PELA 40243

83

TECHNICAL MEMORANDUM NO. 3A
FOR
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
CITY DISPOSAL CORPORATION LANDFILL
(DUNN LANDFILL)

(PELA Reference No. 495207)

Appendix G

Results of Analyses
Soil and Ground-Water Samples

Volume 2 of 16

Technical Reports,
Special Sampling - September 1990

SAMPLES: CA4753-CA4756, CA4757-4762, CA4763

April 1991

P.E. LaMoreaux & Associates

OHM Corporation

ETC Environmental Testing and Certification Corp.

Technical Report

for

WASTE MANAGEMENT, INC.

Chain of Custody Data Required for ETC Data Management Summary Reports						
CA4757-CA4762	WASTE MANAGEMENT, INC.		405			
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert
Vice President, General Manager

This Technical Report is an INSITE℠ service generated by LODESTAR℠ Data Management Software.

284 Raritan Center Parkway ■ CN 7808 ■ Edison, New Jersey 08818-7808 ■ 201-225-5600

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CASE NARRATIVE

SDG NARRATIVE

This technical report submitted by ETC Corporation contains the analytical results and required deliverables for WASTE MANAGEMENT, INC. Site 405 samples as identified below:

ETC ID	CLIENT ID	ETC ID	CLIENT ID
CA4757	2GWPZ10	CA4760	2GWPZ115
CA4758	2GWPZ5	CA4761	2GWPZ11I
CA4759	2GWPZ9	CA4762	2GWPZ11D

During the preparation and analysis of these samples, the following was observed:

VOLATILES:
(QV70357): Surrogate recoveries outside of control limits for samples CA4760, CA4761 and CA4762 may be attributed to sample matrix. The results have been confirmed by a replicate analysis.

Release of the data contained in this hardcopy data package has been authorized by the following signature.

Gregory G. Morrison
Laboratory Manager

10-22-90
Date

File # 000300

METHODOLOGY

INTRODUCTION

Environmental Testing and Certification Corp.
284 Raritan Center Parkway, CN 7808
Edison, New Jersey 08818-7808
(201) 225-6700

This report contains analytical results in tabular form for your sample. It includes comprehensive data for each analytical process. Associated quality control data is also presented, including QC batch results for the laboratory blank, spiked blank, matrix spike and a replicated sample spike, as well as results from surrogate compound analyses. Quality control data for instrument performance is also included. Other appendices may include data system printouts and chain of custody records.

Analytical Methodology

ETC utilizes a wide variety of methodologies and EPA approved procedures which are listed below. Analytical results and Quality Assurance protocols are based upon the approriate guideline dependent upon the level of deliverable requested.

- "Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater", Federal Register Vol. 49, No. 209, October 26, 1984;
- "Test Methods for Evaluating Solid Waste", SW-846 Third Edition, September 1986, USEPA;
- "Standard Methods for the Examination of Water and Wastewater" 1985, 14th, 15th and 16th Edition;
- "Methods for Chemical Analysis of Water and Wastes" March 1983, EMSL, EPA 600 4-79-020;
- Organic Analysis: Multi-media, Multi-Concentration-IFB-CLP, SOW February 1988;
- Inorganic Analysis: Multi-media, Multi-Concentration IFB-CLP, SOW July 1987;
- Dioxin Analysis: Soil/Sediment/Water Matrix; Multi-Concentration, Selected Ion Monitoring with Jar Extraction Procedure; IFB WA86-K357.
- "Methods for the Determination of Organic Compounds in Drinking Water" December 1988, EPA-600/4-88/039;
- "Handbook for Analytical Quality Control in Water and Wastewater Laboratories", EPA-600/4-79-019, March 1979;
- "National Enforcement Investigation Center Policies and Procedures Manual,EPA-330/9/78/001-R, Revised May 1986.

ETC

ETC Network Laboratories are certified to perform analytical analyses upon samples collected throughout the United States. It may be required that this environmental data be reported with reference to a certified laboratory. The Laboratory Identification Numbers for ETC Corp., Edison NJ Laboratory are summarized below for your information and reference. Please contact your Program Manager should you require certification verification for an ETC Network Laboratory.

Certification Summary, January 1990

State Agency	Certification Number
Alabama Department of Environmental Management	40280
Arizona Department of Environmental Quality	322
California Department of Health Services	162
Connecticut Department of Health Services	0511
Florida Department of Health and Rehabilitative Services	E87074 & 87262
Illinois Environmental Protection Agency	100224
Kansas Department of Health and Environment	E-148 & E1122
New Hampshire Department of Environmental Services	198948-B
New Jersey Department of Environmental Protection	12257
New York Department of Public Health	10586
Oklahoma Water Resources Board	8703
Pennsylvania Department of Environmental Regulation	68-323
South Carolina Department of Health and Environmental Control	94002
Tennessee Department of Health and Environmental Laboratory Services	02915
Utah Department of Health	E-91
Virginia Department of General Services	00113
Wisconsin Department of Natural Resources	999464070

VOLATILE DATA

QC SUMMARY

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT	
01	VBLK01	101	106	95		0	
02	A4753	102	107	99		0	
03	A4755	101	107	101		0	
04	A4763	100	107	103		0	
05	A4756	100	107	102		0	
06	A4758	100	110	103		0	
07	VBLK2	99	103	108		0	
08	A4754	103	105	112		0	
09	A4757	101	106	114		0	
10	A4759	101	104	113		0	
11	~~A4760~~	~~111 *~~	~~95~~	~~111~~		~~1~~	CA 10-16-90
12	VBLK4	101	111	105		0	
13	A4762	104	127 *	129 *		2	
14	A4761	101	126 *	130 *		2	
15	VBLK5	98	112	97		0	
16	A4755MS	105	112	109		0	
17	A4755MSD	98	112	106		0	
18							
19	A4762DL	100	121*	119*		2	CA 10-16-90.
20	A4761DL	100	121*	122*		2	
21	A4760	98	118*	116*		2	
22	A4760DL	104	128*	128*		2	
23							
24							
25							
26							
27							
28							
29							
30							

	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values
* Values outside QC limits
D Surrogates diluted out

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: A4755

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.000	0.000	54.109	108	61-145
Trichloroethene	50.000	0.000	48.018	96	71-120
Benzene	50.000	0.000	41.577	83	76-127
Toluene	50.000	0.000	49.472	99	76-125
Chlorobenzene	50.000	0.000	47.831	96	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.000	51.446	103	5	14	61-145
Trichloroethene	50.000	49.846	100	4	14	71-120
Benzene	50.000	42.915	86	3	11	76-127
Toluene	50.000	45.757	92	8	13	76-125
Chlorobenzene	50.000	49.015	98	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

Values outside of limits

PD: 0 out of 5 outside limits
pike Recovery: 0 out of 10 outside limits

omments: _____

FORM III VOA -1 1/87 Rev.

VOLATILE METHOD 4A BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0918 Lab Sample ID: VBLK01

Date Analyzed 09/26/90 Time Analyzed: 1725

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4753	CA4753V	>C0920	1904
02	A4755	CA4755V	>C0922	2043
03	A4763	CA4763V	>C0923	2132
04	A4756	CA4756V	>C0924	2221
05	A4758	CA4758V	>C0925	2310
06				
07				
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Comments: _____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0929 Lab Sample ID: VBLK2

Date Analyzed 09/27/90 Time Analyzed: 1814

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4754	CA4754V2	>C0931	1952
02	A4757	CA4757V2	>C0932	2041
03	A4759	CA4759V2	>C0933	2130
04				
05	A4760	CA4760V2	>C0934	2220
06				
07				
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omments:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0963 Lab Sample ID: VBLK4

Date Analyzed 10/02/90 Time Analyzed: 1621

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4762	CA4762V4	>C0969	2137
02	A4761	CA4761V4	>C0970	2225
03				
04				
05				
06				
07				
08				
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omments:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0979 Lab Sample ID: VBLK5

Date Analyzed 10/03/90 Time Analyzed: 1625

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4755MS	CA4755VS	>C0981	1819
02	A4755MSD	CA4755VR	>C0982	1907
03	A4760	CA4760V5	>C0984	2044
04	10-16-90			
05				
06				
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Comments:

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name:ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0910 BFB Injection Date:09/26/90

Instrument ID: GC/MS C BFB Injection Time:0854

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap)PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	58.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.4
175	5.0 - 9.0% of mass 174	6.5 (8.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.9 (96.9)1
177	5.0 - 9.0% of mass 176	5.9 (7.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VOA	QC70357VS	>C0911	09/26/90	1124
02	VSTD150	QC70357VS	>C0912	09/26/90	1213
03	VSTD100	QC70357VS	>C0913	09/26/90	1303
04	VSTD50	QC70357VS	>C0914	09/26/90	1352
05	VSTD20	QC70357VS	>C0915	09/26/90	1441
06					
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5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0917 BFB Injection Date: 09/26/90

Instrument ID: GC/MS C BFB Injection Time: 1625

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.3
75	30.0 - 60.0% of mass 95	59.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	84.0
175	5.0 - 9.0% of mass 174	7.0 (8.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.3 (96.7)1
177	5.0 - 9.0% of mass 176	6.0 (7.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VBLK01	QC70357V	>C0918	09/26/90	1725
02	A4753	CA4753V	>C0920	09/26/90	1904
03	A4755	CA4755V	>C0922	09/26/90	2043
04	A4763	CA4763V	>C0923	09/26/90	2132
05	A4756	CA4756V	>C0924	09/26/90	2221
06	A4758	CA4758V	>C0925	09/26/90	2310
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0926 BFB Injection Date: 09/27/90

Instrument ID: GC/MS C BFB Injection Time: 0858

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.2
75	30.0 - 60.0% of mass 95	59.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.4
175	5.0 - 9.0% of mass 174	6.0 (7.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	73.7 (95.2)1
177	5.0 - 9.0% of mass 176	5.9 (8.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	QC70357VS	>C0927	09/27/90	1656
02	~~VBLK2~~	~~QC70357V2~~	~~>C0929~~	~~09/27/90~~	~~1814~~
03	~~A4754~~	~~CA4754V2~~	~~>C0931~~	~~09/27/90~~	~~1952~~
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3 EA 10-19-90

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0928 BFB Injection Date: 09/27/90

Instrument ID: GC/MS C BFB Injection Time: 1741

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	58.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	87.9
175	5.0 - 9.0% of mass 174	7.8 (8.9)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.8 (99.8)1
177	5.0 - 9.0% of mass 176	6.8 (7.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VBLK2	QC70357V2	>C0929	09/27/90	1814
02	A4754	CA4754V2	>C0931	09/27/90	1952
03	A4757	CA4757V2	>C0932	09/27/90	2041
04	A4759	CA4759V2	>C0933	09/27/90	2130
05	A4760	CA4760V2	>C0934	09/27/90	2220
06					
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name:ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0957 BFB Injection Date:10/02/90

Instrument ID: GC/MS C BFB Injection Time:1148

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap)PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.2
75	30.0 - 60.0% of mass 95	45.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	92.0
175	5.0 - 9.0% of mass 174	8.0 (8.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	89.6 (97.3)1
177	5.0 - 9.0% of mass 176	6.5 (7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	QC70357VS	>C0958	10/02/90	1215
02	VSTD150	QC70357VS	>C0959	10/02/90	1304
03	VSTD100	QC70357VS	>C0960	10/02/90	1353
04	VSTD50	QC70357VS	>C0961	10/02/90	1443
05	VSTD20	QC70357VS	>C0962	10/02/90	1532
06	VBLK4	QC70357V4	>C0963	10/02/90	1621
07	A4762	CA4762V4	>C0969	10/02/90	2137
08	A4761	CA4761V4	>C0970	10/02/90	2225
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17					
18					
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0971 BFB Injection Date: 10/03/90

Instrument ID: GC/MS C BFB Injection Time: 0930

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	49.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	94.9
175	5.0 - 9.0% of mass 174	7.9 (8.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	93.5 (98.5)1
177	5.0 - 9.0% of mass 176	7.6 (8.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	QC70357VS	>C0972	10/03/90	1001
02	VSTD200	QC70357VS	>C0975	10/03/90	1305
03	VSTD150	QC70357VS	>C0976	10/03/90	1355
04	VSTD100	QC70357VS	>C0977	10/03/90	1445
05	VSTD20	QC70357VS	>C0978	10/03/90	1535
06	VBLK5	QC70357V5	>C0979	10/03/90	1625
07	A4755MS	CA4755VS	>C0981	10/03/90	1819
08	A4755MSD	CA4755VR	>C0982	10/03/90	1907
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SAMPLE DATA

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
A4757

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4757V2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0932

Level: (low/med) LOW Date Received: 09/25/90

% Moisture: not dec. Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4757

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4757

Sample wt/vol: 5 (g/mL) ML Lab File ID: 7C093

Level: (low/med) LOW Date Received: 09/25/90

% Moisture: not dec. _____ Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND		Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4757

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4757

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0932

Level: (low/med) LOW Date Received: 09/25/90

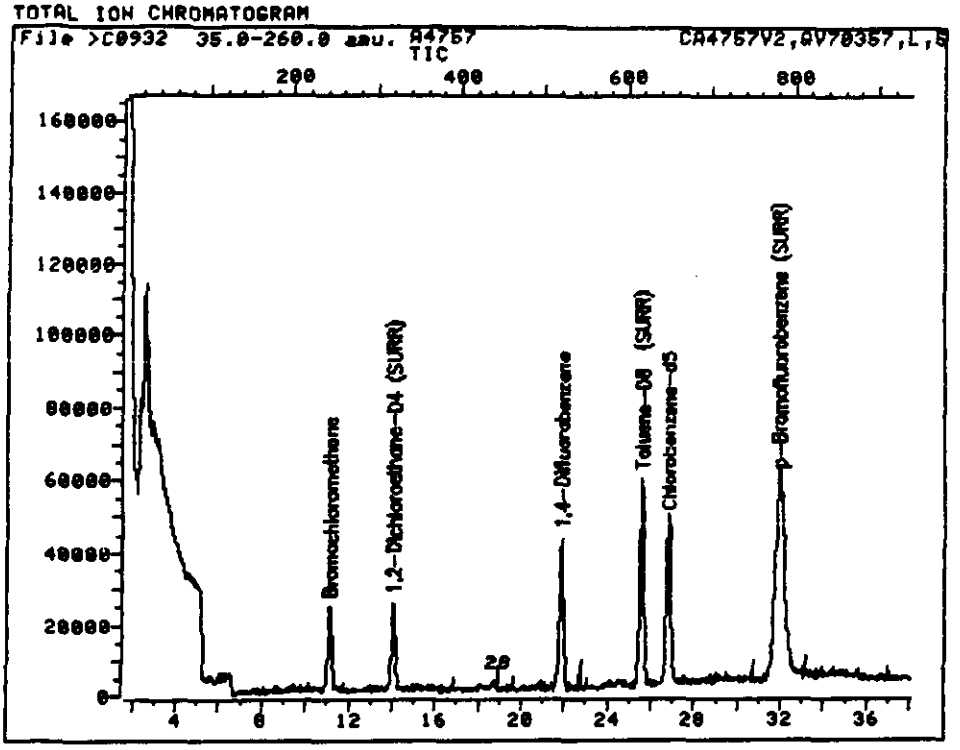
% Moisture: not dec. _____ Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



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Name: A4757
Misc: CA4757V2,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

Operator ID: MGRMS
Quant Time: 900927 21:19
Injected at: 900927 20:41

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 21:19
Output File: ^C0932::AQ Injected at: 900927 20:41
Data File: >C0932::U4 Dilution Factor: 1.00000
Name: A4757
Misc: CA4757V2,QV70357,L,5,,

ıD File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	244	39142	250.00	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	14.04	320	144677M	285.97	NG	99
20)	*1,4-Difluorobenzene	21.84	521	183849	250.00	NG	98
28)	Trichloroethylene	18.74	441	3412	~~10.49~~	~~NG~~	88
36)	*Chlorobenzene-d5	26.78	648	173277	250.00	NG	78
41)	Toluene-D8 (SURR)	25.56	617	255796	252.76	NG	88
45)	p-Bromofluorobenzene (SURR)	31.90	780	206793	264.21	NG	86

* Compound is ISTD

CN
10-16-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4758

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4758V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0925

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/25/90 (CA)

% Moisture: not dec. Date Analyzed: 09/26/90 10-6-90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	56	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	2	J
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4758

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4758

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0925

Level: (low/med) LOW Date Received: 09/25/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) ~~PACK~~ Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4758

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4758

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0925

Level: (low/med) LOW Date Received: 09/25/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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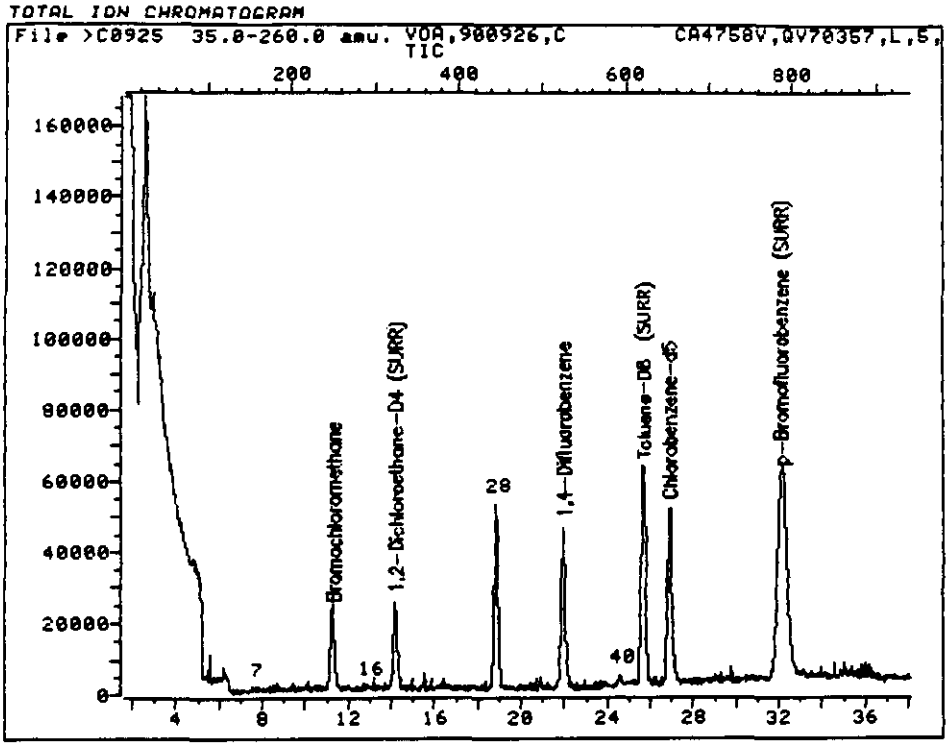
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



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Name: VOA,900926,C
Misc: CA4758V,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 23:48
Injected at: 900926 23:10

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 23:48
Output File: ^C0925::AQ Injected at: 900926 23:10
Data File: >C0925::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: CA4758V,QV70357,L,5,,

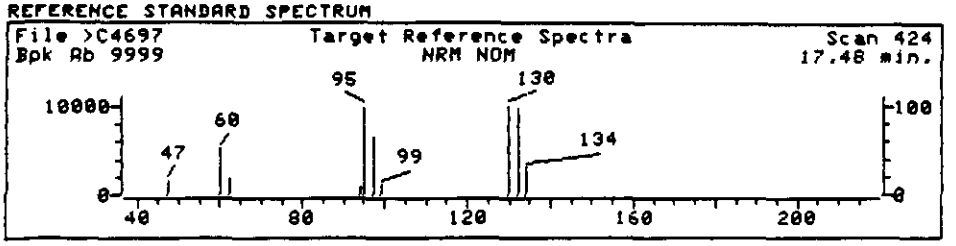
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.30	250	41198	250.00	NG	98
7)	Methylene chloride	7.65	156	2545	~~9.33~~	~~NG~~	89
16)	1,2-Trans-dichloroethylene	12.93	292	2699	~~11.12~~	~~NG~~	89
18)	1,2-Dichloroethane-D4 (SURR)	14.21	325	148614	258.41	NG	97
20)	*1,4-Difluorobenzene	21.96	525	192371	250.00	NG	97
28)	Trichloroethylene	18.86	445	93350	277.87	NG	85
36)	*Chlorobenzene-d5	26.90	652	182527	250.00	NG	74
40)	Tetrachloroethylene	24.56	592	3518	10.26	NG	87
41)	Toluene-D8 (SURR)	25.69	621	268674	249.93	NG	94
45)	p-Bromofluorobenzene (SURR)	32.10	786	218921	275.60	NG	84

* Compound is ISTD

GN
10-17-90.

REFERENCE STANDARD SPECTRUM



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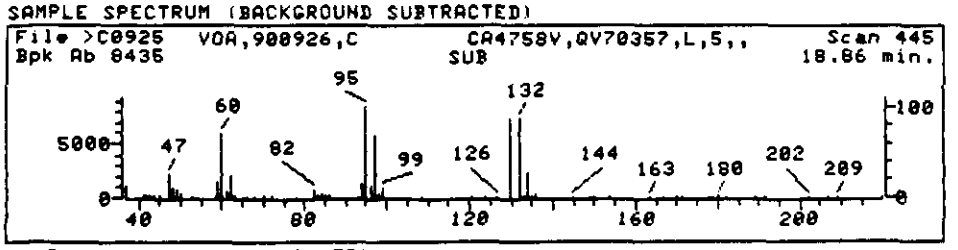
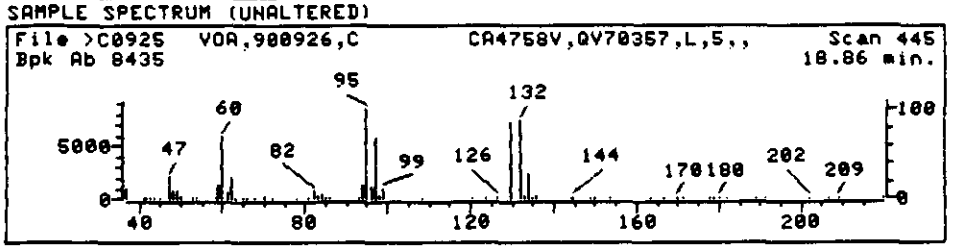


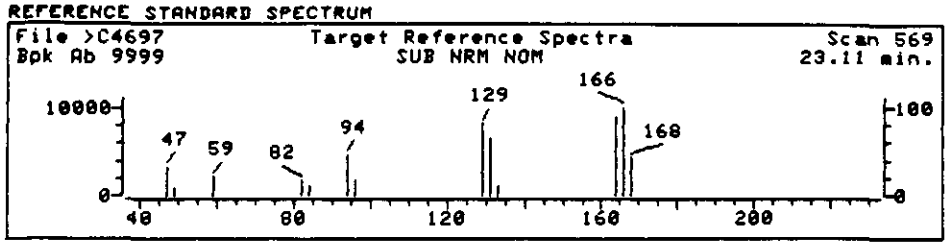
SAMPLE SPECTRUM (UNALTERED)



Data File: >C0925::U0 Quant Output File: ^C0925::AQ
Name: VOA,900926,C
Misc: CA4758V,QV70357,L,5,,
Quant Time: 900926 23:48 Quant ID File: IC1171::US
Injected at: 900926 23:10 Last Calibration: 900926 16:16

Compound No: 28
Compound Name: Trichloroethylene
Scan Number: 445
Retention Time: 18.86 min.
Quant Ion: 130.0
Area: 93350
Concentration: 277.87 NG
q-value: 85

REFERENCE STANDARD SPECTRUM



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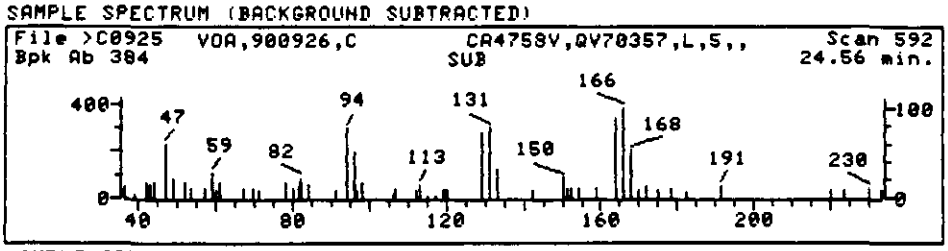

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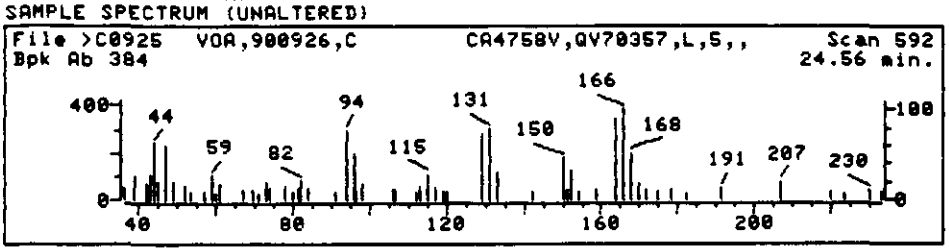

Data File: >C0925::U0 Quant Output File: ^C0925::AQ
Name: VOA,900926,C
Misc: CA4758V,QV70357,L,5,,
Quant Time: 900926 23:48 Quant ID File: IC1171::US
Injected at: 900926 23:10 Last Calibration: 900926 16:16

Compound No: 40
Compound Name: Tetrachloroethylene
Scan Number: 592
Retention Time: 24.56 min.
Quant Ion: 164.0
Area: 3518
Concentration: 10.26 NG
q-value: 87

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4759

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4759V2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0933

Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	14	
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	350	E
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	6	
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4759

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4759

Sample wt/vol: 5 (g/mL) ML Lab File ID: 7C0933

Level: (low/med) LOW Date Received: 09/06/90

% Moisture: not dec. _____ Date Analyzed: 09/07/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4759

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4759

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0933

Level: (low/med) LOW Date Received: 09/06/90

% Moisture: not dec. _____ Date Analyzed: 09/07/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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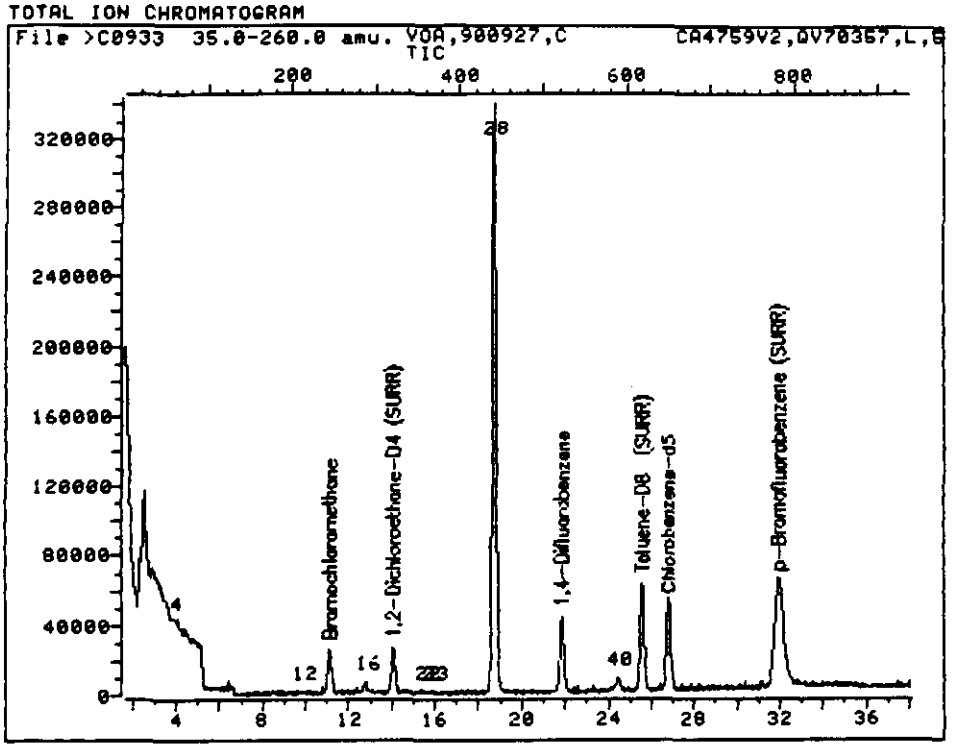
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0933::U4 Quant Output File: ^C0933::AQ
Name: VOA,900927,C
Misc: CA4759V2,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

Operator ID: MGRMS
Quant Time: 900927 22:09
Injected at: 900927 21:30

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 22:09
Output File: ^C0933::AQ Injected at: 900927 21:30
Data File: >C0933::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: CA4759V2,QV70357,L,5,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

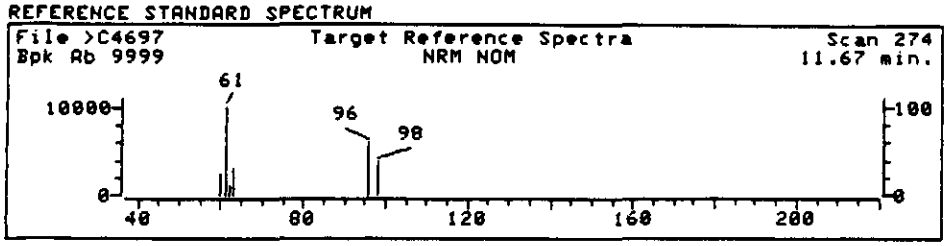
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.11	244	42889	250.00	NG	92
4)	Dichlorodifluoromethane	3.97	60	10773	~~65.63~~	~~NG~~	97
12)	Trichlorofluoromethane	9.87	212	5307	~~6.91~~	~~NG~~	96
16)	1,2-Trans-dichloroethylene	12.78	287	15613	68.19	NG	94
18)	1,2-Dichloroethane-D4 (SURR)	14.06	320	156685	282.65	NG	97
20)	*1,4-Difluorobenzene	21.85	521	192985	250.00	NG	96
22)	1,1,1-Trichloroethane	15.53	358	3973	~~4.76~~	~~NG~~	90
23)	Carbon tetrachloride	15.92	368	2271	~~2.63~~	~~NG~~	83
28)	Trichloroethylene	18.71	440	599628	1756.73	NG 1834 *	92
36)	*Chlorobenzene-d5	26.79	648	186569	250.00	NG	79
40)	Tetrachloroethylene	24.45	588	10502	28.65	NG	94
41)	Toluene-D8 (SURR)	25.58	617	273909	251.38	NG	89
45)	p-Bromofluorobenzene (SURR)	31.91	780	219231	260.15	NG	86

* Compound is ISTD

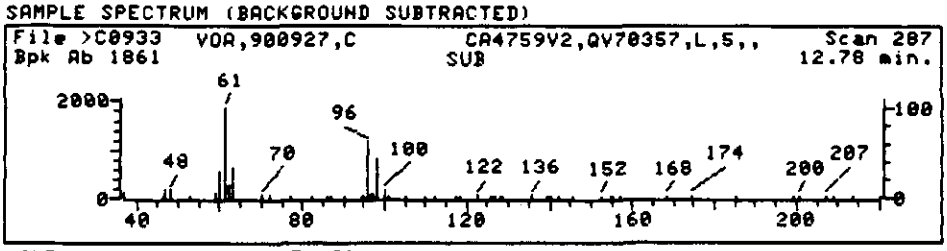
CN 10-16-90.

* value is from dilution run.

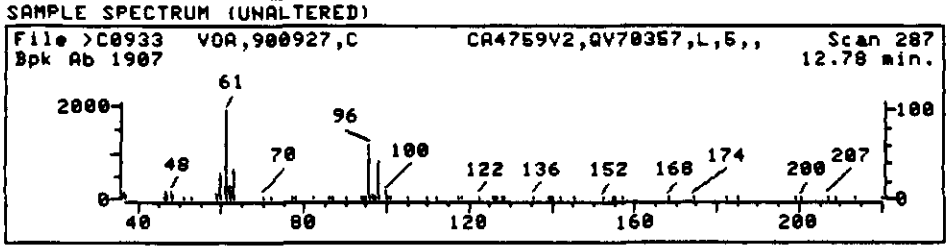
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



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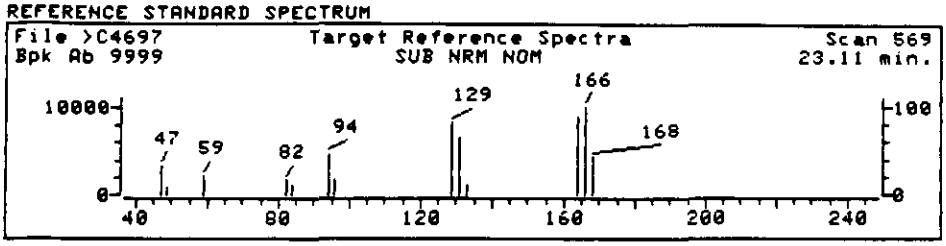
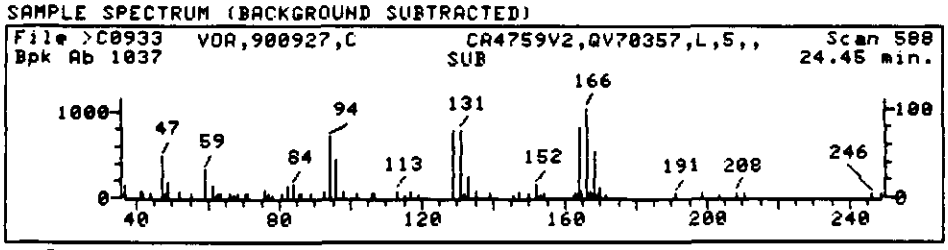
Misc: CA4759V2,QV70357,L,5,,
Quant Time: 900927 22:09 Quant ID File: IC1171::US
Injected at: 900927 21:30 Last Calibration: 900927 17:41

Compound No: 16
Compound Name: 1,2-Trans-dichloroethylene
Scan Number: 287
Retention Time: 12.78 min.
Quant Ion: 96.0
Area: 15613
Concentration: 68.19 NG
q-value: 94

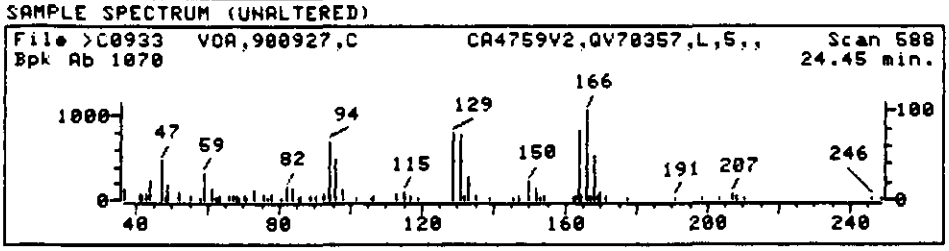
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >C0933::U4 Quant Output File: ^C0933::AQ
Name: VOA,900927,C
Misc: CA4759V2,QV70357,L,5,,
Quant Time: 900927 22:09 Quant ID File: IC1171::US
Injected at: 900927 21:30 Last Calibration: 900927 17:41

Compound No: 40
Compound Name: Tetrachloroethylene
Scan Number: 588
Retention Time: 24.45 min.
Quant Ion: 164.0
Area: 10502
Concentration: 28.65 NG
q-value: 94

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4759DL

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4759U5

Sample wt/vol: 1.0 (g/mL) ML Lab File ID: >C0983

Level: (low/med) LOW Date Received: 09/ /90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	150	UD
74-83-9	Bromomethane	150	UD
75-01-4	Vinyl Chloride	150	UD
75-00-3	Chloroethane	150	UD
75-09-2	Methylene Chloride	125	UD
67-64-1	Acetone	150	UD
75-15-0	Carbon Disulfide	125	UD
75-35-4	1,1-Dichloroethene	125	UD
75-34-3	1,1-Dichloroethane	125	UD
540-59-0	1,2-Dichlorethene (total)	111	JD
67-66-3	Chloroform	125	UD
107-06-2	1,2-Dichloroethane	125	UD
78-93-3	2-Butanone	150	UD
71-55-6	1,1,1-Trichloroethane	125	UD
56-23-5	Carbon Tetrachloride	125	UD
108-05-4	Vinyl Acetate	150	UD
75-27-4	Bromodichloromethane	125	UD
78-87-5	1,2-Dichloropropane	125	UD
10061-01-5	cis-1,3-Dichloropropene	125	UD
79-01-6	Trichloroethene	1370	D
124-48-1	Dibromochloromethane	125	UD
79-00-5	1,1,2-Trichloroethane	125	UD
71-43-2	Benzene	125	UD
10061-02-6	trans-1,3-Dichloropropene	125	UD
75-25-2	Bromoform	125	UD
108-10-1	4-Methyl-2-Pentanone	150	UD
591-78-6	2-Hexanone	150	UD
127-18-4	Tetrachloroethene	125	UD
79-34-5	1,1,2,2-Tetrachloroethane	125	UD
108-88-3	Toluene	125	UD
108-90-7	Chlorobenzene	125	UD
100-41-4	Ethylbenzene	125	UD
100-42-5	Styrene	125	UD
1330-20-7	Xylene (total)	125	UD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4759DL

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4759DL

Sample wt/vol: 1 (g/mL) ML Lab File ID: 2C0983

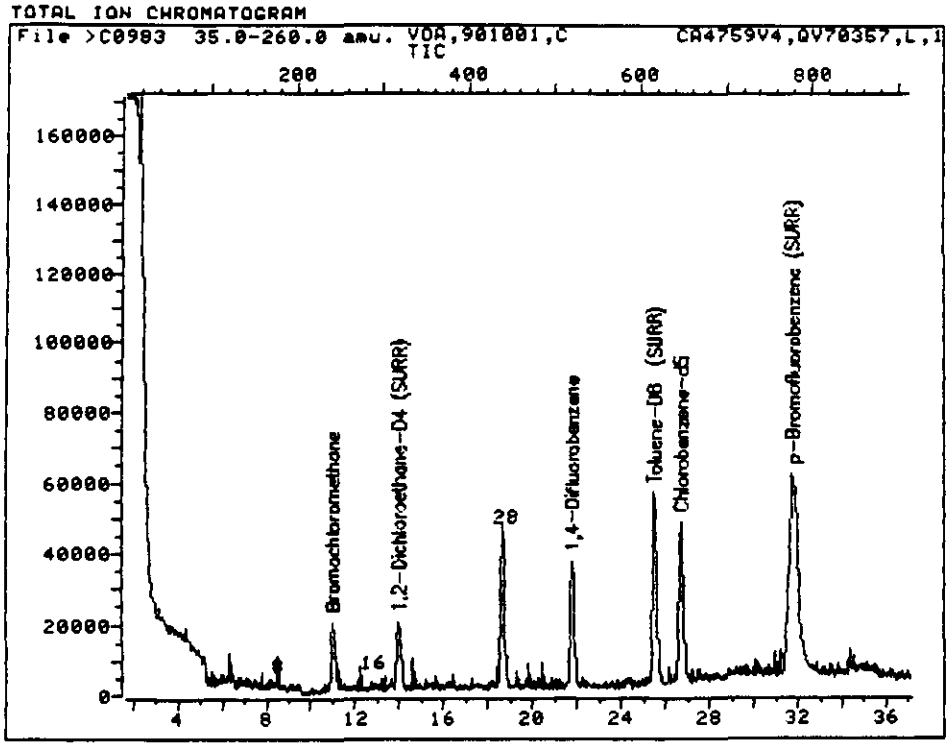
Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	50	U

TOTAL ION CHROMATOGRAM



Data File: >C0983::U4 Quant Output File: ^C0983::AQ
Name: VOA,901001,C
Misc: CA4759V4,QV70357,L,1,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 20:45
Injected at: 901003 19:55

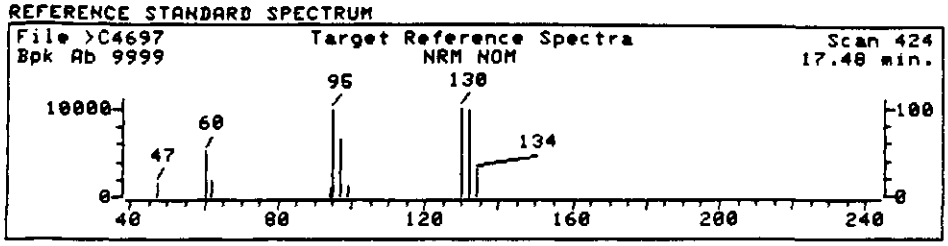
Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 20:45
Output File: ^C0983::AQ Injected at: 901003 19:55
Data File: >C0983::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4759V45QV70357,L,1,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

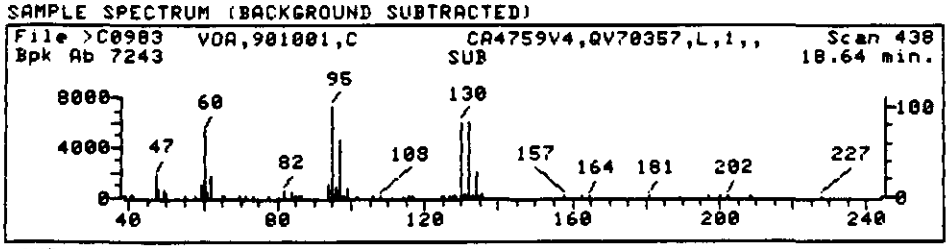
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.00	241	29878	250.00	NG	93
8)	Acrolein	8.40	174	2605	~~127.68~~	~~NG~~	98
16)	1,2-Trans-dichloroethylene	12.70	285	2098	10.85	NG	95
18)	1,2-Dichloroethane-D4 (SURR)	13.98	318	109457	258.53	NG	95
20)	*1,4-Difluorobenzene	21.78	519	139647	250.00	NG	98
28)	Trichloroethylene	18.64	438	76309	366.89	NG	81
36)	*Chlorobenzene-d5	26.73	646	162542	250.00	NG	69
41)	Toluene-D8 (SURR)	25.50	615	235191	244.68	NG	90
45)	p-Bromofluorobenzene (SURR)	31.78	776	219841	300.06	NG	88

* Compound is ISTD

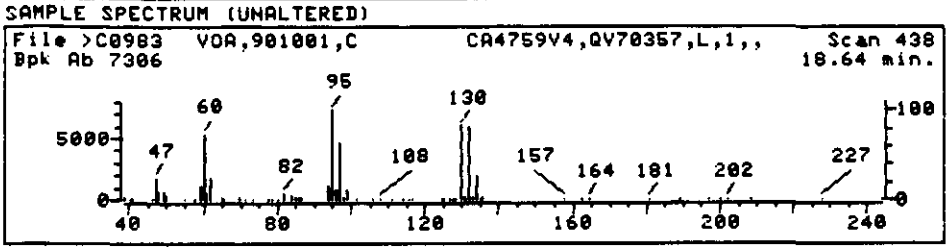
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >C0983::U4 Quant Output File: ^C0983::AQ
Name: VOA,901001,C
Misc: CA4759V4,QV70357,L,1,,
Quant Time: 901003 20:45 Quant ID File: IC1172::US
Injected at: 901003 19:55 Last Calibration: 901003 17:09

Compound No: 28
Compound Name: Trichloroethylene
Scan Number: 438
Retention Time: 18.64 min.
Quant Ion: 130.0
Area: 76309
Concentration: 366.89 NG
q-value: 81

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4760

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4760V5

Sample wt/vol: .025 (g/mL) ML Lab File ID: >C0984

Level: (low/med) ~~LOW~~ MED Date Received: 09/26/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2000	U
74-83-9	Bromomethane	2000	U
75-01-4	Vinyl Chloride	2000	U
75-00-3	Chloroethane	2000	U
75-09-2	Methylene Chloride	1000	U
67-64-1	Acetone	14000	
75-15-0	Carbon Disulfide	1000	U
75-35-4	1,1-Dichloroethene	1000	U
75-34-3	1,1-Dichloroethane	1000	U
540-59-0	1,2-Dichlorethene (total)	1000	U
67-66-3	Chloroform	1000	U
107-06-2	1,2-Dichloroethane	1000	U
78-93-3	2-Butanone	9500	
71-55-6	1,1,1-Trichloroethane	1000	U
56-23-5	Carbon Tetrachloride	1000	U
108-05-4	Vinyl Acetate	2000	U
75-27-4	Bromodichloromethane	1000	U
78-87-5	1,2-Dichloropropane	1000	U
10061-01-5	cis-1,3-Dichloropropene	1000	U
79-01-6	Trichloroethene	1000	U
124-48-1	Dibromochloromethane	1000	U
79-00-5	1,1,2-Trichloroethane	1000	U
71-43-2	Benzene	1000	U
10061-02-6	trans-1,3-Dichloropropene	1000	U
75-25-2	Bromoform	1000	U
108-10-1	4-Methyl-2-Pentanone	2000	U
591-78-6	2-Hexanone	2000	U
127-18-4	Tetrachloroethene	1000	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	U
108-88-3	Toluene	2300	
108-90-7	Chlorobenzene	1000	U
100-41-4	Ethylbenzene	1000	U
100-42-5	Styrene	1000	U
1330-20-7	Xylene (total)	1000	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4760

Lab Name: ETCNJ Contract: _____

Lab Code: T2 Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4760

Sample wt/vol: .025 (g/mL) ML Lab File ID: >C0984

Level: (low/med) MED Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK *Dilution Factor: 200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	44000	

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4760

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4760

Sample wt/vol: .025 (g/ML) ML Lab File ID: >C0984

Level: (low/med) ~~LOW~~ MED @ 10-16-90 Date Received: 09/26/90

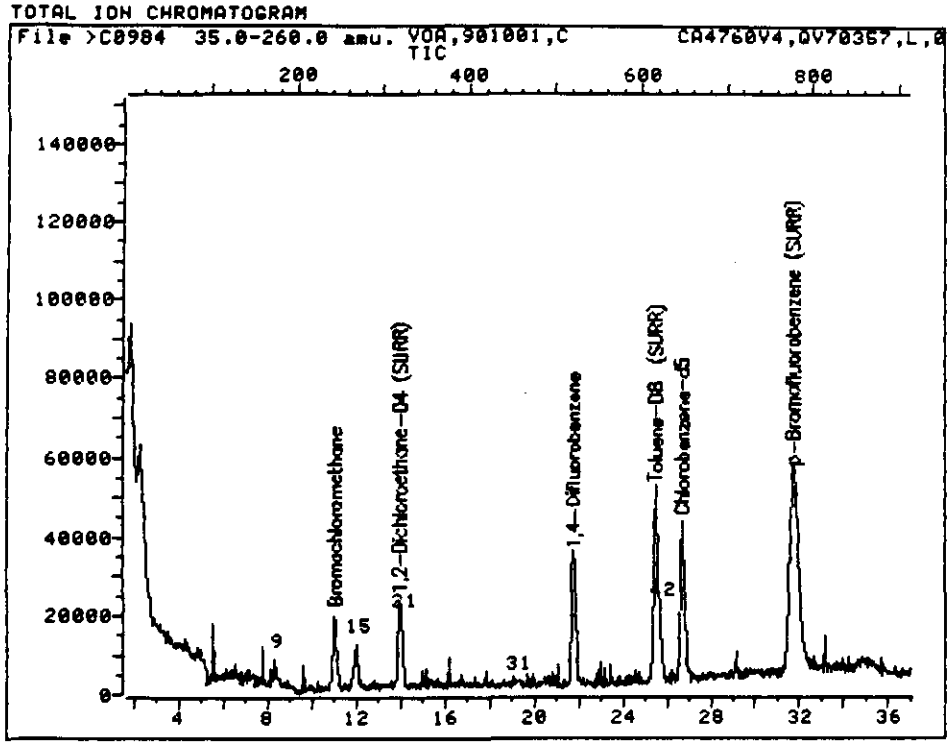
% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1.00

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0984::U4 Quant Output File: ^C0984::AQ
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.025,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 21:22
Injected at: 901003 20:44

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 21:22
Output File: ^C0984::AQ Injected at: 901003 20:44
Data File: >C0984::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4760V45,QV70357,L,0.025,,

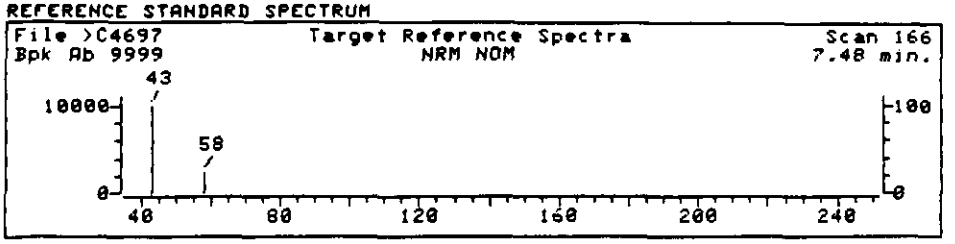
ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.02	242	26590	250.00	NG	95
9)	Acetone	8.30	172	28010	361.08	NG	94
15)	Tetrahydrofuran	11.99	267	31422	1105.28	NG	100
18)	1,2-Dichloroethane-D4 (SURR)	13.96	318	108974	289.22	NG	98
20)	*1,4-Difluorobenzene	21.76	519	126921	250.00	NG	97
21)	Methyl ethyl ketone	14.04	320	5403	237.66	NG	93
31)	Benzene	19.20	453	2217	~~3.74~~	NG	50
36)	*Chlorobenzene-d5	26.69	646	146632	250.00	NG	72
41)	Toluene-D8 (SURR)	25.48	615	211646	244.07	NG	89
42)	Toluene	25.68	620	28303	56.55	NG	98
45)	p-Bromofluorobenzene (SURR)	31.70	775	195826	296.28	NG	82

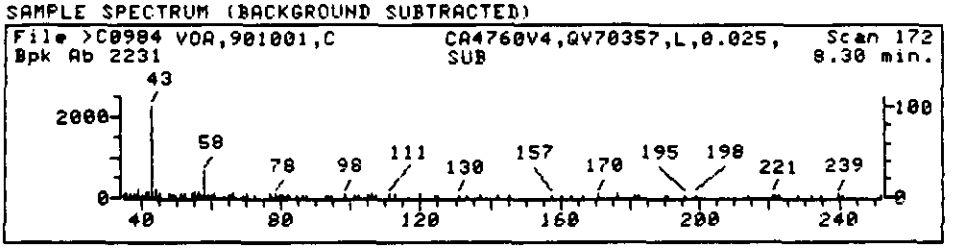
* Compound is ISTD

CV
10-16-90.

