28-0	Thallium				NR
7440-66-6	Zinc	79.8			P

Comments:

THE ENTIRE SAMPLE NUMBER IS SB-1(0.0-0.5)

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SWB-1(.0-.5)

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Matrix : SOIL_____ Lab Sample ID: 66318_____

% Solids: _82.6 Date Received: 11/15/91

Concentration Units: MG/KG__

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0_	Antimony__	10.1	U		P_
7440-38-2_	Arsenic___				NR
7440-41-7_	Beryllium_	0.27			P_
7440-43-9_	Cadmium___	1.5			P_
7440-47-3_	Chromium__	135			P_
7440-50-8_	Copper____	35.6			P_
7439-92-1_	Lead_____	313			P_
7439-97-6_	Mercury___				NR
7440-02-0_	Nickel____	127			P_
7782-49-2_	Selenium__				NR
7440-22-4_	Silver____	0.24	U		P_
7440-28-0_	Thallium__				NR
7440-66-6_	Zinc_____	381			P_

Comments:
__THE_ENTIRE_SAMPLE_NUMBER_IS_SWB-1(0.0-0.5).

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SB-1(.0-.5)

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66319E

% Solids: 0.0 Date Received: 11/15/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	680			F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

THE ENTIRE SAMPLE NUMBER IS SB-1(0.0-0.5)
THIS IS THE LEACHATE.

FORM I - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

SWB-1(.0-.5)

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66318E

% Solids: 0.0 Date Received: 11/15/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	190			F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

THE ENTIRE SAMPLE NUMBER IS SWB-1(0.0-0.5).

THIS IS THE LEACHATE.

FORM I - IN

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INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-4(S)

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66197

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	54.1			F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-4(S)-F

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66194

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	2.0	U		F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-5(S)

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66198

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	89.2			F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-5(S)-F

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66195

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	2.0	U		F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-6(S)

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66199

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	57.9			F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

1

INORGANIC ANALYSES DATA SHEET

SAMPLE NO.

WB-6(S)-F

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER Lab Sample ID: 66196

% Solids: 0.0 Date Received: 11/14/91

Concentration Units: UG/L

CAS No.	Analyte	Conc.	C	Q	M
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-92-1	Lead	2.0	U		F
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7782-49-2	Selenium				NR
7440-22-4	Silver				NR
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR

Comments:

FORM I - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Initial Calibration Source: NIST

Continuing Calibration Source: NIST

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony	500.0	491.99	98.4	500.0	481.96	96.4	477.01	95.4	P
Arsenic									NR
Beryllium	500.0	490.56	98.1	500.0	487.12	97.4	480.09	96.0	P
Cadmium	500.0	471.61	94.3	500.0	475.09	95.0	480.53	96.1	P
Chromium	500.0	498.80	99.8	500.0	505.37	101.1	488.26	97.7	P
Copper	500.0	493.32	98.7	500.0	489.02	97.8	481.85	96.4	P
Lead	1000.0	973.47	97.3	1000.0	973.49	97.3	997.41	99.7	P
Mercury									NR
Nickel	500.0	483.06	96.6	500.0	481.79	96.4	488.63	97.7	P
Selenium									NR
Silver	500.0	486.94	97.4	500.0	488.69	97.7	480.81	96.2	P
Thallium									NR
Zinc	500.0	471.97	94.4	500.0	476.23	95.2	473.56	94.7	P

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Initial Calibration Source: NIST

Continuing Calibration Source: NIST

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony				500.0	479.23	95.8			P
Arsenic									NR
Beryllium				500.0	482.36	96.5			P
Cadmium				500.0	469.58	93.9			P
Chromium				500.0	496.41	99.3			P
Copper				500.0	484.00	96.8			P
Lead				1000.0	1024.01	102.4			P
Mercury									NR
Nickel				500.0	481.98	96.4			P
Selenium									NR
Silver				500.0	478.44	95.7			P
Thallium									NR
Zinc				500.0	473.08	94.6			P

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Initial Calibration Source: NIST

Continuing Calibration Source: NIST

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony	500.0	495.47	99.1	500.0	491.07	98.2			P
Arsenic									NR
Beryllium	500.0	486.17	97.2	500.0	480.12	96.0			P
Cadmium	500.0	477.24	95.4	500.0	481.79	96.4			P
Chromium	500.0	494.31	98.9	500.0	485.06	97.0			P
Copper	500.0	488.91	97.8	500.0	487.42	97.5			P
Lead	1000.0	956.16	95.6	1000.0	971.66	97.2			P
Mercury									NR
Nickel	500.0	484.94	97.0	500.0	474.76	95.0			P
Selenium									NR
Silver	500.0	485.49	97.1	500.0	483.55	96.7			P
Thallium									NR
Zinc	500.0	478.67	95.7	500.0	475.33	95.1			P

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Initial Calibration Source: EPA-LV

Continuing Calibration Source: NIST

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic	50.4	49.70	98.6	50.0	49.10	98.2	47.70	95.4	F
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead	98.4	102.36	104.0	25.0	25.59	102.4	27.43	109.7	F
Mercury	5.0	4.82	96.4	5.0	4.70	94.0	4.65	93.0	CV
Nickel									NR
Selenium	50.3	51.00	101.4	25.0	24.50	98.0	22.60	90.4	F
Silver									NR
Thallium	100.7	97.48	96.8	25.0	26.74	107.0	29.12	116.5	F
Zinc									NR

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic				50.0	47.80	95.6	51.20	102.4	F
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead				25.0	25.41	101.6	25.59	102.4	F
Mercury				5.0	4.65	93.0			CV
Nickel									NR
Selenium				25.0	21.40	85.6			F
Silver									NR
Thallium				25.0	28.27	113.1	29.46	117.8	F
Zinc									NR

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic				50.0	49.00	98.0	47.20	94.4	F
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead				25.0	26.51	106.0	26.14	104.6	F
Mercury	5.0	5.09	101.8	5.0	5.09	101.8	5.14	102.8	CV
Nickel									NR
Selenium	50.3	51.20	101.8	25.0	24.60	98.4	24.90	99.6	F
Silver									NR
Thallium	100.7	100.66	100.0	25.0	22.85	91.4	23.84	95.4	F
Zinc									NR

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic	50.4	46.90	93.1	50.0	46.00	92.0	43.20	86.4	F
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead	98.4	104.98	106.7	25.0	25.53	102.1	26.24	105.0	F
Mercury				5.0	4.72	94.4			CV
Nickel									NR
Selenium				25.0	21.70	86.8	22.60	90.4	F
Silver									NR
Thallium									NR
Zinc									NR

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Initial Calibration Source: EPA-LV_____

Continuing Calibration Source: NIST_____

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Antimony									NR
Arsenic									NR
Beryllium									NR
Cadmium									NR
Chromium									NR
Copper									NR
Lead									NR
Mercury									NR
Nickel									NR
Selenium				25.0	22.80	91.2			F
Silver									NR
Thallium									NR
Zinc									NR

(1) Control Limits: Mercury and Furnace AA Metals 80-120; ICP Metals 90-110

FORM II (PART 1) - IN

BLANKS

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Preparation Blank Matrix: WATER_____

Preparation Blank Concentration Units: UG/L_

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony	17.0	U	17.0	U	17.0	U	17.0	U	17.0	U	P
Arsenic	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Beryllium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Cadmium	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	P
Chromium	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	P
Copper	5.0	U	5.0	U	5.0	U	5.0	U	10.7		P
Lead	35.0	U	35.0	U	35.0	U	35.0	U	35.0	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	CV
Nickel	8.0	U	8.0	U	8.0	U	8.0	U	8.0	U	P
Selenium	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Silver	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	P
Thallium	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	F
Zinc	2.0	U	2.0	U	2.0	U	2.0	U	3.9		P

FORM III - IN

3
BLANKS

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Preparation Blank Matrix: SOIL_____

Preparation Blank Concentration Units: MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony	17.0	U	17.0	U					1.700	U	P
Arsenic			2.0	U	2.0	U	2.0	U			F
Beryllium	2.0	U	2.0	U					0.200	U	P
Cadmium	5.0	U	5.0	U					0.500	U	P
Chromium	4.0	U	4.0	U					0.400	U	P
Copper	5.0	U	5.0	U					1.195		P
Lead	35.0	U	35.0	U					3.500	U	P
Mercury	0.2	U	0.2	U	0.2	U	0.2	U			CV
Nickel	8.0	U	8.0	U					0.800	U	P
Selenium	2.0	U	2.0	U	2.0	U	2.0	U			F
Silver	2.0	U	2.0	U					0.200	U	P
Thallium			1.0	U							F
Zinc	2.0	U	2.0	U					0.645		P

FORM III - IN

3
BLANKS

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Preparation Blank Matrix: WATER

Preparation Blank Concentration Units: UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Arsenic	2.0	U	2.0	U	2.0	U					F
Beryllium											NR
Cadmium											NR
Chromium											NR
Copper											NR
Lead	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	F
Mercury											NR
Nickel											NR
Selenium			2.0	U	2.0	U					F
Silver											NR
Thallium	1.0	U	1.0	U	1.0	U			1.0	U	F
Zinc											NR

FORM III - IN

3
BLANKS

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Preparation Blank Matrix: WATER

Preparation Blank Concentration Units: UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Arsenic											NR
Beryllium											NR
Cadmium											NR
Chromium											NR
Copper											NR
Lead			2.0	U	2.0	U	2.0	U	2.0	U	F
Mercury											NR
Nickel											NR
Selenium											NR
Silver											NR
Thallium											NR
Zinc											NR

FORM III - IN

3
BLANKS

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Preparation Blank Matrix: SOIL

Preparation Blank Concentration Units: MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Arsenic											NR
Beryllium											NR
Cadmium											NR
Chromium											NR
Copper											NR
Lead	2.0	U	2.0	U	2.0	U			0.200	U	F
Mercury											NR
Nickel											NR
Selenium											NR
Silver											NR
Thallium											NR
Zinc											NR

FORM III - IN

3
BLANKS

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Preparation Blank Matrix: WATER

Preparation Blank Concentration Units: UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Antimony											NR
Arsenic											NR
Beryllium											NR
Cadmium											NR
Chromium											NR
Copper											NR
Lead									2.0	U	F
Mercury											NR
Nickel											NR
Selenium											NR
Silver											NR
Thallium											NR
Zinc											NR

FORM III - IN

ICP INTERFERENCE CHECK SAMPLE

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

ICP ID Number: 2-JA_1150___ ICS Source: INOR._VENT._

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony	0	0	-160	-154.3		-144	-150.7	
Arsenic								
Beryllium	0	500	-1	437.7	87.5	-1	430.9	86.2
Cadmium	0	1000	-3	865.9	86.6	-1	863.1	86.3
Chromium	0	500	2	425.2	85.0	6	415.7	83.1
Copper	0	500	-1	453.6	90.7	-5	445.0	89.0
Lead	0	1000	118	947.5	94.8	111	995.7	99.6
Mercury								
Nickel	0	1000	5	837.7	83.8	4	819.6	82.0
Selenium								
Silver	0	1000	-2	900.7	90.1	0	893.8	89.4
Thallium								
Zinc	0	1000	-9	834.6	83.5	-7	829.3	82.9

FORM IV - IN

ICP INTERFERENCE CHECK SAMPLE

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

ICP ID Number: 2-JA_1150___ ICS Source: INOR._VENT._

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	Initial Found %R	Final Found Sol. A	Final Found Sol. AB	Final Found %R
Antimony	0	0	-136	-150.7		-152	-140.9	
Arsenic								
Beryllium	0	500	0	438.2	87.6	0	436.3	87.3
Cadmium	0	1000	0	855.0	85.5	-2	843.9	84.4
Chromium	0	500	3	418.9	83.8	-3	416.0	83.2
Copper	0	500	-1	451.7	90.3	-3	450.2	90.0
Lead	0	1000	142	946.3	94.6	157	920.8	92.1
Mercury								
Nickel	0	1000	7	838.9	83.9	2	828.2	82.8
Selenium								
Silver	0	1000	1	895.5	89.6	-4	887.1	88.7
Thallium								
Zinc	0	1000	-9	839.3	83.9	-9	842.0	84.2

FORM IV - IN

6
DUPLICATES

SAMPLE NO.

SWB-2 D

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units: UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony		850.0000	U	850.0000	U			P
Arsenic	18.0	45.0000		61.2800		30.6		F
Beryllium		100.0000	U	100.0000	U			P
Cadmium		250.0000	U	250.0000	U			P
Chromium		38216.5000		34433.5000		10.4		P
Copper		5805.5000		5178.5000		11.4		P
Lead		643400.0000		572198.5000		11.7		P
Mercury		8.6600		7.4520		15.0		CV
Nickel		61070.0000		54002.5000		12.3		P
Selenium		20.0000	U	20.0000	U			F
Silver		100.0000	U	100.0000	U			P
Thallium		6.5520		6.1570		6.2		F
Zinc		29633.5000		26390.5000		11.6		P

FORM VI - IN

6
DUPLICATES

SAMPLE NO.

SWB-2-F D

Client : VERSAR_A&E_____ Site: O'BRIEN_____

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2___

Matrix : WATER____ LOW

% Solids for Sample: __0.0 % Solids for Duplicate: ___0.0

Concentration Units: UG/L_

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony		17.0000	U	17.0000	U			P
Arsenic	18.0	22.4000		20.6000		8.4		F
Beryllium		2.0000	U	2.0000	U			P
Cadmium		5.0000	U	5.0000	U			P
Chromium		4.0000	U	4.0000	U			P
Copper		28.9000		30.3200		4.8		P
Lead		13.0550		11.2120		15.2		F
Mercury		0.2000	U	0.2000	U			CV
Nickel	8.0	8.1800		12.3000		40.2		P
Selenium		2.0000	U	2.0000	U			F
Silver		2.0000	U	2.0000	U			P
Thallium		1.0000	U	1.0000	U			F
Zinc		2.0000	U	2.0000	U			P

FORM VI - IN

5A
SPIKE SAMPLE RECOVERY

SAMPLE NO.

SWB-2 S

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN

Batch: 1,2

Matrix: WATER

% Solids for Sample: 0.0

Concentration Units: UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	75-125 %R	Q	M	[Sample] 4 x [Spk]
Antimony	75-125	850.0000	U	850.0000	U	4000.00	0.0		P	No
Arsenic	75-125	149.5000		45.0000		100.00	104.5		F	
Beryllium	75-125	1805.0000		100.0000	U	2000.00	90.2		P	
Cadmium	75-125	2005.5000		250.0000	U	2000.00	100.3		P	
Chromium		36369.5000		38216.5000		2000.00	-92.4		P	
Copper	75-125	8686.5000		5805.5000		4000.00	72.0		P	No
Lead		613420.0000		643400.0000		4000.00	-749.5		P	Yes
Mercury		9.3960		8.6600		1.00	73.6		CV	Yes
Nickel		59850.0000		61070.0000		4000.00	-30.5		P	Yes
Selenium	75-125	12.5000		20.0000	U	100.00	12.5		F	No
Silver	75-125	1710.5000		100.0000	U	2000.00	85.5		P	
Thallium	75-125	78.7200		6.5520		100.00	72.2		F	No
Zinc		29984.0000		29633.5000		4000.00	8.8		P	Yes

Comments:

FORM V (Part 1) - IN

5A
SPIKE SAMPLE RECOVERY

SAMPLE NO.

SWB-2-F S

Client : VERSAR A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN

Batch: 1,2

Matrix: WATER

LOW

% Solids for Sample: 0.0

Concentration Units: UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	75-125 %R	Q	M
Antimony	75-125	3527.4600		17.0000	U	4000.00	88.2		P
Arsenic	75-125	119.0000		22.4000		100.00	96.6		F
Beryllium	75-125	1845.2700		2.0000	U	2000.00	92.3		P
Cadmium	75-125	1713.1700		5.0000	U	2000.00	85.7		P
Chromium	75-125	1748.1600		4.0000	U	2000.00	87.4		P
Copper	75-125	3670.7600		28.9000		4000.00	91.0		P
Lead	75-125	118.7350		13.0550		100.00	105.7		F
Mercury	75-125	0.8640		0.2000	U	1.00	86.4		CV
Nickel	75-125	3423.3100		8.1800		4000.00	85.4		P
Selenium	75-125	95.5000		2.0000	U	100.00	95.5		F
Silver	75-125	1647.9400		2.0000	U	2000.00	82.4		P
Thallium	75-125	54.7500		1.0000	U	100.00	54.8		F
Zinc	75-125	3309.1300		2.0000	U	4000.00	82.7		P

Sample 1: 4x Spike

No

Comments:

FORM V (Part 1) - IN

ICP SERIAL DILUTION

SAMPLE NO.

SWB-2

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	17.00	U	85.00	U			P
Arsenic							
Beryllium	2.00	U	10.00	U			P
Cadmium	5.00	U	25.00	U			P
Chromium	764.33		782.90		2.4		P
Copper	116.11		132.60		14.2		P
Lead	12868.00		13072.50		1.6		P
Mercury							
Nickel	1221.40		1259:30		3.1		P
Selenium							
Silver	2.00	U	10.00	U			P
Thallium							
Zinc	592.67		639.70		7.9		P

FORM IX - IN

9

ICP SERIAL DILUTION

SAMPLE NO.

SWB-2-F

Client : VERSAR_A&E Site: O'BRIEN

Lab Name: VERSAR Control No.: R0904 Code: VEOBRIEN Batch: 1,2

Matrix : WATER LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	17.00	U	85.00	U			P
Arsenic							
Beryllium	2.00	U	10.00	U			P
Cadmium	5.00	U	25.00	U			P
Chromium	4.00	U	20.00	U			P
Copper	28.90		35.30		22.1		P
Lead							
Mercury							
Nickel	8.18		40.00	U	100.0		P
Selenium							
Silver	2.00	U	10.00	U			P
Thallium							
Zinc	2.00	U	22.30				P

FORM IX - IN

Non-CLP ICP Analysis Log Sheet

Date 12-12-91

Code/batch # VEDBRIEN 1,2 Control No. 5806 5806 Matrix HOM/soil
Code/batch # NYSDFORG 1 Control No. 5837 Matrix Leachate
Analyst JH Filename 5806
Inst# JA 1150 [✓] ~~#4~~ 2 Method 6010 [✓]
ICAP 61 [] #9 Other [] _____
Batch Comments Ag Be Cd Cr Cu Ni Sb Zn

Opening QC
CAL 3 [] CCVC0 [✓] CCVN0 [✓] ~~CCVH0 [] CCVS0 []~~ JH ICB [✓] _____

Sample Set #1 JH

		Notes & Comments
1)	ICSABI [✓]	
2)	ICSABII	
3)	PBW	
4)	LCSMCH	
5)	66190	
6)	66191	
7)	66192	
8)	66193	
9)	66314	
10)	66315	

QC Set #1
CCVC1 [✓] CCVN1 [✓] ~~CCVH1 [] CCVS1 []~~ JH CCB1 [✓] Profile

Sample Set #2

11)	66193	10 Fold
12)	66316	
13)	66316L	5 Fold
14)	66316D	
15)	66316S	
16)	66317	
17)	66317	10 Fold
18)	66317	50 Fold
19)	66317D	50 Fold
20)	66317L	250 Fold

QC Set #2
CCVC2 [✓] CCVN2 [✓] ~~CCVH2 [] CCVS2 []~~ JH CCB2 [✓] Profile

Sample Set #3

21)	66317S	50 Fold
22)	66192	10 Fold
23)	66193	20 Fold
24)	66193	10 Fold for Pb only
25)	ICSAIF	
26)	ICSABIF	
27)		
28)		
29)		
30)		

QC Set #3
CCVC3 [✓] CCVN3 [✓] ~~CCVH3 [] CCVS3 []~~ JH CCB3 [✓] Profile

ICP Analysis Log Sheet

Code/batch # NYSDFORG 1 Control No. 5837 Date Leachate
Code/batch # _____ Control No. _____
Analyst JH
Batch Comments As Ag Ba Cd Cr Pb

Sample Set # 4

		Notes & Comments
31)	PBW	
32)	PBIT	
33)	67031	
34)	ICSAIF	
35)	ICSABIF	
36)		
37)		
38)		
39)		
40)		

QC Set #
CCVC 4 [✓] CCVN 4 [✓] ~~CCVH~~ [] ~~CCVS~~ [] CCB 4 [✓]

Sample Set #

41)		
42)		
43)		
44)		
45)		
46)		
47)		
48)		
49)		
50)		

QC Set #
CCVC [] CCVN [] CCVH [] CCVS [] CCB []

Sample Set #

51)		
52)		
53)		
54)		
55)		
56)		
57)		
58)		
59)		
60)		

QC Set #
CCVC [] CCVN [] CCVH [] CCVS [] CCB []

Standardization Rpt. Thu 12-12-91 01:10:48 PM page 1

Method: 60101150 Standard: CAL1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00150	.00320	.01500	.00085	.00000	.00115	.00145
#1	-.00190	.00310	.01570	.00060	.00000	.00110	.00100
#2	-.00110	.00330	.01430	.00110	.00000	.00120	.00190

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00060	-.00040	-.00010	.00010	.00425	.00105	.27230
#1	.00080	-.00040	-.00060	-.00010	.00340	.00060	.25060
#2	.00040	-.00040	.00040	.00030	.00510	.00150	.29400

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00020	.00120	.00055	.00000	.00025	-.00090	-.00175
#1	-.00030	.00120	.00050	.00010	.00010	-.00080	-.00340
#2	-.00010	.00120	.00060	-.00010	.00040	-.00100	-.00010

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00035	-.00055	-.00115	.00075	.01700	.00020	.00000
#1	-.00060	.00080	.00080	.00030	.01700	.00040	-.00010
#2	-.00010	-.00190	-.00310	.00120	.01700	.00000	.00010

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00215	-.00025	.00005	.00205
#1	-.00310	-.00050	-.00010	.00180
#2	-.00120	.00000	.00020	.00230

Standardization Rpt. Thu 12-12-91 01:12:36 PM page 1

Method: 60101150 Standard: CAL2 .

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.39945	.00150	.01280	.00080	.00040	.00115	.76290
#1	.40140	.00150	.01190	.00040	.00040	.00130	.76490
#2	.39750	.00150	.01370	.00120	.00040	.00100	.76090

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.27360	.13040	-.00025	.06990	.00115	.00185	.27240
#1	.27250	.13070	-.00040	.07020	.00120	.00210	.26480
#2	.27470	.13010	-.00010	.06960	.00110	.00160	.28000

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00000	.54685	.00795	.15330	.00000	-.00075	-.00145
#1	-.00010	.55050	.00820	.15360	.00000	-.00060	-.00160
	.00010	.54320	.00770	.15300	.00000	-.00090	-.00130

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01730	-.00230	-.00010	.00060	.02165	.00105	-.00005
#1	.01690	-.00240	.00210	.00060	.02480	.00100	-.00010
#2	.01770	-.00220	-.00230	.00060	.01850	.00110	.00000

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00010	-.00065	.00005	.32260
#1	-.00040	-.00110	-.00010	.32380
#2	.00020	-.00020	.00020	.32140

Method: 60101150 Standard: CAL3

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00225	.08170	.00985	.00125	.31435	.35265	.00105
#1	-.00260	.08120	.01030	.00120	.31620	.35580	.00100
#2	-.00190	.08220	.00940	.00130	.3125	.34950	.00110

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00030	-.00030	-.00015	.00025	.22725	.01265	.26160
#1	-.00020	-.00020	-.00030	.00020	.22840	.01240	.26360
#2	.00080	-.00040	.00000	.00030	.22610	.01290	.25960

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.08805	.00235	.00035	.00015	.14700	1.6000	.50915
#1	.08940	.00230	.00040	.00020	.14790	1.6097	.50900
#2	.08670	.00240	.00030	.00010	.14610	1.5904	.50930

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00020	.17150	-.00175	.00105	.67550	.35110	.26640
#1	-.00030	.17260	-.00750	.00100	.67130	.35310	.26830
#2	-.00010	.17040	.00400	.00110	.67970	.34910	.26450

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00240	-.00250	-.00015	.00370
#1	-.00380	-.00270	-.00010	.00370
#2	-.00100	-.00230	-.00020	.00370

Standardization Rpt. Thu 12-12-91 01:16:31 PM page 1

Method: 60101150 Standard: CAL4

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00150	.00255	4.5277	.23545	.00000	.00115	.00150
#1	-.00230	.00220	4.5240	.23620	-.00010	.00120	.00160
#2	-.00070	.00290	4.5314	.23470	.00010	.00110	.00140

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.01470	-.00015	.31240	.00045	.00245	.00055	.30670
#1	.01330	-.00050	.31190	.00050	.00170	.00000	.29720
#2	.01610	.00020	.31290	.00040	.00320	.00110	.31620

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00010	.00105	.00055	-.00010	.00020	-.00080	.00020
#1	.00010	.00110	.00050	.00000	.00010	-.00110	-.00030
	.00010	.00100	.00060	-.00020	.00030	-.00050	.00070

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00040	-.00100	3.1748	.00065	.01420	.00020	.00045
#1	-.00050	-.00240	3.1797	.00090	.01170	.00010	.00020
#2	-.00030	.00040	3.1699	.00040	.01670	.00030	.00070

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00095	-.00045	-.00010	.00270
#1	-.00100	-.00030	-.00020	.00300
#2	-.00090	-.00060	.00000	.00240

Method: 60101150 Standard: CAL7

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00280	.00210	-.01025	.00245	-.00005	.00110	.00110
#1	-.00340	.00180	-.00820	.00220	-.00010	.00120	.00090
#2	-.00220	.00240	-.01230	.00270	.00000	.00100	.00130

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00000	-.00015	.00150	.00005	2.2947	.12210	.25320
#1	.00000	-.00020	.00190	.00000	2.2939	.12280	.25580
#2	.00000	-.00010	.00110	.00010	2.2955	.12140	.25060

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00010	5.3946	.07350	-.00035	-.00225	-.00120	-.00300
#1	-.00010	5.3930	.07360	-.00030	-.00210	-.00110	-.00170
	-.00010	5.3962	.07340	-.00040	-.00240	-.00130	-.00430

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00030	-.01635	-.03280	.00060	.01450	.00040	.00020
#1	.00000	-.01570	-.03600	.00020	.01380	.00060	.00030
#2	.00060	-.01700	-.02960	.00100	.01520	.00020	.00010

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.00010	-.00065	-.00010	.00225
#1	-.00110	-.00090	-.00010	.00230
#2	.00130	-.00040	-.00010	.00220

Method: 60101150 Standard: CAL8 .

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00605	.00285	-.21415	.02030	.00045	.00100	.00105
#1	-.00590	.00260	-.21610	.01990	.00030	.00090	.00110
#2	-.00620	.00310	-.21220	.02070	.00060	.00110	.00100

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00010	-.00010	.01190	-.00030	22.236	1.2077	.26410
#1	-.00010	-.00010	.01240	-.00010	22.220	1.2058	.24480
#2	-.00010	-.00010	.01140	-.00050	22.253	1.2096	.28340

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00005	44.560	.72310	-.00140	-.02650	-.00075	-.00100
#1	.00010	44.518	.72250	-.00150	-.02660	-.00060	-.00160
	-.00020	44.602	.72370	-.00130	-.02640	-.00090	-.00040

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00090	-.13460	-.26490	.00020	.01925	.00010	.00025
#1	.00090	-.13450	-.26460	-.00020	.02290	.00030	.00020
#2	.00090	-.13470	-.26520	.00060	.01560	-.00010	.00030

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.02110	.00020	.00005	.00580
#1	.02260	.00000	.00010	.00560
#2	.01960	.00040	.00000	.00600

Standardization Rpt. Thu 12-12-91 01:22:45 PM page 1

Method: 60101150 Standard: CAL5 .

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00265	.00295	.02030	.00055	.00015	.00225	.00950
#1	-.00210	.00380	.01980	.00130	.00030	.00220	.00960
#2	-.00320	.00210	.02080	-.00020	.00000	.00230	.00940

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00085	-.00035	-.00115	.00015	.00155	-.00205	4.3216
#1	.00090	-.00050	-.00080	.00030	.00190	-.00220	4.3010
#2	.00080	-.00020	-.00150	.00000	.00120	-.00190	4.3422

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00005	.00115	-.00250	.00010	.00050	-.00050	-.00065
#1	-.00010	.00110	-.00260	.00010	.00070	-.00040	-.00180
	.00000	.00120	-.00240	.00010	.00030	-.00060	.00050

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00015	-.00035	.00645	.00060	.02480	.00030	.00015
#1	.00060	-.00050	-.00160	.00110	.02550	.00060	.00030
#2	-.00030	-.00020	.01450	.00010	.02410	.00000	.00000

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00225	.35045	.13380	.00070
#1	-.00210	.34990	.13320	.00060
#2	-.00240	.35100	.13440	.00080

Method: 60101150 Standard: CAL6

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00205	.00200	.01540	.00070	.00010	.00110	.00145
#1	-.00230	.00220	.01430	.00100	.00020	.00110	.00080
#2	-.00180	.00180	.01650	.00040	.00000	.00110	.00210

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00020	-.00010	.00040	.00030	.00170	.00045	.28060
#1	.00040	-.00050	.00050	.00010	.00130	.00030	.25420
#2	.00000	.00030	.00030	.00050	.00210	.00060	.30700

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00005	.00185	.00055	.00025	.00040	-.00110	.00115
#1	-.00010	.00200	.00040	.00020	.00000	-.00150	.00050
	.00020	.00170	.00070	.00030	.00080	-.00070	.00180

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01845	-.00215	.00110	.00070	.01950	.00015	.00015
#1	.01810	-.00300	.00180	.00120	.01750	-.00030	.00010
#2	.01880	-.00130	.00040	.00020	.02150	.00060	.00020

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.21120	-.00030	.00010	.00210
#1	.21470	-.00070	.00010	.00200
#2	.20770	.00010	.00010	.00220

Standardization Report Thu 12-12-91 01:29:21 PM page 1

Method: 60101150

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag3280	328.068	CAL2	CAL1	2.49408	.003741	12/12/91 01:11:16
Al3082	308.265	CAL3	CAL1	12.7116	-.040677	12/12/91 01:13:21
As1936	193.696	CAL4	CAL1	2.21620	-.033243	12/12/91 01:15:12
B_2497	249.773	CAL4	CAL1	4.26239	-.003623	12/12/91 01:15:12
Ba4934	493.409	CAL3	CAL1	3.18121	.000000	12/12/91 01:13:21
Be3130	313.042	CAL3	CAL1	2.84176	-.003268	12/12/91 01:13:21
Ca3179	317.933	CAL2	CAL1	13.1332	-.019043	12/12/91 01:11:16
Cd2288	228.802	CAL2	CAL1	3.64980	-.002190	12/12/91 01:11:16
Co2286	228.616	CAL2	CAL1	7.64377	.003058	12/12/91 01:11:16
Cr2677	267.716	CAL4	CAL1	3.20000	.000320	12/12/91 01:15:12
Cu3247	324.754	CAL2	CAL1	14.3191	-.001432	12/12/91 01:11:16
Fe2599	259.940	CAL3	CAL1	4.48887	-.019078	12/12/91 01:13:21
Fe2714	271.441	CAL8	CAL7	82.9035	-.122513	12/12/91 01:18:57
K_7664	766.491	CAL5	CAL1	12.3478	-3.36231	12/12/91 01:21:25
L[illegible]6707	670.784	CAL3	CAL1	11.3314	.002266	12/12/91 01:13:21
M[illegible] 795	279.553	CAL2	CAL1	1.83246	-.002199	12/12/91 01:11:16
Mg3822	382.231	CAL8	CAL7	138.547	-.183190	12/12/91 01:18:57
Mn2576	257.610	CAL2	CAL1	6.52325	.000000	12/12/91 01:11:16
Mo2023	202.300	CAL3	CAL1	6.81327	-.001703	12/12/91 01:13:21
Na5889	588.995	CAL3	CAL1	31.2316	.028108	12/12/91 01:13:21
Ni2316	231.604	CAL3	CAL1	1.95722	.003425	12/12/91 01:13:21
Pb2203	220.353	CAL6	CAL1	53.1915	.018617	12/12/91 01:23:15
Sb2175	217.581	CAL3	CAL1	5.76032	.003168	12/12/91 01:13:21
Se1960	196.026	CAL4	CAL1	3.14866	.003621	12/12/91 01:15:12
Si2881	288.158	1 ppm Si	CAL1	51.8135	-.038860	12/12/91 01:09:27
Sn1899	189.989	CAL3	CAL1	1.51304	-.025722	12/12/91 01:13:21
Sr4215	421.552	CAL3	CAL1	2.84987	-.000570	12/12/91 01:13:21
Ti3349	334.941	CAL3	CAL1	3.75318	.000000	12/12/91 01:13:21
Tl1908	190.801	CAL6	CAL1	46.8713	.100773	12/12/91 01:23:15
V_2924	292.402	CAL5	CAL1	2.85157	.000713	12/12/91 01:21:25
Y_3710	371.030	CAL5	CAL1	7.47667	-.000374	12/12/91 01:21:25
Zn2138	213.865	CAL2	CAL1	3.13393	-.006425	12/12/91 01:11:16

Analysis Report Thu 12-12-91 01:38:49 PM page 1

Method: 60101150 Sample Name: CAL2 Operator: JH
Run Time: 12/12/91 13:36:43
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.98616	-.00845	-.00538	.00110	.00159	.00000	9.8281
#1	.98815	-.00277	-.00900	.00154	.00127	-.00014	9.8019
#2	.98416	-.01414	-.00176	.00066	.00191	.00015	9.8543

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.99120	.98777	.00130	.98993	-.01603	-.09707	-.06548
#1	.97988	.98395	.00241	.98706	-.01514	-.12134	-.00115
#2	1.0025	.99160	.00018	.99279	-.01692	-.07280	-.12981

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00227	.98021	.88280	.98856	.00027	.00285	.00652
#1	.00340	.97718	.89633	.98432	-.00045	.00285	.00731
#2	.00113	.98323	.86927	.99281	.00099	.00285	.00574

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.97871	.00156	-.00109	-.01254	-.00183	.00305	-.00053
#1	1.0080	.00398	.00701	-.01515	-.00258	.00305	-.00034
#2	.94943	-.00086	-.00919	-.00992	-.00108	.00305	-.00072

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.08267	-.00058	-.00187	.97901
#1	.11352	.00028	-.00262	.97495
#2	.05182	-.00143	-.00112	.98307

Analysis Report QC Standard Thu 12-12-91 01:45:09 PM page 1

Method: 60101150 Sample Name: ICVCQ Operator: JH
Run Time: 12/12/91 13:43:26
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00024	.47952	.50125	.50945	.49147	.49057	19.257
#1	.00174	.46869	.50664	.50582	.48828	.48714	19.164
#2	-.00126	.49035	.49586	.51308	.49465	.49400	19.350

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00442	-.00158	.49881	.00508	.50120	.43269	20.242
#1	.00405	-.00120	.49417	.00651	.49851	.44103	20.144
#2	.00479	-.00197	.50345	.00364	.50389	.42436	20.340

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	2.1263	.49514	.38367	.00056	1.9530	20.030	-.00087
#1	2.1144	.49275	.36405	.00154	1.9390	19.900	-.00312
#2	2.1382	.49753	.40330	-.00042	1.9669	20.159	.00138

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00770	.49199	-.00969	-.00793	1.9750	1.9621	1.9515
#1	-.00772	.48713	-.00394	.00492	1.9555	1.9485	1.9416
#2	-.00769	.49686	-.01545	-.02078	1.9946	1.9756	1.9614

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.03084	-.01199	1.9771	.47198
#1	.08672	-.01186	1.9640	.47010
#2	-.02503	-.01212	1.9901	.47386

Analysis Report QC Standard Thu 12-12-91 01:47:52 PM Page 1

Method: 60101150 Sample Name: ICVNQ Operator: JH
Run Time: 12/12/91 13:46:09
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48694	-.00091	.00282	.00149	.00032	-.00049	.01199
#1	.48544	.00353	.00178	.00299	.00032	-.00048	.00350
#2	.48845	-.00535	.00385	.00000	.00032	-.00050	.02048

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.47161	.47506	.00271	.49332	-.01357	-.04353	.21852
#1	.46922	.47086	.00414	.49547	-.01425	-.05196	.27535
#2	.47400	.47927	.00127	.49117	-.01290	-.03509	.16169

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00284	-.00095	-.10054	.48110	.00082	.00781	.48306
#1	.00114	-.00122	-.08652	.47947	.00047	.01250	.47944
#2	.00454	-.00068	-.11455	.48273	.00118	.00313	.48669

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.97347	.00002	1.9250	-.00034	.00733	-.00057	.00155
#1	.97082	-.00408	1.9084	.00484	.00960	-.00057	.00192
#2	.97612	.00412	1.9417	-.00553	.00506	-.00057	.00118

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9348	.48455	-.00150	.00002
#1	1.8646	.48241	-.00112	.00001
#2	2.0051	.48669	-.00187	.00002

Analysis Report Blank Sample Thu 12-12-91 01:54:33 PM page 1

Method: 60101150 Sample Name: ICB Operator: JH
Run Time: 12/12/91 13:52:51
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00075	-.00953	.00012	-.00102	.00000	-.00014	-.00038
#1	-.00150	-.00636	.00327	.00154	.00032	.00014	-.00036
#2	-.00001	-.01270	-.00304	-.00359	-.00032	-.00042	-.00041

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00200	.00153	.00176	.00143	-.01256	-.06460	.06051
#1	-.00219	.00153	.00096	.00143	-.01324	-.07281	-.03085
#2	-.00182	.00153	.00256	.00143	-.01189	-.05639	.15187

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00113	-.00018	-.10716	.00032	-.00182	-.00624	.00626
#1	.00000	.00000	-.08638	.00064	-.00320	-.01873	.00656
#2	.00227	-.00036	-.12794	-.00001	-.00044	.00625	.00597

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00263	-.00299	-.01467	-.00776	.00515	-.00057	.00094
#1	-.00263	-.00476	-.02294	-.00777	.00575	-.00057	.00113
#2	-.00264	-.00121	-.00640	-.00776	.00454	-.00057	.00076

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.07584	.00015	-.00037	-.00018
#1	.01735	.00043	-.00037	-.00112
#2	.13433	-.00014	-.00037	.00076

Analysis Report Thu 12-12-91 01:57:16 PM page 1

Method: 60101150 Sample Name: ICSAII Operator: JH
Run Time: 12/12/91 13:55:32
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00213	461.17	.17520	.03989	.03532	-.00055	442.44
#1	-.00274	462.56	.18348	.04107	.03548	-.00069	442.93
#2	-.00153	459.78	.16692	.03871	.03516	-.00041	441.96

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00277	.00639	.00152	-.00083	174.32	174.73	-.30030
#1	-.00114	.00603	.00104	-.00227	174.73	174.89	-.48297
#2	-.00441	.00675	.00199	.00060	173.91	174.58	-.11764

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00340	138.37	469.27	.01145	-.00345	-.01245	.00467
#1	.00227	138.16	470.82	.01212	-.00249	-.01257	.00536
#2	.00453	138.57	467.73	.01079	-.00441	-.01232	.00399

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.11808	-.16029	.20961	-.02267	-.00319	.18786	-.00048
#1	.12482	-.16441	.23196	-.00454	-.00389	.18814	-.00085
#2	.11134	-.15617	.18727	-.04080	-.00249	.18758	-.00011

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.60020	-.00423	-.00037	-.00884
#1	-.59597	-.00438	-.00037	-.00827
#2	-.60444	-.00408	-.00037	-.00941

Analysis Report Thu 12-12-91 01:59:48 PM page 1

Method: 60101150 Sample Name: ICSABII Operator: JH
Run Time: 12/12/91 13:58:04
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.90066	455.01	.15553	.03404	.47736	.43767	438.07
#1	.90343	456.30	.18625	.03389	.48022	.43965	438.68
#2	.89790	453.71	.12482	.03418	.47450	.43568	437.46

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.86592	.42085	.42523	.45363	172.14	172.90	.03961
#1	.86919	.42546	.42636	.45291	172.63	173.12	-.03708
#2	.86266	.41625	.42410	.45434	171.64	172.68	.11630

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00284	137.84	462.69	.43908	-.00650	-.03058	.83767
#1	.00227	138.19	463.88	.44238	-.00609	-.04318	.84599
#2	.00340	137.50	461.51	.43579	-.00690	-.01798	.82934

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.94752	-.15434	.22099	-.00985	.00733	.18291	.00066
#1	.95944	-.13522	.22578	-.00464	.01156	.18362	.00011
#2	.93560	-.17346	.21619	-.01506	.00309	.18220	.00122

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.64568	.43441	-.00224	.83456
#1	-.55084	.43512	-.00187	.83307
#2	-.74052	.43371	-.00262	.83605

Analysis Report Blank Sample Thu 12-12-91 02:13:24 PM page 1

Method: 60101150 Sample Name: PBW Operator: JH
Run Time: 12/12/91 14:11:42
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00062	.04196	.00142	.00063	.00032	-.00014	.07481
#1	-.00099	.04450	.00170	.00105	.00032	-.00014	.07028
#2	-.00025	.03943	.00115	.00021	.00032	-.00014	.07935

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00182	.00229	.00240	.01074	.07249	.01829	-.03431
#1	-.00036	.00152	.00352	.01146	.07744	.02681	.06799
#2	-.00327	.00305	.00128	.01002	.06755	.00978	-.13660

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00453	.01576	-.09330	.00131	.00004	.04373	.00255
#1	.00340	.01998	-.10023	.00131	-.00097	.04373	.00342
#2	.00567	.01155	-.08637	.00131	.00105	.04372	.00167

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03461	-.00909	.02569	.07254	-.00189	-.00057	.00301
#1	.00269	-.00642	.02184	H.08551	-.00046	-.00057	.00338
#2	H.06653	-.01176	.02953	.05958	-.00333	-.00057	.00263

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.07952	.00043	-.00037	.00386
#1	.09117	.00100	-.00037	.00354
#2	.06788	-.00014	-.00037	.00418

Analysis Report Thu 12-12-91 02:15:38 PM page 1

Method: 60101150 Sample Name: LCSMCH Operator: JH
Run Time: 12/12/91 14:13:57
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	1.7255	18.690	3.7258	1.9054	1.8490	1.9032	18.199
#1	1.7304	18.689	3.7346	1.9058	1.8497	1.9060	18.204
#2	1.7206	18.691	3.7170	1.9050	1.8482	1.9003	18.194

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	1.8073	1.8098	1.8400	3.7492	18.475	18.102	18.881
#1	1.8126	1.8114	1.8420	3.7471	18.486	18.115	18.932
#2	1.8020	1.8083	1.8379	3.7514	18.464	18.090	18.830

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	2.0686	17.275	18.120	3.6446	1.8549	35.380	3.6197
#1	2.0725	17.285	18.177	3.6400	1.8591	35.345	3.6445
#2	2.0646	17.266	18.063	3.6491	1.8508	35.414	3.5948

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	3.5606	3.6360	3.7866	10.837	3.6217	1.8759	3.6350
#1	3.5872	3.6278	3.8145	10.837	3.6073	1.8762	3.6406
#2	3.5340	3.6441	3.7588	10.837	3.6360	1.8756	3.6294

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	3.5325	1.8439	1.8561	3.4793
#1	3.5160	1.8436	1.8587	3.4817
#2	3.5489	1.8442	1.8535	3.4769

Analysis Report Thu 12-12-91 02:21:34 PM page 1

Method: 60101150 Sample Name: 66190 Operator: JH
Run Time: 12/12/91 14:19:51
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00100	.01753	.00457	.31077	.94275	-.00043	24.876
#1	-.00100	.02453	-.00401	.31395	.94037	-.00043	24.795
#2	-.00100	.01052	.01316	.30758	.94514	-.00043	24.957

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00122	.00378	.00252	.01386	.03456	-.02286	2.3068
#1	-.00175	.00493	.00316	.01386	.03188	.00185	2.2438
#2	-.00069	.00263	.00188	.01386	.03724	-.04758	2.3698

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00907	H64.148	76.918	.44840	.00438	134.93	.01220
#1	.01020	H63.962	76.655	.44873	.00375	134.78	.01161
#2	.00793	H64.334	77.181	.44806	.00502	135.08	.01278

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03461	-.00423	.01767	16.132	-.00615	.43068	.00081
#1	.03460	.00053	.00738	16.096	-.00184	.43068	.00100
#2	.03461	-.00899	.02797	16.169	-.01045	.43068	.00063

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.07897	.00120	-.00037	.01639
#1	.13035	.00105	.00037	.01796
#2	.02758	.00134	-.00112	.01481

Analysis Report Thu 12-12-91 02:23:47 PM page 1

Method: 60101150 Sample Name: 66191 Operator: JH
Run Time: 12/12/91 14:22:05
Comment: VEDBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00098	.68617	.01018	.49727	.10529	-.00013	12.834
#1	-.00064	.66965	.00195	.50217	.10498	.00016	12.794
#2	.00261	.70268	.01841	.49236	.10561	-.00042	12.874

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00143	.00479	.01283	.01417	1.0113	.91512	5.4616
#1	-.00069	.00402	.01186	.01417	1.0081	.90654	5.3209
#2	-.00216	.00556	.01379	.01417	1.0145	.92370	5.6024

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00850	29.687	32.244	.11610	.01017	83.219	.03464
#1	.00680	29.622	32.279	.11544	.00811	83.602	.03493
#2	.01020	29.752	32.209	.11675	.01224	82.837	.03435

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01619	.00219	-.00627	16.150	-.00134	.38932	.04310
#1	.00819	-.00362	-.03217	16.091	-.00853	.39032	.04216
#2	.02418	.00801	.01964	16.210	.00585	.38832	.04405

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.07311	.00697	.00038	.00686
#1	.01924	.00554	.00038	.00638
#2	.12698	.00839	.00038	.00733

Analysis Report Thu 12-12-91 02:26:08 PM page 1

Method: 60101150 Sample Name: 66192 Operator: JH
Run Time: 12/12/91 14:24:25
Comment: VEDBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00059	78.240	.20638	.39519	1.7614	-.00016	43.056
#1	-.00088	78.602	.19874	.38971	1.7742	-.00014	43.062
#2	.00206	77.877	.21402	.40067	1.7487	-.00018	43.049

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00084	.21373	1.2662	.13231	H138.16	137.62	7.0566
#1	.00194	.21295	1.2665	.13159	H138.64	137.86	7.0715
#2	-.00026	.21451	1.2658	.13303	H137.68	137.38	7.0417

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.14164	H136.30	379.63	2.7819	.00580	137.55	2.9767
#1	.14504	H136.26	381.18	2.7874	.00590	138.70	2.9876
#2	.13824	H136.33	378.09	2.7763	.00571	136.40	2.9657

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.30789	-.11635	.21314	32.577	.00006	.53981	3.5015
#1	.31347	-.12385	.24992	32.541	.00540	.54395	3.5226
#2	.30232	-.10884	.17637	32.614	-.00528	.53568	3.4805

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.41619	.20676	.02283	2.2747
#1	-.39597	.20745	.02396	2.2744
#2	-.43641	.20606	.02171	2.2749

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Method: 60101150 Sample Name: 66193 Operator: JH
Run Time: 12/12/91 14:27:07
Comment: VEOBRIEN 1,2 (5800,5806) HOH/SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.02225	986.98	1.6302	1.0154	4.1169	.00407	204.50
#1	.00953	986.30	1.5690	1.0089	4.1050	.00461	204.64
#2	.03497	987.66	1.6915	1.0218	4.1288	.00353	204.35

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00013	1.1935	10.415	1.4158	H837.39	H1293.8	29.863
#1	.00139	1.1893	10.402	1.3427	H837.43	H1292.5	28.969
#2	-.00165	1.1977	10.427	1.4888	H837.36	H1295.0	30.756

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	1.6470	H175.45	H2575.2	22.619	.04692	82.264	17.641
#1	1.5955	H175.43	H2570.1	22.587	.04881	81.599	17.660
#2	1.6986	H175.46	H2580.3	22.650	.04503	82.928	17.622

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	5.3638	-1.0575	1.3241	16.470	-.08389	2.3439	46.805
#1	5.3558	-1.1171	1.3120	16.385	-.09123	2.3431	46.765
#2	5.3718	-.99785	1.3362	16.556	-.07655	2.3448	46.844

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-3.5025	2.2375	.25398	2.7610
#1	-3.4040	2.2337	.25248	2.7454
#2	-3.6010	2.2413	.25548	2.7767

Analysis Report Thu 12-12-91 02:59:15 PM page 1

Method: 60101150 Sample Name: 66314 Operator: Jh
Run Time: 12/12/91 14:57:30
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00170	.02194	-.00306	.93603	1.6774	-.00015	81.355
#1	-.00107	.02893	-.00533	.92024	1.6644	.00041	80.891
#2	-.00233	.01495	-.00079	.95182	1.6905	-.00071	81.815

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00384	.00421	.00110	.01231	1.7971	1.6895	15.099
#1	-.00493	.00497	-.00002	.01231	1.7890	1.7189	15.224
#2	-.00275	.00345	.00221	.01230	1.8051	1.6600	14.974

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.01756	H86.090	112.62	.76839	.00815	137.21	.00904
#1	.01700	H85.695	111.89	.76385	.00957	136.03	.01100
#2	.01813	H86.485	113.35	.77293	.00673	138.39	.00708

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03099	.01397	.01009	24.024	-.00084	1.3578	.00476
#1	.04959	.01559	.02393	23.806	.00376	1.3461	.00569
#2	.01238	.01235	-.00375	24.241	-.00544	1.3695	.00382

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.03150	.00201	-.00187	.00190
#1	.02472	.00415	-	

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Method: 60101150 Sample Name: 66315 Operator: Jn
Run Time: 12/12/91 15:01:16
Comment: VEOBRIEN 1,2 (5800,5806) HOR
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00150	218.42	.51104	1.1174	6.0046	.00047	227.75
#1	.00284	215.31	.45439	1.0982	5.8987	.00071	225.25
	.00016	221.54	.56769	1.1367	6.1105	.00023	230.25

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.04238	.41003	2.8225	.52878	H326.07	330.48	22.299
#1	.04278	.40491	2.7916	.52150	H322.06	326.63	22.184
#2	.04197	.41515	2.8533	.53606	H330.08	334.34	[illegible]

00022

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na3883	Ni2316
Avge	.36091	H145.93	567.60	7.9875	.03488	142.10	3.5831
#1	.35694	H144.55	559.66	7.8894	.03325	139.51	3.5389
#2	.36488	H147.30	575.54	8.0856	.03650	144.69	3.6272

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
ge	151.59	-.33510	.41837	55.828	-.01566	2.5015	12.243
#1	150.45	-.34611	.46647	55.061	-.01761	2.4594	12.034
#2	152.74	-.32408	.37027	56.596	-.01370	2.5435	12.453

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-1.0469	.55281	.06907	5.0830
#1	-1.2381	.54504	.06830	5.0324
#2	-.85563	.56059	.06984	5.1335

Analysis Report QC Standard Thu 12-12-91 03:25:40 PM page 1

Method: 60101150 Sample Name: CCVC1 Operator: JH
Run Time: 12/12/91 15:23:55
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00050	.49029	.49210	.51179	.48415	.48712	19.348
#1	.00275	.49917	.48845	.50369	.48256	.48568	19.340
#2	-.00175	.48141	.49575	.51989	.48574	.48856	19.357

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00060	-.00003	.50537	-.00065	.50052	.44530	19.968
#1	.00263	.00266	.50442	.00222	.49805	.44967	19.927
#2	-.00142	-.00272	.50632	-.00351	.50299	.44093	20.009

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	2.0805	.50228	.40252	.00024	1.9523	19.580	.00001
#1	2.0578	.50174	.44030	.00154	1.9486	19.444	.00060
#2	2.1031	.50282	.36473	-.00107	1.9561	19.716	-.00058

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02156	.48196	-.01366	.00754	1.9579	1.9511	1.9241
#1	.02954	.48429	-.00858	.03605	1.9684	1.9423	1.9160
#2	.01357	.47964	-.01874	-.02097	1.9474	1.9599	1.9322

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.04647	-.01055	1.9569	.47623
#1	.07201	-.00869	1.9483	.47481
#2	.02093	-.01240	1.9655	.47765

Analysis Report QC Standard Thu 12-12-91 03:28:27 PM page 1

Method: 60101150 Sample Name: CCVH1 Operator: JH
Run Time: 12/12/91 15:26:42
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48869	.00162	-.00479	.00108	.00048	-.00078	.00065
#1	.48944	-.00662	-.00606	.00217	.00000	-.00078	.00630
#2	.48795	.00987	-.00353	.00000	.00095	-.00079	-.00500

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.47509	.47736	.00239	.48903	-.01222	-.06810	.00617
#1	.47546	.47851	.00351	.48545	-.01379	-.09336	-.24336
#2	.47472	.47621	.00128	.49261	-.01065	-.04285	.25569

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00227	.00464	-.10697	.48436	-.00127	.01094	.48179
#1	.00114	.00556	-.10037	.48468	.00107	.00937	.48355
#2	.00340	.00372	-.11358	.48403	-.00360	.01250	.48003

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.97349	-.00390	2.0068	.01003	.00710	-.00057	.00117
#1	.94956	-.00491	1.9921	.01523	.01383	-.00057	.00155
#2	.99742	-.00289	2.0216	.00483	.00036	-.00057	.00080

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9820	.48655	-.00038	-.00011
#1	2.0386	.48555	-.00112	-.00057
#2	1.9255	.48754	.00037	.00036

Analysis Report Blank Sample Thu 12-12-91 03:35:10 PM page 1

Method: 60101150 Sample Name: CCB1 Operator: JH
Run Time: 12/12/91 15:33:27
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00138	-.01080	-.00340	-.00103	.00032	-.00014	.00493
#1	-.00150	-.01907	-.00564	-.00231	.00064	-.00043	.01022
#2	-.00125	-.00253	-.00115	.00026	.00000	.00015	-.00036

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00108	.00191	.00080	-.00144	.00472	-.06049	.22132
#1	-.00255	.00076	.00160	-.00001	.00023	-.04780	.04095
#2	.00038	.00306	.00000	-.00287	.00920	-.07318	.40170

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00057	.01302	-.12117	.00162	-.00079	.00625	.00303
#1	.00113	.00862	-.15597	.00260	.00026	.00625	.00303
#2	.00000	.01741	-.08637	.00064	-.00183	.00625	.00304

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02396	-.01768	.02850	.01296	.00537	-.00057	.00132
#1	.00267	-.01788	.03399	.01814	.00499	-.00057	.00076
#2	.04525	-.01748	.02302	.00778	.00575	-.00057	.00188

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.12971	.00015	-.00075	.00094
#1	H.19052	.00072	-.00112	.00078
#2	.06889	-.00043	-.00037	.00111

Analysis Report Thu 12-12-91 03:37:37 PM page 1

Method: 60101150 Sample Name: 66193 Operator: JH
Run Time: 12/12/91 15:35:53
Comment: VEOBRIEN 1,2 (5800,5806) HOH /10
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00046	118.75	.27186	.13084	.48641	.00057	26.397
#1	.00028	118.29	.27319	.13226	.48371	.00054	26.293
#2	.00064	119.22	.27053	.12943	.48912	.00061	26.502

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00154	.16244	1.3599	.15263	H166.86	167.50	3.2400
#1	-.00209	.16056	1.3562	.14974	H166.14	166.96	3.3498
#2	-.00098	.16432	1.3636	.15551	H167.58	168.03	3.1301

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.16827	H133.98	300.56	2.9582	.00053	9.2125	2.3911
#1	.16544	H133.93	299.33	2.9464	.00126	9.1876	2.3862
#2	.17111	H134.04	301.79	2.9700	-.00020	9.2374	2.3961

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.73666	-.16223	.23879	2.0013	-.00984	.27777	5.8036
#1	.74975	-.14661	.25785	1.9883	-.00746	.27535	5.7754
#2	.72356	-.17785	.21972	2.0143	-.01223	.28020	5.8317

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.53673	.28103	.02983	.35073
#1	-.63777	.28206	.02870	.35288
#2	-.43568	.28000	.03095	.34858

Analysis Report Thu 12-12-91 03:43:12 PM page 1

Method: 60101150 Sample Name: 66316 Operator: JH
Run Time: 12/12/91 15:41:28
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00039	.02932	.02146	.83560	.58057	-.00029	48.103
#1	.00014	.02742	.02332	.82412	.58057	-.00015	47.960
#2	.00065	.03123	.01961	.84709	.58056	-.00043	48.245

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00081	.00395	.00271	.02890	1.5133	1.4323	17.686
#1	.00118	.00433	.00255	.03105	1.5077	1.3950	17.884
#2	.00045	.00357	.00287	.02676	1.5189	1.4697	17.488

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.01473	H72.120	88.812	.60557	.01689	116.42	.00819
#1	.01360	H71.950	88.625	.60458	.01716	116.60	.01142
#2	.01586	H72.289	88.999	.60655	.01661	116.24	.00496

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01784	.00506	.02338	17.086	-.00367	1.0821	.00330
#1	.02318	.00857	.03197	17.070	-.00344	1.0848	.00349
#2	.01250	.00154	.01479	17.101	-.00390	1.0794	.00311

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.05600	.00187	-.00037	.00088
#1	.13629	.00188	-.00037	.00118
#2	-.02429	.00187	-.00037	.00058

Analysis Report Thu 12-12-91 03:46:19 PM page 1

Method: 60101150 Sample Name: 66316L Operator: JH
Run Time: 12/12/91 15:44:36
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00010	-.00201	.00485	.18208	.11977	-.00085	10.452
#1	-.00123	.00116	.00241	.18380	.11961	-.00127	10.464
#2	.00102	-.00519	.00728	.18035	.11993	-.00042	10.439

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00199	.00125	.00095	.00706	.33579	.22555	3.6526
#1	-.00217	.00087	.00223	.00849	.33624	.19231	3.5082
#2	-.00181	.00164	-.00033	.00563	.33535	.25879	3.7971

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00623	17.820	18.590	.13197	.00381	24.025	.00224
#1	.00680	17.838	18.645	.13197	.00205	24.063	-.00050
#2	.00567	17.803	18.535	.13198	.00558	23.988	.00498

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00519	-.00900	.01929	3.6037	.00888	.22448	.00217
#1	.01319	-.00463	.02257	3.5726	.01017	.22505	.00198
#2	-.00281	-.01337	.01601	3.6348	.00759	.22391	.00236

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.03844	-.00028	.00000	.00446
#1	.02942	-.00070	-.00112	.00509
#2	.04746	.00015	.00112	.00383

Analysis Report Thu 12-12-91 03:48:40 PM page 1

Method: 60101150 Sample Name: 66316D Operator: JH
Run Time: 12/12/91 15:46:55
Comment: VEOBRIEN 1,2 (5800,5806) HDH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00014	.04139	.01625	.84646	.58900	-.00015	48.840
#1	.00114	.04902	.01861	.84326	.59074	.00014	48.838
#2	-.00085	.03377	.01389	.84966	.58725	-.00044	48.843

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00027	.00434	.00127	.03032	1.5323	1.4488	18.038
#1	.00009	.00357	.00030	.02960	1.5327	1.4529	18.163
#2	-.00063	.00510	.00223	.03104	1.5319	1.4448	17.913

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.01586	H73.038	90.371	.61629	.01521	118.45	.01230
#1	.01586	H73.044	90.482	.62151	.01658	118.77	.01240
#2	.01586	H73.033	90.260	.61107	.01384	118.13	.01221

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03380	.00548	.01709	17.430	-.00484	1.1005	.00256
#1	.03913	-.00198	.01115	17.459	-.00492	1.1045	.00275
#2	.02848	.01294	.02303	17.402	-.00477	1.0965	.00237

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.12974	.00173	-.00037	-.00014
#1	.07338	.00102	-.00037	-.00108
#2	.18610	.00244	-.00037	.00081

Analysis Report Thu 12-12-91 03:54:12 PM page 1

Method: 60101150 Sample Name: 66316S Operator: JH
Run Time: 12/12/91 15:52:29
Comment: VEDBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	1.6479	18.427	3.6135	2.6966	2.4038	1.8453	65.180
#1	1.6432	18.364	3.5956	2.6880	2.4014	1.8383	64.761
#2	1.6527	18.490	3.6314	2.7051	2.4061	1.8522	65.598

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	1.7132	1.7103	1.7482	3.6708	19.216	18.588	36.539
#1	1.7004	1.6988	1.7371	3.6679	19.114	18.579	36.445
#2	1.7260	1.7218	1.7592	3.6736	19.318	18.596	36.633

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	2.0731	H82.712	106.33	4.0765	1.8036	151.22	3.4233
#1	2.0657	H82.309	106.00	4.0579	1.7944	150.82	3.4101
#2	2.0805	H83.115	106.66	4.0950	1.8128	151.62	3.4365

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	3.2755	3.5275	3.6694	27.406	3.4283	2.9359	3.5339
#1	3.2940	3.5181	3.6777	27.178	3.3877	2.9291	3.5202
#2	3.2569	3.5369	3.6611	27.634	3.4690	2.9427	3.5476

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	3.2457	1.7721	1.8184	3.3091
#1	3.3114	1.7663	1.8131	3.2840
#2	3.1801	1.7780	1.8236	3.3343

Analysis Report Thu 12-12-91 03:57:48 PM page 1

Method: 60101150 Sample Name: 66317 Operator: JH
Run Time: 12/12/91 15:56:02
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.03027	H1431.0	2.9152	1.8415	18.176	.02654	620.34
#1	-.03543	H1429.2	2.5306	1.8252	18.331	.02548	621.06
#2	-.02511	H1432.8	3.2998	1.8578	18.022	.02760	619.62

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.17879	2.7312	22.976	5.0386	H747.91	H3083.7	55.288
#1	.18105	2.7269	22.991	5.0407	H747.53	H3084.2	55.519
#2	.17653	2.7355	22.961	5.0364	H748.29	H3083.2	55.058

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	4.8227	H169.89	H5569.7	55.624	.43195	122.01	33.497
#1	4.8068	H169.38	H5579.9	55.693	.42840	121.78	33.421
#2	4.8386	H170.39	H5559.5	55.556	.43550	122.25	33.574

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	H360.82	-2.1355	1.0247	45.763	.15079	6.8709	51.774
#1	H360.04	-2.2439	.76814	45.471	.14201	6.9143	51.871
#2	H361.60	-2.0272	1.2813	46.055	.15957	6.8274	51.677

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-2.2409	4.8531	.58918	17.866
#1	-2.2056	4.8600	.59180	17.738
#2	-2.2761	4.8461	.58655	17.994

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Method: 60101150 Sample Name: 66317 Operator: JH
Run Time: 12/12/91 16:01:19
Comment: VEOBRIEN 1,2 (5800,5806) HOH /10
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00215	318.92	.68843	.28543	2.3725	.00388	95.973
#1	-.00277	316.30	.62465	.28014	2.3507	.00352	95.276
#2	-.00153	321.54	.75221	.29072	2.3942	.00424	96.670

Elem	Co2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.02050	.44382	3.5802	.56051	H448.31	467.61	6.3106
#1	.02221	.44086	3.5525	.55677	H444.70	463.91	6.3107
#2	.01880	.44679	3.6078	.56424	H451.91	471.31	6.3106

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.50312	H173.79	696.38	8.7079	.02775	14.461	5.5723
#1	.49519	H173.70	690.55	8.6362	.02447	14.299	5.5400
#2	.51105	H173.88	702.21	8.7796	.03104	14.623	5.6046

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	59.125	-.47425	.67340	6.1855	.00921	.91297	7.3449
#1	59.079	-.50217	.62041	6.1488	.01945	.90314	7.2620
#2	59.171	-.44633	.72640	6.2221	-.00103	.92279	7.4279

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-1.3727	.71339	.07898	2.6878
#1	-1.2998	.70941	.07673	2.6686
#2	-1.4455	.71737	.08124	2.7069

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Method: 60101150 Sample Name: 66317 Operator: JH
Run Time: 12/12/91 16:07:33
Comment: VEOBRIEN 1,2 (5800,5806) HOH /50
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00075	65.480	.15521	.05994	.48499	.00081	20.466
#1	.00096	65.208	.16601	.05951	.48276	.00081	20.397
#2	.00053	65.752	.14441	.06037	.48722	.00081	20.534

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00303	.09747	.76433	.11612	H100.84	100.79	1.1781
#1	.00356	.09595	.76288	.11539	H100.51	100.47	1.1750
#2	.00250	.09900	.76578	.11684	H101.17	101.12	1.1812

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.10142	H105.88	142.85	1.8750	.00565	2.9324	1.2214
#1	.10085	H105.74	142.29	1.8655	.00539	2.9294	1.2197
#2	.10198	H106.03	143.41	1.8845	.00591	2.9355	1.2231

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	12.868	-.10886	.17771	1.2993	.01353	.18791	1.5327
#1	12.746	-.10438	.17185	1.3018	.01551	.18734	1.5276
#2	12.990	-.11333	.18356	1.2967	.01156	.18848	1.5377

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.27716	.14991	.01625	.59267
#1	-.27292	.14878	.01550	.59194
#2	-.28139	.15103	.01700	.59341

00084

Analysis Report Thu 12-12-91 04:15:03 PM page 1

Method: 60101150 Sample Name: 66317D Operator: JH
Run Time: 12/12/91 16:13:18
Comment: VEOBRIEN 1,2 (5800,5806) HOH /50
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00117	59.078	.15538	.05676	.40901	-.00012	18.714
#1	-.00030	59.172	.16103	.05824	.40964	-.00012	18.704
#2	-.00205	58.984	.14972	.05529	.40837	-.00012	18.725

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00298	.08887	.68867	.10358	90.915	90.515	1.1610
#1	.00352	.08925	.69027	.10501	91.018	90.539	1.2080
#2	.00244	.08850	.68707	.10215	90.812	90.490	1.1140

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.09292	H98.963	128.37	1.6780	.00362	2.6632	1.0801
#1	.09405	H98.945	128.62	1.6773	.00367	2.6523	1.0836
#2	.09179	H98.981	128.12	1.6786	.00357	2.6742	1.0765

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	11.444	-.10343	.19457	.68954	.00154	.16912	1.3865
#1	11.468	-.10122	.19120	.68955	-.00003	.16940	1.3914
#2	11.420	-.10564	.19793	.68952	.00312	.16883	1.3816

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.29306	.13277	.01474	.52782
#1	-.20665	.13319	.01549	.52685
#2	-.37947	.13234	.01399	.52878

Analysis Report Thu 12-12-91 04:18:07 PM page 1

Method: 60101150 Sample Name: 66317L Operator: JH
Run Time: 12/12/91 16:16:22
Comment: VEGBRIEN 1,2 (5800,5806) HOH /250
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00143	13.129	.03390	.01440	.09821	-.00038	4.1779
#1	-.00244	13.106	.04041	.01401	.09821	-.00080	4.1748
#2	-.00042	13.151	.02739	.01479	.09821	.00004	4.1810

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00030	.02255	.15658	.02652	20.772	20.318	.31824
#1	-.00030	.02407	.15546	.02795	20.770	20.260	.29611
#2	-.00030	.02102	.15771	.02509	20.775	20.377	.34036

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.02210	27.254	28.601	.38096	.00020	.62896	.25186
#1	.02153	27.231	28.552	.37899	-.00025	.61335	.25793
#2	.02266	27.278	28.650	.38293	.00064	.64457	.24580

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	2.6145	-.01558	.01878	.24796	.00573	.03616	.30891
#1	2.6172	-.02458	.03203	.23757	.00474	.03616	.30928
#2	2.6118	-.00658	.00552	.25835	.00671	.03616	.30853

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.06537	.03072	.00191	.12795
#1	.05198	.02872	.00041	.12807
#2	.07875	.03271	.00340	.12782

Analysis Report QC Standard Thu 12-12-91 04:26:18 PM page 1

Method: 60101150 Sample Name: CCVC1 Operator: JH
Run Time: 12/12/91 16:24:34
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00000	.49018	.49144	.50667	.47286	.48009	18.986
#1	.00075	.47874	.49268	.50925	.47333	.48024	18.974
#2	-.00074	.50161	.49019	.50409	.47238	.47994	18.999

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00132	-.00266	.48826	.00151	.51712	.44141	19.764
#1	.00150	-.00342	.48457	.00080	.52587	.40793	19.641
#2	.00114	-.00190	.49194	.00223	.50837	.47488	19.888

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	2.0261	.50374	.38160	.00089	1.9159	19.155	.00109
#1	2.0295	.50870	.42283	.00088	1.9165	19.166	-.00116
#2	2.0227	.49879	.34036	.00089	1.9153	19.144	.00335

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.06145	.47701	-.01731	-.02118	1.9553	1.9236	1.8791
#1	.07210	.47533	-.00396	-.04709	1.9636	1.9235	1.8792
#2	.05081	.47869	-.03067	.00473	1.9471	1.9237	1.8789

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.02721	-.01115	1.9094	.47356
#1	-.00809	-.01272	1.9086	.47168
#2	-.04632	-.00958	1.9101	.47543

Analysis Report QC Standard Thu 12-12-91 04:29:16 PM page 1

Method: 60101150 Sample Name: CCVN2 Operator: JH
Run Time: 12/12/91 16:27:32
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48082	-.00092	-.00319	.00045	.00111	-.00075	-.00550
#1	.47969	-.00027	.00098	-.00081	.00127	-.00046	-.00847
#2	.48195	-.00156	-.00735	.00171	.00095	-.00104	-.00253

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.48053	.46780	-.00098	.48186	.03198	-.08546	-.17520
#1	.47834	.46857	.00062	.48258	.03513	-.11056	-.18638
#2	.48273	.46703	-.00258	.48114	.02884	-.06036	-.16401

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00227	.02562	-.09295	.47620	.00007	-.00780	.48864
#1	.00114	.03286	-.05848	.47880	-.00032	-.00312	.47826
#2	.00340	.01837	-.12743	.47359	.00045	-.01249	.49901

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.99741	-.00600	2.0005	-.01333	.00264	-.00057	.00061
#1	.98145	-.00735	2.0029	-.00035	.00869	-.00057	.00080
#2	1.0134	-.00465	1.9981	-.02632	-.00341	-.00057	.00042

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9798	.47984	.00000	.00191
#1	1.9777	.47927	-.00038	.00195
#2	1.9819	.48041	.00037	.00188

Analysis Report Blank Sample Thu 12-12-91 04:41:43 PM page 1

Method: 60101150 Sample Name: CCB2 Operator: JH
Run Time: 12/12/91 16:40:00
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00138	-.01525	-.00272	-.00017	.00111	-.00028	-.01044
#1	-.00325	-.01526	.00047	-.00273	.00127	-.00042	-.01302
#2	.00049	-.01524	-.00592	.00238	.00095	-.00014	-.00787

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00237	.00077	-.00064	.00000	.02693	-.06051	-.05031
#1	-.00256	-.00153	-.00129	.00143	.03300	-.06465	.07564
#2	-.00217	.00306	.00000	-.00143	.02087	-.05638	-.17626

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	-.00057	.01934	-.09380	.00064	-.00317	-.01249	-.00078
#1	.00113	.02328	-.10154	.00129	-.00182	-.00624	-.00147
#2	-.00227	.01540	-.08605	-.00001	-.00453	-.01873	-.00010

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03193	-.01713	.00080	-.01813	.01172	-.00057	.00094
#1	.02928	-.01802	.01115	-.03887	.00696	-.00057	.00113
#2	.03459	-.01623	-.00955	.00262	.01649	-.00057	.00075

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.03593	-.00043	-.00150	.00142
#1	.10161	-.00128	-.00336	.00079
#2	-.02976	.00043	.00037	.00205

Analysis Report Thu 12-12-91 04:44:52 Pm page 1

Method: 60101150 Sample Name: 663179 Operator: Jh
Run Time: 12/12/91 16:43:07
Comment: VEOBRIEN 1,2 (5800,5806) HOR /50
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.03421	59.912	.21391	.09449	.48551	.03611	18.998
#1	.03405	59.657	.20555	.09617	.48249	.03625	18.926
#2	.03437	60.167	.22226	.09281	.48853	.03597	19.069

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.04012	.12685	.72739	.17373	92.452	92.193	1.5246
#1	.03976	.12686	.72818	.17086	92.066	91.903	1.6712
#2	.04047	.12684	.72660	.17661	92.837	92.484	1.3779

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.12748	H100.49	131.46	1.7741	.02447	3.3814	1.1970
#1	.12691	H100.25	131.04	1.7695	.02666	3.3674	1.1876
#2	.12805	H100.72	131.87	1.7787	.02227	3.3954	1.2064

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	12.268	-.09940	.20185	2.0110	.06018	.21044	1.2504
#1	12.212	-.09995	.22077	1.9902	.06397	.20958	1.2427
#2	12.324	-.09885	.18293	2.0317	.05640	.21129	1.2581

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.14211	.16462	.04949	.59968
#1	-.04942	.16321	.04986	.59850
#2	-.23480	.16603	.04912	.60086

Analysis Report Thu 12-12-91 04:47:25 PM page 1

Method: 60101150 Sample Name: 66192 Operator: JH
Run Time: 12/12/91 16:45:41
Comment: VEOBRIEN 1,2 (5800,5806) HOH /ro
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00179	8.3936	.01824	.04503	.18889	-.00012	4.8891
#1	-.00267	8.4412	.01991	.04484	.18985	-.00012	4.8878
#2	-.00091	8.3459	.01657	.04522	.18794	-.00013	4.8904

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00209	.02485	.14218	.01694	15.786	15.462	.76611
#1	-.00317	.02714	.14218	.01622	15.876	15.433	.74517
#2	-.00100	.02256	.14218	.01766	15.697	15.491	.78705

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.01700	H37.277	40.494	.31018	-.00063	14.392	.34084
#1	.01813	H37.393	40.702	.30984	-.00170	14.492	.33927
#2	.01586	H37.161	40.286	.31052	.00045	14.292	.34240

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.09082	-.01472	.04390	3.4809	.00813	.05695	.37647
#1	.09887	-.01635	.00833	3.4706	.00707	.05838	.37910
#2	.08277	-.01309	.07947	3.4913	.00918	.05553	.37385

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.04162	.02246	.00004	.26605
#1	.01848	.02232	-.00033	.26730
#2	.06477	.02261	.00042	.26479

Analysis Report Thu 12-12-91 04:49:21 PM page 1

Method: 60101150 Sample Name: 66193 Operator: JH
Run Time: 12/12/91 16:47:36
Comment: VEDBRIEN 1,2 (5800,5806) HOH /20
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00056	59.486	.14822	.06745	.24328	-.00036	13.431
#1	.00007	59.505	.16790	.07019	.24360	-.00050	13.468
#2	-.00119	59.467	.12853	.06471	.24296	-.00022	13.393

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00050	.08405	.69160	.07710	85.581	85.233	1.7353
#1	-.00235	.08252	.69384	.07639	85.695	85.279	1.7920
#2	.00136	.08559	.68936	.07781	85.467	85.187	1.6785

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.08329	H107.68	149.59	1.4967	.00125	4.5703	1.2218
#1	.08272	H107.72	149.69	1.5003	.00202	4.5563	1.2131
#2	.08385	H107.63	149.48	1.4931	.00049	4.5844	1.2305

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.42878	-.09633	.14249	.99296	-.00005	.13981	2.9065
#1	.43941	-.08655	.11604	1.0034	.00482	.13896	2.9136
#2	.41815	-.10610	.16894	.98255	-.00492	.14067	2.8993

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.24311	.14274	.01417	.18301
#1	-.28807	.14360	.01417	.18210
#2	-.19815	.14189	.01417	.18392

Analysis Report Thu 12-12-91 04:52:36 PM page 1

Method: 60101150 Sample Name: 66195 Operator: JH
Run Time: 12/12/91 16:50:51
Comment: VEOBRIEN 1,2 (5800,5806) HOH /10
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00090	23.479	.08010	.12639	.63908	-.00054	26.177
#1	-.00275	23.640	.06888	.12496	.64592	-.00067	26.279
#2	.00095	23.318	.09132	.12782	.63225	-.00042	26.076

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00436	.05076	.32854	.05904	38.828	38.409	2.2591
#1	.00492	.05189	.32998	.05833	39.164	38.645	2.2202
#2	.00379	.04963	.32710	.05975	38.493	38.174	2.2981

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.03909	453.495	61.120	.92148	.00097	14.795	.42233
#1	.03853	453.756	61.626	.92706	.00106	14.943	.42332
#2	.03966	453.234	60.614	.91590	.00087	14.646	.42133

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	18.246	-.04501	.06066	6.1609	.00248	.26937	1.3423
#1	18.336	-.05528	.06999	6.1946	-.00059	.27164	1.3566
#2	18.155	-.03474	.05133	6.1272	.00555	.26709	1.3281

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.15311	.06326	.00688	.61112
#1	-.21465	.06196	.00726	.61218
#2	-.09156	.06456	.00651	.61006

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Method: 60101150 Sample Name: ICSA1F Operator: JH
Run Time: 12/12/91 16:54:00
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00012	456.03	.13671	.04059	.03454	-.00069	435.68
#1	.00117	453.43	.12605	.03603	.03486	-.00041	433.58
#2	-.00092	458.62	.14737	.04516	.03421	-.00097	437.77

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00127	.00898	.00625	-.00519	172.09	172.33	-.04986
#1	-.00327	.00818	.00479	-.00522	171.20	171.48	-.10774
#2	.00073	.00978	.00771	-.00516	172.98	173.18	.00803

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00227	136.35	458.50	.01022	-.00507	-.00693	.00419
#1	.00113	136.32	455.82	.00780	-.00796	-.01135	.00810
#2	.00340	136.38	461.18	.01264	-.00217	-.00250	.00028

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.11119	-.14392	.19074	-.04339	.00233	.18592	.00020
#1	.10619	-.16249	.20663	-.05121	.00000	.18480	-.00020
#2	.11619	-.12535	.17485	-.03557	.00467	.18705	.00060

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.58166	-.00469	-.00150	-.00668
#1	-.73549	-.00423	-.00037	-.00746
#2	-.42783	-.00515	-.00262	-.00589

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Method: 60101150 Sample Name: ICSABIF Operator: JH
Run Time: 12/12/91 16:56:30
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.89384	451.81	.08432	.03851	.46973	.43089	431.97
#1	.89546	451.47	.12374	.04048	.46973	.43060	431.59
#2	.89223	452.16	.04489	.03655	.46973	.43118	432.35

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.86307	.42080	.41571	.44498	170.52	170.92	-.26767
#1	.85317	.42079	.41250	.44570	170.46	170.84	-.27892
#2	.87298	.42080	.41891	.44427	170.58	170.99	-.25642

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00397	136.26	454.26	.43235	-.01076	-.02837	.81957
#1	.00340	136.27	454.00	.42908	-.00953	-.01116	.81997
#2	.00453	136.25	454.51	.43563	-.01199	-.04558	.81918

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.99570	-.15072	.20248	-.04623	.00361	.18411	.00005
#1	.98739	-.14061	.21479	-.05662	.00903	.18482	.00005
#2	1.0040	-.16083	.19017	-.03584	-.00182	.18339	.00004

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.55895	.42635	.00000	.82930
#1	-.44991	.42750	.00037	.82556
#2	-.66799	.42521	-.00037	.83305

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Method: 60101150 Sample Name: CCVC3 Operator: JH
Run Time: 12/12/91 17:15:36
Comment: VEOBRIEN 1,2 (5800,5806) HDH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00063	.48891	.49597	.50518	.47063	.48237	19.077
#1	.00075	.48640	.49769	.50842	.47492	.48481	19.161
#2	.00051	.49143	.49426	.50194	.46633	.47993	18.993

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00078	-.00076	.49642	.00080	.52767	.42475	19.780
#1	.00187	-.00039	.49865	.00222	.49895	.36655	20.102
#2	-.00032	-.00113	.49418	-.00063	0.55639	.48295	19.458

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	2.0351	.51629	.42168	.00088	1.9121	19.207	.00139
#1	2.0487	.49623	.35718	.00218	1.9205	19.319	.00236
#2	2.0215	.53635	.48617	-.00041	1.9037	19.094	.00041

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02157	.47924	-.01276	-.01597	1.9467	1.9146	1.8819
#1	.00830	.48493	-.01036	-.01589	1.9543	1.9280	1.8980
#2	.03484	.47355	-.01516	-.01604	1.9390	1.9012	1.8657

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.01751	-.01057	1.9060	.47309
#1	.09127	-.01100	1.9169	.47387
#2	-.05626	-.01015	1.8952	.47231

Analysis Report QC Standard Thu 12-12-91 05:19:46 PM page 1

Method: 60101150 Sample Name: CCVN3 Operator: JH
Run Time: 12/12/91 17:18:02
Comment: VEOBRIEN 1,2 (5800,5806) HDH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.47844	-.01106	.00122	-.00040	.00032	-.00145	-.00326
#1	.47370	-.01549	.00004	.00044	-.00064	-.00157	-.00479
#2	.48319	-.00663	.00240	-.00125	.00127	-.00132	-.00173

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.46958	.46818	.00013	.48401	-.00797	-.07788	-.05283
#1	.46702	.46627	.00124	.47971	-.00572	-.06201	-.03064
#2	.47214	.47010	-.00098	.48830	-.01021	-.09376	-.07502

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00227	.00491	-.11374	.47685	.00008	-.00624	.48198
#1	.00227	.00665	-.09972	.47294	-.00023	-.00624	.47943
#2	.00227	.00318	-.12775	.48076	.00040	-.00624	.48453

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	1.0240	-.00542	1.9697	.00998	.00862	-.00057	.00080
#1	1.0027	-.01280	1.9515	.00477	.00476	-.00057	.00155
#2	1.0453	.00196	1.9880	.01518	.01248	-.00057	.00004

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9210	.47728	.00000	.00035
#1	2.0051	.47385	.00037	.00099
#2	1.8369	.48070	-.00038	-.00029

Analysis Report Blank Sample Thu 12-12-91 05:27:08 PM page 1

Method: 60101150 Sample Name: CCB3 Operator: JH
Run Time: 12/12/91 17:25:25
Comment: VEOBRIEN 1,2 (5800,5806) HOH
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00113	-.00888	-.00018	-.00061	.00032	-.00028	.00038
#1	-.00175	-.01015	.00445	-.00275	.00095	-.00042	.00087
#2	-.00050	-.00761	-.00481	.00153	-.00032	-.00014	-.00011

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00291	.00344	.00112	.00215	.01728	-.04417	-.00237
#1	-.00437	.00382	.00320	.00287	.04601	-.03175	-.05056
#2	-.00144	.00306	-.00096	.00143	-.01144	-.05660	.04581

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00453	.01320	-.10765	-.00033	-.00280	-.00312	.00225
#1	.00340	.02529	-.07285	-.00066	-.00449	-.00312	-.00479
#2	.00567	.00111	-.14245	-.00001	-.00112	-.00312	.00930

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01597	-.00346	.00742	-.00777	.00401	-.00057	.00131
#1	.00799	-.00571	.00865	-.03367	.00136	-.00057	.00150
#2	.02396	-.00121	.00619	.01813	.00666	-.00057	.00113

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.04978	-.00028	-.00150	.00030
#1	.10116	-.00014	-.00112	.00079
#2	-.00160	-.00043	-.00187	-.00019

Analysis Report Blank Sample Thu 12-12-91 05:29:53 PM page 1

Method: 60101150 Sample Name: PBW Operator: JH
Run Time: 12/12/91 17:28:10
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00075	.03559	.00098	.00386	.00477	-.00071	.03125
#1	-.00025	.02796	-.00012	.00363	.00477	-.00014	.03782
#2	-.00125	.04321	.00209	.00408	.00477	-.00128	.02468

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00073	.00000	.00224	.00644	.04714	-.03132	-.21700
#1	.00110	.00000	.00352	.00716	.04198	-.01471	-.16642
#2	-.00256	.00000	.00096	.00572	.05230	-.04794	-.26758

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00000	.01220	-.12167	.00522	-.00176	.00625	.00421
#1	.00000	.01083	-.12827	.00522	-.00309	.00937	.00265
#2	.00000	.01358	-.11507	.00521	-.00042	.00313	.00577

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.04527	-.01027	.00850	H.19949	.00340	-.00057	.00113
#1	H.05057	-.00441	-.01290	H.16843	.00575	-.00057	.00150
#2	.03997	-.01613	.02989	H.23056	.00105	-.00057	.00076

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.08246	.00000	-.00187	H.04227
#1	.04945	.00014	-.00112	H.04211
#2	.11547	-.00014	-.00262	H.04242

Analysis Report Blank Sample Thu 12-12-91 05:32:31 PM page 1

Method: 60101150 Sample Name: PB1T Operator: JH
Run Time: 12/12/91 17:30:48
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00150	.00383	-.00254	.00537	.00907	-.00028	.06452
#1	-.00025	.00636	.00397	.00324	.00891	-.00015	.06982
#2	-.00275	.00130	-.00906	.00750	.00923	-.00042	.05922

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00090	.00229	.00144	.00429	-.04110	-.06475	-.36788
#1	-.00219	.00229	.00288	.00286	-.03775	-.06439	-.31971
#2	.00038	.00230	-.00001	.00572	-.04445	-.06512	-.41606

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
pe	.00340	.01084	-.09990	.00097	-.00045	H1319.4	.00304
#1	.00453	.00992	-.08571	.00195	-.00045	H1311.2	.00773
#2	.00227	.01175	-.11408	-.00001	-.00046	H1327.6	-.00166

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01068	-.00300	.01240	H.17103	.02013	.00285	.00132
#1	.01866	-.00125	.02059	H.16846	.02361	.00285	.00151
#2	.00270	-.00475	.00421	H.17361	.01664	.00285	.00113

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.12503	-.00014	.00037	H.05216
#1	.09226	.00129	.00112	H.05152
#2	H.15780	-.00157	-.00037	H.05279

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Method: 60101150 Sample Name: 67031 Operator: JH
Run Time: 12/12/91 17:34:21
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00125	.01463	-.00425	.01663	.02179	-.00029	35.827
#1	-.00149	.02607	-.01015	.01727	.02227	.00042	35.709
#2	-.00100	.00319	.00166	.01600	.02131	-.00100	35.945

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00028	.00268	.00015	.03220	.06146	-.00225	1.8203
#1	.00046	.00230	-.00161	.03292	.07492	.01020	1.9426
#2	-.00101	.00307	.00190	.03149	.04800	-.01469	1.6980

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00113	1.9478	1.8604	.17804	.00068	219.74	.00450
#1	.00113	1.9566	1.8810	.17739	.00241	220.07	.00401
#2	.00113	1.9390	1.8398	.17869	-.00105	219.41	.00499

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03725	-.00317	.00059	.22806	.00579	.09487	.00055
#1	.05587	.00036	.00686	.22547	.00745	.09487	.00073
#2	.01863	-.00670	-.00568	.23066	.00412	.09487	.00036

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.02301	.00088	.00000	.07379
#1	.07681	.00073	-.00037	.07317
#2	-.03079	.00102	.00037	.07442

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Method: 60101150 Sample Name: 1CSA1F Operator: JH
Run Time: 12/12/91 17:37:13
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00097	450.22	.16457	.03657	.03485	-.00083	436.44
#1	.00028	449.95	.16574	.03786	.03517	-.00098	435.93
#2	-.00221	450.49	.16339	.03527	.03453	-.00069	436.96

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00131	.00697	.00706	-.00157	172.03	172.62	-.08323
#1	-.00260	.00506	.00866	-.00228	171.87	172.60	-.17224
#2	-.00002	.00888	.00546	-.00085	172.18	172.65	.00579

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00283	136.35	454.09	.00996	-.00488	.06059	.00467
#1	.00340	136.31	453.87	.01061	-.00799	.06999	.00516
#2	.00227	136.39	454.30	.00931	-.00177	.05119	.00418

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.08875	-.15175	.24224	-.06152	-.00123	.18406	.00114
#1	.08582	-.14448	.24262	-.07704	.00985	.18478	.00094
#2	.09169	-.15901	.24186	-.04601	-.01232	.18335	.00134

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.76162	-.00356	-.00112	-.00864
#1	-.89462	-.00399	-.00187	-.00847
#2	-.62861	-.00314	-.00037	-.00881

Method: 60101150 Sample Name: ICSABIF Operator: JH
Run Time: 12/12/91 17:39:54
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.89519	453.22	.14930	.03324	.47624	.43811	437.47
#1	.89685	451.02	.15137	.03744	.47354	.43513	435.47
#2	.89354	455.41	.14723	.02904	.47894	.44109	439.47

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.86120	.42538	.42090	.44723	172.55	173.15	-.27392
#1	.86045	.42230	.41895	.44576	171.72	172.25	-.27901
#2	.86195	.42845	.42285	.44870	173.38	174.04	-.26883

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00397	136.13	456.86	.43664	-.00128	.02755	.83923
#1	.00227	136.11	455.09	.43452	-.00359	.02618	.83678
#2	.00567	136.15	458.63	.43876	.00102	.02891	.84160

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.94012	-.16496	.21910	-.03840	.00350	.18577	.00047
#1	.90632	-.16821	.19706	-.03066	.00561	.18479	.00082
#2	.97391	-.16172	.24114	-.04614	.00140	.18675	.00012

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.72564	.43141	.00000	.83425
#1	-.76454	.43001	.00037	.83065
#2	-.68674	.43280	-.00037	.83786

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Method: 60101150 Sample Name: CCVC4 Operator: JH
Run Time: 12/12/91 17:59:21
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00163	.49081	.50082	.49858	.46840	.48051	19.178
#1	.00275	.49275	.50694	.50029	.47079	.48280	19.266
#2	.00051	.48888	.49469	.49688	.46602	.47823	19.090

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00424	-.00113	.49338	.00509	.48906	.42061	20.002
#1	.00332	-.00037	.49513	.00653	.49041	.42451	19.863
#2	.00515	-.00189	.49162	.00366	.48772	.41671	20.142

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	2.0306	.49000	.38508	.00088	1.9179	19.161	.00413
#1	2.0499	.49311	.38128	-.00042	1.9240	19.278	-.00194
#2	2.0113	.48688	.38888	.00219	1.9117	19.044	.01019

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01891	.48412	.01065	-.00044	1.9477	1.9055	1.8774
#1	.02955	.49276	.00062	-.00557	1.9527	1.9138	1.8864
#2	.00827	.47547	.02069	.00469	1.9427	1.8972	1.8684

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.01045	-.01071	1.9015	.47635
#1	.01058	-.01128	1.9086	.47856
#2	.01031	-.01014	1.8944	.47414

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Method: 60101150 Sample Name: CCVN4 Operator: JH
Run Time: 12/12/91 18:01:38
Comment: NYSDFORG 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48206	-.01868	.00405	.00090	-.00048	-.00075	.01051
#1	.47920	-.01935	.00428	.00220	-.00064	-.00047	.00189
#2	.48493	-.01802	.00382	-.00040	-.00032	-.00102	.01913

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.47968	.47277	.00142	.48759	-.01268	-.11503	.08676
#1	.48090	.47163	.00158	.48687	-.01335	-.14344	.22135
#2	.47726	.47392	.00125	.48830	-.01201	-.08661	-.04782

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00114	-.00004	-.12132	.47946	.00172	.02811	.48532
#1	-.00113	.00005	-.12808	.48010	.00235	.02812	.48336
#2	.00340	-.00013	-.11456	.47881	.00109	.02811	.48728

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	1.0373	-.00364	1.9716	.00482	.00355	-.00057	.00061
#1	1.0293	-.00643	1.9724	-.01590	.00294	-.00057	.00005
#2	1.0453	-.00086	1.9707	.02553	.00416	-.00057	.00117

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.8934	.47971	-.00150	-.00060
#1	1.9126	.48156	-.00112	-.00058
#2	1.8742	.47785	-.00187	-.00062

Analysis Report Blank Sample Thu 12-12-91 06:08:50 PM page 1

Method: 60101150 Sample Name: CCB4 Operator: JH
Run Time: 12/12/91 18:07:06
Comment: NYSDFORB 1 (5837) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00101	-.00252	.00402	-.00038	-.00048	-.00042	.00320
#1	-.00250	-.00253	.00155	.00068	.00000	-.00071	.00525
#2	.00049	-.00252	.00649	-.00143	-.00095	-.00014	.00115

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00182	.00382	.00112	.00143	-.01437	-.07738	-.10580
#1	-.00072	.00306	.00032	.00143	-.01549	-.06490	-.17122
#2	-.00291	.00459	.00192	.00143	-.01325	-.08986	-.04038

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00170	.00010	-.11457	-.00034	.00055	.01874	.00010
#1	.00000	.00037	-.12859	-.00001	.00159	.01562	.00891
#2	.00340	-.00018	-.10055	-.00067	-.00050	.02187	-.00870

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	n.05323	-.01205	.00834	.01038	.00855	-.00057	.00057
#1	n.05057	-.01510	.02059	-.00259	.00908	-.00057	.00038
#2	n.05590	-.00901	-.00392	.02334	.00802	-.00057	.00076

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.05957	-.00028	-.00150	-.00094
#1	-.00151	-.00042	-.00187	-.00176
#2	.12064	-.00014	-.00112	-.00012

Non-CLP ICP Analysis Log Sheet

HERN INV 3 (5947) Leachate

Date 12-13-91

Code/batch # VEOBRIEN 2 Control No. 5806 Matrix Soil

Code/batch # BELLOFPA 255 Control No. 5914 Matrix Leachate

Analyst JH Filename ~~5914~~ JH 5806

Inst# JA 1150 [✓] ~~#4 2~~ Method 6010 [✓]

ICAP 61 [] #9 Other [] _____

Batch Comments _____

Opening QC

CAL 2 [✓] CCVC0 [✓] CCVN0 [✓] ~~CCVH0 [] CCVS0 []~~ JH ICB [✓] Profile

Sample Set #1 — **Notes & Comments**

1) ICSAB11 [] JH
2) ICSAB11
3) PBS — Veobrien 2
4) 66318
5) 66319 — 5 Fold
6) 66319
7) 66319 — 5 Fold
8) ICSAIF
9) ICSABIF
10)