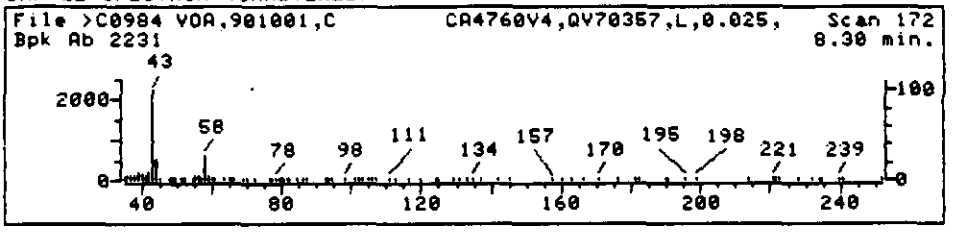
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



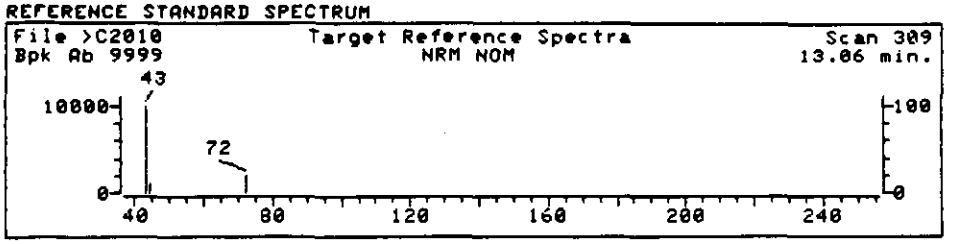
SAMPLE SPECTRUM (UNALTERED)



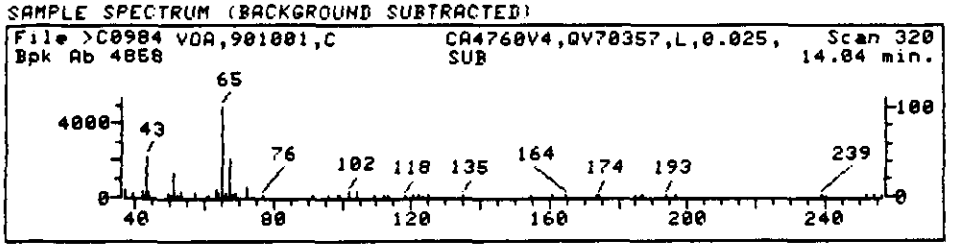
Data File: >C0984::U4 Quant Output File: ^C0984::AQ
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.025,,
Quant Time: 901003 21:22 Quant ID File: IC1172::US
Injected at: 901003 20:44 Last Calibration: 901003 17:09

Compound No: 9
Compound Name: Acetone
Scan Number: 172
Retention Time: 8.30 min.
Quant Ion: 43.0
Area: 28010
Concentration: 361.08 NG
q-value: 94

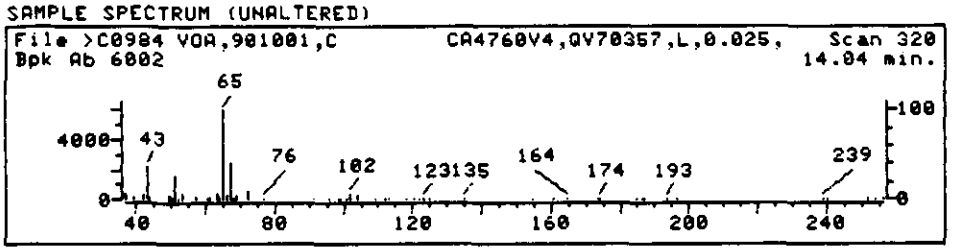
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



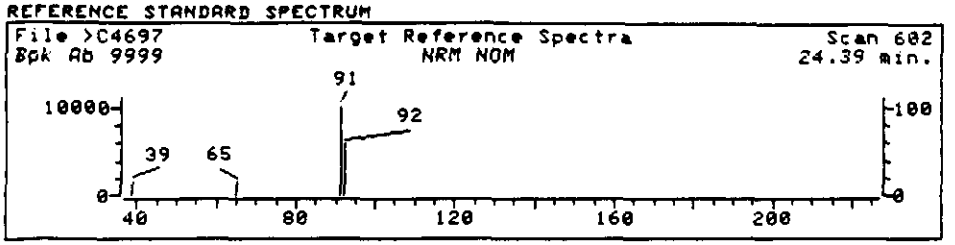
SAMPLE SPECTRUM (UNALTERED)



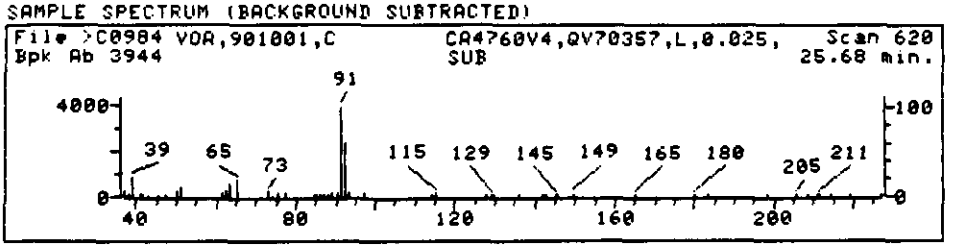
Data File: >C0984::U4 Quant Output File: ^C0984::AQ
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.025,,
Quant Time: 901003 21:22 Quant ID File: IC1172::US
Injected at: 901003 20:44 Last Calibration: 901003 17:09

Compound No: 21
Compound Name: Methyl ethyl ketone
Scan Number: 320
Retention Time: 14.04 min.
Quant Ion: 72.0
Area: 5403
Concentration: 237.66 NG
q-value: 93

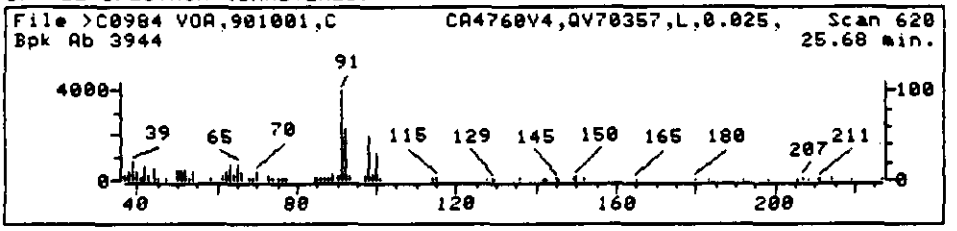
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



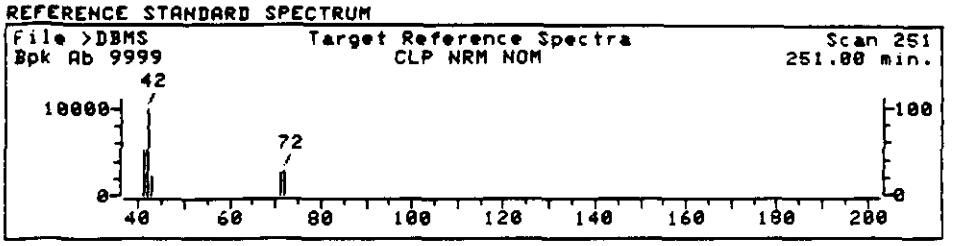
SAMPLE SPECTRUM (UNALTERED)



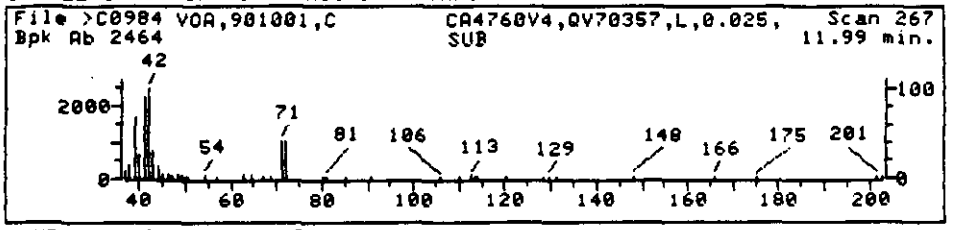
Data File: >C0984::U4 Quant Output File: ^C0984::AQ
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.025,,
Quant Time: 901003 21:22 Quant ID File: IC1172::US
Injected at: 901003 20:44 Last Calibration: 901003 17:09

Compound No: 42
Compound Name: Toluene
Scan Number: 620
Retention Time: 25.68 min.
Quant Ion: 92.0
Area: 28303
Concentration: 56.55 NG
q-value: 98

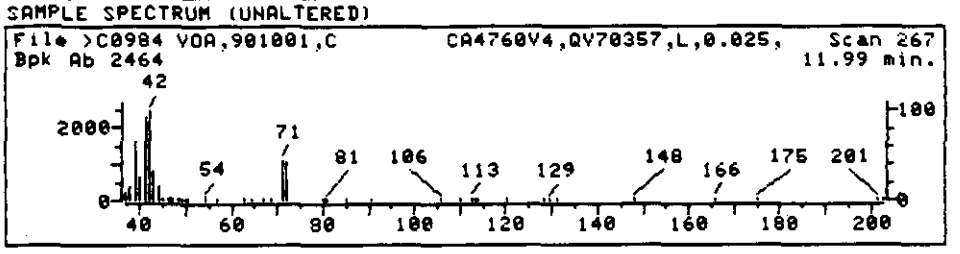
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



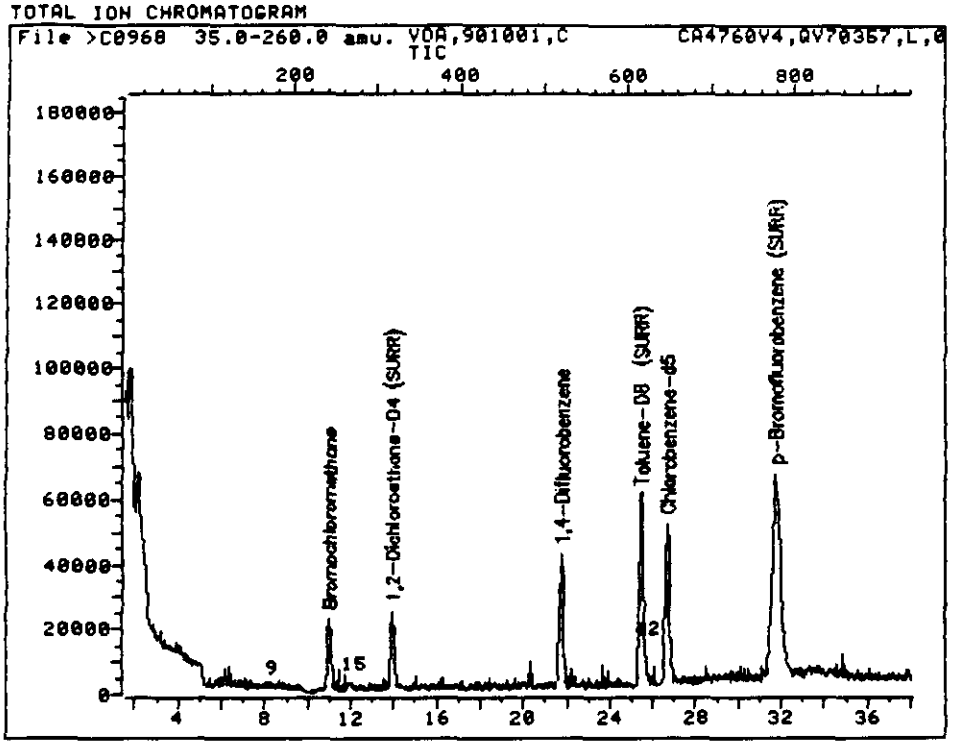
SAMPLE SPECTRUM (UNALTERED)



Data File: >C0984::U4 Quant Output File: ^C0984::AQ
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.025,,
Quant Time: 901003 21:22 Quant ID File: IC1172::US
Injected at: 901003 20:44 Last Calibration: 901003 17:09

Compound No: 15
Compound Name: Tetrahydrofuran
Scan Number: 267
Retention Time: 11.99 min.
Quant Ion: 42.0
Area: 31422
Concentration: 1105.28 NG
q-value: 100

TOTAL ION CHROMATOGRAM



Data File: >C0968::U4 Quant Output File: ^C0968::AQ
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.005,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 21:27
Injected at: 901002 20:48

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 21:27
Output File: ^C0968::AQ Injected at: 901002 20:48
Data File: >C0968::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4760V4,QV70357,L,0.005,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.00	243	30387	250.00	NG	92
9)	Acetone	8.29	173	6939	~~99.25~~	~~NG~~	84
15)	Tetrahydrofuran	11.97	268	4136	129.49	NG	100
18)	1,2-Dichloroethane-D4 (SURR)	13.95	319	125868	320.66	NG	91
20)	*1,4-Difluorobenzene	21.78	521	153691	250.00	NG	94
36)	*Chlorobenzene-d5	26.71	648	178955	250.00	NG	67
41)	Toluene-D8 (SURR)	25.46	616	271240	258.82	NG	89
42)	Toluene	25.66	621	8329	14.02	NG	91
45)	p-Bromofluorobenzene (SURR)	31.76	778	237617	320.99	NG	78

* Compound is ISTD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4761

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4761U4

Sample wt/vol: .02 (g/mL) ML Lab File ID: >C0970

Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 250

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2500	U
74-83-9	Bromomethane	2500	U
75-01-4	Vinyl Chloride	3300	
75-00-3	Chloroethane	2500	U
75-09-2	Methylene Chloride	1300	U
67-64-1	Acetone	140000	E
75-15-0	Carbon Disulfide	1300	U
75-35-4	1,1-Dichloroethene	1300	U
75-34-3	1,1-Dichloroethane	1300	U
540-59-0	1,2-Dichlorethene (total)	1300	U
67-66-3	Chloroform	1300	U
107-06-2	1,2-Dichloroethane	1300	U
78-93-3	2-Butanone	830000	E
71-55-6	1,1,1-Trichloroethane	1300	U
56-23-5	Carbon Tetrachloride	1300	U
108-05-4	Vinyl Acetate	2500	U
75-27-4	Bromodichloromethane	1300	U
78-87-5	1,2-Dichloropropane	1300	U
10061-01-5	cis-1,3-Dichloropropene	1300	U
79-01-6	Trichloroethene	1300	U
124-48-1	Dibromochloromethane	1300	U
79-00-5	1,1,2-Trichloroethane	1300	U
71-43-2	Benzene	1300	U
10061-02-6	trans-1,3-Dichloropropene	1300	U
75-25-2	Bromoform	1300	U
108-10-1	4-Methyl-2-Pentanone	3100	
591-78-6	2-Hexanone	2500	U
127-18-4	Tetrachloroethene	1300	U
79-34-5	1,1,2,2-Tetrachloroethane	1300	U
108-88-3	Toluene	18000	
108-90-7	Chlorobenzene	1300	U
100-41-4	Ethylbenzene	700	J
100-42-5	Styrene	1300	U
1330-20-7	Xylene (total)	3300	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4761

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4761

Sample wt/vol: .02 (g/mL) ML Lab File ID: >C0970

Level: (low/med) MED Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 250

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	220000	E

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
A4761

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4761V4

Sample wt/vol: .02 (g/mL) ML Lab File ID: >C0970

Level: (low/med) LOW Date Received: 09/26/90

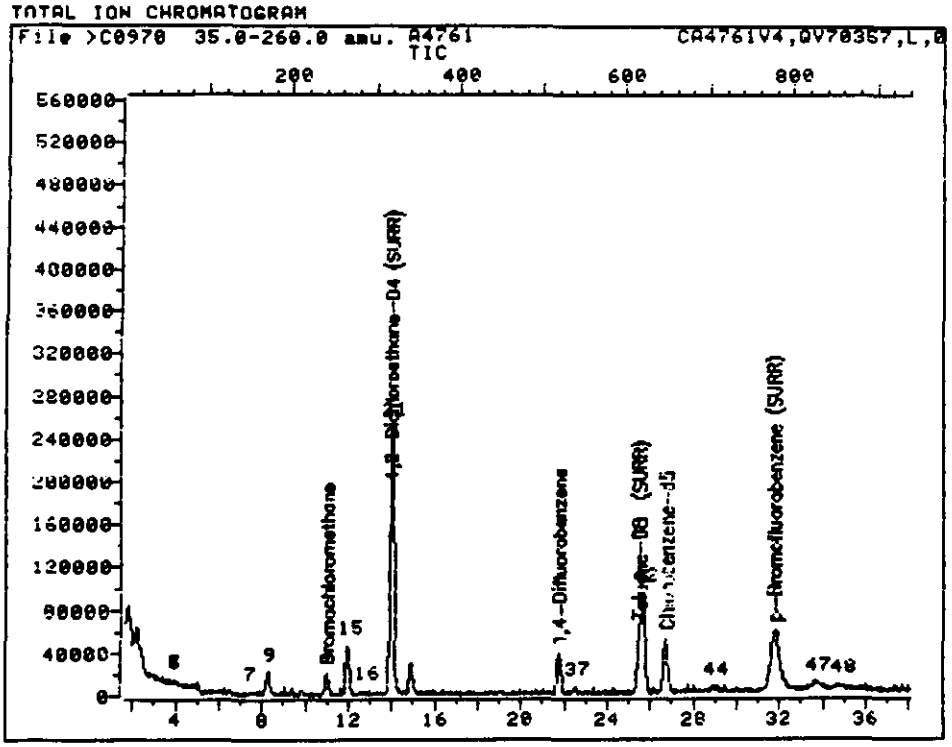
% Moisture: not dec. Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 250.0

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC	Q
01. 78-92-2	2-Butanol	14.93	16000	J
02.	Unknown	9.85	2700	J

TOTAL ION CHROMATOGRAM



Data File: >C0970::U4 Quant Output File: ^C0970::AQ
Name: A4761
Misc: CA4761V4,QV70357,L,0.02,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8/81
Quant Time: 901002 23:04
Injected at: 901002 22:25

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 23:04
Output File: ^C0970::AQ Injected at: 901002 22:25
Data File: >C0970::U4 Dilution Factor: 1.00000
Name: A4761
Misc: CA4761U4,QV70357,L,0.02,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

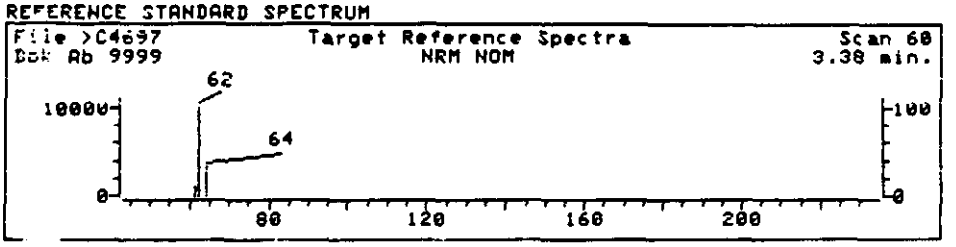
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	245	28016	250.00	NG	96
4)	Dichlorodifluoromethane	3.95	61	5344	~~64.09~~	~~NG~~	90
5)	Vinyl chloride	3.95	61	4878	65.11	NG	86
7)	Methylene chloride	7.45	151	4490	~~36.17~~	~~NG~~	97
9)	Acetone	8.26	172	180294	2796.53	NG 3350*	97
15)	Tetrahydrofuran	11.94	267	132089	4485.60	NG 3200*	100
16)	1,2-Trans-dichloroethylene	12.72	287	3092	~~16.85~~	~~NG~~	95
18)	1,2-Dichloroethane-D4 (SURR)	13.96	319	117337	324.22	NG	93
20)	*1,4-Difluorobenzene	21.75	520	145859	250.00	NG	96
21)	Methyl ethyl ketone	14.00	320	336682	16573.60	NG 10333*	95
36)	*Chlorobenzene-d5	26.73	648	173819	250.00	NG	73
37)	Methyl-iso-butyl ketone	22.49	539	14691	61.76	NG	83
41)	Toluene-D8 (SURR)	25.48	616	255850	251.34	NG	90
42)	Toluene	25.67	621	213132	369.41	NG	93
44)	Ethylbenzene	28.98	706	6810	14.02	NG	82
45)	p-Bromofluorobenzene (SURR)	31.73	777	226610	315.17	NG	77
47)	m-Xylene	33.71	828	21377	33.59	NG	93
48)	o+p-Xylenes	34.87	858	21115	32.13	NG	85

* Compound is ISTD

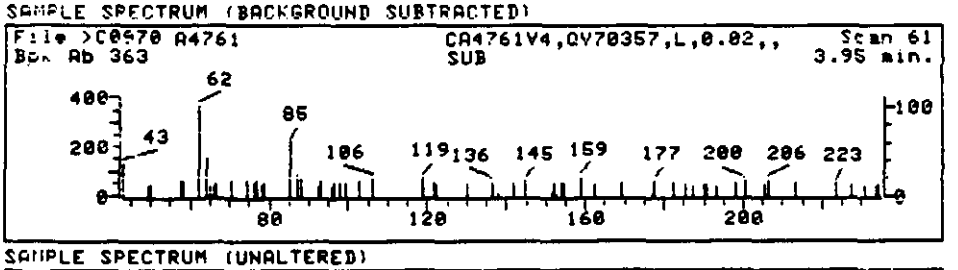
CP
10-16-90

* values are from dilution run.

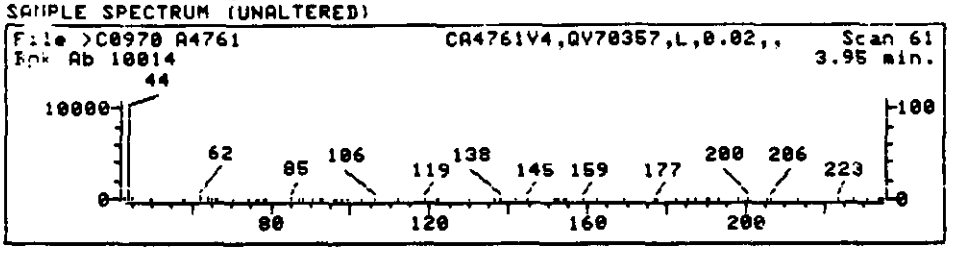
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



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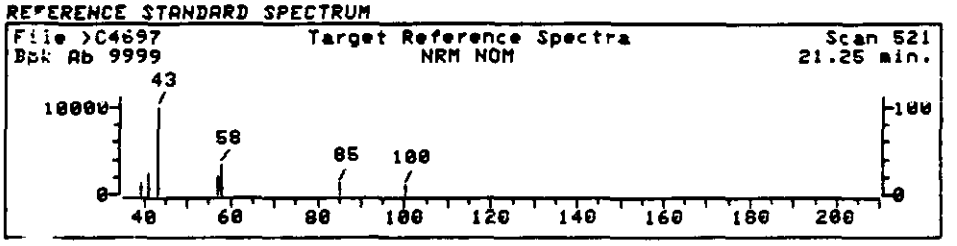
Name: A4761
Misc: CA4761V4,QV70357,L,0.02,,
Quant Time: 901002 23:04 Quant ID File: IC1171::US
Injected at: 901002 22:25 Last Calibration: 901002 16:53

Compound No: 5
Compound Name: Vinyl chloride
Scan Number: 61
Retention Time: 3.95 min.
Quant Ion: 62.0
Area: 4878
Concentration: 65.11 NG
q-value: 86

REFERENCE STANDARD SPECTRUM



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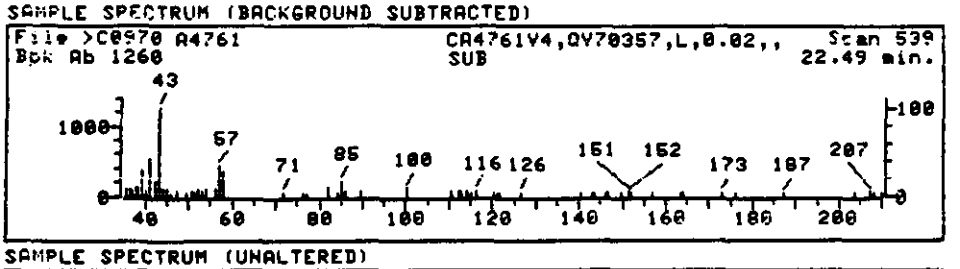

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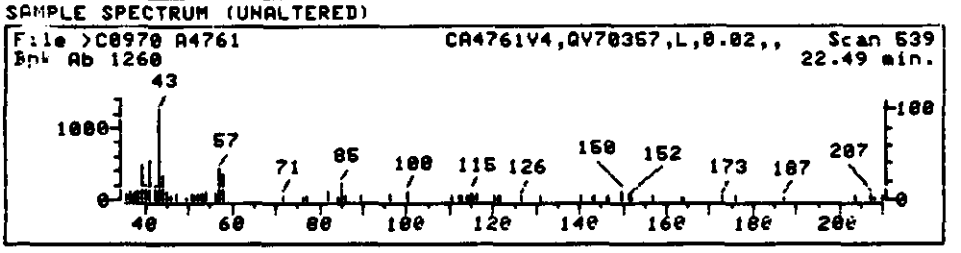

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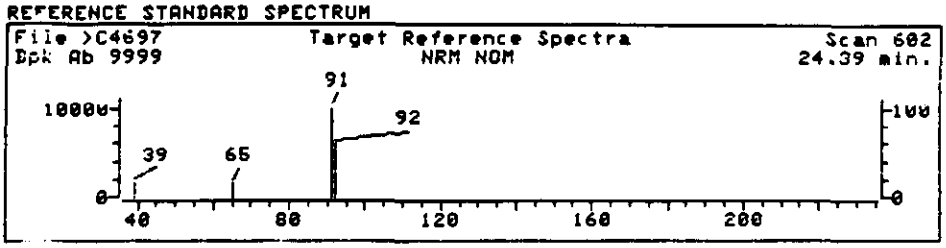
Name: A4761
Misc: CA4761U4,QV70357,L,0.02,,
Quant Time: 901002 23:04 Quant ID File: IC1171::US
Injected at: 901002 22:25 Last Calibration: 901002 16:53

Compound No: 37
Compound Name: Methyl-iso-butyl ketone
Scan Number: 539
Retention Time: 22.49 min.
Quant Ion: 43.0
Area: 14691
Concentration: 61.76 NG
q-value: 83

REFERENCE STANDARD SPECTRUM



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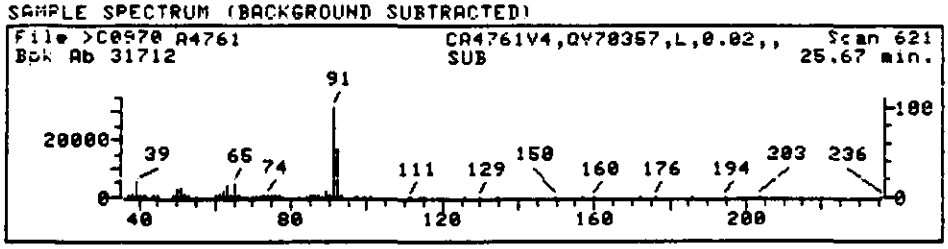

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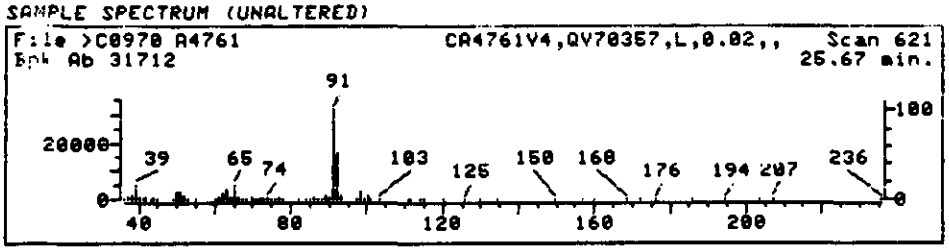

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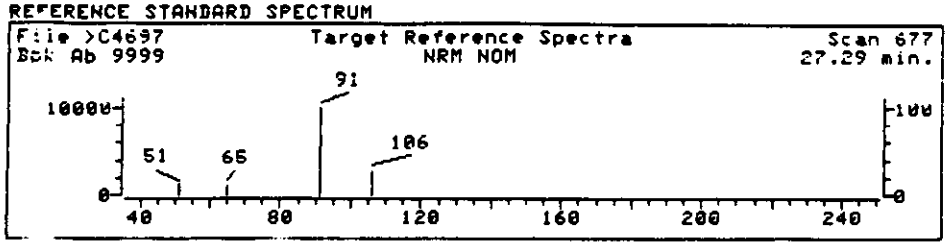
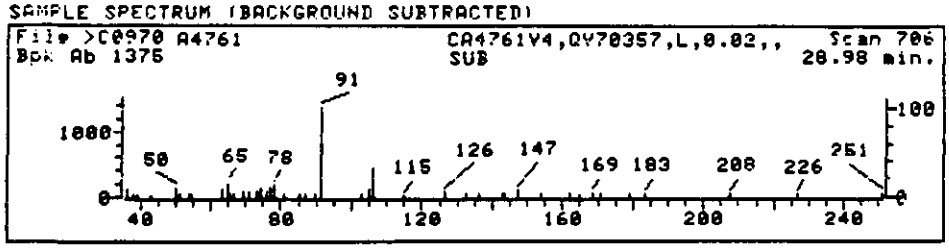
Misc: CA4761V4,QV70357,L,0.02,,
Quant Time: 901002 23:04 Quant ID File: IC1171::US
Injected at: 901002 22:25 Last Calibration: 901002 16:53

Compound No: 42
Compound Name: Toluene
Scan Number: 621
Retention Time: 25.67 min.
Quant Ion: 92.0
Area: 213132
Concentration: 369.41 NG
q-value: 93

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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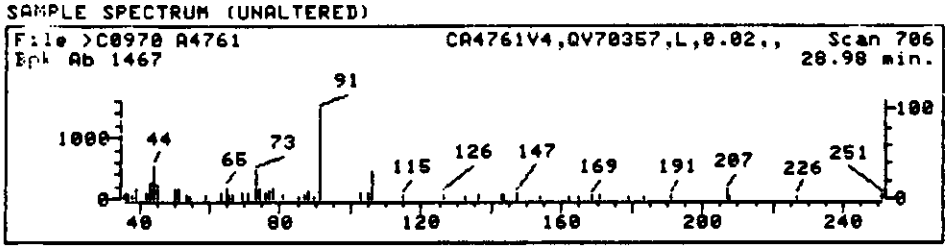

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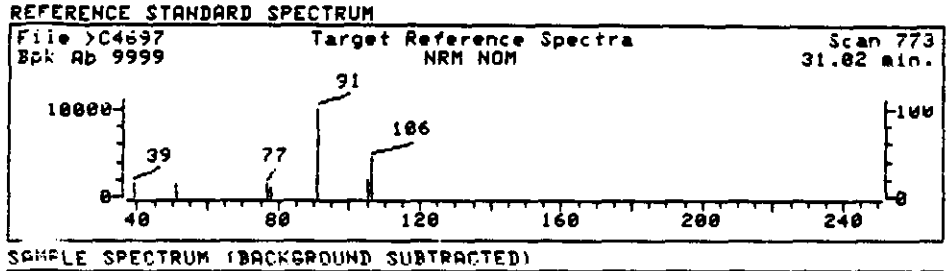
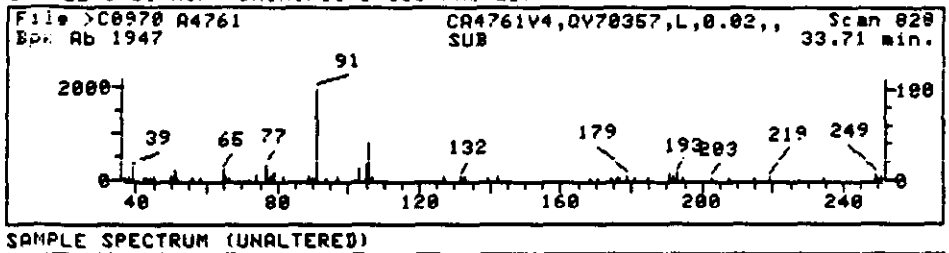
Quant Time: 901002 23:04 Quant ID File: IC1171::US
Injected at: 901002 22:25 Last Calibration: 901002 16:53

Compound No: 44
Compound Name: Ethylbenzene
Scan Number: 706
Retention Time: 28.98 min.
Quant Ion: 106.0
Area: 6810
Concentration: 14.02 NG
q-value: 82

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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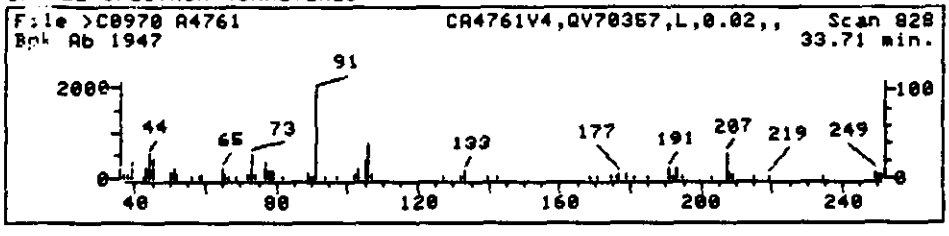

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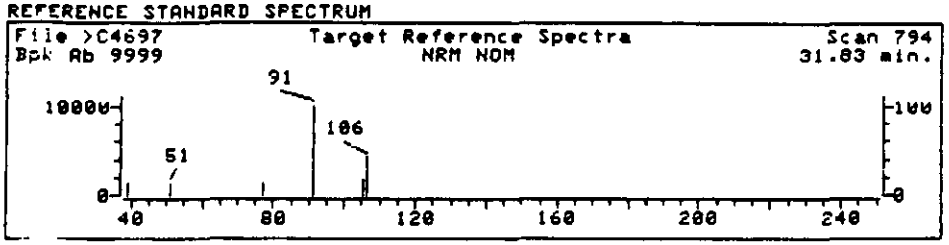
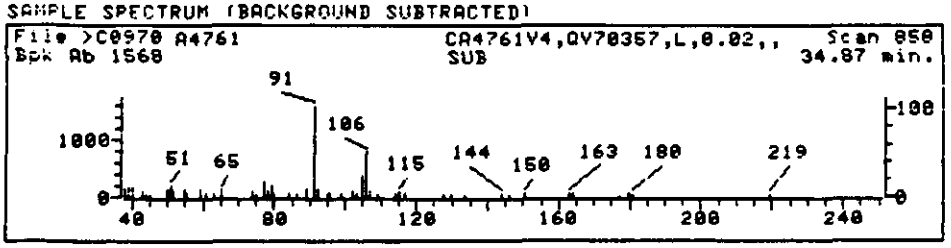
Misc: CA4761V4,QV70357,L,0.02,,
Quant Time: 901002 23:04 Quant ID File: IC1171::US
Injected at: 901002 22:25 Last Calibration: 901002 16:53

Compound No: 47
Compound Name: m-Xylene
Scan Number: 828
Retention Time: 33.71 min.
Quant Ion: 106.0
Area: 21377
Concentration: 33.59 NG
q-value: 93

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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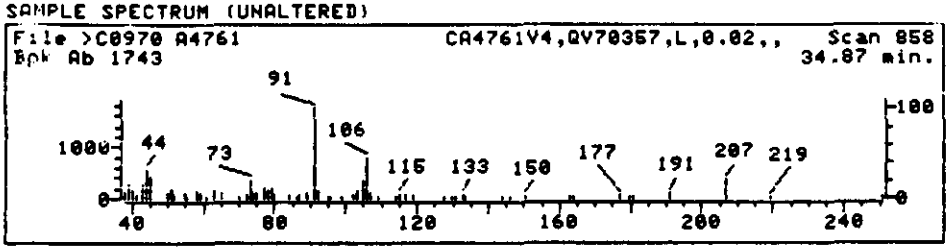

Data File: >C0970::U4 Quant Output File: ^C0970::AQ
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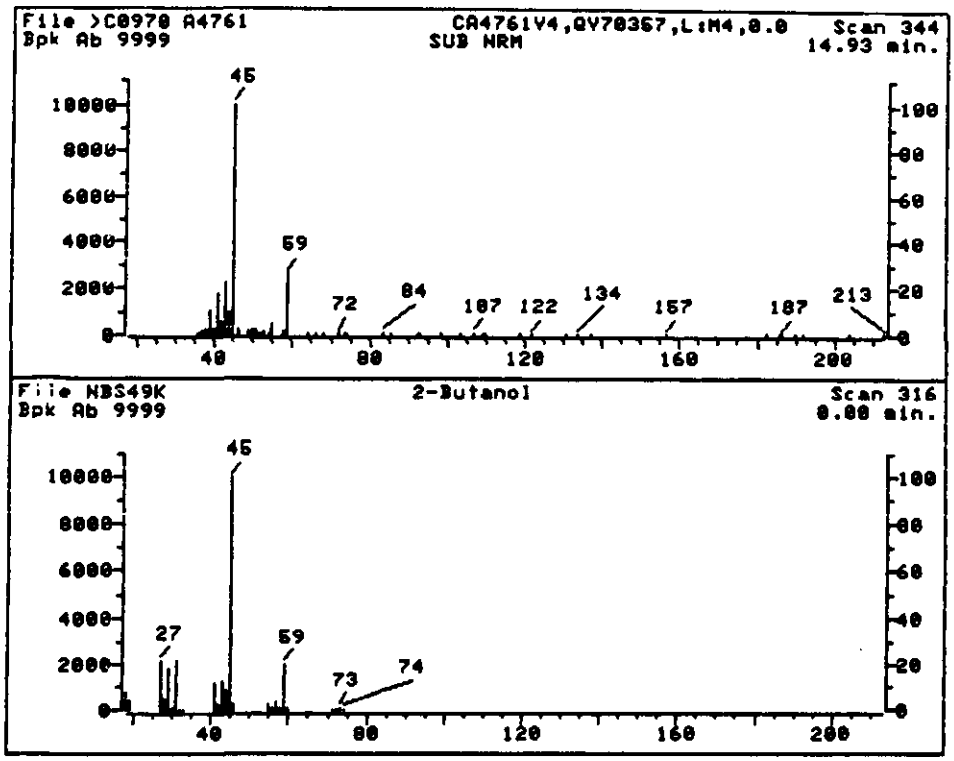
Misc: CA4761V4,QV70357,L,0.02,,
Quant Time: 901002 23:04 Quant ID File: IC1171::US
Injected at: 901002 22:25 Last Calibration: 901002 16:53

Compound No: 48
Compound Name: o+p-Xylenes
Scan Number: 858
Retention Time: 34.87 min.
Quant Ion: 106.0
Area: 21115
Concentration: 32.13 NG
q-value: 85

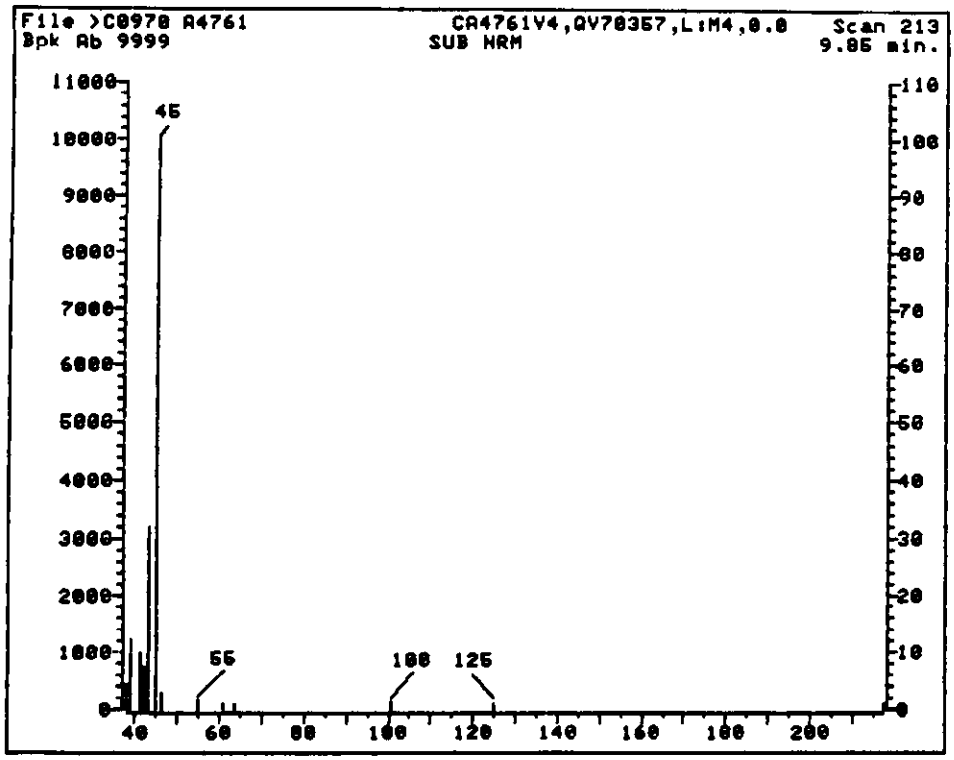


Data File: >C0970
Name: A4761
Misc Data: CA4761V4,QV70357,L:M4,0.02,, 1:250 DL
RT (min): 14.93
Scan: 344
Area: 347476 Rank: 6
Semi-quantitative Conc (uncorrected): 318.16 NG
Semi-quantitative Conc (corrected): 15907.80 ug/l
Calculated using Istd: Bromochloromethane @ 11.01 minutes

1. 2-Butanol 74 C4H10O

Sample file: >C0970 Spectrum #: 344
Search speed: 2 Tilting option: S No. of ion ranges searched: 45

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_1	R_IV
1.	60	78922	1715	NBS49K	35	48	2	0	100	14	30	12



Data File: >C0970
Name: A4761
Misc Data: CA4761V4,QV70357,L:M4,0.02,, 1:250 DL
RT (min): 9.85
Scan: 213
Area: 57973 Rank: 8
Semi-quantitative Conc (uncorrected): 53.08 NG
Semi-quantitative Conc (corrected): 2654.06 ug/l
Calculated using Istd: Bromochloromethane @ 11.01 minutes

No PBM hits for this scan.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4761DL

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4761U5

Sample wt/vol: .0 (g/mL) ML Lab File ID: >C0986

Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 5000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50000	UD
74-83-9	Bromomethane	50000	UD
75-01-4	Vinyl Chloride	50000	UD
75-00-3	Chloroethane	50000	UD
75-09-2	Methylene Chloride	25000	UD
67-64-1	Acetone	170000	D
75-15-0	Carbon Disulfide	25000	UD
75-35-4	1,1-Dichloroethene	25000	UD
75-34-3	1,1-Dichloroethane	25000	UD
540-59-0	1,2-Dichlorethene (total)	25000	UD
67-66-3	Chloroform	25000	UD
107-06-2	1,2-Dichloroethane	25000	UD
78-93-3	2-Butanone	520000	D
71-55-6	1,1,1-Trichloroethane	25000	UD
56-23-5	Carbon Tetrachloride	25000	UD
108-05-4	Vinyl Acetate	50000	UD
75-27-4	Bromodichloromethane	25000	UD
78-87-5	1,2-Dichloropropane	25000	UD
10061-01-5	cis-1,3-Dichloropropene	25000	UD
79-01-6	Trichloroethene	25000	UD
124-48-1	Dibromochloromethane	25000	UD
79-00-5	1,1,2-Trichloroethane	25000	UD
71-43-2	Benzene	25000	UD
10061-02-6	trans-1,3-Dichloropropene	25000	UD
75-25-2	Bromoform	25000	UD
108-10-1	4-Methyl-2-Pentanone	50000	UD
591-78-6	2-Hexanone	50000	UD
127-18-4	Tetrachloroethene	25000	UD
79-34-5	1,1,2,2-Tetrachloroethane	25000	UD
108-88-3	Toluene	21000	JD
108-90-7	Chlorobenzene	25000	UD
100-41-4	Ethylbenzene	25000	UD
100-42-5	Styrene	25000	UD
1330-20-7	Xylene (total)	25000	UD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4761DL

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4761DL

Sample wt/vol: .001 (g/mL) ML Lab File ID: >C0986

Level: (low/med) MED Date Received: 091219

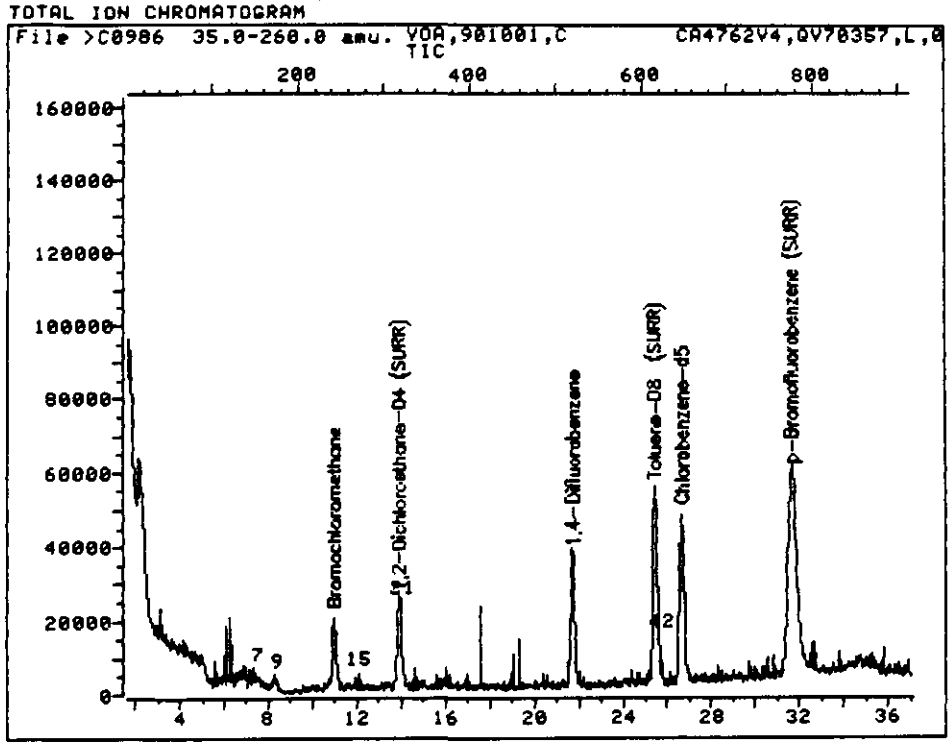
% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 5000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	160000	D

FORM I VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0986::U4 Quant Output File: ^C0986::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.001,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 22:59
Injected at: 901003 22:21

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 22:59
Output File: ^C0986::AQ Injected at: 901003 22:21
Data File: >C0986::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4767,U4,QV70357,L,0.001,,

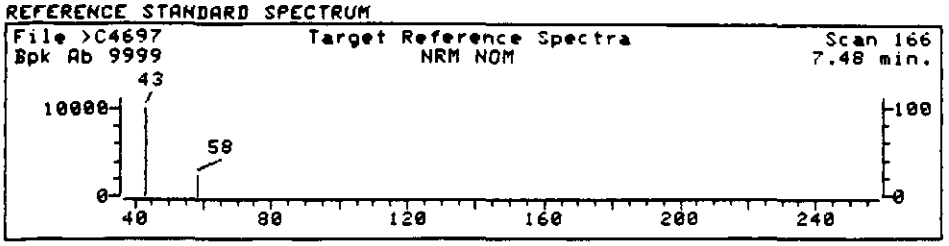
ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.96	241	27061	250.00	NG	99
7)	Methylene chloride	7.43	150	6308	~~44.48~~	NG	92
9)	Acetone	8.29	172	13223	167.49	NG	89
15)	Tetrahydrofuran	11.97	267	4629	159.99	NG	100
18)	1,2-Dichloroethane-D4 (SURR)	13.91	317	116601	304.08	NG	99
20)	*1,4-Difluorobenzene	21.74	519	136448	250.00	NG	94
21)	Methyl ethyl ketone	13.98	319	12628	516.69	NG	97
36)	*Chlorobenzene-d5	26.68	646	157154	250.00	NG	66
41)	Toluene-D8 (SURR)	25.43	614	231507	249.10	NG	83
42)	Toluene	25.62	619	11180	20.84	NG	95
45)	p-Bromofluorobenzene (SURR)	31.64	774	214732	303.13	NG	82

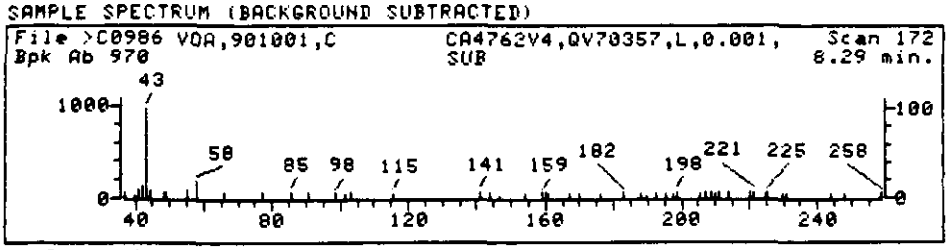
* Compound is ISTD

CN 10-16-90.

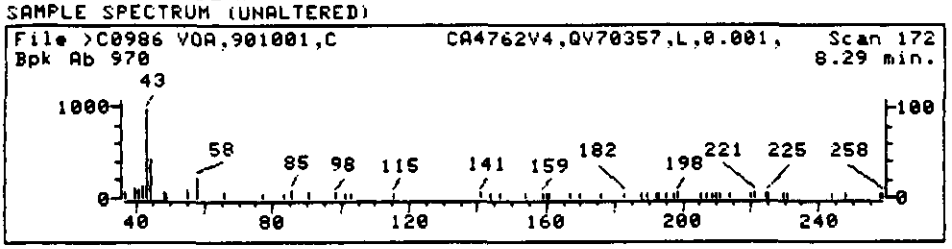
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



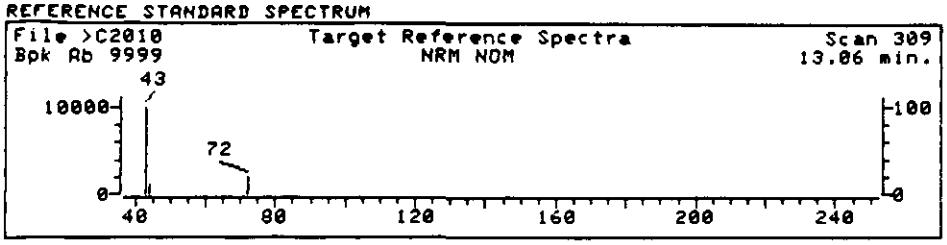
SAMPLE SPECTRUM (UNALTERED)



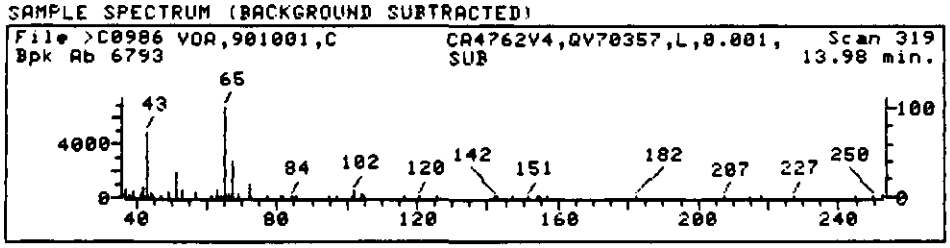
Data File: >C0986::U4 Quant Output File: ^C0986::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.001,,
Quant Time: 901003 22:59 Quant ID File: IC1172::US
Injected at: 901003 22:21 Last Calibration: 901003 17:09

Compound No: 9
Compound Name: Acetone
Scan Number: 172
Retention Time: 8.29 min.
Quant Ion: 43.0
Area: 13223
Concentration: 167.49 NG
q-value: 89

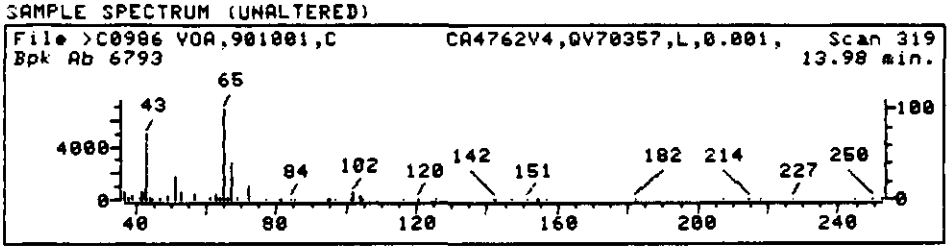
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



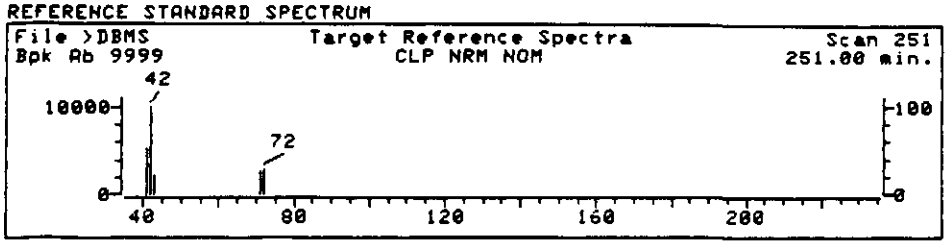
SAMPLE SPECTRUM (UNALTERED)



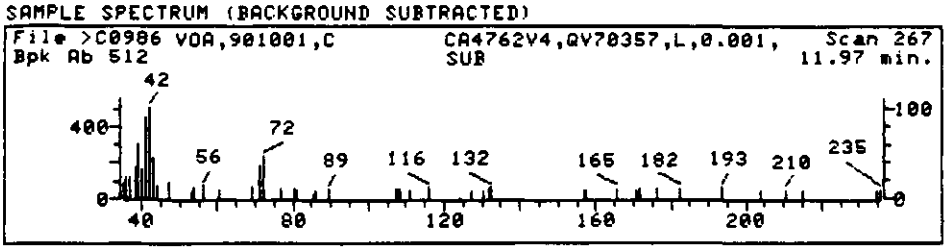
Data File: >C0986::U4 Quant Output File: ^C0986::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.001,,
Quant Time: 901003 22:59 Quant ID File: IC1172::US
Injected at: 901003 22:21 Last Calibration: 901003 17:09

Compound No: 21
Compound Name: Methyl ethyl ketone
Scan Number: 319
Retention Time: 13.98 min.
Quant Ion: 72.0
Area: 12628
Concentration: 516.69 NG
q-value: 97

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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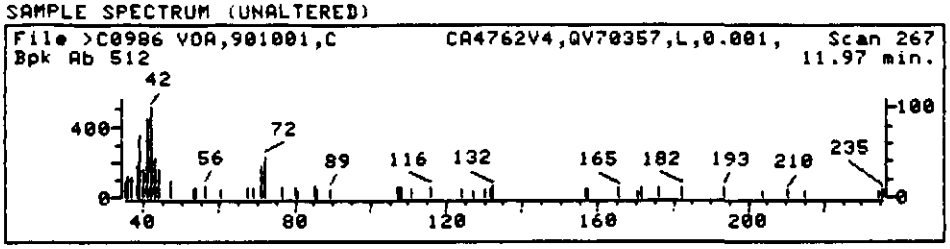


Data File: >C0986::U4 Quant Output File: ^C0986::AQ
Name: VOA,901001,C 4/22/93
Misc: CA4762V4,QV70357,L,0.001,,
Quant Time: 901003 22:59 Quant ID File: IC1172::US
Injected at: 901003 22:21 Last Calibration: 901003 17:09

Compound No: 15
Compound Name: Tetrahydrofuran
Scan Number: 267
Retention Time: 11.97 min.
Quant Ion: 42.0
Area: 4629
Concentration: 159.99 NG
q-value: 100

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4762

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4762U4

Sample wt/vol: .5 (g/mL) ML Lab File ID: >C0969

Level: (low/med) ~~LOW~~ MED Date Received: 09/26/90

% Moisture: not dec. Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl Chloride	330	
75-00-3	Chloroethane	100	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	5200	E
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichlorethene (total)	1400	
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	25000	E
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	50	U
108-05-4	Vinyl Acetate	100	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	37	J
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	110	
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	570	
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	66	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4762

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4762

Sample wt/vol: .5 (g/mL) ML Lab File ID: >C0969

Level: (low/med) MED Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	9000	E

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4762

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4762

Sample wt/vol: .5 (g/ML) ML Lab File ID: >C0969

Level: (low/med) LOW Date Received: 09/26/90

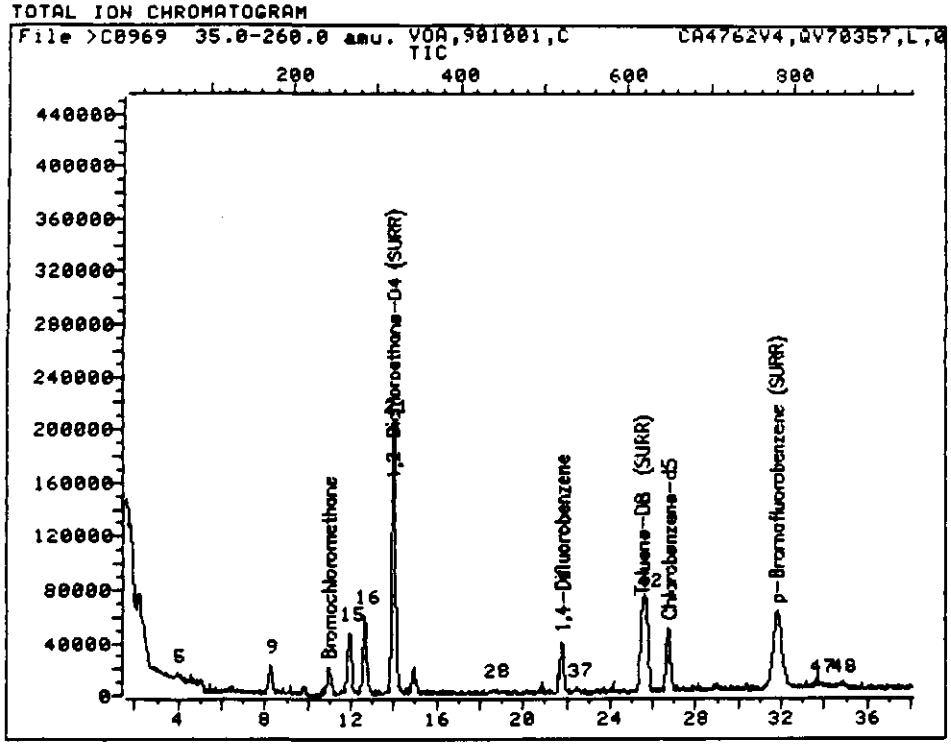
% Moisture: not dec. _____ Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 10

Number TICs found: _____ CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		2-Butanol	14.92	440	J
2.		Unknown	9.89	160	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0969::U4 Quant Output File: ^C0969::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 22:15
Injected at: 901002 21:37

QUANT REPORT

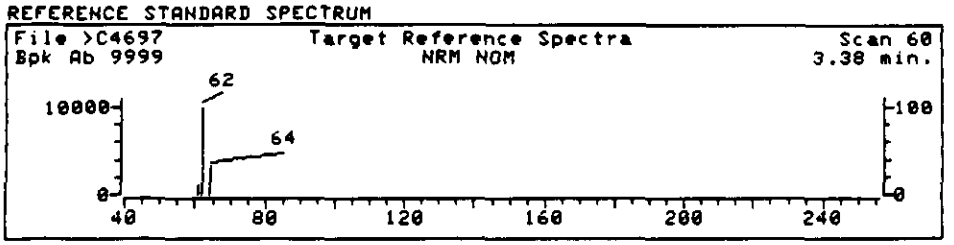
Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 22:15
Output File: ^C0969::AQ Injected at: 901002 21:37
Data File: >C0969::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

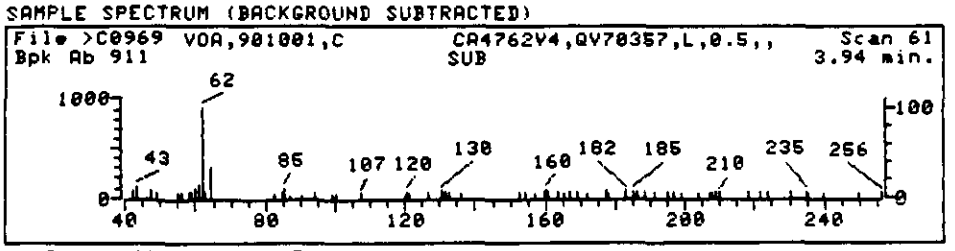
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.96	242	29250	250.00	NG	98
5)	Vinyl chloride	3.94	61	12789	163.49	NG	99
9)	Acetone	8.25	172	176238	2618.29	NG 2800*	98
15)	Tetrahydrofuran	11.93	267	137914	4485.83	NG 4980*	100
16)	1,2-Trans-dichloroethylene	12.67	286	134570	702.26	NG	93
18)	1,2-Dichloroethane-D4 (SURR)	13.95	319	122208	323.44	NG	93
20)	*1,4-Difluorobenzene	21.78	521	152364	250.00	NG	94
21)	Methyl ethyl ketone	13.99	320	266355	12551.88	NG 8025*	96
28)	Trichloroethylene	18.68	441	4193	18.63	NG	75
36)	*Chlorobenzene-d5	26.75	649	179637	250.00	NG	70
37)	Methyl-iso-butyl ketone	22.52	540	13019	52.96	NG	89
41)	Toluene-D8 (SURR)	25.50	617	274359	260.80	NG	90
42)	Toluene	25.70	622	168759	283.03	NG	96
45)	p-Bromofluorobenzene (SURR)	31.76	778	235927	317.50	NG	80
47)	m-Xylene	33.81	831	10939	16.63	NG	95
48)	o+p-Xylenes	34.82	857	11268	16.59	NG	82

* Compound is ISTD

REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



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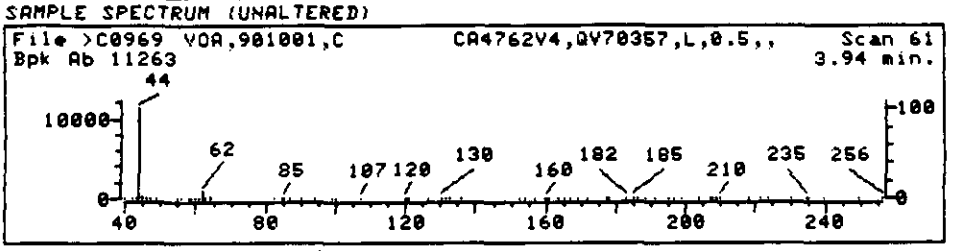
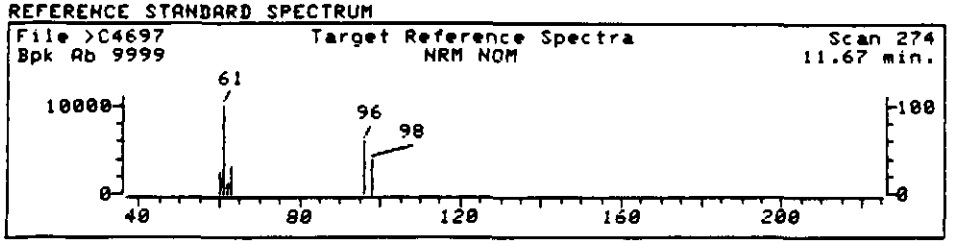


Data File: >C0969::U4
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15
Injected at: 901002 21:37

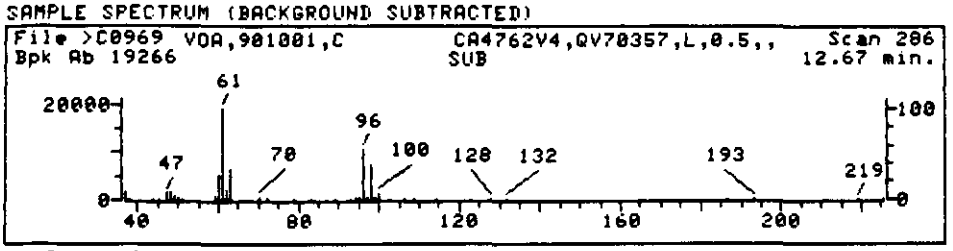
Quant Output File: ^C0969::AQ
Quant ID File: IC1171::US
Last Calibration: 901002 16:53

Compound No: 5
Compound Name: Vinyl chloride
Scan Number: 61
Retention Time: 3.94 min.
Quant Ion: 62.0
Area: 12789
Concentration: 163.49 NG
q-value: 99

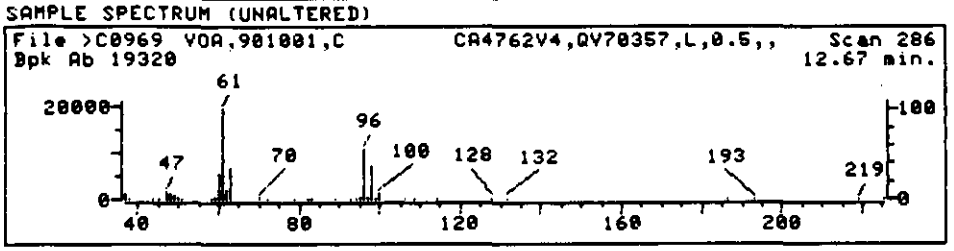
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



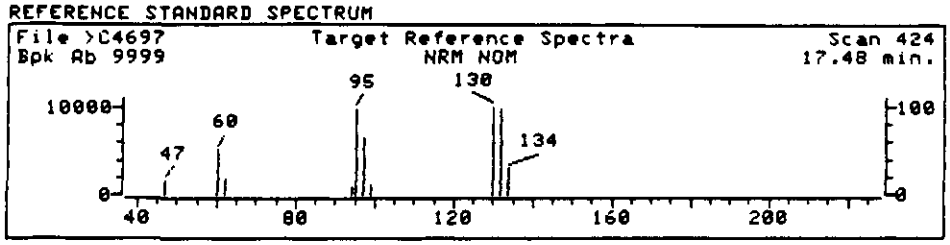
SAMPLE SPECTRUM (UNALTERED)



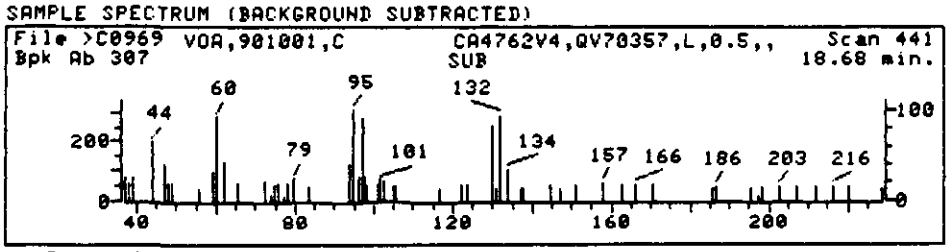
Data File: >C0969::U4 Quant Output File: ^C0969::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15 Quant ID File: IC1171::US
Injected at: 901002 21:37 Last Calibration: 901002 16:53

Compound No: 16
Compound Name: 1,2-Trans-dichloroethylene
Scan Number: 286
Retention Time: 12.67 min.
Quant Ion: 96.0
Area: 134570
Concentration: 702.26 NG
q-value: 93

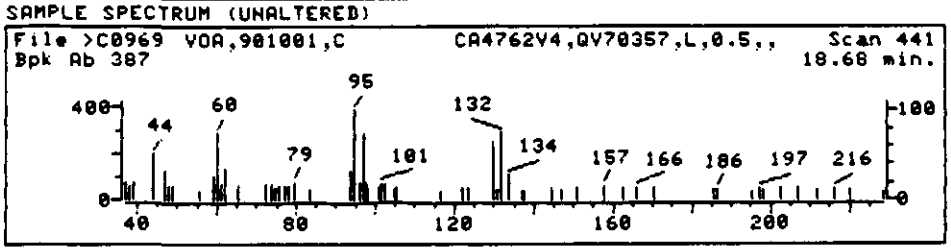
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



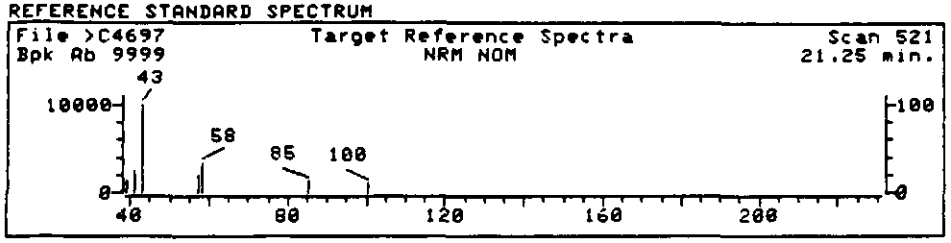
SAMPLE SPECTRUM (UNALTERED)



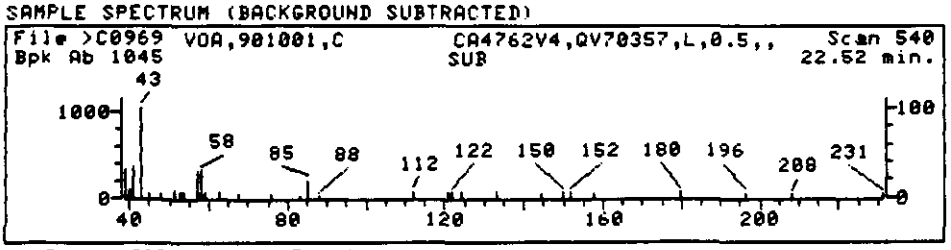
Data File: >C0969::U4 Quant Output File: ^C0969::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15 Quant ID File: IC1171::US
Injected at: 901002 21:37 Last Calibration: 901002 16:53

Compound No: 28
Compound Name: Trichloroethylene
Scan Number: 441
Retention Time: 18.68 min.
Quant Ion: 130.0
Area: 4193
Concentration: 18.63 NG
q-value: 75

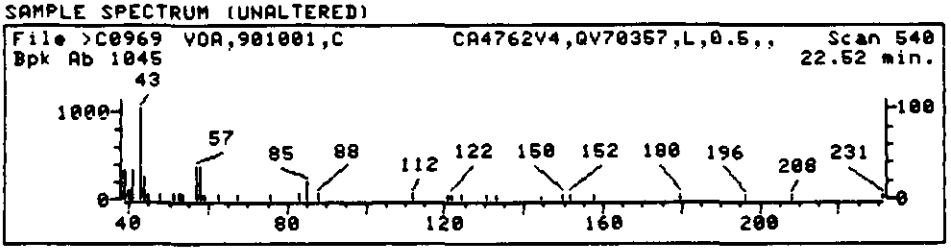
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



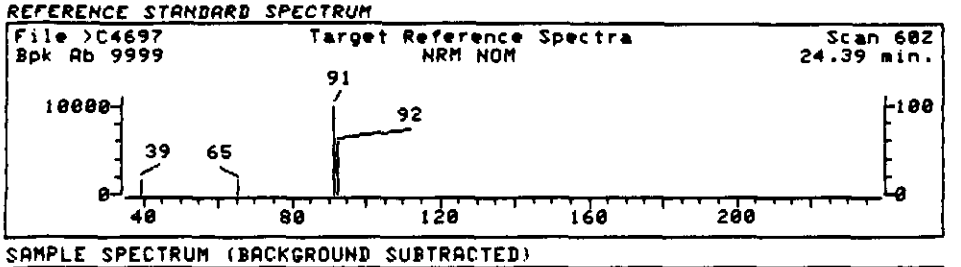
SAMPLE SPECTRUM (UNALTERED)



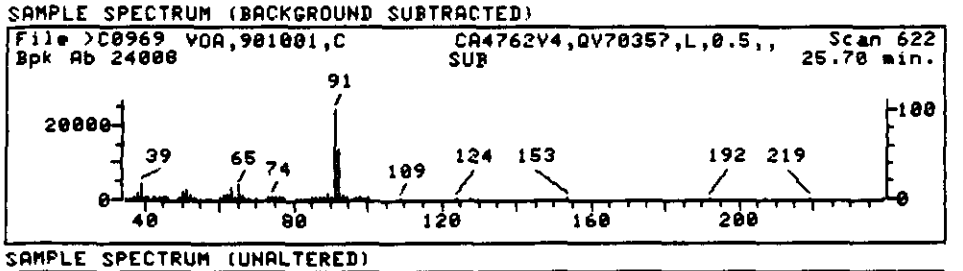
Data File: >C0969::U4 Quant Output File: ^C0969::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15 Quant ID File: IC1171::US
Injected at: 901002 21:37 Last Calibration: 901002 16:53

Compound No: 37
Compound Name: Methyl-iso-butyl ketone
Scan Number: 540
Retention Time: 22.52 min.
Quant Ion: 43.0
Area: 13019
Concentration: 52.96 NG
q-value: 89

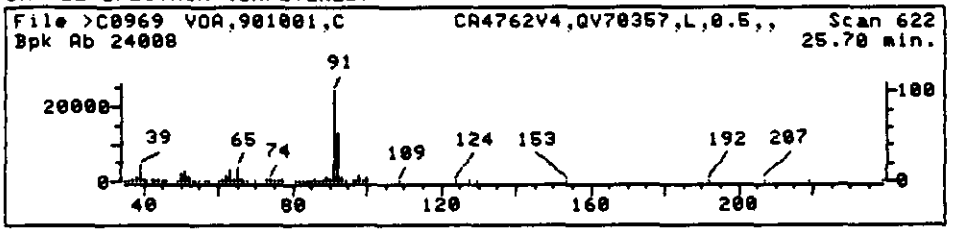
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



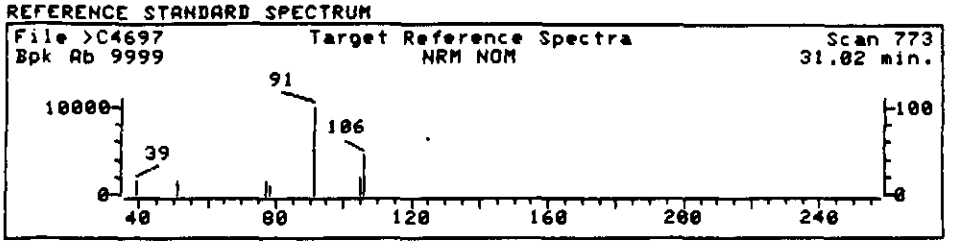
Data File: >C0969::U4
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15
Injected at: 901002 21:37

Quant Output File: ^C0969::AQ

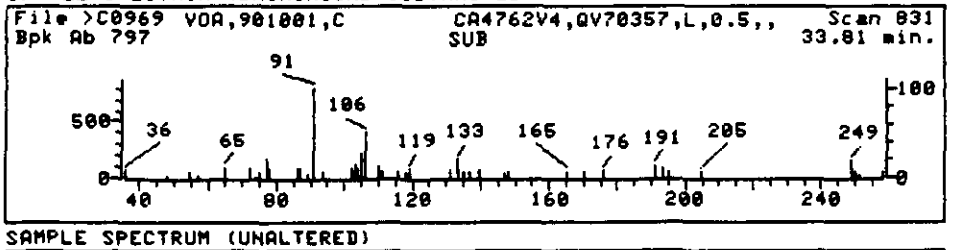
Quant ID File: IC1171::US
Last Calibration: 901002 16:53

Compound No: 42
Compound Name: Toluene
Scan Number: 622
Retention Time: 25.70 min.
Quant Ion: 92.0
Area: 168759
Concentration: 283.03 NG
q-value: 96

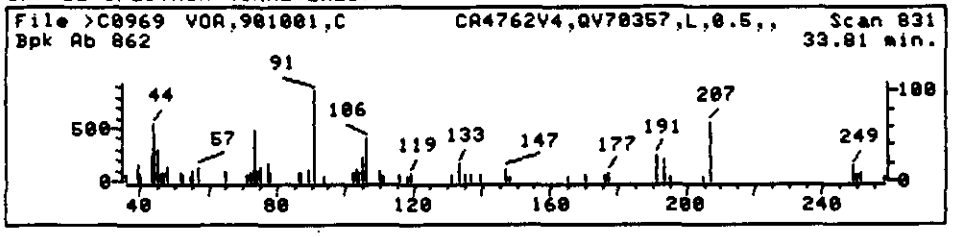
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)

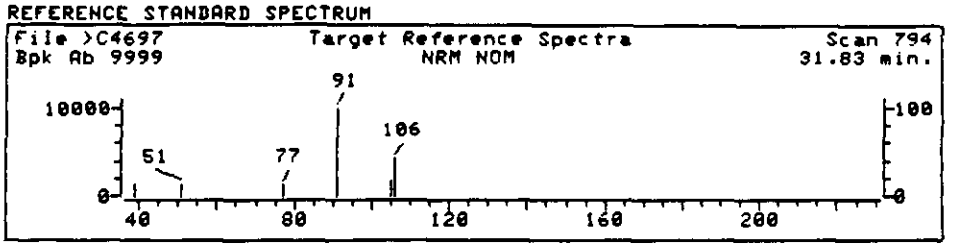


Data File: >C0969::U4
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15
Injected at: 901002 21:37

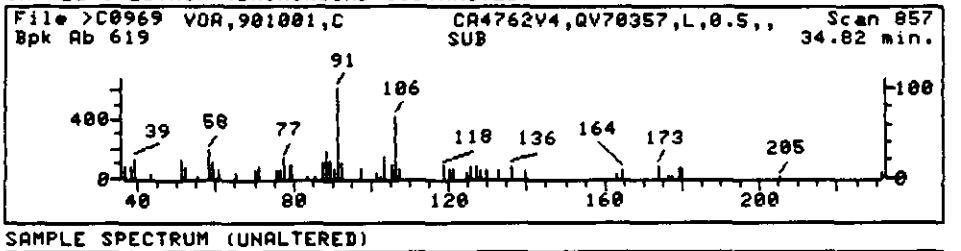
Quant Output File: ^C0969::AQ
Quant ID File: IC1171::US
Last Calibration: 901002 16:53

Compound No: 47
Compound Name: m-Xylene
Scan Number: 831
Retention Time: 33.81 min.
Quant Ion: 106.0
Area: 10939
Concentration: 16.63 NG
q-value: 95

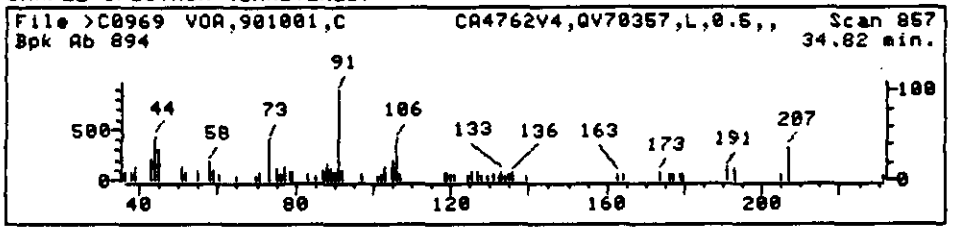
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



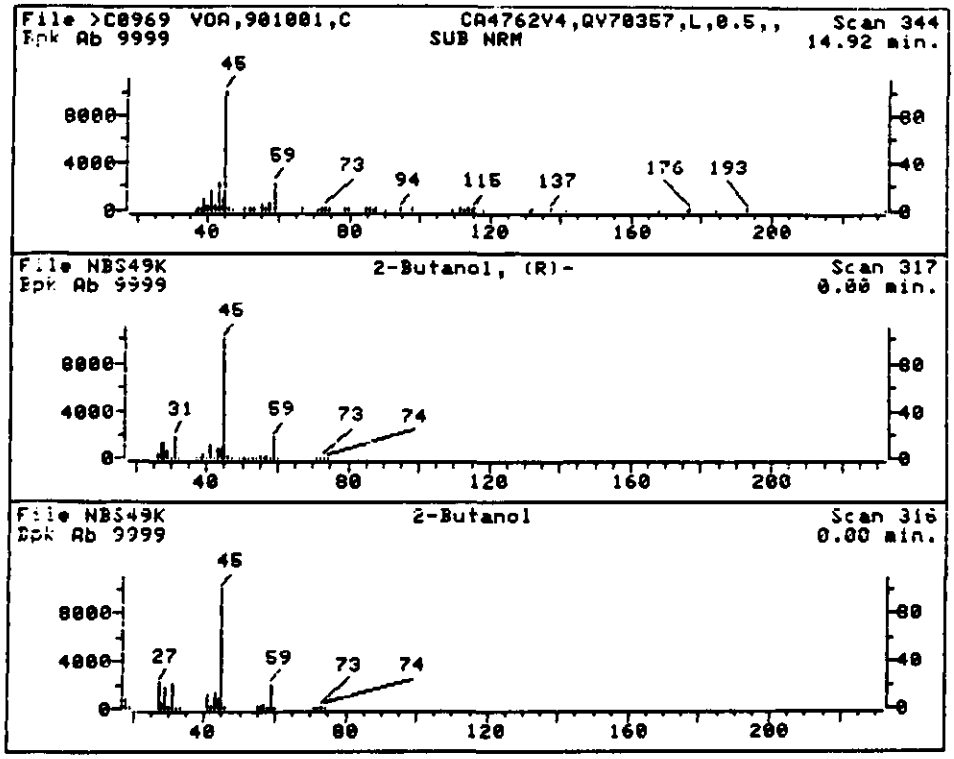
SAMPLE SPECTRUM (UNALTERED)



Data File: >C0969::U4
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.5,,
Quant Time: 901002 22:15
Injected at: 901002 21:37

Quant Output File: ^C0969::AQ
Quant ID File: IC1171::US
Last Calibration: 901002 16:53

Compound No: 48
Compound Name: o+p-Xylenes
Scan Number: 857
Retention Time: 34.82 min.
Quant Ion: 106.0
Area: 11268
Concentration: 16.59 NG
q-value: 82

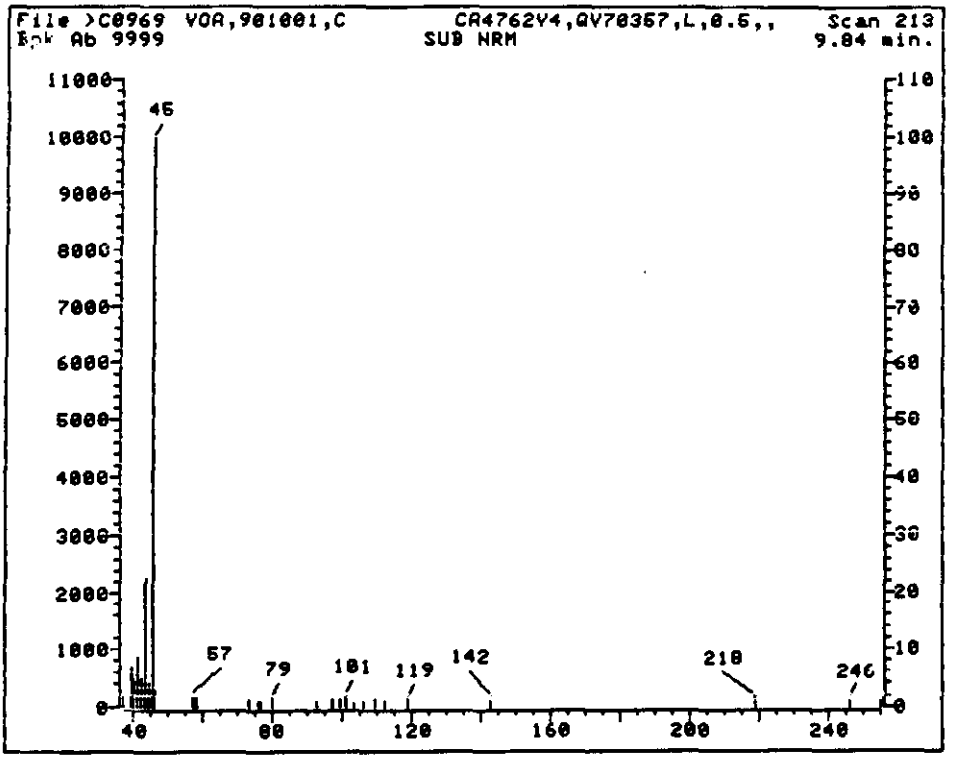


Data File: >C0969::U4
Name: VOA,901001,C
Misc Data: CA4762V4,QV70357,L,0.5,,
RT (min): 14.92
Scan: 344
Area: 245480 Rank: 7
Semi-quantitative Conc (uncorrected): 219.74 NG
Semi-quantitative Conc (corrected): 439.48 ug/l
Calculated using Istd: Bromochloromethane @ 11.00 minutes

1. 2-Butanol, (R)- 74 C4H10O
2. 2-Butanol 74 C4H10O

Sample file: >C0969 Spectrum #: 344
Search speed: 2 Tilting option: S No. of ion ranges searched: 45

	Prob.	CAS #	CON #	ROUT	K	DK	#FLG	TILT	%	CON	C_I	R_IO
1.	60	14898794	1716	NBS49K	36	44	0	0	84	14	30	19
2.	52	78922	1715	NBS49K	43	40	2	0	100	16	20	14



Data File: >C0969::U4
Name: VOA,901001,C
Misc Data: CA4762V4,QV70357,L,0.5,,
R: (min): 9.84
Scan: 213
Area: 88566 Rank: 8
Semi-quantitative Conc (uncorrected): 79.28 NG
Semi-quantitative Conc (corrected): 158.56 ug/l
Calculated using Istd: Bromochloromethane @ 11.00 minutes

No PBM hits for this scan.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4762DL

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4762U5

Sample wt/vol: .0 (g/mL) ML Lab File ID: >C0985

Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	2000	UD
74-83-9	Bromomethane	2000	UD
75-01-4	Vinyl Chloride	2000	UD
75-00-3	Chloroethane	2000	UD
75-09-2	Methylene Chloride	1000	UD
67-64-1	Acetone	5600	D
75-15-0	Carbon Disulfide	1000	UD
75-35-4	1,1-Dichloroethene	1000	UD
75-34-3	1,1-Dichloroethane	1000	UD
540-59-0	1,2-Dichlorethene (total)	1400	D
67-66-3	Chloroform	1000	UD
107-06-2	1,2-Dichloroethane	1000	UD
78-93-3	2-Butanone	16000	D
71-55-6	1,1,1-Trichloroethane	1000	UD
56-23-5	Carbon Tetrachloride	1000	UD
108-05-4	Vinyl Acetate	2000	UD
75-27-4	Bromodichloromethane	1000	UD
78-87-5	1,2-Dichloropropane	1000	UD
10061-01-5	cis-1,3-Dichloropropene	1000	UD
79-01-6	Trichloroethene	1000	UD
124-48-1	Dibromochloromethane	1000	UD
79-00-5	1,1,2-Trichloroethane	1000	UD
71-43-2	Benzene	1000	UD
10061-02-6	trans-1,3-Dichloropropene	1000	UD
75-25-2	Bromoform	1000	UD
108-10-1	4-Methyl-2-Pentanone	2000	UD
591-78-6	2-Hexanone	2000	UD
127-18-4	Tetrachloroethene	1000	UD
79-34-5	1,1,2,2-Tetrachloroethane	1000	UD
108-88-3	Toluene	630	JD
108-90-7	Chlorobenzene	1000	UD
100-41-4	Ethylbenzene	1000	UD
100-42-5	Styrene	1000	UD
1330-20-7	Xylene (total)	1000	UD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4762DL

Lab Name: GTCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4762DL

Sample wt/vol: .025 (g/mL) ML Lab File ID: >C0985

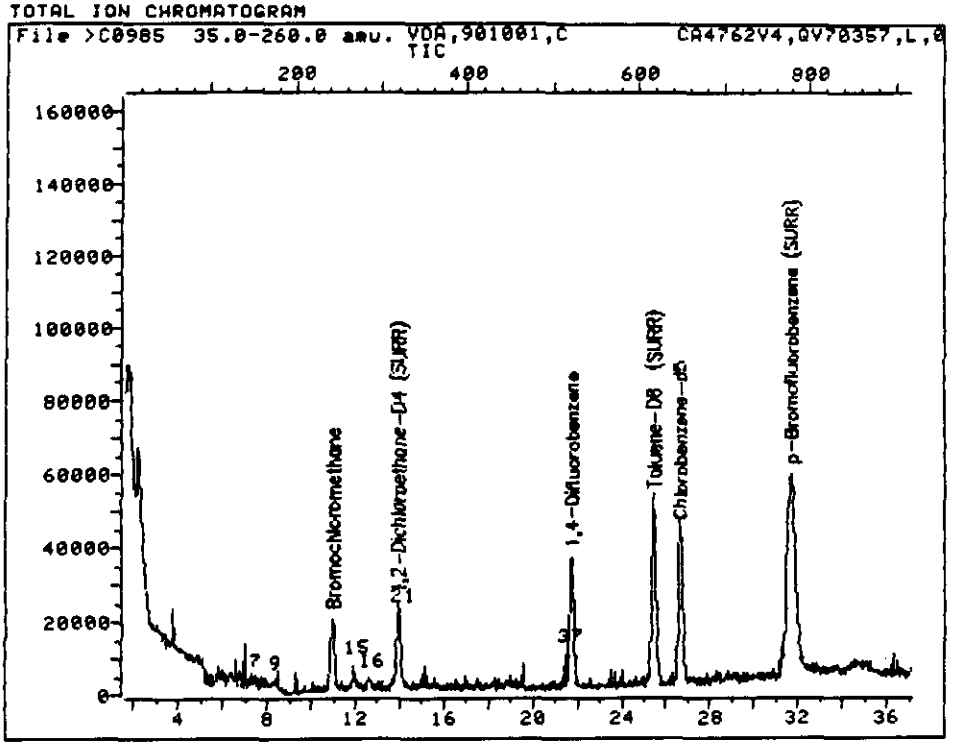
Level: (low/med) MED Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 200

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10000	D

TOTAL ION CHROMATOGRAM



Data File: >C0985::U4 Quant Output File: ^C0985::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.025,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 22:11
Injected at: 901003 21:33

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 22:11
Output File: ^C0985::AQ Injected at: 901003 21:33
Data File: >C0985::U4 Dilution Factor: 1.00000
Name: A4762DL
Misc: CA4762U5,QU70357,L:M4,0.025,, 1:200 DL

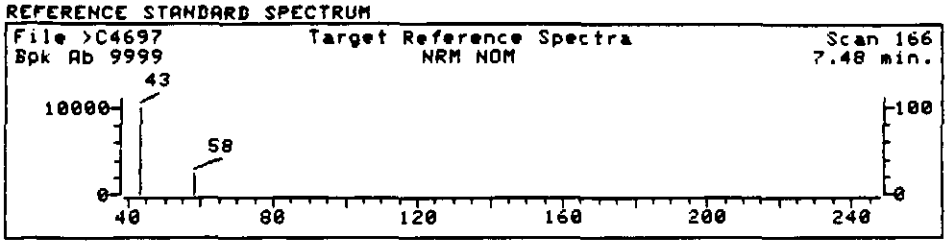
ID File: IC1172::US
Title: IFB, PP/UOA, TCL, XUOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.97	242	27092	250.00	NG	90
7)	Methylene chloride	7.40	150	3150	~~22.18~~	~~NG~~	98
9)	Acetone	8.29	173	11075	140.12	NG	80
15)	Tetrahydrofuran	11.94	267	7213	249.02	NG	100
16)	1,2-Trans-dichloroethylene	12.63	285	6113	34.88	NG	93
18)	1,2-Dichloroethane-D4 (SURR)	13.91	318	114687	298.74	NG	98
20)	*1,4-Difluorobenzene	21.75	520	132079	250.00	NG	93
21)	Methyl ethyl ketone	13.99	320	9552	403.76	NG	96
36)	*Chlorobenzene-d5	26.64	646	149729	250.00	NG	74
37)	Methyl-iso-butyl ketone	21.48	513	2278	~~11.22~~	~~NG~~	72
41)	Toluene-D8 (SURR)	25.43	615	220625	249.16	NG	89
42)	Toluene	25.63	620	8017M	15.69	NG	
45)	p-Bromofluorobenzene (SURR)	31.69	776	204308	302.72	NG	80

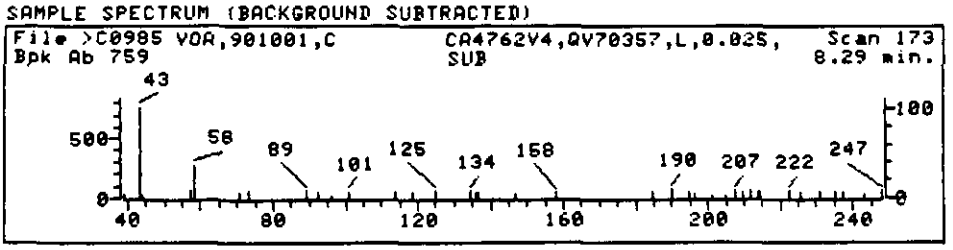
* Compound is ISTD

CA
10-16-90.