QC Set #1

CCVC1 [✓] CCVN1 [✓] ~~CCVH1 [] CCVS1 []~~ JH CCB1 [✓]

Sample Set #2

11) PBW — Bellofpa 255 — High Ag — Rerun to verify
12) PBIT
13) 68417
14) PBW — High Ag
15) ICSAIF
16) ICSABIF
17)
18)
19)
20)

QC Set #2

CCVC2 [✓] CCVN2 [✓] ~~CCVH2 [] CCVS2 []~~ JH CCB2 [✓]

Sample Set #3

21) PBW — HERN INV 3
22) PBFX
23) 68944
24) 68945
25) 68946
26) ICSAIF
27) ICSABIF
28)
29)
30)

QC Set #3

CCVC3 [✓] CCVN3 [✓] ~~CCVH3 [] CCVS3 []~~ JH CCB3 [✓]

SL

Method: 60101150 Standard: CAL1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00150	.00310	.01525	.00095	.00010	.00095	.00350
#1	-.00090	.00400	.01440	.00120	.00020	.00090	.00360
#2	-.00210	.00220	.01610	.00070	.00000	.00100	.00340

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00040	.00000	.00090	.00020	.00275	.00040	.25820
#1	.00050	.00030	.00160	.00020	.00400	.00110	.24820
#2	.00030	-.00030	.00020	.00020	.00150	-.00030	.26820

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00015	.00515	.00050	.00100	.00030	-.00105	-.00125
#1	.00020	.00760	.00070	.00160	.00020	-.00100	-.00180
	.00010	.00270	.00030	.00040	.00040	-.00110	-.00070

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00055	-.00110	-.00190	.00090	.01715	.00000	.00035
#1	-.00050	-.00070	.00130	.00180	.01630	.00000	.00020
#2	-.00060	-.00150	-.00510	.00000	.01800	.00000	.00050

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00060	-.00035	.00000	.00275
#1	-.00040	.00000	.00010	.00290
#2	-.00080	-.00070	-.00010	.00260

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Method: 60101150 Standard: CAL2

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.38485	.00160	.01220	.00100	.00030	.00095	.71530
#1	.38270	.00170	.01170	.00080	.00030	.00090	.70950
#2	.38700	.00150	.01270	.00120	.00030	.00100	.72110

Elem	Cd2288	Co2286	Cr2577	Cu3247	Fe2599	Fe2714	K_7664
Avge	.26210	.12305	.00030	.06705	.00195	.00155	.26450
#1	.26060	.12150	.00010	.06630	.00040	.00200	.29300
#2	.26360	.12460	.00050	.06780	.00350	.00110	.23600

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00005	.51600	.00765	.14600	.00010	-.00055	-.00350
#1	.00020	.50930	.00750	.14380	.00000	-.00040	-.00310
	-.00010	.52270	.00780	.14820	.00020	-.00070	-.00390

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01830	-.00210	.00195	.00055	.01955	.00160	.00035
#1	.01840	-.00100	.01000	.00070	.02020	.00160	.00020
#2	.01820	-.00320	-.00610	.00040	.01890	.00160	.00050

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00095	-.00085	-.00005	.30395
#1	-.00110	-.00040	-.00010	.30320
#2	-.00080	-.00090	.00000	.30470

Method: 60101150 Standard: CAL3

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00210	.07970	.00945	.00160	.29960	.33475	.00270
#1	-.00180	.07880	.00740	.00140	.29780	.33400	.00250
#2	-.00240	.08060	.01150	.00180	.30140	.33550	.00290

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00060	-.00045	.00025	.00020	.21875	.01135	.23270
#1	.00040	-.00050	.00020	.00030	.21730	.01140	.23400
#2	.00080	-.00040	.00030	.00010	.22020	.01130	.23140

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.08550	.00505	.00055	.00015	.13800	1.5366	.48475
#1	.08560	.00290	.00050	.00010	.13790	1.5330	.48160
	.08540	.00720	.00060	.00020	.13810	1.5403	.48790

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	-.00050	.16105	-.00665	.00050	.62840	.34340	.25255
#1	-.00080	.16050	.00090	.00080	.62630	.34280	.25220
#2	-.00020	.16160	-.01420	.00020	.63050	.34400	.25290

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00205	-.00265	-.00020	.00425
#1	-.00180	-.00270	-.00020	.00410
#2	-.00230	-.00260	-.00020	.00440

Method: 60101150 Standard: CAL4

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00095	.00255	4.3324	.22085	.00005	.00095	.00335
#1	-.00020	.00230	4.3480	.22090	.00010	.00100	.00370
#2	-.00170	.00280	4.3168	.22080	.00000	.00090	.00300

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.01490	-.00010	.29835	.00025	.00125	.00060	.22990
#1	.01570	.00000	.29950	.00030	.00130	.00070	.24560
#2	.01410	-.00020	.29720	.00020	.00120	.00050	.21420

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00025	.00150	.00065	.00010	.00040	-.00080	-.00190
#1	.00020	.00140	.00060	.00010	.00020	-.00120	-.00190
	.00030	.00160	.00070	.00010	.00060	-.00040	-.00190

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00020	-.00040	3.0436	.00085	.02330	.00000	.00045
#1	.00060	.00000	3.0632	.00090	.02870	.00000	.00030
#2	-.00020	-.00080	3.0239	.00080	.01790	.00000	.00060

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00120	-.00055	.00000	.00295
#1	-.00120	-.00090	.00010	.00300
#2	-.00120	-.00020	-.00010	.00290

Method: 60101150 Standard: CAL7

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00245	.00245	-.00605	.00265	-.00015	.00090	.00245
#1	-.00270	.00200	-.00910	.00230	-.00010	.00080	.00280
#2	-.00220	.00290	-.00300	.00300	-.00020	.00100	.00210

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00045	.00000	.00140	.00030	2.1704	.11615	.26220
#1	.00090	.00010	.00130	.00030	2.1699	.11610	.23420
#2	.00000	-.00010	.00150	.00030	2.1708	.11620	.29020

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5689	Ni2316
Avge	-.00015	5.0398	.07010	.00025	-.00230	-.00105	.00075
#1	-.00030	5.0331	.06990	.00020	-.00230	-.00070	-.00050
#2	.00000	5.0465	.07030	.00030	-.00230	-.00140	.00200

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00020	-.01500	-.02735	.00065	.02015	.00000	.00040
#1	.00050	-.01540	-.02660	.00050	.01800	.00000	.00040
#2	-.00010	-.01460	-.02810	.00080	.02230	.00000	.00040

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.00025	-.00045	-.00005	.00265
#1	.00140	-.00070	-.00010	.00260
#2	-.00090	-.00020	.00000	.00270

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Method: 60101150 Standard: CAL8

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00545	.00240	-.20555	.01860	.00045	.00095	.00385
#1	-.00540	.00240	-.20640	.01930	.00040	.00100	.00380
#2	-.00550	.00240	-.20470	.01790	.00050	.00090	.00390

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00005	-.00010	.01115	-.00035	21.100	1.1370	.28870
#1	-.00010	.00000	.01070	-.00040	21.210	1.1422	.30080
#2	.00020	-.00020	.01160	-.00030	20.991	1.1317	.27660

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00020	42.232	.69035	-.00160	-.02495	-.00100	-.00010
#1	.00040	42.350	.69400	-.00170	-.02480	-.00100	-.00030
	.00000	42.114	.68670	-.00150	-.02510	-.00100	.00010

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00095	-.12660	-.24710	.00040	.01990	.00000	.00025
#1	.00150	-.12750	-.24940	.00060	.02190	.00000	.00020
#2	.00040	-.12570	-.24480	.00020	.01790	.00000	.00030

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.01995	.00010	-.00005	.00590
#1	.01790	.00010	-.00010	.00580
#2	.02200	.00010	.00000	.00600

Method: 60101150 Standard: CAL5

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00205	.00360	.02280	.00075	.00010	.00205	.01110
#1	-.00220	.00310	.02070	.00050	-.00020	.00200	.01130
#2	-.00190	.00410	.02490	.00100	.00040	.00210	.01090

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00100	.00010	.00010	.00050	.01345	-.00180	4.1505
#1	.00110	.00020	-.00080	.00060	.00260	-.00270	4.1276
#2	.00090	.00000	.00100	.00040	.02430	-.00090	4.1734

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00010	.00735	-.00230	.00040	.00050	-.00030	-.00110
#1	-.00010	.00240	-.00250	.00030	.00040	-.00040	-.00100
	.00030	.01230	-.00210	.00050	.00060	-.00020	-.00120

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00030	-.00045	-.00320	.00140	.02060	.00000	.00045
#1	.00020	-.00050	-.00770	.00150	.02130	.00000	.00050
#2	.00040	-.00040	.00130	.00130	.01990	.00000	.00040

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00090	.33115	.12635	.00145
#1	-.00060	.32750	.12590	.00150
#2	-.00120	.33480	.12680	.00140

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Method: 60101150 Standard: CAL6

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00185	.00225	.01235	.00105	.00030	.00080	.00275
#1	-.00180	.00260	.01340	.00050	.00040	.00070	.00280
#2	-.00190	.00190	.01130	.00160	.00020	.00090	.00270

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00025	-.00025	-.00010	.00035	.00415	.00055	.28730
#1	-.00090	-.00020	-.00060	.00020	.00710	.00060	.28080
#2	.00040	-.00030	.00040	.00050	.00120	.00050	.29380

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00025	.00355	.00060	.00015	-.00010	-.00095	.00230
#1	-.00010	.00550	.00060	.00010	.00000	-.00100	.00290
	-.00040	.00160	.00060	.00020	-.00020	-.00090	.00170

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01880	-.00245	.00175	.00045	.01985	.00000	.00015
#1	.01890	-.00370	.00260	-.00010	.02190	.00000	.00000
#2	.01870	-.00120	.00090	.00100	.01780	.00000	.00030

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.19790	-.00080	.00005	.00270
#1	.19400	-.00070	.00010	.00280
#2	.20180	-.00090	.00000	.00260

Standardization Report Fri 12-13-91 08:13:37 AM page 1

Method: 60101150

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Ag3280	328.068	CAL2	CAL1	2.58833	.003882	12/13/91 08:00:20
Al3082	308.265	CAL3	CAL1	13.0269	-.040383	12/13/91 08:02:36
As1936	193.696	CAL4	CAL1	2.31658	-.035328	12/13/91 08:04:19
B_2497	249.773	CAL4	CAL1	4.54733	-.004320	12/13/91 08:04:19
Ba4934	493.409	CAL3	CAL1	3.33895	-.000334	12/13/91 08:02:36
Be3130	313.042	CAL3	CAL1	2.99245	-.002843	12/13/91 08:02:36
Ca3179	317.933	CAL2	CAL1	14.0493	-.049173	12/13/91 08:00:20
Cd2288	228.802	CAL2	CAL1	3.80739	-.001523	12/13/91 08:00:20
Co2286	228.616	CAL2	CAL1	8.12519	.000000	12/13/91 08:00:20
Cr2677	267.716	CAL4	CAL1	3.36191	-.003026	12/13/91 08:04:19
Cu3247	324.754	CAL2	CAL1	14.9510	-.002990	12/13/91 08:00:20
Fe2599	259.940	CAL3	CAL1	4.63435	-.012744	12/13/91 08:02:36
Fe2714	271.441	CAL8	CAL7	88.1661	-.240498	12/13/91 08:07:56
K_7664	766.491	CAL5	CAL1	12.8459	-3.31680	12/13/91 08:09:45
Li6707	670.784	CAL3	CAL1	11.7165	-.001757	12/13/91 08:02:36
Mg2795	279.553	CAL2	CAL1	1.95729	-.010080	12/13/91 08:00:20
Mn3822	382.231	CAL8	CAL7	145.103	-.171704	12/13/91 08:07:56
Mn2576	257.610	CAL2	CAL1	6.89665	-.006897	12/13/91 08:00:20
Mo2023	202.300	CAL3	CAL1	7.26106	-.002178	12/13/91 08:02:36
Na5889	588.995	CAL3	CAL1	32.5162	.034142	12/13/91 08:02:36
Ni2316	231.604	CAL3	CAL1	2.05750	.002572	12/13/91 08:02:36
Pb2203	220.353	CAL6	CAL1	51.6796	.028424	12/13/91 08:11:55
Sb2175	217.581	CAL3	CAL1	6.11201	.006723	12/13/91 08:02:36
Se1960	196.026	CAL4	CAL1	3.28359	.006239	12/13/91 08:04:19
Si2881	288.158	1 ppm Si	CAL1	52.2193	-.046997	12/13/91 07:58:12
Sn1899	189.989	CAL3	CAL1	1.63000	-.027955	12/13/91 08:02:36
Sr4215	421.552	CAL3	CAL1	2.91211	.000000	12/13/91 08:02:36
Ti3349	334.941	CAL3	CAL1	3.96450	-.001388	12/13/91 08:02:36
Tl1908	190.801	CAL6	CAL1	50.3778	.030227	12/13/91 08:11:55
V_2924	292.402	CAL5	CAL1	3.01673	.001056	12/13/91 08:09:45
Y_3710	371.030	CAL5	CAL1	7.91456	.000000	12/13/91 08:09:45
Zn2138	213.865	CAL2	CAL1	3.33526	-.009172	12/13/91 08:00:20

Analysis Report Fri 12-13-91 08:21:36 AM page 1

Method: 60101150 Sample Name: CAL2 Operator: JH
Run Time: 12/13/91 08:19:52
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.98187	-.01078	.00088	-.00106	.00117	-.00030	9.8540
#1	.98536	-.00296	.00227	-.00016	.00134	-.00044	9.8372
#2	.97837	-.01860	-.00052	-.00195	.00100	-.00015	9.8709

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.97844	.98660	-.00304	.99396	-.01125	-.21589	-.14290
#1	.97862	.98579	-.00254	.99322	-.01102	-.19830	-.09799
#2	.97825	.98742	-.00355	.99471	-.01148	-.23348	-.18781

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	.00059	.98610	.89515	.98099	-.00029	.01110	.00125
#1	.00059	.98513	.90240	.97789	-.00026	.00460	.00557
#2	.00059	.98708	.88789	.98409	-.00032	.01761	-.00306

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.93286	-.01310	-.00422	-.02315	.00584	.00457	-.00076
#1	.92253	-.01296	-.01947	-.00226	.00576	.00457	.00023
#2	.94320	-.01325	.01103	-.04404	.00592	.00457	-.00175

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.08900	-.00077	.00079	.98350
#1	.04094	-.00122	.00079	.98349
#2	.13705	-.00032	.00079	.98352

Analysis Report QC Standard Fri 12-13-91 08:32:17 AM page 1

Method: 60101150 Sample Name: ICV0 Operator: JH
Run Time: 12/13/91 08:30:33
Comment: VEOBNIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00013	.48600	.50728	.52014	.48478	.48617	19.269
#1	.00182	.48926	.50395	.51786	.48378	.48587	19.270
#2	-.00207	.48275	.51062	.52241	.48579	.48648	19.268

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00347	-.00443	.49431	.00159	.49194	.34705	20.267
#1	.00386	-.00280	.49398	.00234	.49426	.35158	20.362
#2	.00308	-.00605	.49464	.00084	.48962	.34252	20.172

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
ge	2.0797	.49161	.36559	-.00668	1.9530	19.737	-.00399
#1	2.0721	.49111	.38630	-.00599	1.9475	19.719	-.00677
#2	2.0873	.49210	.34487	-.00737	1.9584	19.754	-.00122

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00808	.49548	-.00721	-.00294	1.9739	1.9337	1.9309
#1	.00292	.50038	-.01981	-.00296	1.9629	1.9323	1.9297
#2	.01325	.49057	.00538	-.00292	1.9849	1.9352	1.9321

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.03478	-.00944	1.9591	.47867
#1	-.07267	-.00839	1.9567	.47601
#2	.00312	-.01049	1.9615	.48133

Analysis Report QC Standard Fri 12-13-91 08:34:51 AM page 1

Method: 60101150 Sample Name: ICVWO Operator: JH
Run Time: 12/13/91 08:33:07
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48549	-.01005	-.00376	.00258	.00017	-.00130	.02463
#1	.48665	-.00937	.00191	.00237	-.00033	-.00128	.02970
#2	.48434	-.01074	-.00944	.00279	.00067	-.00131	.01956

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.47724	.47330	-.00211	.48892	-.00592	-.18288	.22448
#1	.47534	.47452	-.00245	.48891	-.00452	-.20595	.47490
#2	.47915	.47208	-.00176	.48892	-.00731	-.15981	-.02594

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
pe	-.00234	-.00532	-.07012	.47689	-.00011	.00813	.48495
#1	-.00410	-.00356	-.05579	.47723	.00057	.00813	.48999
#2	-.00058	-.00709	-.08446	.47655	-.00080	.00813	.47991

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.95616	-.00033	1.9651	.02051	.00814	.00000	.00025
#1	.94326	.00108	1.9511	.01788	.01043	.00000	.00025
#2	.96907	-.00174	1.9792	.02314	.00586	.00000	.00025

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9949	.48637	-.00040	-.00216
#1	1.9925	.48290	-.00079	-.00319
#2	1.9973	.48983	.00000	-.00112

Analysis Report Blank Sample Fri 12-13-91 08:44:44 AM page 1

Method: 60101150 Sample Name: ICB Operator: Jn
Run Time: 12/13/91 08:42:57
Comment: VEOBRIEN 2 (5806) HOM
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00089	-.00655	-.00440	-.00124	.00000	.00044	-.00035
#1	.00050	-.01566	-.00409	-.00239	.00000	.00045	-.00234
#2	.00128	.00256	-.00471	-.00010	.00000	.00044	.00124

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00019	-.00162	-.00135	.00298	-.00696	-.18716	.14916
#1	.00038	-.00243	-.00337	-.00001	-.00765	-.17864	.14145
#2	.00000	-.00081	.00068	.00597	-.00627	-.19567	.15687

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00293	-.00724	-.09967	-.00658	.00111	-.00162	-.00278
#1	-.00293	-.00597	-.09985	-.00417	.00113	-.02113	-.00216
#2	-.00293	-.00852	-.09950	-.00900	.00110	.01789	-.00340

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00527	-.01133	.00072	-.00523	.00008	.00000	-.00060
#1	.00267	-.01219	-.00707	-.02090	.00594	.00000	-.00060
#2	.00787	-.01047	.00851	.01043	-.00579	.00000	-.00059

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.02527	.00106	-.00119	-.00081
#1	-.05313	-.00045	-.00158	-.00148
#2	.00259	.00257	-.00079	-.00015

Analysis Report Fri 12-13-91 08:47:28 AM page 1

Method: 60101150 Sample Name: 1CSAII Operator: Jh
Run Time: 12/13/91 08:45:42
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00102	454.61	.15133	.03311	.03610	.00017	441.75
#1	.00335	450.00	.18171	.03337	.03627	.00017	442.72
#2	-.00130	459.22	.12095	.03286	.03594	.00017	440.79

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00004	.00518	.00290	-.00110	171.42	176.05	-.27282
#1	-.00160	.00429	.00660	.00192	170.89	176.01	.04297
#2	.00152	.00607	-.00080	-.00411	171.95	176.09	-.58861

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00059	144.19	470.78	.00333	-.00425	-.00114	.00739
#1	.00410	144.29	466.19	.00301	-.00288	.01057	.01182
#2	-.00293	144.10	475.37	.00364	-.00563	-.01286	.00297

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.14155	-.13603	.20748	-.03058	.03109	.18710	-.00056
#1	.12882	-.12029	.25087	-.01225	.04504	.18476	.00024
#2	.15429	-.15176	.16409	-.04891	.01714	.18944	-.00136

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.48870	-.00409	-.00040	-.00882
#1	-.48384	-.00393	.00079	-.00839
#2	-.49356	-.00425	-.00158	-.00924

Analysis Report Fri 12-13-91 08:49:54 AM page 1

Method: 60101150 Sample Name: ICSABII Operator: JH
Run Time: 12/13/91 08:48:08
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.89548	452.41	.17600	.03233	.48386	.43824	437.29
#1	.89115	451.13	.18381	.03631	.48270	.43706	435.98
#2	.89981	453.69	.16819	.02835	.48503	.43942	438.60

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.85503	.42468	.41888	.45175	169.95	174.41	-.57443
#1	.86015	.42182	.41601	.45022	169.40	173.89	-.49490
#2	.84992	.42753	.42176	.45327	170.51	174.94	-.65395

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00000	144.01	467.20	.43444	-.00985	-.01055	.83892
#1	.00176	143.97	466.17	.43366	-.00936	-.00556	.84776
#2	-.00176	144.04	468.22	.43523	-.01035	-.01555	.83008

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.94628	-.15070	.25276	-.09098	.00531	.18627	-.00152
#1	.91677	-.15351	.18119	-.08057	.00540	.18483	-.00193
#2	.97580	-.14789	.32432	-.10139	.00522	.18771	-.00112

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.57699	.43516	-.00119	.83934
#1	-.55694	.43202	-.00079	.83972
#2	-.59704	.43831	-.00158	.83896

Analysis Report Blank Sample Fri 12-13-91 09:10:17 AM page 1

Method: 60101150 Sample Name: PBS Operator: Jm
Run Time: 12/13/91 09:08:31
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00024	.05796	-.00904	.00577	.00117	.00030	.21950
#1	-.00001	.06251	-.00070	.00712	.00100	.00075	.21395
#2	.00050	.05340	-.01737	.00442	.00134	-.00014	.22504

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00229	-.00162	-.00051	.01195	.04656	-.13469	-.15792
	.00190	-.00162	.00034	.01046	.03590	-.11687	-.46035
	.00268	-.00162	-.00135	.01345	.05722	-.15252	.16450

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00059	.07782	.03144	-.00485	.00048	.13168	.00020
#1	-.00059	.06549	.03110	-.00485	.00197	.13493	-.00258
#2	-.00059	.09015	.03178	-.00486	-.00100	.12843	.00298

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00272	-.00606	-.00072	H.16450	.00814	.00000	-.00020
#1	-.00762	-.01053	.03493	H.17234	.00740	.00000	.00020
#2	.01306	-.00159	-.03636	H.15666	.00888	.00000	-.00060

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.01605	-.00060	.00000	.00645
#1	.03164	.00016	-.00079	.00614
#2	-.06373	-.00135	.00079	.00677

Analysis Report Fri 12-13-91 09:12:38 AM page 1

Method: 60101150 Sample Name: 66318 Operator: JH
Run Time: 12/13/91 09:10:53
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00033	178.35	.94603	.13125	2.5002	.00227	42.303
#1	.00112	177.75	.93911	.12971	2.4920	.00223	42.261
#2	-.00041	178.94	.95296	.13278	2.5084	.00231	42.345

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.01264	.21638	1.1410	.29977	H240.65	248.82	11.632
	.01227	.21845	1.1393	.29977	H240.10	248.73	11.541
#2	.01301	.21431	1.1427	.29977	H241.20	248.91	11.723

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.16228	H83.551	103.52	4.8874	.00277	3.1236	1.0713
#1	.16345	H83.408	103.14	4.8805	.00624	3.1269	1.0636
#2	.16110	H83.693	103.89	4.8943	-.00070	3.1203	1.0790

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	2.6348	-.28560	.40541	4.6400	.01981	.28632	8.7124
#1	2.6445	-.28104	.39055	4.6582	.02276	.28560	8.6720
#2	2.6251	-.25015	.42027	4.6218	.01685	.28705	8.7528

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.84115	.54255	.08924	3.2081
#1	-.84076	.54167	.08805	3.2051
#2	-.84153	.54344	.09044	3.2111

Analysis Report Fri 12-13-91 09:16:32 AM page 1

Method: 60101150 Sample Name: 66318 Operator: JH
Run Time: 12/13/91 09:14:46
Comment: VEOBRIEN 2 (5806) SOIL 15
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00041	37.940	.20681	.02563	.52212	.00055	9.4099
#1	.00028	37.890	.20116	.02767	.52162	.00040	9.3903
#2	.00054	37.989	.21246	.02360	.52262	.00071	9.4296

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00393	.04709	.25068	.06709	53.601	54.810	2.7307
	.00336	.04466	.25135	.06858	53.473	54.828	2.6959
	.00450	.04952	.25	.06559	53.729	54.793	2.7655

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.03046	21.238	22.045	1.0610	.00184	.69153	.23819
#1	.03105	21.197	22.038	1.0572	.00187	.69153	.23449
#2	.02988	21.279	22.052	1.0648	.00181	.69153	.24189

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.59428	-.05810	.09024	1.0225	-.00033	.06034	1.8489
#1	.59163	-.05037	.09667	1.0407	.00219	.06049	1.8445
#2	.59693	-.06582	.08382	1.0042	-.00285	.06020	1.8533

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.18662	.11821	.01921	.73671
#1	-.14408	.11776	.02000	.73488
#2	-.22915	.11866	.01842	.73855

Analysis Report Fri 12-13-91 09:19:08 AM page 1

Method: 60101150 Sample Name: 66319 Operator: JH
Run Time: 12/13/91 09:17:22
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00121	179.00	.87285	.10563	1.9483	.00229	39.127
#1	-.00044	177.93	.85027	.10035	1.9398	.00181	38.908
#2	-.00197	180.07	.89543	.11091	1.9568	.00278	39.346

Elem	Co2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00388	.13929	.95804	.22110	H236.88	245.38	11.281
	.00182	.13977	.95178	.21879	H235.44	244.04	11.302
	.00595	.13882	.96430	.22341	H238.31	246.71	11.261

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.15583	H78.961	96.261	3.6987	.00444	1.8283	.99052
#1	.15525	H78.566	95.637	3.6805	.00203	1.8235	.98178
#2	.15642	H79.357	96.885	3.7169	.00685	1.8331	.99927

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	1.6219	-.23934	.45998	4.6944	-.00493	.22534	8.0252
#1	1.6190	-.24380	.46314	4.6342	.00990	.22505	7.9722
#2	1.6249	-.23487	.45683	4.7546	-.01976	.22563	8.0781

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.53357	.53706	.09035	.72398
#1	-.43733	.53306	.08955	.72130
#2	-.62982	.54107	.09115	.72667

Analysis Report Fri 12-13-91 09:23:20 AM page 1

Method: 60101150 Sample Name: 66319 Operator: JH
Run Time: 12/13/91 09:21:35
Comment: VEOBRIEN 2 (5806) SOIL 15
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00163	37.558	.19270	.02240	.40243	.00070	8.5059
#1	-.00199	37.637	.19272	.02428	.40310	.00084	8.5245
#2	-.00127	37.478	.19268	.02051	.40176	.00055	8.4873

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00088	.02823	.20408	.04306	51.862	52.743	2.4326
	-.00317	.02700	.20325	.04307	51.987	52.995	2.5020
	.00141	.02945	.20491	.04305	51.737	52.491	2.3633

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.03164	19.464	20.158	.78891	-.00264	.42342	.22026
#1	.03222	19.495	20.195	.79206	-.00292	.41529	.22170
#2	.03105	19.434	20.122	.78576	-.00237	.43155	.21883

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.34955	-.05184	.11123	1.0060	-.00272	.04681	1.6778
#1	.34433	-.05200	.13219	1.0086	-.00843	.04681	1.6812
#2	.35478	-.05169	.09027	1.0034	.00299	.04681	1.6744

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.16545	.11134	.01840	.16543
#1	-.03747	.11329	.01919	.16658
#2	-.29342	.10939	.01760	.16428

Analysis Report Fri 12-13-91 09:25:54 AM page 1

Method: 60101150 Sample Name: ICSAIF Operator: JH
Run Time: 12/13/91 09:24:09
Comment: VEONRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00400	452.04	.09850	.03216	.03561	.00003	439.05
#1	-.00479	451.30	.10759	.02548	.03527	-.00042	438.24
#2	-.00320	452.77	.08941	.03884	.03594	.00048	439.85

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00170	.00636	-.00319	-.00262	169.74	175.06	-.29056
	-.00342	.00676	-.00219	-.00562	169.46	174.85	-.26225
	.00003	.00595	-.00419	.00038	170.02	175.27	-.31888

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00234	144.34	466.94	.00458	-.00568	.00081	.00225
#1	-.00410	144.33	466.43	.00350	-.00279	.00087	.00462
#2	-.00059	144.35	467.45	.00565	-.00857	.00074	-.00012

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.15740	-.15205	.20774	-.02027	.00440	.18480	-.00178
#1	.18256	-.14354	.21313	.01893	.02056	.18480	-.00139
#2	.13224	-.16057	.20235	-.05947	-.01176	.18479	-.00216

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.47129	-.00707	-.00079	-.00908
#1	-.49329	-.00691	-.00158	-.00954
#2	-.44929	-.00724	.00000	-.00863

Analysis Report Fri 12-13-91 09:29:21 AM page 1

Method: 60101150 Sample Name: ICSABIF Operator: JH
Run Time: 12/13/91 09:27:36
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.88706	447.31	.07274	.03407	.47686	.43632	434.15
#1	.88195	446.56	.08667	.02945	.47402	.43499	432.09
#2	.89217	448.05	.05881	.03869	.47969	.43766	436.21

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.84390	.41974	.41597	.45022	168.02	173.13	-.27147
	.83626	.41688	.41191	.45019	167.51	172.53	-.05592
	.85155	.42259	.42002	.45024	168.52	173.73	-.48702

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00059	144.20	461.94	.44080	-.00602	.01757	.82822
#1	-.00176	144.13	460.98	.42174	-.00238	-.00183	.82061
#2	.00293	144.26	462.89	.45987	-.00965	.03696	.83584

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.92079	-.14093	.20366	-.03884	-.00097	.18397	-.00096
#1	.88673	-.13009	.22809	-.03368	-.01000	.18311	.00041
#2	.95486	-.15178	.17924	-.04399	.00806	.18482	-.00233

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.61798	.42934	-.00158	.84198
#1	-.52614	.42755	-.00237	.83743
#2	-.70983	.43113	-.00079	.84653

Analysis Report QC Standard Fri 12-13-91 09:45:20 AM page 1

Method: 60101150 Sample Name: CCVC1 Operator: JH
Run Time: 12/13/91 09:43:34
Comment: VEOBRIEN 2 (5806) SOIL
Mode: COMC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00065	.48854	.49016	.51855	.47510	.48013	18.999
#1	.00000	.49049	.48411	.51241	.47677	.48013	18.985
#2	.00130	.48658	.49620	.52468	.47343	.48012	19.013

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00158	-.00480	.48507	-.00289	.51023	.32927	20.150
	.00387	-.00601	.48591	-.00364	.52019	.32474	20.097
#2	-.00071	-.00358	.48423	-.00214	.50027	.33380	20.203

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	2.0557	.52154	.44489	-.00565	1.9166	19.597	.00126
#1	2.0639	.52966	.50432	-.00600	1.9177	19.676	.00331
#2	2.0475	.51341	.38545	-.00530	1.9156	19.517	-.00080

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02618	.49107	.00690	-.01625	1.9449	1.8896	1.8824
#1	.01844	.48005	-.00530	-.01884	1.9520	1.8912	1.8829
#2	.03393	.50209	.01909	-.01366	1.9378	1.8880	1.8822

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00812	-.01052	1.9250	.47533
#1	-.05344	-.01142	1.9282	.47366
#2	.03719	-.00962	1.9219	.47701

Analysis Report QC Standard Fri 12-13-91 09:47:49 AM page 1

Method: 60101150 Sample Name: CCVN1 Operator: Jh
Run Time: 12/13/91 09:46:04
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48355	-.00743	-.00210	.00186	.00017	-.00098	.02528
#1	.47966	-.00549	-.00213	-.00038	.00000	-.00097	.02096
#2	.48744	-.00938	-.00207	.00410	.00033	-.00099	.02959

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.48180	.46965	-.00093	.48743	.05201	-.13045	.25417
	.48255	.46721	-.00111	.48742	.00845	-.18790	.46233
	.48104	.47208	-.00076	.48743	.09557	-.07300	.04602

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00117	.01767	-.10622	.47276	.00216	.00488	.47476
#1	.00059	.00681	-.09897	.47309	-.00012	-.00162	.47579
#2	.00176	.02854	-.11347	.47242	.00444	.01139	.47373

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.97167	-.00584	1.9547	.03097	.00798	.00000	.00045
#1	.98460	-.00560	1.9283	.03357	.00586	.00000	.00104
#2	.95873	-.00608	1.9810	.02837	.01009	.00000	-.00015

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9791	.48320	.00000	-.00079
#1	1.9672	.48169	.00000	-.00147
#2	1.9910	.48471	.00000	-.00012

Analysis Report Blank Sample Fri 12-13-91 09:58:42 AM page 1

Method: 60101150 Sample Name: CCB1 Operator: JB
Run Time: 12/13/91 09:56:57
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00001	.00192	.00173	-.00080	-.00050	.00074	.00095
#1	-.00027	.01168	.00751	-.00194	-.00067	.00074	.00134
#2	.00024	-.00784	-.00405	.00034	-.00033	.00074	-.00024

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00210	-.00041	-.00034	.00149	.01366	-.16949	.29817
	-.00153	-.00081	.00000	.00149	.02201	-.16921	.26982
#2	-.00266	.00000	-.00068	.00149	.00532	-.16977	.32652

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00000	.00508	-.08499	-.00589	-.00103	-.00812	-.00185
#1	.00176	.00694	-.09950	-.00555	-.00176	-.00487	-.00010
#2	-.00176	.00322	-.07048	-.00624	-.00030	-.01138	-.00360

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03369	.00192	.01370	-.00524	-.00562	.00000	-.00020
#1	.02853	.00744	.00878	-.01045	-.00350	.00000	.00059
#2	.03885	-.00360	.01863	-.00003	-.00774	.00000	-.00099

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.02802	.00166	-.00079	-.00114
#1	-.08339	.00257	-.00079	-.00015
#2	.02735	.00076	-.00079	-.00214

Analysis Report Blank Sample Fri 12-13-91 10:01:36 AM page 1

Method: 60101150 Sample Name: PBW Operator: JH
Run Time: 12/13/91 09:59:51
Comment: BELLOFPA 255 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	0.02509	-.00392	-.01103	.00285	.00000	.00030	.14086
#1	0.02483	-.00261	-.00775	.00309	.00033	.00015	.12813
#2	0.02535	-.00522	-.01430	.00262	-.00033	.00045	.15350

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00059	.00041	.00084	.00223	.00601	-.19205	.08498
	-.00227	.00000	-.00034	.00148	-.00163	-.20542	.12570
	.00345	.00082	.00202	.00298	.01366	-.17868	.29567

Elem	Li6707	Mg2795	Mg3832	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00059	.01811	-.09225	-.00659	-.00252	.02114	-.00061
#1	.00059	.01557	-.07014	-.00624	-.00400	.01788	-.00010
#2	.00059	.02066	-.11436	-.00693	-.00105	.02439	-.00113

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03370	-.00464	.00592	.05223	.00620	.00000	.00000
#1	.03370	-.00381	-.00932	.05222	.00677	.00000	-.00060
#2	.03369	-.00548	.02116	.05225	.00563	.00000	.00060

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00771	.00001	-.00079	-.00066
#1	-.02270	-.00075	.00000	-.00183
#2	.00729	.00076	-.00158	.00051

Analysis Report Blank Sample Fri 12-13 91 10:04:45 AM page 1

Method: 60101150 Sample Name: PB1T Operator: JH
Run Time: 12/13/91 10:03:01
Comment: BELLOFPA 255 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00093	.03319	-.00551	.00490	.00952	.00060	.51994
#1	-.00183	.05990	-.00048	.00714	.00935	.00075	.50370
#2	-.00002	.00649	-.01054	.00265	.00968	.00045	.53619

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00153	-.00324	-.00253	.00148	-.00341	-.19611	-.04217
	-.00039	-.00243	-.00303	.00298	.01973	-.15195	-.21292
	-.00267	-.00405	-.00203	-.00002	-.02656	-.24027	.12858

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00117	.10611	.01727	-.00693	-.00362	H1247.2	.00329
#1	-.00176	.14986	.07566	-.00831	-.00462	H1248.0	.00340
#2	-.00059	.06237	-.04112	-.00556	-.00261	H1246.5	.00319

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03115	-.00829	.00030	H.18278	.02176	.00465	-.00138
#1	.04925	-.01014	-.02716	H.17234	.02225	.00465	-.00059
#2	.01306	-.00645	.02776	H.19322	.02127	.00465	-.00218

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.01289	-.00015	.00079	.00616
#1	.02687	.00045	.00158	.00648
#2	-.05264	-.00075	.00000	.00584

Analysis Report Fri 12-13-91 10:07:40 AM page 1

Method: 60101150 Sample Name: 68417 Operator: JB
Run Time: 12/13/91 10:05:56
Comment: VEOBRIEN 2 (5806) SOIL
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00037	.01574	-.00261	.00399	.03489	.00015	8.9144
#1	.00231	.02225	-.00453	.00353	.03473	.00045	8.9145
#2	-.00157	.00922	-.00068	.00444	.03506	-.00015	8.9143

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00040	-.00121	-.00153	.00148	.00729	-.17862	.39573
	.00155	.00001	.00066	.00148	.01495	-.16971	.49577
	-.00075	-.00244	-.00372	.00147	-.00037	-.18754	.29569

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00117	1.3135	1.2577	.11131	-.00069	130.38	.00442
#1	-.00059	1.3123	1.2652	.11028	.00187	129.85	.00257
#2	-.00176	1.3146	1.2503	.11235	-.00324	130.91	.00627

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02396	.00496	-.01611	.16453	.00529	.01856	-.00051
#1	.01304	.01541	-.00634	.16718	.00831	.01856	-.00011
#2	.03888	-.00548	-.02589	.16189	.00227	.01856	-.00091

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.04474	-.00013	.00040	.01619
#1	.01816	.00078	.00079	.01703
#2	-.10764	-.00104	.00000	.01534

Analysis Report Blank Sample Fri 12-13-91 10:11:32 AM page 1

Method: 60101150 Sample Name: PBW Operator: JH
Run Time: 12/13/91 10:09:48
Comment: BELLOFPA 255 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	n.02444	-.00525	-.00838	.00217	.00017	.00044	.07270
#1	n.02509	.00389	.00139	.00124	.00000	.00045	.08461
#2	n.02380	-.01438	-.01815	.00310	.00033	.00043	.06079

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00037	-.00121	-.00034	.00223	-.00627	-.19149	.12479
	-.00305	-.00081	-.00135	.00597	-.00395	-.15213	.53971
	.00230	-.00162	.00068	-.00151	-.00859	-.23085	-.29012

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00000	.00314	-.09207	-.00590	-.00071	.22436	-.00072
#1	.00176	.00598	-.08429	-.00485	.00191	.25851	-.00421
#2	-.00176	.00030	-.09985	-.00694	-.00332	.19022	.00277

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02853	-.00464	-.01919	.07051	.00701	.00000	-.00079
#1	.04919	.00752	-.01994	n.10445	.00987	.00000	.00099
#2	.00787	-.01679	-.01844	.03656	.00414	.00000	-.00258

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.02260	.00152	-.00040	-.00048
#1	.01708	.00046	.00079	-.00016
#2	.02812	.00257	-.00158	-.00081

Analysis Report Fri 12-13-91 10:15:10 AM page 1

Method: 60101150 Sample Name: ICSAIF Operator: JH
Run Time: 12/13/91 10:13:25
Comment: ~~VERBRIEN 2 (5806) SOIL~~ JH BELLOF PA 255 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00130	452.21	.12844	.02841	.03561	.00002	435.67
#1	-.00288	451.59	.11652	.02476	.03595	.00017	434.40
#2	.00028	452.83	.14037	.03207	.03528	-.00012	436.94

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00098	.00476	-.00188	-.00793	168.61	173.47	.01495
	-.00344	.00516	-.00290	-.00720	168.21	173.14	-.04415
	.00148	.00436	-.00087	-.00867	169.01	173.80	.07404

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00117	143.93	467.13	.01807	-.00565	.06916	.00698
#1	.00059	143.91	466.54	.03629	-.00588	.09525	.00693
#2	.00176	143.94	467.73	-.00015	-.00542	.04307	.00502

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.13264	-.14283	.22516	-.03855	.00953	.18483	-.00162
#1	.14249	-.13751	.21506	-.05944	.01043	.18484	-.00223
#2	.12279	-.14815	.23527	-.01765	.00864	.18482	-.00101

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.73747	-.00519	-.00119	-.01025
#1	-.76287	-.00412	-.00237	-.01103
#2	-.71206	-.00626	.00000	-.00946

Analysis Report Fri 12-13-91 10:18:21 AM page 1

Method: 60101150 Sample Name: 1CSABIF Operator: JH
Run Time: 12/13/91 10:16:35
Comment: BELLOFFA 255 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.90555	453.98	.12457	.03595	.48586	.43884	440.67
#1	.90633	452.99	.12050	.03660	.48469	.43764	441.34
#2	.90477	454.97	.12865	.03530	.48703	.44004	439.99

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.85930	.42794	.41908	.45180	170.14	175.50	-.19660
	.86559	.42752	.42480	.45031	170.24	175.55	-.23769
	.85302	.42836	.41336	.45328	170.03	175.45	-.15552

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00117	144.17	468.71	.43326	-.00571	.04940	.83790
#1	.00176	144.19	467.78	.43534	.00019	.06247	.83955
#2	.00059	144.15	469.64	.43117	-.01162	.03634	.83625

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.97064	-.15151	.21505	-.07001	.02141	.18653	-.00050
#1	.99020	-.14103	.21329	-.07517	.02586	.18478	-.00149
#2	.95107	-.16199	.21681	-.06486	.01696	.18829	.00048

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.73094	.43482	-.00198	.84651
#1	-.80194	.43468	-.00158	.84486
#2	-.65994	.43496	-.00237	.84816

Analysis Report QC Standard Fri 12-13-91 10:39:32 AM page 1

Method: 60101150 Sample Name: CCVC2 Operator: JH
Run Time: 12/13/91 10:37:47 JH
Comment: ~~VEONCIER~~ BELLOFPA 255 (S914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00027	.47686	.48503	.51837	.48345	.48152	19.059
#1	.00077	.47618	.48638	.51108	.48178	.47926	19.044
#2	-.00131	.47753	.48168	.52566	.48512	.48378	19.075

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00577	-.00483	.48708	-.00065	.48313	.25403	20.154
	.00691	-.00523	.48893	-.00215	.47942	.27190	19.889
	.00464	-.00443	.48522	.00084	.48684	.23616	20.419

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	2.0639	.48669	.37433	-.00635	1.9346	19.694	.00115
#1	2.0568	.48580	.36411	-.00738	1.9285	19.572	.00064
#2	2.0709	.48757	.38455	-.00532	1.9408	19.816	.00166

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.00813	.48509	-.02129	-.00053	1.9283	1.9168	1.9137
#1	.01845	.49802	-.03441	.01773	1.9190	1.9084	1.9075
#2	-.00220	.47215	-.00818	-.01880	1.9376	1.9253	1.9198

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.04419	-.01157	1.9460	.47216
#1	-.06721	-.01081	1.9393	.46900
#2	-.02116	-.01232	1.9527	.47532

Analysis Report QC Standard Fri 12-13-91 10:43:19 AM

Method: 60101150 Sample Name: CCVN2 Operator: JH
Run Time: 12/13/91 10:41:34
Comment: BELLOFFA 258 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.48342	-.00616	-.00663	-.00036	-.00067	-.00115	-.00842
#1	.48148	-.00160	-.01432	.00009	-.00033	-.00129	-.00950
#2	.48537	-.01072	.00105	-.00081	-.00100	-.00101	-.00734

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.47382	.47249	-.00244	.48967	-.00337	-.21354	-.23410
	.47686	.47046	-.00110	.48892	-.00361	-.20492	-.21868
	.47077	.47452	-.00379	.49042	-.00314	-.22215	-.24952

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00234	-.00719	-.08516	.47274	-.00053	.06016	.47836
#1	-.00293	-.00748	-.08550	.47033	.00057	.06016	.47620
#2	-.00176	-.00690	-.08481	.47515	-.00164	.06016	.48052

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.94843	-.00575	1.9681	-.01084	.00374	.00000	.00005
#1	.94843	-.00571	1.9429	.00224	.00863	.00000	.00064
#2	.94843	-.00580	1.9933	-.02392	-.00115	.00000	-.00055

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	1.9147	.48682	-.00159	-.00380
#1	2.0028	.48531	-.00238	-.00413
#2	1.8267	.48833	-.00079	-.00347

Analysis Report Blank Sample Fri 12-13-91 10:51:57 AM page 1

Method: 60101150 Sample Name: CCB2 Operator: JH
Run Time: 12/13/91 10:50:12
Comment: BELLOFPA 255 (5914) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00157	-.00654	-.00628	-.00463	-.00017	.00044	-.01599
#1	-.00364	-.00655	-.00169	-.00463	-.00033	.00044	-.01940
#2	.00050	-.00653	-.01088	-.00463	.00000	.00045	-.01257

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00190	.00000	-.00421	-.00076	-.00534	-.22702	.05166
	-.00076	-.00081	-.00404	-.00151	-.00209	-.23114	.07986
	-.00303	.00082	-.00438	-.00001	-.00858	-.22289	.02346

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00059	-.00763	-.07756	-.00659	-.00077	.03740	-.00041
#1	.00059	-.00773	-.08465	-.00625	-.00259	.03090	.00360
#2	-.00176	-.00754	-.07048	-.00694	.00105	.04390	-.00442

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02596	-.01434	.00786	-.01831	.00301	.00000	.00020
#1	.02338	-.01068	-.00695	-.03658	.00644	.00000	.00019
#2	.02854	-.01800	.02268	-.00004	-.00041	.00000	.00020

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.00969	.00091	-.00040	-.00197
#1	-.08769	.00166	.00000	-.00248
#2	.06832	.00016	-.00079	-.00146

Method: 60101150 Sample Name: PBW Operator: JH
Run Time: 12/13/91 10:53:34
Comment: HERM INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00222	.02798	-.00543	.01582	.00050	.00074	.03106
#1	-.00080	.03514	-.00708	.01491	.00000	.00043	.02812
#2	-.00364	.02082	-.00377	.01672	.00100	.00104	.03401

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00038	-.00121	-.00185	.00971	.03312	-.20057	.01307
	-.00190	-.00162	-.00101	.00896	.05768	-.20494	-.09485
	.00114	-.00081	-.00269	.01046	.00856	-.19620	.12099

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00059	.00610	-.07756	-.00590	-.00109	.13982	-.00062
#1	-.00176	.01207	-.05562	-.00555	-.00109	.13169	.00134
#2	.00059	.00013	-.09950	-.00624	-.00108	.14795	-.00278

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03374	-.00619	.00748	H.52479	.00285	.00000	-.00099
#1	.02858	-.00743	.00415	H.54828	.00105	.00000	-.00099
#2	.03889	-.00495	.01080	H.50130	.00464	.00000	-.00099

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.01007	.00046	-.00040	-.00002
#1	-.03772	.00046	.00000	-.00019
#2	.01759	.00046	-.00079	.00015