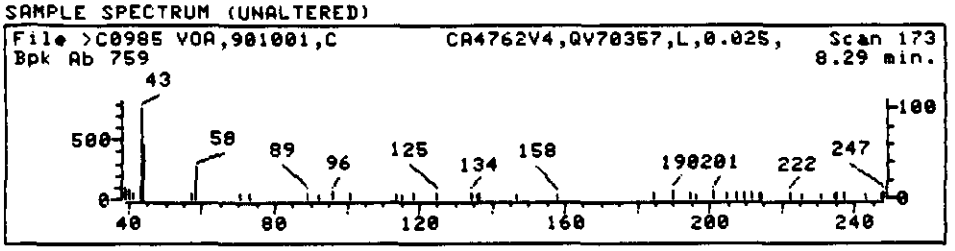
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



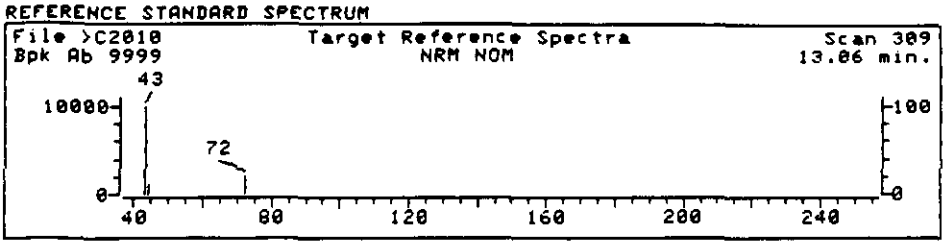
SAMPLE SPECTRUM (UNALTERED)



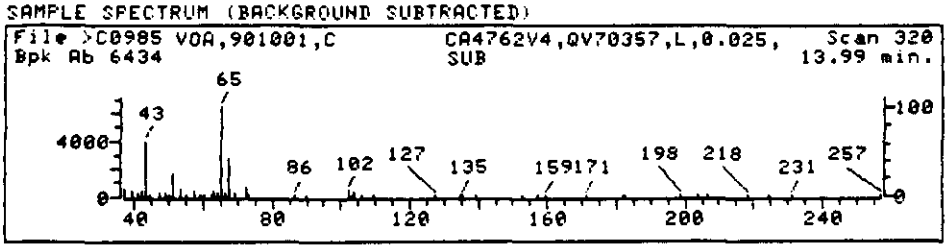
Data File: >C0985::U4 Quant Output File: ^C0985::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.025,,
Quant Time: 901003 22:11 Quant ID File: IC1172::US
Injected at: 901003 21:33 Last Calibration: 901003 17:09

Compound No: 9
Compound Name: Acetone
Scan Number: 173
Retention Time: 8.29 min.
Quant Ion: 43.0
Area: 11075
Concentration: 140.12 NG
q-value: 80

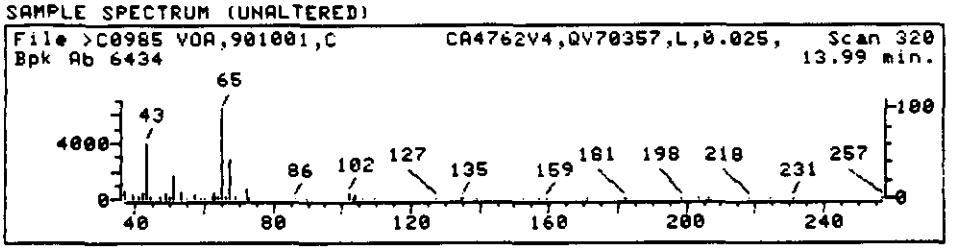
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



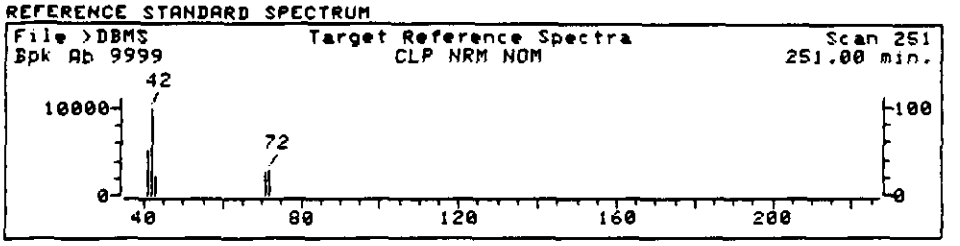
SAMPLE SPECTRUM (UNALTERED)



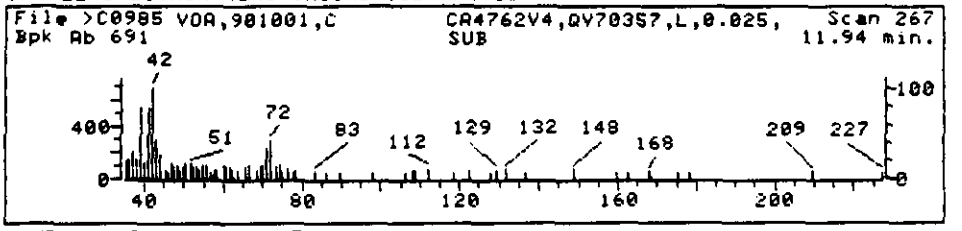
Data File: >C0985::U4 Quant Output File: ^C0985::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.025,,
Quant Time: 901003 22:11 Quant ID File: IC1172::US
Injected at: 901003 21:33 Last Calibration: 901003 17:09

Compound No: 21
Compound Name: Methyl ethyl ketone
Scan Number: 320
Retention Time: 13.99 min.
Quant Ion: 72.0
Area: 9552
Concentration: 403.76 NG
q-value: 96

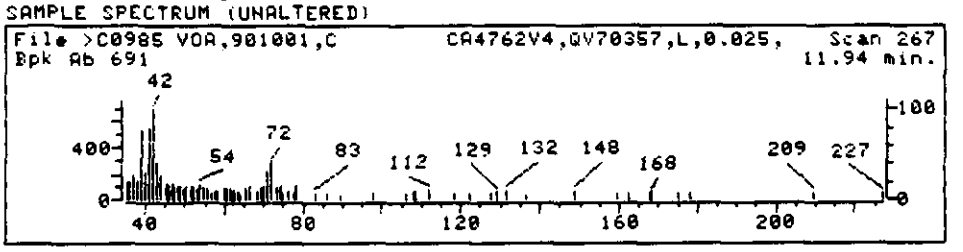
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >C0985::U4 Quant Output File: ^C0985::AQ
Name: VOA,901001,C
Misc: CA4762V4,QV70357,L,0.025,,
Quant Time: 901003 22:11 Quant ID File: IC1172::US
Injected at: 901003 21:33 Last Calibration: 901003 17:09

Compound No: 15
Compound Name: Tetrahydrofuran
Scan Number: 267
Retention Time: 11.94 min.
Quant Ion: 42.0
Area: 7213
Concentration: 249.02 NG
q-value: 100

STANDARDS DATA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date(s) 09/26/90 09/26/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>C0915 RRF50 =>C0914
RRF100=>C0913 RRF150=>C0912 RRF200=>C0911

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	.746	.648	.619	.587	.587	.637	10.3#
Bromomethane	.474	.298	.216	.308	.148	.289	42.4
Vinyl Chloride *	1.598	1.187	1.061	1.282	1.057	1.237	18.0*
Chloroethane	1.014	.827	.797	.869	.967	.895	10.3
Methylene Chloride	1.913	1.631	1.621	1.579	1.529	1.655	9.1
Acetone	.606	.631	.561	.612	.619	.606	4.5
Carbon Disulfide	5.121	4.577	4.609	4.680	4.514	4.700	5.2
1,1-Dichloroethene *	1.669	1.462	1.440	1.456	1.375	1.480	7.5*
1,1-Dichloroethane #	3.113	2.697	2.675	2.710	2.570	2.753	7.6#
1,2-Dichlorethene (total)	1.677	1.434	1.409	1.491	1.356	1.473	8.4
Chloroform *	5.511	4.748	4.641	4.702	4.508	4.822	8.2*
1,2-Dichloroethane	4.718	4.074	3.899	3.949	3.856	4.099	8.7
2-Butanone	.027	.024	.023	.023	.021	.024	8.0
1,1,1-Trichloroethane	1.082	.953	.915	.932	.979	.972	6.8
Carbon Tetrachloride	1.070	.936	.908	.933	.993	.968	6.7
Vinyl Acetate	.505	.461	.405	.461	.463	.459	7.8
Bromodichloromethane	.901	.801	.773	.795	.806	.815	6.1
1,2-Dichloropropane *	.283	.253	.248	.249	.238	.254	6.7*
cis-1,3-Dichloropropene	.526	.479	.462	.464	.462	.478	5.7
Trichloroethene	.482	.420	.454	.413	.414	.437	7.0
Dibromochloromethane	.666	.619	.598	.614	.628	.625	4.1
1,1,2-Trichloroethane	.345	.312	.308	.318	.321	.321	4.5
Benzene	1.003	.898	.939	.978	.952	.954	4.2
trans-1,3-Dichloropropene	.703	.645	.634	.653	.668	.661	4.1
Bromoform #	.603	.574	.551	.568	.565	.572	3.3#
4-Methyl-2-Pentanone	.347	.322	.277	.281	.249	.295	13.2
2-Hexanone	.280	.278	.233	.246	.227	.253	9.9
Tetrachloroethene	.537	.469	.447	.448	.446	.470	8.3
1,1,2,2-Tetrachloroethane #	.553	.517	.404	.528	.491	.498	11.5#
Toluene *	.878	.789	.784	.796	.780	.805	5.1*
Chlorobenzene #	1.302	1.157	1.121	1.134	1.111	1.165	6.7#
Ethylbenzene *	.715	.644	.630	.647	.641	.655	5.2*
Styrene	1.776	1.594	1.560	1.622	1.641	1.639	5.0
Xylene (total)	.983	.892	.878	.916	.936	.921	4.4
Toluene-d8	1.475	1.457	1.461	1.470	1.498	1.472	1.1
Bromofluorobenzene	1.077	1.078	1.070	1.085	1.130	1.088	2.2
1,2-Dichloroethane-d4	3.407	3.393	3.454	3.586	3.610	3.490	2.9

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ETCNJ   Contract: ______

Lab Code: ______ Case No.: ______ SAS No.: ______ SDG No.: ______

Instrument ID: GC/MS C   Calibration Date(s): 09/26/90   09/26/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

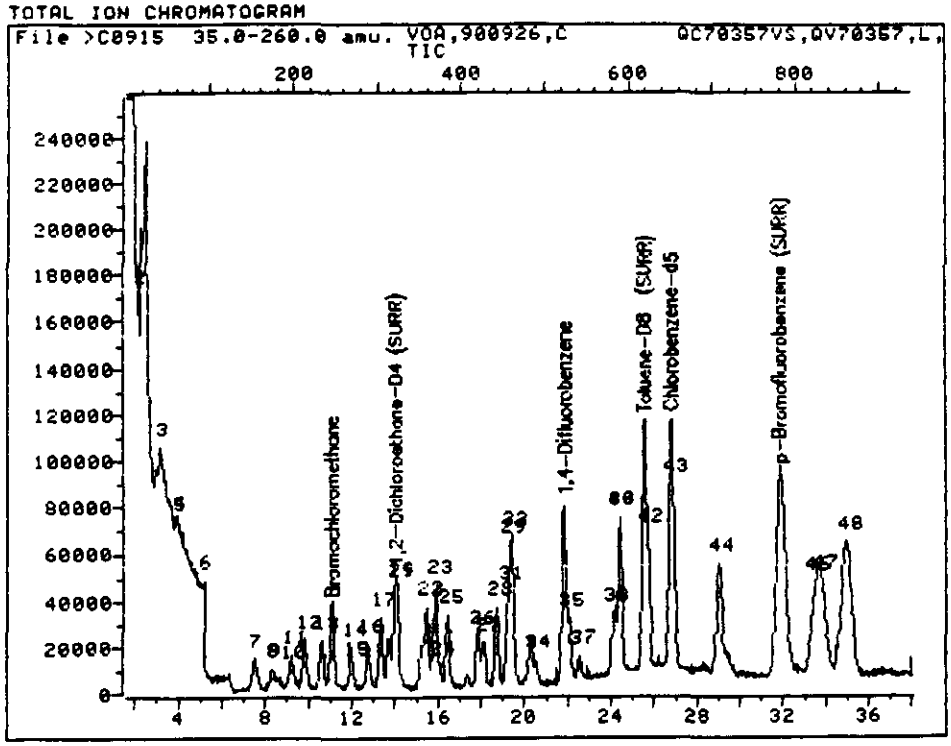
Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = >C0915 RRF50 = >C0914
RRF100= >C0913 RRF150= >C0912 RRF200= >C0911

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Tetrahydrofuran	.209	.176	.167	.169	.164	.177	10.4
Toluene-d8							
Bromofluorobenzene							
1,2-Dichloroethane-d4							

FORM VI VOA   1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0915::U0 Quant Output File: ^C0915::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 2UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:57
Injected at: 900926 14:41

Operator ID: MGRMS
Output File: ^C0915::AQ
Data File: >C0915::U0
Name: ~~VOA,900926,C~~ VSTD
Misc: QC70357VS,QV70357,L,5,, 2UL CAL I,II,XVOA

Quant Rev: 7 Quant Time: 900926 15:57
Injected at: 900926 14:41
Dilution Factor: 1.00000

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.05	244	67956	250.00	NG	99
2)	Methyl chloride	2.16	15	20268	115.01	NG	98
3)	Methyl bromide	3.17	41	12898	159.04	NG	95
4)	Dichlorodifluoromethane	3.95	61	28289	138.98	NG	93
5)	Vinyl chloride	3.99	62	43431	134.61	NG	94
6)	Chloroethane	5.15	92	27553	122.53	NG	93
7)	Methylene chloride	7.52	153	52013	117.33	NG	95
8)	Acrolein	8.30	173	55190	1636.79	NG	86
9)	Acetone	8.34	174	16459M	95.88	NG	
10)	Acrylonitrile	9.11	194	12522	176.63	NG	92
11)	Carbon disulfide	9.23	197	139206	111.88	NG	97
12)	Trichlorofluoromethane	9.85	213	129947	115.44	NG	93
13)	1,1-Dichloroethylene	10.63	233	45358	114.17	NG	91
14)	1,1-Dichloroethane	11.98	268	84606	109.42	NG	94
15)	Tetrahydrofuran	12.06	270	5680	3163.62	NG	100
16)	1,2-Trans-dichloroethylene	12.76	288	45577	83.81	NG	99
17)	Chloroform	13.38	304	149809	151.86	NG	97
18)	1,2-Dichloroethane-D4 (SURR)	14.04	321	231517	333.78	NG	95
19)	1,2-Dichloroethane	14.12	323	128237	144.20	NG	97
20)	*1,4-Difluorobenzene	21.84	522	339584	250.00	NG	99
21)	Methyl ethyl ketone	14.12	323	3600	14.05	NG	67
22)	1,1,1-Trichloroethane	15.48	358	146924	138.75	NG	96
~~23)~~	~~Carbon tetrachloride~~	~~15.48~~	~~358~~	~~15976~~	~~17.00~~	~~NG~~	~~93~~
23)	Carbon tetrachloride	15.90	369	145279	154.62	NG	98
24)	Vinyl acetate	16.10	374	68655	88.17	NG	99
25)	Dichlorobromomethane	16.45	383	122422	135.70	NG	98
26)	1,2-Dichloropropane	17.88	420	38455	71.03	NG	92
27)	cis-1,3-Dichloropropylene	18.16	427	71381	92.25	NG	92
28)	Trichloroethylene	18.70	441	65499	105.06	NG	92
29)	Chlorodibromomethane	19.36	458	90526	134.62	NG	99
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.36~~	~~458~~	~~37275~~	~~464.95~~	~~NG~~	~~100~~
31)	Benzene	19.24	455	136244	80.94	NG	89
32)	1,1,2-Trichloroethane	19.44	460	46896	99.99	NG	93
33)	trans-1,3-Dichloropropylene	19.44	460	95520	117.98	NG	89
34)	2-Chloroethylvinyl ether	20.52	488	24448	83.44	NG	100
35)	Bromoform	22.08	528	81887	212.65	NG	95
36)	*Chlorobenzene-d5	26.79	649	326537	250.00	NG	78
37)	Methyl-iso-butyl ketone	22.54	540	45299	81.27	NG	91
38)	2-Hexanone	24.10	580	36575	72.64	NG	87
39)	1,1,2,2-Tetrachloroethane	24.41	588	72212	81.69	NG	99
40)	Tetrachloroethylene	24.41	588	70134	64.45	NG	95
41)	Toluene-D8 (SURR)	25.53	617	481657	231.97	NG	90
42)	Toluene	25.73	622	114626	45.85	NG	97

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:57
Output File: ^C0915::AQ Injected at: 900926 14:41
Data File: >C0915::U0 Dilution Factor: 1.00000
Name: V0A,900926,C
Misc: QC70357VS,QV70357,L,5,, 2UL CAL I,II,XV0A

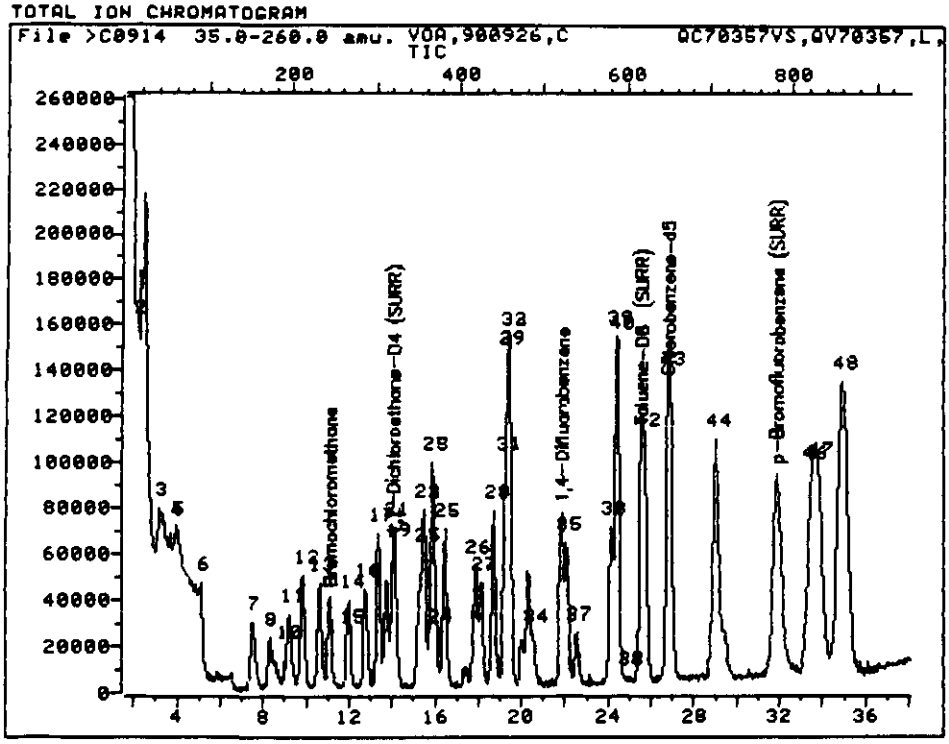
ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
43)	Chlorobenzene	26.90	652	170050	92.20	NG	97
44)	Ethylbenzene	29.04	707	93449	27.15	NG	79
45)	p-Bromofluorobenzene (SURR)	31.84	779	351619	263.74	NG	85
46)	Styrene	33.51	822	231937	85.74	NG	89
47)	m-Xylene	33.82	830	125328	37.63	NG	90
48)	o+p-Xylenes	34.98	860	256790	40.41	NG	88

* Compound is ISTD

EAK 10/15/90

TOTAL ION CHROMATOGRAM



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Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: MGRMS
Quant Time: 900926 16:20
Injected at: 900926 13:52

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 16:20
Output File: ^C0914::AQ Injected at: 900926 13:52
Data File: >C0914::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.09	245	70232	250.00	NG	97
2)	Methyl chloride	2.16	15	45532	254.27	NG	98
3)	Methyl bromide	3.17	41	20954	258.19	NG	88
4)	Dichlorodifluoromethane	3.91	60	52592	233.25	NG	96
5)	Vinyl chloride	3.99	62	83361	239.87	NG	95
6)	Chloroethane	5.15	92	58101	231.15	NG	99
7)	Methylene chloride	7.48	152	114536	246.38	NG	95
8)	Acrolein	8.30	173	139391	3727.47	NG	86
9)	Acetone	8.33	174	44351	260.62	NG	82
10)	Acrylonitrile	9.07	193	29308	401.95	NG	83
11)	Carbon disulfide	9.23	197	321471	243.46	NG	99
12)	Trichlorofluoromethane	9.85	213	290849	241.86	NG	93
13)	1,1-Dichloroethylene	10.62	233	102651	246.84	NG	91
14)	1,1-Dichloroethane	11.98	268	189423	244.94	NG	94
~~14)~~	~~1,1-Dichloroethane~~	~~12.76~~	~~288~~	~~54508~~	~~78.48~~	~~NG~~	~~58~~
15)	Tetrahydrofuran	12.06	270	12343	248.30	NG	100
16)	1,2-Trans-dichloroethylene	12.76	288	100678	243.26	NG	96
17)	Chloroform	13.34	303	333431	246.15	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	14.04	321	238291	243.05	NG	97
19)	1,2-Dichloroethane	14.16	324	286158	248.48	NG	97
20)	*1,4-Difluorobenzene	21.84	522	342312	250.00	NG	98
21)	Methyl ethyl ketone	14.12	323	8313	256.28	NG	87
22)	1,1,1-Trichloroethane	15.48	358	326236	245.09	NG	95
~~23)~~	~~Carbon tetrachloride~~	~~15.48~~	~~358~~	~~34127~~	~~25.75~~	~~NG~~	~~97~~
23)	Carbon tetrachloride	15.90	369	320401	241.74	NG	98
24)	Vinyl acetate	16.10	374	157868	251.11	NG	95
~~25)~~	~~Dichlorobromomethane~~	~~15.55~~	~~360~~	~~2699~~	~~2.42~~	~~NG~~	~~86~~
~~25)~~	~~Dichlorobromomethane~~	~~15.90~~	~~369~~	~~4779~~	~~4.28~~	~~NG~~	~~92~~
25)	Dichlorobromomethane	16.45	383	274289	245.70	NG	99
26)	1,2-Dichloropropane	17.88	420	86444	248.47	NG	98
27)	cis-1,3-Dichloropropylene	18.11	426	163824	250.08	NG	96
28)	Trichloroethylene	18.70	441	143838	240.61	NG	91
29)	Chlorodibromomethane	19.36	458	212019	247.68	NG	98
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.36~~	~~458~~	~~83203~~	~~245.15~~	~~NG~~	~~100~~
31)	Benzene	19.24	455	307266	235.22	NG	90
32)	1,1,2-Trichloroethane	19.43	460	106714	242.96	NG	91
33)	trans-1,3-Dichloropropylene	19.43	460	220924	244.17	NG	90
34)	2-Chloroethylvinyl ether	20.52	488	62156	256.96	NG	100
35)	Bromoform	22.07	528	196579	250.82	NG	99
36)	*Chlorobenzene-d5	26.78	649	318334	250.00	NG	77
37)	Methyl-iso-butyl ketone	22.54	540	102645	272.99	NG	95
38)	2-Hexanone	24.13	581	88566	275.20	NG	87
~~38)~~	~~2-Hexanone~~	~~24.95~~	~~602~~	~~2369~~	~~7.36~~	~~NG~~	~~93~~

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 16:20
Output File: ^C0914::AQ Injected at: 900926 13:52
Data File: >C0914::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

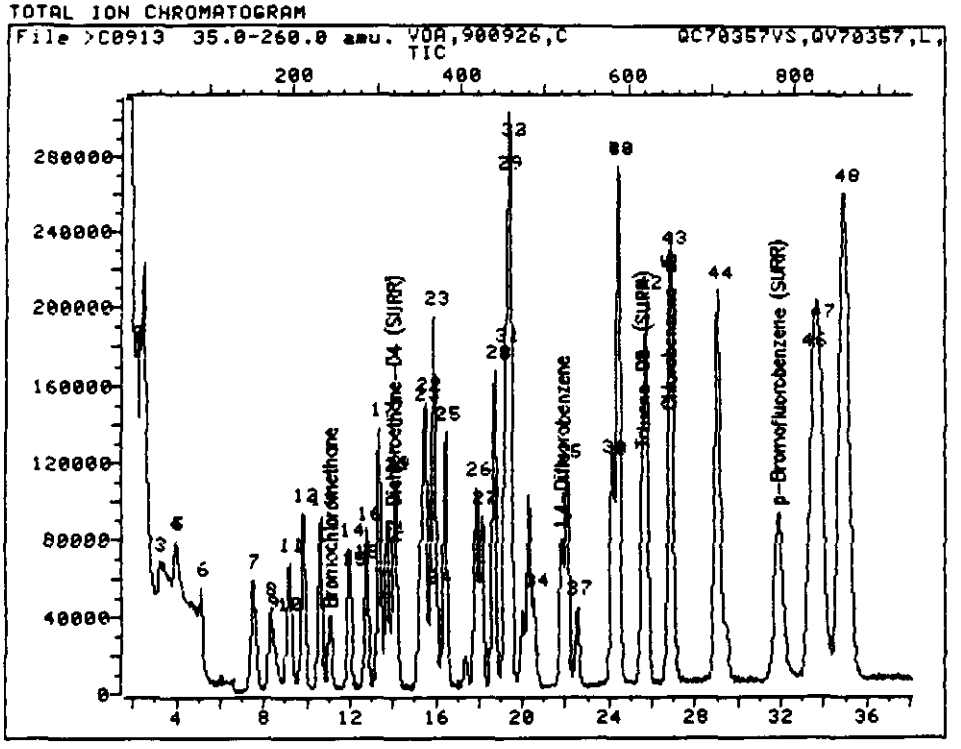
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
39)	1,1,2,2-Tetrachloroethane	24.40	588	164492	259.15	NG	97
40)	Tetrachloroethylene	24.44	589	149308	249.68	NG	98
41)	Toluene-D8 (SURR)	25.53	617	463917	247.45	NG	90
42)	Toluene	25.72	622	251169	244.99	NG	95
43)	Chlorobenzene	26.90	652	368430	248.34	NG	98
44)	Ethylbenzene	29.03	707	205107	245.75	NG	78
45)	p-Bromofluorobenzene (SURR)	31.87	780	343104	247.66	NG	85
46)	Styrene	33.50	822	507414	243.18	NG	90
47)	m-Xylene	33.81	830	272301	242.18	NG	92
48)	o+p-Xylenes	34.94	859	568101	484.31	NG	87

* Compound is ISTD

DAL 10/15/90

TOTAL ION CHROMATOGRAM



Data File: >C0913::U0 Quant Output File: ^C0913::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 10UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:53
Injected at: 900926 13:03

Operator ID: MGRMS
Output File: ^C0913::AQ
Data File: >C0913::U0
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 10UL CAL I,II,XVOA

Quant Rev: 7 Quant Time: 900926 15:53
Injected at: 900926 13:03
Dilution Factor: 1.00000

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.05	244	68225	250.00	NG	99
2)	Methyl chloride	2.16	15	84438	477.26	NG	97
3)	Methyl bromide	3.21	42	29462	361.85	NG	90
4)	Dichlorodifluoromethane	3.95	61	95209	465.90	NG	97
5)	Vinyl chloride	3.99	62	144780	446.97	NG	97
6)	Chloroethane	5.15	92	108717	481.55	NG	97
7)	Methylene chloride	7.48	152	221249	497.13	NG	98
8)	Acrolein	8.30	173	265559	7844.73	NG	91
9)	Acetone	8.37	175	76485	443.82	NG	80
10)	Acrylonitrile	9.07	193	57919	813.74	NG	78
11)	Carbon disulfide	9.19	196	628910	503.48	NG	98
12)	Trichlorofluoromethane	9.81	212	550069	486.72	NG	95
13)	1,1-Dichloroethylene	10.62	233	196535	492.73	NG	90
14)	1,1-Dichloroethane	11.94	267	364980	470.16	NG	95
15)	Tetrahydrofuran	12.02	269	22793	12645.10	NG	100
~~15)~~	~~Tetrahydrofuran~~	~~12.68~~	~~286~~	~~3651~~	~~2025.58~~	~~NG~~	~~100~~
16)	1,2-Trans-dichloroethylene	12.72	287	192283	352.18	NG	96
17)	Chloroform	13.34	303	633220	639.36	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	14.00	320	235624	338.36	NG	99
19)	1,2-Dichloroethane	14.12	323	532039	595.89	NG	97
20)	*1,4-Difluorobenzene	21.80	521	340907	250.00	NG	99
21)	Methyl ethyl ketone	14.08	322	15681	60.98	NG	86
22)	1,1,1-Trichloroethane	15.48	358	623521	586.57	NG	95
~~23)~~	~~Carbon tetrachloride~~	~~15.44~~	~~357~~	~~66844~~	~~70.86~~	~~NG~~	~~90~~
23)	Carbon tetrachloride	15.86	368	619317	656.56	NG	97
24)	Vinyl acetate	16.06	373	276192	353.33	NG	95
25)	Dichlorobromomethane	16.45	383	526976	581.86	NG	98
26)	1,2-Dichloropropane	17.84	419	168757	310.51	NG	98
27)	cis-1,3-Dichloropropylene	18.12	426	315197	405.77	NG	94
28)	Trichloroethylene	18.70	441	309255	494.10	NG	88
29)	Chlorodibromomethane	19.32	457	408046	604.43	NG	92
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.32~~	~~457~~	~~159828~~	~~1985.88~~	~~NG~~	~~100~~
31)	Benzene	19.20	454	640063	378.77	NG	91
32)	1,1,2-Trichloroethane	19.44	460	209992	445.98	NG	88
33)	trans-1,3-Dichloropropylene	19.44	460	432174	531.71	NG	91
34)	2-Chloroethylvinyl ether	20.52	488	118333	402.29	NG	100
35)	Bromoform	22.08	528	375897	972.35	NG	97
36)	*Chlorobenzene-d5	26.74	648	322654	250.00	NG	78
37)	Methyl-iso-butyl ketone	22.54	540	178675	324.43	NG	93
38)	2-Hexanone	24.09	580	150372	302.24	NG	88
39)	1,1,2,2-Tetrachloroethane	24.40	588	260722	298.50	NG	97
40)	Tetrachloroethylene	24.40	588	288656	268.45	NG	99
41)	Toluene-D8 (SURR)	25.53	617	471320	229.73	NG	90

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:53
Output File: ^C0913::AQ Injected at: 900926 13:03
Data File: >C0913::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 10UL CAL I,II,XVOA

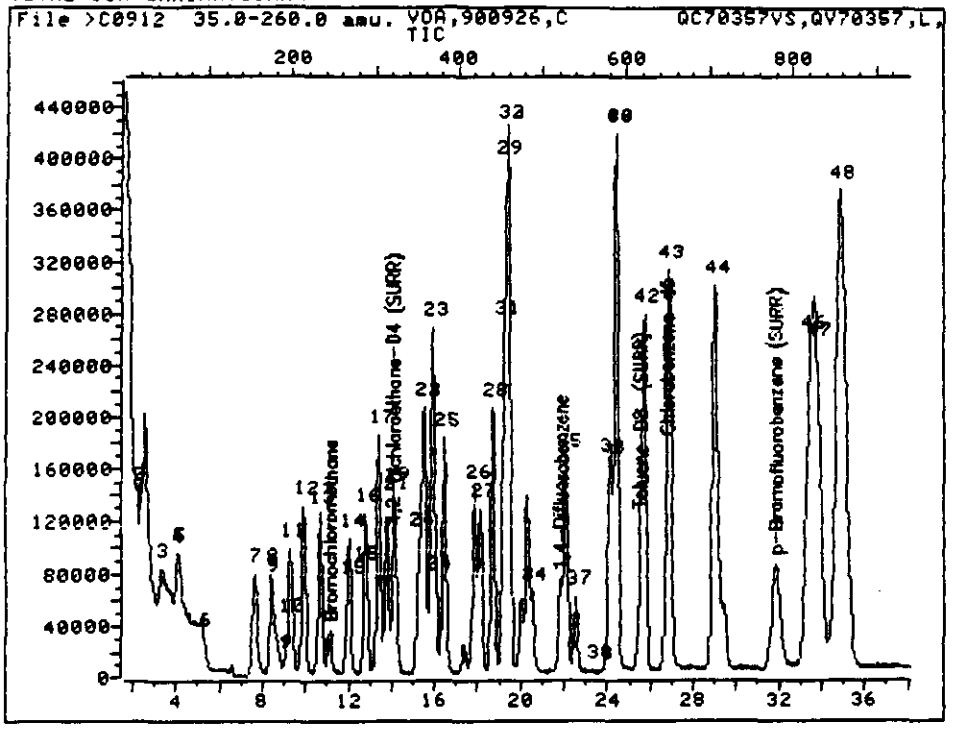
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
42)	Toluene	25.72	622	505696	204.72	NG	95
43)	Chlorobenzene	26.90	652	723198	396.83	NG	98
44)	Ethylbenzene	29.03	707	406333	119.47	NG	78
45)	p-Bromofluorobenzene (SURR)	31.83	779	345303	262.12	NG	86
46)	Styrene	33.46	821	1006763	376.65	NG	90
47)	m-Xylene	33.77	829	541251	164.48	NG	91
48)	o+p-Xylenes	34.94	859	1133798	180.56	NG	89

* Compound is ISTD

EAL 6/15/90

TOTAL ION CHROMATOGRAM



Data File: >C0912::U0 Quant Output File: ^C0912::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 15UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:49
Injected at: 900926 12:13

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:49
Output File: ^C0912::AQ Injected at: 900926 12:13
Data File: >C0912::U0 Dilution Factor: 1.00000
Name: V0A,900926,C
Misc: QC70357VS,QV70357,L,5,, 15UL CAL I,II,XV0A

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.12	245	61517	250.00	NG	98
2)	Methyl chloride	2.23	16	108400	679.50	NG	97
3)	Methyl bromide	3.28	43	56817	773.91	NG	93
4)	Dichlorodifluoromethane	4.05	63	151377	821.52	NG	96
5)	Vinyl chloride	4.09	64	236659	810.29	NG	99
6)	Chloroethane	5.30	95	160295	787.44	NG	98
7)	Methylene chloride	7.63	155	291356	726.04	NG	97
8)	Acrolein	8.40	175	441660	14469.49	NG	89
9)	Acetone	8.44	176	112895	726.53	NG	86
~~9)~~	~~Acetone~~	~~9.02~~	~~191~~	~~2503~~	~~16.11~~	~~NG~~	~~22~~
10)	Acrylonitrile	9.14	194	77255	1203.76	NG	92
11)	Carbon disulfide	9.29	198	863774	766.90	NG	98
12)	Trichlorofluoromethane	9.92	214	753293	739.22	NG	95
13)	1,1-Dichloroethylene	10.65	233	268737	747.21	NG	91
14)	1,1-Dichloroethane	12.01	268	500082	714.45	NG	95
15)	Tetrahydrofuran	12.09	270	31236	19218.72	NG	100
~~15)~~	~~Tetrahydrofuran~~	~~12.71~~	~~286~~	~~6132~~	~~3772.87~~	~~NG~~	~~100~~
16)	1,2-Trans-dichloroethylene	12.79	288	275091	558.79	NG	97
17)	Chloroform	13.37	303	867721	971.67	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	14.07	321	220621	351.37	NG	99
19)	1,2-Dichloroethane	14.15	323	728878	905.38	NG	97
20)	*1,4-Difluorobenzene	21.83	521	307690	250.00	NG	99
21)	Methyl ethyl ketone	14.11	322	21496	92.62	NG	85
22)	1,1,1-Trichloroethane	15.51	358	860583	896.98	NG	95
~~23)~~	~~Carbon tetrachloride~~	~~15.51~~	~~350~~	~~90300~~	~~186.87~~	~~NG~~	~~93~~
23)	Carbon tetrachloride	15.89	368	861224	1011.59	NG	96
~~24)~~	~~Vinyl acetate~~	~~15.27~~	~~352~~	~~198487~~	~~281.34~~	~~NG~~	~~75~~
24)	Vinyl acetate	16.09	373	425268	602.78	NG	96
25)	Dichlorobromomethane	16.44	382	733919	897.83	NG	97
26)	1,2-Dichloropropane	17.83	418	229684	468.24	NG	99
27)	cis-1,3-Dichloropropylene	18.11	425	428246	610.82	NG	92
28)	Trichloroethylene	18.69	440	381133	674.68	NG	89
29)	Chlorodibromomethane	19.35	457	566804	930.24	NG	96
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.35~~	~~457~~	~~222702~~	~~3865.82~~	~~NG~~	~~100~~
31)	Benzene	19.23	454	903092	592.12	NG	92
32)	1,1,2-Trichloroethane	19.43	459	293592	690.84	NG	89
33)	trans-1,3-Dichloropropylene	19.43	459	603037	822.02	NG	93
34)	2-Chloroethylvinyl ether	20.51	487	161877	609.74	NG	100
35)	Bromoform	22.07	527	524398	1502.93	NG	98
36)	*Chlorobenzene-d5	26.74	647	298374	250.00	NG	77
37)	Methyl-iso-butyl ketone	22.53	539	251487	493.79	NG	94
~~38)~~	~~2-Hexanone~~	~~23.50~~	~~564~~	~~2970~~	~~6.47~~	~~NG~~	~~87~~
38)	2-Hexanone	24.09	579	220079	478.34	NG	91

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:49
Output File: ^C0912::AQ Injected at: 900926 12:13
Data File: >C0912::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 15UL CAL I,II,XVOA

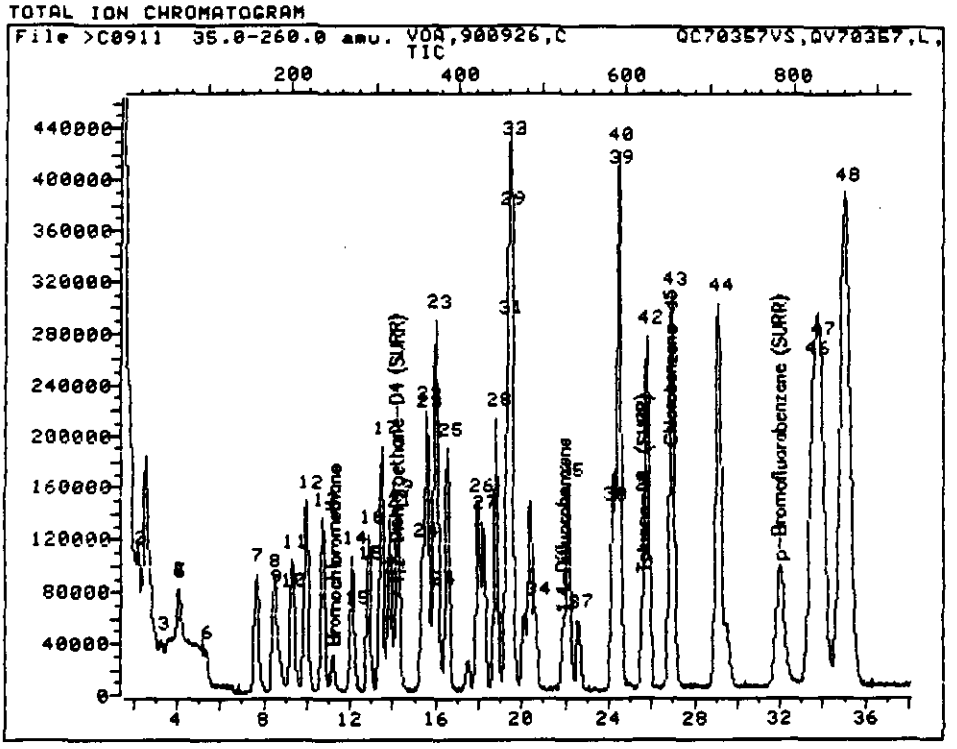
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
39)	1,1,2,2-Tetrachloroethane	24.40	587	472274	584.70	NG	97
40)	Tetrachloroethylene	24.40	587	401360	403.63	NG	97
41)	Toluene-D8 (SURR)	25.52	616	438728	231.24	NG	95
42)	Toluene	25.72	621	712541	311.93	NG	95
43)	Chlorobenzene	26.86	650	1015436	602.53	NG	98
44)	Ethylbenzene	28.99	705	578703	183.99	NG	78
45)	p-Bromofluorobenzene (SURR)	31.83	778	323728	265.74	NG	84
46)	Styrene	33.46	820	1452199	587.50	NG	91
47)	m-Xylene	33.77	828	776028	255.02	NG	94
48)	o+p-Xylenes	34.86	856	1640544	282.52	NG	89

* Compound is ISTD

ERL 10/15/90

TOTAL ION CHROMATOGRAM



Data File: >C0911::U0 Quant Output File: ^C0911::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 20UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:43
Injected at: 900926 11:24

Operator ID: MGRMS
Output File: ^C0911::AQ
Data File: >C0911::U0
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 20UL CAL I,II,XVOA

Quant Rev: 7 Quant Time: 900926 15:43
Injected at: 900926 11:24
Dilution Factor: 1.00000

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.23	249	49370	250.00	NG	97
2)	Methyl chloride	2.25	18	115927	905.48	NG	98
3)	Methyl bromide	3.30	45	29185	495.34	NG	99
4)	Dichlorodifluoromethane	4.04	64	139319	942.11	NG	95
5)	Vinyl chloride	4.08	65	208786	890.74	NG	96
6)	Chloroethane	5.32	97	191040	1169.37	NG	98
7)	Methylene chloride	7.65	157	302039	937.85	NG	97
8)	Acrolein	8.47	178	453160	18499.02	NG	88
9)	Acetone	8.55	180	122291	980.63	NG	81
10)	Acrylonitrile	9.25	198	70170	1362.38	NG	84
11)	Carbon disulfide	9.32	200	891360	986.11	NG	99
12)	Trichlorofluoromethane	9.98	217	862656	1054.83	NG	93
13)	1,1-Dichloroethylene	10.76	237	271510	940.66	NG	89
14)	1,1-Dichloroethane	12.12	272	507563	903.54	NG	94
15)	Tetrahydrofuran	12.20	274	32334	24789.09	NG	100
~~15)~~	~~Tetrahydrofuran~~	~~12.82~~	~~290~~	~~9922~~	~~7606.77~~	~~NG~~	~~100~~
16)	1,2-Trans-dichloroethylene	12.90	292	267830	677.90	NG	99
17)	Chloroform	13.48	307	890236	1242.16	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	14.14	324	178226	353.68	NG	96
19)	1,2-Dichloroethane	14.26	327	761552	1178.71	NG	96
20)	*1,4-Difluorobenzene	21.90	524	232529	250.00	NG	99
21)	Methyl ethyl ketone	14.22	326	19882	113.35	NG	87
22)	1,1,1-Trichloroethane	15.61	362	910803	1256.17	NG	94
~~23)~~	~~Carbon tetrachloride~~	~~15.58~~	~~361~~	~~88064~~	~~136.87~~	~~NG~~	~~97~~
23)	Carbon tetrachloride	16.00	372	923576	1435.47	NG	95
~~24)~~	~~Vinyl acetate~~	~~15.38~~	~~356~~	~~206336~~	~~387.00~~	~~NG~~	~~76~~
24)	Vinyl acetate	16.20	377	430938	808.26	NG	97
25)	Dichlorobromomethane	16.55	386	749680	1213.56	NG	96
26)	1,2-Dichloropropane	17.98	423	221792	598.30	NG	95
27)	cis-1,3-Dichloropropylene	18.22	429	429536	810.69	NG	95
28)	Trichloroethylene	18.80	444	385137	902.14	NG	89
29)	Chlorodibromomethane	19.42	460	583657	1267.52	NG	98
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.42~~	~~460~~	~~228974~~	~~4171.04~~	~~NG~~	~~100~~
31)	Benzene	19.34	458	885817	768.53	NG	91
32)	1,1,2-Trichloroethane	19.54	463	298426	929.20	NG	89
33)	trans-1,3-Dichloropropylene	19.54	463	621566	1121.14	NG	90
34)	2-Chloroethylvinyl ether	20.62	491	160736	801.14	NG	100
35)	Bromoform	22.14	530	525932	1994.55	NG	98
36)	*Chlorobenzene-d5	26.85	650	228594	250.00	NG	81
37)	Methyl-iso-butyl ketone	22.60	542	227996	584.32	NG	91
38)	2-Hexanone	24.16	582	207178	587.76	NG	86
39)	1,1,2,2-Tetrachloroethane	24.47	590	449164	725.84	NG	97
40)	Tetrachloroethylene	24.51	591	408254	535.89	NG	97

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:43
Output File: ^C0911::AQ Injected at: 900926 11:24
Data File: >C0911::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 20UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.59	619	342513	235.64	NG	92
42)	Toluene	25.79	624	712783	407.28	NG	94
43)	Chlorobenzene	26.97	653	1015905	786.82	NG	96
44)	Ethylbenzene	29.10	708	586369	243.34	NG	77
45)	p-Bromofluorobenzene (SURR)	31.94	781	258347	276.81	NG	82
46)	Styrene	33.57	823	1500542	792.37	NG	92
47)	m-Xylene	33.88	831	817849	350.81	NG	91
48)	o+p-Xylenes	35.05	861	1711432	384.69	NG	88

* Compound is ISTD

EAL 10/15/90

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date: 09/27/90 Time: 1656

Lab File ID: >C0927 Init Calib. Dates(s): 09/26/90 09/26/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 25.0%

COMPOUND		RRF	RRF50	%D	
Chloromethane	#	.637	1.077	69.0	#
Bromomethane		.289	.346	19.8	
Vinyl Chloride	*	1.237	1.461	18.1	*
Chloroethane		.895	1.032	15.4	
Methylene Chloride		1.655	1.661	.4	
Acetone		.606	.713	17.7	
Carbon Disulfide		4.700	4.402	6.3	
1,1-Dichloroethene	*	1.480	1.375	7.1	*
1,1-Dichloroethane	#	2.753	2.529	8.1	#
1,2-Dichlorethene (total)		1.473	1.335	9.4	
Chloroform	*	4.822	4.530	6.1	*
1,2-Dichloroethane		4.099	3.918	4.4	
2-Butanone		.024	.024	2.2	
1,1,1-Trichloroethane		.972	1.081	11.2	
Carbon Tetrachloride		.968	1.119	15.6	
Vinyl Acetate		.459	.421	8.3	
Bromodichloromethane		.815	.836	2.5	
1,2-Dichloropropane	*	.254	.238	6.2	*
cis-1,3-Dichloropropene		.478	.465	2.7	
Trichloroethene		.437	.442	1.3	
Dibromochloromethane		.625	.654	4.7	
1,1,2-Trichloroethane		.321	.301	6.1	
Benzene		.954	.840	11.9	
trans-1,3-Dichloropropene		.661	.650	1.7	
Bromoform	#	.572	.584	2.1	#
4-Methyl-2-Pentanone		.295	.283	4.0	
2-Hexanone		.253	.264	4.4	
Tetrachloroethene		.470	.491	4.6	
1,1,2,2-Tetrachloroethane	#	.498	.437	12.3	#
Toluene	*	.805	.749	7.0	*
Chlorobenzene	#	1.165	1.161	.3	#
Ethylbenzene	*	.655	.671	2.4	*
Styrene		1.639	1.583	3.4	
Xylene (total)		.921	.970	5.3	
Toluene-d8		1.472	1.460	.8	
Bromofluorobenzene		1.088	1.129	3.8	
1,2-Dichloroethane-d4		3.490	3.231	7.4	

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ETC NJ Contract: ____________

Lab Code: ________ Case No.: ______ SAS No.: _______ SDG No.: ______

Instrument ID: GC/MS C Calibration Date: 09/27/90 Time: 1656

Lab File ID: >C0927 Init. Calib. Date(s): 09/26/90 09/26/90

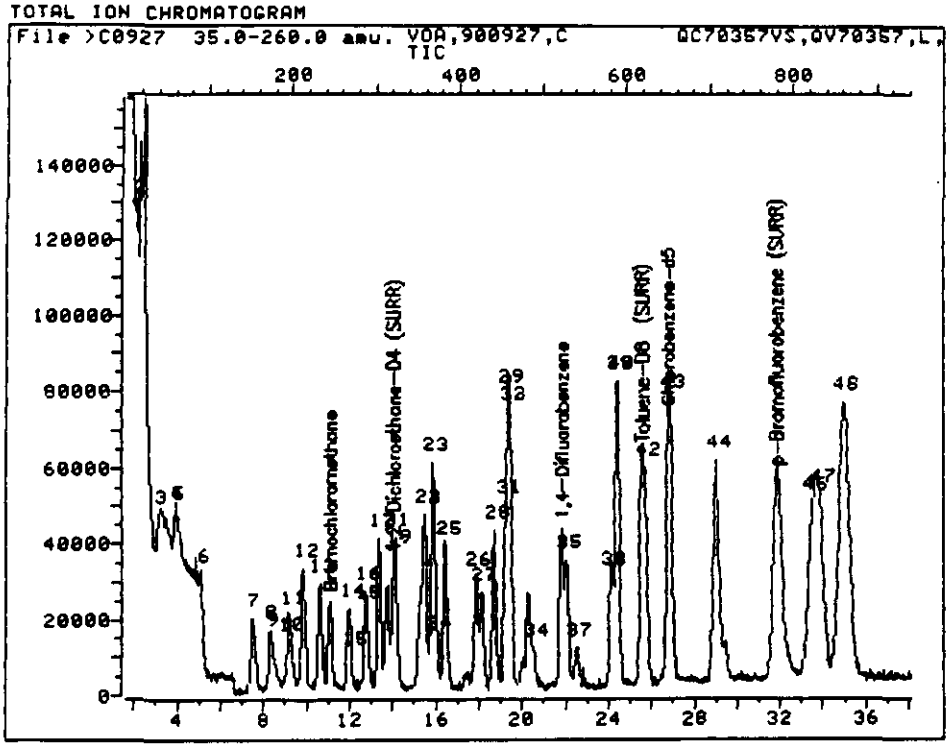
Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Tetrahydrofuran	.177	.178	0.50
Toluene-d8			
Bromofluorobenzene			
1,2-Dichloroethane-d4			