Analysis Report Blank Sample Fri 12-13-91 10:57:31 AM page 1

Method: 60101150 Sample Name: PREX Operator: JH
Run Time: 12/13/91 10:55:47
Comment: HERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00067	.01626	-.00909	H.02194	.03573	.00060	.08599
#1	-.00105	.02211	-.00881	H.02308	.03640	.00075	.09329
#2	-.00028	.01042	-.00938	H.02080	.03506	.00045	.07868

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00114	-.00204	.00134	.00597	.00207	-.17870	-.04603
	-.00076	-.00325	-.00068	.00597	.00207	-.18731	.11063
	-.00151	-.00082	.00335	.00597	.00207	-.17010	-.20268

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00117	.00551	-.06288	-.00624	.00077	.20810	.00123
#1	.00059	.00718	-.05632	-.00555	.00039	.20323	.00134
#2	.00176	.00384	-.06944	-.00693	.00115	.21298	.00113

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.03113	-.00544	.00573	H.43082	.00709	.00000	-.00020
#1	.02339	-.00304	-.00782	H.44909	.00856	.00000	-.00060
#2	.03887	-.00783	.01928	H.41255	.00562	.00000	.00020

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.04310	-.00044	.00000	.00982
#1	-.05307	-.00014	-.00158	.01049
#2	-.03314	-.00074	.00158	.00915

Method: 60101150 Sample Name: 68944 Operator: JH
Run Time: 12/13/91 10:59:18
Comment: MERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00024	.02543	-.00069	.01490	.05376	.00060	3.2818
#1	.00102	.02607	-.00200	.00946	.05376	.00015	3.2961
#2	-.00053	.02480	.00061	.02034	.05376	.00105	3.2675

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00343	-.00041	.01748	.00821	-.00262	-.18318	1.0239
	.00267	-.00244	.01815	.00895	-.00726	-.20502	.58859
#2	.00420	.00162	.01681	.00746	.00201	-.16134	1.4593

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00176	.76769	.67715	.02340	-.00069	.67948	.00247
#1	-.00176	.76798	.66954	.02201	-.00037	.67460	.00175
#2	-.00176	.76739	.68475	.02478	-.00101	.68435	.00319

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02597	.00006	.00880	.56669	-.00111	.01832	-.00057
#1	.02857	-.00682	.01761	.54842	.00272	.01861	-.00057
#2	.02337	.00693	-.00001	.58496	-.00494	.01803	-.00057

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.06985	.00018	.00000	.01158
#1	-.07459	.00018	-.00079	.01175
#2	-.06511	.00018	.00079	.01142

Analysis Report Fri 12-13-91 11:03:49 AM page 1

Method: 60101150 Sample Name: 68945 Operator: JH
Run Time: 12/13/91 11:02:03
Comment: HERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.00101	.04175	-.00891	.03996	.06444	.00000	1.1729
#1	.00257	.04043	-.00618	.04178	.06377	.00014	1.1678
#2	-.00055	.04306	-.01164	.03814	.06511	-.00014	1.1779

Elem	Co2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	-.00036	.00114	1.2968	.01198	.01622	-.17268	.92987
	-.00188	.00317	1.2913	.01198	.01181	-.17664	1.2691
	.00116	-.00089	1.3024	.01198	.02063	-.16873	.59067

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na3689	Ni2316
Avge	.00117	.43958	.35032	.02277	-.00018	.94943	.00054
#1	-.00059	.43527	.36483	.02277	-.00019	.96406	.00260
#2	.00293	.44389	.33581	.02278	-.00017	.93480	-.00152

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.04149	-.01398	.00677	1.1039	.00076	.00465	.00136
#1	.05958	-.01218	.02282	1.0934	-.00201	.00462	.00117
#2	.02340	-.01579	-.00927	1.1144	.00353	.00465	.00156

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.00073	.00020	-.00078	.03411
#1	.02602	.00261	-.00078	.03278
#2	-.02457	-.00221	-.00078	.03544

Analysis Report Fri 12-13-91 11:09:01 AM page 1

Method: 60101150 Sample Name: 68946 Operator: Jh
Run Time: 12/13/91 11:07:16
Comment: MERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00196	.01300	-.00809	.03262	.07062	-.00030	.22508
#1	-.00208	.00647	-.01035	.03304	.07145	-.00015	.22793
#2	-.00184	.01952	-.00583	.03221	.06978	-.00044	.22383

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00020	-.00123	-.00270	.00597	.03224	-.17003	.76840
	-.00228	-.00164	-.00337	.00298	.06748	-.10790	.71962
	.00267	-.00082	-.00203	.00896	-.00301	-.23215	.81717

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00059	.19901	.13957	.05686	-.00103	1.2096	-.00206
#1	-.00176	.21643	.17585	.07791	.00053	1.2015	-.00237
#2	.00293	.18159	.10329	.03582	-.00260	1.2177	-.00175

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.02078	-.01119	-.00962	.66319	.00465	.00145	-.00040
#1	.01299	-.01781	-.01687	.62664	.00334	.00000	-.00020
#2	.02858	-.00456	-.00237	.69975	.00595	.00291	-.00060

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.06872	-.00090	-.00158	.04401
#1	-.08461	.00046	-.00158	.04452
#2	-.05284	-.00225	-.00158	.04349

Analysis Report Fri 12-13-91 11:11:26 AM page 1

Method: 60101150 Sample Name: ICSAIF Operator: Jm
Run Time: 12/13/91 11:09:40
Comment: HERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00176	471.44	.13988	.02743	.03658	-.00012	459.26
#1	-.00278	472.40	.13766	.02482	.03691	-.00012	459.90
#2	-.00074	470.49	.14210	.03004	.03624	-.00013	458.63

Elem	Co2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00039	.00780	.00222	-.00683	175.86	182.03	-.22020
	.00134	.00782	.00408	-.00684	176.22	182.19	-.40894
	-.00075	.00778	.00037	-.00683	175.50	181.87	-.03146

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00176	144.13	486.68	.00260	-.00834	.05245	-.00321
#1	-.00293	144.12	487.78	.00468	-.00696	.05073	-.00877
#2	-.00059	144.14	485.59	.00051	-.00972	.05418	.00235

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.10221	-.15262	.22699	-.06710	.00072	.19335	-.00159
#1	.09282	-.16540	.22734	-.07491	.00370	.19393	-.00079
#2	.11160	-.13985	.22664	-.05929	-.00225	.19278	-.00239

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.76836	-.00602	-.00079	-.01038
#1	-.74844	-.00632	.00000	-.01058
#2	-.78828	-.00571	-.00158	-.01018

Analysis Report Fri 12-13-91 11:14:21 AM page 1

Method: 60101150 Sample Name: 1CSABIF Operator: JM
Run Time: 12/13/91 11:12:35
Comment: MERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.92510	465.13	.16354	.02733	.49720	.44418	452.34
#1	.92427	463.59	.14185	.03315	.49470	.44209	450.97
#2	.92593	466.67	.18523	.02152	.49970	.44627	453.71

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.88787	.43660	.43201	.46090	173.67	179.34	-.09265
	.88464	.43334	.42930	.45939	173.22	178.79	.33770
	.89109	.43986	.43472	.46242	174.12	179.90	-.52301

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00351	143.93	479.78	.44422	-.00675	.03688	.84510
#1	-.00410	143.92	478.25	.44551	-.00775	.04841	.84201
#2	-.00293	143.95	481.32	.44294	-.00574	.02535	.84819

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.99092	.13268	.25888	-.03065	.00176	.19080	-.00098
#1	.99473	-.13306	.21939	-.01760	.01377	.18935	-.00099
#2	.98711	-.13229	.29836	-.04370	-.01026	.19224	-.00097

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	-.61666	.44417	-.00079	.86291
#1	-.64380	.44359	-.00158	.86086
#2	-.58951	.44475	.00000	.86496

Analysis Report QC Standard Fri 12-13-91 11:38:00 AM page 1

Method: 60101150 Sample Name: CCVC3 Operator: Jr
Run Time: 12/13/91 11:36:11
Comments: HERB INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00040	.49519	.48518	.51857	.49330	.48935	19.344
#1	-.00260	.49581	.48566	.50836	.49213	.48710	19.220
#2	.00181	.49457	.48470	.52878	.49447	.49160	19.468
Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00464	-.00364	.49531	.00008	.49147	.31569	20.541
#1	.00539	-.00689	.49027	.00233	.48777	.28044	20.444
#2	.00389	-.00039	.50036	-.00216	.49518	.35095	20.637
Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	2.1353	.49452	.37070	-.00599	1.9703	20.218	.00033
#1	2.1330	.49109	.35322	-.00669	1.9597	20.135	-.00142
#2	2.1377	.49796	.38819	-.00529	1.9809	20.301	.00208
Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.01328	.50079	-.01312	.00226	1.9432	1.9575	1.9434
#1	-.00220	.50116	-.02283	-.02916	1.9287	1.9509	1.9416
#2	.02876	.50041	-.00341	.03368	1.9576	1.9640	1.9571
Elem	Tl1908	V_2924	Y_3710	Zn2138			
Avge	-.05159	-.01094	1.9872	.47916			
#1	-.07653	-.01231	1.9804	.47499			
#2	-.02665	-.00957	1.9939	.48334			

Analysis Report QC Standard Fri 12-13-91 11:40:22 AM page 1

Method: 60101150 Sample Name: CCVN3 Operator: Jh
Run Time: 12/13/91 11:38:36
Comment: HERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	.49122	-.00817	-.00539	-.00148	-.00017	-.00107	-.00770
#1	.48953	-.00033	-.01104	.00101	-.00033	-.00106	-.00983
#2	.49290	-.01600	.00026	-.00397	.00000	-.00108	-.00557

Elem	Co2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.48452	.48468	-.00223	.50237	-.00429	-.22876	.13221
#1	.47691	.48427	-.00308	.50387	-.00545	-.21156	.27977
#2	.49213	.48508	-.00138	.50088	-.00313	-.24597	-.01535

Elem	Li6707	Mg2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	.00000	-.00806	-.06977	.48722	-.00164	.02602	.48732
#1	.00059	-.00865	-.05474	.48343	-.00161	.02114	.48321
#2	-.00058	-.00748	-.08481	.49101	-.00167	.03090	.49144

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.98978	-.00646	2.0136	.00490	.01058	.00000	.00025
#1	.97428	.00281	1.9885	.00750	.01385	.00000	.00064
#2	1.0053	-.01573	2.0387	.00231	.00732	.00000	-.00015

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	2.0689	.50070	.00039	-.00417
#1	2.0333	.49888	.00158	-.00317
#2	2.1044	.50251	-.00079	-.00517

Analysis Report Blank Sample Fri 12-13-91 11:51:57 AM page 1

Method: 60101150 Sample name: CCB3 Operator: JH
Run Time: 12/13/91 11:50:12
Comment: MERN INV 3 (5947) LEACHATE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	B_2497	Ba4934	Be3130	Ca3179
Avge	-.00222	.00193	-.00686	-.00147	.00000	.00075	-.02284
#1	-.00105	.00389	-.00283	-.00058	.00033	.00075	-.02226
#2	-.00338	-.00002	-.01089	-.00236	-.00033	.00074	-.02343

Elem	Cd2288	Co2286	Cr2677	Cu3247	Fe2599	Fe2714	K_7664
Avge	.00039	-.00040	-.00286	-.00001	.01459	-.19191	-.01896
#1	.00038	-.00162	-.00269	-.00001	.03081	-.16101	-.02799
#2	.00040	.00082	-.00303	-.00001	-.00163	-.22281	-.00993

Elem	Li6707	Mn2795	Mg3822	Mn2576	Mo2023	Na5889	Ni2316
Avge	-.00059	.00675	-.07808	-.00659	.00036	.01789	.00360
#1	-.00176	.01067	-.08464	-.00761	.00044	.01139	.00566
#2	.00059	.00284	-.07152	-.00556	.00033	.02439	.00155

Elem	Pb2203	Sb2175	Se1960	Si2881	Sn1899	Sr4215	Ti3349
Avge	.04921	-.00554	-.00820	-.00785	.00310	.00000	-.00020
#1	.04402	-.00472	-.03119	-.03135	.00530	.00000	.00020
#2	.05439	-.00637	.01480	.01564	.00090	.00000	-.00059

Elem	Tl1908	V_2924	Y_3710	Zn2138
Avge	.01253	.00016	-.00158	-.00450
#1	-.02814	-.00015	.00000	-.00451
#2	.05320	.00046	-.00317	-.00449

5800, 5806 Veobrien 1, 2 PBO

B1/4

File : 5800ASH1.WSL

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Flags
1	S0		3		1.0	12/11/91	20:08:44	
2	S10		3		1.0	12/11/91	20:13:11	
3	S20		3		1.0	12/11/91	20:17:38	
4	S50		3		1.0	12/11/91	20:22:05	
5	S100		3		1.0	12/11/91	20:26:32	
6	ICV		0		1.0	12/11/91	20:31:00	
7	ICB	ICB	0		1.0	12/11/91	20:35:26	
8	CCV1		0		1.0	12/11/91	20:39:54	
9	CCB1	CCB	0		1.0	12/11/91	20:44:20	
10	CRA	CRA	0		1.0	12/11/91	20:48:46	
11	PBW	PBW	0		1.0	12/11/91	20:53:15	
12	+20		1		1.0	12/11/91	20:57:42	
~~13~~	~~LCSM~~ PBO Rerun to verify		0		5.0	12/11/91	21:02:10	N
~~14~~	~~66316S~~		0		5.0	12/11/91	21:06:38	N
~~15~~	~~66317S~~		0		5.0	12/11/91	21:11:05	N
16	66190		0		1.0	12/11/91	21:15:33	
17	+20		1		1.0	12/11/91	21:20:00	
18	66191		0		1.0	12/11/91	21:24:28	
19	+20		1		1.0	12/11/91	21:28:54	
20	CCV2		0		1.0	12/11/91	21:33:25	
21	CCB2	CCB	0		1.0	12/11/91	21:37:52	
22	66192		0		1.0	12/11/91	21:42:22	
23	+20		1		1.0	12/11/91	21:46:52	
~~24~~	~~66193~~ PBO Rerun 10 fold		0		1.0	12/11/91	21:51:23	M
~~25~~	~~+20~~		1		1.0	12/11/91	21:55:54	
26	66314		0		1.0	12/11/91	22:00:25	
27	+20		1		1.0	12/11/91	22:04:56	
~~28~~	~~66315~~ PBO Rerun		0		1.0	12/11/91	22:09:26	4pt
~~29~~	~~+20~~		1		1.0	12/11/91	22:13:56	
30	66316		0		1.0	12/11/91	22:18:27	
31	+20		1		1.0	12/11/91	22:22:58	
32	CCV3		0		1.0	12/11/91	22:27:28	
33	CCB3	CCB	0		1.0	12/11/91	22:31:56	
34	66316D		0		1.0	12/11/91	22:36:30	
35	+20		1		1.0	12/11/91	22:41:00	
~~36~~	~~66317~~ PBO Unat Rerun → Bad RSD		0		1.0	12/11/91	22:45:31	M
~~37~~	~~66317~~ PBO Rerun 10 fold		0		1.0	12/11/91	22:49:59	M
~~38~~	~~+20~~		1		1.0	12/11/91	22:54:30	M
~~39~~	~~66317D~~ PBO Rerun 10 fold		0		1.0	12/11/91	22:59:00	
~~40~~	~~+20~~		1		1.0	12/11/91	23:03:30	
41	CCV4		0		1.0	12/11/91	23:08:02	
42	CCB4	CCB	0		1.0	12/11/91	23:12:30	
43	LCSM		0		5.0	12/12/91	00:29:19	
44	66316S		0		5.0	12/12/91	00:33:51	
45	66317S		0		5.0	12/12/91	00:38:23	
46	CCV5		0		1.0	12/12/91	00:42:52	
47	CCB5	CCB	0		1.0	12/12/91	00:47:18	
~~48~~	~~66193~~ PBO Rerun		0		10.0	12/12/91	02:05:56	4pt
~~49~~	~~+20~~		1		10.0	12/12/91	02:10:24	
50	66317		0		10.0	12/12/91	02:14:50	W
51	+20		1		10.0	12/12/91	02:19:18	
~~52~~	~~66317D~~ PBO Rerun		0		10.0	12/12/91	02:23:45	4pt
~~53~~	~~+20~~		1		10.0	12/12/91	02:28:12	
54	66315		0		1.0	12/12/91	02:32:37	
55	+10		2		1.0	12/12/91	02:37:04	

5800, 5806 Veobrien 1,2 BBD

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56	+20		2	1.0	12/12/91 02:41:31
57	+40		2	1.0	12/12/91 02:45:58
58	CCV6		0	1.0	12/12/91 02:50:29
59	CCB6	CCB	0	1.0	12/12/91 02:54:57

ICV2K = 50.4ppb EPA
CCV = 50.0ppb NBS

5800, 5806 Veobrien 1, 2 PBC

Pg 3/4

Spike Recoveries in 5800ASH1.WSL

#	Sample Names Laboratory	EPA/Customer	Element	Original	Added	Found	% R	E
1	PBW	PBW	AS193.70	-2.20000	20.000	18.20000	91.00	
2	66190		AS193.70	5.20000	20.000	26.80000	108.00	
3	66191		AS193.70	11.40000	20.000	32.80000	107.00	
4	66192		AS193.70	9.20000	20.000	28.50000	96.50	
5	66193		AS193.70	8.30000	20.000	0.00000		*
6	66314		AS193.70	2.40000	20.000	22.20000	99.00	
7	66315		AS193.70	61.10000	20.000	75.30000	71.00	*
8	66316		AS193.70	22.40000	20.000	40.80000	92.00	
9	66316D		AS193.70	20.60000	20.000	40.30000	98.50	
10	66317		AS193.70	39.70000	20.000	-35.7000		*
11	66317D		AS193.70	0.00000	20.000	0.00000		*
12	66193		AS193.70	8.30000	20.000	18.30000	50.00	*
13	66317		AS193.70	4.50000	20.000	14.70000	51.00	*
14	66317D		AS193.70	7.80000	20.000	17.70000	49.50	*

5800, 5806 Veobrien 1,2 8BL

Pg 4/4

MSA Calculations in 5800ASH1.WSL

Elm #	Lab. Sample Name EPA/Cust. Name	Dilution Signal 0	Spike 1 Signal 1	Spike 2 Signal 2	Spike 3 Signal 3	Final. Conc Soln. Conc.	R SEE
AS	66315	1.00	10.00	20.00	40.00	20.3	0.9993
1		0.085	0.132	0.177	0.258	20.3	0.0034

5800 5806 Veobrien 1,2 8/8/0 Pg 1/46 22

Element File: VAS.GEL
Date: 12/11/91
Data File: 5800ASH1.DAT
Technique: HGA

Element: As
Time: 20:04
ID/wt File: 5800ASH1.IDW
Calib. Type: Linear

Wavelength: 193.7
Slit: 0.70 L
Lamp Current: 0
Energy: 53

As ID: 50 Seq. No.: 00001 A/S Pos.: 36 Date: 12/11/91

uL dispensed: 20 from 36

Replicate 1
Peak Area (A-s): 0.013
Background Pk Area (A-s): 0.139
Blank Corrected Pk Area (A-s): -0.009

Time: 20:06
Peak Height (A): 0.021
Background Pk Height (A): 0.058

5800, 5806 Veobrien 1,2 BBD

Pg 3/46 22

uL dispensed: 20 from 36
Replicate 2 (Peak Stored) Time: 20:08
Peak Area (A-s): 0.014 Peak Height (A): 0.016
Background Pk Area (A-s): 0.102 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): -0.009

Mean Pk Area (A-s): -0.009 SD: 0.0002 RSD(%): 2.19

Auto-zero performed.

~~~~~~

As ID: S10 Seq. No.: 00002 A/S Pos.: 1 Date: 12/11/91

uL dispensed: 20 from 1
Replicate 1 Time: 20:10
Peak Area (A-s): 0.057 Peak Height (A): 0.098
Background Pk Area (A-s): 0.091 Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.043

uL dispensed: 20 from 1
Replicate 2 (Peak Stored) Time: 20:13
Peak Area (A-s): 0.057 Peak Height (A): 0.096
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.043

Mean Pk Area (A-s): 0.043 SD: 0.0001 RSD(%): 0.20

Standard number 1 applied. [10.0]
Correlation coefficient: 1.00000 Slope: 0.0043

~~~~~~

ID: S20 Seq. No.: 00003 A/S Pos.: 2 Date: 12/11/91

uL dispensed: 20 from 2
Replicate 1 Time: 20:15
Peak Area (A-s): 0.106 Peak Height (A): 0.171
Background Pk Area (A-s): 0.081 Background Pk Height (A): 0.036
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 21.4

uL dispensed: 20 from 2
Replicate 2 (Peak Stored) Time: 20:17
Peak Area (A-s): 0.105 Peak Height (A): 0.173
Background Pk Area (A-s): 0.076 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): 0.091
Concentration (ug/L): 21.1

Mean Conc (ug/L): 21.2 SD: 0.20 RSD(%): 0.93

Standard number 2 applied. [20.0]
Correlation coefficient: 0.99719 Slope: 0.0045

~~~~~~

As ID: S50 Seq. No.: 00004 A/S Pos.: 3 Date: 12/11/91

uL dispensed: 20 from 3

plicate 1 Time: 20:19
Peak Area (A-s): 0.253 Peak Height (A): 0.422
Background Pk Area (A-s): 0.082 Background Pk Height (A): 0.038
~~~~~~

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22

Blank Corrected Pk Area (A-s): 0.239
Concentration (ug/L): 52.7

uL dispensed: 20 from 3
Replicate 2 (Peak Stored) Time: 20:22
Peak Area (A-s): 0.252 Peak Height (A): 0.424
Background Pk Area (A-s): 0.079 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.239
Concentration (ug/L): 52.6

Mean Conc (ug/L): 52.7 SD: 0.03 RSD(%): 0.06

Standard number 3 applied. [50.0]
Correlation coefficient: 0.99921 Slope: 0.0047

~~~~~~

As ID: S100 Seq. No.: 00005 A/S Pos.: 4 Date: 12/11/91

uL dispensed: 20 from 4

Replicate 1 Time: 20:24
Peak Area (A-s): 0.481 Peak Height (A): 0.782
Background Pk Area (A-s): 0.094 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.468
Concentration (ug/L): 98.7

uL dispensed: 20 from 4
Replicate 2 (Peak Stored) Time: 20:26
Peak Area (A-s): 0.482 Peak Height (A): 0.775
Background Pk Area (A-s): 0.092 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.468
Concentration (ug/L): 98.7

Mean Conc (ug/L): 98.7 SD: 0.04 RSD(%): 0.04

Standard number 4 applied. [100.0]
Correlation coefficient: 0.99982 Slope: 0.0047

~~~~~~

As ID: ICV Seq. No.: 00006 A/S Pos.: 5 Date: 12/11/91

uL dispensed: 20 from 5
Replicate 1 Time: 20:28
Peak Area (A-s): 0.247 Peak Height (A): 0.409
Background Pk Area (A-s): 0.077 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.234
Concentration (ug/L): 49.7

uL dispensed: 20 from 5
Replicate 2 (Peak Stored) Time: 20:31
Peak Area (A-s): 0.246 Peak Height (A): 0.403
Background Pk Area (A-s): 0.075 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.233
Concentration (ug/L): 49.6

Mean Conc (ug/L): 49.7 SD: 0.09 RSD(%): 0.17

sample is within range 45.11 - 55.69

5800, 5806 Veobrien 1, 2 [illegible]

As ID: ICB Seq. No.: 00007 A/S Pos.: 6 Date: 12/11/91

uL dispensed: 20 from 6

Replicate 1 Time: 20:33
Peak Area (A-s): 0.010 Peak Height (A): 0.015
Background Pk Area (A-s): 0.061 Background Pk Height (A): 0.033
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -0.8

uL dispensed: 20 from 6

Replicate 2 (Peak Stored) Time: 20:35
Peak Area (A-s): 0.008 Peak Height (A): 0.012
Background Pk Area (A-s): 0.060 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): -0.005
Concentration (ug/L): -1.1

Mean Conc (ug/L): -0.9 SD: 0.26 RSD(%): 27.80

QC sample is within range -10 - 10

As ID: CCV Seq. No.: 00008 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 20 from 7

Replicate 1 Time: 20:37
Peak Area (A-s): 0.243 Peak Height (A): 0.382
Background Pk Area (A-s): 0.074 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.230
Concentration (ug/L): 48.9

uL dispensed: 20 from 7

Replicate 2 (Peak Stored) Time: 20:39
Peak Area (A-s): 0.245 Peak Height (A): 0.383
Background Pk Area (A-s): 0.075 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.231
Concentration (ug/L): 49.2

Mean Conc (ug/L): 49.1 SD: 0.22 RSD(%): 0.45

QC sample is within range 44.8 - 53.2

As ID: CCB Seq. No.: 00009 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 20 from 8

Replicate 1 Time: 20:42
Peak Area (A-s): 0.007 Peak Height (A): 0.011
Background Pk Area (A-s): 0.060 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.4

uL dispensed: 20 from 8

Replicate 2 (Peak Stored) Time: 20:44
Peak Area (A-s): 0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.059 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -2.0

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Mean Conc (ug/L): -1.7 SD: 0.41 RSD(%): 24.33

QC sample is within range -10 - 10

ID: CRA Seq. No.: 00010 A/S Pos.: 9 Date: 12/11/91

uL dispensed: 20 from 9

Replicate 1 Time: 20:46
Peak Area (A-s): 0.054 Peak Height (A): 0.090
Background Pk Area (A-s): 0.063 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.040
Concentration (ug/L): 8.6

uL dispensed: 20 from 9

Replicate 2 (Peak Stored) Time: 20:48
Peak Area (A-s): 0.054 Peak Height (A): 0.090
Background Pk Area (A-s): 0.061 Background Pk Height (A): 0.029
Blank Corrected Pk Area (A-s): 0.041
Concentration (ug/L): 8.7

Mean Conc (ug/L): 8.6 SD: 0.10 RSD(%): 1.17

QC sample is within range

As ID: PBW Seq. No.: 00011 A/S Pos.: 11 Date: 12/11/91

uL dispensed: 20 from 11

Replicate 1 Time: 20:51
Peak Area (A-s): 0.004 Peak Height (A): 0.007
Background Pk Area (A-s): 0.059 Background Pk Height (A): 0.027
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -2.1

uL dispensed: 20 from 11

Replicate 2 (Peak Stored) Time: 20:53
Peak Area (A-s): 0.003 Peak Height (A): 0.007
Background Pk Area (A-s): 0.057 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -2.2

Mean Conc (ug/L): -2.2 SD: 0.10 RSD(%): 4.77

As ID: +20 Seq. No.: 00012 A/S Pos.: 12 Date: 12/11/91

uL dispensed: 20 from 12

Replicate 1 Time: 20:55
Peak Area (A-s): 0.100 Peak Height (A): 0.160
Background Pk Area (A-s): 0.062 Background Pk Height (A): 0.028
Blank Corrected Pk Area (A-s): 0.086
Concentration (ug/L): 18.4

uL dispensed: 20 from 12

Replicate 2 (Peak Stored) Time: 20:57
Peak Area (A-s): 0.098 Peak Height (A): 0.161
Background Pk Area (A-s): 0.061 Background Pk Height (A): 0.026
Blank Corrected Pk Area (A-s): 0.085

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Concentration (ug/L): 18.0

Mean Conc (ug/L): 18.2 SD: 0.24 RSD(%): 1.30

ID: LCSM Seq. No.: 00013 A/S Pos.: 13 Date: 12/11/91

uL dispensed: 20 from 13

Replicate 1 Time: 20:59
Peak Area (A-s): 0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.009 Background Pk Height (A): 0.021
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -2.0

uL dispensed: 20 from 13

Replicate 2 (Peak Stored) Time: 21:02
Peak Area (A-s): 0.004 Peak Height (A): 0.010
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.018
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.9

PBD

Mean Conc (ug/L): -1.9 SD: 0.03 RSD(%): 1.46

Rerun to verify N

As ID: 66316S Seq. No.: 00014 A/S Pos.: 14 Date: 12/11/91

uL dispensed: 20 from 14

Replicate 1 Time: 21:04
Peak Area (A-s): 0.004 Peak Height (A): 0.012
Background Pk Area (A-s): 0.006 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.9

uL dispensed: 20 from 14

Replicate 2 (Peak Stored) Time: 21:06
Peak Area (A-s): 0.005 Peak Height (A): 0.010
Background Pk Area (A-s): 0.004 Background Pk Height (A): 0.016
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.7

PBD

Mean Conc (ug/L): -1.8 SD: 0.12 RSD(%): 6.52

Rerun to verify N

As ID: 66317S Seq. No.: 00015 A/S Pos.: 15 Date: 12/11/91

uL dispensed: 20 from 15

Replicate 1 Time: 21:08
Peak Area (A-s): 0.003 Peak Height (A): 0.009
Background Pk Area (A-s): 0.005 Background Pk Height (A): 0.018
Blank Corrected Pk Area (A-s): -0.011
Concentration (ug/L): -2.3

uL dispensed: 20 from 15

Replicate 2 (Peak Stored) Time: 21:11
Peak Area (A-s): 0.004 Peak Height (A): 0.012
Background Pk Area (A-s): 0.005 Background Pk Height (A): 0.017
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.9

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Mean Conc (ug/L): -2.4 100 SD: 0.21 RSD(%): 10.22 15 7/46 22

Return to verify N

As ID: 66190 Seq. No.: 00016 A/S Pos.: 16 Date: 12/11/91

uL dispensed: 20 from 16

Replicate 1 Time: 21:13
Peak Area (A-s): 0.038 Peak Height (A): 0.065
Background Pk Area (A-s): 0.086 Background Pk Height (A): 0.038
Blank Corrected Pk Area (A-s): 0.025
Concentration (ug/L): 5.3

uL dispensed: 20 from 16

Replicate 2 (Peak Stored) Time: 21:15
Peak Area (A-s): 0.037 Peak Height (A): 0.064
Background Pk Area (A-s): 0.091 Background Pk Height (A): 0.040
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 5.0

Mean Conc (ug/L): 5.2 SD: 0.18 RSD(%): 3.44

As ID: +20 Seq. No.: 00017 A/S Pos.: 17 Date: 12/11/91

uL dispensed: 20 from 17

Replicate 1 Time: 21:17
Peak Area (A-s): 0.139 Peak Height (A): 0.240
Background Pk Area (A-s): 0.099 Background Pk Height (A): 0.041
Blank Corrected Pk Area (A-s): 0.126
Concentration (ug/L): 26.8

uL dispensed: 20 from 17

Replicate 2 (Peak Stored) Time: 21:20
Peak Area (A-s): 0.139 Peak Height (A): 0.241
Background Pk Area (A-s): 0.098 Background Pk Height (A): 0.039
Blank Corrected Pk Area (A-s): 0.126
Concentration (ug/L): 26.8

Mean Conc (ug/L): 26.8 SD: 0.00 RSD(%): 0.01

As ID: 66191 Seq. No.: 00018 A/S Pos.: 18 Date: 12/11/91

uL dispensed: 20 from 18

Replicate 1 Time: 21:22
Peak Area (A-s): 0.067 Peak Height (A): 0.117
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.054
Concentration (ug/L): 11.4

uL dispensed: 20 from 18

Replicate 2 (Peak Stored) Time: 21:24
Peak Area (A-s): 0.067 Peak Height (A): 0.112
Background Pk Area (A-s): 0.084 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.054
Concentration (ug/L): 11.4

Mean Conc (ug/L): 11.4 SD: 0.00 RSD(%): 0.03

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As ID: +20 Seq. No.: 00019 A/S Pos.: 19 Date: 12/11/91

uL dispensed: 20 from 19

Replicate 1
Peak Area (A-s): 0.167
Background Pk Area (A-s): 0.089
Blank Corrected Pk Area (A-s): 0.154
Concentration (ug/L): 32.8

Time: 21:26
Peak Height (A): 0.283
Background Pk Height (A): 0.053

uL dispensed: 20 from 19

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.168
Background Pk Area (A-s): 0.090
Blank Corrected Pk Area (A-s): 0.154
Concentration (ug/L): 32.9

Time: 21:28
Peak Height (A): 0.274
Background Pk Height (A): 0.051

Mean Conc (ug/L): 32.8 SD: 0.04 RSD(%): 0.13

As ID: CCV2 Seq. No.: 00020 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 20 from 7

Replicate 1
Peak Area (A-s): 0.236
Background Pk Area (A-s): 0.072
Blank Corrected Pk Area (A-s): 0.223
Concentration (ug/L): 47.4

Time: 21:31
Peak Height (A): 0.369
Background Pk Height (A): 0.036

uL dispensed: 20 from 7

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.239
Background Pk Area (A-s): 0.068
Blank Corrected Pk Area (A-s): 0.225
Concentration (ug/L): 48.0

Time: 21:33
Peak Height (A): 0.363
Background Pk Height (A): 0.037

Mean Conc (ug/L): 47.7 SD: 0.43 RSD(%): 0.90

QC sample is within range 44.8 - 55.2

As ID: CCB2 Seq. No.: 00021 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 20 from 8

Replicate 1
Peak Area (A-s): 0.007
Background Pk Area (A-s): 0.057
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.4

Time: 21:35
Peak Height (A): 0.011
Background Pk Height (A): 0.026

uL dispensed: 20 from 8

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.001
Background Pk Area (A-s): 0.056
Blank Corrected Pk Area (A-s): -0.012
Concentration (ug/L): -2.6

Time: 21:37
Peak Height (A): 0.007
Background Pk Height (A): 0.027

Mean Conc (ug/L): -2.0 SD: 0.84 RSD(%): 41.64

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QC sample is within range -10 - 10

As ID: 66192 Seq. No.: 00022 A/S Pos.: 20 Date: 12/11/91

uL dispensed: 20 from 20

Replicate 1 Time: 21:40
Peak Area (A-s): 0.056 Peak Height (A): 0.105
Background Pk Area (A-s): 0.875 Background Pk Height (A): 0.916
Blank Corrected Pk Area (A-s): 0.043
Concentration (ug/L): 9.1

uL dispensed: 20 from 20

Replicate 2 (Peak Stored) Time: 21:42
Peak Area (A-s): 0.057 Peak Height (A): 0.104
Background Pk Area (A-s): 0.920 Background Pk Height (A): 0.952
Blank Corrected Pk Area (A-s): 0.044
Concentration (ug/L): 9.4

Mean Conc (ug/L): 9.2 SD: 0.15 RSD(%): 1.60

As ID: +20 Seq. No.: 00023 A/S Pos.: 21 Date: 12/11/91

uL dispensed: 20 from 21

Replicate 1 Time: 21:44
Peak Area (A-s): 0.148 Peak Height (A): 0.277
Background Pk Area (A-s): 0.932 Background Pk Height (A): 0.964
Blank Corrected Pk Area (A-s): 0.135
Concentration (ug/L): 28.7

uL dispensed: 20 from 21

Replicate 2 (Peak Stored) Time: 21:46
Peak Area (A-s): 0.146 Peak Height (A): 0.278
Background Pk Area (A-s): 0.938 Background Pk Height (A): 0.943
Blank Corrected Pk Area (A-s): 0.133
Concentration (ug/L): 28.2

Mean Conc (ug/L): 28.5 SD: 0.31 RSD(%): 1.09

As ID: 66193 Seq. No.: 00024 A/S Pos.: 22 Date: 12/11/91

uL dispensed: 20 from 22

The height of this peak exceeds the rollover value.

Replicate 1 Time: 21:49
Peak Area (A-s): 0.112 Peak Height (A): 3.231
Background Pk Area (A-s): 3.890 Background Pk Height (A): 3.270
Blank Corrected Pk Area (A-s): 0.099
Concentration (ug/L): 21.1

uL dispensed: 20 from 22

The height of this peak exceeds the rollover value.

Replicate 2 (Peak Stored) Time: 21:51
Peak Area (A-s): -0.007 Peak Height (A): 3.265
Background Pk Area (A-s): 3.812 Background Pk Height (A): 3.278
Blank Corrected Pk Area (A-s): -0.021
Concentration (ug/L): -4.4

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Mean Conc (ug/L): 8.3 SD: 18.02 RSD(%): 216.46

Rerun 10 fold

As ID: +20 Seq. No.: 00025 A/S Pos.: 23 Date: 12/11/91

--- dispensed: 20 from 23

The signal is too large for the range of the electronics.

Replicate 1 Time: 21:53
Peak Area (A-s): -0.074 Peak Height (A): 3.190
Background Pk Area (A-s): 3.681 Background Pk Height (A): 3.271
Blank Corrected Pk Area (A-s): -0.087
Concentration (ug/L): --------

uL dispensed: 20 from 23

The signal is too large for the range of the electronics.

Replicate 2 (Peak Stored) Time: 21:55
Peak Area (A-s): 0.054 Peak Height (A): 3.244
Background Pk Area (A-s): 4.108 Background Pk Height (A): 3.270
Blank Corrected Pk Area (A-s): 0.041
Concentration (ug/L): --------

Mean Conc (ug/L): ---- SD: ---- RSD(%): ----

As ID: 66314 Seq. No.: 00026 A/S Pos.: 24 Date: 12/11/91

uL dispensed: 20 from 24

Replicate 1 Time: 21:58
Peak Area (A-s): 0.027 Peak Height (A): 0.039
Background Pk Area (A-s): 0.520 Background Pk Height (A): 0.425
Blank Corrected Pk Area (A-s): 0.013
Concentration (ug/L): 2.9

uL dispensed: 20 from 24

Replicate 2 (Peak Stored) Time: 22:00
Peak Area (A-s): 0.023 Peak Height (A): 0.032
Background Pk Area (A-s): 0.212 Background Pk Height (A): 0.132
Blank Corrected Pk Area (A-s): 0.009
Concentration (ug/L): 2.0

Mean Conc (ug/L): 2.4 SD: 0.61 RSD(%): 25.07

As ID: +20 Seq. No.: 00027 A/S Pos.: 25 Date: 12/11/91

uL dispensed: 20 from 25

Replicate 1 Time: 22:02
Peak Area (A-s): 0.117 Peak Height (A): 0.195
Background Pk Area (A-s): 0.162 Background Pk Height (A): 0.092
Blank Corrected Pk Area (A-s): 0.104
Concentration (ug/L): 22.1

uL dispensed: 20 from 25

Replicate 2 (Peak Stored) Time: 22:04
Peak Area (A-s): 0.118 Peak Height (A): 0.193
Background Pk Area (A-s): 0.136 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.105
Concentration (ug/L): 22.3

5800, 5806 Veobrien 1, 2 PBD

Mean Conc (ug/L): 22.2 SD: 0.12 RSD(%): 0.56

As ID: 66315 Seq. No.: 00028 A/S Pos.: 26 Date: 12/11/91

uL dispensed: 20 from 26

Replicate 1 Time: 22:07
Peak Area (A-s): 0.304 Peak Height (A): 0.606
Background Pk Area (A-s): 1.960 Background Pk Height (A): 1.963
Blank Corrected Pk Area (A-s): 0.291
Concentration (ug/L): 61.9

uL dispensed: 20 from 26

Replicate 2 (Peak Stored) Time: 22:09
Peak Area (A-s): 0.297 Peak Height (A): 0.609
Background Pk Area (A-s): 2.054 Background Pk Height (A): 2.064
Blank Corrected Pk Area (A-s): 0.283
Concentration (ug/L): 60.3

Mean Conc (ug/L): ~~61.1~~ PBD SD: 1.15 RSD(%): 1.89

Rerun 4pt MSA

As ID: +20 Seq. No.: 00029 A/S Pos.: 27 Date: 12/11/91

uL dispensed: 20 from 27

Replicate 1 Time: 22:11
Peak Area (A-s): 0.369 Peak Height (A): 0.727
Background Pk Area (A-s): 2.082 Background Pk Height (A): 2.117
Blank Corrected Pk Area (A-s): 0.356
Concentration (ug/L): 75.7

uL dispensed: 20 from 27

Replicate 2 (Peak Stored) Time: 22:13
Peak Area (A-s): 0.365 Peak Height (A): 0.755
Background Pk Area (A-s): 2.084 Background Pk Height (A): 2.106
Blank Corrected Pk Area (A-s): 0.351
Concentration (ug/L): 74.8

Mean Conc (ug/L): 75.3 SD: 0.62 RSD(%): 0.83

As ID: 66316 Seq. No.: 00030 A/S Pos.: 28 Date: 12/11/91

uL dispensed: 20 from 28

Replicate 1 Time: 22:16
Peak Area (A-s): 0.121 Peak Height (A): 0.219
Background Pk Area (A-s): 0.292 Background Pk Height (A): 0.212
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 22.9

uL dispensed: 20 from 28

Replicate 2 (Peak Stored) Time: 22:18
Peak Area (A-s): 0.116 Peak Height (A): 0.201
Background Pk Area (A-s): 0.180 Background Pk Height (A): 0.104
Blank Corrected Pk Area (A-s): 0.102
Concentration (ug/L): 21.8

Mean Conc (ug/L): 22.4 SD: 0.79 RSD(%): 3.52

5800, 5806 Veobrien 1,2 BBD

18/12/46 22

As ID: +20 Seq. No.: 00031 A/S Pos.: 29 Date: 12/11/91

uL dispensed: 20 from 29

Replicate 1
Peak Area (A-s): 0.205
Background Pk Area (A-s): 0.159
Blank Corrected Pk Area (A-s): 0.191
Concentration (ug/L): 40.8

Time: 22:20
Peak Height (A): 0.356
Background Pk Height (A): 0.089

uL dispensed: 20 from 29

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.205
Background Pk Area (A-s): 0.150
Blank Corrected Pk Area (A-s): 0.192
Concentration (ug/L): 40.9

Time: 22:22
Peak Height (A): 0.356
Background Pk Height (A): 0.082

Mean Conc (ug/L): 40.8 SD: 0.06 RSD(%): 0.14

As ID: CCV 3 Seq. No.: 00032 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 20 from 7

Replicate 1
Peak Area (A-s): 0.239
Background Pk Area (A-s): 0.102
Blank Corrected Pk Area (A-s): 0.225
Concentration (ug/L): 48.0

Time: 22:25
Peak Height (A): 0.378
Background Pk Height (A): 0.058

uL dispensed: 20 from 7

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.237
Background Pk Area (A-s): 0.097
Blank Corrected Pk Area (A-s): 0.223
Concentration (ug/L): 47.6

Time: 22:27
Peak Height (A): 0.381
Background Pk Height (A): 0.051

Mean Conc (ug/L): 47.8 SD: 0.27 RSD(%): 0.57

QC sample is within range 44.8 - 55.2

As ID: CCB 3 Seq. No.: 00033 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 20 from 8

Replicate 1
Peak Area (A-s): 0.009
Background Pk Area (A-s): 0.082
Blank Corrected Pk Area (A-s): -0.005
Concentration (ug/L): -1.0

Time: 22:29
Peak Height (A): 0.014
Background Pk Height (A): 0.043

uL dispensed: 20 from 8

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.006
Background Pk Area (A-s): 0.079
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Time: 22:31
Peak Height (A): 0.009
Background Pk Height (A): 0.044

Mean Conc (ug/L): -1.3 SD: 0.41 RSD(%): 31.10

5800, 5806 Veobrien 1,2

QC sample is within range -10 - 10

Pg 1/3/46 22

As ID: 66316D Seq. No.: 00034 A/S Pos.: 30 Date: 12/11/91

uL dispensed: 20 from 30

Replicate 1 Time: 22:34
Peak Area (A-s): 0.110 Peak Height (A): 0.174
Background Pk Area (A-s): 0.111 Background Pk Height (A): 0.052
Blank Corrected Pk Area (A-s): 0.097
Concentration (ug/L): 20.6

uL dispensed: 20 from 30

Replicate 2 (Peak Stored) Time: 22:36
Peak Area (A-s): 0.110 Peak Height (A): 0.175
Background Pk Area (A-s): 0.112 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 20.5

Mean Conc (ug/L): 20.6 SD: 0.09 RSD(%): 0.45

As ID: +20 Seq. No.: 00035 A/S Pos.: 31 Date: 12/11/91

uL dispensed: 20 from 31

Replicate 1 Time: 22:38
Peak Area (A-s): 0.204 Peak Height (A): 0.334
Background Pk Area (A-s): 0.118 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.190
Concentration (ug/L): 40.5

uL dispensed: 20 from 31

Replicate 2 (Peak Stored) Time: 22:41
Peak Area (A-s): 0.201 Peak Height (A): 0.324
Background Pk Area (A-s): 0.117 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.188
Concentration (ug/L): 40.0

Mean Conc (ug/L): 40.3 SD: 0.36 RSD(%): 0.89

As ID: 66317 Seq. No.: 00036 A/S Pos.: 32 Date: 12/11/91

uL dispensed: 20 from 32

The height of this peak exceeds the rollover value.

Replicate 1 Time: 22:43
Peak Area (A-s): 0.013 Peak Height (A): 3.274
Background Pk Area (A-s): 3.245 Background Pk Height (A): 3.126
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.1

uL dispensed: 20 from 32

The height of this peak exceeds the rollover value.

Replicate 2 (Peak Stored) Time: 22:45
Peak Area (A-s): 0.247 Peak Height (A): 3.276
Background Pk Area (A-s): 3.483 Background Pk Height (A): 3.250
Blank Corrected Pk Area (A-s): 0.234
Concentration (ug/L): 49.8

5800, 5806 Veobrien 1,2 PBO

Mean Conc (ug/L): 24/9 PBO SD: 35.31 Bad RSD(%): 142.24 Pg 14/46 22

Rerun ~~10 Bad~~ PBO

As ID: 66317 Seq. No.: 00037 A/S Pos.: 32 Date: 12/11/91

uL dispensed: 20 from 32

The height of this peak exceeds the rollover value.

Replicate 1 Time: 22:47
Peak Area (A-s): 0.066 Peak Height (A): 3.286
Background Pk Area (A-s): 3.518 Background Pk Height (A): 3.277
Blank Corrected Pk Area (A-s): 0.052
Concentration (ug/L): 11.1

uL dispensed: 20 from 32

The height of this peak exceeds the rollover value.

Replicate 2 (Peak Stored) Time: 22:49
Peak Area (A-s): 0.334 Peak Height (A): 3.285
Background Pk Area (A-s): 3.671 Background Pk Height (A): 3.247
Blank Corrected Pk Area (A-s): 0.320
Concentration (ug/L): 68.2

Mean Conc (ug/L): ~~39.7~~ PBO SD: 40.38 RSD(%): 101.72

Rerun 10 Bad

As ID: +20 Seq. No.: 00038 A/S Pos.: 33 Date: 12/11/91

uL dispensed: 20 from 33

The height of this peak exceeds the rollover value.

Replicate 1 Time: 22:52
Peak Area (A-s): -0.031 Peak Height (A): 3.078
Background Pk Area (A-s): 3.527 Background Pk Height (A): 3.165
Blank Corrected Pk Area (A-s): -0.044
Concentration (ug/L): -9.4

uL dispensed: 20 from 33

The height of this peak exceeds the rollover value.