FORM VII VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0927::U4 Quant Output File: ^C0927::AQ
Name: VOA,900927,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: MGRMS
Quant Time: 900927 17:35
Injected at: 900927 16:56

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 17:35
Output File: ^C0927::AQ Injected at: 900927 16:56
Data File: >C0927::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.08	245	40844	250.00	NG	93
2)	Methyl chloride	2.16	15	44000	422.50	NG	96
3)	Methyl bromide	3.17	41	14140	299.60	NG	97
4)	Dichlorodifluoromethane	3.94	61	39082	298.05	NG	94
5)	Vinyl chloride	3.98	62	59670	295.24	NG	99
6)	Chloroethane	5.15	92	42159	288.41	NG	95
7)	Methylene chloride	7.48	152	67827	250.88	NG	98
8)	Acrolein	8.33	174	85031	3909.88	NG	86
9)	Acetone	8.37	175	29128	294.32	NG	77
10)	Acrylonitrile	9.11	194	14484	341.57	NG	98
11)	Carbon disulfide	9.22	197	179802	234.14	NG	99
12)	Trichlorofluoromethane	9.84	213	182861	261.47	NG	92
13)	1,1-Dichloroethylene	10.62	233	56160	232.21	NG	87
14)	1,1-Dichloroethane	11.98	268	103305	229.69	NG	95
15)	Tetrahydrofuran	12.09	271	7263	251.24	NG	100
15)	Tetrahydrofuran	12.71	287	2777	96.06	NG	100
16)	1,2-Trans-dichloroethylene	12.75	288	54510	226.47	NG	98
17)	Chloroform	13.37	304	185021	234.87	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	14.03	321	131980	231.47	NG	99
19)	1,2-Dichloroethane	14.15	324	160047	238.97	NG	97
20)	*1,4-Difluorobenzene	21.83	522	179047	250.00	NG	99
21)	Methyl ethyl ketone	14.11	323	4335	255.50	NG	81
22)	1,1,1-Trichloroethane	15.47	358	193583	278.04	NG	95
23)	Carbon tetrachloride	15.47	358	19284	27.82	NG	96
23)	Carbon tetrachloride	15.90	369	200265	288.88	NG	99
24)	Vinyl acetate	16.09	374	75362	229.18	NG	99
25)	Dichlorobromomethane	16.48	384	149611	256.22	NG	97
26)	1,2-Dichloropropane	17.87	420	42662	234.44	NG	95
27)	cis-1,3-Dichloropropylene	18.11	426	83309	243.14	NG	96
28)	Trichloroethylene	18.69	441	79170	253.20	NG	90
29)	Chlorodibromomethane	19.35	458	117146	261.64	NG	96
30)	bis(Chloromethyl)ether	19.35	458	45649	257.15	NG	100
31)	Benzene	19.23	455	150448	220.19	NG	88
32)	1,1,2-Trichloroethane	19.47	461	53921	234.71	NG	92
33)	trans-1,3-Dichloropropylene	19.47	461	116317	245.78	NG	86
34)	2-Chloroethylvinyl ether	20.55	489	28248	223.27	NG	100
35)	Bromoform	22.07	528	104650	255.28	NG	96
36)	*Chlorobenzene-d5	26.77	649	171595	250.00	NG	75
37)	Methyl-iso-butyl ketone	22.53	540	48634	239.95	NG	92
38)	2-Hexanone	24.08	580	45280	261.02	NG	80
39)	1,1,2,2-Tetrachloroethane	24.39	588	75058	219.37	NG	98
40)	Tetrachloroethylene	24.43	589	84284	261.47	NG	97
41)	Toluene-D8 (SURR)	25.56	618	250546	247.92	NG	87

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 17:35
Output File: ^C0927::AQ Injected at: 900927 16:56
Data File: >C0927::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
42)	Toluene	25.71	622	128494	232.51	NG	97
43)	Chlorobenzene	26.89	652	199297	249.22	NG	98
44)	Ethylbenzene	29.02	707	115137	255.93	NG	77
45)	p-Bromofluorobenzene (SURR)	31.82	779	193769	259.47	NG	92
46)	Styrene	33.53	823	271632	241.51	NG	85
47)	m-Xylene	33.84	831	153657	253.53	NG	94
48)	o+p-Xylenes	34.96	860	333036	526.71	NG	87

* Compound is ISTD

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date(s) 10/02/90 10/02/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>C0962 RRF50 =>C0961
RRF100=>C0960 RRF150=>C0959 RRF200=>C0958

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	1.098	.925	.925	.907	1.315	1.034	17.0#
Bromomethane	.270	.171	.127	.119	.136	.165	37.8
Vinyl Chloride *	.860	.684	.567	.529	.702	.669	19.5*
Chloroethane	.495	.411	.403	.403	.474	.437	10.0
Methylene Chloride	1.490	1.165	.884	.941	1.059	1.108	21.6
Acetone	.803	.607	.487	.497	.483	.575	23.8
Carbon Disulfide	6.833	6.678	3.834	4.540	7.107	5.799	25.9
1,1-Dichloroethene *	1.649	1.622	1.672	1.694	1.825	1.692	4.7*
1,1-Dichloroethane #	3.626	3.263	3.237	3.308	3.598	3.407	5.6#
1,2-Dichlorethene (total)	1.624	1.576	1.596	1.661	1.732	1.638	3.8
Chloroform *	5.077	4.498	4.485	4.561	4.877	4.700	5.6*
1,2-Dichloroethane	4.047	3.642	3.430	3.418	3.660	3.639	7.0
2-Butanone	.038	.038	.034	.034	.029	.035	10.8
1,1,1-Trichloroethane	.868	.756	.695	.711	.738	.754	9.0
Carbon Tetrachloride	.769	.677	.643	.665	.705	.692	7.0
Vinyl Acetate	.493	.521	.456	.538	.544	.510	7.1
Bromodichloromethane	.801	.710	.652	.671	.686	.704	8.2
1,2-Dichloropropane *	.386	.343	.330	.342	.346	.349	6.1*
cis-1,3-Dichloropropene	.532	.493	.467	.488	.494	.495	4.7
Trichloroethene	.400	.365	.368	.359	.355	.369	4.9
Dibromochloromethane	.552	.514	.492	.507	.511	.515	4.3
1,1,2-Trichloroethane	.346	.323	.322	.326	.330	.329	3.1
Benzene	1.179	1.114	1.118	1.187	1.223	1.164	4.0
trans-1,3-Dichloropropene	.713	.650	.603	.627	.633	.645	6.4
Bromoform #	.477	.439	.417	.416	.383	.426	8.1#
4-Methyl-2-Pentanone	.380	.373	.344	.320	.292	.342	10.7
2-Hexanone	.387	.345	.336	.307	.277	.331	12.5
Tetrachloroethene	.367	.349	.344	.334	.330	.345	4.2
1,1,2,2-Tetrachloroethane #	.534	.544	.488	.525	.505	.519	4.3#
Toluene *	.858	.809	.814	.817	.852	.830	2.8*
Chlorobenzene #	1.226	1.170	1.128	1.121	1.162	1.161	3.6#
Ethylbenzene *	.758	.692	.672	.677	.695	.699	5.0*
Styrene	1.823	1.663	1.578	1.542	1.625	1.646	6.6
Xylene (total)	1.050	.948	.901	.886	.940	.945	6.8
Toluene-d8	1.478	1.471	1.455	1.455	1.462	1.464	.7
Bromofluorobenzene	1.082	1.038	1.002	1.003	1.045	1.034	3.2
1,2-Dichloroethane-d4	3.212	3.041	3.093	3.263	3.539	3.229	6.0

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: GC/MS C Calibration Date(s): 10/02/90 10/02/90

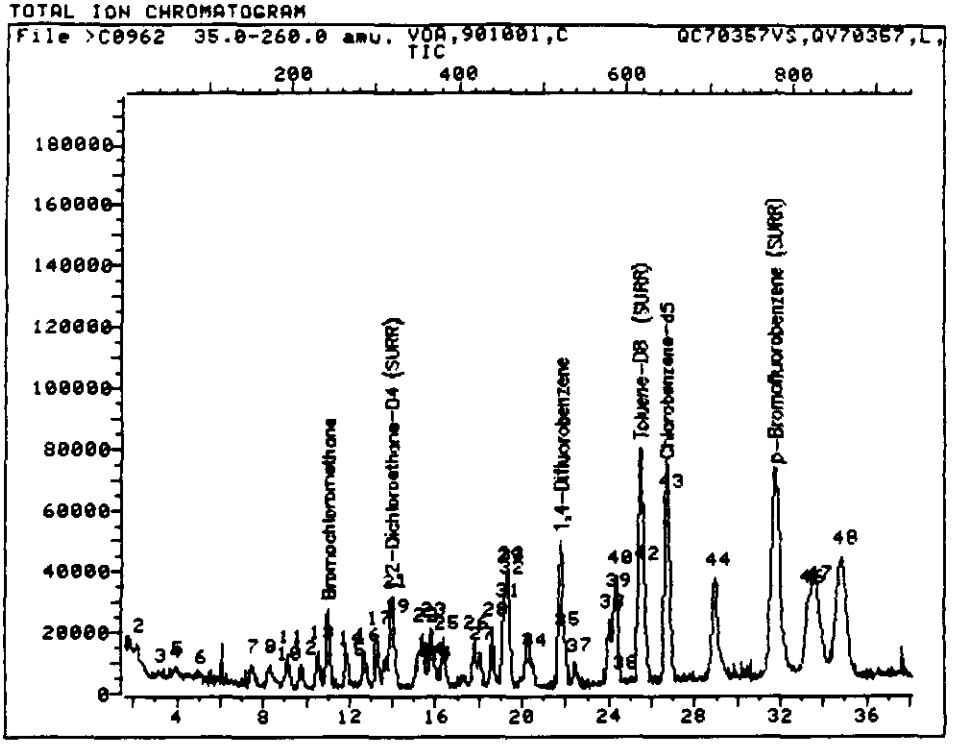
Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = >C0962 RRF50 = >C0961
RRF100= >C0960 RRF150= >C0959 RRF200= >C0958

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	%RSD
Tetrahydrofuran	.198	.157	.325	.301	.258	.248	28.3
Toluene-d8							
Bromofluorobenzene							
1,2-Dichloroethane-d4							

TOTAL ION CHROMATOGRAM



Data File: >C0962::U0 Quant Output File: ^C0962::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 2UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 17:06
Injected at: 901002 15:32

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:06
Output File: ^C0962::AQ Injected at: 901002 15:32
Data File: >C0962::U0 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 2UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	243	40870	250.00	NG	95
2)	Methyl chloride	2.16	15	17949	106.18	NG	98
3)	Methyl bromide	3.17	41	4412	164.03	NG	99
4)	Dichlorodifluoromethane	3.95	61	9787	128.58	NG	98
5)	Vinyl chloride	3.99	62	14067	128.70	NG	92
6)	Chloroethane	5.11	91	8097	113.28	NG	87
7)	Methylene chloride	7.48	152	24363	134.53	NG	99
8)	Acrolein	8.30	173	42501	2269.06	NG	97
9)	Acetone	8.30	173	13122	139.52	NG	99
10)	Acrylonitrile	9.03	192	16223	197.03	NG	96
11)	Carbon disulfide	9.15	195	111713	117.85	NG	99
12)	Trichlorofluoromethane	9.77	211	57950	98.14	NG	89
13)	1,1-Dichloroethylene	10.54	231	26951	97.43	NG	92
14)	1,1-Dichloroethane	11.90	266	59283	106.45	NG	96
15)	Tetrahydrofuran	11.98	268	3236	75.33	NG	100
16)	1,2-Trans-dichloroethylene	12.72	287	26552	99.17	NG	92
17)	Chloroform	13.26	301	82994	108.03	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	13.96	319	131291	248.68	NG	95
19)	1,2-Dichloroethane	14.07	322	66160	111.20	NG	96
20)	*1,4-Difluorobenzene	21.79	521	203524	250.00	NG	98
21)	Methyl ethyl ketone	14.03	321	3125	110.25	NG	91
22)	1,1,1-Trichloroethane	15.39	356	70670	115.18	NG	91
23)	Carbon tetrachloride	15.39	356	7889	14.01	NG	83
23)	Carbon tetrachloride	15.82	367	62573	111.13	NG	99
24)	Vinyl acetate	15.66	363	24580	59.15	NG	80
24)	Vinyl acetate	16.01	372	40164	96.66	NG	97
25)	Dichlorobromomethane	16.40	382	65190	113.74	NG	98
26)	1,2-Dichloropropane	17.80	418	31426	110.50	NG	94
27)	cis-1,3-Dichloropropylene	18.03	424	43309	107.51	NG	91
28)	Trichloroethylene	18.65	440	32596	108.40	NG	82
29)	Chlorodibromomethane	19.27	456	44953	107.21	NG	98
30)	bis(Chloromethyl)ether	19.23	455	19135	112.10	NG	100
31)	Benzene	19.15	453	95987	101.27	NG	96
32)	1,1,2-Trichloroethane	19.39	459	28182	105.13	NG	82
33)	trans-1,3-Dichloropropylene	19.35	458	58007	110.46	NG	86
34)	2-Chloroethylvinyl ether	20.47	487	21381	105.47	NG	100
35)	Bromoform	21.98	526	38856	111.92	NG	96
36)	*Chlorobenzene-d5	26.69	647	242723	250.00	NG	86
37)	Methyl-iso-butyl ketone	22.49	539	36908	111.11	NG	95
38)	2-Hexanone	24.04	579	37569	117.06	NG	91
38)	2-Hexanone	24.70	596	2378	7.41	NG	89
39)	1,1,2,2-Tetrachloroethane	24.27	585	51853	102.83	NG	93
40)	Tetrachloroethylene	24.35	587	35670	106.50	NG	99

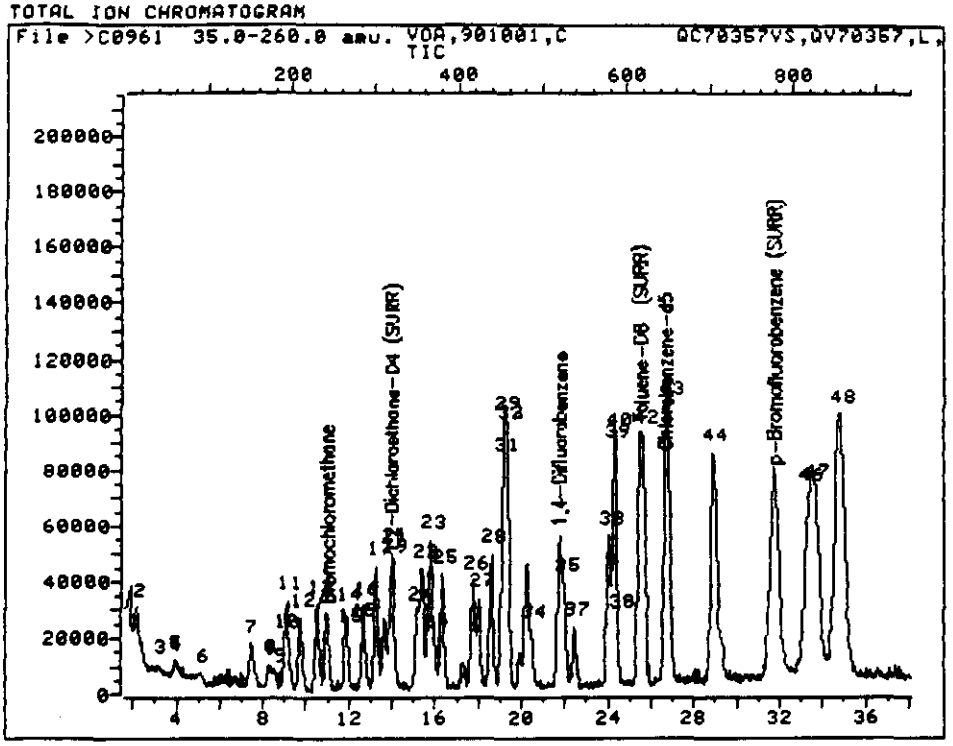
Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:06
Output File: ^C0962::AQ Injected at: 901002 15:32
Data File: >C0962::U0 Dilution Factor: 1.00000
Name: V0A,901001,C
Misc: QC70357VS,QV70357,L,5,, 2UL

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.48	616	358633	252.30	NG	93
42)	Toluene	25.67	621	83277	103.36	NG	91
43)	Chlorobenzene	26.80	650	119003	105.55	NG	97
44)	Ethylbenzene	28.94	705	73613	108.50	NG	81
45)	p-Bromofluorobenzene (SURR)	31.73	777	262700	261.64	NG	92
46)	Styrene	33.36	819	176969	110.72	NG	93
47)	m-Xylene	33.71	828	97183	109.35	NG	99
48)	o+p-Xylenes	34.87	858	203958	222.26	NG	88

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0961::U0 Quant Output File: ^C0961::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 5UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 16:55
Injected at: 901002 14:43

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 16:55
Output File: ^C0961::AQ Injected at: 901002 14:43
Data File: >C0961::U0 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 5UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.98	242	45268	250.00	NG	94
2)	Methyl chloride	2.17	15	41886	223.72	NG	99
3)	Methyl bromide	3.18	41	7729	259.43	NG	99
4)	Dichlorodifluoromethane	3.92	60	21384	253.64	NG	97
5)	Vinyl chloride	3.95	61	30956	255.71	NG	94
6)	Chloroethane	5.16	92	18624	235.25	NG	89
7)	Methylene chloride	7.45	151	52721	262.83	NG	96
8)	Acrolein	8.30	173	49447	2383.42	NG	91
9)	Acetone	8.34	174	27481	263.81	NG	93
9)	Acetone	8.77	185	2024	19.43	NG	41
10)	Acrylonitrile	9.00	191	45608	500.09	NG	91
11)	Carbon disulfide	9.12	194	302293	287.91	NG	97
12)	Trichlorofluoromethane	9.74	210	158968	243.07	NG	91
13)	1,1-Dichloroethylene	10.51	230	73422	239.63	NG	93
14)	1,1-Dichloroethane	11.87	265	147715	239.48	NG	97
15)	Tetrahydrofuran	11.95	267	7108	149.39	NG	100
15)	Tetrahydrofuran	12.60	284	2152	45.23	NG	100
16)	1,2-Trans-dichloroethylene	12.64	285	71329	240.52	NG	98
17)	Chloroform	13.26	301	203625	239.29	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	13.96	319	137642	235.38	NG	96
19)	1,2-Dichloroethane	14.04	321	164881	250.20	NG	97
20)	*1,4-Difluorobenzene	21.76	520	234953	250.00	NG	96
21)	Methyl ethyl ketone	14.00	320	9007	275.25	NG	84
22)	1,1,1-Trichloroethane	15.40	356	177556	250.68	NG	96
23)	Carbon tetrachloride	15.40	356	19550	30.08	NG	98
23)	Carbon tetrachloride	15.79	366	159011	244.63	NG	96
24)	Vinyl acetate	15.16	350	47100	98.18	NG	81
24)	Vinyl acetate	15.98	371	122478	255.32	NG	99
25)	Dichlorobromomethane	16.37	381	166787	252.07	NG	94
26)	1,2-Dichloropropane	17.76	417	80498	245.18	NG	91
27)	cis-1,3-Dichloropropylene	18.03	424	115898	249.21	NG	92
28)	Trichloroethylene	18.62	439	85764	247.05	NG	87
29)	Chlorodibromomethane	19.24	455	120679	249.32	NG	99
30)	bis(Chloromethyl)ether	19.24	455	50123	254.35	NG	100
31)	Benzene	19.16	453	261723	239.18	NG	93
32)	1,1,2-Trichloroethane	19.35	458	75776	244.87	NG	84
33)	trans-1,3-Dichloropropylene	19.35	458	152620	251.75	NG	89
34)	2-Chloroethylvinyl ether	20.44	486	58207	248.73	NG	100
35)	Bromoform	21.95	525	103057	257.13	NG	94
36)	*Chlorobenzene-d5	26.65	646	265376	250.00	NG	86
37)	Methyl-iso-butyl ketone	22.46	538	99055	272.76	NG	99
38)	2-Hexanone	24.01	578	91684	261.29	NG	88
38)	2-Hexanone	24.47	590	3200	9.12	NG	86

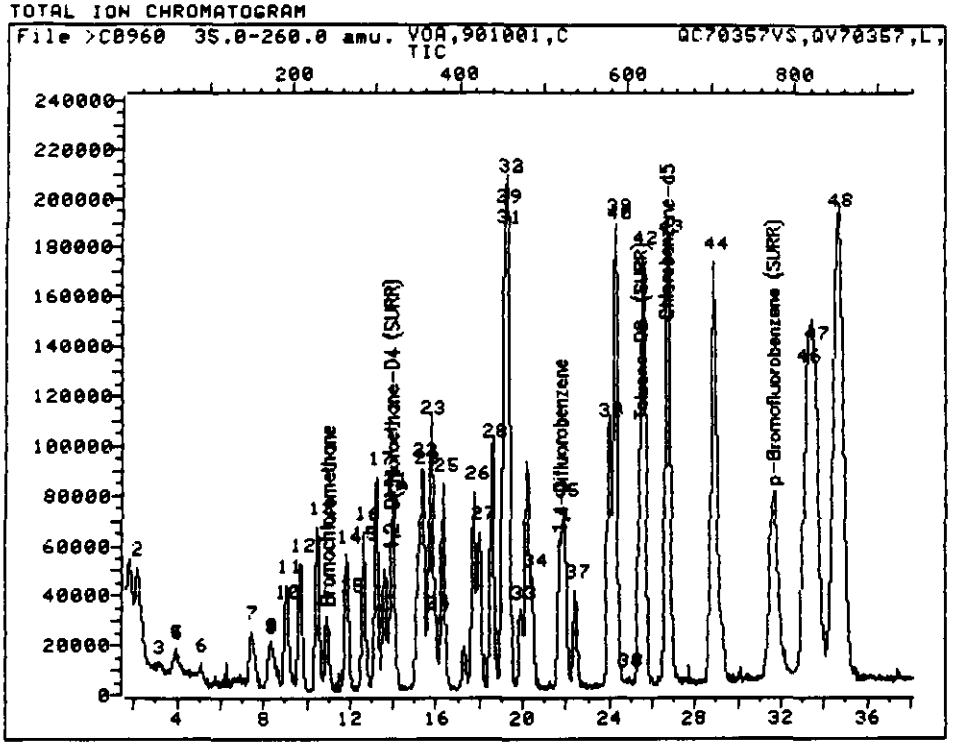
Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 16:55
Output File: ^C0961::AQ Injected at: 901002 14:43
Data File: >C0961::U0 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 5UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
39)	1,1,2,2-Tetrachloroethane	24.28	585	144422	261.96	NG	99
40)	Tetrachloroethylene	24.36	587	92698	253.15	NG	96
41)	Toluene-D8 (SURR)	25.48	616	390359	251.18	NG	89
42)	Toluene	25.64	620	214769	243.82	NG	91
43)	Chlorobenzene	26.81	650	310398	251.80	NG	94
44)	Ethylbenzene	28.90	704	183632	247.57	NG	79
45)	p-Bromofluorobenzene (SURR)	31.74	777	275490	250.96	NG	83
46)	Styrene	33.37	819	441269	252.51	NG	93
47)	m-Xylene	33.68	827	243938	251.05	NG	97
48)	o+p-Xylenes	34.76	855	503073	501.43	NG	89

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0960::U0 Quant Output File: ^C0960::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 10UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 17:03
Injected at: 901002 13:53

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:03
Output File: ^C0960::AQ Injected at: 901002 13:53
Data File: >C0960::U0 Dilution Factor: 1.00000
Name: V0A,901001,C
Misc: QC70357VS,QV70357,L,5,, 10UL

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.93	241	46511	250.00	NG	92
2)	Methyl chloride	2.12	14	86009	447.10	NG	98
3)	Methyl bromide	3.13	40	11787	385.06	NG	93
4)	Dichlorodifluoromethane	3.87	59	36001	415.60	NG	95
5)	Vinyl chloride	3.95	61	52754	424.12	NG	97
6)	Chloroethane	5.11	91	37464	460.58	NG	94
7)	Methylene chloride	7.44	151	82230	398.98	NG	99
8)	Acrolein	8.26	172	130129	6104.78	NG	87
9)	Acetone	8.33	174	45276	423.02	NG	94
10)	Acrylonitrile	8.99	191	57272	611.21	NG	93
11)	Carbon disulfide	9.07	193	356632	330.59	NG	99
12)	Trichlorofluoromethane	9.69	209	314827	468.52	NG	96
13)	1,1-Dichloroethylene	10.51	230	155521	494.02	NG	96
14)	1,1-Dichloroethane	11.82	264	301095	475.09	NG	95
15)	Tetrahydrofuran	11.94	267	30274	619.26	NG	100
15)	Tetrahydrofuran	12.60	284	4645	95.01	NG	100
16)	1,2-Trans-dichloroethylene	12.64	285	148502	487.36	NG	98
17)	Chloroform	13.26	301	417209	477.18	NG	94
18)	1,2-Dichloroethane-D4 (SURR)	13.92	318	143846	239.42	NG	98
19)	1,2-Dichloroethane	14.03	321	319071	471.23	NG	97
20)	*1,4-Difluorobenzene	21.72	519	256903	250.00	NG	99
21)	Methyl ethyl ketone	14.00	320	17574	491.17	NG	92
22)	1,1,1-Trichloroethane	15.35	355	357272	461.31	NG	93
23)	Carbon tetrachloride	15.39	356	40615	57.15	NG	97
23)	Carbon tetrachloride	15.74	365	330550	465.09	NG	97
24)	Vinyl acetate	16.01	372	234265	446.62	NG	96
25)	Dichlorobromomethane	16.32	380	335186	463.29	NG	98
26)	1,2-Dichloropropane	17.76	417	169497	472.15	NG	97
27)	cis-1,3-Dichloropropylene	17.99	423	239863	471.71	NG	91
28)	Trichloroethylene	18.57	438	188967	497.83	NG	92
29)	Chlorodibromomethane	19.19	454	252858	477.77	NG	96
30)	bis(Chloromethyl)ether	19.19	454	100814	467.88	NG	100
31)	Benzene	19.15	453	574627	480.27	NG	94
32)	1,1,2-Trichloroethane	19.31	457	165271	488.44	NG	88
33)	trans-1,3-Dichloropropylene	19.31	457	309782	467.34	NG	92
33)	trans-1,3-Dichloropropylene	19.93	473	38584	58.21	NG	58
34)	2-Chloroethylvinyl ether	20.44	486	126916	495.99	NG	100
35)	Bromoform	21.91	524	214387	489.21	NG	95
36)	*Chlorobenzene-d5	26.66	646	285650	250.00	NG	87
37)	Methyl-iso-butyl ketone	22.41	537	196718	503.24	NG	94
38)	2-Hexanone	23.97	577	191773	507.75	NG	90
38)	2-Hexanone	24.86	600	4253	11.26	NG	95
39)	1,1,2,2-Tetrachloroethane	24.28	585	278991	470.12	NG	93

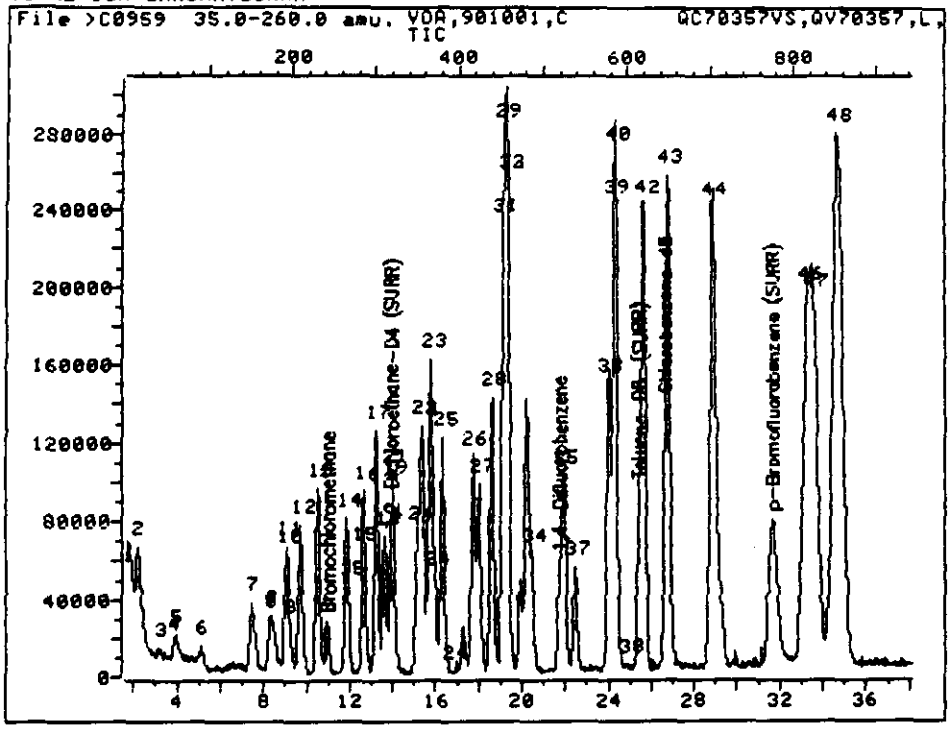
Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:03
Output File: ^C0960::AQ Injected at: 901002 13:53
Data File: >C0960::U0 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 10UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.31	586	196320	498.08	NG	99
41)	Toluene-D8 (SURR)	25.44	615	415602	248.44	NG	91
42)	Toluene	25.60	619	464802	490.22	NG	93
43)	Chlorobenzene	26.77	649	644676	485.85	NG	93
44)	Ethylbenzene	28.87	703	383763	480.65	NG	79
45)	p-Bromofluorobenzene (SURR)	31.62	774	286218	242.23	NG	91
46)	Styrene	33.21	815	901649	479.34	NG	92
47)	m-Xylene	33.56	824	497605	475.77	NG	96
48)	o+p-Xylenes	34.65	852	1029765	953.55	NG	87

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0959::U0 Quant Output File: ^C0959::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 15UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 17:01
Injected at: 901002 13:04

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:01
Output File: ^C0959::AQ Injected at: 901002 13:04
Data File: >C0959::U0 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 15UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.97	242	43946	250.00	NG	90
2)	Methyl chloride	2.12	14	119589	657.95	NG	97
3)	Methyl bromide	3.17	41	15696	542.69	NG	99
4)	Dichlorodifluoromethane	3.83	58	47936	585.67	NG	96
5)	Vinyl chloride	3.91	60	69767	593.64	NG	93
6)	Chloroethane	5.11	91	53146	691.50	NG	99
7)	Methylene chloride	7.44	151	124051	637.03	NG	99
8)	Acrolein	8.26	172	209088	10381.53	NG	92
8)	Acrolein	9.23	197	4123	204.71	NG	94
9)	Acetone	8.33	174	65468	647.37	NG	95
10)	Acrylonitrile	9.03	192	82560	932.51	NG	96
11)	Carbon disulfide	9.07	193	598559	587.23	NG	99
12)	Trichlorofluoromethane	9.69	209	474825	747.88	NG	91
13)	1,1-Dichloroethylene	10.51	230	223289	750.68	NG	93
14)	1,1-Dichloroethane	11.86	265	436142	728.35	NG	95
15)	Tetrahydrofuran	11.94	267	39683	859.10	NG	100
15)	Tetrahydrofuran	12.56	283	4728	102.36	NG	100
16)	1,2-Trans-dichloroethylene	12.64	285	218918	760.39	NG	98
17)	Chloroform	13.22	300	601279	727.85	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	13.92	318	143382	252.58	NG	95
19)	1,2-Dichloroethane	13.61	310	3987	6.23	NG	66
19)	1,2-Dichloroethane	14.03	321	450613	704.35	NG	98
20)	*1,4-Difluorobenzene	21.72	519	242651	250.00	NG	99
21)	Methyl ethyl ketone	14.00	320	24669	729.96	NG	89
22)	1,1,1-Trichloroethane	15.35	355	517516	707.46	NG	98
23)	Carbon tetrachloride	15.35	355	56892	84.75	NG	96
23)	Carbon tetrachloride	15.78	366	484005	721.00	NG	97
24)	Vinyl acetate	15.12	349	127578	257.51	NG	76
24)	Vinyl acetate	15.97	371	391627	790.49	NG	98
24)	Vinyl acetate	16.79	392	2236	4.51	NG	50
25)	Dichlorobromomethane	16.32	380	488465	714.81	NG	96
26)	1,2-Dichloropropane	17.72	416	249216	734.99	NG	95
27)	cis-1,3-Dichloropropylene	17.99	423	355519	740.22	NG	92
28)	Trichloroethylene	18.61	439	261235	728.64	NG	87
29)	Chlorodibromomethane	19.19	454	368760	737.69	NG	99
30)	bis(Chloromethyl)ether	19.19	454	145087	712.90	NG	100
31)	Benzene	19.12	452	864067	764.60	NG	96
32)	1,1,2-Trichloroethane	19.35	458	236975	741.48	NG	84
33)	trans-1,3-Dichloropropylene	19.35	458	456365	728.91	NG	90
34)	2-Chloroethylvinyl ether	20.44	486	177590	734.79	NG	100
35)	Bromoform	21.91	524	302707	731.31	NG	98
36)	*Chlorobenzene-d5	26.62	645	281445	250.00	NG	86
37)	Methyl-iso-butyl ketone	22.45	538	270605	702.59	NG	94

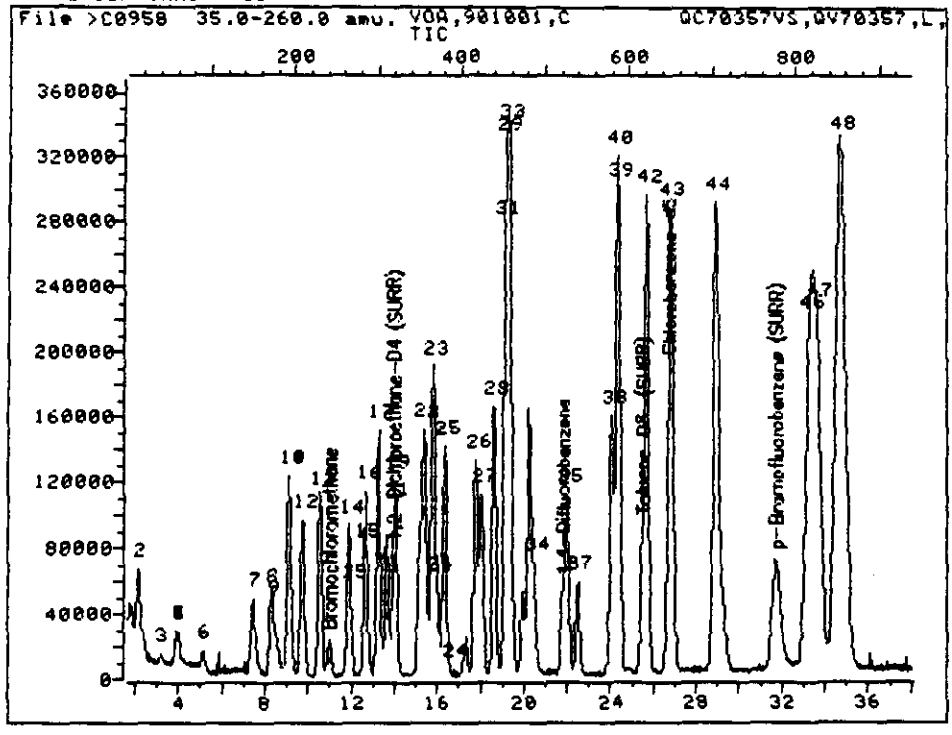
Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:01
Output File: ^C0959::AQ Injected at: 901002 13:04
Data File: >C0959::U0 Dilution Factor: 1.00000
Name: V0A,901001,C
Misc: QC70357VS,QV70357,L,5,, 15UL

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
38)	2-Hexanone	23.97	577	259439	697.16	NG	99
38)	2-Hexanone	24.94	602	3828	10.29	NG	99
39)	1,1,2,2-Tetrachloroethane	24.24	584	443558	758.60	NG	98
40)	Tetrachloroethylene	24.32	586	282256	726.81	NG	98
41)	Toluene-D8 (SURR)	25.40	614	409590	248.51	NG	91
42)	Toluene	25.64	620	689511	738.08	NG	91
43)	Chlorobenzene	26.74	648	946510	723.99	NG	92
44)	Ethylbenzene	28.83	702	571616	726.63	NG	81
45)	p-Bromofluorobenzene (SURR)	31.63	774	282323	242.50	NG	86
46)	Styrene	33.26	816	1302237	702.65	NG	90
47)	m-Xylene	33.57	824	734713	712.98	NG	98
48)	o+p-Xylenes	34.65	852	1496032	1406.00	NG	88

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0958::U0 Quant Output File: ^C0958::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 20UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 16:58
Injected at: 901002 12:15

QUANT REPORT Page 1

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 16:58
Output File: ^C0958::AQ Injected at: 901002 12:15
Data File: >C0958::U0 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,, 20UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.96	241	35888	250.00	NG	98
2)	Methyl chloride	2.12	13	188780	1271.83	NG	98
3)	Methyl bromide	3.16	40	19565	828.34	NG	99
4)	Dichlorodifluoromethane	3.90	59	72696	1087.61	NG	97
5)	Vinyl chloride	3.90	59	100809	1050.37	NG	98
6)	Chloroethane	5.14	91	67975	1083.03	NG	99
7)	Methylene chloride	7.43	150	152042	956.08	NG	97
8)	Acrolein	8.25	171	357306	21724.14	NG	93
9)	Acetone	8.37	174	69403	840.37	NG	95
10)	Acrylonitrile	9.06	192	113050	1563.59	NG	99
11)	Carbon disulfide	9.10	193	1020286	1225.73	NG	99
12)	Trichlorofluoromethane	9.72	209	576578	1112.05	NG	93
13)	1,1-Dichloroethylene	10.50	229	261922	1078.28	NG	95
14)	1,1-Dichloroethane	11.86	264	516512	1056.24	NG	96
15)	Tetrahydrofuran	11.97	267	36980	980.34	NG	100
15)	Tetrahydrofuran	12.59	283	11239	297.95	NG	100
16)	1,2-Trans-dichloroethylene	12.67	285	248677	1057.69	NG	97
17)	Chloroform	13.25	300	700113	1037.77	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	13.95	318	126995	273.94	NG	97
19)	1,2-Dichloroethane	14.03	320	525411	1005.66	NG	94
20)	*1,4-Difluorobenzene	21.79	520	205564	250.00	NG	98
21)	Methyl ethyl ketone	13.99	319	24075	840.91	NG	89
22)	1,1,1-Trichloroethane	15.39	355	607067	979.60	NG	97
23)	Carbon tetrachloride	15.39	355	65406	115.01	NG	93
23)	Carbon tetrachloride	15.81	366	579302	1018.65	NG	99
24)	Vinyl acetate	16.01	371	446961	1064.94	NG	96
24)	Vinyl acetate	16.74	390	2108	5.02	NG	59
25)	Dichlorobromomethane	16.36	380	564259	974.70	NG	97
26)	1,2-Dichloropropane	17.75	416	284368	989.97	NG	88
27)	cis-1,3-Dichloropropylene	18.02	423	405944	997.69	NG	94
28)	Trichloroethylene	18.61	438	291786	960.68	NG	86
29)	Chlorodibromomethane	19.23	454	419860	991.44	NG	96
30)	bis(Chloromethyl)ether	19.23	454	168159	975.33	NG	100
31)	Benzene	19.15	452	1005812	1050.60	NG	98
32)	1,1,2-Trichloroethane	19.34	457	271744	1003.68	NG	82
33)	trans-1,3-Dichloropropylene	19.34	457	520749	981.81	NG	94
34)	2-Chloroethylvinyl ether	20.47	486	200384	978.68	NG	100
35)	Bromoform	21.98	525	315163	898.77	NG	94
36)	*Chlorobenzene-d5	26.70	646	236905	250.00	NG	85
37)	Methyl-iso-butyl ketone	22.49	538	277047	854.56	NG	98
38)	2-Hexanone	24.04	578	262866	839.18	NG	95
39)	1,1,2,2-Tetrachloroethane	24.31	585	478478	972.17	NG	97
40)	Tetrachloroethylene	24.35	586	312878	957.13	NG	97

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 16:58
Output File: ^C0958::AQ Injected at: 901002 12:15
Data File: >C0958::U0 Dilution Factor: 1.00000
Name: V0A,901001,C
Misc: QC70357VS,QV70357,L,5,, 20UL

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.47	615	346251	249.57	NG	95
42)	Toluene	25.67	620	807213	1026.53	NG	90
43)	Chlorobenzene	26.78	648	1100799	1000.31	NG	89
44)	Ethylbenzene	28.91	703	658561	994.55	NG	80
45)	p-Bromofluorobenzene (SURR)	31.71	775	247619	252.68	NG	80
46)	Styrene	33.26	815	1540003	987.17	NG	91
47)	m-Xylene	33.61	824	867468	1000.07	NG	95
48)	o+p-Xylenes	34.73	853	1782225	1989.88	NG	87

* Compound is ISTD

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date(s) 10/03/90 10/03/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>C0978 RRF50 =>C0972
RRF100=>C0977 RRF150=>C0976 RRF200=>C0975

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	.573	.735	1.123	.521	1.488	.888	46.2#
Bromomethane	.240	.302	.140	.103	.165	.190	42.3
Vinyl Chloride *	.705	.854	.683	.478	.857	.715	21.8*
Chloroethane	.426	.567	.460	.366	.622	.488	21.4
Methylene Chloride	1.204	1.588	1.176	1.067	1.516	1.310	17.4
Acetone	.957	.896	.582	.544	.668	.729	25.6
Carbon Disulfide	5.944	7.468	4.613	7.465	6.830	6.464	18.7
1,1-Dichloroethene *	1.678	1.666	1.635	1.717	1.794	1.698	3.6*
1,1-Dichloroethane #	3.608	3.578	3.360	3.473	3.611	3.526	3.1#
1,2-Dichlorethene (total)	1.660	1.572	1.556	1.657	1.641	1.617	3.0
Chloroform *	5.094	5.263	4.600	4.849	5.013	4.964	5.1*
1,2-Dichloroethane	4.185	4.302	3.690	3.764	3.965	3.981	6.6
2-Butanone	.058	.072	.032	.032	.029	.045	43.2
1,1,1-Trichloroethane	.911	1.039	.750	.799	.812	.862	13.3
Carbon Tetrachloride	.826	.940	.699	.736	.765	.793	11.9
Vinyl Acetate	.568	.570	.581	.623	.528	.574	5.9
Bromodichloromethane	.825	.899	.695	.738	.736	.779	10.5
1,2-Dichloropropane *	.356	.331	.323	.347	.323	.336	4.5*
cis-1,3-Dichloropropene	.509	.553	.485	.513	.491	.510	5.2
Trichloroethene	.408	.373	.353	.366	.362	.372	5.7
Dibromochloromethane	.545	.538	.511	.528	.520	.528	2.6
1,1,2-Trichloroethane	.321	.304	.322	.335	.330	.322	3.7
Benzene	1.159	1.120	1.118	1.243	1.203	1.169	4.6
trans-1,3-Dichloropropene	.686	.732	.650	.663	.673	.681	4.6
Bromoform #	.477	.403	.445	.429	.409	.433	6.9#
4-Methyl-2-Pentanone	.426	.298	.342	.340	.289	.339	16.1
2-Hexanone	.389	.267	.323	.329	.274	.316	15.6
Tetrachloroethene	.403	.345	.349	.330	.329	.351	8.6
1,1,2,2-Tetrachloroethane #	.548	.412	.537	.535	.458	.498	12.1#
Toluene *	.849	.845	.817	.867	.888	.853	3.1*
Chlorobenzene #	1.214	1.141	1.135	1.119	1.161	1.154	3.2#
Ethylbenzene *	.743	.730	.699	.678	.738	.718	3.9*
Styrene	1.859	1.866	1.696	1.586	1.760	1.753	6.7
Xylene (total)	1.092	1.143	.987	.921	1.026	1.034	8.4
Toluene-d8	1.456	1.544	1.498	1.432	1.463	1.478	3.0
Bromofluorobenzene	1.116	1.275	1.085	1.042	1.116	1.127	7.8
1,2-Dichloroethane-d4	3.274	3.769	3.321	3.511	3.837	3.543	7.2

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ETCNJ Contract: ____

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Instrument ID: GC/MS C Calibration Date(s): ____ ____

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

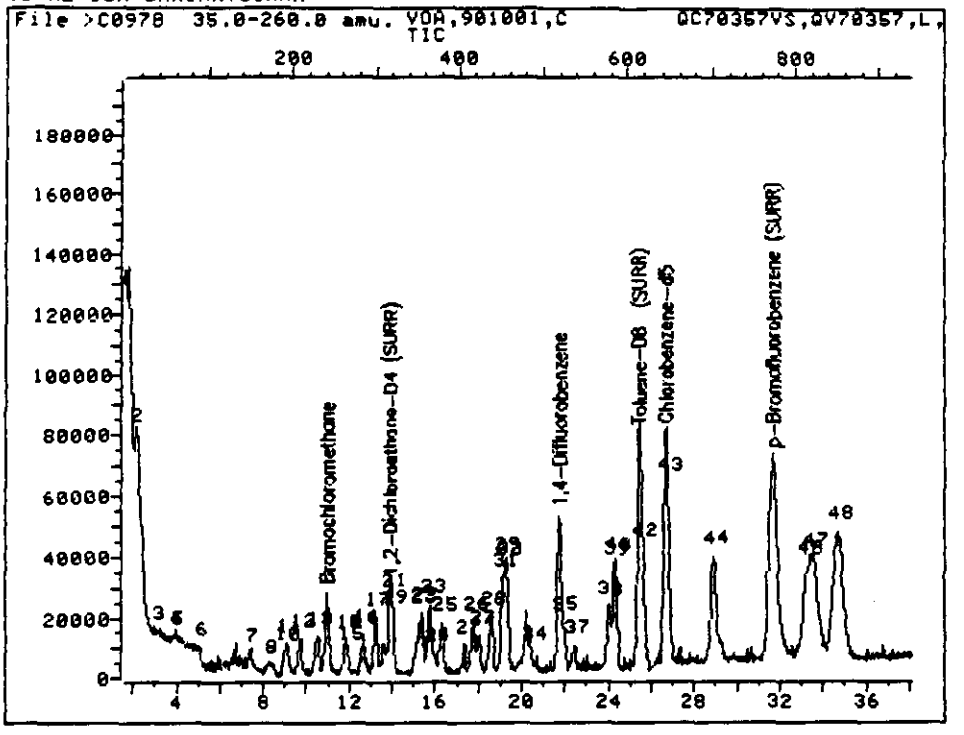
LAB FILE ID: RRF20 = >C0978 RRF50 = >C0972

RRF100= >C0977 RRF150= >C0976 RRF200= >C0975

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Tetrahydrofuran	.172	.313	.267	.316	.268	.267	21.9
Toluene-d8							
Bromofluorobenzene							
1,2-Dichloroethane-d4							

FORM VI VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0978::U4 Quant Output File: ^C0978::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 2UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 16:40
Injected at: 901003 15:35

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:40
Output File: ^C0978::AQ Injected at: 901003 15:35
Data File: >C0978::U4 Dilution Factor: 1.00000
Name: UOA,901001,C
Misc: QC70357US,QU70357,L,5, 2UL

ID File: IC1171::US
Title: IFB, PP/UOA, TCL, XUOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.94	241	42566	250.00	NG	97
2)	Methyl chloride	2.14	14	9755	55.41	NG	92
3)	Methyl bromide	3.15	40	4089	145.96	NG	84
4)	Dichlorodifluoromethane	3.88	59	8620	108.73	NG	92
5)	Vinyl chloride	3.96	61	11997	105.39	NG	94
6)	Chloroethane	5.12	91	7254	97.44	NG	84
7)	Methylene chloride	7.42	150	20507	108.72	NG	99
8)	Acrolein	8.31	173	23677	1213.71	NG	93
9)	Acetone	8.31	173	16293	166.33	NG	89
10)	Acrylonitrile	9.01	191	14008	163.35	NG	90
11)	Carbon disulfide	9.08	193	101202	102.51	NG	97
12)	Trichlorofluoromethane	9.70	209	69603	113.18	NG	91
13)	1,1-Dichloroethylene	10.48	229	28574	99.18	NG	93
14)	1,1-Dichloroethane	11.84	264	61430	105.91	NG	97
14)	1,1-Dichloroethane	12.65	285	14699	25.34	NG	65
15)	Tetrahydrofuran	11.87	265	2073	46.33	NG	100
15)	Tetrahydrofuran	11.95	267	2920	65.26	NG	100
16)	1,2-Trans-dichloroethylene	12.65	285	28272	101.38	NG	94
17)	Chloroform	13.23	300	86729	108.39	NG	97
18)	1,2-Dichloroethane-D4 (SURR)	13.89	317	139355	253.44	NG	95
19)	1,2-Dichloroethane	14.05	321	71261	115.00	NG	96
20)	*1,4-Difluorobenzene	21.73	519	210589	250.00	NG	98
21)	Methyl ethyl ketone	14.01	320	4914	167.54	NG	99
22)	1,1,1-Trichloroethane	15.37	355	76758	120.91	NG	95
23)	Carbon tetrachloride	15.33	354	8892	15.26	NG	81
23)	Carbon tetrachloride	15.75	365	69546	119.37	NG	96
24)	Vinyl acetate	15.99	371	47815	111.21	NG	97
25)	Dichlorobromomethane	16.34	380	69506	117.20	NG	98
26)	1,2-Dichloropropane	17.73	416	30006	101.97	NG	99
27)	cis-1,3-Dichloropropylene	17.38	407	2119	5.08	NG	71
27)	cis-1,3-Dichloropropylene	18.00	423	42910	102.94	NG	92
28)	Trichloroethylene	18.59	438	34378	110.49	NG	86
29)	Chlorodibromomethane	19.21	454	45927	105.86	NG	99
30)	bis(Chloromethyl)ether	19.17	453	18986	107.49	NG	100
31)	Benzene	19.13	452	97590	99.50	NG	90
32)	1,1,2-Trichloroethane	19.32	457	27035	97.47	NG	84
33)	trans-1,3-Dichloropropylene	19.32	457	57788	106.35	NG	88
34)	2-Chloroethylvinyl ether	20.45	486	21125	100.71	NG	100
35)	Bromoform	21.92	524	40197	111.90	NG	98
36)	*Chlorobenzene-d5	26.65	643	243193	250.00	NG	80
37)	Methyl-iso-butyl ketone	22.43	537	41488	124.66	NG	95
38)	2-Hexanone	23.98	577	37852	117.71	NG	83
39)	1,1,2,2-Tetrachloroethane	24.25	584	53349	105.59	NG	97

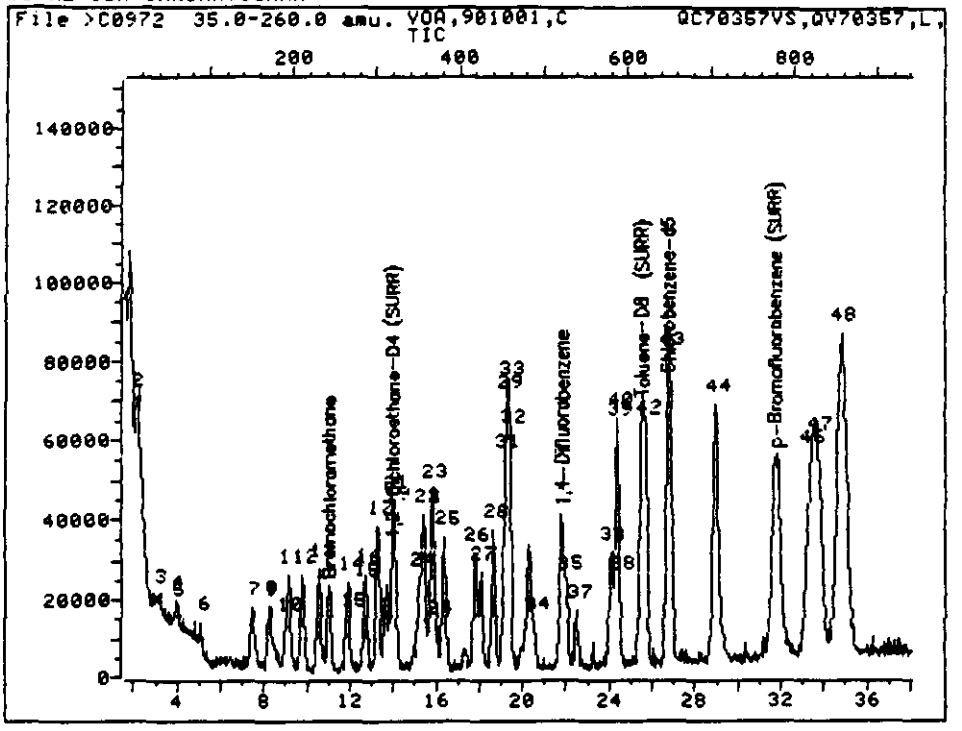
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:40
Output File: ^C0978::AQ Injected at: 901003 15:35
Data File: >C0978::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 2UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.33	586	39161	116.70	NG	93
41)	Toluene-D8 (SURR)	25.42	614	354032	248.58	NG	92
42)	Toluene	25.61	619	82575	102.30	NG	93
43)	Chlorobenzene	26.76	646	118136	104.58	NG	96
44)	Ethylbenzene	28.86	700	72302	106.37	NG	78
45)	p-Bromofluorobenzene (SURR)	31.65	772	271522	269.90	NG	83
46)	Styrene	33.28	814	180878	112.95	NG	98
47)	m-Xylene	33.56	821	102366	114.96	NG	96
48)	o+p-Xylenes	34.72	851	212529	231.16	NG	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0972::U4 Quant Output File: ^C0972::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 10:39
Injected at: 901003 10:01

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 10:39
Output File: ^C0972::AQ Injected at: 901003 10:01
Data File: >C0972::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 5ul

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.00	243	33439	250.00	NG	92
2)	Methyl chloride	2.12	14	24563	177.60	NG	92
3)	Methyl bromide	3.17	41	10088	458.39	NG	89
4)	Dichlorodifluoromethane	3.94	61	20601	330.79	NG	95
5)	Vinyl chloride	3.98	62	28559	319.36	NG	99
6)	Chloroethane	5.14	92	18945	323.95	NG	97
7)	Methylene chloride	7.47	152	53114	358.46	NG	92
8)	Acrolein	8.25	172	105297	6870.91	NG	88
9)	Acetone	8.29	173	29974	389.52	NG	97
10)	Acrylonitrile	9.02	192	30914	458.88	NG	93
11)	Carbon disulfide	9.14	195	249726	321.98	NG	97
12)	Trichlorofluoromethane	9.80	212	145098	300.35	NG	93
13)	1,1-Dichloroethylene	10.57	232	55695	246.08	NG	87
14)	1,1-Dichloroethane	11.93	267	119653	262.60	NG	98
15)	Tetrahydrofuran	12.01	269	10461	297.63	NG	100
15)	Tetrahydrofuran	12.67	286	2117	60.23	NG	100
16)	1,2-Trans-dichloroethylene	12.71	287	52582	240.03	NG	89
17)	Chloroform	13.29	302	175991	279.98	NG	97
18)	1,2-Dichloroethane-D4 (SURR)	13.95	319	126037	291.78	NG	99
19)	1,2-Dichloroethane	14.06	322	143848	295.50	NG	97
20)	*1,4-Difluorobenzene	21.78	521	154748	250.00	NG	95
21)	Methyl ethyl ketone	14.03	321	11158	517.72	NG	91
22)	1,1,1-Trichloroethane	15.42	357	160852	344.79	NG	98
23)	Carbon tetrachloride	15.42	357	16473	38.48	NG	93
23)	Carbon tetrachloride	15.81	367	145452	339.75	NG	97
24)	Vinyl acetate	15.23	352	49264	155.92	NG	78
24)	Vinyl acetate	16.04	373	88161	279.03	NG	89
25)	Dichlorobromomethane	16.39	382	139050	319.07	NG	95
26)	1,2-Dichloropropane	17.79	418	51182	236.69	NG	98
27)	cis-1,3-Dichloropropylene	18.06	425	85652	279.63	NG	91
28)	Trichloroethylene	18.64	440	57747	252.56	NG	78
29)	Chlorodibromomethane	19.26	456	83180	260.92	NG	99
30)	bis(Chloromethyl)ether	19.26	456	38771	298.72	NG	100
31)	Benzene	19.18	454	173359	240.54	NG	89
32)	1,1,2-Trichloroethane	19.42	460	47019	230.69	NG	88
33)	trans-1,3-Dichloropropylene	19.38	459	113305	283.77	NG	85
34)	2-Chloroethylvinyl ether	20.50	488	32319	209.68	NG	100
35)	Bromoform	22.02	527	62340	236.16	NG	97
36)	*Chlorobenzene-d5	26.72	648	176233	250.00	NG	65
37)	Methyl-iso-butyl ketone	22.48	539	52446	217.46	NG	91
38)	2-Hexanone	24.07	580	47055	201.94	NG	80
38)	2-Hexanone	24.50	591	2192	9.41	NG	96
39)	1,1,2,2-Tetrachloroethane	24.34	587	72692	198.54	NG	99

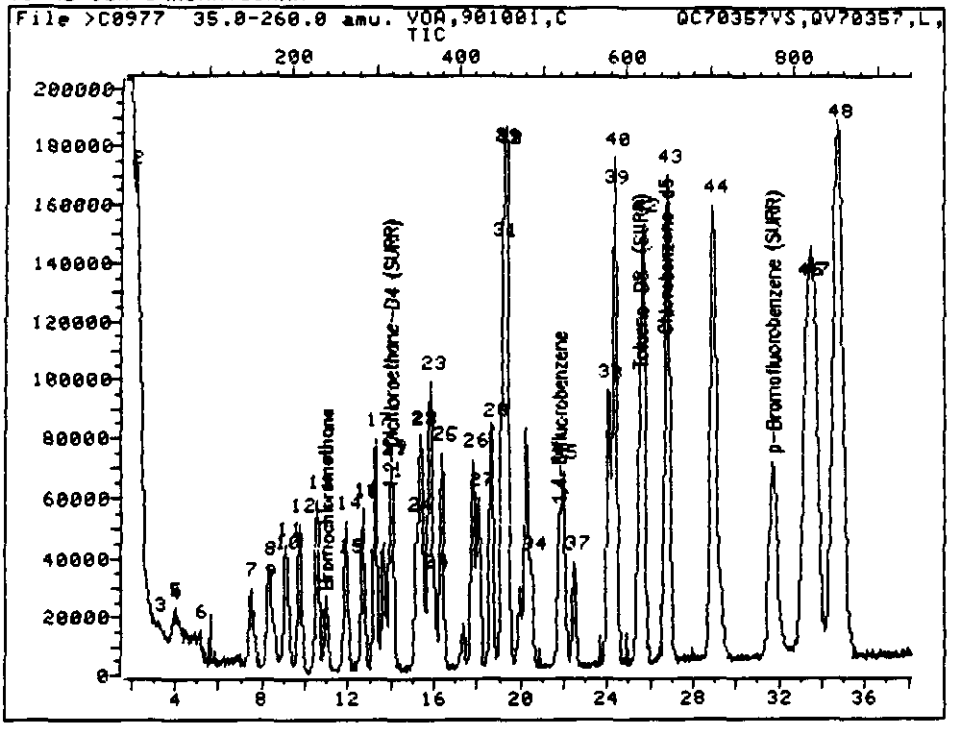
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 10:39
Output File: ^C0972::AQ Injected at: 901003 10:01
Data File: >C0972::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.38	588	60842	250.20	NG	98
41)	Toluene-D8 (SURR)	25.51	617	272171	263.72	NG	93
42)	Toluene	25.70	622	148919	254.58	NG	99
43)	Chlorobenzene	26.83	651	201006	245.54	NG	96
44)	Ethylbenzene	28.97	706	128615	261.10	NG	78
45)	p-Bromofluorobenzene (SURR)	31.72	777	224676	308.20	NG	73
46)	Styrene	33.39	820	328857	283.38	NG	98
47)	m-Xylene	33.70	828	189326	293.41	NG	96
48)	o+p-Xylenes	34.83	857	402974	604.82	NG	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0977::U4 Quant Output File: ^C0977::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 10UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 16:43
Injected at: 901003 14:45

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:43
Output File: ^C0977::AQ Injected at: 901003 14:45
Data File: >C0977::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 10UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.94	240	40449	250.00	NG	95
2)	Methyl chloride	2.17	14	90814	542.83	NG	97
3)	Methyl bromide	3.22	41	11319	425.19	NG	98
4)	Dichlorodifluoromethane	3.92	59	37369	496.04	NG	93
5)	Vinyl chloride	3.96	60	55220	510.48	NG	97
6)	Chloroethane	5.16	91	37245	526.51	NG	97
7)	Methylene chloride	7.45	150	95143	530.82	NG	98
8)	Acrolein	8.31	172	244743	13202.43	NG	95
9)	Acetone	8.38	174	47100	506.01	NG	94
10)	Acrylonitrile	9.04	191	58471	717.52	NG	97
11)	Carbon disulfide	9.12	193	373170	397.76	NG	98
12)	Trichlorofluoromethane	9.74	209	293996	503.09	NG	95
13)	1,1-Dichloroethylene	10.52	229	132241	483.02	NG	93
14)	1,1-Dichloroethane	11.87	264	271805	493.15	NG	95
15)	Tetrahydrofuran	11.95	266	21639	508.97	NG	100
15)	Tetrahydrofuran	12.65	284	2620	61.62	NG	100
16)	1,2-Trans-dichloroethylene	12.69	285	125902	475.11	NG	96
17)	Chloroform	13.27	300	372092	489.36	NG	95
18)	1,2-Dichloroethane-D4 (SURR)	13.97	318	134320	257.07	NG	98
19)	1,2-Dichloroethane	14.05	320	298525	506.96	NG	97
20)	*1,4-Difluorobenzene	21.77	519	216201	250.00	NG	98
21)	Methyl ethyl ketone	14.01	319	14033	466.04	NG	95
22)	1,1,1-Trichloroethane	15.40	355	324364	497.66	NG	96
23)	Carbon tetrachloride	15.36	354	35214	58.87	NG	95
23)	Carbon tetrachloride	15.79	365	302117	505.11	NG	94
24)	Vinyl acetate	15.21	350	80279	181.86	NG	78
24)	Vinyl acetate	16.02	371	251350	569.41	NG	93
25)	Dichlorobromomethane	16.37	380	300604	493.71	NG	97
26)	1,2-Dichloropropane	17.77	416	139502	461.75	NG	91
27)	cis-1,3-Dichloropropylene	18.04	423	209777	490.21	NG	93
28)	Trichloroethylene	18.66	439	152596	477.69	NG	87
29)	Chlorodibromomethane	19.24	454	220994	496.17	NG	97
30)	bis(Chloromethyl)ether	19.20	453	89735	494.86	NG	100
31)	Benzene	19.17	452	483500	480.18	NG	94
32)	1,1,2-Trichloroethane	19.36	457	139077	488.40	NG	82
33)	trans-1,3-Dichloropropylene	19.36	457	281099	503.90	NG	89
34)	2-Chloroethylvinyl ether	20.49	486	105157	488.32	NG	100
35)	Bromoform	21.96	524	192370	521.61	NG	99
36)	*Chlorobenzene-d5	26.67	645	245701	250.00	NG	82
37)	Methyl-iso-butyl ketone	22.46	537	167817	499.10	NG	94
38)	2-Hexanone	24.02	577	158671	488.41	NG	94
39)	1,1,2,2-Tetrachloroethane	24.29	584	264065	517.32	NG	97
40)	Tetrachloroethylene	24.33	585	171398	505.56	NG	97

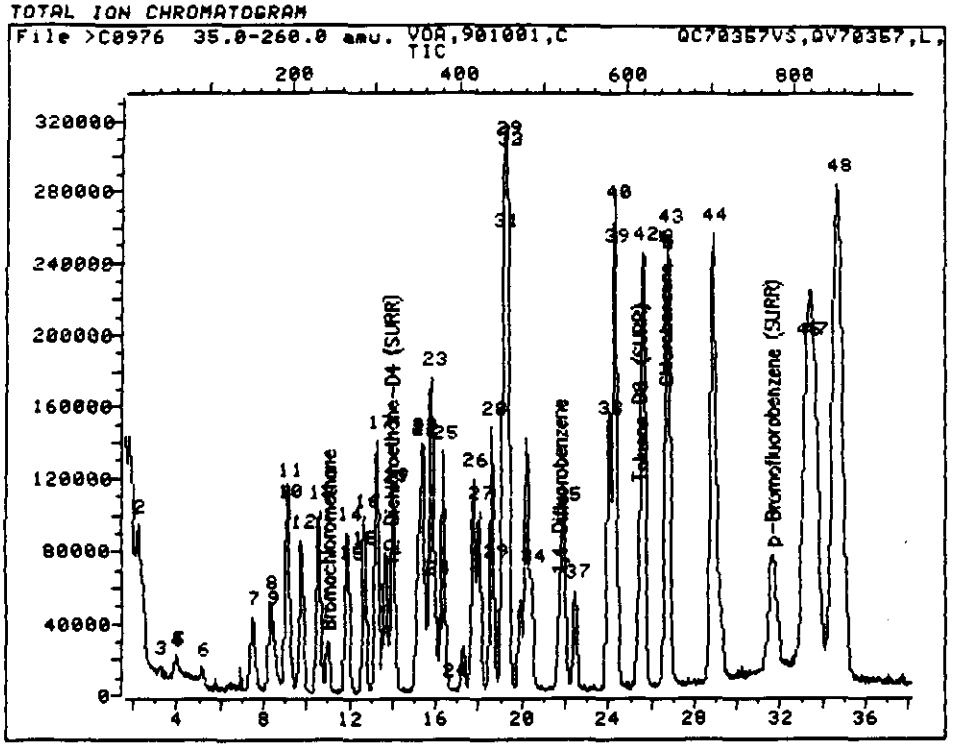
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:43
Output File: ^C0977::AQ Injected at: 901003 14:45
Data File: >C0977::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 10UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.49	615	367994	255.75	NG	91
42)	Toluene	25.65	619	401656	492.50	NG	95
43)	Chlorobenzene	26.79	648	557897	488.82	NG	94
44)	Ethylbenzene	28.88	702	343471	500.13	NG	79
45)	p-Bromofluorobenzene (SURR)	31.67	774	266698	262.40	NG	84
46)	Styrene	33.31	816	833355	515.07	NG	94
47)	m-Xylene	33.62	824	460640	512.04	NG	97
48)	o+p-Xylenes	34.70	852	969564	1043.78	NG	87

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0976::U4 Quant Output File: ^C0976::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 15UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 16:46
Injected at: 901003 13:55

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:46
Output File: ^C0976::AQ Injected at: 901003 13:55
Data File: >C0976::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 15UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.98	242	44783	250.00	NG	99
2)	Methyl chloride	2.21	16	69987	377.85	NG	99
3)	Methyl bromide	3.22	42	13798	468.15	NG	97
4)	Dichlorodifluoromethane	3.92	60	44312	531.28	NG	93
5)	Vinyl chloride	4.00	62	64172	535.83	NG	98
6)	Chloroethane	5.16	92	49183	627.98	NG	98
7)	Methylene chloride	7.49	152	143319	722.22	NG	98
8)	Acrolein	8.31	173	370346	18044.55	NG	90
9)	Acetone	8.38	175	73037	708.72	NG	95
10)	Acrylonitrile	9.04	192	138313	1533.03	NG	90
11)	Carbon disulfide	9.12	194	1002979	965.61	NG	99
12)	Trichlorofluoromethane	9.74	210	504835	780.28	NG	96
13)	1,1-Dichloroethylene	10.56	231	230701	761.10	NG	92
14)	1,1-Dichloroethane	11.87	265	466532	764.54	NG	96
15)	Tetrahydrofuran	11.95	267	42526	903.44	NG	100
15)	Tetrahydrofuran	12.61	284	8088	171.83	NG	100
16)	1,2-Trans-dichloroethylene	12.65	285	222632	758.83	NG	98
17)	Chloroform	13.27	301	651450	773.84	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	13.93	318	157254	271.83	NG	97
19)	1,2-Dichloroethane	14.05	321	505720	775.71	NG	97
20)	*1,4-Difluorobenzene	21.73	519	235893	250.00	NG	99
21)	Methyl ethyl ketone	14.01	320	22639	689.08	NG	94
22)	1,1,1-Trichloroethane	15.40	356	565553	795.28	NG	97
23)	Carbon tetrachloride	15.37	355	57679	88.38	NG	92
23)	Carbon tetrachloride	15.79	366	520609	797.74	NG	91
24)	Vinyl acetate	15.99	371	440600	914.82	NG	97
24)	Vinyl acetate	16.84	393	2264	4.70	NG	73
25)	Dichlorobromomethane	16.34	380	522200	786.07	NG	95
26)	1,2-Dichloropropane	17.73	416	245780	745.62	NG	99
27)	cis-1,3-Dichloropropylene	18.00	423	362807	777.03	NG	93
28)	Trichloroethylene	18.59	438	258713	742.27	NG	87
29)	Chlorodibromomethane	18.70	441	2087	4.29	NG	57
29)	Chlorodibromomethane	19.21	454	373799	769.19	NG	96
30)	bis(Chloromethyl)ether	19.21	454	152055	768.54	NG	100
31)	Benzene	19.13	452	879768	800.80	NG	94
32)	1,1,2-Trichloroethane	19.32	457	237165	763.34	NG	87
33)	trans-1,3-Dichloropropylene	19.32	457	469529	771.42	NG	92
34)	2-Chloroethylvinyl ether	20.41	485	176943	753.08	NG	100
35)	Bromoform	21.96	525	303909	755.25	NG	99
36)	*Chlorobenzene-d5	26.65	644	269685	250.00	NG	85
37)	Methyl-iso-butyl ketone	22.43	537	275155	745.56	NG	94
38)	2-Hexanone	23.98	577	266545	747.49	NG	95
39)	1,1,2,2-Tetrachloroethane	24.25	584	432936	772.72	NG	98

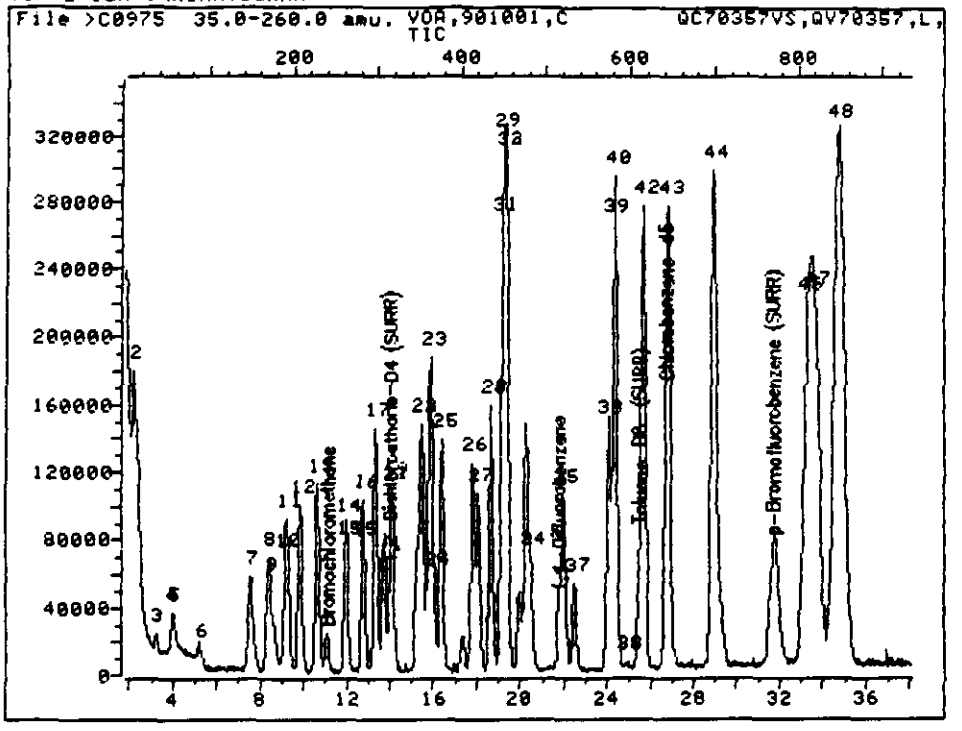
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:46
Output File: ^C0976::AQ Injected at: 901003 13:55
Data File: >C0976::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 15UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.33	586	267038	717.61	NG	98
41)	Toluene-D8 (SURR)	25.45	615	386124	244.48	NG	93
42)	Toluene	25.61	619	701550	783.72	NG	97
43)	Chlorobenzene	26.77	647	905631	722.93	NG	94
44)	Ethylbenzene	28.86	701	548559	727.73	NG	80
45)	p-Bromofluorobenzene (SURR)	31.62	772	280987	251.88	NG	83
46)	Styrene	33.21	813	1283190	722.57	NG	91
47)	m-Xylene	33.60	823	716403	725.52	NG	96
48)	o+p-Xylenes	34.65	850	1489830	1461.23	NG	89

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0975::U4 Quant Output File: ^C0975::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 20UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 14:45
Injected at: 901003 13:05

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 14:45
Output File: ^C0975::AQ Injected at: 901003 13:05
Data File: >C0975::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 20UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	240	33082	250.00	NG	93
2)	Methyl chloride	2.19	11	196957	1439.46	NG	97
3)	Methyl bromide	3.20	37	21780	1000.34	NG	96
4)	Dichlorodifluoromethane	3.93	56	79248	1286.20	NG	93
5)	Vinyl chloride	3.97	57	113382	1281.58	NG	94
6)	Chloroethane	5.21	89	82361	1423.55	NG	96
7)	Methylene chloride	7.50	148	200574	1368.24	NG	99
8)	Acrolein	8.36	170	442510	29186.55	NG	91
9)	Acetone	8.44	172	88336	1160.35	NG	92
10)	Acrylonitrile	9.10	189	107700	1615.94	NG	99
11)	Carbon disulfide	9.17	191	903789	1177.87	NG	99
12)	Trichlorofluoromethane	9.83	208	590028	1234.52	NG	92
13)	1,1-Dichloroethylene	10.61	228	237397	1060.21	NG	87
14)	1,1-Dichloroethane	11.93	262	477859	1060.08	NG	95
15)	Tetrahydrofuran	12.00	264	35476	1020.24	NG	100
15)	Tetrahydrofuran	12.66	281	8973	258.05	NG	100
16)	1,2-Trans-dichloroethylene	12.74	283	217086	1001.64	NG	92
17)	Chloroform	13.32	298	663299	1066.60	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	13.98	315	126950	297.07	NG	98
19)	1,2-Dichloroethane	14.10	318	524656	1089.39	NG	96
20)	*1,4-Difluorobenzene	21.74	515	183065	250.00	NG	98
21)	Methyl ethyl ketone	14.06	317	21244	833.22	NG	93
22)	1,1,1-Trichloroethane	15.42	352	594519	1077.26	NG	97
23)	Carbon tetrachloride	15.42	352	58362	115.24	NG	99
23)	Carbon tetrachloride	15.84	363	560082	1105.89	NG	96
24)	Vinyl acetate	16.04	368	386372	1033.72	NG	97
25)	Dichlorobromomethane	16.39	377	539072	1045.63	NG	96
26)	1,2-Dichloropropane	17.78	413	236212	923.39	NG	96
27)	cis-1,3-Dichloropropylene	18.06	420	359779	992.91	NG	93
28)	Trichloroethylene	18.64	435	265049	979.90	NG	84
29)	Chlorodibromomethane	19.26	451	380714	1009.49	NG	99
30)	bis(Chloromethyl)ether	19.26	451	161033	1048.79	NG	100
31)	Benzene	19.18	449	880604	1032.87	NG	94
32)	1,1,2-Trichloroethane	19.37	454	242009	1003.71	NG	81
33)	trans-1,3-Dichloropropylene	19.37	454	492760	1043.22	NG	89
34)	2-Chloroethylvinyl ether	20.46	482	172878	948.11	NG	100
35)	Bromoform	21.97	521	299168	958.02	NG	99
36)	*Chlorobenzene-d5	26.69	641	214016	250.00	NG	80
37)	Methyl-iso-butyl ketone	22.48	534	247124	843.78	NG	96
38)	2-Hexanone	24.03	574	234177	827.55	NG	95
38)	2-Hexanone	24.92	597	6261	22.13	NG	44
39)	1,1,2,2-Tetrachloroethane	24.30	581	391687	880.94	NG	96
40)	Tetrachloroethylene	24.34	582	281542	953.38	NG	97

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 14:45
Output File: ^C0975::AQ Injected at: 901003 13:05
Data File: >C0975::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 20UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.47	611	313012	249.74	NG	91
42)	Toluene	25.66	616	760493	1070.55	NG	91
43)	Chlorobenzene	26.81	644	993619	999.48	NG	94
44)	Ethylbenzene	28.90	698	631612	1055.86	NG	77
45)	p-Bromofluorobenzene (SURR)	31.66	769	238765	269.70	NG	80
46)	Styrene	33.29	811	1506277	1068.82	NG	93
47)	m-Xylene	33.64	820	842266	1074.86	NG	95
48)	o+p-Xylenes	34.73	848	1756527	2170.94	NG	88

* Compound is ISTD

VOLATILE INTERNAL STANDARD AREA SUMMARY 8A

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0914 Data Analyzed: 09/26/90

Instrument ID: GC/MS C Time Analyzed: 1352

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
	12 HOUR STD	70232		11.09	342312		21.84	318334		26.78
	UPPER LIMIT	140464			684624			636668		
	LOWER LIMIT	35116			171156			159167		
	EPA SAMPLE NO.									
01	VBLK01	47287		11.08	219376		21.83	199092		26.79
02	A4753	46998		11.19	224774		21.94	207367		26.92
03	A4755	51014		11.20	234507		21.98	216956		26.92
04	A4763	45139		11.24	219122		21.95	207394		26.88
05	A4756	44376		11.26	215254		21.96	204163		26.90
06	A4758	41198		11.30	192371		21.96	182527		26.90
07										
08										
09										
10										
11										
12										
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IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0927 Data Analyzed: 09/27/90

Instrument ID: GC/MS C Time Analyzed: 1656

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
	12 HOUR STD	40844		11.08	179047		21.83	171595		26.77
	UPPER LIMIT	81688			358094			343190		
	LOWER LIMIT	20422			89523			85798		
	EPA SAMPLE NO.									
01	VBLK2	36606		11.11	178010		21.86	167977		26.79
02	A4754	42061		11.10	196522		21.85	185259		26.82
(CA) 03	~~VBA~~ A4757	39142		11.10	183849		21.84	173277		26.78
10/16/90 04	A4759	42889		11.11	192985		21.85	186569		26.79
05										
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22										

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

page 1 of 1

FORM VIII VOA 1/87 Rev.

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0961 Data Analyzed: 10/02/90

Instrument ID: GC/MS C Time Analyzed: 1443

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	45268	10.98	234953	21.76	265376	26.65
	UPPER LIMIT	90536		469906		530752	
	LOWER LIMIT	22634		117476		132688	
	EPA SAMPLE NO.						
01	VBLK4	36061	11.01	187095	21.79	221523	26.72
02	A4762	29250	10.96	152364	21.78	179637	26.75
03	A4761	28016	11.01	145859	21.75	173819	26.73
04							
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22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

BA

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0972 Data Analyzed: 10/03/90

Instrument ID: GC/MS C Time Analyzed: 1001

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PAC/C

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	33439	11.00	154748	21.78	176233	26.72
	UPPER LIMIT	66878		309496		352466	
	LOWER LIMIT	16719		77374		88117	
	EPA SAMPLE NO.						
01	VBLK5	32787	10.99	159758	21.73	189232	26.68
02	A4755MS	31333	11.02	158395	21.80	191425	26.75
03	A4755MSD	33706	10.96	166042	21.74	193787	26.68
04	A4760 ~~DL~~ CN	26590	11.02	126921	21.76	146632	26.69
05	10-16-90						
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22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

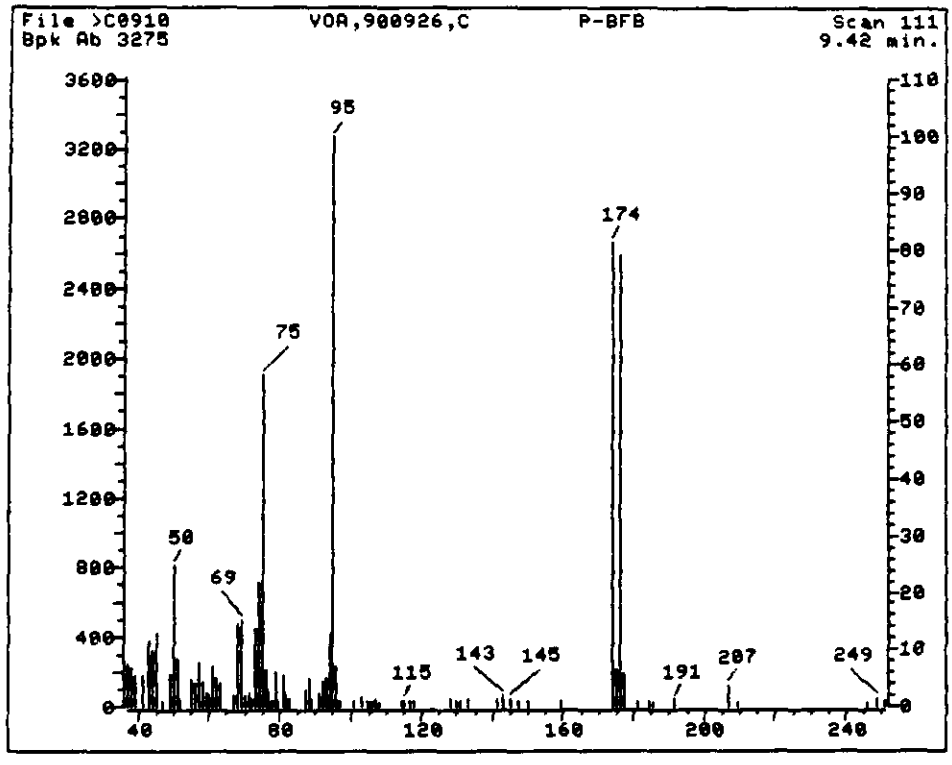
UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

RAW QC DATA

MS Data File: >C0910::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 8:54
Misc: P-BFB



MS Data File: >C0910::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 8:54
Misc: P-BFB

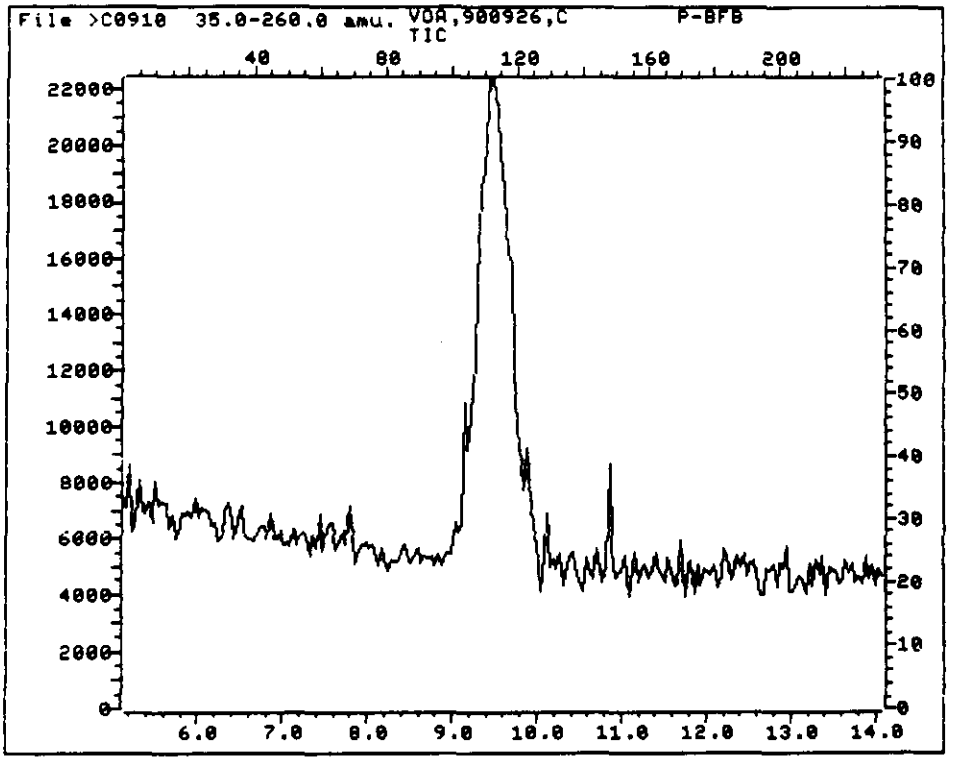
>C0910 VOA,900926,C P-BFB
111 NRM

File: >C0910 Scan #: 111 Retn. time: 9.42

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	7.481	61.00	6.931	79.70	1.008	104.70	.977	145.15	1.527
38.00	6.595	62.00	5.191	80.90	5.435	105.30	.794	147.05	1.130
39.00	5.374	63.00	4.031	81.90	2.137	105.60	.977	149.95	1.008
41.10	5.282	67.10	2.107	82.50	1.038	105.80	.916	158.95	.947
43.10	11.328	68.00	14.443	83.00	1.435	106.90	1.374	173.95	81.405
44.00	9.802	69.00	15.298	87.00	3.084	108.00	.733	175.05	6.504
45.00	12.855	70.00	2.076	88.00	5.069	114.60	.885	175.95	78.870
46.90	1.069	70.30	1.893	89.00	1.221	114.90	1.130	176.95	5.863
49.00	5.802	71.10	2.351	91.00	2.382	116.80	1.130	180.95	.702
50.00	24.947	72.00	1.221	92.00	4.275	117.80	1.008	184.05	1.069
51.00	8.519	73.00	13.802	93.00	5.130	128.05	1.435	185.55	.824
51.90	1.405	74.00	21.893	94.00	12.947	129.85	1.069	191.15	1.221
55.10	4.733	75.00	58.290	95.00	100.000	131.05	.947	206.95	3.878
56.00	4.061	76.00	6.321	96.00	7.023	132.95	1.496	209.15	.641
57.00	7.847	77.00	2.321	97.00	1.160	140.95	1.221	245.75	.794
58.00	4.305	78.10	1.191	101.00	1.160	141.15	1.252	248.95	1.405
59.10	2.351	78.90	5.924	103.00	1.740	142.85	1.985	250.95	.977
60.00	2.168								

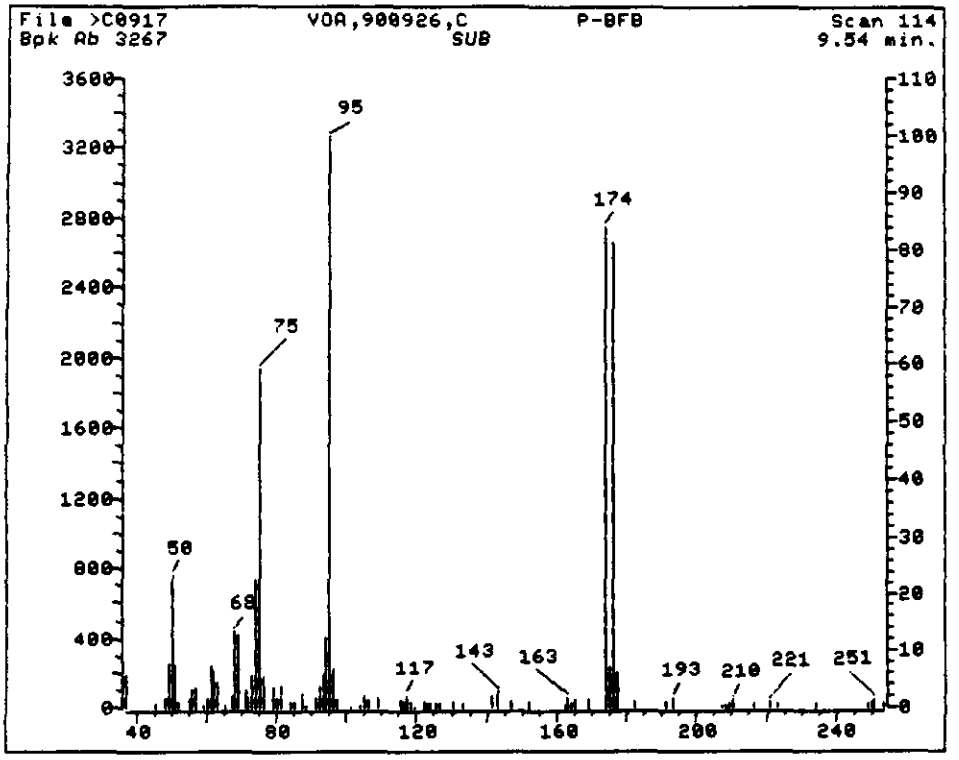
MS Data File: >C0910::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 8:54
Misc: P-BFB



MS Data File: >C0917::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 16:25
Misc: P-BFB



MS Data File: >C0917::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 16:25
Misc: P-BFB

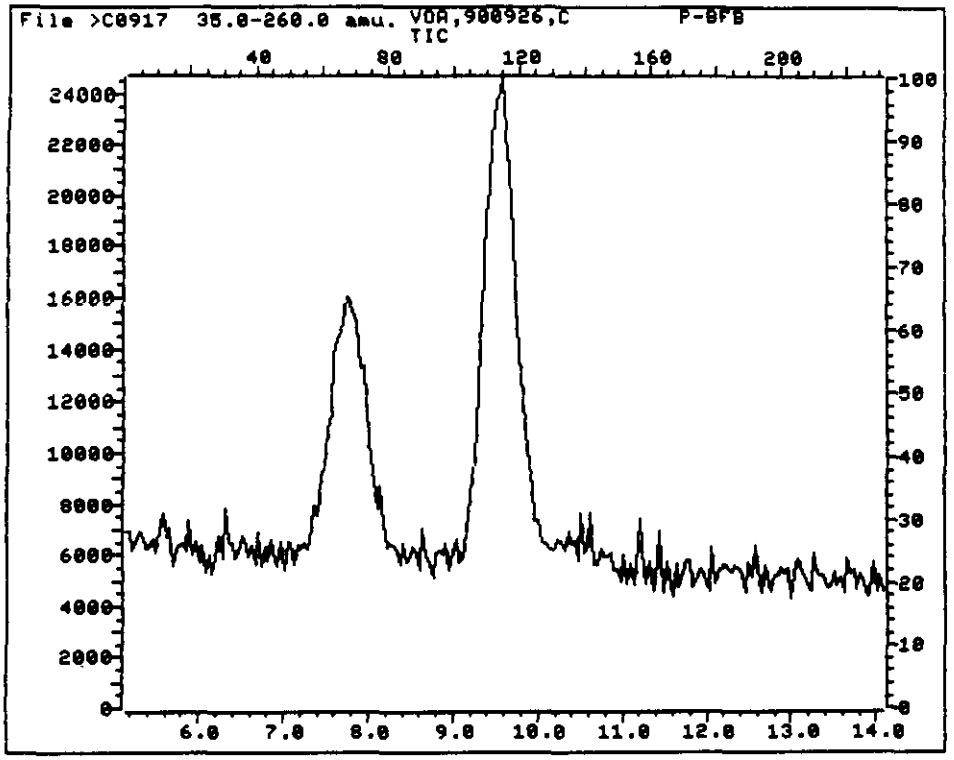
>C0917 VOA,900926,C P-BFB
114 SUB NRM

File: >C0917 Scan #: 114 Retn. time: 9.54

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	5.908	69.00	12.856	95.00	100.000	123.90	.765	177.05	6.030
45.10	.857	71.10	3.122	96.00	6.856	125.20	.673	182.05	.979
48.00	1.592	72.00	1.622	97.30	1.408	126.60	.857	190.95	.949
49.00	7.836	73.00	5.510	101.10	.184	130.05	1.194	192.95	1.561
50.00	23.263	74.00	22.467	103.90	.275	132.95	.796	207.05	.429
51.00	7.530	75.00	59.443	105.10	1.928	141.05	2.173	208.05	.490
51.80	1.071	76.00	5.448	106.00	1.439	142.95	2.694	209.05	.582
55.10	1.377	79.00	3.520	109.00	1.714	147.05	1.133	210.05	1.377
56.00	3.183	79.90	1.653	115.10	1.500	152.05	.888	216.15	.735
57.00	3.275	80.90	3.826	115.80	1.163	162.15	.398	221.05	.888
59.00	.367	84.10	.918	116.20	.796	162.95	1.622	222.85	.735
59.90	1.745	85.10	.888	117.00	2.173	163.85	.765	233.85	.765
61.00	7.254	87.00	2.418	118.00	1.163	164.95	1.408	234.05	.826
62.00	6.367	88.10	.429	119.00	.122	169.15	1.224	249.05	.551
63.00	4.561	91.10	1.622	121.90	.888	173.95	84.022	249.85	1.071
65.00	.398	92.00	3.887	122.40	.643	175.05	7.040	250.85	1.224
67.10	2.204	93.00	5.877	123.00	.367	175.95	81.267	253.45	.857
68.00	13.315	94.00	12.489						

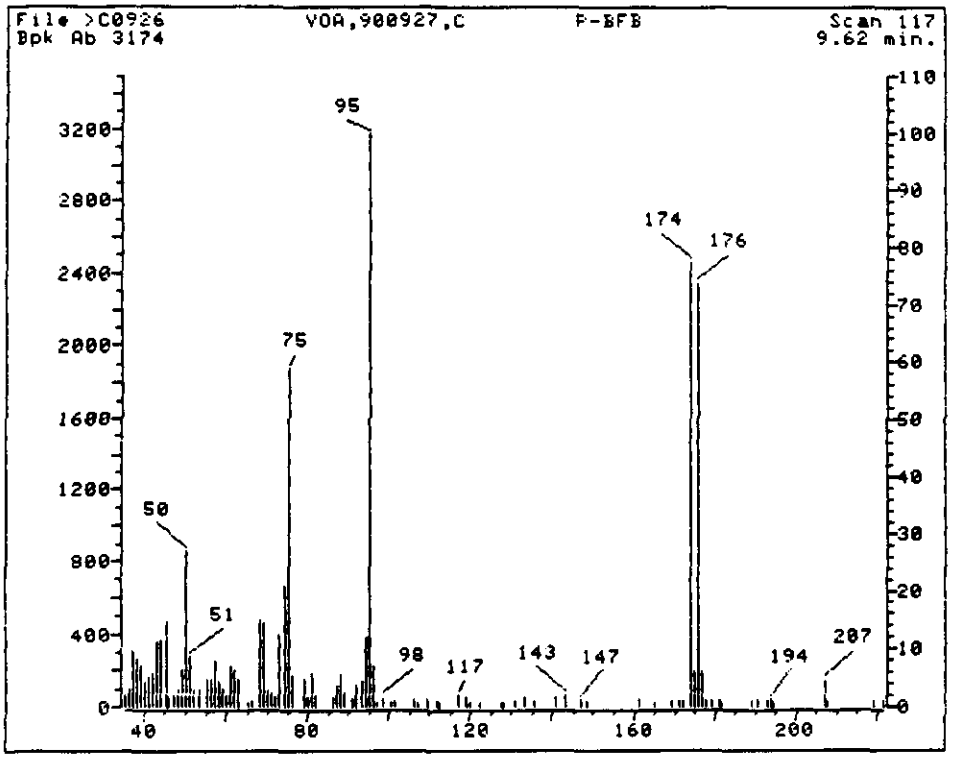
MS Data File: >C0917::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 16:25
Misc: P-BFB