Replicate 2 (Peak Stored) Time: 22:54
Peak Area (A-s): -0.278 Peak Height (A): 3.203
Background Pk Area (A-s): 3.733 Background Pk Height (A): 3.268
Blank Corrected Pk Area (A-s): -0.291
Concentration (ug/L): -62.0

Mean Conc (ug/L): -35.7 SD: 37.22 RSD(%): 104.30

As ID: 66317D Seq. No.: 00039 A/S Pos.: 34 Date: 12/11/91

uL dispensed: 20 from 34

The signal is too large for the range of the electronics.

Replicate 1 Time: 22:56
Peak Area (A-s): -0.093 Peak Height (A): 3.241
Background Pk Area (A-s): 3.061 Background Pk Height (A): 3.268
Blank Corrected Pk Area (A-s): -0.106
Concentration (ug/L): --------

uL dispensed: 20 from 34

The signal is too large for the range of the electronics.

Replicate 2 (Peak Stored) Time: 22:59
Peak Area (A-s): -0.001 Peak Height (A): 3.266

5800, 5806 Veobrien 1, 2 PBD 9/15/92

Background Pk Area (A-s): 3.305 Background Pk Height (A): 3.284
Blank Corrected Pk Area (A-s): -0.014
Concentration (ug/L): --------

Mean Conc (ug/L): ---- PBD SD: ---- RSD(%): ----

Rerun 10 fold

As ID: +20 Seq. No.: 00040 A/S Pos.: 35 Date: 12/11/91

uL dispensed: 20 from 35

The signal is too large for the range of the electronics.
Replicate 1 Time: 23:01
Peak Area (A-s): 0.153 Peak Height (A): 3.223
Background Pk Area (A-s): 3.597 Background Pk Height (A): 3.286
Blank Corrected Pk Area (A-s): 0.140
Concentration (ug/L): --------

uL dispensed: 20 from 35

The height of this peak exceeds the rollover value.
Replicate 2 (Peak Stored) Time: 23:03
Peak Area (A-s): -0.209 Peak Height (A): 3.276
Background Pk Area (A-s): 4.414 Background Pk Height (A): 3.268
Blank Corrected Pk Area (A-s): -0.222
Concentration (ug/L): -47.3

Mean Conc (ug/L): ---- SD: ---- RSD(%): ----

As ID: CCV4 Seq. No.: 00041 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 20 from 7

Replicate 1 Time: 23:05
Peak Area (A-s): 0.258 Peak Height (A): 0.409
Background Pk Area (A-s): 0.568 Background Pk Height (A): 0.440
Blank Corrected Pk Area (A-s): 0.244
Concentration (ug/L): 52.0

uL dispensed: 20 from 7

Replicate 2 (Peak Stored) Time: 23:08
Peak Area (A-s): 0.250 Peak Height (A): 0.383
Background Pk Area (A-s): 0.288 Background Pk Height (A): 0.200
Blank Corrected Pk Area (A-s): 0.237
Concentration (ug/L): 50.4

Mean Conc (ug/L): 51.2 SD: 1.16 RSD(%): 2.27

QC sample is within range 44.8 - 55.2

As ID: CCB 4 Seq. No.: 00042 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 20 from 8

Replicate 1 Time: 23:10
Peak Area (A-s): 0.020 Peak Height (A): 0.031
Background Pk Area (A-s): 0.215 Background Pk Height (A): 0.150
Blank Corrected Pk Area (A-s): 0.007
Concentration (ug/L): 1.5

uL dispensed: 20 from 8

5800, 5806 Veobrien 1,2 BBP

Pg 16/~~16~~ 22

Replicate 2 (Peak Stored) Time: 23:12

Peak Area (A-s): 0.016 Peak Height (A): 0.020

Background Pk Area (A-s): 0.183 Background Pk Height (A): 0.135

Blank Corrected Pk Area (A-s): 0.002

Concentration (ug/L): 0.5

Mean Conc (ug/L): 1.0 SD: 0.70 RSD(%): 69.88

QC sample is within range -10 - 10

5800 Veobrien 1,2 8B20 Pg 17/22
5806

As ID: LCSM Seq. No.: 00043 A/S Pos.: 37 Date: 12/12/91

uL dispensed: 20 from 37

Replicate 1 Time: 00:27
Peak Area (A-s): 0.098 Peak Height (A): 0.155
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.151
Blank Corrected Pk Area (A-s): 0.084
Concentration (ug/L): 18.0

uL dispensed: 20 from 37

Replicate 2 (Peak Stored) Time: 00:29
Peak Area (A-s): 0.099 Peak Height (A): 0.151
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.149
Blank Corrected Pk Area (A-s): 0.085
Concentration (ug/L): 18.1

Mean Conc (ug/L): 18.1 SD: 0.13 90.5% RSD(%): 0.72
[100]

As ID: 66316S Seq. No.: 00044 A/S Pos.: 38 Date: 12/12/91

uL dispensed: 20 from 38

Replicate 1 Time: 00:31
Peak Area (A-s): 0.126 Peak Height (A): 0.171
Background Pk Area (A-s): 0.163 Background Pk Height (A): 0.113
Blank Corrected Pk Area (A-s): 0.113
Concentration (ug/L): 24.0

uL dispensed: 20 from 38

Replicate 2 (Peak Stored) Time: 00:33
Peak Area (A-s): 0.125 Peak Height (A): 0.166
Background Pk Area (A-s): 0.148 Background Pk Height (A): 0.099
Blank Corrected Pk Area (A-s): 0.111
Concentration (ug/L): 23.7

Mean Conc (ug/L): 23.8 SD: 0.22 96.6% RSD(%): 0.93
[100]

As ID: 66317S Seq. No.: 00045 A/S Pos.: 39 Date: 12/12/91

uL dispensed: 20 from 39

Replicate 1 Time: 00:36
Peak Area (A-s): 0.154 Peak Height (A): 0.291
Background Pk Area (A-s): 1.452 Background Pk Height (A): 1.676
Blank Corrected Pk Area (A-s): 0.140
Concentration (ug/L): 29.9

uL dispensed: 20 from 39

5800, 5806 Veobrien 1,2 PBW

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Replicate 2 (Peak Stored) Time: 00:33
Peak Area (A-s): 0.154 Peak Height (A): 0.290
Background Pk Area (A-s): 1.537 Background Pk Height (A): 1.740
Blank Corrected Pk Area (A-s): 0.141
Concentration (ug/L): 29.9

Mean Conc (ug/L): 29.9 SD: 0.04 109.8% RSD(%): 0.15
[100]

As ID: CCV 5 Seq. No.: 00046 A/S Pos.: 7 Date: 12/12/91

uL dispensed: 20 from 7
Replicate 1 Time: 00:40
Peak Area (A-s): 0.244 Peak Height (A): 0.371
Background Pk Area (A-s): 0.225 Background Pk Height (A): 0.166
Blank Corrected Pk Area (A-s): 0.231
Concentration (ug/L): 49.2

uL dispensed: 20 from 7
Replicate 2 (Peak Stored) Time: 00:42
Peak Area (A-s): 0.243 Peak Height (A): 0.362
Background Pk Area (A-s): 0.143 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.229
Concentration (ug/L): 48.8

Mean Conc (ug/L): 49.0 SD: 0.28 RSD(%): 0.56

QC sample is within range 44.8 - 55.2

Pr ID: CCB 5 Seq. No.: 00047 A/S Pos.: 8 Date: 12/12/91

uL dispensed: 20 from 8
Replicate 1 Time: 00:45
Peak Area (A-s): 0.013 Peak Height (A): 0.016
Background Pk Area (A-s): 0.118 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.1

uL dispensed: 20 from 8
Replicate 2 (Peak Stored) Time: 00:47
Peak Area (A-s): 0.008 Peak Height (A): 0.013
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): -0.005
Concentration (ug/L): -1.1

Mean Conc (ug/L): -0.6 SD: 0.73 RSD(%): 122.81

QC sample is within range -10 - 10

5800, 5806 Veobrien 1,2 PBO 8/4/22

Ge ID: 66193 Seq. No.: 00048 A/S Pos.: 3 Date: 12/12/91

uL dispensed: 20 from 3

Replicate 1 Time: 02:03

Peak Area (A-s): 0.054 Peak Height (A): 0.086

Background Pk Area (A-s): 0.721 Background Pk Height (A): 0.853

Blank Corrected Pk Area (A-s): 0.040

Concentration (ug/L): 8.6

5800, 5806 Veobrien 1,2 [illegible]

Pg 204/22

uL dispensed: 20 from 3

Replicate 2 (Peak Stored)	Time: 02:05
Peak Area (A-s): 0.051	Peak Height (A): 0.083
Background Pk Area (A-s): 0.791	Background Pk Height (A): 0.949
Blank Corrected Pk Area (A-s): 0.037	
Concentration (ug/L): 8.0	

Mean Conc (ug/L): ~~8.7~~ 13 [illegible] SD: 0.48 Rerun 4pt MSA RSD(%): 5.74

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As ID: +20 Seq. No.: 00049 A/S Pos.: 4 Date: 12/12/91

uL dispensed: 20 from 4

Replicate 1	Time: 02:08
Peak Area (A-s): 0.100	Peak Height (A): 0.163
Background Pk Area (A-s): 0.794	Background Pk Height (A): 0.962
Blank Corrected Pk Area (A-s): 0.086	
Concentration (ug/L): 18.4	

uL dispensed: 20 from 4

Replicate 2 (Peak Stored)	Time: 02:10
Peak Area (A-s): 0.099	Peak Height (A): 0.165
Background Pk Area (A-s): 0.794	Background Pk Height (A): 0.941
Blank Corrected Pk Area (A-s): 0.085	
Concentration (ug/L): 18.2	

Mean Conc (ug/L): 18.3 SD: 0.15 RSD(%): 0.82

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As ID: 66317 Seq. No.: 00050 A/S Pos.: 5 Date: 12/12/91

dispensed: 20 from 5

Replicate 1	Time: 02:12
Peak Area (A-s): 0.035	Peak Height (A): 0.057
Background Pk Area (A-s): 0.590	Background Pk Height (A): 0.674
Blank Corrected Pk Area (A-s): 0.022	
Concentration (ug/L): 4.6	

uL dispensed: 20 from 5

Replicate 2 (Peak Stored)	Time: 02:14
Peak Area (A-s): 0.034	Peak Height (A): 0.058
Background Pk Area (A-s): 0.572	Background Pk Height (A): 0.661
Blank Corrected Pk Area (A-s): 0.021	
Concentration (ug/L): 4.5	

Mean Conc (ug/L): 4.5 SD: 0.08 W RSD(%): 1.79

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As ID: +20 Seq. No.: 00051 A/S Pos.: 6 Date: 12/12/91

uL dispensed: 20 from 6

Replicate 1	Time: 02:17
Peak Area (A-s): 0.081	Peak Height (A): 0.136
Background Pk Area (A-s): 0.575	Background Pk Height (A): 0.663
Blank Corrected Pk Area (A-s): 0.068	
Concentration (ug/L): 14.4	

uL dispensed: 20 from 6

Replicate 2 (Peak Stored)	Time: 02:19
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5800, 5806 Veobrien 1,2 PBO

Peak Area (A-s): 0.083 Peak Height (A): 0.132
Background Pk Area (A-s): 0.571 Background Pk Height (A): 0.646
Blank Corrected Pk Area (A-s): 0.070
Concentration (ug/L): 14.9

Mean Conc (ug/L): 14.7 SD: 0.30 RSD(%): 2.04

As ID: 66317D Seq. No.: 00052 A/S Pos.: 7 Date: 12/12/91

uL dispensed: 20 from 7

Replicate 1 Time: 02:21
Peak Area (A-s): 0.051 Peak Height (A): 0.086
Background Pk Area (A-s): 0.852 Background Pk Height (A): 0.985
Blank Corrected Pk Area (A-s): 0.037
Concentration (ug/L): 8.0

uL dispensed: 20 from 7

Replicate 2 (Peak Stored) Time: 02:23
Peak Area (A-s): 0.049 Peak Height (A): 0.084
Background Pk Area (A-s): 0.875 Background Pk Height (A): 1.022
Blank Corrected Pk Area (A-s): 0.036
Concentration (ug/L): 7.6

Mean Conc (ug/L): ~~7.8~~ SD: 0.23 RSD(%): 2.88

Rerun after ASA

As ID: +20 Seq. No.: 00053 A/S Pos.: 8 Date: 12/12/91

uL dispensed: 20 from 8

Replicate 1 Time: 02:25
Peak Area (A-s): 0.097 Peak Height (A): 0.159
Background Pk Area (A-s): 0.877 Background Pk Height (A): 1.039
Blank Corrected Pk Area (A-s): 0.083
Concentration (ug/L): 17.7

uL dispensed: 20 from 8

Replicate 2 (Peak Stored) Time: 02:28
Peak Area (A-s): 0.096 Peak Height (A): 0.164
Background Pk Area (A-s): 0.882 Background Pk Height (A): 1.042
Blank Corrected Pk Area (A-s): 0.083
Concentration (ug/L): 17.7

Mean Conc (ug/L): 17.7 SD: 0.03 RSD(%): 0.15

As ID: 66315 Seq. No.: 00054 A/S Pos.: 9 Date: 12/12/91

uL dispensed: 20 from 9

Replicate 1 Time: 02:30
Peak Area (A-s): 0.097 Peak Height (A): 0.171
Background Pk Area (A-s): 0.592 Background Pk Height (A): 0.640
Blank Corrected Pk Area (A-s): 0.084
Concentration (ug/L): 17.8

uL dispensed: 20 from 9

Replicate 2 (Peak Stored) Time: 02:32
Peak Area (A-s): 0.100 Peak Height (A): 0.173
Background Pk Area (A-s): 0.579 Background Pk Height (A): 0.622

5800, 5806 Veobrien 1, 2 SBD

Pg 21/22

Blank Corrected Pk Area (A-s): 0.086
Concentration (ug/L): 18.3

Mean Conc (ug/L): 18.1 SD: 0.40 RSD(%): 2.19

~~Rerun 1pt n SA~~ accept PBD

As ID: +10 Seq. No.: 00055 A/S Pos.: 10 Date: 12/12/91

uL dispensed: 20 from 10

Replicate 1
Peak Area (A-s): 0.145
Background Pk Area (A-s): 0.589
Blank Corrected Pk Area (A-s): 0.132
Concentration (ug/L): 28.0

Time: 02:34
Peak Height (A): 0.255
Background Pk Height (A): 0.645

uL dispensed: 20 from 10

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.146
Background Pk Area (A-s): 0.588
Blank Corrected Pk Area (A-s): 0.133
Concentration (ug/L): 28.3

Time: 02:37
Peak Height (A): 0.254
Background Pk Height (A): 0.646

Mean Conc (ug/L): 28.2 SD: 0.21 RSD(%): 0.74

As ID: +20 Seq. No.: 00056 A/S Pos.: 11 Date: 12/12/91

uL dispensed: 20 from 11

Replicate 1
Peak Area (A-s): 0.192
Background Pk Area (A-s): 0.581
Blank Corrected Pk Area (A-s): 0.178
Concentration (ug/L): 37.9

Time: 02:39
Peak Height (A): 0.319
Background Pk Height (A): 0.625

uL dispensed: 20 from 11

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.190
Background Pk Area (A-s): 0.582
Blank Corrected Pk Area (A-s): 0.177
Concentration (ug/L): 37.6

Time: 02:41
Peak Height (A): 0.324
Background Pk Height (A): 0.627

Mean Conc (ug/L): 37.8 SD: 0.22 RSD(%): 0.58

As ID: +40 Seq. No.: 00057 A/S Pos.: 12 Date: 12/12/91

uL dispensed: 20 from 12

Replicate 1
Peak Area (A-s): 0.270
Background Pk Area (A-s): 0.584
Blank Corrected Pk Area (A-s): 0.257
Concentration (ug/L): 54.7

Time: 02:43
Peak Height (A): 0.465
Background Pk Height (A): 0.638

uL dispensed: 20 from 12

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.272
Background Pk Area (A-s): 0.584
Blank Corrected Pk Area (A-s): 0.259
Concentration (ug/L): 55.1

Time: 02:45
Peak Height (A): 0.464
Background Pk Height (A): 0.649

5800, 5806 Veobrien 1,2 DCE

Mean Conc (ug/L): 54.9 SD: 0.33 RSD(%): 0.60

As ID: CCV 6 Seq. No.: 00058 A/S Pos.: 1 Date: 12/12/91

uL dispensed: 20 from 1

Replicate 1 Time: 02:48
Peak Area (A-s): 0.237 Peak Height (A): 0.346
Background Pk Area (A-s): 0.130 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.224
Concentration (ug/L): 47.7

uL dispensed: 20 from 1
Replicate 2 (Peak Stored) Time: 02:50
Peak Area (A-s): 0.233 Peak Height (A): 0.345
Background Pk Area (A-s): 0.104 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): 0.220
Concentration (ug/L): 46.8

Mean Conc (ug/L): 47.2 SD: 0.62 RSD(%): 1.32

QC sample is within range 40.0 - 60.0

As ID: CCB 6 Seq. No.: 00059 A/S Pos.: 2 Date: 12/12/91

uL dispensed: 20 from 2

Replicate 1 Time: 02:52
Peak Area (A-s): 0.008 Peak Height (A): 0.010
Background Pk Area (A-s): 0.089 Background Pk Height (A): 0.054
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.2

uL dispensed: 20 from 2
Replicate 2 (Peak Stored) Time: 02:54
Peak Area (A-s): 0.004 Peak Height (A): 0.007
Background Pk Area (A-s): 0.081 Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -2.1

Mean Conc (ug/L): -1.6 SD: 0.59 RSD(%): 35.86

QC sample is within range -10 - 10

Pg 1/2

Analytical Difficulties

Project: Veobrien 1, 2 Method Code: As 3

Batch: 5800, 5806

Due to the high levels (ppm) of Al (485.2 ppm), Fe (458.2 ppm) and Mg (41324.0 ppm) in samples 66192, 66193, 66315, ~~66316~~ 66317 and 66317D no true percent MSA recovery could be measured when samples were run straight. These samples were diluted ~~at a~~ 10 fold to obtain a better reading.

Reviewer: _____ Analyst: [illegible]

Date: _____ Date: 12-12-91

Veobrien 1,2 5800, 5806 8&D

Pg 2/2

Method: OPTIMIZE Sample Name: 663175 Operator: AI
Run Time: 12/12/91 01:20:34
Comment: HGA SPIKE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	Ba4934	Be3130	Ca3179	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0910	485.2	2.282	.5748	.0280	513.3	.3870
#1	.0891	490.3	2.131	.5822	.0282	512.2	.3895
#2	.0928	480.0	2.433	.5674	.0277	514.3	.3846

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Mg3832	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.891	6.752	3.324	M519.2	25.88	M1324.	22.94
#1	1.890	6.747	3.401	M519.4	23.50	M1335.	22.93
#2	1.892	6.758	3.247	M517.0	28.16	M1313.	22.95

Elem	Mo2023	Na5889	Ni2316	Pb2203	Sb2068	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0614	84.84	14.51	M216.3	.2248	1.269	153.8
#1	.0657	86.53	14.92	M216.2	.1997	1.207	154.5
#2	.0570	83.15	14.90	M216.5	.2499	1.332	153.2

Elem	Sn1899	Ti3349	Tl1908	V_2924	Y_3710	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.6016	.1721	-1.404	.3009	1.427	15.48
#1	-.6331	.1734	-1.513	.2994	1.434	15.47
#2	-.5700	.1827	-1.295	.3023	1.421	15.49

5800, 5806 Veobrien 1,2 8BO

Pg 1/2

File : 5800ASH2.WSL

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Instrument Type	Matrix	Dil.	Date	Time	Flags
1	S0		3		1.0	12/12/91	19:28:26	
2	S10		3		1.0	12/12/91	19:33:02	
3	S20		3		1.0	12/12/91	19:37:38	
4	S50		3		1.0	12/12/91	19:42:16	
5	S100		3		1.0	12/12/91	19:46:54	
6	ICV		0		1.0	12/12/91	19:51:32	
7	ICB	ICB	0		1.0	12/12/91	19:56:08	
8	CCV1		0		1.0	12/12/91	20:00:44	
9	CCB1	CCB	0		1.0	12/12/91	20:05:21	
10	CRA	CRA	0		1.0	12/12/91	20:09:58	
11	66193		0		10.0	12/12/91	20:13:35	
12	+10		2		10.0	12/12/91	20:15:54	
13	+20		2		10.0	12/12/91	20:18:14	
14	+40		2		10.0	12/12/91	20:20:32	
~~15~~	~~66317 PBO~~ not needed		0		10.0	12/12/91	20:22:51	
~~16~~	~~+10~~		2		10.0	12/12/91	20:25:10	
~~17~~	~~+20~~		2		10.0	12/12/91	20:27:29	
~~18~~	~~+40~~		2		10.0	12/12/91	20:29:48	
19	66317D		0		10.0	12/12/91	20:32:06	
20	+10		2		10.0	12/12/91	20:34:26	
21	+20		2		10.0	12/12/91	20:36:46	
22	+40		2		10.0	12/12/91	20:39:07	
23	CCV2		0		1.0	12/12/91	20:41:28	
24	CCB2	CCB	0		1.0	12/12/91	20:43:48	

ICV 2K = 50.4ppb EPA
CCV = 50.0ppb NBS

5800, 5806 Veobrien 1,2 [illegible]

MSA Calculations in 5800ASH2.WSL

Elm #	Lab. Sample Name EPA/Cust. Name	Dilution Signal 0	Spike 1 Signal 1	Spike 2 Signal 2	Spike 3 Signal 3	Final. Conc Soln. Conc.	R SEE
AS	66193	10.00	10.00	20.00	40.00	81.7	0.9989
1		0.032	0.079	0.125	0.204	8.2	0.0042
AS	66317	10.00	10.00	20.00	40.00	18.1	0.9998
2		0.008	0.057	0.108	0.202	1.8	0.0018
AS	66317D	1.00	10.00	20.00	40.00	6.1	0.9983
3		0.027	0.072	0.128	0.211	6.1	0.0057

5800, 5806 Veobrien 1, 2 BBO

Pg 2/7

Element File: VAS.GCL	Element: As	Wavelength: 193.7
Date: 12/12/91	Time: 19:23	Slit: 0.70 L
Data File: 5800ASH2.DAT	ID/Wt File: 5800ASH2.IDW	Lamp Current: 0
Technique: HGA	Calib. Type: Linear	Energy: 55

As ID: S0 Seq. No.: 00001 A/S Pos.: 36 Date: 12/12/91

uL dispensed: 20 from 36

Replicate 1 Time: 19:26

Peak Area (A-s): 0.035 Peak Height (A): 0.044

Background Pk Area (A-s): 0.120 Background Pk Height (A): 0.051

5800, 5806 Vedrien 1,2 BBO

Pg 2/7

Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.7

uL dispensed: 20 from 36

Replicate 2 (Peak Stored) Time: 19:28
Peak Area (A-s): 0.039 Peak Height (A): 0.053
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.047
Blank Corrected Pk Area (A-s): 0.007
Concentration (ug/L): 1.5

Mean Conc (ug/L): 1.1 SD: 0.55 RSD(%): 52.23

Auto-zero performed.

~~~~~~

As ID: S10 Seq. No.: 00002 A/S Pos.: 1 Date: 12/12/91

uL dispensed: 20 from 1

Replicate 1 Time: 19:30
Peak Area (A-s): 0.098 Peak Height (A): 0.148
Background Pk Area (A-s): 0.113 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.062
Concentration (ug/L): 12.5

uL dispensed: 20 from 1

Replicate 2 (Peak Stored) Time: 19:33
Peak Area (A-s): 0.104 Peak Height (A): 0.156
Background Pk Area (A-s): 0.110 Background Pk Height (A): 0.046
Blank Corrected Pk Area (A-s): 0.068
Concentration (ug/L): 13.7

Mean Conc (ug/L): 13.1 SD: 0.84 RSD(%): 6.42

Standard number 1 applied. [10.0]
Correlation coefficient: 1.00000 Slope: 0.0065

~~~~~~

As ID: S20 Seq. No.: 00003 A/S Pos.: 2 Date: 12/12/91

uL dispensed: 20 from 2

Replicate 1 Time: 19:35
Peak Area (A-s): 0.157 Peak Height (A): 0.259
Background Pk Area (A-s): 0.110 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.120
Concentration (ug/L): 18.6

uL dispensed: 20 from 2

Replicate 2 (Peak Stored) Time: 19:37
Peak Area (A-s): 0.162 Peak Height (A): 0.263
Background Pk Area (A-s): 0.105 Background Pk Height (A): 0.045
Blank Corrected Pk Area (A-s): 0.125
Concentration (ug/L): 19.3

Mean Conc (ug/L): 19.0 SD: 0.50 RSD(%): 2.64

Standard number 2 applied. [20.0]
Correlation coefficient: 0.99771 Slope: 0.0062

5800, 5806 Veobrien 1,2 880 Pg 3/7

As ID: S50 Seq. No.: 00004 A/S Pos.: 3 Date: 12/12/91

uL dispensed: 20 from 3

Replicate 1 | Time: 19:39
Peak Area (A-s): 0.316 | Peak Height (A): 0.547
Background Pk Area (A-s): 0.110 | Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): 0.279
Concentration (ug/L): 45.0

uL dispensed: 20 from 3
Replicate 2 (Peak Stored) | Time: 19:42
Peak Area (A-s): 0.318 | Peak Height (A): 0.551
Background Pk Area (A-s): 0.109 | Background Pk Height (A): 0.050
Blank Corrected Pk Area (A-s): 0.281
Concentration (ug/L): 45.3

Mean Conc (ug/L): 45.1 SD: 0.23 RSD(%): 0.50

Standard number 3 applied. [50.0]
Correlation coefficient: 0.99718 Slope: 0.0057

As ID: S100 Seq. No.: 00005 A/S Pos.: 4 Date: 12/12/91

uL dispensed: 20 from 4
Replicate 1 | Time: 19:44
Peak Area (A-s): 0.546 | Peak Height (A): 0.939
Background Pk Area (A-s): 0.121 | Background Pk Height (A): 0.077
ank Corrected Pk Area (A-s): 0.509
Concentration (ug/L): 89.2

uL dispensed: 20 from 4
Replicate 2 (Peak Stored) | Time: 19:46
Peak Area (A-s): 0.550 | Peak Height (A): 0.952
Background Pk Area (A-s): 0.118 | Background Pk Height (A): 0.077
Blank Corrected Pk Area (A-s): 0.514
Concentration (ug/L): 90.0

Mean Conc (ug/L): 89.6 SD: 0.55 RSD(%): 0.62

Standard number 4 applied. [100.0]
Correlation coefficient: 0.99651 Slope: 0.0053

As ID: ICV Seq. No.: 00006 A/S Pos.: 5 Date: 12/12/91

uL dispensed: 20 from 5
Replicate 1 | Time: 19:49
Peak Area (A-s): 0.285 | Peak Height (A): 0.470
Background Pk Area (A-s): 0.096 | Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.248
Concentration (ug/L): 47.2

dispensed: 20 from 5
Replicate 2 (Peak Stored) | Time: 19:51
Peak Area (A-s): 0.281 | Peak Height (A): 0.461
Background Pk Area (A-s): 0.093 | Background Pk Height (A): 0.043
Blank Corrected Pk Area (A-s): 0.245

5800, 5806 Veobrien 1, 2 [illegible] B4/7

Concentration (ug/L): 46.5

Mean Conc (ug/L): 46.9 SD: 0.50 RSD(%): 1.06

—— sample is within range 40.32 - 60.5

~~~~~~

As ID: ICB Seq. No.: 00007 A/S Pos.: 6 Date: 12/12/91

uL dispensed: 20 from 6

Replicate 1 Time: 19:53
Peak Area (A-s): 0.040 Peak Height (A): 0.064
Background Pk Area (A-s): 0.083 Background Pk Height (A): 0.034
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.6

uL dispensed: 20 from 6

Replicate 2 (Peak Stored) Time: 19:56
Peak Area (A-s): 0.029 Peak Height (A): 0.049
Background Pk Area (A-s): 0.080 Background Pk Height (A): 0.032
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.5

Mean Conc (ug/L): -0.4 SD: 1.50 RSD(%): 340.80

QC sample is within range -10 - 10

~~~~~~

As ID: CCV| Seq. No.: 00008 A/S Pos.: 7 Date: 12/12/91

uL dispensed: 20 from 7

Replicate 1 Time: 19:58
Peak Area (A-s): 0.279 Peak Height (A): 0.556
Background Pk Area (A-s): 0.093 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.242
Concentration (ug/L): 46.0

uL dispensed: 20 from 7

Replicate 2 (Peak Stored) Time: 20:00
Peak Area (A-s): 0.279 Peak Height (A): 0.542
Background Pk Area (A-s): 0.094 Background Pk Height (A): 0.048
Blank Corrected Pk Area (A-s): 0.242
Concentration (ug/L): 46.0

Mean Conc (ug/L): 46.0 SD: 0.01 RSD(%): 0.02

QC sample is within range 40.0 - 60.0

~~~~~~

As ID: CCB| Seq. No.: 00009 A/S Pos.: 8 Date: 12/12/91

uL dispensed: 20 from 8

Replicate 1 Time: 20:03
Peak Area (A-s): 0.027 Peak Height (A): 0.045
Background Pk Area (A-s): 0.077 Background Pk Height (A): 0.033
ank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -1.9

uL dispensed: 20 from 8
~~~~~~

5800, 5806 Veobrien 1,2 RBD

Replicate 2 (Peak Stored) Time: 20:05
Peak Area (A-s): 0.025 Peak Height (A): 0.041
Background Pk Area (A-s): 0.075 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): -0.012
Concentration (ug/L): -2.3

Mean Conc (ug/L): -2.1 SD: 0.28 RSD(%): 13.15

QC sample is within range -10 - 10

~~~~~~

As ID: CRA Seq. No.: 00010 A/S Pos.: 9 Date: 12/12/91

uL dispensed: 20 from 9

Replicate 1 Time: 20:07
Peak Area (A-s): 0.073 Peak Height (A): 0.131
Background Pk Area (A-s): 0.075 Background Pk Height (A): 0.031
Blank Corrected Pk Area (A-s): 0.037
Concentration (ug/L): 7.0

uL dispensed: 20 from 9

Replicate 2 (Peak Stored) Time: 20:09
Peak Area (A-s): 0.075 Peak Height (A): 0.131
Background Pk Area (A-s): 0.073 Background Pk Height (A): 0.030
Blank Corrected Pk Area (A-s): 0.038
Concentration (ug/L): 7.2

Mean Conc (ug/L): 7.1 SD: 0.15 RSD(%): 2.19

sample is within range

~~~~~~

As ID: 66193 Seq. No.: 00011 A/S Pos.: 11 Date: 12/12/91

uL dispensed: 20 from 11

Replicate 1 (Peak Stored) Time: 20:13
Peak Area (A-s): 0.068 Peak Height (A): 0.093
Background Pk Area (A-s): 0.806 Background Pk Height (A): 1.133
Blank Corrected Pk Area (A-s): 0.032
Concentration (ug/L): 6.0

~~~~~~

As ID: +10 Seq. No.: 00012 A/S Pos.: 12 Date: 12/12/91

uL dispensed: 20 from 12

Replicate 1 (Peak Stored) Time: 20:15
Peak Area (A-s): 0.116 Peak Height (A): 0.179
Background Pk Area (A-s): 0.862 Background Pk Height (A): 1.236
Blank Corrected Pk Area (A-s): 0.079
Concentration (ug/L): 15.0

~~~~~~

As ID: +20 Seq. No.: 00013 A/S Pos.: 13 Date: 12/12/91

uL dispensed: 20 from 13

Replicate 1 (Peak Stored) Time: 20:18
Peak Area (A-s): 0.162 Peak Height (A): 0.254
Background Pk Area (A-s): 0.880 Background Pk Height (A): 1.237
Blank Corrected Pk Area (A-s): 0.125

5800, 5806 Veobrien 1,2 RBD Pg 6/7

Concentration (ug/L): 23.8

~~~~~~

As ID: +40 Seq. No.: 00014 A/S Pos.: 14 Date: 12/12/91

uL dispensed: 20 from 14

Replicate 1 (Peak Stored) Time: 20:20
Peak Area (A-s): 0.241 Peak Height (A): 0.382
Background Pk Area (A-s): 0.872 Background Pk Height (A): 1.230
Blank Corrected Pk Area (A-s): 0.204
Concentration (ug/L): 38.8

~~~~~~

As ID: 66317 Seq. No.: 00015 A/S Pos.: 15 Date: 12/12/91

uL dispensed: 20 from 15

Replicate 1 (Peak Stored) Time: 20:22
Peak Area (A-s): 0.045 Peak Height (A): 0.066
Background Pk Area (A-s): 0.646 Background Pk Height (A): 0.947
Blank Corrected Pk Area (A-s): 0.008
Concentration (ug/L): 1.5

~~~~~~

As ID: +10 Seq. No.: 00016 A/S Pos.: 16 Date: 12/12/91

uL dispensed: 20 from 16

Replicate 1 (Peak Stored) Time: 20:25
Peak Area (A-s): 0.094 Peak Height (A): 0.140
Background Pk Area (A-s): 0.639 Background Pk Height (A): 0.923
ank Corrected Pk Area (A-s): 0.057
Concentration (ug/L): 10.8

~~~~~~

As ID: +20 Seq. No.: 00017 A/S Pos.: 17 Date: 12/12/91

uL dispensed: 20 from 17

Replicate 1 (Peak Stored) Time: 20:27
Peak Area (A-s): 0.145 Peak Height (A): 0.218
Background Pk Area (A-s): 0.633 Background Pk Height (A): 0.932
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 20.5

~~~~~~

As ID: +40 Seq. No.: 00018 A/S Pos.: 18 Date: 12/12/91

uL dispensed: 20 from 18

Replicate 1 (Peak Stored) Time: 20:29
Peak Area (A-s): 0.239 Peak Height (A): 0.349
Background Pk Area (A-s): 0.650 Background Pk Height (A): 0.942
Blank Corrected Pk Area (A-s): 0.202
Concentration (ug/L): 38.4

~~~~~~

As ID: 66317D Seq. No.: 00019 A/S Pos.: 19 Date: 12/12/91

dispensed: 20 from 19

Replicate 1 (Peak Stored) Time: 20:32
Peak Area (A-s): 0.064 Peak Height (A): 0.096
Background Pk Area (A-s): 0.953 Background Pk Height (A): 1.305

5800, 5806 Veobrien 1,2 8880 Pg 7/7

Blank Corrected Pk Area (A-s): 0.027
Concentration (ug/L): 5.2

~~~~~ID:~+10~~~~~~~~~~~~~~~~Seq.~No.:~00020~~~~A/S~Pos.:~20~~~~Date:~12/12/91~
dispensed: 20 from 20

Replicate 1 (Peak Stored) Time: 20:34
Peak Area (A-s): 0.109 Peak Height (A): 0.168
Background Pk Area (A-s): 0.988 Background Pk Height (A): 1.352
Blank Corrected Pk Area (A-s): 0.072
Concentration (ug/L): 13.7

~~~~~~

As ID: +20 Seq. No.: 00021 A/S Pos.: 21 Date: 12/12/91

uL dispensed: 20 from 21

Replicate 1 (Peak Stored) Time: 20:36
Peak Area (A-s): 0.165 Peak Height (A): 0.254
Background Pk Area (A-s): 0.975 Background Pk Height (A): 1.330
Blank Corrected Pk Area (A-s): 0.128
Concentration (ug/L): 24.3

~~~~~~

As ID: +40 Seq. No.: 00022 A/S Pos.: 22 Date: 12/12/91

uL dispensed: 20 from 22

Replicate 1 (Peak Stored) Time: 20:39
Peak Area (A-s): 0.248 Peak Height (A): 0.374
ckground Pk Area (A-s): 0.993 Background Pk Height (A): 1.365
Blank Corrected Pk Area (A-s): 0.211
Concentration (ug/L): 40.1

~~~~~~

As ID: CCV 2 Seq. No.: 00023 A/S Pos.: 7 Date: 12/12/91

uL dispensed: 20 from 7

Replicate 1 (Peak Stored) Time: 20:41
Peak Area (A-s): 0.264 Peak Height (A): 0.510
Background Pk Area (A-s): 0.151 Background Pk Height (A): 0.133
Blank Corrected Pk Area (A-s): 0.227
Concentration (ug/L): 43.2

QC sample is within range 40.0 - 60.0

~~~~~~

As ID: CCB 2 Seq. No.: 00024 A/S Pos.: 8 Date: 12/12/91

uL dispensed: 20 from 8

Replicate 1 (Peak Stored) Time: 20:43
Peak Area (A-s): 0.019 Peak Height (A): 0.027
Background Pk Area (A-s): 0.098 Background Pk Height (A): 0.040
Blank Corrected Pk Area (A-s): -0.018
Concentration (ug/L): -3.4

sample is within range -10 - 10
~~~~~~

VERSAR LABORATORIES INC.
Worklist # 7330

13-DEC-91 01:48 F

Analyst: OP

Comments:

Date Analyzed: 13-DEC-91

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	PB3	PB
5800	VEOBRIEN	1	SOIL	PB3	PB
5806	VEOBRIEN	2	HOH	PB3	PB
5806	VEOBRIEN	2	SOIL	PB3	PB

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	41	EPA	98.4
CCV :		NIST	25
LCSW :	2K41	EPA	98.4
LCSS :		EPA	1180
CAL. STD. :		I.V.	
Prep. Day/Hr. :	13-DEC-91 07:30		

INSTRUMENT # 6

Light Source:	EDL	Gas Flow:	0
Current/Power:	10	Matrix Modifiers:	Y
Slit:	0.7	Signal:	PK AREA
Wavelength:	283.3	Tube:	LVP
Background Corr.:	BD	Replicates:	2
IDL:	1	CRDL:	5
Spike:	100	Integration Time:	5 SEC

Correlation: .9999 Y-Intercept: -.82 Slope: 5.42 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	5800	S0	1		0	09:00	-2		1				
2	5800	S5	1		5	09:05	26	4.94	1		98.8	CRA	
3	5800	S10	2		10	09:10	55		1				
4	5800	S20	3		20	09:15	108		1				
5	5800	S50	4		50	09:20	270		1				
6	5800	ICV	1			09:25	138	25.59	4	98.4	104.0		
7	5800	ICB	1			09:30	-1	-0.03	1				
8	5800	CCV1	1			09:35	138	25.59	1	25	102.4		
9	5800	CCB1	1			09:40	-1	-0.03	1				
10	5800	CRA	1			09:45	29	5.50	1	5	109.9		
11	5800	PBW R	1			09:50	0	0.15	1				R2
12	5800	+10	1			09:55	55	10.29	1	10	102.9		R2
13	5800	PB1T	1			10:00	-42	~~-7.59~~	~~1~~	OP		Rerun	R2
14	5800	+10	1			10:05	18	~~3.47~~	~~1~~	~~10~~	34.7	10fd	R2
15	5800	66190	1	WB-1(S)-F		10:10	10	2.00	1				R2
16	5800	+10	1			10:15	69	12.87	1	10	108.8		R2
17	5800	66191	1	WB-3(S)-F		10:20	50	9.37	1				R2
18	5800	+10	1			10:25	109	20.24	1	10	108.8		R2
19	5800	CCV2	2			10:30	148	27.43	1	25	109.7		

2-1

Worklist # 7330

Analyst: OP

Comments:

Date Analyzed: 13-DEC-91

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
20	5800	CCB2	2			10:35	-1	-0.03	1				
21	5800	66194	1	WB-4(S)-F		10:40	-10	-1.69	1				R2
22	5800	+10	1			10:45	54	10.11	1	10	101.1		R2
23	5800	66195	1	WB-5(S)-F		10:50	-4	-0.59	1				R2
24	5800	+10	1			10:55	58	10.84	1	10	108.4		R2
25	5800	66196	1	WB-6(S)-F		11:00	-8	-1.32	1				R2
26	5800	+10	1			11:05	54	10.11	1	10	101.1		R2
27	5800	66197	1	WB-4(S)		11:10	268	~~49.56~~	~~1~~	OP			R2
28	5800	+10	1			11:15	317	~~58.59~~	~~1~~	~~10~~	90.3	Dilute	R2
29	5800	66198	1	WB-5(S)		11:20	455	~~84.03~~	~~1~~	OP		Dilute	R2
30	5800	+10	1			11:25	495	~~91.40~~	~~1~~	10	73.7	Dilute	R2
31	5800	CCV3	3			11:30	137	25.41	1	25	101.6		
32	5800	CCB3	3			11:35	-2	-0.22	1				
33	5800	66199	1	WB-6(S)		11:40	321	~~59.33~~	~~1~~	OP		Dilute	R2
34	5800	+10	1			11:45	380	~~70.20~~	~~1~~	~~10~~	108.8	Dilute	R2
35	5806	66316	1	SWB-2-F		11:50	70	13.06	1				R2
36	5806	+10	1			11:55	124	23.01	1	10	99.6		R2
37	5806	66318	1	SWB-1(0.0-0.5)		12:00	102	18.95	1				R2
38	5806	+10	1			12:05	161	29.83	1	10	108.8		R2
39	5806	66319	1	SB-1(0.0-0.5)		12:10	349	~~64.49~~	~~1~~	OP		Dilute	R2
40	5806	+10	1			12:15	402	~~74.26~~	~~1~~	~~10~~	97.7	Dilute	R2
41	5806	PBW	1			12:20	1	0.34	1				R
42	5806	+10	1			12:25	47	8.82	1	10	88.2		R
43	5806	CCV4	4			12:30	138	25.59	1	25	102.4		
44	5806	CCB4	4			12:35	-1	-0.03	1				
45	5806	LCSM	1			12:40	111	20.61	5	100	103.1		R
46	5806	66316S	1	SWB-2-F		12:45	128	23.75	5	100	118.7		R
47	5806	66316D	1	SWB-2-F		12:50	60	11.21	1				R
48	5806	+10	1			12:55	121	22.46	1	10	112.5		R
49	5806	PBS	1			13:00	5	1.07	1				
50	5806	+10	1			13:05	60	11.21	1	10	101.4		

Worklist # 7330

Analyst: OP

Comments:

Date Analyzed: 13-DEC-91

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
51	5806	66320	1	BACKGROUND		13:10	63	11.77	5				
52	5806	+10	1			13:15	122	22.64	5	10	108.8		
53	5806	PB1T	2			13:20	-2	-0.22	10				
54	5806	+10	2			13:25	58	10.84	10	10	108.4		
55	5806	CCV5	5			13:30	143	26.51	1	25	106.1		
56	5806	CCB5	5			13:35	-2	-0.22	1				
57	5800	66197	2	WB-4(S)		13:40	97	18.03	3				R2
58	5800	+10	2			13:45	145	26.88	3	10	88.5		R2
59	5800	66198	2	WB-5(S)		13:50	96	17.85	5				R2
60	5800	+10	2			13:55	155	28.72	5	10	108.8		R2
61	5800	66199	2	WB-6(S)		14:00	62	11.58	5				R2
62	5800	+10	2			14:05	121	22.46	5	10	108.8		R2
63	5806	66319	2	SB-1(0.0-0.5)		14:10	73	13.61	5				~~R2~~ R3
64	5806	+10	2			14:15	128	23.75	5	10	101.4		~~R2~~ R3
65	5806	CCV6	6			14:20	141	26.14	1	25	104.6		
66	5806	CCB6	6			14:25	0	0.15	1				

1 - 3

WL #7380

12-13-91

OP

VEOBRIEN 1,2

PB

	0.005	
	0.002	
0	0.004	AV
	60.61	CV
	0.000	AZ
	-0.001	
	-0.002	
1	-0.002	AV
	47.14	CV
	0.024	
	0.028	
2	0.026	AV
	10.88	CV
	0.054	
	0.056	
3	0.055	AV
	2.57	CV
	0.108	
	0.108	
4	0.108	AV
	0.00	CV
	0.270	
	0.269	
5	0.270	AV
	0.26	CV
	0.137	
	0.139	
6	0.138	AV 9:25
	1.03	CV
	-0.001	
	-0.002	
7	-0.001	AV 9:30
	47.14	CV
	0.136	
	0.140	
8	0.138	AV 9:35
	2.05	CV
	-0.002	
	-0.001	
9	-0.001	AV 9:40
	47.14	CV
	0.029	
	0.029	
10	0.029	AV
	0.00	CV
	0.001	
	-0.001	
11	-0.000	AV
	06	ER
	0.057	
	0.053	
12	0.055	AV
	5.14	CV
	-0.041	
	-0.044	
13	-0.042	AV
	4.99	CV
	0.017	
	0.019	
14	0.018	AV
	7.86	CV
	0.011	
	0.010	
15	0.010	AV
	6.73	CV

12-13-91

OP

VEOBRIEN - 1,2

PB

	0.068	
	0.070	
16	0.069	AV
	2.05	CV
	0.048	
	0.051	
17	0.050	AV
	4.29	CV
	0.106	
	0.113	
18	0.109	AV
	4.52	CV
	0.148	
	0.148	
19	0.148	AV 10:30
	0.00	CV
	-0.002	
	-0.000	
20	-0.001	AV 10:35
	06	ER
	-0.010	
	-0.010	
21	-0.010	AV
	0.00	CV
	0.054	
	0.054	
22	0.054	AV
	0.00	CV
	-0.006	
	-0.002	
23	-0.004	AV
	70.71	CV
	0.058	
	0.058	
24	0.058	AV
	0.00	CV
	-0.009	
	-0.007	
25	-0.008	AV
	17.68	CV
	0.054	
	0.054	
26	0.054	AV
	0.00	CV
	0.268	
	0.268	
27	0.268	AV
	0.00	CV
	0.318	
	0.317	
28	0.317	AV
	0.22	CV
	0.455	
	0.455	
29	0.455	AV
	0.00	CV
	0.494	
	0.496	
30	0.495	AV
	0.29	CV
	0.137	
	0.138	
31	0.137	AV 11:40
	0.51	CV

12-13-91

OP

VEOBRIEN - 1,2

PB

	-0.001	
	-0.003	
32	-0.002	AV 11:45
	70.71	CV
	0.323	
	0.319	
33	0.321	AV
	0.88	CV
	0.380	
	0.379	
34	0.380	AV
	0.19	CV
	0.071	
	0.069	
35	0.070	AV
	2.02	CV
	0.125	
	0.123	
36	0.124	AV
	1.14	CV
	0.102	
	0.101	
37	0.102	AV
	0.70	CV
	0.161	
	0.161	
38	0.161	AV
	0.00	CV
	0.351	
	0.348	
39	0.349	AV
	0.61	CV
	0.407	
	0.398	
40	0.402	AV
	1.58	CV
	0.001	
	0.001	
41	0.001	AV
	0.00	CV
	0.049	
	0.046	
42	0.047	AV
	4.47	CV
	0.139	
	0.137	
43	0.138	AV 12:30
	1.03	CV
	-0.001	
	-0.002	
44	-0.001	AV 12:35
	47.14	CV
	0.110	
	0.112	
45	0.111	AV
	1.27	CV
	0.131	
	0.126	
46	0.128	AV
	2.75	CV
	0.060	
	0.060	
47	0.060	AV
	0.00	CV

VZ # 7330

12-B-91

OP

PB TEOBRIEN -1,2

	0.120	
	0.122	
48	0.121	AV
	1.17	CV
	0.006	
	0.005	
49	0.005	AV
	12.86	CV
	0.061	
	0.058	
50	0.060	AV
	3.57	CV
	0.064	
	0.061	
51	0.063	AV
	3.39	CV
	0.121	
	0.123	
52	0.122	AV
	1.15	CV
	-0.003	
	-0.002	
53	-0.002	AV
	28.28	CV
	0.057	
	0.059	
54	0.058	AV
	2.44	CV
	0.142	
	0.144	
55	0.143	AV
	0.99	CV
	-0.001	
	-0.003	
56	-0.002	AV
	70.71	CV
	0.097	
	0.097	
57	0.097	AV
	0.00	CV

13:30

14:35

12-B-91

OP

PB TEOBRIEN -1,2

	0.144	
	0.146	
58	0.145	AV
	0.98	CV
	0.094	
	0.097	
59	0.096	AV
	2.22	CV
	0.155	
	0.155	
60	0.155	AV
	0.00	CV
	0.062	
	0.062	
61	0.062	AV
	0.00	CV
	0.124	
	0.118	
62	0.121	AV
	3.51	CV
	0.073	
	0.073	
63	0.073	AV
	0.00	CV
	0.129	
	0.126	
64	0.128	AV
	1.66	CV
	0.140	
	0.143	
65	0.141	AV
	1.50	CV
	0.000	
	-0.001	
66	-0.000	AV
	06	ER

14:20

14:25

2-5

VERSAR LABORATORIES INC.
Worklist # 7671

18-DEC-91 08:46 PM

Analyst: NA

Comments:

Date Analyzed: 18-DEC-91

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	PB3	PB
5806	VEOBRIEN	2	HOH	PB3	PB
5806	VEOBRIEN	2	SOIL	PB3	PB

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	41	EPA	98.4
CCV :		NIST	25
LCSW :		EPA	98.4
LCSS :		EPA	1180
CAL. STD. :		I.V.	
Prep. Day/Hr. :	18-DEC-91 07:30		

INSTRUMENT # 8

Light Source:	EDL	Gas Flow:	0
Current/Power:	9	Matrix Modifiers:	Y
Slit:	0.7	Signal:	PK AR
Wavelength:	273.6	Tube:	LVP
Background Corr.:	bz	Replicates:	2
IDL:	2	CRDL:	5
Spike:	100	Integration Time:	5 SEC

Correlation: .9997 Y-Intercept: -4.05 Slope: 5.6 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	5800	S0	1		0		-5		1				
2	5800	S5	1		5		21	4.47	1		89.4	CRA	
3	5800	S10	2		10		55		1				
4	5800	S20	3		20		110		1				
5	5800	S50	4		50		275		1				
6	5800	ICV	1				143	26.25	4	98.4	106.7		
7	5800	ICB	1				2	1.08	1				
8	5800	CCV1	1				139	25.53	1	25	102.1		
9	5800	CCB1	1				-1	0.55	1				
10	5800	CRA	1				23	4.83	1				
11	5806	66314	2	SWB-1-F			75	14.11	1				
12	5806	+10	1				136	25.00	1	10	108.9		
13	5806	CCV2	2				143	26.25	1	25	105.0		
14	5806	CCB2	2				-2	0.37	1				

#7671 VEOBRIEN 1,2 NA

12-18-91

PB
0.007 -0.004

MEAN= 0.001 STD.DEV.= COEF.VAR.= 99.99 %

****

0.000 AUTOZERO

****

PB 0001
-0.007 -0.002

MEAN= -0.005 STD.DEV.= COEF.VAR.= 65.69 %

****

PB 0002
0.018 0.023

MEAN= 0.021 STD.DEV.= COEF.VAR.= 16.59 %

****

PB 0003
0.053 0.058

MEAN= 0.055 STD.DEV.= COEF.VAR.= 6.90 %

****

PB 0004
0.106 0.113

MEAN= 0.110 STD.DEV.= COEF.VAR.= 4.84 %

****

PB 0005
0.275 0.274

MEAN= 0.275 STD.DEV.= COEF.VAR.= 0.20 %

****

PB 0006
0.143 0.142

MEAN= 0.143 STD.DEV.= COEF.VAR.= 0.54 %

****

PB 0007
0.007 -0.002

MEAN= 0.002 STD.DEV.= COEF.VAR.= 99.99 %

****

PB 0008
0.135 0.144

MEAN= 0.139 STD.DEV.= COEF.VAR.= 4.34 %

****

PB 0009
0.000 -0.003

MEAN= -0.001 STD.DEV.= COEF.VAR.= 99.99 %

****

PB 0010
0.023 0.024

EAN= 0.023 STD.DEV.= COEF.VAR.= 1.01 %

****

PB 0011
0.072 0.078

MEAN= 0.075 STD.DEV.= COEF.VAR.= 5.49 %

2/3

0.137 0.136 #7671 VEOBRIEN 1,2 NA

MEAN= 0.136 STD.DEV.= COEF.VAR.= 0.58 % 12-18-91

****

PB 0013

0.149 0.137

MEAN= 0.143 STD.DEV.= COEF.VAR.= 5.70 %

****

PB 0014

-0.001 -0.004

MEAN= -0.002 STD.DEV.= COEF.VAR.= 67.26 %

****

3/3

5800, 5806 Veobrien 1,2 PBO

B1/2

File : 5800SEH1.WSL

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Flags
1	S0		3		1.0	12/10/91	19:38:18	
2	S5		3		1.0	12/10/91	19:43:05	
3	S10		3		1.0	12/10/91	19:47:53	
4	S20		3		1.0	12/10/91	19:52:39	
5	S50		3		1.0	12/10/91	19:57:26	
6	ICV		0		2.0	12/10/91	20:02:13	
7	ICB	ICB	0		1.0	12/10/91	20:06:59	
8	CCV1		0		1.0	12/10/91	20:11:46	
9	CCB1	CCB	0		1.0	12/10/91	20:16:33	
10	CRA	CRA	0		1.0	12/10/91	20:21:20	
11	PBW	PBW	0		1.0	12/10/91	20:26:09	
12	+10		1		1.0	12/10/91	20:30:56	
13	LCSM		0		5.0	12/10/91	20:35:43	
14	66316S		0		5.0	12/10/91	20:40:30	
~~15~~	~~66317S~~ Rerun to verify		0		5.0	12/10/91	20:45:17	N
~~16~~	66190		0		1.0	12/10/91	20:50:04	W
17	+10		1		1.0	12/10/91	20:54:52	
18	66191		0		1.0	12/10/91	20:59:38	W
19	+10		1		1.0	12/10/91	21:04:26	
20	CCV2		0		1.0	12/10/91	21:09:18	
21	CCB2	CCB	0		1.0	12/10/91	21:14:05	
~~22~~	~~66192~~ PBO rerun	no MSA Recovery	0		1.0	12/10/91	21:18:57	
23	+10		1		1.0	12/10/91	21:23:47	
~~24~~	~~66193~~ PBO rerun	no MSA Recovery	0		1.0	12/10/91	21:28:37	
25	+10		1		1.0	12/10/91	21:33:28	
26	66314		0		1.0	12/10/91	21:38:18	W
27	+10		1		1.0	12/10/91	21:43:09	
~~28~~	~~66315~~ PBO rerun	no MSA Recovery	0		1.0	12/10/91	21:47:58	
29	+10		1		1.0	12/10/91	21:52:49	
30	66316		0		1.0	12/10/91	21:57:38	W
31	+10		1		1.0	12/10/91	22:02:28	
32	CCV3		0		1.0	12/10/91	22:07:18	
33	CCB3	CCB	0		1.0	12/10/91	22:12:05	
~~34~~	~~66316D~~ PBO		0		1.0	12/10/91	22:16:58	
35	+10		1		1.0	12/10/91	22:21:50	
~~36~~	~~66317~~ PBO rerun	no MSA Recovery	0		1.0	12/10/91	22:26:40	
37	+10		1		1.0	12/10/91	22:31:32	
~~38~~	~~66317D~~ PBO rerun	no MSA Recovery	0		1.0	12/10/91	22:36:22	
39	+10		1		1.0	12/10/91	22:41:13	
40	CCV4	failed → Recalib & Rerun	0		1.0	12/10/91	22:46:05	
41	CCB4	CCB	0		1.0	12/10/91	22:50:52	

Rerun

ICV 2K = 50.3 ppb EPA
CCV = 25.0 ppb NBS

5800, 5806 Veobrien 1, 2 PBW

Pg 2/2

Spike Recoveries in 5800SEH1.WSL

#	Sample Names Laboratory	EPA/Customer	Element	Original	Added	Found	% R	E
1	PBW	PBW	SE196.00	-1.40000	10.000	9.30000	93.00	
2	66190		SE196.00	-2.10000	10.000	4.90000	49.00	*
3	66191		SE196.00	-1.80000	10.000	5.60000	56.00	*
4	66192		SE196.00	-2.80000	10.000	-1.00000		*
5	66193		SE196.00	-3.20000	10.000	-2.00000		*
6	66314		SE196.00	-1.30000	10.000	5.80000	58.00	*
7	66315		SE196.00	-2.30000	10.000	-1.60000		*
8	66316		SE196.00	-1.80000	10.000	5.00000	50.00	*
9	66316D		SE196.00	-1.70000	10.000	5.30000	53.00	*
10	66317		SE196.00	-2.20000	10.000	-1.60000		*
11	66317D		SE196.00	-1.60000	10.000	-1.20000		*

5800 5806 Veobrien 1, 2 8BD Pg 1/13

Element File: VSE.GEL | Element: Se | Wavelength: 196.0
Date: 12/10/91 | Time: 19:33 | Slit: 2.00 L
Data File: 5800SEH1.DAT | ID/Wt File: 5800SEH1.IDW | Lamp Current: 0
Technique: HGA | Calib. Type: Linear | Energy: 53

Se ID: S0 Seq. No.: 00001 A/S Pos.: 36 Date: 12/10/91

uL dispensed: 30 from 36

Replicate 1 Time: 19:35
Peak Area (A-s): 0.019 Peak Height (A): 0.031
Background Pk Area (A-s): 0.182 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): -0.002

uL dispensed: 30 from 36

Replicate 2 (Peak Stored) Time: 19:38
Peak Area (A-s): 0.016 Peak Height (A): 0.031
Background Pk Area (A-s): 0.185 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): -0.005

Mean Pk Area (A-s): -0.003 SD: 0.0020 RSD(%): 61.40

Auto-zero performed.

Se ID: S5 Seq. No.: 00002 A/S Pos.: 1 Date: 12/10/91

uL dispensed: 30 from 1

Replicate 1 Time: 19:40
Peak Area (A-s): 0.041 Peak Height (A): 0.076
Background Pk Area (A-s): 0.192 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.023

uL dispensed: 30 from 1

Replicate 2 (Peak Stored) Time: 19:43
Peak Area (A-s): 0.040 Peak Height (A): 0.078
Background Pk Area (A-s): 0.196 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.023

Mean Pk Area (A-s): 0.023 SD: 0.0004 RSD(%): 1.67

Standard number 1 applied. [5.0]
Correlation coefficient: 1.00000 Slope: 0.0046

Se ID: S10 Seq. No.: 00003 A/S Pos.: 2 Date: 12/10/91

uL dispensed: 30 from 2

Replicate 1 Time: 19:45
Peak Area (A-s): 0.066 Peak Height (A): 0.123
Background Pk Area (A-s): 0.200 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 10.7

dispensed: 30 from 2

Replicate 2 (Peak Stored) Time: 19:47
Peak Area (A-s): 0.065 Peak Height (A): 0.121
Background Pk Area (A-s): 0.199 Background Pk Height (A): 0.089

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Blank Corrected Pk Area (A-s): 0.047
Concentration (ug/L): 10.4

Mean Conc (ug/L): 10.5 SD: 0.23 RSD(%): 2.15

Standard number 2 applied. [10.0]
Correlation coefficient: 0.99805 Slope: 0.0048

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Se ID: S20 Seq. No.: 00004 A/S Pos.: 3 Date: 12/10/91

uL dispensed: 30 from 3

Replicate 1 Time: 19:50
Peak Area (A-s): 0.122 Peak Height (A): 0.224
Background Pk Area (A-s): 0.211 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.104
Concentration (ug/L): 21.9

uL dispensed: 30 from 3
Replicate 2 (Peak Stored) Time: 19:52
Peak Area (A-s): 0.118 Peak Height (A): 0.224
Background Pk Area (A-s): 0.213 Background Pk Height (A): 0.089
Blank Corrected Pk Area (A-s): 0.100
Concentration (ug/L): 21.1

Mean Conc (ug/L): 21.5 SD: 0.55 RSD(%): 2.58

Standard number 3 applied. [20.0]
Correlation coefficient: 0.99780 Slope: 0.0050

~~~~~~

Se ID: S50 Seq. No.: 00005 A/S Pos.: 4 Date: 12/10/91

uL dispensed: 30 from 4

Replicate 1 Time: 19:55
Peak Area (A-s): 0.282 Peak Height (A): 0.513
Background Pk Area (A-s): 0.245 Background Pk Height (A): 0.148
Blank Corrected Pk Area (A-s): 0.254
Concentration (ug/L): 52.4

uL dispensed: 30 from 4
Replicate 2 (Peak Stored) Time: 19:57
Peak Area (A-s): 0.278 Peak Height (A): 0.515
Background Pk Area (A-s): 0.251 Background Pk Height (A): 0.148
Blank Corrected Pk Area (A-s): 0.260
Concentration (ug/L): 51.7

Mean Conc (ug/L): 52.1 SD: 0.53 RSD(%): 1.01

Standard number 4 applied. [50.0]
Correlation coefficient: 0.99951 Slope: 0.0052

~~~~~~

Se ID: ICV Seq. No.: 00006 A/S Pos.: 5 Date: 12/10/91

dispensed: 30 from 5

Replicate 1 Time: 19:59
Peak Area (A-s): 0.150 Peak Height (A): 0.281
Background Pk Area (A-s): 0.218 Background Pk Height (A): 0.101
~~~~~~

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Blank Corrected Pk Area (A-s): 0.133
Concentration (ug/L): 25.4

uL dispensed: 30 from 5

Replicate 2 (Peak Stored) Time: 20:02
Peak Area (A-s): 0.150 Peak Height (A): 0.289
Background Pk Area (A-s): 0.215 Background Pk Height (A): 0.098
Blank Corrected Pk Area (A-s): 0.133
Concentration (ug/L): 25.5

Mean Conc (ug/L): 25.5 SD: 0.07 RSD(%): 0.27

QC sample is within range 20.32 - 30.12

~~~~~~

Se ID: ICB Seq. No.: 00007 A/S Pos.: 6 Date: 12/10/91

uL dispensed: 30 from 6

Replicate 1 Time: 20:04
Peak Area (A-s): 0.019 Peak Height (A): 0.034
Background Pk Area (A-s): 0.180 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

uL dispensed: 30 from 6

Replicate 2 (Peak Stored) Time: 20:06
Peak Area (A-s): 0.019 Peak Height (A): 0.033
Background Pk Area (A-s): 0.179 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.3

Mean Conc (ug/L): 0.3 SD: 0.02 RSD(%): 9.12

QC sample is within range -5 - 5

~~~~~~

Se ID: CCV| Seq. No.: 00008 A/S Pos.: 7 Date: 12/10/91

uL dispensed: 30 from 7

Replicate 1 Time: 20:09
Peak Area (A-s): 0.144 Peak Height (A): 0.284
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.127
Concentration (ug/L): 24.3

uL dispensed: 30 from 7

Replicate 2 (Peak Stored) Time: 20:11
Peak Area (A-s): 0.146 Peak Height (A): 0.284
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.095
Blank Corrected Pk Area (A-s): 0.129
Concentration (ug/L): 24.7

Mean Conc (ug/L): 24.5 SD: 0.26 RSD(%): 1.04

QC sample is within range 20.0 - 30.0

~~~~~~

Se ID: CCB| Seq. No.: 00009 A/S Pos.: 8 Date: 12/10/91
~~~~~~

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uL dispensed: 30 from 8
Replicate 1 Time: 20:14
Peak Area (A-s): 0.021 Peak Height (A): 0.034
Background Pk Area (A-s): 0.176 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.8

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 20:16
Peak Area (A-s): 0.016 Peak Height (A): 0.032
Background Pk Area (A-s): 0.179 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.2

Mean Conc (ug/L): 0.3 SD: 0.71 RSD(%): 275.78

QC sample is within range -5 - 5

~~~~~~
Se ID: CRA Seq. No.: 00010 A/S Pos.: 9 Date: 12/10/91

uL dispensed: 30 from 9
Replicate 1 Time: 20:18
Peak Area (A-s): 0.043 Peak Height (A): 0.077
Background Pk Area (A-s): 0.196 Background Pk Height (A): 0.088
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 5.0

uL dispensed: 30 from 9
Replicate 2 (Peak Stored) Time: 20:21
Peak Area (A-s): 0.042 Peak Height (A): 0.080
Background Pk Area (A-s): 0.190 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.025
Concentration (ug/L): 4.7

Mean Conc (ug/L): 4.9 SD: 0.20 RSD(%): 4.00

QC sample is within range

~~~~~~
Se ID: PBW Seq. No.: 00011 A/S Pos.: 11 Date: 12/10/91

uL dispensed: 30 from 11
Replicate 1 Time: 20:23
Peak Area (A-s): 0.011 Peak Height (A): 0.018
Background Pk Area (A-s): 0.184 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.2

uL dispensed: 30 from 11
Replicate 2 (Peak Stored) Time: 20:26
Peak Area (A-s): 0.009 Peak Height (A): 0.020
Background Pk Area (A-s): 0.182 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Mean Conc (ug/L): -1.4 SD: 0.27 RSD(%): 19.09

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Se ID: +10 Seq. No.: 00012 A/S Pos.: 12 Date: 12/10/91

uL dispensed: 30 from 12
Replicate 1 Time: 20:28
Peak Area (A-s): 0.065 Peak Height (A): 0.130
Background Pk Area (A-s): 0.190 Background Pk Height (A): 0.082
Blank Corrected Pk Area (A-s): 0.048
Concentration (ug/L): 9.2

uL dispensed: 30 from 12
Replicate 2 (Peak Stored) Time: 20:30
Peak Area (A-s): 0.067 Peak Height (A): 0.134
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.079
Blank Corrected Pk Area (A-s): 0.049
Concentration (ug/L): 9.5

Mean Conc (ug/L): 9.3 SD: 0.22 RSD(%): 2.34

Se ID: LCSM Seq. No.: 00013 A/S Pos.: 13 Date: 12/10/91

uL dispensed: 30 from 13
Replicate 1 Time: 20:33
Peak Area (A-s): 0.125 Peak Height (A): 0.238
Background Pk Area (A-s): 0.195 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 20.7

dispensed: 30 from 13
Replicate 2 (Peak Stored) Time: 20:35
Peak Area (A-s): 0.124 Peak Height (A): 0.250
Background Pk Area (A-s): 0.192 Background Pk Height (A): 0.088
Blank Corrected Pk Area (A-s): 0.107
Concentration (ug/L): 20.6

Mean Conc (ug/L): 20.6 SD: 0.08 RSD(%): 0.37
[100] 103.0%

Se ID: 663165 Seq. No.: 00014 A/S Pos.: 14 Date: 12/10/91

uL dispensed: 30 from 14
Replicate 1 Time: 20:38
Peak Area (A-s): 0.116 Peak Height (A): 0.211
Background Pk Area (A-s): 0.214 Background Pk Height (A): 0.093
Blank Corrected Pk Area (A-s): 0.099
Concentration (ug/L): 19.0

uL dispensed: 30 from 14
Replicate 2 (Peak Stored) Time: 20:40
Peak Area (A-s): 0.117 Peak Height (A): 0.211
Background Pk Area (A-s): 0.208 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.100
Concentration (ug/L): 19.2

an Conc (ug/L): 19.1 SD: 0.13 RSD(%): 0.66
[100] 95.5%

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Se ID: 66317S Seq. No.: 00015 A/S Pos.: 15 Date: 12/10/91

uL dispensed: 30 from 15
Replicate 1 Time: 20:42
Peak Area (A-s): 0.028 Peak Height (A): 0.034
Background Pk Area (A-s): 0.688 Background Pk Height (A): 0.265
Blank Corrected Pk Area (A-s): 0.010
Concentration (ug/L): 2.0

uL dispensed: 30 from 15
Replicate 2 (Peak Stored) Time: 20:45
Peak Area (A-s): 0.026 Peak Height (A): 0.035
Background Pk Area (A-s): 0.731 Background Pk Height (A): 0.272
Blank Corrected Pk Area (A-s): 0.008
Concentration (ug/L): 1.6

Mean Conc (ug/L): 1.8 PBD SD: 0.26 RSD(%): 14.62

Rerun to verify

Se ID: 66190 Seq. No.: 00016 A/S Pos.: 16 Date: 12/10/91

uL dispensed: 30 from 16
Replicate 1 Time: 20:47
Peak Area (A-s): 0.006 Peak Height (A): 0.013
Background Pk Area (A-s): 0.288 Background Pk Height (A): 0.120
Blank Corrected Pk Area (A-s): -0.012
Concentration (ug/L): -2.2

dispensed: 30 from 16
Replicate 2 (Peak Stored) Time: 20:50
Peak Area (A-s): 0.007 Peak Height (A): 0.013
Background Pk Area (A-s): 0.246 Background Pk Height (A): 0.112
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -2.0

Mean Conc (ug/L): -2.1 SD: 0.17 RSD(%): 7.81

W

Se ID: +10 Seq. No.: 00017 A/S Pos.: 17 Date: 12/10/91

uL dispensed: 30 from 17
Replicate 1 Time: 20:52
Peak Area (A-s): 0.042 Peak Height (A): 0.088
Background Pk Area (A-s): 0.254 Background Pk Height (A): 0.112
Blank Corrected Pk Area (A-s): 0.024
Concentration (ug/L): 4.7

uL dispensed: 30 from 17
Replicate 2 (Peak Stored) Time: 20:54
Peak Area (A-s): 0.044 Peak Height (A): 0.085
Background Pk Area (A-s): 0.251 Background Pk Height (A): 0.112
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 5.1

Mean Conc (ug/L): 4.9 SD: 0.29 RSD(%): 6.01

~~~~~~
Se ID: 66191 Seq. No.: 00018 A/S Pos.: 18 Date: 12/10/91

uL dispensed: 30 from 18

Replicate 1 Time: 20:57
Peak Area (A-s): 0.007 Peak Height (A): 0.015
Background Pk Area (A-s): 0.206 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): -0.011
Concentration (ug/L): -2.0

uL dispensed: 30 from 18
Replicate 2 (Peak Stored) Time: 20:59
Peak Area (A-s): 0.009 Peak Height (A): 0.015
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.092
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Mean Conc (ug/L): -1.8 SD: 0.31 W RSD(%): 16.96

~~~~~~
Se ID: +10 Seq. No.: 00019 A/S Pos.: 19 Date: 12/10/91

uL dispensed: 30 from 19
Replicate 1 Time: 21:02
Peak Area (A-s): 0.047 Peak Height (A): 0.098
Background Pk Area (A-s): 0.218 Background Pk Height (A): 0.095
Blank Corrected Pk Area (A-s): 0.030
Concentration (ug/L): 5.7

dispensed: 30 from 19
Replicate 2 (Peak Stored) Time: 21:04
Peak Area (A-s): 0.046 Peak Height (A): 0.094
Background Pk Area (A-s): 0.215 Background Pk Height (A): 0.092
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 5.5

Mean Conc (ug/L): 5.6 SD: 0.12 RSD(%): 2.12

~~~~~~
Se ID: CCV8 Seq. No.: 00020 A/S Pos.: 7 Date: 12/10/91

uL dispensed: 30 from 7
Replicate 1 Time: 21:06
Peak Area (A-s): 0.134 Peak Height (A): 0.265
Background Pk Area (A-s): 0.189 Background Pk Height (A): 0.088
Blank Corrected Pk Area (A-s): 0.117
Concentration (ug/L): 22.5

uL dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 21:09
Peak Area (A-s): 0.135 Peak Height (A): 0.277
Background Pk Area (A-s): 0.187 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.118
Concentration (ug/L): 22.7

Mean Conc (ug/L): 22.6 SD: 0.14 RSD(%): 0.63

QC sample is within range 20.0 - 30.0
~~~~~~

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Se ID: CCB 2 Seq. No.: 00021 A/S Pos.: 8 Date: 12/10/91

uL dispensed: 30 from 8

Replicate 1 Time: 21:11
Peak Area (A-s): 0.017 Peak Height (A): 0.032
Background Pk Area (A-s): 0.168 Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.1

uL dispensed: 30 from 8

Replicate 2 (Peak Stored) Time: 21:14
Peak Area (A-s): 0.016 Peak Height (A): 0.030
Background Pk Area (A-s): 0.178 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.3

Mean Conc (ug/L): -0.2 SD: 0.17 RSD(%): 94.28

QC sample is within range -5 - 5

Se ID: 66192 Seq. No.: 00022 A/S Pos.: 20 Date: 12/10/91

uL dispensed: 30 from 20

Replicate 1 Time: 21:16
Peak Area (A-s): 0.004 Peak Height (A): 0.006
Background Pk Area (A-s): 0.499 Background Pk Height (A): 0.204
Blank Corrected Pk Area (A-s): -0.014
Concentration (ug/L): -2.6

uL dispensed: 30 from 20

Replicate 2 (Peak Stored) Time: 21:18
Peak Area (A-s): 0.002 Peak Height (A): 0.018
Background Pk Area (A-s): 0.534 Background Pk Height (A): 0.202
Blank Corrected Pk Area (A-s): -0.015
Concentration (ug/L): -3.0

Mean Conc (ug/L): ~~-2.8~~ SD: 0.25 RSD(%): 9.00

Rerun no MSA recovery

Se ID: +10 Seq. No.: 00023 A/S Pos.: 21 Date: 12/10/91

uL dispensed: 30 from 21

Replicate 1 Time: 21:21
Peak Area (A-s): 0.012 Peak Height (A): 0.023
Background Pk Area (A-s): 0.542 Background Pk Height (A): 0.206
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.1

uL dispensed: 30 from 21

Replicate 2 (Peak Stored) Time: 21:23
Peak Area (A-s): 0.012 Peak Height (A): 0.021
Background Pk Area (A-s): 0.543 Background Pk Height (A): 0.207
Blank Corrected Pk Area (A-s): -0.005
Concentration (ug/L): -1.0

Mean Conc (ug/L): -1.0 SD: 0.06 RSD(%): 5.50

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Se ID: 66193 Seq. No.: 00024 A/S Pos.: 22 Date: 12/10/91

uL dispensed: 30 from 22

Replicate 1 Time: 21:26
Peak Area (A-s): -0.000 Peak Height (A): 0.011
Background Pk Area (A-s): 1.911 Background Pk Height (A): 0.831
Blank Corrected Pk Area (A-s): -0.018
Concentration (ug/L): -3.4

uL dispensed: 30 from 22

Replicate 2 (Peak Stored) Time: 21:28
Peak Area (A-s): 0.002 Peak Height (A): 0.014
Background Pk Area (A-s): 2.102 Background Pk Height (A): 0.894
Blank Corrected Pk Area (A-s): -0.016
Concentration (ug/L): -3.0

PBD

Mean Conc (ug/L): -3.2 SD: 0.30 RSD(%): 9.42

Rerun no MSA recovery

Se ID: +10 Seq. No.: 00025 A/S Pos.: 23 Date: 12/10/91

uL dispensed: 30 from 23

Replicate 1 Time: 21:31
Peak Area (A-s): 0.004 Peak Height (A): 0.022
Background Pk Area (A-s): 2.112 Background Pk Height (A): 0.863
Blank Corrected Pk Area (A-s): -0.013
Concentration (ug/L): -2.5

dispensed: 30 from 23

Replicate 2 (Peak Stored) Time: 21:33
Peak Area (A-s): 0.009 Peak Height (A): 0.023
Background Pk Area (A-s): 2.111 Background Pk Height (A): 0.863
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Mean Conc (ug/L): -2.0 SD: 0.63 RSD(%): 30.95

Se ID: 66314 Seq. No.: 00026 A/S Pos.: 24 Date: 12/10/91

uL dispensed: 30 from 24

Replicate 1 Time: 21:35
Peak Area (A-s): 0.012 Peak Height (A): 0.017
Background Pk Area (A-s): 0.311 Background Pk Height (A): 0.151
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.1

uL dispensed: 30 from 24

Replicate 2 (Peak Stored) Time: 21:38
Peak Area (A-s): 0.009 Peak Height (A): 0.014
Background Pk Area (A-s): 0.234 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

PBD-BD except

an Conc (ug/L): -1.3 SD: 0.38 RSD(%): 28.78

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Se ID: +10 Seq. No.: 00027 A/S Pos.: 25 Date: 12/10/91

uL dispensed: 30 from 25
Replicate 1 Time: 21:40
Peak Area (A-s): 0.048 Peak Height (A): 0.095
Background Pk Area (A-s): 0.204 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 6.0

uL dispensed: 30 from 25
Replicate 2 (Peak Stored) Time: 21:43
Peak Area (A-s): 0.047 Peak Height (A): 0.095
Background Pk Area (A-s): 0.198 Background Pk Height (A): 0.082
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 5.6

Mean Conc (ug/L): 5.8 SD: 0.24 RSD(%): 4.21

Se ID: 66315 Seq. No.: 00028 A/S Pos.: 26 Date: 12/10/91

uL dispensed: 30 from 26
Replicate 1 Time: 21:45
Peak Area (A-s): 0.004 Peak Height (A): 0.009
Background Pk Area (A-s): 0.878 Background Pk Height (A): 0.315
Blank Corrected Pk Area (A-s): -0.013
Concentration (ug/L): -2.5

dispensed: 30 from 26
Replicate 2 (Peak Stored) Time: 21:47
Peak Area (A-s): 0.006 Peak Height (A): 0.017
Background Pk Area (A-s): 0.960 Background Pk Height (A): 0.317
Blank Corrected Pk Area (A-s): -0.011
Concentration (ug/L): -2.1

Mean Conc (ug/L): ~~-2.3~~ SD: 0.29 RSD(%): 12.52

Rerun no MSA recovery

Se ID: +10 Seq. No.: 00029 A/S Pos.: 27 Date: 12/10/91

uL dispensed: 30 from 27
Replicate 1 Time: 21:50
Peak Area (A-s): 0.008 Peak Height (A): 0.016
Background Pk Area (A-s): 0.977 Background Pk Height (A): 0.348
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.8

uL dispensed: 30 from 27
Replicate 2 (Peak Stored) Time: 21:52
Peak Area (A-s): 0.010 Peak Height (A): 0.024
Background Pk Area (A-s): 0.977 Background Pk Height (A): 0.317
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.3

Mean Conc (ug/L): -1.6 SD: 0.35 RSD(%): 22.27

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Se ID: 66316 Seq. No.: 00030 A/S Pos.: 28 Date: 12/10/91

uL dispensed: 30 from 28

Replicate 1 Time: 21:55
Peak Area (A-s): 0.008 Peak Height (A): 0.016
Background Pk Area (A-s): 0.365 Background Pk Height (A): 0.232
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.7

uL dispensed: 30 from 28
Replicate 2 (Peak Stored) Time: 21:57
Peak Area (A-s): 0.008 Peak Height (A): 0.015
Background Pk Area (A-s): 0.274 Background Pk Height (A): 0.102
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -1.9

Mean Conc (ug/L): -1.8 SD: 0.11 RSD(%): 5.91

Se ID: +10 Seq. No.: 00031 A/S Pos.: 29 Date: 12/10/91

uL dispensed: 30 from 29
Replicate 1 Time: 22:00
Peak Area (A-s): 0.044 Peak Height (A): 0.081
Background Pk Area (A-s): 0.267 Background Pk Height (A): 0.101
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 5.1

dispensed: 30 from 29
Replicate 2 (Peak Stored) Time: 22:02
Peak Area (A-s): 0.043 Peak Height (A): 0.080
Background Pk Area (A-s): 0.261 Background Pk Height (A): 0.097
Blank Corrected Pk Area (A-s): 0.026
Concentration (ug/L): 4.9

Mean Conc (ug/L): 5.0 SD: 0.09 RSD(%): 1.80

Se ID: CCV3 Seq. No.: 00032 A/S Pos.: 7 Date: 12/10/91

uL dispensed: 30 from 7
Replicate 1 Time: 22:04
Peak Area (A-s): 0.127 Peak Height (A): 0.245
Background Pk Area (A-s): 0.177 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.109
Concentration (ug/L): 21.0

uL dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 22:07
Peak Area (A-s): 0.132 Peak Height (A): 0.249
Background Pk Area (A-s): 0.168 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.114
Concentration (ug/L): 21.9

an Conc (ug/L): 21.4 SD: 0.65 RSD(%): 3.04

QC sample is within range 20.0 - 30.0

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Se ID: CCB 3 Seq. No.: 00033 A/S Pos.: 8 Date: 12/10/91

uL dispensed: 30 from 8
Replicate 1 Time: 22:09
Peak Area (A-s): 0.017 Peak Height (A): 0.033
Background Pk Area (A-s): 0.150 Background Pk Height (A): 0.065
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.0

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 22:12
Peak Area (A-s): 0.016 Peak Height (A): 0.029
Background Pk Area (A-s): 0.155 Background Pk Height (A): 0.066
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.3

Mean Conc (ug/L): -0.2 SD: 0.24 RSD(%): 141.16

QC sample is within range -5 - 5

Rerun all samples after An

Se ID: 66316D Seq. No.: 00034 A/S Pos.: 30 Date: 12/10/91

uL dispensed: 30 from 30
Replicate 1 Time: 22:14
Peak Area (A-s): 0.008 Peak Height (A): 0.017
Background Pk Area (A-s): 0.252 Background Pk Height (A): 0.096
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.7

uL dispensed: 30 from 30
Replicate 2 (Peak Stored) Time: 22:16
Peak Area (A-s): 0.009 Peak Height (A): 0.016
Background Pk Area (A-s): 0.259 Background Pk Height (A): 0.100
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Mean Conc (ug/L): -1.7 SD: 0.09 RSD(%): 5.40

Se ID: +10 Seq. No.: 00035 A/S Pos.: 31 Date: 12/10/91

uL dispensed: 30 from 31
Replicate 1 Time: 22:19
Peak Area (A-s): 0.045 Peak Height (A): 0.083
Background Pk Area (A-s): 0.250 Background Pk Height (A): 0.093
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 5.4

uL dispensed: 30 from 31
Replicate 2 (Peak Stored) Time: 22:21
Peak Area (A-s): 0.045 Peak Height (A): 0.083
Background Pk Area (A-s): 0.251 Background Pk Height (A): 0.095
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 5.3

Mean Conc (ug/L): 5.3 SD: 0.05 RSD(%): 0.98

5800, 5806 Veobrien 1, 2 PBL

Se ID: 66317 Seq. No.: 00036 A/S Pos.: 32 Date: 12/10/91

uL dispensed: 30 from 32

Replicate 1 Time: 22:24
Peak Area (A-s): 0.006 Peak Height (A): 0.015
Background Pk Area (A-s): 1.694 Background Pk Height (A): 0.869
Blank Corrected Pk Area (A-s): -0.011
Concentration (ug/L): -2.2

uL dispensed: 30 from 32
Replicate 2 (Peak Stored) Time: 22:26
Peak Area (A-s): 0.006 Peak Height (A): 0.024
Background Pk Area (A-s): 1.863 Background Pk Height (A): 0.896
Blank Corrected Pk Area (A-s): -0.011
Concentration (ug/L): -2.2

PBL

Mean Conc (ug/L): -2.2 SD: 0.03 RSD(%): 1.39

Rerun 10 fold

Se ID: +10 Seq. No.: 00037 A/S Pos.: 33 Date: 12/10/91

uL dispensed: 30 from 33
Replicate 1 Time: 22:29
Peak Area (A-s): 0.009 Peak Height (A): 0.023
Background Pk Area (A-s): 1.924 Background Pk Height (A): 0.898
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

dispensed: 30 from 33
Replicate 2 (Peak Stored) Time: 22:31
Peak Area (A-s): 0.009 Peak Height (A): 0.026
Background Pk Area (A-s): 1.877 Background Pk Height (A): 0.899
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Mean Conc (ug/L): -1.6 SD: 0.02 RSD(%): 1.04

Se ID: 66317D Seq. No.: 00038 A/S Pos.: 34 Date: 12/10/91

uL dispensed: 30 from 34
Replicate 1 Time: 22:33
Peak Area (A-s): 0.010 Peak Height (A): 0.034
Background Pk Area (A-s): 2.578 Background Pk Height (A): 1.251
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.3

uL dispensed: 30 from 34
Replicate 2 (Peak Stored) Time: 22:36
Peak Area (A-s): 0.007 Peak Height (A): 0.025
Background Pk Area (A-s): 2.509 Background Pk Height (A): 1.287
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -2.0

an Conc (ug/L): -1.6 PBL SD: 0.46 RSD(%): 28.01

Rerun 10 fold

5800, 5806 Veobrien 1,2 8630 12/12/13

Se ID: +10 Seq. No.: 00039 A/S Pos.: 35 Date: 12/10/91

uL dispensed: 30 from 35
Replicate 1 Time: 22:38
Peak Area (A-s): 0.011 Peak Height (A): 0.033
Background Pk Area (A-s): 2.628 Background Pk Height (A): 1.335
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.3

uL dispensed: 30 from 35
Replicate 2 (Peak Stored) Time: 22:41
Peak Area (A-s): 0.011 Peak Height (A): 0.029
Background Pk Area (A-s): 2.555 Background Pk Height (A): 1.368
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.2

Mean Conc (ug/L): -1.2 SD: 0.03 RSD(%): 2.37

Se ID: CCV4 Seq. No.: 00040 A/S Pos.: 7 Date: 12/10/91

uL dispensed: 30 from 7
Replicate 1 Time: 22:43
Peak Area (A-s): 0.112 Peak Height (A): 0.221
Background Pk Area (A-s): 0.309 Background Pk Height (A): 0.193
Blank Corrected Pk Area (A-s): 0.095
Concentration (ug/L): 18.2

dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 22:46
Peak Area (A-s): 0.123 Peak Height (A): 0.225
Background Pk Area (A-s): 0.218 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.105
Concentration (ug/L): 20.2

Mean Conc (ug/L): 19.2 SD: 1.41 RSD(%): 7.34

QC sample is out of range 20.0 - 30.0 Recalibr Rerun Samples

Se ID: CCB4 Seq. No.: 00041 A/S Pos.: 8 Date: 12/10/91

uL dispensed: 30 from 8
Replicate 1 Time: 22:48
Peak Area (A-s): 0.019 Peak Height (A): 0.030
Background Pk Area (A-s): 0.174 Background Pk Height (A): 0.069
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.4

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 22:50
Peak Area (A-s): 0.017 Peak Height (A): 0.028
Background Pk Area (A-s): 0.168 Background Pk Height (A): 0.068
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): 0.0

Mean Conc (ug/L): 0.2 SD: 0.28 RSD(%): 141.19

5800, 5806 Veobrien 1,2 BBD

Pg 13/13

QC sample is within range -5 - 5

Se ID: SO Seq. No.: 00042 A/S Pos.: 36 Date: 12/10/91

UL dispensed: 30 from 36

Pg 1/2

Analytical Difficulties

Project: Veobrien 1,2 Method Code: Se 3

Batch: 5800, 5806

Due to the high levels (ppm) of Al (485.2ppm), Fe (+518.2ppm) and Mg (+1324.0ppm) in samples 66193, 66317 and 66317D no true percent MSA recovery could be measured when samples were run undiluted. Because of such interference from the above elements, the samples listed were rerun at a 10 fold dilution to obtain a better reading.

Reviewer: _____ Analyst: PBP

Date: _____ Date: 12-12-7[illegible]

Veobrien 1,2
5800, 5804
RBD

Pg 2/2

Analysis Report Thu 12-12-91 01:27:53 AM page 1

Method: OPTIMIZE Sample Name: 663175 Operator: AT
Run Time: 12/12/91 01:26:34
Comment: HGA SPIKE
Mode: CONC Corr. Factor: 1

Elem	Ag3280	Al3082	As1936	Ba4934	Be3130	Ca3179	Cd2288
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0910	485.2	2.282	.5748	.0280	513.3	.3870
#1	.0891	490.5	2.131	.5822	.0282	512.2	.3895
#2	.0928	480.0	2.433	.5674	.0277	514.3	.3846

Elem	Co2286	Cr2677	Cu3247	Fe2599	K_7664	Mg3832	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.891	6.752	3.324	H518.2	25.88	H1324.	22.94
#1	1.890	6.747	3.401	H519.4	25.60	H1335.	22.93
#2	1.892	6.758	3.247	H517.0	26.16	H1313.	22.95

Elem	Mo2023	Na5889	Ni2316	Pb2203	Sb2068	Se1960	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.0614	84.84	14.91	H216.3	.2248	1.269	153.8
#1	.0657	86.53	14.92	H216.2	.1997	1.207	154.5
#2	.0570	83.15	14.90	H216.5	.2499	1.332	153.2

Elem	Sn1899	Ti3349	Tl1908	V_2924	Y_3710	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.6016	.1781	-1.404	.3009	1.427	15.48
#1	-.6331	.1734	-1.513	.2994	1.434	15.47
#2	-.5700	.1827	-1.295	.3023	1.421	15.49

5800, 5806 Veobrien 1,2 PBD

Pg 1/2

File : 5800SEH2.WSL

File Record	Laboratory Sample Name	Customer/EPA Sample Name	Type	Matrix	Instrument Dil.	Date	Time	Flags
1	S0		3		1.0	12/10/91	23:29:49	
2	S5		3		1.0	12/10/91	23:34:35	
3	S10		3		1.0	12/10/91	23:39:23	
4	S20		3		1.0	12/10/91	23:44:11	
5	S50		3		1.0	12/10/91	23:49:00	
6	ICV		0		2.0	12/10/91	23:54:16	
7	ICB	ICB	0		1.0	12/10/91	23:59:02	
8	CCV1		0		1.0	12/10/91	00:03:50	
9	CCB1	CCB	0		1.0	12/11/91	00:08:37	
10	CRA	CRA	0		1.0	12/11/91	00:13:25	
11	66317S		0		5.0	12/11/91	00:18:12	N
~~12~~	~~66192~~ PBD Rerun 10 fold		0		1.0	12/11/91	00:22:58	
~~13~~	~~+10~~		1		1.0	12/11/91	00:27:46	
~~14~~	~~66193~~ PBD Rerun 10 fold		0		1.0	12/11/91	00:32:32	
~~15~~	~~+10~~		1		1.0	12/11/91	00:37:19	
~~16~~	~~66315~~ PBD Rerun 10 fold		0		1.0	12/11/91	00:42:05	~~4pt~~ DRO
~~17~~	~~+10~~		1		1.0	12/11/91	00:46:53	
~~18~~	~~66316D~~ accept		0		1.0	12/11/91	00:51:39	W
19	+10		1		1.0	12/11/91	00:56:26	
20	CCV2		0		1.0	12/11/91	01:01:17	
21	CCB2	CCB	0		1.0	12/11/91	01:06:04	
~~22~~	~~66317~~ PBD Rerun 10 fold		0		1.0	12/11/91	01:10:56	
~~23~~	~~+10~~		1		1.0	12/11/91	01:15:43	
~~24~~	~~66317D~~ PBD Rerun 10 fold		0		1.0	12/11/91	01:20:33	
25	+10		1		1.0	12/11/91	01:25:23	
26	CCV3		0		1.0	12/11/91	01:30:13	
27	CCB3	CCB	0		1.0	12/11/91	01:35:00	
28	CCV4 after calib QC		0		1.0	12/11/91	02:02:19	
29	CCB4	CCB	0		1.0	12/11/91	02:07:08	
30	66192		0		10.0	12/11/91	02:11:56	W
31	+10		1		10.0	12/11/91	02:16:45	
32	66193		0		10.0	12/11/91	02:21:32	W
33	+10		1		10.0	12/11/91	02:26:19	
34	66315		0		10.0	12/11/91	02:31:07	W
35	+10		1		10.0	12/11/91	02:35:56	
36	66317		0		10.0	12/11/91	02:40:45	W
37	+10		1		10.0	12/11/91	02:45:33	
38	66317D		0		10.0	12/11/91	02:50:22	W
39	+10		1		10.0	12/11/91	02:55:10	
40	CCV5		0		1.0	12/11/91	03:00:02	
41	CCB5	CCB	0		1.0	12/11/91	03:04:51	

ICV2K = 50.3ppb EPA

CCV = 25.0ppb NBS

5800, 5806 Veobrien 1,2 BBD

Pg 2/2

Spike Recoveries in 5800SEH2.WSL

#	Sample Names Laboratory	EPA/Customer	Element	Original	Added	Found	% R	E
1	66192		SE196.00	-2.40000	10.000	-0.10000		*
2	66193		SE196.00	-3.10000	10.000	-1.90000		*
3	66315		SE196.00	-1.40000	10.000	0.00000		*
4	66316D		SE196.00	-1.10000	10.000	6.70000	67.00	*
5	66317		SE196.00	-1.10000	10.000	0.10000		*
6	66317D		SE196.00	-0.10000	10.000	0.60000		*
7	66192		SE196.00	-1.60000	10.000	6.00000	60.00	*
8	66193		SE196.00	-1.80000	10.000	4.30000	43.00	*
9	66315		SE196.00	-0.90000	10.000	6.80000	68.00	*
10	66317		SE196.00	-0.70000	10.000	6.00000	60.00	*
11	66317D		SE196.00	-0.10000	10.000	6.30000	63.00	*

5800, 5806 Veobrien 1/2 PBO

B 1/16

Element File: VSE.GEL | Element: Se | Wavelength: 196.0
Date: 12/10/91 | Time: 23:24 | Slit: 2.00 L
Data File: 5800SEH2.DAT | ID/Wt File: 5800SEH2.IDW | Lamp Current: 0
Technique: HGA | Calib. Type: Linear | Energy: 54

Se ID: S0 Seq. No.: 00001 A/S Pos.: 36 Date: 12/10/91

uL dispensed: 30 from 36
Replicate 1 Time: 23:27
Peak Area (A-s): 0.015 Peak Height (A): 0.027
Background Pk Area (A-s): 0.245 Background Pk Height (A): 0.125
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.4

uL dispensed: 30 from 36
Replicate 2 (Peak Stored) Time: 23:29
Peak Area (A-s): 0.017 Peak Height (A): 0.026
Background Pk Area (A-s): 0.171 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.1

Mean Conc (ug/L): -0.2 SD: 0.20 RSD(%): 81.29

Auto-zero performed.

Se ID: S5 Seq. No.: 00002 A/S Pos.: 1 Date: 12/10/91

uL dispensed: 30 from 1
Replicate 1 Time: 23:32
Peak Area (A-s): 0.037 Peak Height (A): 0.061
Background Pk Area (A-s): 0.164 Background Pk Height (A): 0.064
Blank Corrected Pk Area (A-s): 0.021
Concentration (ug/L): 4.0

uL dispensed: 30 from 1
Replicate 2 (Peak Stored) Time: 23:34
Peak Area (A-s): 0.039 Peak Height (A): 0.064
Background Pk Area (A-s): 0.156 Background Pk Height (A): 0.063
Blank Corrected Pk Area (A-s): 0.023
Concentration (ug/L): 4.4

Mean Conc (ug/L): 4.2 SD: 0.34 RSD(%): 8.10

Standard number 1 applied. [5.0]
Correlation coefficient: 1.00000 Slope: 0.0044

Se ID: S10 Seq. No.: 00003 A/S Pos.: 2 Date: 12/10/91

uL dispensed: 30 from 2
Replicate 1 Time: 23:36
Peak Area (A-s): 0.058 Peak Height (A): 0.100
Background Pk Area (A-s): 0.157 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 9.6

5800, 5806 Veobrien 1, 2 8BD

Pg 2/16

uL dispensed: 30 from 2
Replicate 2 (Peak Stored) Time: 23:39
Peak Area (A-s): 0.058 Peak Height (A): 0.101
Background Pk Area (A-s): 0.158 Background Pk Height (A): 0.061
—ank Corrected Pk Area (A-s): 0.042
Concentration (ug/L): 9.6

Mean Conc (ug/L): 9.6 SD: 0.04 RSD(%): 0.38

Standard number 2 applied. [10.0]
Correlation coefficient: 0.99877 Slope: 0.0042

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Se ID: S20 Seq. No.: 00004 A/S Pos.: 3 Date: 12/10/91

uL dispensed: 30 from 3

Replicate 1 Time: 23:41
Peak Area (A-s): 0.108 Peak Height (A): 0.188
Background Pk Area (A-s): 0.165 Background Pk Height (A): 0.073
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 21.6

uL dispensed: 30 from 3
Replicate 2 (Peak Stored) Time: 23:44
Peak Area (A-s): 0.108 Peak Height (A): 0.194
Background Pk Area (A-s): 0.167 Background Pk Height (A): 0.072
Blank Corrected Pk Area (A-s): 0.092
Concentration (ug/L): 21.6

' an Conc (ug/L): 21.6 SD: 0.02 RSD(%): 0.10

Standard number 3 applied. [20.0]
Correlation coefficient: 0.99752 Slope: 0.0045

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Se ID: S50 Seq. No.: 00005 A/S Pos.: 4 Date: 12/10/91

uL dispensed: 30 from 4
Replicate 1 Time: 23:46
Peak Area (A-s): 0.254 Peak Height (A): 0.440
Background Pk Area (A-s): 0.196 Background Pk Height (A): 0.129
Blank Corrected Pk Area (A-s): 0.237
Concentration (ug/L): 52.7

uL dispensed: 30 from 4
Replicate 2 (Peak Stored) Time: 23:49
Peak Area (A-s): 0.262 Peak Height (A): 0.456
Background Pk Area (A-s): 0.195 Background Pk Height (A): 0.130
Blank Corrected Pk Area (A-s): 0.245
Concentration (ug/L): 54.5

Mean Conc (ug/L): 53.6 SD: 1.25 RSD(%): 2.33

Standard number 4 applied. [50.0]
Correlation coefficient: 0.99894 Slope: 0.0048