MS Data File: >C0926::U8

Name: VOA,900927,C Operator: JA8781 Date/Time: 9/27/90 8:58
Misc: P-BFB



MS Data File: >C0926::U8

Name: VOA,900927,C Operator: JA8781 Date/Time: 9/27/90 8:58
Misc: P-BFB

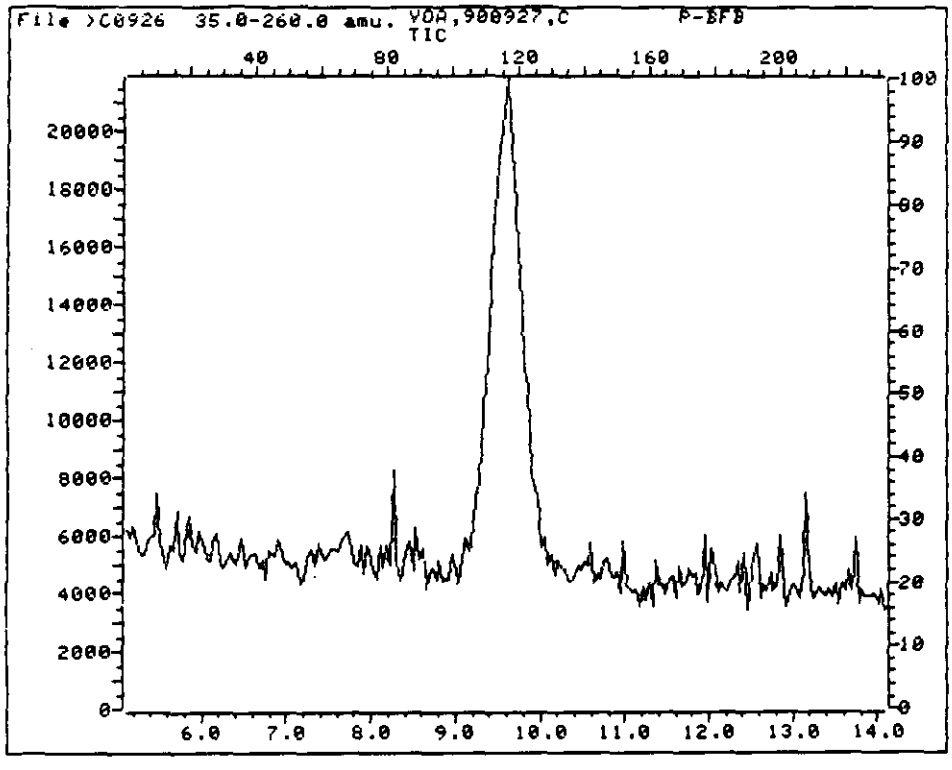
>C0926 VOA,900927,C P-BFB
117 NRM

File: >C0926 Scan #: 117 Retn. time: 9.62

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.30	2.048	56.00	4.820	78.90	4.789	109.20	1.229	171.95	.977
36.00	3.214	57.00	8.255	80.10	1.701	111.80	1.040	172.25	.914
37.00	9.704	58.00	4.505	80.90	5.577	112.40	.630	173.95	77.347
38.00	8.349	59.00	2.962	81.90	2.016	117.00	1.953	175.05	5.986
39.10	7.089	60.00	2.016	85.90	1.638	119.00	1.796	175.95	73.661
39.90	4.348	61.00	7.057	86.90	3.749	119.80	.756	176.95	5.923
41.10	5.230	62.00	6.364	88.00	5.640	122.30	.819	177.95	1.197
42.00	5.577	63.00	4.789	89.10	2.331	127.25	.819	179.45	.945
43.00	11.374	65.10	.851	90.90	1.481	128.05	.756	180.95	1.134
44.00	11.815	66.00	.882	91.90	3.718	130.95	.977	181.75	.788
45.10	14.808	66.30	.851	93.00	4.505	132.95	1.670	189.05	.882
45.90	1.701	68.00	15.028	94.00	12.130	135.45	1.040	190.55	1.071
47.10	2.048	69.00	14.556	95.00	100.000	140.95	1.638	190.85	1.260
47.90	2.615	70.00	2.804	96.00	7.120	142.95	1.953	193.05	1.008
49.00	6.301	71.10	2.268	97.10	.851	146.85	1.292	193.85	1.323
50.00	27.221	72.00	1.575	98.30	1.512	148.25	.914	194.55	.756
51.00	8.727	73.00	12.508	100.20	.662	161.25	1.292	207.05	4.474
52.00	2.615	74.00	20.983	101.20	.977	164.95	.693	207.85	1.103
53.10	3.088	75.00	59.074	106.00	1.260	169.45	.945	219.05	.977
55.00	4.789	76.00	5.325	106.90	.788	171.15	.977	221.55	1.134

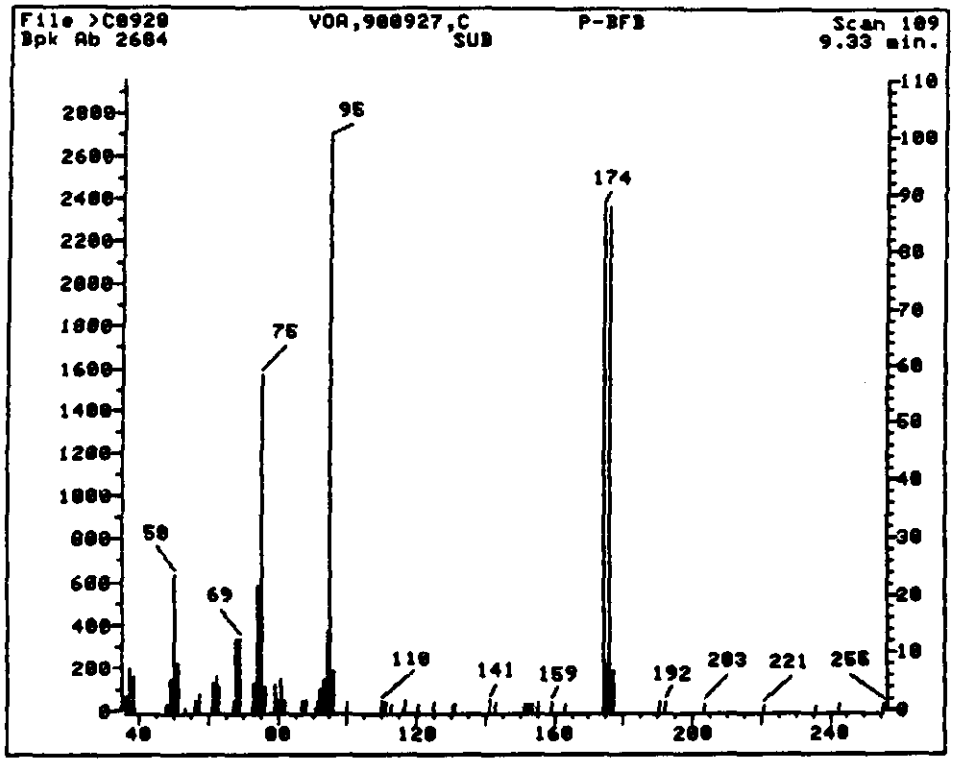
MS Data File: >C0926::U8

Name: VOA,900927,C Operator: JA8781 Date/Time: 9/27/90 8:58
Misc: P-BFB



MS Data File: >C0928::U4

Name: VOA,900927,C Operator: MGRMS Date/Time: 9/27/90 17:41
Misc: P-BFB



MS Data File: >C0928::U4

Name: VOA,900927,C Operator: MGRMS Date/Time: 9/27/90 17:41
Misc: P-BFB

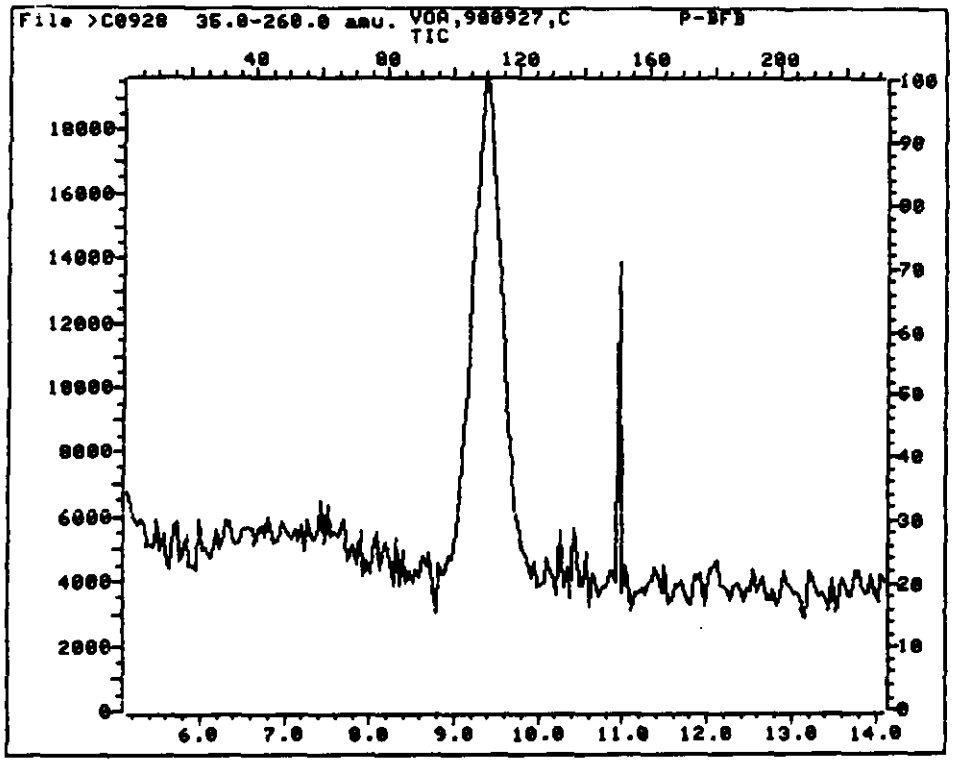
>C0928 VOA,900927,C P-BFB
109 SUB NRM

File: >C0928 Scan #: 109 Retn. time: 9.33

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	2.496	63.00	3.949	88.00	2.086	116.80	1.639	159.05	1.528
37.00	7.377	67.20	1.677	90.80	.447	120.60	.894	162.85	1.006
38.00	6.222	68.00	12.444	91.20	1.677	125.20	1.379	173.95	87.928
39.00	.522	69.00	12.556	92.00	3.875	130.55	.782	174.95	7.787
47.50	1.155	73.00	4.657	93.00	5.477	130.75	.894	175.95	87.779
49.00	5.551	74.00	21.610	94.00	13.748	131.05	1.006	177.05	6.781
50.00	23.547	75.00	58.569	95.00	100.000	141.05	2.012	190.35	1.230
51.00	7.973	76.00	3.912	96.00	6.706	143.05	1.528	192.05	1.490
53.10	.447	78.90	4.247	99.50	1.490	151.45	1.118	203.35	1.155
56.00	1.751	79.90	1.937	110.10	1.677	152.15	.969	220.95	.782
57.10	2.720	80.90	5.477	110.90	1.267	153.15	1.155	235.95	.782
60.90	4.844	81.80	1.639	112.50	.931	153.35	1.155	242.35	1.006
62.00	5.961	87.00	1.826	116.00	.112	154.95	1.267	255.45	1.080

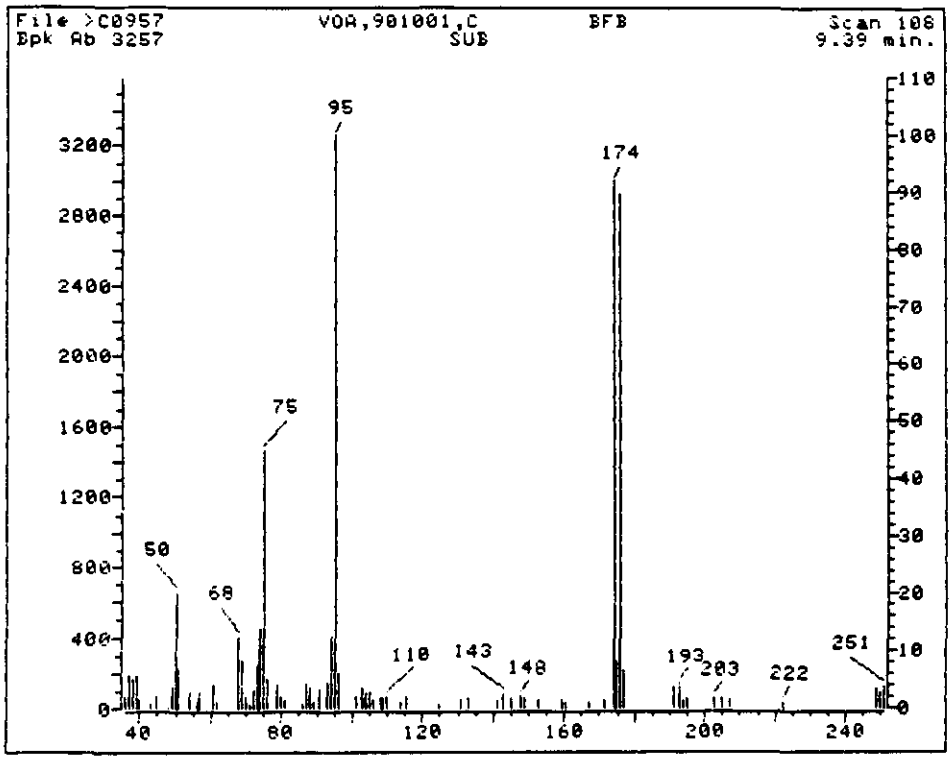
MS Data File: >C0928::U4

Name: VOA,900927,C Operator: MGRMS Date/Time: 9/27/90 17:41
Misc: P-BFB



MS Data File: >C0957::U8

Name: VOA,901001,C Operator: JA8781 Date/Time: 10/02/90 11:48
Misc: BFB



MS Data File: >C0957::U8

Name: UOA,901001,C Operator: JA8781 Date/Time: 10/02/90 11:48
Misc: BFB

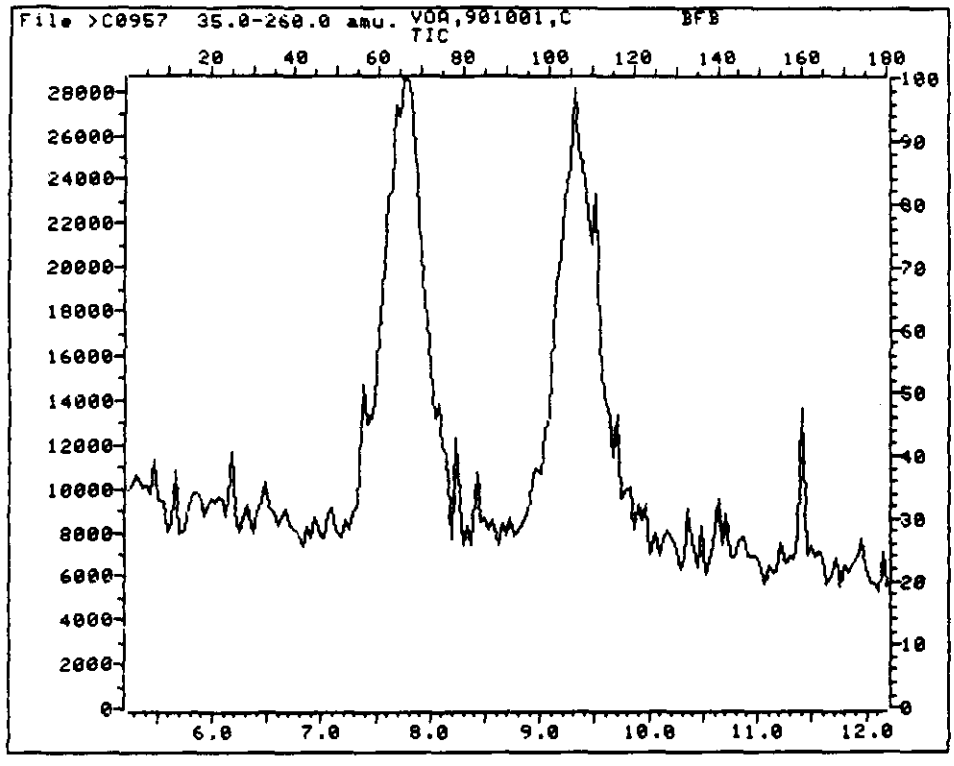
>C0957 UOA,901001,C BFB
108 SUB NRM

File: >C0957 Scan #: 108 Retn. time: 9.39

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	2.119	68.00	12.558	91.00	3.377	115.20	1.904	173.95	92.017
37.00	5.711	69.00	8.443	93.00	4.483	124.80	.645	174.95	8.014
38.00	5.097	69.80	2.180	94.00	12.312	130.80	1.320	175.95	89.561
39.00	5.834	71.00	.706	95.00	100.000	132.90	1.597	176.95	6.478
39.90	1.412	72.00	3.132	96.00	6.049	141.45	1.228	191.05	3.562
43.00	.553	73.00	7.277	101.00	2.149	142.85	2.487	192.95	4.237
45.00	1.965	74.00	13.755	102.90	3.531	145.05	1.873	193.95	1.351
48.10	.154	75.00	45.164	104.00	2.272	147.95	2.088	194.75	1.873
48.90	3.776	76.00	4.943	105.10	2.733	148.95	1.842	202.85	1.811
50.00	20.233	78.90	4.022	106.20	1.412	152.95	1.228	205.05	1.597
51.00	6.785	79.80	2.149	108.50	1.689	159.15	.123	207.05	1.320
54.00	2.671	80.90	1.259	108.80	1.719	159.35	1.535	222.15	1.075
56.00	1.197	85.90	.860	109.00	1.627	160.45	1.167	248.95	3.408
57.00	2.733	87.00	4.513	110.00	2.057	167.15	1.075	250.05	2.671
60.90	3.991	88.00	3.592	113.70	1.075	171.45	1.290	250.95	3.869
62.00	.952	89.00	1.167						

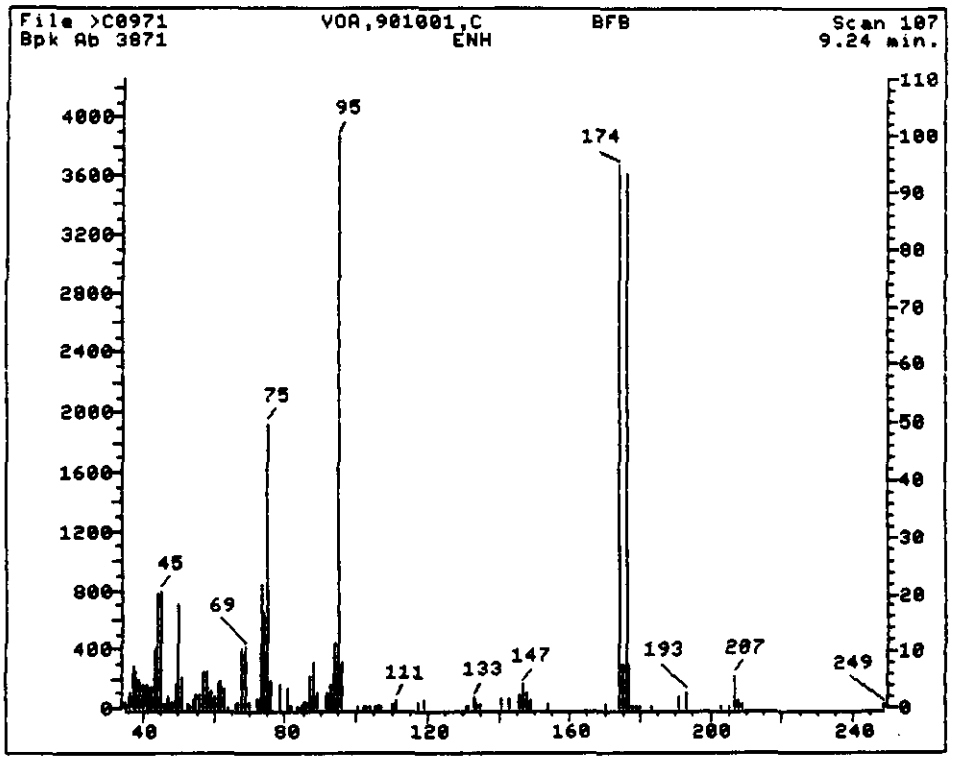
MS Data File: >C0957::U8

Name: VOA,901001,C Operator: JA8781 Date/Time: 10/02/90 11:48
Misc: BFB



MS Data File: >C0971::U5

Name: VOA,901001,C Operator: KB6656 Date/Time: 10/03/90 9:30
Misc: BFB



MS Data File: >C0971::U5

Name: VOA,901001,C Operator: KB6656 Date/Time: 10/03/90 9:30
Misc: BFB

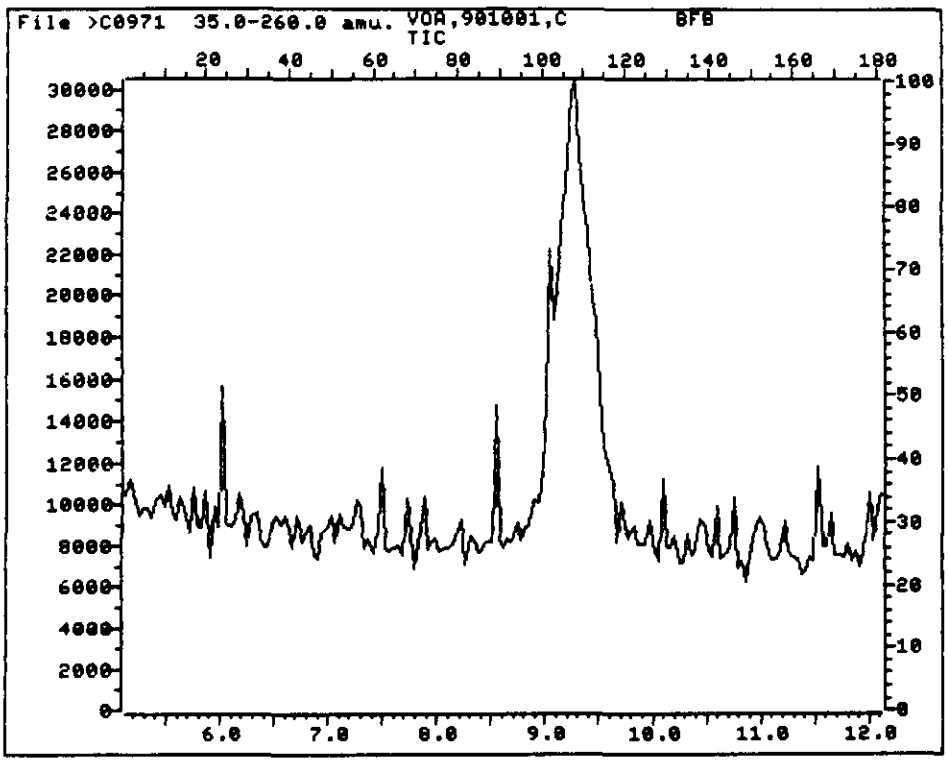
>C0971 VOA,901001,C BFB
107 NRM ENH

File: >C0971 Scan #: 107 Retn. time: 9.24

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.10	1.121	54.90	2.423	78.80	4.128	105.60	.377	148.05	2.640
35.90	2.743	55.90	2.392	80.90	3.250	105.80	.356	149.05	1.271
37.00	7.316	57.00	6.494	81.50	.232	106.50	.269	153.85	.661
38.00	6.396	57.90	6.256	82.00	.393	107.10	.382	170.15	.568
39.00	5.228	59.10	3.079	83.50	.258	110.10	.599	173.95	94.932
39.90	4.133	59.90	2.191	84.50	.284	110.40	.372	174.95	7.889
41.00	4.112	61.00	4.422	85.00	.951	111.10	1.503	175.95	93.521
42.00	3.653	61.90	4.707	85.90	1.142	111.40	.537	176.95	7.579
43.00	10.297	63.00	3.270	87.00	5.735	117.10	.914	177.95	.517
44.00	20.149	64.10	.196	88.00	8.209	118.80	1.209	178.85	.372
45.00	20.660	65.90	.837	88.90	2.692	130.90	.336	180.25	.248
45.90	.770	66.90	.997	92.00	2.749	131.20	.258	183.45	.511
47.00	2.067	68.00	10.519	92.90	4.180	131.50	.232	190.85	2.206
48.20	1.199	69.00	10.710	94.00	11.314	133.00	2.025	192.95	2.795
49.00	4.221	70.20	.883	95.00	100.000	133.80	.610	202.85	.253
49.90	18.056	71.90	1.679	96.00	7.992	134.80	.672	205.15	.449
51.00	5.409	73.00	21.766	100.70	.315	141.05	1.875	206.95	5.884
52.60	.599	74.00	16.956	101.90	.253	142.95	1.571	207.95	1.297
53.00	.387	75.00	49.752	102.90	.537	145.95	2.304	209.15	.873
53.90	1.374	75.90	4.686	103.50	.269	146.95	4.402	248.75	.594

MS Data File: >C0971::U5

Name: VOA,901001,C Operator: KB6656 Date/Time: 10/03/90 9:30
Misc: BFB



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VBLK01

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0918

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/26/90

% Moisture: not dec. Date Analyzed: 09/26/90 10-16-90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0916

Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: GC70357

Sample wt/vol: 5 (g/ML) ML Lab File ID: >C0918

Level: (low/med) LOW Date Received: 09/06/90

% Moisture: not dec. _____ Date Analyzed: 09/06/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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27.					
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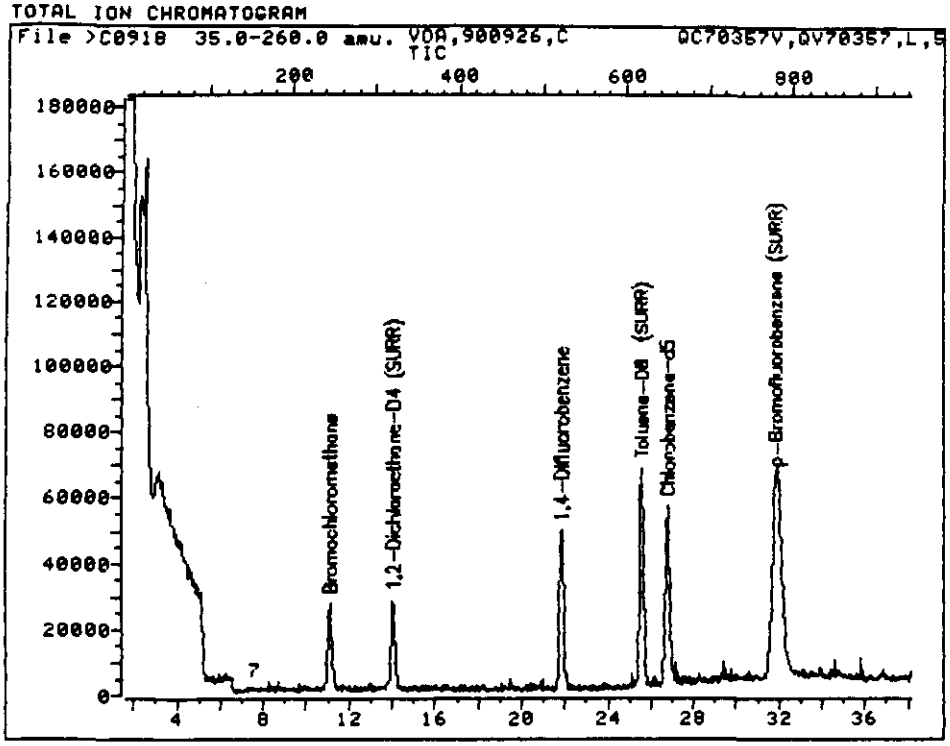
29.					
30.					

TOTAL ION CHROMATOGRAM



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Misc: QC70357V,QV70357,L,5,, BLANK

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 18:05
Injected at: 900926 17:25

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 18:05
Output File: ^C0918::AQ Injected at: 900926 17:25
Data File: >C0918::U0 Dilution Factor: 1.00000
Name: V0A,900926,C
Misc: QC70357V,QV70357,L,5,, BLANK

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.08	245	47287	250.00	NG	97
7)	Methylene chloride	7.48	152	3530	~~11.20~~	~~NG~~	96
18)	1,2-Dichloroethane-D4 (SURR)	14.03	321	157251	238.22	NG	99
20)	*1,4-Difluorobenzene	21.83	522	219376	250.00	NG	99
36)	*Chlorobenzene-d5	26.79	649	199092	250.00	NG	80
41)	Toluene-D8 (SURR)	25.55	618	295439	251.96	NG	93
45)	p-Bromofluorobenzene (SURR)	31.83	779	228780	264.05	NG	85

* Compound is ISTD

CN
10-17-90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357V2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0929

Level: (low/med) LOW Date Received: ~~10/~~ /90 09/27/90 10-16-90

% Moisture: not dec. Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: ETCNT Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C09-9

Level: (low/med) LOW Date Received: 09/27/90

% Moisture: not dec. _____ Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC70337

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0909

Level: (low/med) LOW Date Received: 04/27/90

% Moisture: not dec. _____ Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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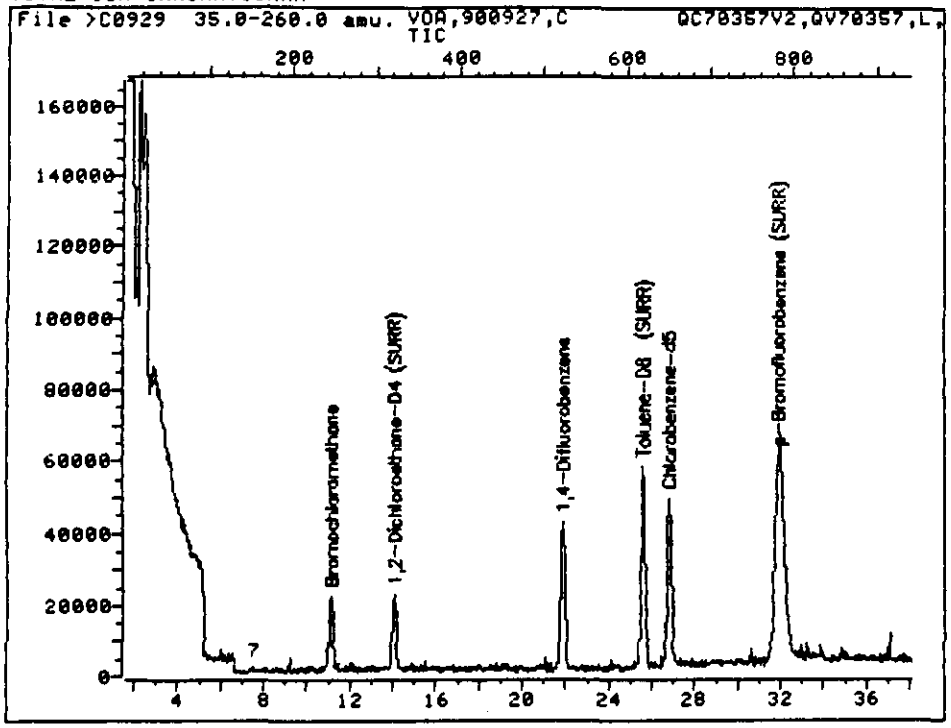
TOTAL ION CHROMATOGRAM



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Misc: QC70357V2,QV70357,L,5,, BLANK

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

Operator ID: MGRMS
Quant Time: 900927 18:53
Injected at: 900927 18:14

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 18:53
Output File: ^C0929::AQ Injected at: 900927 18:14
Data File: >C0929::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: QC70357V2,QV70357,L,5,, BLANK

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.11	245	36606	250.00	NG	94
7)	Methylene chloride	7.47	151	3941	~~16.21~~	~~NG~~	82
18)	1,2-Dichloroethane-D4 (SURR)	14.06	321	128055	270.65	NG	99
20)	*1,4-Difluorobenzene	21.86	522	178010	250.00	NG	99
36)	*Chlorobenzene-d5	26.79	649	167977	250.00	NG	82
41)	Toluene-D8 (SURR)	25.58	618	243972	248.68	NG	92
45)	p-Bromofluorobenzene (SURR)	31.88	780	195124	257.17	NG	85

* Compound is ISTD

CN
10-16-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK4

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357V4

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0963

Level: (low/med) LOW Date Received: ~~09/ /90~~ 10/02/90 10/4/90

% Moisture: not dec. Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK4

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 8C70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0963

Level: (low/med) LOW Date Received: 10/02/90

% Moisture: not dec. _____ Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK04

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0963

Level: (low/med) LOW Date Received: 10/02/90

% Moisture: not dec. _____ Date Analyzed: 10/02/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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10.					
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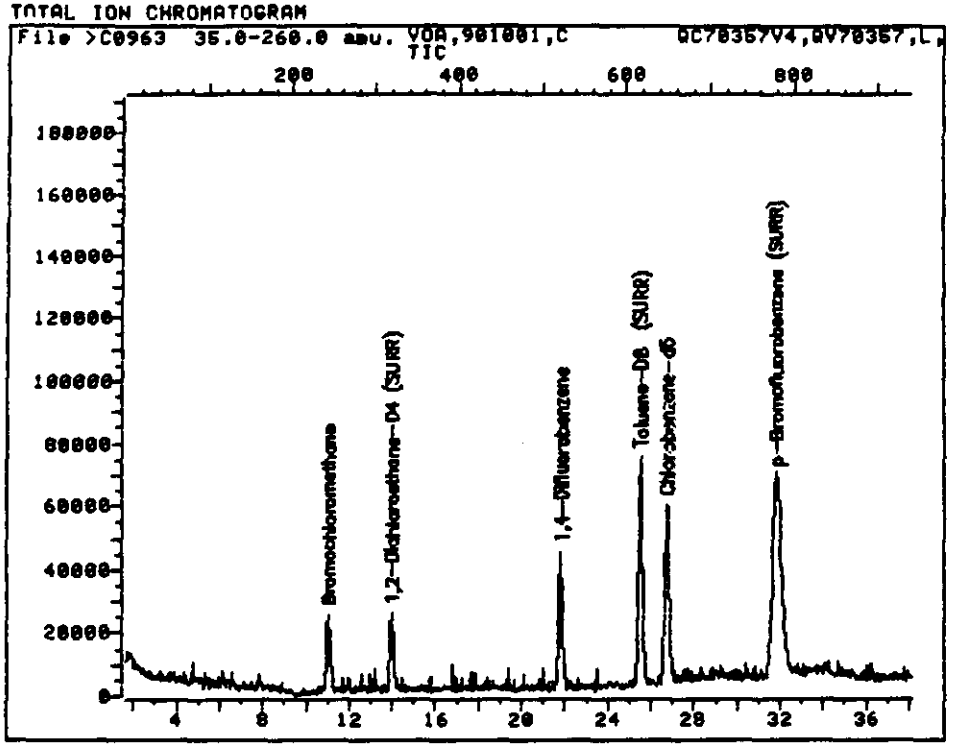
TOTAL ION CHROMATOGRAM



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Misc: QC70357V4,QV70357,L:M4,5,, BLANK

Id File: IC1171::US
Title: IF8, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: JA8781
Quant Time: 901002 17:10
Injected at: 901002 16:21

Operator ID: JA8781 Quant Rev: 7 Quant Time: 901002 17:10
Output File: ^C0963::AQ Injected at: 901002 16:21
Data File: >C0963::U0 Dilution Factor: 1.00000
Name: VBLK4
Misc: QC70357V4,QV70357,L:M4,5,, BLANK

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.01	243	36061	250.00	NG	99
18)	1,2-Dichloroethane-D4 (SURR)	13.95	319	122247	262.43	NG	91
20)	*1,4-Difluorobenzene	21.79	521	187095	250.00	NG	99
36)	*Chlorobenzene-d5	26.72	646	221523	250.00	NG	76
41)	Toluene-D8 (SURR)	25.51	617	327258M	252.26	NG	88
45)	p-Bromofluorobenzene (SURR)	31.80	777	259405	278.72	NG	80

* Compound is ISTD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357V5

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0979

Level: (low/med) LOW Date Received: 10/03/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: BC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0979

Level: (low/med) LOW Date Received: ~~10/10/90~~ 10/03/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90 (R) 10-16-90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK5

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC7037

Sample wt/vol: 5 (g/mL) ML Lab File ID: >CC479

Level: (low/med) LOW Date Received: 10/03/90

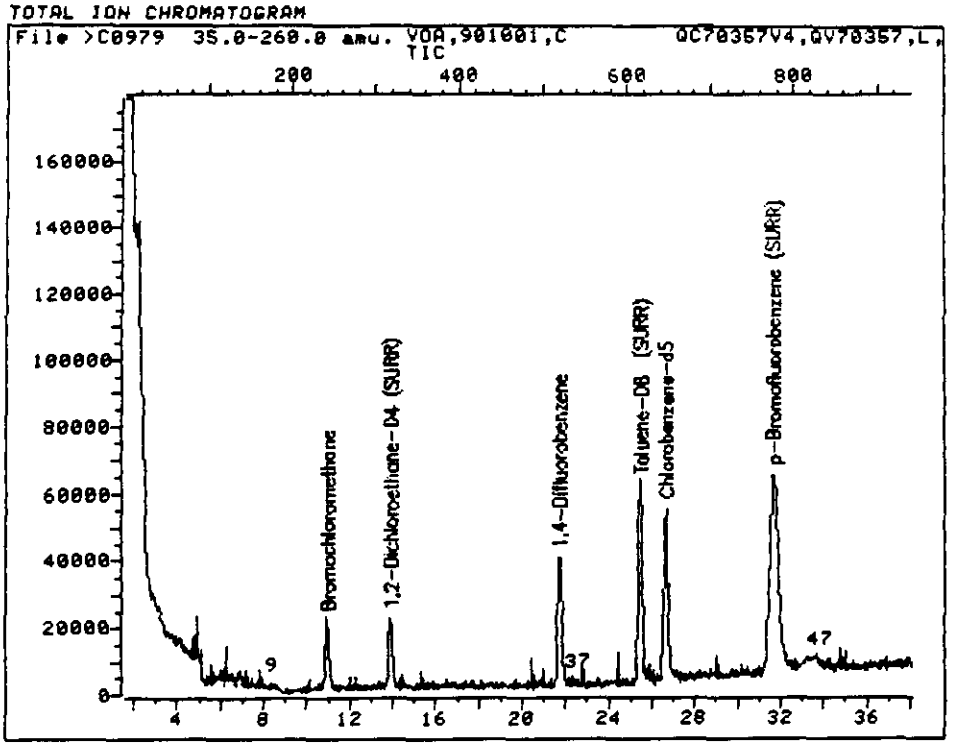
% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0979::U4 Quant Output File: ^C0979::AQ
Name: VOA,901001,C
Misc: QC70357V4,QV70357,L,5,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: KB6656
Quant Time: 901003 17:10
Injected at: 901003 16:25

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 17:10
Output File: ^C0979::AQ Injected at: 901003 16:25
Data File: >C0979::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357V43QV70357,L,5,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.99	242	32787	250.00	NG	98
9)	Acetone	8.31	173	2343	~~24.50~~	~~NG~~	94
18)	1,2-Dichloroethane-D4 (SURR)	13.93	318	112633	242.43	NG	90
20)	*1,4-Difluorobenzene	21.73	519	159758	250.00	NG	95
36)	*Chlorobenzene-d5	26.68	646	189232	250.00	NG	75
37)	Methyl-iso-butyl ketone	22.47	538	3765	~~14.68~~	~~NG~~	82
41)	Toluene-D8 (SURR)	25.49	616	272990	243.94	NG	86
45)	p-Bromofluorobenzene (SURR)	31.69	775	239059	280.27	NG	83
47)	m-Xylene	33.71	827	2049	~~2.74~~	~~NG~~	91

* Compound is ISTD

10-16-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755MS

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4755US

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0981

Level: (low/med) LOW Date Received: ~~10/1/90~~ 9/30/90 10/1/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	54	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	48	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	42	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	49	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4265MS

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4265MS

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0981

Level: (low/med) LOW Date Received: 09/20/90

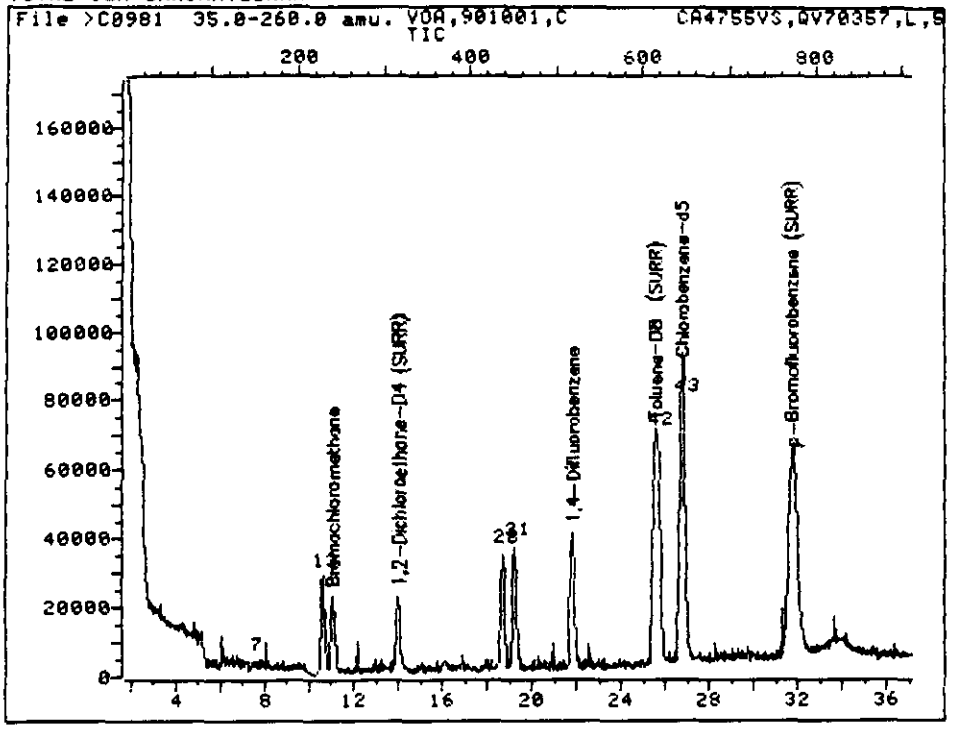
% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

FORM I VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0981::U4 Quant Output File: ^C0981::AQ
Name: VOA,901001,C
Misc: CA4755VS,QV70357,L,5,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 20:28
Injected at: 901003 18:19

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 20:28
Output File: ^C0981::AQ Injected at: 901003 18:19
Data File: >C0981::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4755V5,QV70357,L,5,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.02	240	31333	250.00	NG	98
7)	Methylene chloride	7.53	150	4026	~~24.52~~	~~NG~~	76
13)	1,1-Dichloroethylene	10.56	228	57573	270.54	NG	89
18)	1,2-Dichloroethane-D4 (SURR)	14.01	317	120617	271.66	NG	99
20)	*1,4-Difluorobenzene	21.80	518	158395	250.00	NG	98
28)	Trichloroethylene	18.70	438	56640	240.09	NG	79
30)	bis(Chloromethyl)ether	19.21	451	10705	~~75.34~~	~~NG~~	100
31)	Benzene	19.21	451	153911	207.88	NG	87
36)	*Chlorobenzene-d5	26.75	643	191425	250.00	NG	78
41)	Toluene-D8 (SURR)	25.53	614	297943	263.19	NG	90
42)	Toluene	25.68	618	161625	247.36	NG	93
43)	Chlorobenzene	26.86	646	211336	239.16	NG	95
45)	p-Bromofluorobenzene (SURR)	31.71	771	241906	280.36	NG	81

* Compound is ISTD

CA
10-16-90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755MSD

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4755VR

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0982

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/20/90

% Moisture: not dec. Date Analyzed: 10/03/90 10/4 90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	51	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	43	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	46	
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755MSD

Lab Name: ETC NJ Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4755VR

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0952

Level: (low/med) LOW Date Received: 09/20/90

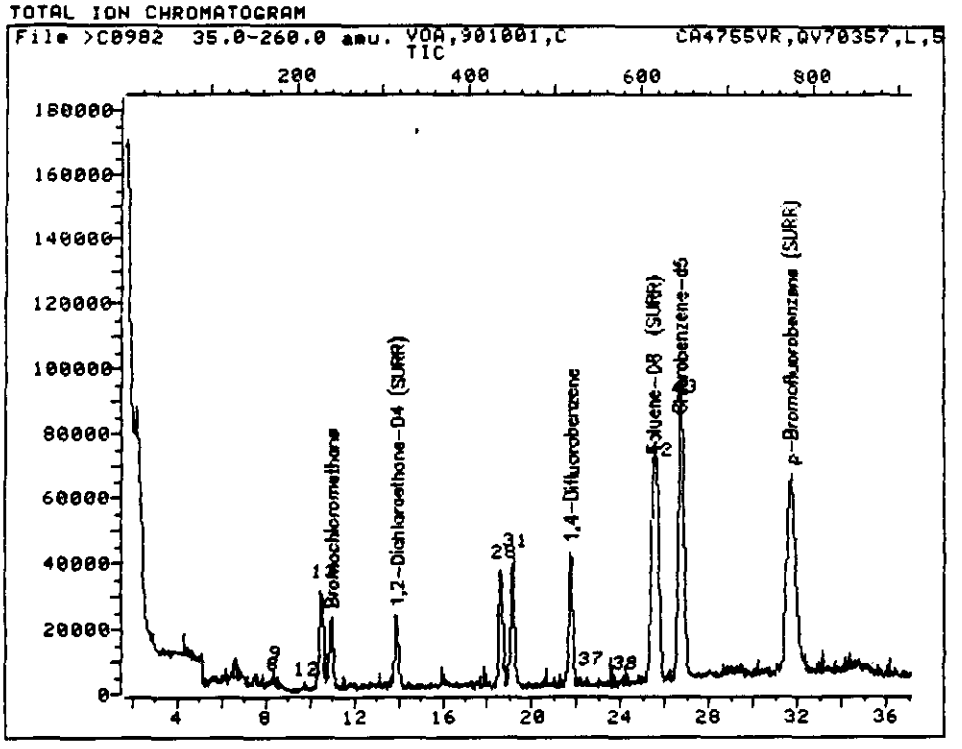
% Moisture: not dec. Date Analyzed: 09/24/90 (CA) 10-16-90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

FORM I VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0982::U4 Quant Output File: ^C0982::AQ
Name: VOA,901001,C
Misc: CA4755VR,QV70357,L,5,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 20:38
Injected at: 901003 19:07

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 20:38
Output File: ^C0982::AQ Injected at: 901003 19:07
Data File: >C0982::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4755VR,QV70357,L,5,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.96	240	33706	250.00	NG	93
8)	Acrolein	8.28	171	3252	~~141.20~~	~~NG~~	77
9)	Acetone	8.36	173	3871	~~39.37~~	~~NG~~	77
12)	Trichlorofluoromethane	9.72	208	3383	~~6.19~~	~~NG~~	72
13)	1,1-Dichloroethylene	10.49	228	58885	257.23	NG	84
18)	1,2-Dichloroethane-D4 (SURR)	13.94	317	126631	265.13	NG	98
20)	*1,4-Difluorobenzene	21.74	518	166042	250.00	NG	96
28)	Trichloroethylene	18.60	437	61635	249.23	NG	81
30)	bis(Chloromethyl)ether	19.14	451	10810	~~72.57~~	~~NG~~	100
31)	Benzene	19.14	451	166534	214.57	NG	86
36)	*Chlorobenzene-d5	26.68	644	193787	250.00	NG	73
37)	Methyl-iso-butyl ketone	22.47	537	3213	~~12.23~~	~~NG~~	97
38)	2-Hexanone	24.07	578	4067	~~16.58~~	~~NG~~	95
41)	Toluene-D8 (SURR)	25.46	614	281173	245.35	NG	86
42)	Toluene	25.66	619	151333	228.78	NG	93
43)	Chlorobenzene	26.79	647	219237	245.07	NG	91
45)	p-Bromofluorobenzene (SURR)	31.68	773	243679	278.97	NG	81

* Compound is ISTD

CH
10-16-90.

CHAIN OF CUSTODY

ETC Environmental Testing and Certification Corp.

Seal No. 175397 ETC Job # CA4252

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 505 (Facility Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W-26WPZ10 (Source Code, see below / Your Sample Point ID, left justify) 901092 (Start Date YY/MM/DD) 1150 (Start Time 2400 hr clock) _____ (Elapsed Hours composite)

Source Codes

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TE	40	GC/MS	TRIP BLANK			✓
2	VOA	40	HCL	VOLATILES	N	Sampled For	✓
1	VS	40	HCL	VOA SCREEN	N	VOLATILES ONLY	✓
1	CONU	125	NONE	CHLORIDE			Bottles Read Empty
1	CONS	125	H2SO4	TOC2			
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			
1	MET	1000	HNO3	METALS			
1	CYAN	500	NaOH	CY/T			
1	FL	125	NONE	FLUORIDE			

CHAIN OF CUSTODY CHRONICLE

1 Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 14:10

Signature: _____ Seal #: 0175397 Intact: —

I have received these materials in good condition from the above person.