~~~~~~

Se ID: ICV Seq. No.: 00006 A/S Pos.: 5 Date: 12/10/91
~~~~~~

5800, 5806 Veobrien 1, 2 88D 43/16

uL dispensed: 30 from 5
Replicate 1 Time: 23:51
Peak Area (A-s): 0.140 Peak Height (A): 0.251
Background Pk Area (A-s): 0.171 Background Pk Height (A): 0.085
Blank Corrected Pk Area (A-s): 0.124
Concentration (ug/L): 25.9

uL dispensed: 30 from 5
Replicate 2 (Peak Stored) Time: 23:54
Peak Area (A-s): 0.137 Peak Height (A): 0.243
Background Pk Area (A-s): 0.168 Background Pk Height (A): 0.086
Blank Corrected Pk Area (A-s): 0.121
Concentration (ug/L): 25.3

Mean Conc (ug/L): 25.6 SD: 0.43 RSD(%): 1.69

QC sample is within range 20.32 - 30.12

~~~~~~
Se ID: ICB Seq. No.: 00007 A/S Pos.: 6 Date: 12/10/91

uL dispensed: 30 from 6
Replicate 1 Time: 23:56
Peak Area (A-s): 0.018 Peak Height (A): 0.034
Background Pk Area (A-s): 0.139 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.4

uL dispensed: 30 from 6
Replicate 2 (Peak Stored) Time: 23:59
Peak Area (A-s): 0.017 Peak Height (A): 0.031
Background Pk Area (A-s): 0.134 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.3

Mean Conc (ug/L): 0.4 SD: 0.10 RSD(%): 27.79

QC sample is within range -5 - 5

~~~~~~
Se ID: CCV Seq. No.: 00008 A/S Pos.: 7 Date: 12/10/91

uL dispensed: 30 from 7
Replicate 1 Time: 00:01
Peak Area (A-s): 0.132 Peak Height (A): 0.249
Background Pk Area (A-s): 0.158 Background Pk Height (A): 0.084
Blank Corrected Pk Area (A-s): 0.116
Concentration (ug/L): 24.2

uL dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 00:03
Peak Area (A-s): 0.135 Peak Height (A): 0.250
Background Pk Area (A-s): 0.155 Background Pk Height (A): 0.083
Blank Corrected Pk Area (A-s): 0.119
Concentration (ug/L): 25.0

Mean Conc (ug/L): 24.6 SD: 0.52 RSD(%): 2.11

QC sample is within range 20.0 - 30.0

5800, 5806 Veobrien 1,2 BBD

Se ID: CCB Seq. No.: 00009 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 30 from 8

Replicate 1 Time: 00:06
Peak Area (A-s): 0.018 Peak Height (A): 0.033
Background Pk Area (A-s): 0.151 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.4

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 00:08
Peak Area (A-s): 0.017 Peak Height (A): 0.031
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.1

Mean Conc (ug/L): 0.2 SD: 0.18 RSD(%): 73.19

QC sample is within range -5 - 5

Se ID: CRA Seq. No.: 00010 A/S Pos.: 9 Date: 12/11/91

uL dispensed: 30 from 9

Replicate 1 Time: 00:11
Peak Area (A-s): 0.038 Peak Height (A): 0.069
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): 0.022
Concentration (ug/L): 4.6

uL dispensed: 30 from 9
Replicate 2 (Peak Stored) Time: 00:13
Peak Area (A-s): 0.039 Peak Height (A): 0.070
Background Pk Area (A-s): 0.143 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.023
Concentration (ug/L): 4.8

Mean Conc (ug/L): 4.7 SD: 0.16 RSD(%): 3.37

QC sample is within range

Se ID: 66317S Seq. No.: 00011 A/S Pos.: 10 Date: 12/11/91

uL dispensed: 30 from 10

Replicate 1 Time: 00:15
Peak Area (A-s): 0.026 Peak Height (A): 0.045
Background Pk Area (A-s): 0.610 Background Pk Height (A): 0.223
Blank Corrected Pk Area (A-s): 0.010
Concentration (ug/L): 2.2

uL dispensed: 30 from 10
Replicate 2 (Peak Stored) Time: 00:18
Peak Area (A-s): 0.030 Peak Height (A): 0.042
Background Pk Area (A-s): 0.674 Background Pk Height (A): 0.238
Blank Corrected Pk Area (A-s): 0.014
Concentration (ug/L): 2.9

5800, 5806 Veobrien 1,2 8820 Pg 5/16

Mean Conc (ug/L): 2.5 SD: 0.54 12.5% N RSD(%): 21.28

Se ID: 66192 Seq. No.: 00012 A/S Pos.: 11 Date: 12/11/91

uL dispensed: 30 from 11

Replicate 1 Time: 00:20
Peak Area (A-s): 0.005 Peak Height (A): 0.009
Background Pk Area (A-s): 0.519 Background Pk Height (A): 0.184
Blank Corrected Pk Area (A-s): -0.011
Concentration (ug/L): -2.4

uL dispensed: 30 from 11

Replicate 2 (Peak Stored) Time: 00:22
Peak Area (A-s): 0.005 Peak Height (A): 0.009
Background Pk Area (A-s): 0.477 Background Pk Height (A): 0.176
Blank Corrected Pk Area (A-s): -0.012
Concentration (ug/L): -2.4

Mean Conc (ug/L): ~~-2.4~~ PBD SD: 0.01 RSD(%): 0.47

Rerun 10 fold

Se ID: +10 Seq. No.: 00013 A/S Pos.: 12 Date: 12/11/91

uL dispensed: 30 from 12

Replicate 1 Time: 00:25
Peak Area (A-s): 0.016 Peak Height (A): 0.030
Background Pk Area (A-s): 0.477 Background Pk Height (A): 0.176
Blank Corrected Pk Area (A-s): 0.000
Concentration (ug/L): 0.0

uL dispensed: 30 from 12

Replicate 2 (Peak Stored) Time: 00:27
Peak Area (A-s): 0.015 Peak Height (A): 0.031
Background Pk Area (A-s): 0.479 Background Pk Height (A): 0.178
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.2

Mean Conc (ug/L): -0.1 SD: 0.18 RSD(%): 203.67

Se ID: 66193 Seq. No.: 00014 A/S Pos.: 13 Date: 12/11/91

uL dispensed: 30 from 13

Replicate 1 Time: 00:30
Peak Area (A-s): 0.000 Peak Height (A): 0.014
Background Pk Area (A-s): 1.738 Background Pk Height (A): 0.744
Blank Corrected Pk Area (A-s): -0.016
Concentration (ug/L): -3.3

uL dispensed: 30 from 13

Replicate 2 (Peak Stored) Time: 00:32
Peak Area (A-s): 0.002 Peak Height (A): 0.011
Background Pk Area (A-s): 1.847 Background Pk Height (A): 0.736
Blank Corrected Pk Area (A-s): -0.014
Concentration (ug/L): -2.9

Mean Conc (ug/L): ~~-3.1~~ PBD SD: 0.26 RSD(%): 8.51

Rerun 10 fold

5800, 5806 Veobrion 1,2 8BD

Pg 6/16

Se ID: +10 Seq. No.: 00015 A/S Pos.: 14 Date: 12/11/91

uL dispensed: 30 from 14

Replicate 1 Time: 00:34
Peak Area (A-s): 0.006 Peak Height (A): 0.027
Background Pk Area (A-s): 1.827 Background Pk Height (A): 0.753
Blank Corrected Pk Area (A-s): -0.010
Concentration (ug/L): -2.1

uL dispensed: 30 from 14

Replicate 2 (Peak Stored) Time: 00:37
Peak Area (A-s): 0.008 Peak Height (A): 0.030
Background Pk Area (A-s): 1.895 Background Pk Height (A): 0.770
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.7

Mean Conc (ug/L): -1.9 SD: 0.29 RSD(%): 14.97

Se ID: 66315 Seq. No.: 00016 A/S Pos.: 15 Date: 12/11/91

uL dispensed: 30 from 15

Replicate 1 Time: 00:39
Peak Area (A-s): 0.010 Peak Height (A): 0.016
Background Pk Area (A-s): 1.006 Background Pk Height (A): 0.345
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.3

dispensed: 30 from 15

Replicate 2 (Peak Stored) Time: 00:42
Peak Area (A-s): 0.008 Peak Height (A): 0.017
Background Pk Area (A-s): 0.944 Background Pk Height (A): 0.336
Blank Corrected Pk Area (A-s): -0.008
Concentration (ug/L): -1.6

Mean Conc (ug/L): ~~-1.4~~ PBD SD: 0.25 RSD(%): 17.27

Rerun 10 fold

Se ID: +10 Seq. No.: 00017 A/S Pos.: 16 Date: 12/11/91

uL dispensed: 30 from 16

Replicate 1 Time: 00:44
Peak Area (A-s): 0.017 Peak Height (A): 0.023
Background Pk Area (A-s): 0.951 Background Pk Height (A): 0.355
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

uL dispensed: 30 from 16

Replicate 2 (Peak Stored) Time: 00:46
Peak Area (A-s): 0.015 Peak Height (A): 0.019
Background Pk Area (A-s): 0.935 Background Pk Height (A): 0.330
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.3

an Conc (ug/L): -0.0 SD: 0.36 RSD(%): 794.14

5800, 5806 Veobrien 1, 2 8BO

Se ID: 66316D Seq. No.: 00018 A/S Pos.: 17 Date: 12/11/91

uL dispensed: 30 from 17

Replicate 1 Time: 00:49
Peak Area (A-s): 0.013 Peak Height (A): 0.016
Background Pk Area (A-s): 0.350 Background Pk Height (A): 0.191
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.7

uL dispensed: 30 from 17
Replicate 2 (Peak Stored) Time: 00:51
Peak Area (A-s): 0.009 Peak Height (A): 0.016
Background Pk Area (A-s): 0.265 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.5

Mean Conc (ug/L): -1.1 SD: 0.57 RSD(%): 53.88

Se ID: +10 Seq. No.: 00019 A/S Pos.: 18 Date: 12/11/91

uL dispensed: 30 from 18

Replicate 1 Time: 00:54
Peak Area (A-s): 0.047 Peak Height (A): 0.082
Background Pk Area (A-s): 0.263 Background Pk Height (A): 0.088
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 6.5

dispensed: 30 from 18
Replicate 2 (Peak Stored) Time: 00:56
Peak Area (A-s): 0.049 Peak Height (A): 0.080
Background Pk Area (A-s): 0.263 Background Pk Height (A): 0.091
Blank Corrected Pk Area (A-s): 0.033
Concentration (ug/L): 7.0

Mean Conc (ug/L): 6.7 SD: 0.37 RSD(%): 5.56

Se ID: CCV 2 Seq. No.: 00020 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 30 from 7

Replicate 1 Time: 00:58
Peak Area (A-s): 0.132 Peak Height (A): 0.227
Background Pk Area (A-s): 0.174 Background Pk Height (A): 0.080
Blank Corrected Pk Area (A-s): 0.116
Concentration (ug/L): 24.4

uL dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 01:01
Peak Area (A-s): 0.137 Peak Height (A): 0.238
Background Pk Area (A-s): 0.165 Background Pk Height (A): 0.082
Blank Corrected Pk Area (A-s): 0.121
Concentration (ug/L): 25.4

an Conc (ug/L): 24.9 SD: 0.74 RSD(%): 2.98

QC sample is within range 20.0 - 30.0

5800, 5806 Veobrien 1, 2 PBQ

Pg 8/16

Se ID: CCB2 Seq. No.: 00021 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 30 from 8

Replicate 1
Peak Area (A-s): 0.019
Background Pk Area (A-s): 0.151
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.5

Time: 01:03
Peak Height (A): 0.029
Background Pk Height (A): 0.059

uL dispensed: 30 from 8

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.017
Background Pk Area (A-s): 0.149
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.1

Time: 01:06
Peak Height (A): 0.028
Background Pk Height (A): 0.059

Mean Conc (ug/L): 0.3 SD: 0.30 RSD(%): 90.32

QC sample is within range -5 - 5

Se ID: 66317 Seq. No.: 00022 A/S Pos.: 19 Date: 12/11/91

uL dispensed: 30 from 19

Replicate 1
Peak Area (A-s): 0.010
Background Pk Area (A-s): 1.558
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.3

Time: 01:08
Peak Height (A): 0.020
Background Pk Height (A): 0.732

uL dispensed: 30 from 19

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.011
Background Pk Area (A-s): 1.691
Blank Corrected Pk Area (A-s): -0.005
Concentration (ug/L): -1.0

Time: 01:10
Peak Height (A): 0.017
Background Pk Height (A): 0.722

PBQ

Mean Conc (ug/L): -1.1 SD: 0.22 RSD(%): 19.24

Lower 10 fold

Se ID: +10 Seq. No.: 00023 A/S Pos.: 20 Date: 12/11/91

uL dispensed: 30 from 20

Replicate 1
Peak Area (A-s): 0.018
Background Pk Area (A-s): 1.705
Blank Corrected Pk Area (A-s): 0.002
Concentration (ug/L): 0.3

Time: 01:13
Peak Height (A): 0.023
Background Pk Height (A): 0.747

uL dispensed: 30 from 20

Replicate 2 (Peak Stored)
Peak Area (A-s): 0.015
Background Pk Area (A-s): 1.732
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.2

Time: 01:15
Peak Height (A): 0.022
Background Pk Height (A): 0.745

Mean Conc (ug/L): 0.1 SD: 0.39 RSD(%): 625.61

5800, 5806 Veobrien 1, 2 BBD

Pg 9/16

Se ID: 66317D Seq. No.: 00024 A/S Pos.: 21 Date: 12/11/91

uL dispensed: 30 from 21

Replicate 1 Time: 01:18
Peak Area (A-s): 0.015 Peak Height (A): 0.028
Background Pk Area (A-s): 2.387 Background Pk Height (A): 1.159
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.2

uL dispensed: 30 from 21
Replicate 2 (Peak Stored) Time: 01:20
Peak Area (A-s): 0.015 Peak Height (A): 0.023
Background Pk Area (A-s): 2.322 Background Pk Height (A): 1.152
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.1

Mean Conc (ug/L): -0.1 BBD SD: 0.01 RSD(%): 8.63

Rerun 10 fold

Se ID: +10 Seq. No.: 00025 A/S Pos.: 22 Date: 12/11/91

uL dispensed: 30 from 22
Replicate 1 Time: 01:22
Peak Area (A-s): 0.021 Peak Height (A): 0.030
Background Pk Area (A-s): 2.337 Background Pk Height (A): 1.155
Blank Corrected Pk Area (A-s): 0.004
Concentration (ug/L): 0.9

dispensed: 30 from 22
Replicate 2 (Peak Stored) Time: 01:25
Peak Area (A-s): 0.017 Peak Height (A): 0.032
Background Pk Area (A-s): 1.862 Background Pk Height (A): 0.909
Blank Corrected Pk Area (A-s): 0.001
Concentration (ug/L): 0.2

Mean Conc (ug/L): 0.6 SD: 0.52 RSD(%): 90.94

Se ID: CCV 3 Seq. No.: 00026 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 30 from 7
Replicate 1 Time: 01:27
Peak Area (A-s): 0.112 Peak Height (A): 0.201
Background Pk Area (A-s): 0.341 Background Pk Height (A): 0.251
Blank Corrected Pk Area (A-s): 0.096
Concentration (ug/L): 20.1

uL dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 01:30
Peak Area (A-s): 0.127 Peak Height (A): 0.217
Background Pk Area (A-s): 0.216 Background Pk Height (A): 0.090
Blank Corrected Pk Area (A-s): 0.111
Concentration (ug/L): 23.2

Mean Conc (ug/L): 21.7 SD: 2.23 RSD(%): 10.28

QC sample is within range 20.0 - 30.0

5800, 5806 Veobrien 1, 2 BBD

Pg 10/16

Se ID: CCB3 Seq. No.: 00027 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 30 from 8

Replicate 1 Time: 01:32
Peak Area (A-s): 0.022 Peak Height (A): 0.033
Background Pk Area (A-s): 0.172 Background Pk Height (A): 0.062
Blank Corrected Pk Area (A-s): 0.006
Concentration (ug/L): 1.2

uL dispensed: 30 from 8

Replicate 2 (Peak Stored) Time: 01:35
Peak Area (A-s): 0.020 Peak Height (A): 0.029
Background Pk Area (A-s): 0.160 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): 0.003
Concentration (ug/L): 0.7

Mean Conc (ug/L): 1.0 SD: 0.33 RSD(%): 33.99

QC sample is within range -5 - 5

5800, 5806 Veobrien 1, 2 SBD

Pg 11/16

Se ID: ICV Seq. No.: 00028 A/S Pos.: 5 Date: 12/11/91

uL dispensed: 30 from 5 sequence terminated before injection SBD

Se ID: CCV4 Seq. No.: 00029 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 30 from 7
Replicate 1 Time: 01:59
Peak Area (A-s): 0.124 Peak Height (A): 0.194
Background Pk Area (A-s): 0.202 Background Pk Height (A): 0.087
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 22.6

uL dispensed: 30 from 7
Replicate 2 (Peak Stored) Time: 02:02
Peak Area (A-s): 0.124 Peak Height (A): 0.195
Background Pk Area (A-s): 0.172 Background Pk Height (A): 0.076
Blank Corrected Pk Area (A-s): 0.108
Concentration (ug/L): 22.7

Mean Conc (ug/L): 22.6 SD: 0.10 RSD(%): 0.45

Se ID: CCB 4 Seq. No.: 00030 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 30 from 8
Replicate 1 Time: 02:04
Peak Area (A-s): 0.014 Peak Height (A): 0.018
Background Pk Area (A-s): 0.145 Background Pk Height (A): 0.056
Blank Corrected Pk Area (A-s): -0.002
Concentration (ug/L): -0.5

uL dispensed: 30 from 8
Replicate 2 (Peak Stored) Time: 02:07
Peak Area (A-s): 0.011 Peak Height (A): 0.019
Background Pk Area (A-s): 0.142 Background Pk Height (A): 0.055
Blank Corrected Pk Area (A-s): -0.005

5800, 5806 Veobrien 1,2 RBC

Pg 12/16

Concentration (ug/L): -1.0

Mean Conc (ug/L): -0.7 SD: 0.33 RSD(%): 44.02

Se ID: 66192 Seq. No.: 00031 A/S Pos.: 10 Date: 12/11/91

uL dispensed: 30 from 10
Replicate 1 Time: 02:09
Peak Area (A-s): 0.008 Peak Height (A): 0.014
Background Pk Area (A-s): 0.155 Background Pk Height (A): 0.059
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.8

uL dispensed: 30 from 10
Replicate 2 (Peak Stored) Time: 02:11
Peak Area (A-s): 0.009 Peak Height (A): 0.015
Background Pk Area (A-s): 0.156 Background Pk Height (A): 0.058
Blank Corrected Pk Area (A-s): -0.007
Concentration (ug/L): -1.4 accept

Mean Conc (ug/L): ~~-1.6~~ SD: 0.24 W RSD(%): 14.59

Se ID: +10 Seq. No.: 00032 A/S Pos.: 11 Date: 12/11/91

uL dispensed: 30 from 11
Replicate 1 Time: 02:14
Peak Area (A-s): 0.045 Peak Height (A): 0.081
Background Pk Area (A-s): 0.166 Background Pk Height (A): 0.060
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 6.0

uL dispensed: 30 from 11
Replicate 2 (Peak Stored) Time: 02:16
Peak Area (A-s): 0.045 Peak Height (A): 0.084
Background Pk Area (A-s): 0.166 Background Pk Height (A): 0.061
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 6.1

Mean Conc (ug/L): 6.0 SD: 0.06 RSD(%): 0.95

Se ID: 66193 Seq. No.: 00033 A/S Pos.: 12 Date: 12/11/91

uL dispensed: 30 from 12
Replicate 1 Time: 02:19
Peak Area (A-s): 0.008 Peak Height (A): 0.018
Background Pk Area (A-s): 0.320 Background Pk Height (A): 0.128
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.8

uL dispensed: 30 from 12
Replicate 2 (Peak Stored) Time: 02:21
Peak Area (A-s): 0.007 Peak Height (A): 0.015
Background Pk Area (A-s): 0.368 Background Pk Height (A): 0.134
Blank Corrected Pk Area (A-s): -0.009
Concentration (ug/L): -1.9

5800, 5806 Veobrien 1,2 [illegible] Pg 13/16

Mean Conc (ug/L): -1.8 SD: 0.05 W RSD(%): 2.91

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Se ID: +10 Seq. No.: 00034 A/S Pos.: 13 Date: 12/11/91

uL dispensed: 30 from 13
Replicate 1 Time: 02:23
Peak Area (A-s): 0.035 Peak Height (A): 0.073
Background Pk Area (A-s): 0.375 Background Pk Height (A): 0.141
Blank Corrected Pk Area (A-s): 0.019
Concentration (ug/L): 4.0

uL dispensed: 30 from 13
Replicate 2 (Peak Stored) Time: 02:26
Peak Area (A-s): 0.038 Peak Height (A): 0.070
Background Pk Area (A-s): 0.378 Background Pk Height (A): 0.136
Blank Corrected Pk Area (A-s): 0.022
Concentration (ug/L): 4.6

Mean Conc (ug/L): 4.3 SD: 0.37 RSD(%): 8.67

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Se ID: 66315 Seq. No.: 00035 A/S Pos.: 14 Date: 12/11/91

uL dispensed: 30 from 14
Replicate 1 Time: 02:28
Peak Area (A-s): 0.012 Peak Height (A): 0.023
Background Pk Area (A-s): 0.242 Background Pk Height (A): 0.135
Blank Corrected Pk Area (A-s): -0.004
ncentration (ug/L): -0.9

uL dispensed: 30 from 14
Replicate 2 (Peak Stored) Time: 02:31
Peak Area (A-s): 0.012 Peak Height (A): 0.022
Background Pk Area (A-s): 0.205 Background Pk Height (A): 0.070
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -0.9

Mean Conc (ug/L): -0.9 SD: 0.03 W RSD(%): 3.88

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Se ID: +10 Seq. No.: 00036 A/S Pos.: 15 Date: 12/11/91

uL dispensed: 30 from 15
Replicate 1 Time: 02:33
Peak Area (A-s): 0.047 Peak Height (A): 0.087
Background Pk Area (A-s): 0.214 Background Pk Height (A): 0.074
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 6.6

uL dispensed: 30 from 15
Replicate 2 (Peak Stored) Time: 02:35
Peak Area (A-s): 0.050 Peak Height (A): 0.091
Background Pk Area (A-s): 0.210 Background Pk Height (A): 0.071
Blank Corrected Pk Area (A-s): 0.034
ncentration (ug/L): 7.1

Mean Conc (ug/L): 6.8 SD: 0.39 RSD(%): 5.70
~~~~~~

5800, 5806 Veobrien 1,2 8BD Pg 14/16

Se ID: 66317 Seq. No.: 00037 A/S Pos.: 16 Date: 12/11/91

uL dispensed: 30 from 16

plicate 1 Time: 02:38
Peak Area (A-s): 0.013 Peak Height (A): 0.022
Background Pk Area (A-s): 0.303 Background Pk Height (A): 0.112
Blank Corrected Pk Area (A-s): -0.003
Concentration (ug/L): -0.6

uL dispensed: 30 from 16
Replicate 2 (Peak Stored) Time: 02:40
Peak Area (A-s): 0.012 Peak Height (A): 0.021
Background Pk Area (A-s): 0.320 Background Pk Height (A): 0.113
Blank Corrected Pk Area (A-s): -0.004
Concentration (ug/L): -0.8

Mean Conc (ug/L): -0.7 SD: 0.10 RSD(%): 15.04

W

Se ID: +10 Seq. No.: 00038 A/S Pos.: 17 Date: 12/11/91

uL dispensed: 30 from 17

Replicate 1 Time: 02:43
Peak Area (A-s): 0.045 Peak Height (A): 0.075
Background Pk Area (A-s): 0.337 Background Pk Height (A): 0.116
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 6.1

dispensed: 30 from 17
Replicate 2 (Peak Stored) Time: 02:45
Peak Area (A-s): 0.045 Peak Height (A): 0.080
Background Pk Area (A-s): 0.340 Background Pk Height (A): 0.116
Blank Corrected Pk Area (A-s): 0.028
Concentration (ug/L): 6.0

Mean Conc (ug/L): 6.0 SD: 0.07 RSD(%): 1.23

Se ID: 66317D Seq. No.: 00039 A/S Pos.: 18 Date: 12/11/91

uL dispensed: 30 from 18

Replicate 1 Time: 02:47
Peak Area (A-s): 0.016 Peak Height (A): 0.027
Background Pk Area (A-s): 0.434 Background Pk Height (A): 0.153
Blank Corrected Pk Area (A-s): -0.001
Concentration (ug/L): -0.1

uL dispensed: 30 from 18
Replicate 2 (Peak Stored) Time: 02:50
Peak Area (A-s): 0.016 Peak Height (A): 0.025
Background Pk Area (A-s): 0.439 Background Pk Height (A): 0.155
Blank Corrected Pk Area (A-s): -0.000
Concentration (ug/L): -0.0

an Conc (ug/L): -0.1 SD: 0.07 RSD(%): 114.48

W

5800, 5806 Veobrien 1, 2 PBN

Pg 15/16

Se ID: +10 Seq. No.: 00040 A/S Pos.: 19 Date: 12/11/91

uL dispensed: 30 from 19

Replicate 1 Time: 02:52
Peak Area (A-s): 0.045 Peak Height (A): 0.070
Background Pk Area (A-s): 0.442 Background Pk Height (A): 0.151
Blank Corrected Pk Area (A-s): 0.029
Concentration (ug/L): 6.1

uL dispensed: 30 from 19

Replicate 2 (Peak Stored) Time: 02:55
Peak Area (A-s): 0.047 Peak Height (A): 0.075
Background Pk Area (A-s): 0.451 Background Pk Height (A): 0.155
Blank Corrected Pk Area (A-s): 0.031
Concentration (ug/L): 6.5

Mean Conc (ug/L): 6.3 SD: 0.27 RSD(%): 4.34

Se ID: CCV 5 Seq. No.: 00041 A/S Pos.: 7 Date: 12/11/91

uL dispensed: 30 from 7

Replicate 1 Time: 02:57
Peak Area (A-s): 0.122 Peak Height (A): 0.201
Background Pk Area (A-s): 0.207 Background Pk Height (A): 0.161
Blank Corrected Pk Area (A-s): 0.106
Concentration (ug/L): 22.2

dispensed: 30 from 7

Replicate 2 (Peak Stored) Time: 03:00
Peak Area (A-s): 0.128 Peak Height (A): 0.212
Background Pk Area (A-s): 0.163 Background Pk Height (A): 0.078
Blank Corrected Pk Area (A-s): 0.112
Concentration (ug/L): 23.4

Mean Conc (ug/L): 22.8 SD: 0.86 RSD(%): 3.78

QC sample is within range 20.0 - 30.0

Se ID: CCB 5 Seq. No.: 00042 A/S Pos.: 8 Date: 12/11/91

uL dispensed: 30 from 8

Replicate 1 Time: 03:02
Peak Area (A-s): 0.011 Peak Height (A): 0.016
Background Pk Area (A-s): 0.134 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.2

uL dispensed: 30 from 8

Replicate 2 (Peak Stored) Time: 03:04
Peak Area (A-s): 0.010 Peak Height (A): 0.019
Background Pk Area (A-s): 0.133 Background Pk Height (A): 0.053
Blank Corrected Pk Area (A-s): -0.006
Concentration (ug/L): -1.3

Mean Conc (ug/L): -1.2 SD: 0.13 RSD(%): 10.09

5800 / 5806 Veobrien 1, 2 8BD

Pg 16/16

QC sample is within range -5 - 5

VERSAR LABORATORIES INC.
Worklist # 7222

11-DEC-91 12:55 AM

Analyst: PBD

Comments:

Date Analyzed: 10-DEC-91

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	P2M	TL
5806	VEOBRIEN	2	HOH	P2M	TL

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	4K	EPA	100.7
CCV :		NIST	25
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	10-DEC-91 07:30		

INSTRUMENT # 6

Light Source:	EDL	Gas Flow:	0
Current/Power:	7	Matrix Modifiers:	Y
Slit:	0.7	Signal:	PK AREA
Wavelength:	276.3	Tube:	LVP
Background Corr.:	BD	Replicates:	2
IDL:	1	CRDL:	10
Spike:	100	Integration Time:	5 SEC

Correlation: .9998 Y-Intercept: -.61 Slope: 5.89 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	5800	S0	1		0	19:20	2		1				
2	5800	S10	1		10	19:25	56	9.61	1		96.1	CRA	
3	5800	S20	1		20	19:30	116		1				
4	5800	S50	1		50	19:35	295		1				
5	5800	ICV	1			19:40	143	24.37	4	100.7	96.8		
6	5800	ICB	1			19:45	0	0.10	1				
7	5800	CCV1	1			19:50	157	26.75	1	25	107.0		
8	5800	CCB1	1			19:55	2	0.44	1				
9	5800	CRA	1			20:00	69	11.81	1				
10	5800	PBW	1			20:05	1	0.27	1				
11	5800	+20	1			20:10	131	22.33	1	20	111.7		
12	5800	LCSM	1			20:15	140	23.86	5	100	119.3		
13	5800	66190	1	WB-1(S)-F		20:20	-1	-0.07	1			W	
14	5800	+20	1			20:25	61	10.46	1	20	52.3		
15	5800	66191	1	WB-3(S)-F		20:30	0	0.10	1			W	
16	5800	+20	1			20:35	51	8.76	1	20	43.8		
17	5800	66192	1	WB-1(S)		20:40	-1	-0.07	1			W	
18	5800	+20	1			20:45	93	15.89	1	20	79.4		
19	5800	CCV2	2			20:50	171	29.12	1	25	116.5		
20	5800	CCB2	2			20:55	2	0.44	1				

Worklist # 7222

Analyst: PBD

Comments:

Date Analyzed: 10-DEC-91

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
21	5800	66193	1	WB-3(S)		21:00	127	~~21.66~~	1			Rerun	Rerun NO MSA
22	5800	+20	1			21:05	132	22.50	1	20	4.2		
23	5806	66314	1	SWB-1-F		21:10	64	~~10.96~~	1			Rerun	
24	5806	+20	1			21:15	64	10.96	1	20	0.0		
25	5806	66315	1	SWB-1		21:20	105	~~17.92~~	1			Rerun	
26	5806	+20	1			21:25	104	17.75	1	20	-0.8		
27	5806	66316	1	SWB-2-F		21:30	57	~~9.78~~	1			Rerun	
28	5806	+20	1			21:35	60	10.29	1	20	2.5		
29	5806	66317	1	SWB-2		21:40	145	~~24.71~~	1			Rerun	
30	5806	+20	1			21:45	142	24.20	1	20	-2.5		PBD
31	5806	CCV3	3			21:50	166	28.27	1	25	113.1		
32	5806	CCB3	3			21:55	2	0.44	1				
33	5800	66193	2	WB-3(S)		22:00	9	1.63	1			W	
34	5800	+20	2			22:05	132	22.50	1	20	104.4		
35	5806	66314	2	SWB-1-F		22:10	0	0.10	1			W	
36	5806	+20	2			22:15	83	14.19	1	20	70.9		
37	5806	66315	2	SWB-1		22:20	13	2.31	1			W	
38	5806	+20	2			22:25	129	21.99	1	20	98.4		
39	5806	66316	2	SWB-2-F		22:30	1	0.27	1			W	
40	5806	+20	2			22:35	76	13.00	1	20	65.0		
41	5806	66317	2	SWB-2		22:40	38	6.55	1			W	
42	5806	+20	2			22:45	157	26.75	1	20	101.0		
43	5806	CCV4	4			22:50	173	29.46	1	25	117.8		
44	5806	CCB4	4			22:55	1	0.27	1				

5800, 5806 Veobrien-1, 2 WL ID # 7222 12-10-91 BBD Pg 3/4

	-0.001	
	-0.003	
0	-0.002	AV
	70.71	CV
	0.000	AZ
	0.002	
	0.003	
1	0.002	AV
	28.28	CV
	0.057	
	0.054	
2	0.056	AV
	3.82	CV
	0.113	
	0.120	
3	0.116	AV
	4.25	CV
	0.292	
	0.299	
4	0.295	AV
	1.68	CV
	0.141	
	0.145	
5	0.143	AV
	1.98	CV
	-0.001	
	0.001	
6	0.000	AV
	05	ER
	0.155	
	0.159	
7	0.157	AV
	1.80	CV
	0.002	
	0.002	
8	0.002	AV
	0.00	CV
	0.069	
	0.070	
9	0.069	AV
	1.02	CV
	-0.001	
	0.003	
10	0.001	AV
	05	ER
	0.131	
	0.130	
11	0.131	AV
	0.54	CV
	0.137	
	0.142	
12	0.140	AV
	2.53	CV
	-0.002	
	0.000	
13	-0.001	AV

	0.062	
	0.061	
14	0.061	AV
	1.15	CV
	-0.001	
	0.001	
15	0.000	AV
	05	ER
	0.050	
	0.051	
16	0.051	AV
	1.40	CV
	-0.001	
	-0.001	
17	-0.001	AV
	0.00	CV
	0.093	
	0.093	
18	0.093	AV
	0.00	CV
	0.170	
	0.171	
19	0.171	AV
	0.42	CV
	0.001	
	0.003	
20	0.002	AV
	70.71	CV
	0.127	
	0.126	
21	0.127	AV
	0.56	CV
	0.131	
	0.134	
22	0.132	AV
	1.60	CV
	0.065	
	0.064	
23	0.064	AV
	1.10	CV
	0.064	
	0.063	
24	0.064	AV
	1.11	CV
	0.105	
	0.105	
25	0.105	AV
	0.00	CV
	0.104	
	0.104	
26	0.104	AV
	0.00	CV
	0.056	
	0.058	
27	0.057	AV
	2.48	CV

	0.056	
	0.061	
28	0.060	AV
	3.57	CV
	0.143	
	0.148	
29	0.145	AV
	2.43	CV
	0.143	
	0.142	
30	0.142	AV
	0.50	CV
	0.166	
	0.166	
31	0.166	AV
	0.00	CV
	0.004	
	0.001	
32	0.002	AV
	84.85	CV

5800, 5806 Veobrien-1, 2 WL IS# 7222 12-10-91 BBO Pg 4/4

	0.006	
	0.012	
33	0.009	AV
	47.14	CV
	0.132	
	0.133	
34	0.132	AV
	0.53	CV
	-0.002	
	0.003	
35	0.000	AV
	06	ER
	0.081	
	0.084	
36	0.083	AV
	2.57	CV
	0.012	
	0.013	
37	0.013	AV
	5.66	CV
	0.130	
	0.129	
38	0.129	AV
	0.55	CV
	0.001	
	0.001	
39	0.001	AV
	0.00	CV
	0.073	
	0.078	
40	0.076	AV
	4.68	CV
	0.035	
	0.041	
41	0.038	AV
	11.17	CV
	0.159	
	0.156	
42	0.157	AV
	1.35	CV
	0.168	
	0.178	
43	0.173	AV
	4.09	CV
	0.001	
	0.000	
44	0.001	AV
	05	ER

VERSAR LABORATORIES INC.
Worklist # 7673

18-DEC-91 10:01 PM

Analyst: PBD

Comments:

Date Analyzed: 18-DEC-91

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	P2M	TL
5806	VEOBRIEN	2	HOH	P2M	TL

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	4I	EPA	100.7
CCV :		NIST	25
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	

Prep. Day/Hr. : 18-DEC-91 07:30

INSTRUMENT # 6

Light Source:	EDL	Gas Flow:	0
Current/Power:	7	Matrix Modifiers:	Y *
Slit:	0.7	Signal:	PK AR
Wavelength:	276.8	Tube:	LVP
Background Corr.:	BD	Replicates:	2
IDL:	1	CRDL:	10
Spike:	100	Integration Time:	5 SEC

Correlation: .9994 Y-Intercept: 2.75 Slope: 6.05 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	5800	S0	1		0	20:20	-2		1				
2	5800	S10	1		10	20:25	69	10.95	1		109.5	CRA	
3	5800	S20	2		20	20:30	124		1				
4	5800	S50	3		50	20:35	304		1				
5	5800	ICV	1			20:40	155	25.17	4	100.7	100.0		
6	5800	ICB	1			20:45	0	-0.46	1				
7	5800	CCV1	1			20:50	141	22.85	1	25	91.4		
8	5800	CCB1	1			20:55	-2	-0.79	1				
9	5800	CRA	1			21:00	64	10.12	1				
10	5800	66190	1	WB-1(S)-F		21:05	0	-0.46	100 1				not needed
11	5806	PBW R	1			21:10	3	0.04	1				
12	5806	+20	1			21:15	120	19.38	1	20	96.9		
13	5806	66316S	1	SWB-2-F		21:20	69	10.95	5	100	54.8	N	
14	5806	66317S	1	SWB-2		21:25	98	15.74	5	100	72.2	N	
15	5806	66316D	1	SWB-2-F		21:30	0	-0.46	1			W	
16	5806	+20	1			21:35	92	14.75	1	20	73.8		
17	5806	66317D	2	SWB-2		21:40	40	6.16	1				
18	5806	+20	1			21:45	158	25.66	1	20	97.5		
19	5806	CCV2	2			21:50	147	23.84	1	25	95.4		
20	5806	CCB2	2			21:55	1	-0.29	1				

00239

Pg 2/2

5800, 5806 Veobrien 1, 2 W. ID # 7673 12-18-91 DBD

	-0.002	
	-0.002	
0	-0.002	AV
	0.00	CV
	0.000	AZ
	-0.003	
	-0.002	
1	-0.002	AV
	28.28	CV
	0.069	
	0.069	
2	0.069	AV
	0.00	CV
	0.123	
	0.125	
3	0.124	AV
	1.14	CV
	0.302	
	0.306	
4	0.304	AV
	0.93	CV
	0.153	
	0.157	
5	0.155	AV
	1.83	CV
	-0.002	
	0.001	
6	-0.000	AV
	06	ER
	0.141	
	0.141	
7	0.141	AV
	0.00	CV
	-0.001	
	-0.002	
8	-0.002	AV
	47.14	CV
	0.066	
	0.062	
9	0.064	AV
	4.42	CV
	0.000	
	-0.000	
10	0.000	AV
	06	ER

5800, 5806 Veobrien 1, 2 W. ID # 7673 12-18-91 DBD

	0.006	
	-0.001	
11	0.003	AV
	06	ER
	0.123	
	0.117	
12	0.120	AV
	3.54	CV
	0.066	
	0.073	
13	0.069	AV
	7.12	CV
	0.095	
	0.101	
14	0.098	AV
	4.33	CV
	0.000	
	0.001	
15	0.000	AV
	06	ER
	0.090	
	0.094	
16	0.092	AV
	3.07	CV
	0.038	
	0.043	
17	0.040	AV
	8.73	CV
	0.159	
	0.158	
18	0.158	AV
	0.45	CV
	0.149	
	0.145	
19	0.147	AV
	1.92	CV
	0.001	
	0.002	
20	0.001	AV
	47.14	CV

VERSAR LABORATORIES INC.
Worklist # 6607

25-NOV-91 08:34 PM

Analyst: EFS

Comments:

Date Analyzed: 21-NOV-91

Control #	Code	Batch	Matrix	Analysis Code	Test
5759	YEC FORD	1	HOH	NCLP	HG
5795	CIBA DDA	3	HOH	3CLP	HG
5800	VEOBRIEN	1	HOH	P2M	HG
5806	VEOBRIEN	2	HOH	P2M	HG
5818	PRC ZCA	2	HOH	HGW	HG
5821	LTTD	1	HOH	HGW	HG

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	5E	EPA	5
CCV :		NIST	5
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	21-NOV-91 17:00		

INSTRUMENT # 12

Light Source:	HCL	Gas Flow:	1
Current/Power:	7mA	Matrix Modifiers:	N
Slit:	0.7	Signal:	PK HT
Wavelength:	253.7	Tube:	
Background Corr.:		Replicates:	1
IDL:	.2	CRDL:	.2
Spike:	1	Integration Time:	CONT

Correlation: .9997 Y-Intercept: 1.93 Slope: 17.45 Units: ug/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	5806	S0	1		0	22:50	1		1				
2	5806	S.5	1		.5	22:52	10	0.46	1		92.0	CRA	
3	5806	S2	2		2	22:54	37		1				
4	5806	S5	3		5	22:56	92		1				
5	5806	S10	4		10	22:58	175		1				
6	5806	ICV	1			23:00	86	4.82	1	5	96.4		
7	5806	ICB	1			23:02	1	-0.05	1				
8	5806	CCV1	1			23:04	84	4.70	1	5	94.1		
9	5806	CCB1	1			23:06	1	-0.05	1				
10	5806	PBW	1			23:08	2	0.00	1				
11	5806	LCSM	1			23:10	19	0.98	1	1	97.8		
12	5806	66314	1	SWB-1-F		23:12	1	-0.05	1				
13	5806	66315	1	SWB-1		23:14	58	3.21	1				
14	5806	66316	1	SWB-2-F		23:16	2	0.00	1				
15	5806	66316D	1	SWB-2-F		23:18	2	0.00	1				
16	5806	66316S	1	SWB-2-F		23:20	17	0.86	1	1	86.4		
17	5806	66317	1	SWB-2		23:22	300	~~17.08~~	1			Dilute	
18	5806	CCV2	2			23:28	83	4.65	1	5	92.9		

00241

Worklist # 6607

Analyst: EFS

Comments:

Date Analyzed: 21-NOV-91

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
19	5806	CCB2	2			23:30	2	0.00	1				
20	5800	66190	1	WB-1(S)-F		23:32	1	-0.05	1				
21	5800	66191	1	WB-3(S)-F		23:34	2	0.00	1				
22	5800	66192	1	WB-1(S)		23:36	2	0.00	1				
23	5800	66193	1	WB-3(S)		23:38	220	~~42.50~~	1			Dilute	[illegible]
24	5800	CCV3	3			23:40	83	4.65	1	5	92.9		
25	5800	CCB3	3			23:42	1	-0.05	1				
26	5795	PBW	1			23:44	2	0.00	1				
27	5795	66124	1	FB1112		23:46	2	0.00	1				
28	5795	CCV4	4			23:48	86	4.82	1	5	96.4		
29	5795	CCB4	4			23:50	2	0.00	1				
30	5821	PBW	1			23:52	1	-0.05	1				
31	5821	LCSM	1			23:54	20	1.04	1	1	103.6		
32	5821	66795	1	AR1-01-COMP		23:56	12	0.58	1				
33	5821	CCV5	5			23:58	80	4.47	1	5	89.5		
34	5821	CCB5	5			00:00	2	0.00	1				
35	5759	PBW	1			00:02	1	-0.05	1				
36	5759	65608	1	SW-1		00:04	1	-0.05	1				
37	5759	65609	1	RB		00:06	2	0.00	1				
38	5759	CCV6	6			00:08	81	4.53	1	5	90.6		
39	5759	CCB6	6			00:10	1	-0.05	1				
40	5818	PBW	1			00:12	2	0.00	1				
41	5818	66685	1	001		00:14	6	0.23	1				
42	5818	66686	1	002		00:16	3	0.06	1				
43	5818	66687	1	003		00:18	3	0.06	1				
44	5818	66688	1	004		00:20	3	0.06	1				
45	5818	66689	1	005		00:22	2	0.00	1				
46	5818	CCV7	7			00:24	81	4.53	1	5	90.6		
47	5818	CCB7	7			00:26	2	0.00	1				

VERSAR LABORATORIES, INC.
Analytical Difficulties Log Sheet

Pg: _____

Code - #: VEOBRIEN 2

Control #: 5806

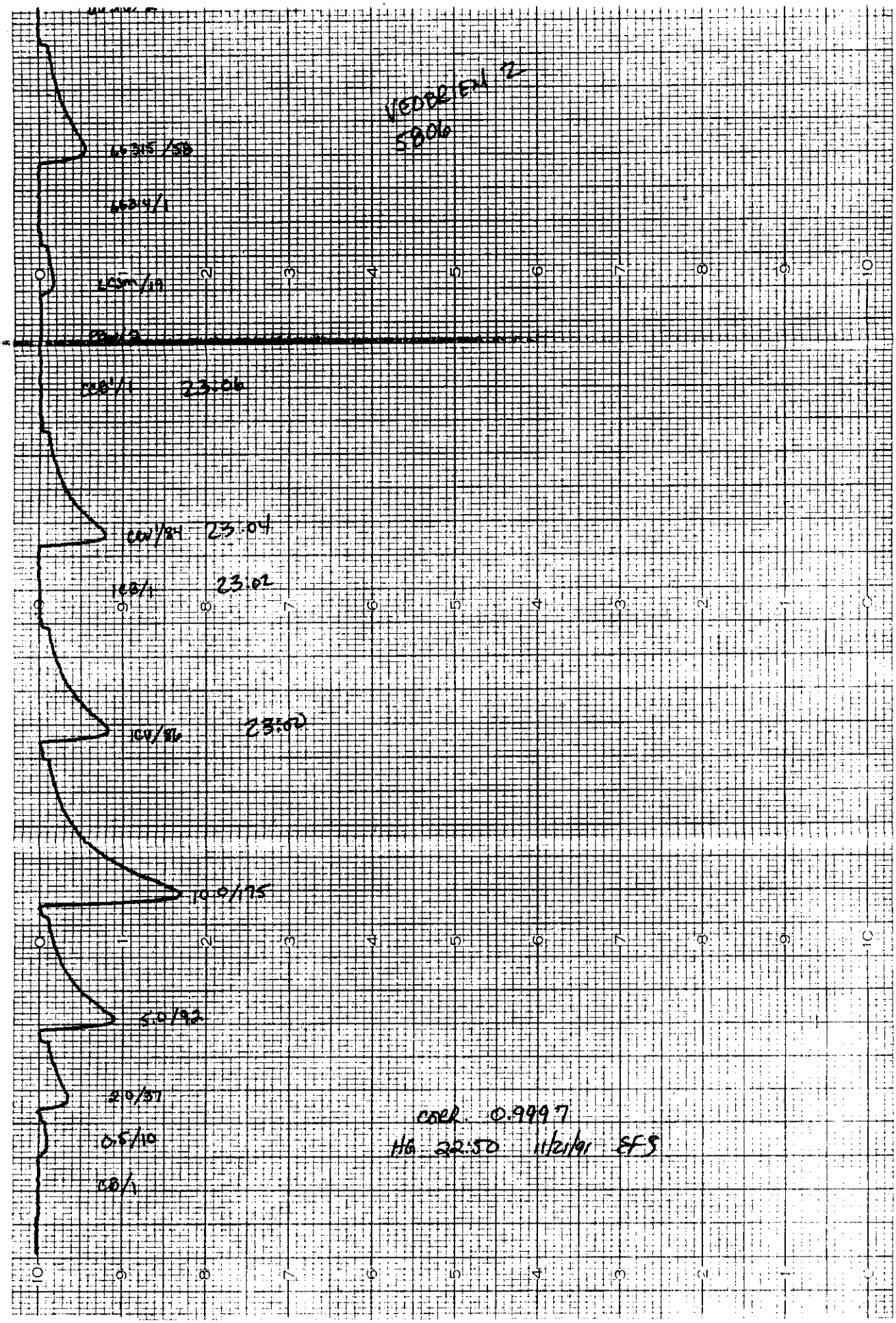
Method Code: HGWC

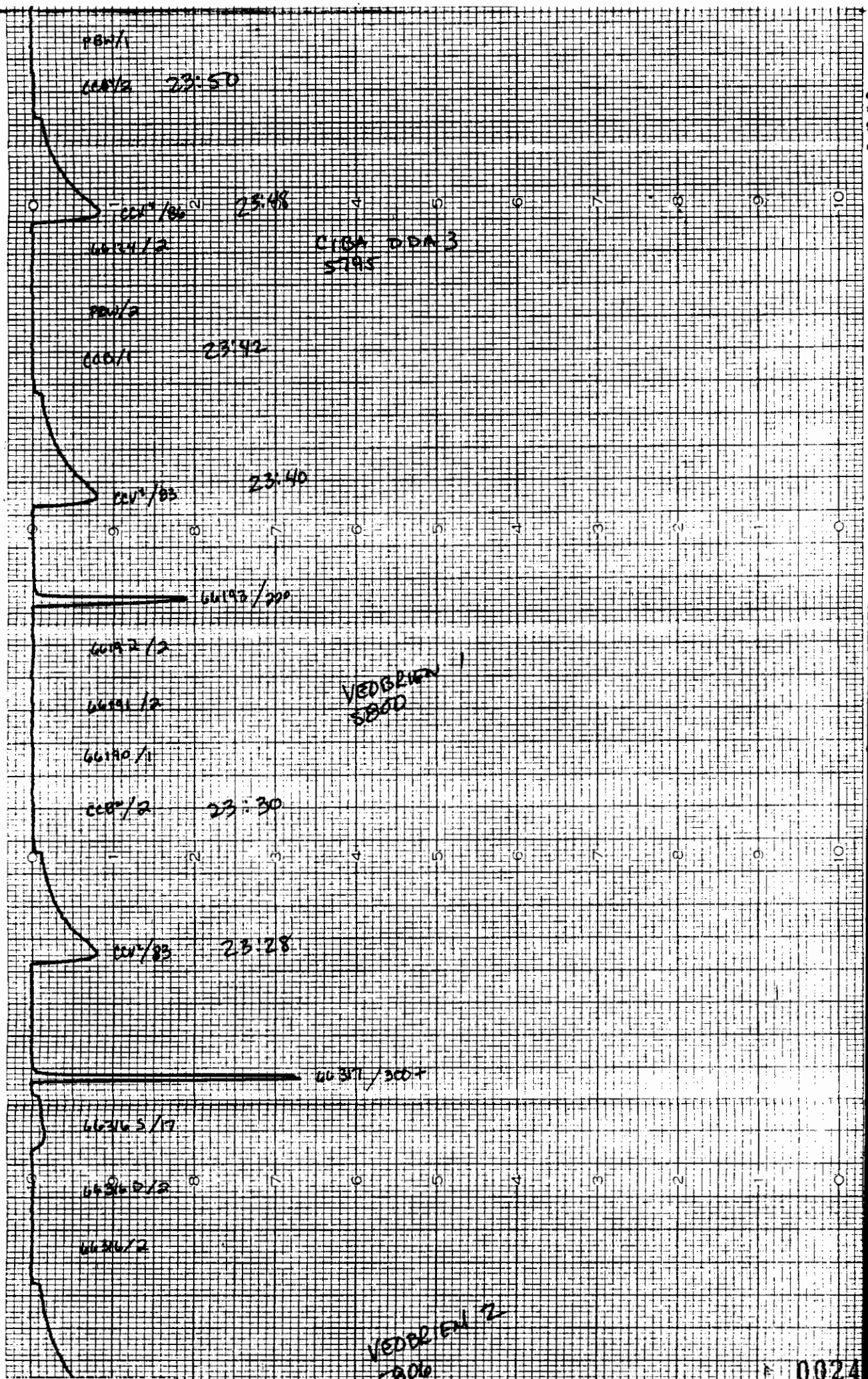
Date: 11/21/91

I HAD TO ADD 30 ml of $KMnO_4$ EXTRA TO SAMPLES 317, 317D, & 317S. THE SAMPLE TURNED TO A PURPLE COLOR, HOWEVER, ~~IT~~ MOST OF THE $KMnO_4$ SEPARATED & LAID ONTOP OF THE SAMPLE.

Analyst: EFS

Reviewer: [signature]


VEDBRIEF 2
5906
66315/50
66314/1
LCSM/19
CCB'/1
23:06
CW/84
23:04
CCB/1
23:02
CCV/86
23:00
10.0/175
5.0/92
2.0/37
0.5/10
CB/1
CORR 0.9997
HG 22:50 11/21/91 SFS
HOUSTON INSTRUMENT
CHART TYPE ECX-103
OmniScribe


23:50
23:46
CIBA TDDA 3
5795
23:42
23:40
VEDBREN
5800
23:30
23:28
VEDBREN 2
-006

00:26
00:24
PEC ZCA 2
5818
00:10
00:08
YEC FOLD 1
5759
24:00
23:58
LTD 1
5821
23:50
HOUSTON INSTRUMENT
CHART TYPE ECX-103

VERSAR LABORATORIES INC.
Worklist # 6983

03-DEC-91 03:41

Analyst: BT

Comments:

Date Analyzed: 03-~~NOV~~ Dec-91
as

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	P2M	HG
5806	VEOBRIEN	2	HOH	P2M	HG
5840	CIBA PA	8	HOH	3CLP	HG

STANDARD INFORMATION

	Name	Source	Conc.
ICV :	5E	EPA	5
CCV :		NIST	5
LCSW :		EPA	
LCSS :		EPA	
CAL. STD. :		I.V.	
Prep. Day/Hr. :	03-DEC-91 10:30		

INSTRUMENT # 12

Light Source:	HCL	Gas Flow:	1L/M
Current/Power:	6	Matrix Modifiers:	N
Slit:	0.7	Signal:	PK HT
Wavelength:	253.4	Tube:	
Background Corr.:	NONE	Replicates:	1
IDL:	.2	CRDL:	.2
Spike:	1	Integration Time:	CONT

Correlation: .9997 Y-Intercept: 2.2 Slope: 19.03 Units: UG/L

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
1	5840	S0	1		0	14:30	3		1				
2	5840	S.5	1		.5	14:32	12	0.52	1		104.0	CRA	
3	5840	S2	2		2	14:34	41		1				
4	5840	S5	3		5	14:36	94		1				
5	5840	S10	4		10	14:38	194		1				
6	5840	ICV	1			14:40	99	5.09	1	5	101.7		
7	5840	ICB	1			14:42	5	0.15	1				
8	5840	CCV1	1			14:44	99	5.09	1	5	101.7		
9	5840	CCB1	1			14:46	4	0.10	1				
10	5840	PBW	1			14:48	4	0.10	1				
11	5840	67064	1	FB1118		14:50	4	0.10	1				
12	5840	CCV2	2			14:52	100	5.14	1	5	102.8		
13	5840	CCB2	2			14:54	5 ~~4~~	0.15 ~~0.10~~	1	WTN 12-4-91			
14	5800	PBW	2			14:56	3	0.04	1				
15	5800	LCSM	2			14:58	23	1.09	1	1	109.3		
16	5800	66193	2	WB-3(S)		15:00	88	4.51	1				
17	5806	66317	2	SWB-2		15:02	167	8.66	1				WTN 12-4-91
18	5806	66317D	2	SWB-2		15:04	144	7.45	1				
19	5806	66317S	2	SWB-2		15:06	181	9.40	1	1	~~959.6~~	N	73.6
20	5806	CCV3	3			15:08	92	4.72	1	5	94.4		

00247

Worklist # 6983

Analyst: BT

Comments:

Date Analyzed: 03-NOV-91

Seq	Control #	Sample/QC	Rp	Field Number	Standard Concentr	Time	Absorb	Concentration	Dilutn	True Value	% Recovr	Flag	Comments
21	5806	CCB3	3			15:10	2	-0.01	1				

Figure 1
Page 68

00250

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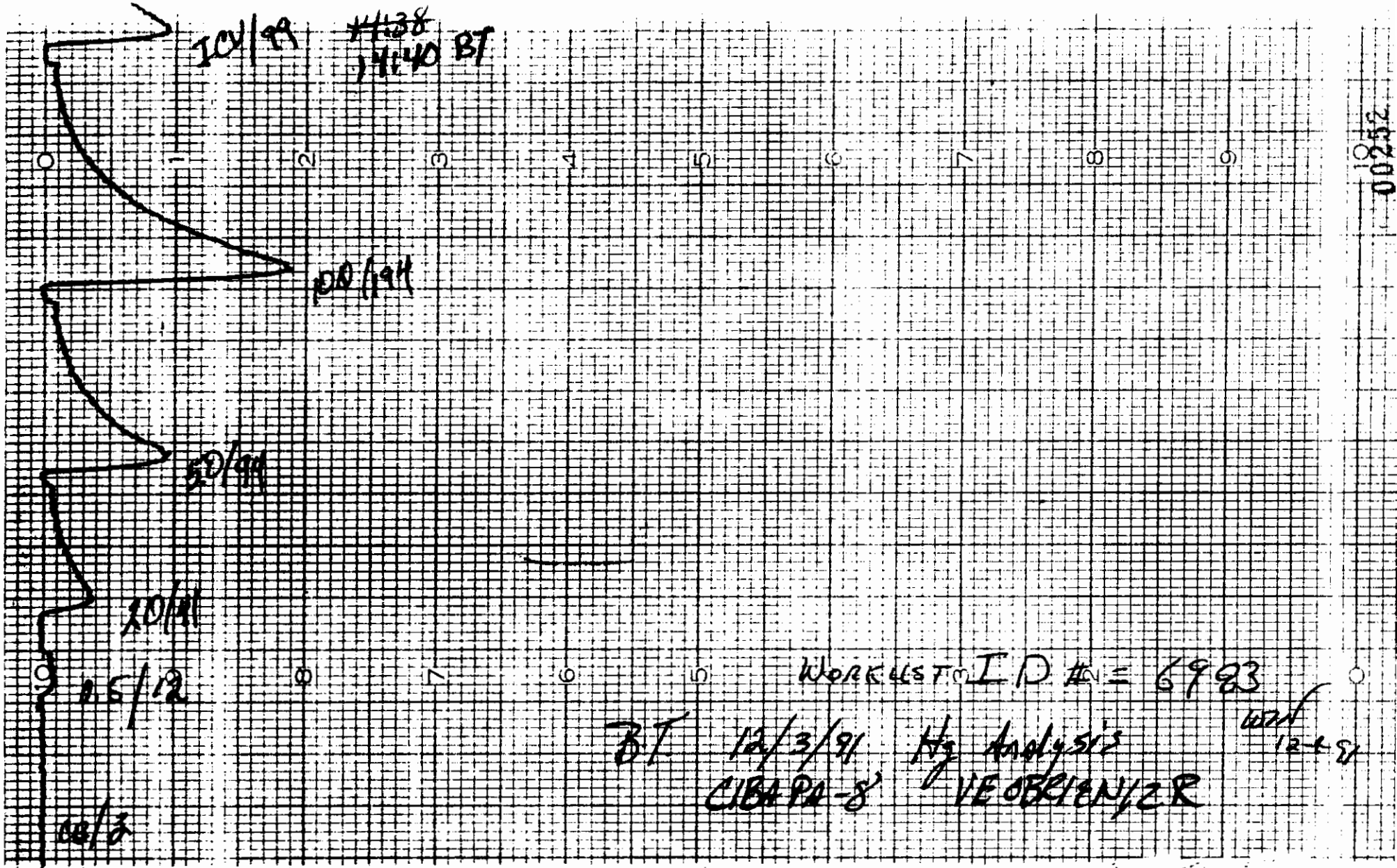
ICV/99 #4138 14:40 BT
00/94
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05/12
00/2
WORKLIST ID # = 6983
BT 12/3/91 Hg Analysis
CIBA PA-8 VEOBERN/2R
12-4-91

VERSAR LABORATORIES INC.
Prep Worklist # 6858

27-NOV-91 09:54 PM

Analyst: BDC

Date Analyzed: ~~29~~ 30-NOV-91

Comments:

Reference:

Method: DIWT

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	P2M	DI
5806	VEOBRIEN	2	HOH	P2M	DI

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	5800	PBW		1	50	50	colorless	clear			colorless	clear	
2	5800	LCSW		1			↓	↓			↓	↓	
3	5800	66190	WB-1(S)-F	1			↓	↓			↓	↓	
4	5800	66191	WB-3(S)-F	1			↓	↓			↓	↓	
5	5800	66192	WB-1(S)	1			Brown	cloudy			Yellow	cloudy	
6	5800	66193	WB-3(S)	1			Black	opaque			↓	↓	
7	5806	66314	SWB-1-F	1			Brown	cloudy			colorless	clear	
8	5806	66315	SWB-1	1			Black	opaque			Yellow	cloudy	
9	5806	66316	SWB-2-F	1			colorless	clear			colorless	clear	
10	5806	66316D		1			↓	↓			↓	↓	
11	5806	66316S		1			↓	↓			↓	↓	
12	5806	66317	SWB-2	1			Black	opaque			Brown	cloudy	
13	5806	66317D		2			↓	↓			↓	↓	
14	5806	66317S		2			↓	↓			↓	↓	

* sample # 66317 was 50% soil

00253

VERSAR, INC.
METALS LABORATORY
SPIKE LOG

Code-Batch: VEOBRIEN-1,2 **Date:** 30-NOV-91
Control No.: 5800 5806 **Method code:** DLWT

*** CLP WATER SPIKING ***

☐ HGA WATER: spike = 0.5 ml of HGA spiking solution / 100 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Sol'n prep date:_____

☐ ICP WATER: spike = 5 ml of CLP ICP SPIKING SOLUTION / 100 ml
0.5 ml of 100ppm Sb / 100 ml
0.5 ml of 10ppm Ag / 100 ml
0.2 ml 100ppm Cr / 100 ml

ICP SPIKING SOLUTION: 5ppm Cu - 40 ppm Ba, Al, As, Se, Tl - 20ppm Fe - 10ppm Mn, Ni, Zn, Co, Pb, V - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** CLP SOIL SPIKING ***

☐ HGA SOIL: spike = 1 ml of HGA SPIKING SOLUTION / 200 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Soln prep date:_____

☐ ICP SOIL: spike = 10 ml of ICP SPIKING SOLUTION / 200 ml
1ml of 100ppm Sb / 200 ml
1 ml of 10ppm Ag / 200 ml
0.4ml of 100ppm Cr / 200ml

ICP SPIKING SOLUTION: 40ppm Ba, As, Se, Tl, - 10ppm Co, Pb, Mn, Ni, V, Zn - 5ppm Cu - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** NON-CLP SPIKING ***

HGA SPIKE = _____ ml of HGA NON-CLP spiking solution / _____ ml

HGA SPIKING SOLUTION: 10 ppm As, Se, Tl, Pb, 200 ppm Y Sol'n prep date:_____

ICP SPIKE = 2.5 ml of Solution #1 / 50 ml

SPIKING SOLUTION #1: 40 ppm Ba, Be, Cd, Co, Li, Mo, Sr, V - 80 ppm Cu, Pb, Mn, Ni, Se, Tl - 200 ppm Si - 328 ppm Na
Sol'n prep date: 11279106A

ICP SPIKE = 2.5 ml of Solution #2 / 50 ml

SPIKING SOLUTION #2: 40 ppm B, Cr, Y - 80 ppm As, Sb, Sn, Ti, Zn - 400 ppm Al, Ca, Fe, K, Mg, Na
Sol'n prep date: 11139108A

ICP SPIKE = 2.5 ml of Solution #3 / 50 ml

SPIKING SOLUTION #3: 40 ppm Ag Sol'n prep date: 11191083A

Preparer BDC

VERSAR LABORATORIES INC.
Prep Worklist # 7300

12-DEC-91 11:48 F

Analyst: TMM/EFS

Date Analyzed: 12-DEC-91

Comments:

Reference: SW 846 3rd Ed.

Method: DIS

Control #	Code	Batch	Matrix	Analysis Code	Test
5806	VEOBRIEN	2	SOIL	6010	6010

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	5806	PBS		1	1	100	COLORLESS	CLEAR	NO		COLORLESS	CLEAR	
2	5806	66318	SWB-1(0.0-0.5)	1	1.02	100	BROWN		YES	MEDIUM	YELLOW	CLEAR	ROOTS
3	5806	66319	SB-1(0.0-0.5)	1	1.15	100	BROWN		YES	MEDIUM	YELLOW	CLEAR	

00255

VERSAR LABORATORIES INC.
Prep Worklist # 6854

27-NOV-91 09:08 PM

Analyst: BDC

Date Analyzed: ~~29~~ 30-NOV-91

Comments: Locations: B-5, A-75

Reference:

Method: DS43

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	P2M	DH
5806	VEOBRIEN	2	HOH	P2M	DH

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	5800	PBW		1	50	50	colorless	clear			colorless	clear	
2	5800	LCSM		1									
3	5800	66190	WB-1(S)-F	1									
4	5800	66191	WB-3(S)-F	1									
5	5800	66192	WB-1(S)	1			Brown	cloudy					
6	5800	66193	WB-3(S)	1			Black	opaque					
7	5806	66314	SWB-1-F	1			Brown	cloudy					
8	5806	66315	SWB-1	1			Black	opaque			Yellow	cloudy	
9	5806	66316	SWB-2-F	1			colorless	clear			colorless	clear	
10	5806	66316D		1									
11	5806	66316S		1									
12	5806	66317	SWB-2	1			Black	opaque			Yellow	cloudy	
13	5806	66317D		1									
14	5806	66317S		1									

* sample # 66317 was 50% soil

VERSAR, INC.
METALS LABORATORY
SPIKE LOG

Code-Batch: VEOBRIEN-1,2 **Date:** 30-NOV-91
Control No.: 5800, 5806 **Method code:** DSA3

*** CLP WATER SPIKING ***

☐ HGA WATER: spike = 0.5 ml of HGA spiking solution / 100 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Sol'n prep date:_____

☐ ICP WATER: spike = 5 ml of CLP ICP SPIKING SOLUTION / 100 ml
0.5 ml of 100ppm Sb / 100 ml
0.5 ml of 10ppm Ag / 100 ml
0.2 ml 100ppm Cr / 100 ml

ICP SPIKING SOLUTION: 5ppm Cu - 40 ppm Ba, Al, As, Se, Tl - 20ppm Fe - 10ppm Mn, Ni, Zn, Co, Pb, V - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** CLP SOIL SPIKING ***

☐ HGA SOIL: spike = 1 ml of HGA SPIKING SOLUTION / 200 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Soln prep date:_____

☐ ICP SOIL: spike = 10 ml of ICP SPIKING SOLUTION / 200 ml
1ml of 100ppm Sb / 200 ml
1 ml of 10ppm Ag / 200 ml
0.4ml of 100ppm Cr / 200ml

ICP SPIKING SOLUTION: 40ppm Ba, As, Se, Tl, - 10ppm Co, Pb, Mn, Ni, V, Zn - 5ppm Cu - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** NON-CLP SPIKING ***

HGA SPIKE = .5 ml of HGA NON-CLP spiking solution / 50 ml

HGA SPIKING SOLUTION: 10 ppm As, Se, Tl, Pb, 200 ppm Y Sol'n prep date: 11279107A

ICP SPIKE = _____ ml of Solution #1 / _____ ml

SPIKING SOLUTION #1: 40 ppm Ba, Be, Cd, Co, Li, Mo, Sr, V - 80 ppm Cu, Pb, Mn, Ni, Se, Tl - 200 ppm Si - 328 ppm Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #2 / _____ ml

SPIKING SOLUTION #2: 40 ppm B, Cr, Y - 80 ppm As, Sb, Sn, Ti, Zn - 400 ppm Al, Ca, Fe, K, Mg, Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #3 / _____ ml

SPIKING SOLUTION #3: 40 ppm Ag Sol'n prep date:_____

Preparer BDC

VERSAR LABORATORIES INC.
Prep Worklist # 6856

02-DEC-91 11:11 PM

Analyst: TMM

Date Analyzed: ~~29-NOV-91~~ 12/2/91 TMM

Comments: A-75

Reference: SW 846 3rd Ed.

Method: DHWT

Control #	Code	Batch	Matrix	Analysis Code	Test
5800	VEOBRIEN	1	HOH	~~P2M~~	~~AS~~ DHWT
5806	VEOBRIEN	2	HOH	~~P2M~~ TMM	~~AS~~

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	5800	PBW		1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
2	5800	LCSM		1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
3	5800	66190	WB-1(S)-F	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
4	5800	66191	WB-3(S)-F	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
5	5800	66192	WB-1(S)	1	50	50	GRAY	CLOUDY			COLORLESS	CLEAR	
6	5800	66193	WB-3(S)	1	50	50	GRAY	OPAQUE			COLORLESS	CLEAR	
7	5806	66314	SWB-1-F	1	50	50	YELLOW	CLEAR			COLORLESS	CLEAR	
8	5806	~~663140~~	TMM	1	50	50	YELLOW	CLEAR			COLORLESS	CLEAR	NOT NEEDED
9	5806	~~663143~~	TMM	1	50	50	YELLOW	CLEAR			COLORLESS	CLEAR	↓
10	5806	66315	SWB-1	1	50	50	BLACK	OPAQUE			BROWN	CLEAR	
11	5806	66315D	TMM	1	50	50	BLACK	OPAQUE			BROWN	CLEAR	Not Needed
12	5806	~~663156~~	TMM	1	50	50	BLACK	OPAQUE			BROWN	CLEAR	↓
13	5806	66316	SWB-2-F	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
14	5806	66317	SWB-2	1	50	50	BLACK	OPAQUE			BROWN	CLEAR	
15	5800	66194	WB-4(S)-F	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
16	5800	66195	WB-5(S)-F	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
17	5800	66196	WB-6(S)-F	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
18	5800	66197	WB-4(S)	1	50	50	BROWN	CLOUDY			COLORLESS	CLEAR	
19	5800	66198	WB-5(S)	1	50	50	BROWN	CLOUDY			COLORLESS	CLEAR	
20	5800	66199	WB-6(S)	1	50	50	BROWN	CLOUDY	NO		COLORLESS	CLEAR	
21	5806	PB1T		1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
22	5806	66318	SWB-1(0.0-0.5)	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
23	5806	66319	SB-1(0.0-0.5)	1	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	

VERSAR, INC.
METALS LABORATORY
SPIKE LOG

Code-Batch: Veobrien 1,2 **Date:** 12/2/91
Control No.: 58070, 58076 **Method code:** DHWT

*** CLP WATER SPIKING ***

☐ HGA WATER: spike = 0.5 ml of HGA spiking solution / 100 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Sol'n prep date:_____

☐ ICP WATER: spike = 5 ml of CLP ICP SPIKING SOLUTION / 100 ml
0.5 ml of 100ppm Sb / 100 ml
0.5 ml of 10ppm Ag / 100 ml
0.2 ml 100ppm Cr / 100 ml

ICP SPIKING SOLUTION: 5ppm Cu - 40 ppm Ba, Al, As, Se, Tl - 20ppm Fe - 10ppm Mn, Ni, Zn, Co, Pb, V - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** CLP SOIL SPIKING ***

☐ HGA SOIL: spike = 1 ml of HGA SPIKING SOLUTION / 200 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Soln prep date:_____

☐ ICP SOIL: spike = 10 ml of ICP SPIKING SOLUTION / 200 ml
1ml of 100ppm Sb / 200 ml
1 ml of 10ppm Ag / 200 ml
0.4ml of 100ppm Cr / 200ml

ICP SPIKING SOLUTION: 40ppm Ba, As, Se, Tl, - 10ppm Co, Pb, Mn, Ni, V, Zn - 5ppm Cu - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** NON-CLP SPIKING ***

✓HGA SPIKE = 0.5 ml of HGA NON-CLP spiking solution / 50.0 ml

HGA SPIKING SOLUTION: 10 ppm As, Se, Tl, Pb, 200 ppm Y Sol'n prep date: 11279107A

ICP SPIKE = _____ ml of Solution #1 / _____ ml

SPIKING SOLUTION #1: 40 ppm Ba, Be, Cd, Co, Li, Mo, Sr, V - 80 ppm Cu, Pb, Mn, Ni, Se, Tl - 200 ppm Si - 328 ppm Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #2 / _____ ml

SPIKING SOLUTION #2: 40 ppm B, Cr, Y - 80 ppm As, Sb, Sn, Ti, Zn - 400 ppm Al, Ca, Fe, K, Mg, Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #3 / _____ ml

SPIKING SOLUTION #3: 40 ppm Ag Sol'n prep date:_____

Preparer Jmm

VERSAR LABORATORIES, INC.
Analytical Difficulties Log Sheet

Pg: _____

Code - #: VEDBRIEN 1,2

Control #: 5800, 5806

Method Code: ~~5800, 5806~~ DHWT
JMM

Date: 12/29/91
JMM

Sample 66316 was designated as a QC sample. It did not have enough left in its sample bottles to digest. Jammy Ugarte was informed and made the decision that samples 66314 & 66315 should be used for Q.C. instead.

Analyst: JMM

Reviewer: _____

VERSAR LABORATORIES INC.
Prep Worklist # 7009

04-DEC-91 08:08 AM

Analyst: MSR

Date Analyzed: 04-DEC-91

Comments: A-75 Redig of QC

Reference: SW 846 3rd Ed.

Method: DHWT

Control #	Code	Batch	Matrix	Analysis Code	Test
5806	VEOBRIEN	2	HOH	P2M	DH

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	5806	PBW		2	50	50	COLORLESS	CLEAR			COLORLESS	CLEAR	
2	5806	LCSM		2	50	50	↓	↓			↓	↓	
3	5806	66316D		2	50	50	YELLOW	↓			↓	↓	
4	5806	66316S		2	50	50	↓	↓			↓	↓	
5	5806	66317D		2	50	50	BLACK	OPAQUE			RED	CLOUDY	
6	5806	66317S		2	50	50	↓	↓			↓	↓	

VERSAR, INC.
METALS LABORATORY
SPIKE LOG

Code-Batch: NEOBRIEN 2 **Date:** 4DEC 1991
Control No.: 5906 **Method code:** DHWT

*** CLP WATER SPIKING ***

☐ HGA WATER: spike = 0.5 ml of HGA spiking solution / 100 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Sol'n prep date:_____

☐ ICP WATER: spike = 5 ml of CLP ICP SPIKING SOLUTION / 100 ml
0.5 ml of 100ppm Sb / 100 ml
0.5 ml of 10ppm Ag / 100 ml
0.2 ml 100ppm Cr / 100 ml

ICP SPIKING SOLUTION: 5ppm Cu - 40 ppm Ba, Al, As, Se, Tl - 20ppm Fe - 10ppm Mn, Ni, Zn, Co, Pb, V - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** CLP SOIL SPIKING ***

☐ HGA SOIL: spike = 1 ml of HGA SPIKING SOLUTION / 200 ml

HGA SPIKING SOLUTION: 8ppm As - 4ppm Pb - 10ppm Tl - 1ppm Cd - 2ppm Se - 200ppm Y Soln prep date:_____

☐ ICP SOIL: spike = 10 ml of ICP SPIKING SOLUTION / 200 ml
1ml of 100ppm Sb / 200 ml
1 ml of 10ppm Ag / 200 ml
0.4ml of 100ppm Cr / 200ml

ICP SPIKING SOLUTION: 40ppm Ba, As, Se, Tl, - 10ppm Co, Pb, Mn, Ni, V, Zn - 5ppm Cu - 1ppm Be, Cd
Sol'n prep date:_____ Sb prep:_____ Ag prep:_____ Cr prep:_____

*** NON-CLP SPIKING ***

HGA SPIKE = 0.5 ml of HGA NON-CLP spiking solution / 50 ml

HGA SPIKING SOLUTION: 10 ppm As, Se, Tl, Pb, 200 ppm Y Sol'n prep date: 11279107A

ICP SPIKE = _____ ml of Solution #1 / _____ ml

SPIKING SOLUTION #1: 40 ppm Ba, Be, Cd, Co, Li, Mo, Sr, V - 80 ppm Cu, Pb, Mn, Ni, Se, Tl - 200 ppm Si - 328 ppm Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #2 / _____ ml

SPIKING SOLUTION #2: 40 ppm B, Cr, Y - 80 ppm As, Sb, Sn, Ti, Zn - 400 ppm Al, Ca, Fe, K, Mg, Na
Sol'n prep date:_____

ICP SPIKE = _____ ml of Solution #3 / _____ ml

SPIKING SOLUTION #3: 40 ppm Ag Sol'n prep date:_____

Preparer MSR

VERSAR LABORATORIES INC.
Prep Worklist # 7065

06-DEC-91 08:35 A

Analyst: BDC

Date Analyzed: 12-7-91

Comments: A-75

Reference: SW 846 3rd Ed.

Method: DHS

Control #	Code	Batch	Matrix	Analysis Code	Test
5806	VEOBRIEN	2	SOIL	PB3	DH

Seq	Cont#	Sample #	Field Number	Re	Initial Wt/Vol (g)(ml)	Final Volume (ml)	Before Color	Before Clarity	Artifact	Texture	After Color	After Clarity	Comment
1	5806	PBS		1	1	100	colorless	clear			colorless	clear	
2	5806	66318	SWB-1(0.0-0.5)	1	BDC ~~1.02~~	1.02 100	Brown		None	Med.			
3	5806	66319	SB-1(0.0-0.5)	1	1.18	100	↓		Weeds	Med.			
4	5806	66320	BACKGROUND	1	1.03	100	orange		↓	Fine			

00263

VERSAR, INC.
METALS LABORATORY
DIGESTION LOG

Page 1 of 1

Code-Batch: VEDBRIEN 1#2R
Control No.: 5800 & 5806

Date: 12/12/91
Method code: DHS / (DHWT) / DSA3
Reference: SW-846 3rd. ed.
Digestion Type: HGA Method:

Sample/EPA ID Number	Mtrx.	Init. W/V	Final Vol.	Description * Before	After	pH
PBW		50	50	See original	colorless, clear	
66190				digestion		<2.0
66191				log.		
66194						
66195						
66196						
66197						
66198						
66199						
66316*		25	25			
66318		5	50			
66319						
PBIT		~~100~~ 50	50			

Comments: *Sample 66316 had a limited ~~begining~~ sample volume. All acids that were added during digestion were reduced by 1/2 as was the sample. [illegible]

* Description of colors: red, blue, yellow, green, orange, violet, white, colorless, brown, grey, black.
* Description of texture: fine, medium, coarse.
* Description of clarity: clear, cloudy, opaque.
* Description of artifacts: yes or no and describe.

VERSAR, INC.
METALS LABORATORY
MERCURY DIGESTION LOG

Project-Batch: VEO BRIEN 1 & 2
Control No.: 5800 & 5806
No. of Samples: 8

Date: 11/21/91
Method Code: HGSC or HGWC
Reference: CLP SOW 787
Reference #: 245.1 or 245.5

Sample / EPA ID Number		Matrix	Initial Wt./Vol.	Final Vol.	Comments
PBW		HOH	100ml	100 ml	
LCSM					
66314					
66315					
66316					
66316 D					
66316 S					
66317					ADDED 30ml extra KMnO4
~~66317 D~~	RFS				NOT ANALYZED BECAUSE
~~66317 S~~	RFS				SAMPLE WAS ABOVE
66190					LINEAR RANGE
66191					
66192					
66193					

SPIKE = 1 ml x 0.1ppm Hg / 100ml = 1 ppb.
CCV = 0.50 ml x 1.0ppm Hg / 100ml = 5.0 ppb.
ICV/LCS = 1 ml x ICV #5 / 100ml = 5 ppb. LCS Series No.: 0689

STANDARD source: ING. VENTS Prep Date: 11/21/91 Prep Time: 17:00

0.5ppb = 5ml x 0.01ppm / 100ml.
2.0ppb = 2ml x 0.1ppm / 100ml.
5.0ppb = 5ml x 0.1ppm / 100ml.
10.0ppb = 10ml x 0.1ppm / 100ml.

VERSAR, INC.
METALS LABORATORY
MERCURY DIGESTION LOG

Page ___ of ___

Project-Batch: CIBAPA - 8
Control No.: 5840
No. of Samples: 1

Date: 12/3/91
Method Code: HGSC or HGWC
Reference: CLP SOW ~~[illegible]~~ .391
Reference #: 245.1 or 245.5

Sample / EPA ID Number		Matrix	Initial Wt./Vol.	Final Vol.	Comments
PBW		HOH	100ml	100ml	
67064		↓	↓	↓	

SPIKE = ___ ml x 0.1ppm Hg / 100ml = ___ ppb.
CCV = 0.50 ml x 1.0ppm Hg / 100ml = 5.0 ppb.
ICV/LCS = 1 ml x ICV #5 / 100ml = 5 ppb. LCS Series No.: 0689

STANDARD source: IV Prep Date: 12/3/91 Prep Time: 10:30

0.5ppb = 5ml x 0.01ppm / 100ml.
2.0ppb = 2ml x 0.1ppm / 100ml.
5.0ppb = 5ml x 0.1ppm / 100ml.
10.0ppb = 10ml x 0.1ppm / 100ml.

BT

WN

6983

VERSAR, INC.
METALS LABORATORY
MERCURY DIGESTION LOG

Page ___ of ___

Project-Batch: VEOBRIEN-1,2R
Control No.: 5800, 5806
No. of Samples: 2

Date: 12/3/91
Method Code: HGW or HGS
Reference: SW846 3rd Ed
Method No: 7470 or 7471

Sample / EPA ID Number		Matrix	Initial Wt./Vol.	Final Vol.	Comments
PBW		H_2O	100 ml	100 ml	
66317		↓	20 ml	↓	
66317D		↓	20 ml	↓	
66317S		↓	20 ml	↓	
66193		↓	25 ml	↓	
LCSM		↓	100 ml	↓	

SPIKE = 1 ml x 0.1ppm Hg / 100ml = 1 ppb.
CCV = 0.50 ml x 1.0ppm Hg / 100ml = 5.0 ppb.
ICV/LCS = 1 ml x ICV #5 / 100ml = 5 ppb. LCS Series No.: 0689

STANDARD source: I.V Prep Date: 12/3/91 Prep Time: 10:30

0.5ppb = 5ml x 0.01ppm / 100ml.
2.0ppb = 2ml x 0.1ppm / 100ml.
5.0ppb = 5ml x 0.1ppm / 100ml.
10.0ppb = 10ml x 0.1ppm / 100ml.

preparer: BL

VERSAR LABORATORIES, INC.
METALS LABORATORY
TCLP EXTRACTION LOG

Page ___ of ___

Code-Batch: VEOBRIEN2 Ctrl No.: 5806 Date: 11/26/91

Reference: Federal Register, June 1990, Method 1311 Method Code: TCLX

Extract Location: Metals _____ Semivolatiles Glassware J Analyst: KJ

QC REQUIREMENTS:

1. Extraction start date & time 11/26/91 3:30 PM
2. Extraction stop date & time 11/27/91 7:30 AM
3. Room temp., Initial 22.0 Maximum 27.2 Minimum 13.8
4. Number of extraction blanks, fluid #1 1
5. Number of extraction blanks, fluid #2 _____
6. Record pH meter calibration: pH 4 4.00 pH 7 7.06
7. Record initial pH of extraction fluid #1 4.95 #2 _____
8. Sample numbers extracted 66318, 66319, ~~67037~~ TRIP
9. Inorganic spike required for bias correction? YES (NO)
   Sample no(s): _____
10. A copy of this page was given to OEL on _____

PROBLEMS OR COMMENTS:

VERSAR LABORATORIES, INC.
METALS LABORATORY
TCLP EXTRACTION LOG

Page___of___

Code-Batch: Veobrien 2 Ctrl No.: 5806 Date: 11/26/91
Reference: Federal Register, June 1990, Method 1311 Method Code: TCLX
Extraction: Metals/Semivolatiles Sample No.: 66318 Analyst: KT

PRELIMINARY EVALUATIONS

1. **Particle Size Reduction**

_____
_____
_____
_____

2. **Percent Dry Solid**

A. Weight of solid/liquid sample_____
B. Weight of wet solid and filter paper_____
C. Weight of dry filter paper_____
D. Successive weighings after drying filter paper and solid

_____ _____ _____ _____ _____

E. Percent Dry Solid = (2B-2C)/2A X 100 =_____

3. **Liquid/Solid Separation**

A. Weight of container_____
B. Weight of container and liquid solid sample_____
C. Weight of residue and container_____
D. Weight of liquid/solid sample (3B-3C)_____
E. Weight of container to collect filtrate_____
F. Weight of container and flitrate_____
G. Weight of liquid (filtrate) (3F-3E)_____
H. Weight of solid (3D-3G)_____
I. Percent solid = (3H/3D) X 100 =_____

4. **Extraction Fluid Determination**

A. Weigh 5 grams of the solid into an Erlenmeyer flask.
B. Add 96.5 ml of reagent water.
C. Cover with a watch glass and stir for 5 minutes.
D. Record initial pH 6.45. If the initial pH is <5, use extraction fluid #1. If the initial pH is >5, add 3.5 ml 1N HCl, slurry, cover with a watch glass, heat to 50 degrees C and hold for 10 minutes. Cool. Record final pH 1.80. If the final pH is <5, use extraction fluid #1. If the final pH is >5, use extraction fluid #2.
E. Extraction fluid used _____ (#1) _____ #2_____

TCLP EXTRACTION

1. **Extraction of solid sample**

A. Weight of solid sample (3H) 25.032
B. Weight of extraction fluid 500 mL
{20 X Percent Solid (3I) X wt. of solid sample (3H)/100}
C. Shake sample, record initial pH 4.62
D. Record final pH 4.83
E. Combine any pre-extract filtrate
F. Description of final extract clear & colorless

00269

VERSAR LABORATORIES, INC.
METALS LABORATORY
TCLP EXTRACTION LOG

Page___of___

Code-Batch: Veobrien 2 Ctrl No.: 5806 Date: 11/26/91
Reference: Federal Register, June 1990, Method 1311 Method Code: TCLX
Extraction: Metals/Semivolatiles Sample No.: 66319 Analyst: FJ

PRELIMINARY EVALUATIONS

1. **Particle Size Reduction**

_____
_____
_____
_____

2. **Percent Dry Solid**

A. Weight of solid/liquid sample_____
B. Weight of wet solid and filter paper_____
C. Weight of dry filter paper_____
D. Successive weighings after drying filter paper and solid

_____ _____ _____ _____ _____

E. Percent Dry Solid = (2B-2C)/2A X 100 =_____

3. **Liquid/Solid Separation**

A. Weight of container_____
B. Weight of container and liquid solid sample_____
C. Weight of residue and container_____
D. Weight of liquid/solid sample (3B-3C)_____
E. Weight of container to collect filtrate_____
F. Weight of container and flitrate_____
G. Weight of liquid (filtrate) (3F-3E)_____
H. Weight of solid (3D-3G)_____
I. Percent solid = (3H/3D) X 100 =_____

4. **Extraction Fluid Determination**

A. Weigh 5 grams of the solid into an Erlenmeyer flask.
B. Add 96.5 ml of reagent water.
C. Cover with a watch glass and stir for 5 minutes.
D. Record initial pH 6.54. If the initial pH is <5, use extraction fluid #1. If the initial pH is >5, add 3.5 ml 1N HCl, slurry, cover with a watch glass, heat to 50 degrees C and hold for 10 minutes. Cool. Record final pH 1.64. If the final pH is <5, use extraction fluid #1. If the final pH is >5, use extraction fluid #2.
E. Extraction fluid used ___(#1)___ #2___

TCLP EXTRACTION

1. **Extraction of solid sample**

A. Weight of solid sample (3H) 25.001
B. Weight of extraction fluid 500
(20 X Percent Solid (3I) X wt. of solid sample (3H)/100)
C. Shake sample, record initial pH 4.93
D. Record final pH 4.84
E. Combine any pre-extract filtrate
F. Description of final extract

00270

Versar Laboratories INC.

27-NOV-91

GENERAL CHEMISTRY
Total Solids Worklist

Worklist ID: 6799

Control	Code	Batch	Job	Location
5797	NUSMCAS	25	420.94.0	B-5
5806	VEOBRIEN	2	420.1.0	A-75
5824	VERSMCAS	9	420.1.0	A-49
5840	CIBA PA	8	420.116.0	A-61

Analysis Date: 25-NOV-91

Balance Calibration

Zero	0.0000	0.0000	50 gram	49.9999	50.0000
50 mg	0.0500	0.0500	100 gram	99.9998	100.0000
1 gram	1.0000	1.0000			

Comments:
LCS = NBS 1632b @ 98.7% TS

Cont#	Sample	Cruc. ID.	Crucible Wt. (g)	Dried Crucible + Sample Wt. (g)	Cruc + Sample	% H2O	% Solids	True Value	Comments
5840	MDL1						.0005		Units: g
5840	MDL2						.01		
5840	CB1						0.00		Units: g
5840	ICV1						1.00	1.0	100.0% rec. Units: g
5840	RB1		13.1938		13.1937		< 0.01		
5840	RB2								
5840	LCS1		13.0725	14.2339	14.2219	1.1000	98.9	98.7	100.2% rec.
5840	67061		12.2396	19.0315	18.8306	3.0000	97.0		
5840	67062		12.0355	21.8194	21.3597	4.7000	95.3		
5840	67062DP1		13.1239	20.8781	20.6099	3.5000	96.5		Mean = 95.9 RPD = 1.3%
5840	67063		13.6425	21.4248	21.0277	5.1000	94.9		
5797	66147		12.9234	16.8584	16.1199	18.8000	81.2		
5797	66148		13.4250	18.7799	17.6548	21.0000	79.0		

11/27/91

Analyst [illegible]

Date 11-27-91

00271

Versar Laboratories INC.

27-NOV-91

GENERAL CHEMISTRY
Total Solids Worklist

Cont#	Sample	Cruc. ID.	Crucible Wt. (g)	Crucible + Sample Wt. (g)	Dried Cruc + Sample	% H2O	% Solids	True Value	Comments
5797	66148DP1		13.8952	18.7618	17.9422	16.8000	83.2		Mean = 81.1 RPD = 5.2% ~~5.1%~~
5797	66149		12.7011	16.8901	16.1243	18.3000	81.7		
5824	66864		14.8883	24.4639	23.4515	10.6000	89.4		
5824	66864DP1		13.0604	24.7654	23.4884	10.9000	89.1		Mean = 89.2 RPD = 0.3% ~~0.4%~~
5824	66865		13.4586	21.9341	20.8150	13.2000	86.8		
5824	66866		12.8400	23.0725	21.9345	11.1000	88.9		
5824	66867		13.1347	23.6992	22.4668	11.7000	88.3		
5806	66318		12.8782	22.5361	20.8596	17.4000	82.6		
5806	66319		14.1293	23.5530	21.5667	21.1000	78.9		

11/27/91

Analyst Vasantha

Date 11/27/91

00272

DATE | SUBJECT | PROJECT NO.

December 24, 1991 | TS | 420.1-2/5806

MCAWW 160.3

Sartorius Balance Calibration

Oven #1 Temperature
Aug 105°C
end 105°C

zero	0.0000	0.0000
50mg	0.0501	0.0500
1.0g	0.9999	0.9999
50.0g	49.9999	49.9998
100.0g	100.0000	99.9999

Control #	Sample #	Crus. #	Crus. wt (g)	Crus + wet sample(g)	Crus. + dry sample(g)	% TS	Recovery
	Blank	JB	14.1285		14.1285	<10mg/L	(0mg/L)
5806	66320	BF	11.4249	21.0456	20.2206	91.4	

WITNESSED AND UNDERSTOOD

Evelyn M. Sefillo