2 Name: JOHN Y. RUDD Signature: John Y. Rudd

Date: 9/18/90 Time: 10:00am Remarks: OK

I have received these materials in good condition from the above person.

3 Name: _____ Signature: _____

Date: _____ Time: _____ Remarks: _____

4 Shuttle Sealed By: (print) JOHN Y. RUDD Date: 9/24/90 Time: 12:30

Signature: _____ Seal #: 0175386 Intact: OK

LAB USE ONLY Opened By: _____ Date: 9/25/90 Time: 915

SHUTTLE # 590 TEMP. °C 3 SEAL # 175396 COND. Intact 206

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4757

Sample Point [ ] Source Code [ ] Sample Point I.D

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
910624	1150	1010	13.1	500

SAMPLING METHOD: BAILER

Sampler Type [E] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [A] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y (N)] N
Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) 9407.76* Well Depth (ft) 21.64

Depth to Ground water (ft) 13.61 Sample Depth (non-well) (ft)

Groundwater Elevation (ft msl) 9271.15

	pH		spec. cond.		(other parameter)	value	units
1st	7.28 (STD)	1st	5598	umhos/cm at 25°C			
2nd	7.28 (STD)	2nd	5599	umhos/cm at 25°C			
3rd	7.29 (STD)	3rd	5598	umhos/cm at 25°C			
4th	7.29 (STD)	4th	5598	umhos/cm at 25°C			

Sample Temp: 12.0 (°C)

Turbidity: NTU

FIELD COMMENTS

Sample Appearance: NO ODOR - PALE yel. ORANGE

Weather Conditions: SUNNY - CLEAR - Windy WINDS SW 10-12 mph

Other: * FROM WELL RECORDS (MP).
SAMPLED ONLY FOR VOLATILES

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print): John L. Rudd Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

(Date) 6/24/91 (Signature) John L Rudd

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175391 ETC Job # CA4758

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 4 0 5 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W-26WPZ5 (Source Code (from below) / Your Sample Point ID (left justify)) 9 0 0 9 2 4 (Start Date (YY/MM/DD)) 1 3 4 0 (Start Time (2400 hr clock)) _____ (Elapsed Hours (composite))

Source Codes

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TE	40	GC/MS	TRIP BLANK			✓
2	VOA	40	HCL	VOLATILES	N	VOLATILES ONLY	✓
1	VS	40	HCL	VOA SCREEN	N	sampled	✓
1	CONJ	125	NONE	CHLORIDE			Bottles Rcvd Empty
1	CONS	125	H2SO4	TOC2			
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			
1	MET	1000	HNO3	METALS			
1	CYAN	500	NaOH	CY/T			
1	FL	125	NONE	FLUORIDE			

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 14:20
   Signature: _____ Seal #: 0175391 Intact: NO

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y Rudd
   Date: 9/24/90 Time: 09:00 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) JOHN Y. RUDD Date: 9/24/90 Time: 1600
   Signature: _____ Seal #: 0175350 Intact: OK

LAB USE ONLY Opened By: _____ Date: 9/25/90 Time: 910

SHUTTLE # 228 TEMP. °C 4.0 SEAL # 175350 QS COND. Intact OK

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4755

Sample Point [ ] [ ] (Source Code / Sample Point I.D)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901024	1340	1010	1.81	9.0

SAMPLING METHOD: BAILER

Sampler Type [E] — A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other ____ (SPECIFY OTHER)

Sampler Material [A] — A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other ____ (SPECIFY OTHER)

Tubing Material [ ] — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other ____ (SPECIFY OTHER)

Sample Composited [Y/(N)] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl): 966.96 * Well Depth (ft): 54.46

Depth to Ground water (ft): 43.39 Sample Depth (non-well) (ft): ____

Groundwater Elevation (ft msl): 923.57

	pH		Spec. cond.		(other parameter)	value	units
1st	7.22 (STD)	1st	610	um/cm at 25°C			
2nd	7.22 (STD)	2nd	610	um/cm at 25°C			
3rd	7.23 (STD)	3rd	610	um/cm at 25°C			
4th	7.22 (STD)	4th	610	um/cm at 25°C			

Sample Temp: 12.1 (°C) Turbidity: ____ NTU

FIELD COMMENTS

Sample Appearance: CLEAR / NO ODOR

Weather Conditions: WINDY - CLEAR - 60s°F - WINDS SW 10-12 MPH

Other: SAMPLED ONLY FOR VOLATILES

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) JOHN Y. RUDD Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

5/29/90 (Date) John Y. Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175369 ETC Job # CA4759

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W (Source Code from below) | 2GWPZ9 (Your Sample Point ID left justify) | 901092 5 (Start Date YY/MM/DD) | 0815 (Start Time 2400 hr. clock) | _____ (Elapsed Hours composite)

Source Codes

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK			✓ small bubble
2	VOA	40	HCL	VOLATILES	N	Sampled for	✓
1	VS	40	HCL	VOA SCREEN	N	volatiles only	✓
1	CONU	125	NONE	CHLORIDE			
1	CONS	125	H2SO4	TOC2			
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			
1	MET	1000	HNO3	METALS			
1	CYAN	500	NaOH	CY/T			
1	FL	125	NONE	FLUORIDE			

Bottles Recd empty

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 14:30
   Signature: Dan Green Seal #: 0175369 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: John V. RUDD Signature: John V Rudd
   Date: 9/25/90 Time: 07:00 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) John V. RUDD Date: 9/25/90 Time: 10:00
   Signature: John V Rudd Seal #: 0175368 Intact: OK

LAB USE ONLY Opened By: A. Schroeder Date: 9/26/90 Time: 1130

SHUTTLE # 993 TEMP. °C 4.0 SEAL # 175368 COND. Intact 240

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA2759

Sample Point [W] [2GWP79] (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
910925	0845	1.5	19	90

SAMPLING METHOD: BAILER

Sampler Type [E] — A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [A] — A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl) 9441.01 * Well Depth (ft) 325.1

Depth to Ground water (ft) 210.31 Sample Depth (non-well) (ft)

Groundwater Elevation (ft msl) 923.70

	ph		spec. cond.		(other parameter)	value	units
1st	7.02 (STD)	1st	748	umhos/cm at 25°C			
2nd	7.02 (STD)	2nd	748	umhos/cm at 25°C			
3rd	7.02 (STD)	3rd	746	umhos/cm at 25°C			
4th	7.0V (STD)	4th	748	umhos/cm at 25°C			

Sample Temp: 12.7 (°C) Turbidity: NTU

FIELD COMMENTS

Sample Appearance: COLOR - PALE YEL. ORANGE NO ODOR

Weather Conditions: CLEAR - 60s°F · WIND NW 4-6 mph

Other: * WELL RECORDS

WELL SAMPLED FOR VOLATILES ONLY

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John Y. Rudd Employer: DELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

(Date) 9/25/90 (Signature) John Y. Rudd

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175363 ETC Job # CA4760

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) _____ (Optional Sample Point Description)

Sample Point: W-2GWP711 5 (Source Code from below / Your Sample Point ID left justify) 900625 (Start Date YY/MM/DD) 1020 (Start Time 2400 hr clock) _____ (Elapsed Hours composite)

Source Codes

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK			✓ small bubble
2	VOA	40	HCL	VOLATILES	N	SAMPLED FOR	✓
1	VS	40	HCL	VOA SCREEN	N	VOLATILES ONLY	✓
1	CONU	125	NONE	CHLORIDE			Bottles Rcvd Empty
1	CONS	125	H2SO4	TOC2			
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			
1	MET	1000	HNO3	METALS			
1	CYAN	500	NaOH	CY/T			
1	FL	125	NONE	FLUORIDE			

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 14:35
   Signature: Dan Green Seal #: 0175363 Intact: No

2. I have received these materials in good condition from the above person.
   Name: JOHN Y RUDD Signature: John Y Rudd
   Date: 9/18/90 Time: 10:00 am Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) JOHN Y. RUDD Date: 9/12/90 Time: 1200
   Signature: John Y Rudd Seal #: 0175362 Intact: OK

LAB USE ONLY Opened By: K Stenler Date: 9/13/90 Time: 1145

SHUTTLE # 693 TEMP. °C 30 SEAL # Intact COND 175362

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ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4760

Sample Point [W] [2GWP7] (Source Code / Sample Point I.D)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
910925	1020	1.75	11.16	16.0

SAMPLING METHOD: BAILER

Sampler Type [E] — A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [A] — A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] — Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl): 9403.4 * Well Depth (ft): 25.95'

Depth to Ground water (ft): 18.85 Sample Depth (non-well) (ft):

Groundwater Elevation (ft msl): 9214.9

	ph		spec. cond.		(other parameter)	value	units
1st	6.77 (STD)	1st	1125	umhos/cm at 25°C			
2nd	6.77 (STD)	2nd	1125	umhos/cm at 25°C			
3rd	6.76 (STD)	3rd	1125	umhos/cm at 25°C			
4th	6.77 (STD)	4th	1125	umhos/cm at 25°C			

Sample Temp: 12.5 (°C) Turbidity: NTU

FIELD COMMENTS

Sample Appearance: COLOR - PALE YEL ORANGE - GARBAGE ODOR

Weather Conditions: CLEAR - 60s°F - WIND NW 4-6 mph

Other: * WELL RECORDS

SAMPLED FOR VOLATILES ONLY

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) JOHN Y. RUDD Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/25/90 (Date) John Y Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175379 ETC Job # CA4761

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W-26WP3111I (Source Code (from below) / Your Sample Point ID (left justify)) 910/06/25 (Start Date (YY/MM/DD)) 1310 (Start Time (2400 hr clock)) _____ (Elapsed Hours (composite))

Source Codes:

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK			✓ small bubble
2	VOA	40	HCL	VOLATILES	N	Sampled for ✓	
1	VS	40	HCL	VOA SCREEN	N	volatiles only ✓	
1	CONU	125	NONE	CHLORIDE			Bottles Rec'd emptied
1	CONS	125	H2SO4	TOC2			
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			
1	MET	1000	HNO3	METALS			
1	CYAN	500	NaOH	CY/T			
1	FL	125	NONE	FLUORIDE			

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 14:40
   Signature: [signature] Seal #: 0175379 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: John Y. Rudd Signature: John Y. Rudd
   Date: 9/18/90 Time: 1000 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) John Y. Rudd Date: 9/25/90 Time: 1500
   Signature: John Y. Rudd Seal #: 0175375 Intact: OK

LAB USE ONLY Opened By: [signature] Date: 9/26/90 Time: 1140

SHUTTLE # 857 TEMP. °C 4° SEAL # 175379 COND. OK

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4761

Sample Point: W (Source Code) | 2GWPZ111I (Sample Point I.D)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
900925	1310	.8	4.25	1510

SAMPLING METHOD: BAILER

Sampler Type: E — A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other ____ (SPECIFY OTHER)

Sampler Material: A — A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other ____ (SPECIFY OTHER)

Tubing Material: ____ — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other ____ (SPECIFY OTHER)

Sample Composited: Y/N ____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl): 939.85 *

Well Depth (ft): 43.70

Depth to Ground water (ft): 17.63

Sample Depth (non-well) (ft): ____

Groundwater Elevation (ft msl): 922.22

	ph (STD)	spec. cond. umho/cm at 25 °C	other parameter	value	units
1st	7.06	1472			
2nd	7.07	1472			
3rd	7.07	1472			
4th	7.08	1472			

Sample Temp: 11.0 (°C)

Turbidity: ____ NTU

FIELD COMMENTS

Sample Appearance: COLOR: PALE YEL. ORANGE - GARBAGE LIKE ODOR

Weather Conditions: FAIR - 60s°F - WIND NW 4-6 mph

Other: * WELL RECORDS

SAMPLED FOR VOLATILES ONLY

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler (Print): John Y. RUDD

Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

5/25/90 (Date) John Y Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175395 ETC Job # CA4762

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 4 0 5 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W 2 6 W P 2 1 1 D (Source Code (from below) / Your Sample Point ID (left justify)) 9 0 0 9 2 5 (Start Date (YY/MM/DD)) 1 5 3 5 (Start Time (2400 hr clock)) _____ (Elapsed Hours (composite))

Source Codes

Well	(W)	Outfall	(O)	Bottom Sediment	(B)	Surface Impoundment	(I)	Leachate Collection Sys.	(C)	Other	(X)
Soil	(S)	River/Stream	(R)	Generation Point	(G)	Treatment Facility	(T)	Lake/Ocean	(L)	Specify	

SHUTTLE CONTENTS

BOTTLE No	BOTTLE Type	BOTTLE Size	BOTTLE Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK			✓ small bubble
2	VOA	40	HCL	VOLATILES	N	Sampled for	✓
1	VS	40	HCL	VOA SCREEN	N	Volatiles only	✓
1	CONU	125	NONE	CHLORIDE			
1	CONS	125	H2SO4	TOC2			
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			
1	MET	1000	HNO3	METALS			
1	CYAN	500	NaOH	CY/T			
1	FL	125	NONE	FLUORIDE			

Bottles Read ✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-8-90 Time: 1450
   Signature: Dan Green Seal #: 0175345 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: John V. Rudd Signature: John V Rudd
   Date: 9/18/90 Time: 1000am Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) John V. Rudd Date: 9/25/90 Time: 1700
   Signature: John V Rudd Seal #: 0175354 Intact: OK

LAB USE ONLY Opened By: _____ Date: 9/26/90 Time: 1135

Cooler 1817 TEMP °C 3° SEAL # 175344 COND. Intact OK

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4762

Sample Point [W] [2GWP7] [1] [D] (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr. Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901092 5	1535	9	54.9	210.0

SAMPLING METHOD: BAILER

Sampler Type [E] — A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [A] — A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl) 914.76 *

Depth to Ground water (ft) 18.64

Groundwater Elevation (ft msl) 912.12

Well Depth (ft) 52.30

Sample Depth (non-well) (ft)

	ph	(STD)		spec. cond.	um/cm at 25° C	(other parameter)	value	units
1st	10.30	(STD)	1st	3647	um/cm at 25° C			
2nd	10.30	(STD)	2nd	3643	um/cm at 25°C			
3rd	10.29	(STD)	3rd	3643	um/cm at 25°C			
4th	10.30	(STD)	4th	3643	um/cm at 25°C			

Sample Temp: 11.3 (°C)

Turbidity: NTU

FIELD COMMENTS

Sample Appearance: COLOR - CLEAR

Weather Conditions: FAIR - 60°s F - WINDS NW - 4-6 mph

Other: * WELL RECORDS

SAMPLED FOR VOLATILES ONLY

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: John Y. Rudd (Print) Employer: DEQ

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/25/90 (Date) John Y Rudd (Signature)

ORIGINAL

Date 9/26/90 Instr. C

A-Type PP/VOA, TCL / IFB XVOA13
Tune file APEI01
Seq. file JM1
Method file VOAC
ID file IC1171
CB file CC1171
Analyst
Reviewed by/Date

Batch #'s QV 70357

__ Standards Updated CBUPD, CBCAL, CBMS
Date By 9/26

Tape # Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol. (ul)
P-BFB	50	9871	1.0
INT STD/SURR	25	9972	10.0
CAL I	50	9996	20, 5, 1, 0.5
CAL II	↓	9997	↓
XVOA	↓	0505	↓
IFB MATRIX SPIKE	25	9973	10.0

IR	NAME	DATA File	Init. (ml) g	ALS #	Dil	Inj. Time	Comments	P
9/26	p-BFB	>C0910	1AL	-		854	ok 111	
	QC 70357VS	>C0911	5mL	6		1124	ok 20 ul CAL I, II, XVOA	
	QC 70357VS	>C0912		7	CBUPD	1213	ok 15 ul IC1171	
	QC 70357VS	>C0913		8	CBCAL	1303	ok 10 ul CC1171	
	QC 70357VS	>C0914		9	CBMS	1352	ok 5 ul	
	QC 70357VS	>C0915		10		1441	ok 2 ul	
	QC 70357V	>C0916	↓	1	— NOT USED		BLANK	
	p-BFB	>C0917	1uL	—		1625	(114-104)	
	QC 70357V	>C0918	5mL	6		1705	ok	
	QC 70357V	>C0919		7		NOT used		
	CA 4753V	>C0920		8		1904	ok	
	CA 4754V	>C0921		9		1944	ok rerun, pos. leak	
	CA 4755V	>C0922		10		2043	ok	
	CA 4763V	>C0923		1		2132	ok	
	CA 4756V	>C0924		2		2221	ok	
	CA 4758V	>C0925	↓	3		2310	ok	
9/27	p-BFB	>C0926	1uL	—		858	ok	
	QC 70357VS	>C0927	5mL	1	QCA	1656	ok 5 ul CAL I, II, XVOA	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U16 Page 2 of 5

Date 9/27/90 Instr. C

A-Type IEB - XV0913 / PP/10A, TCL
Tune file APEI01
Seq. file JA1 , JA2
Method file VOAC
ID file TC1171
CB file CC1171
Analyst
Reviewed by/Date

Batch #'s QV70357

__ Standards Updated
Date By

Tape # R-135 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p.1			

R	NAME	DATA File	init. (m)/g	ALS #	Dil	Inj. Time	Comments	P
	p-BFB QC70357V2	>C0927	5mL	2			BLANK ON 9/27	
	p-BFB	>C0928	1uL	—		1241	OK (109-70)	
	QC70357V2	>C0929	5mL	6		1814	OK Blank	+
	QC70357V2	>C0930		7		NOT USED ON 9/27	Blank	+
R	CA4758V2	>C0931		8		1952	OK	+
	CA4757V2	>C0932		9		2041	NO SURR OUT, RERUN	+
	CA4759V2	>C0933		10		2130	dc RERUN 1:5 FOR C25	+
	CA4760V2	>C0934		1			NG. RERUN 1:1000 (RUN POSCHK)	+
	CA4761V2	>C0935		2			DID NOT	+
	CA4762V2	>C0936		3			RUN ON 9/28/90	+
9/28/90	POS/SYSCHK	>C0938	5mL	1		957	RUN IMMEDBLANK	
	pos/sysCHK	>C0939		1		1125	RUN IMMEDBLANK	
		>C0940	5mL	1			OK	
	QC70357V3	>C0942	5mL	2			5mL OA LI, IE, XV0913 NOT USED ON 9/28	
	QC70357V3	>C0943		3			BLANK (MISSING - NOT RAN)	
	p-BFB	>C0941	1uL	—		N24	(RAN PRIOR TO CBCHKCOPY2)	
10-1-90	p-BFB	>C0942	1uL			1253	OK (SEA 114)	
	QC70357V3	>C0943	5mL	3	CBUPD CBCAL	RRT	5mL OA LI, IE, XV0913 219	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U11 Page 3 of 5

Date 10-1-90 Instr. C

A-Type IFB/PP VOA
Tune file BFB01
Seq. file JA1 , JA2
Method file VOAC
ID file IC1171 , IC1174
CB file CC1171 CC1174
Analyst
Reviewed By/Date

Batch #'s QV70357

1 Standards Updated CBVPD, CBCAL 10/1/90
Date By

Tape # R-135 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
SOP p.1			

R	NAME	DATA File	Inj. ml/g	ALS #	Dil	Inj. Time	Comments	P
	QC70357VS	>C0944	5mL	1		Not Needed	20 ul CAL I, II, XVOA	
	QC70357VS	>C0945		2	CBVPD		15 ul	
	QC70357VS	>C0946		3	CBCAL		10 ul	
	QC70357VS	>C0947		4			2 ul	
	QC70357V3	>C0948		5			NG BLANK	
	QC70357V3	>C0949		6		2241	NG	
	QC70357V3	>C0950		7		2334	NG	
R	CA4757V3	>C0951		8		0019	NG	
	CA4757VS	>C0952		9		0109	NG 10ul IFB MATRIX SPIKE	
	CA4757VR	>C0953	↓	10		0158	NG ↓	
	P-BFB	>C0954	1ul	—		08:58	OK	
	QC70357VS	>C0955	5ml	1			NG 5ul CAL I+II, XVOA	
	QC70357V4	>C0956	↓	2			Not Used	
	BFB	>C0957	5ml/ul			11:48	OK 10-8-93	
	QC70357VS	>C0958	5ml	6		12:15	20 ul CAL I+II, XVOA	
	QC70357VS	>C0959		7		13:04	15ul " " " IH1174	
	QC70357VS	>C0960		8	CBVPD CBCAL	13:53	10 ul " " " CC1174	
	QC70357VS	>C0961	↓	9	QT	14:43	5ul " " "	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department Page 4 of 5

Date 10-2-90 Instr. C

A-Type IFB/VOA
Tune file BFB01
Seq. file
Method file VOAC
ID file IC1171 | IC1172
CB file CC1171 | CC1172
Analyst K. Baylor
Reviewed by/Date

Batch #'s QV70357

__ Standards Updated
Date By

Tape # Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
See pg #1			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	QC7035NS	>C0962	5ml	10		CBand CBcalc	2ul CalC I+II, XVOA	
	QC7035N4	>C0963	5ml	61		16:21	OK ~~SURR OUT KB10/4/90~~	
R	CA4757V4	>C0964		6		17:31	OK SURR out confirmed by >C0985	
	CA4758V5	>C0965		7			Not USED	
	CA4758VR	>C0966		8			Not USED	
	CA4759V4	>C0967	1ml	9			"	
	CA4760V4	>C0968	0.005ml	10	1:1000	20:48	OK " confirms >C0984	
	CA4762V4	>C0969	0.5ml	1	1:10	21:37	OK " Confirmed by >C0985	
	CA4761V4	>C0970	0.02ml	2	1:250	22:25	~~OK~~ Contains Surrogates ~~NO POSSIBLE CARRYOVER~~	
	BFB	>C0971	1ml	—		09:30	OK KB 10/8/90	
	QC7035VS	>C0972	5ml	1		10:01	NG 5ul CalC I+II, XVOA	
	QC7035N5	>C0973		2			Not RUN	
	QC7035NS	>C0974		1			NG 5ul CalC I+II, XVOA	
	QC7035NS	>C0975	5ml	8	CBand CBcalc QT	13:05	2ul	IC1172 CC1172
	QC7035VS	>C0976		9		13:55	15ul	
	QC7035VS	>C0977		10		14:45	10ul	
	QC7035NS	>C0978		1		15:35	2ul	
	QC7035VA	>C0979		2		16:25	OK	

KB 10/8/90

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department Page 5 of 5

Date 12/4/90 Instr. C

A-Type IFB/VOA
Tune file AB12012
Seq. file
Method file VOAC
ID file CC1172
CB file CC1172
Analyst K. Brophy
Reviewed by/Date
Batch #'s QC QV70357
LB 10470

__ Standards Updated
Date By

Tape # Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
R	CA4757V4F>C0980		5ml	6		17:29	OK Confirms >C0964	
	CA4755VS>C0981		5ml	7		18:19	OK 10 ul IFB matrix spike	
	CA4755VR>C0982		5ml	8		19:07	OK 10 ul " " "	
	CA4759V4F>C0983		1ml	9		19:55	OK Dilution for >C0933	
	CA4760V4F>C0984		0.025ml	10	1:200	20:44	OK Confirmed by >C0968	
	CA4762V4F>C0985		0.025ml	1	1:200	21:33	OK Dilution Data for >C0986	
	CA4761V4F>C0986		0.001ml	2	1:500	22:21	OK Confirmed by >C0970	

R : redo , P : Aroclor search , + : Plus search

222

OHM Corporation

ETC Environmental Testing and Certification Corp.

Technical Report

for

CITY DISPOSAL CORPORATION LANDFILL

Chain of Custody Data Required for ETC Data Management Summary Reports

CA4753-CA4756, CA4763 WASTE MANAGEMENT, INC. 405

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert

Vice President, General Manager

This Technical Report is an INSITE℠ service generated by LODESTAR℠ Data Management Software.

284 Raritan Center Parkway ■ CN 7808 ■ Edison, New Jersey 08818-7808 ■ 201-225-5600

ETC

TABLE OF CONTENTS

CASE NARRATIVE

SDG NARRATIVE

This technical report submitted by ETC Corporation contains the analytical results and required deliverables for WASTE MANAGEMENT, INC. Site 405 samples as identified below:

ETC ID	CLIENT ID	ETC ID	CLIENT ID
CA4753	2GWBL	CA4756	2GWIH
CA4754	2GWLA	CA4763	2FB
CA4755	2GWSW		

During the preparation and analysis of these samples, the following was observed:

VOLATILES:
(OV70357): Problems were not observed during the analysis of these samples.

Release of the data contained in this hardcopy data package has been authorized by the following signature.

Marie Albanese /fax — 10-17-90

Gregory G. Morrison
Laboratory Manager

Date

File # 000295

METHODOLOGY

INTRODUCTION

Environmental Testing and Certification Corp.
284 Raritan Center Parkway, CN 7808
Edison, New Jersey 08818-7808
(201) 225-6700

This report contains analytical results in tabular form for your sample. It includes comprehensive data for each analytical process. Associated quality control data is also presented, including QC batch results for the laboratory blank, spiked blank, matrix spike and a replicated sample spike, as well as results from surrogate compound analyses. Quality control data for instrument performance is also included. Other appendices may include data system printouts and chain of custody records.

Analytical Methodology

ETC utilizes a wide variety of methodologies and EPA approved procedures which are listed below. Analytical results and Quality Assurance protocols are based upon the approriate guideline dependent upon the level of deliverable requested.

- "Methods of Organic Chemical Analysis of Municipal and Industrial Wastewater", Federal Register Vol. 49, No. 209, October 26, 1984;
- "Test Methods for Evaluating Solid Waste", SW-846 Third Edition, September 1986, USEPA;
- "Standard Methods for the Examination of Water and Wastewater" 1985, 14th, 15th and 16th Edition;
- "Methods for Chemical Analysis of Water and Wastes" March 1983, EMSL, EPA 600 4-79-020;
- Organic Analysis: Multi-media, Multi-Concentration-IFB-CLP, SOW February 1988;
- Inorganic Analysis: Multi-media, Multi-Concentration IFB-CLP, SOW July 1987;
- Dioxin Analysis: Soil/Sediment/Water Matrix; Multi-Concentration, Selected Ion Monitoring with Jar Extraction Procedure; IFB WA86-K357.
- "Methods for the Determination of Organic Compounds in Drinking Water" December 1988, EPA-600/4-88/039;
- "Handbook for Analytical Quality Control in Water and Wastewater Laboratories", EPA-600/4-79-019, March 1979;
- "National Enforcement Investigation Center Policies and Procedures Manual,EPA-330/9/78/001-R, Revised May 1986.

ETC

ETC Network Laboratories are certified to perform analytical analyses upon samples collected throughout the United States. It may be required that this environmental data be reported with reference to a certified laboratory. The Laboratory Identification Numbers for ETC Corp., Edison NJ Laboratory are summarized below for your information and reference. Please contact your Program Manager should you require certification verification for an ETC Network Laboratory.

Certification Summary, January 1990

State Agency	Certification Number
Alabama Department of Environmental Management	40280
Arizona Department of Environmental Quality	322
California Department of Health Services	162
Connecticut Department of Health Services	0511
Florida Department of Health and Rehabilitative Services	E87074 & 87262
Illinois Environmental Protection Agency	100224
Kansas Department of Health and Environment	E-148 & E1122
New Hampshire Department of Environmental Services	198948-B
New Jersey Department of Environmental Protection	12257
New York Department of Public Health	10586
Oklahoma Water Resources Board	8703
Pennsylvania Department of Environmental Regulation	68-323
South Carolina Department of Health and Environmental Control	94002
Tennessee Department of Health and Environmental Laboratory Services	02915
Utah Department of Health	E-91
Virginia Department of General Services	00113
Wisconsin Department of Natural Resources	999464070

VOLATILE DATA

QC SUMMARY

END OF PAGE INSERTION

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (TOL)#	S2 (BFB)#	S3 (DCE)#	OTHER	TOT OUT
01	VBLK01	101	106	95		0
02	A4753	102	107	99		0
03	A4755	101	107	101		0
04	A4763	100	107	103		0
05	A4756	100	107	102		0
06	A4758	100	110	103		0
07	VBLK2	99	103	108		0
08	A4754	103	105	112		0
09	VBLK5	98	112	97		0
10	A4755MS	105	112	109		0
11	A4755MSD	98	112	106		0
12						
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	QC LIMITS
S1 (TOL) = Toluene-d8	(88-110)
S2 (BFB) = Bromofluorobenzene	(86-115)
S3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values
* Values outside QC limits
D Surrogates diluted out

FORM II VOA -1 1/87 Rev.

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: A4755

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	QC LIMITS REC.
1,1-Dichloroethene	50.000	0.000	54.109	108		61-145
Trichloroethene	50.000	0.000	48.018	96		71-120
Benzene	50.000	0.000	41.577	83		76-127
Toluene	50.000	0.000	49.472	99		76-125
Chlorobenzene	50.000	0.000	47.831	96		75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	REC.
1,1-Dichloroethene	50.000	51.446	103		5		14	61-145
Trichloroethene	50.000	49.846	100		4		14	71-120
Benzene	50.000	42.915	86		3		11	76-127
Toluene	50.000	45.757	92		8		13	76-125
Chlorobenzene	50.000	49.015	98		2		13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

Comments: _____

FORM III VOA -1 1/87 Rev.

VOLATILE METHOD 4A BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0918 Lab Sample ID: VBLK01

Date Analyzed 09/26/90 Time Analyzed: 1725

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4753	CA4753V	>C0920	1904
02	A4755	CA4755V	>C0922	2043
03	A4763	CA4763V	>C0923	2132
04	A4756	CA4756V	>C0924	2221
05	A4758	CA4758V	>C0925	2310
06				
07				
08				
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Comments:

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0929 Lab Sample ID: VBLK2

Date Analyzed 09/27/90 Time Analyzed: 1814

Matrix: (soil/water) WATER Level:(low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4754	CA4754V2	>C0931	1952
02	A4757	CA4757V2	>C0932	2041
03	A4759	CA4759V2	>C0933	2130
04	~~VQA~~A4760	CA4760V2	>C0934	2220
05				
06				
07				
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(CN) 10-17-90

Comments: _____

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0979 Lab Sample ID: VBLK5

Date Analyzed 10/03/90 Time Analyzed: 1625

Matrix: (soil/water) WATER Level: (low/med) LOW

Instrument ID: GC/MS C

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	A4755MS	CA4755VS	>C0981	1819
02	A4755MSD	CA4755VR	>C0982	1907
03				
04				
05				
06				
07				
08				
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omments:

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0910 BFB Injection Date: 09/26/90

Instrument ID: GC/MS C BFB Injection Time: 0854

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	58.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.4
175	5.0 - 9.0% of mass 174	6.5 (8.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.9 (96.9)1
177	5.0 - 9.0% of mass 176	5.9 (7.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VQA	QC70357VS	>C0911	09/26/90	1124
02	VSTD150	QC70357VS	>C0912	09/26/90	1213
03	VSTD100	QC70357VS	>C0913	09/26/90	1303
04	VSTD50	QC70357VS	>C0914	09/26/90	1352
05	VSTD20	QC70357VS	>C0915	09/26/90	1441
06					
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0917 BFB Injection Date: 09/26/90

Instrument ID: GC/MS C BFB Injection Time: 1625

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.3
75	30.0 - 60.0% of mass 95	59.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	84.0
175	5.0 - 9.0% of mass 174	7.0 (8.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.3 (96.7)1
177	5.0 - 9.0% of mass 176	6.0 (7.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VBLK01	QC70357V	>C0918	09/26/90	1725
02	A4753	CA4753V	>C0920	09/26/90	1904
03	A4755	CA4755V	>C0922	09/26/90	2043
04	A4763	CA4763V	>C0923	09/26/90	2132
05	A4756	CA4756V	>C0924	09/26/90	2221
06	A4758	CA4758V	>C0925	09/26/90	2310
07					
08					
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22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0926 BFB Injection Date: 09/27/90

Instrument ID: GC/MS C BFB Injection Time: 0858

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	27.2
75	30.0 - 60.0% of mass 95	59.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.4
175	5.0 - 9.0% of mass 174	6.0 (7.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	73.7 (95.2)1
177	5.0 - 9.0% of mass 176	5.9 (8.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	QC70357VS	>C0927	09/27/90	1656
02	VBLK2	QC70357V2	>C0929	09/27/90	1814
03	A4754	CA4754V2	>C0931	09/27/90	1952
04					
05					
06					
07					
08					
09					
10					
11					
12					
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17					
18					
19					
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22					

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5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID: >C0971 BFB Injection Date: 10/03/90

Instrument ID: GC/MS C BFB Injection Time: 0930

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	49.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	94.9
175	5.0 - 9.0% of mass 174	7.9 (8.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	93.5 (98.5)1
177	5.0 - 9.0% of mass 176	7.6 (8.1)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	QC70357VS	>C0972	10/03/90	1001
02	VSTD200	QC70357VS	>C0975	10/03/90	1305
03	VSTD150	QC70357VS	>C0976	10/03/90	1355
04	VSTD100	QC70357VS	>C0977	10/03/90	1445
05	VSTD20	QC70357VS	>C0978	10/03/90	1535
06	VBLK5	QC70357V5	>C0979	10/03/90	1625
07	A4755MS	CA4755VS	>C0981	10/03/90	1819
08	A4755MSD	CA4755VR	>C0982	10/03/90	1907
09					
10					
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17					
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20					
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22					

SAMPLE DATA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4753

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4753U

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0920

Level: (low/med) LOW Date Received: ~~10/~~/90 9/20/90 CA 10-16-90

% Moisture: not dec. Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4753

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4753

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0420

Level: (low/med) LOW Date Received: 09/20/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4753

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4753

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0900

Level: (low/med) LOW Date Received: 09/26/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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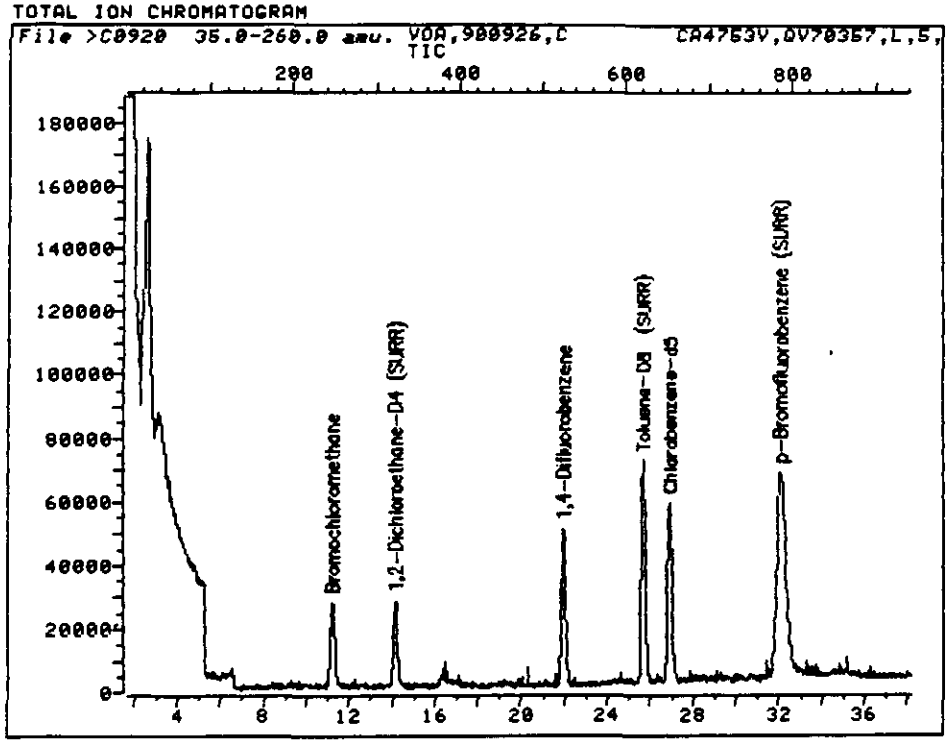
TOTAL ION CHROMATOGRAM



Data File: >C0920::U0 Quant Output File: ^C0920::AQ
Name: VOA,900926,C
Misc: CA4753V,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 19:44
Injected at: 900926 19:04

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 19:44
Output File: ^C0920::AQ Injected at: 900926 19:04
Data File: >C0920::U0 Dilution Factor: 1.00000
Name: U0A,900926,C
Misc: CA4753U,QU70357,L,5,,

ID File: IC1171::US
Title: IFB, PP/U0A, TCL, XU0A13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.19	246	46998	250.00	NG	95
18)	1,2-Dichloroethane-D4 (SURR)	14.14	322	163095	248.59	NG	96
20)	*1,4-Difluorobenzene	21.94	523	224774	250.00	NG	99
36)	*Chlorobenzene-d5	26.92	651	207367	250.00	NG	75
41)	Toluene-D8 (SURR)	25.66	619	312662	256.01	NG	89
45)	p-Bromofluorobenzene (SURR)	32.08	784	242017	268.18	NG	81

* Compound is ISTD

EP
10-19-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4754

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4754V2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0931

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/20/90 CP

% Moisture: not dec. Date Analyzed: 09/27/90 10.16.90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4754

Lab Name: ETC/T Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: C4754

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C093|

Level: (low/med) LOW Date Received: 09/20/90

% Moisture: not dec. _____ Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. A4754

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: C4475L

Sample wt/vol: 5 (g/mL) ML Lab File ID: >CC931

Level: (low/med) LOW Date Received: 09/20/90

% Moisture: not dec. _____ Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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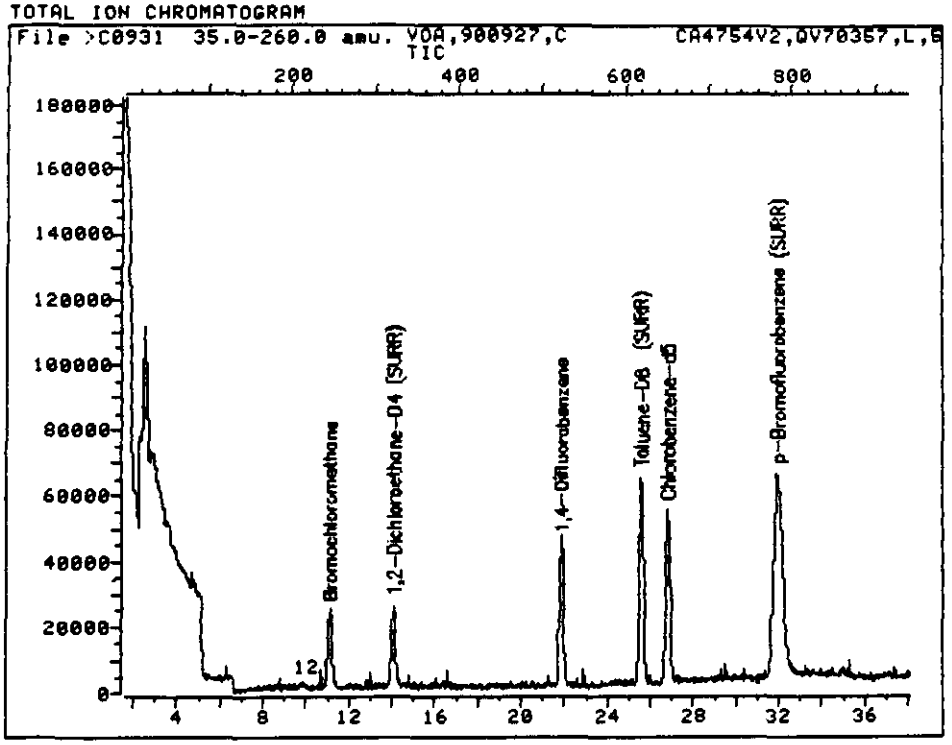
TOTAL ION CHROMATOGRAM



Data File: >C0931::U4 Quant Output File: ^C0931::AQ
Name: VOA,900927,C
Misc: CA4754V2,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

Operator ID: MGRMS
Quant Time: 900927 20:31
Injected at: 900927 19:52

QUANT REPORT Page 1

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 20:31
Output File: ^C0931::AQ Injected at: 900927 19:52
Data File: >C0931::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: CA4754V2,QV70357,L,5,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.10	245	42061	250.00	NG	98
12)	Trichlorofluoromethane	9.90	214	9391	~~12.47~~	~~NG~~	85
18)	1,2-Dichloroethane-D4 (SURR)	14.09	322	152876	281.20	NG	95
20)	*1,4-Difluorobenzene	21.85	522	196522	250.00	NG	99
36)	*Chlorobenzene-d5	26.82	650	185259	250.00	NG	76
41)	Toluene-D8 (SURR)	25.57	618	278543	257.44	NG	90
45)	p-Bromofluorobenzene (SURR)	31.94	782	220655	263.69	NG	87

* Compound is ISTD

@
10-17-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4755U

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0922

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/20/90 EB

% Moisture: not dec. Date Analyzed: 09/26/90 10/6/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4755

Sample wt/vol: 5 (g/mL) ML Lab File ID: > CC422

Level: (low/med) LOW Date Received: 04/20/90

% Moisture: not dec. _____ Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4765

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4765

Sample wt/vol: 5 (g/ML) ML Lab File ID: >CC942

Level: (low/med) LOW Date Received: 04/20/90

% Moisture: not dec. _____ Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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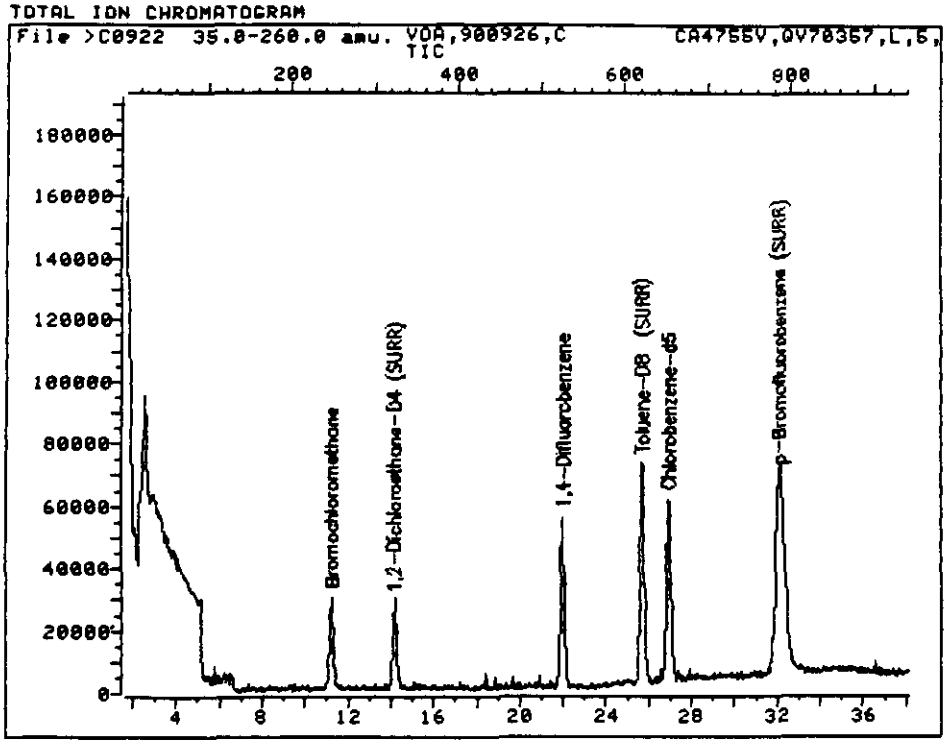
TOTAL ION CHROMATOGRAM



Data File: >C0922::U0 Quant Output File: ^C0922::AQ
Name: VOA,900926,C
Misc: CA4755V,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 21:22
Injected at: 900926 20:43

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 21:22
Output File: ^C0922::AQ Injected at: 900926 20:43
Data File: >C0922::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: CA4755V,QV70357,L,5,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.20	247	51014	250.00	NG	95
18)	1,2-Dichloroethane-D4 (SURR)	14.15	323	180352	253.25	NG	99
20)	*1,4-Difluorobenzene	21.98	525	234507	250.00	NG	96
36)	*Chlorobenzene-d5	26.92	652	216956	250.00	NG	75
41)	Toluene-D8 (SURR)	25.67	620	321910	251.93	NG	88
45)	p-Bromofluorobenzene (SURR)	32.08	785	251598	266.47	NG	81

* Compound is ISTD

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4756

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4756V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0924

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/28/90 10/4/90

% Moisture: not dec. Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. A4756

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4756

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0924

Level: (low/med) LOW Date Received: 09/28/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

FORM I VOA 1/87 Rev.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4756

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4256

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0924

Level: (low/med) LOW Date Received: 09/21/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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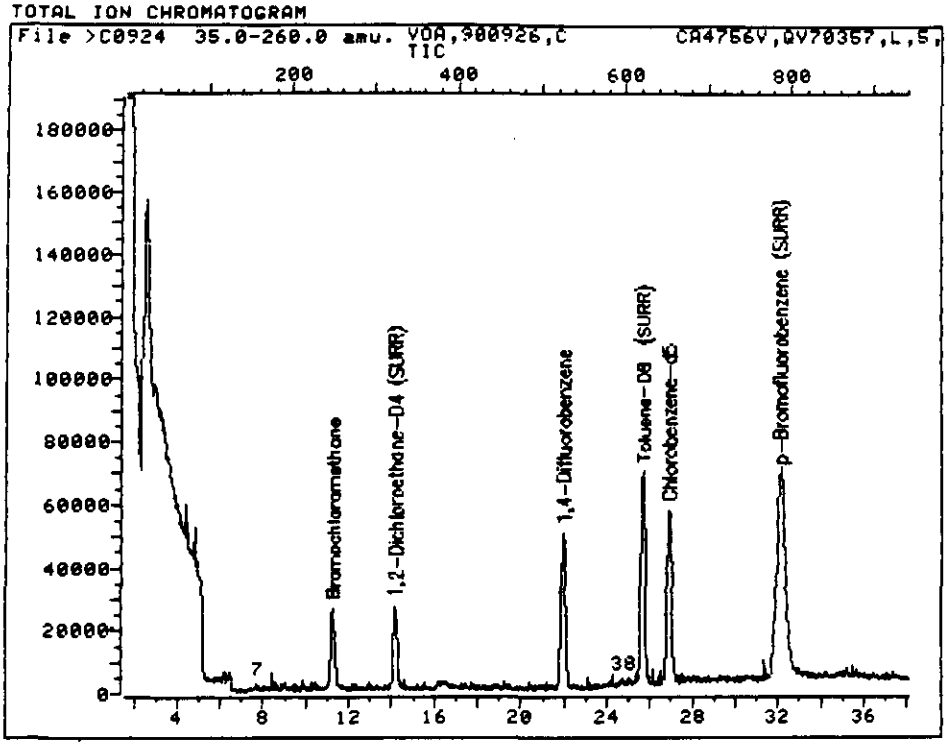
FORM I VOA-TIC 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0924::U0 Quant Output File: ^C0924::AQ
Name: VOA,900926,C
Misc: CA4756V,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 23:00
Injected at: 900926 22:21

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 23:00
Output File: ^C0924::AQ Injected at: 900926 22:21
Data File: >C0924::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: CA4756V,QV70357,L,5,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.26	250	44376	250.00	NG	95
7)	Methylene chloride	7.65	157	3431	~~11.60~~	~~NG~~	90
18)	1,2-Dichloroethane-D4 (SURR)	14.17	325	157436	254.14	NG	99
20)	*1,4-Difluorobenzene	21.96	526	215254	250.00	NG	96
36)	*Chlorobenzene-d5	26.90	653	204163	250.00	NG	76
38)	2-Hexanone	24.68	596	2711	~~13.13~~	~~NG~~	53
41)	Toluene-D8 (SURR)	25.69	622	300152	249.62	NG	89
45)	p-Bromofluorobenzene (SURR)	32.10	787	237983	267.85	NG	83

* Compound is ISTD

CA
10/17-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4763

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4763V

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0923

Level: (low/med) LOW Date Received: ~~10/~~ 09/28/90 (EA) 10/4/90

% Moisture: not dec. Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4763

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4763

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0423

Level: (low/med) LOW Date Received: 09/20/90

% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

A4763

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4763

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0903

Level: (low/med) LOW Date Received: 09/20/90

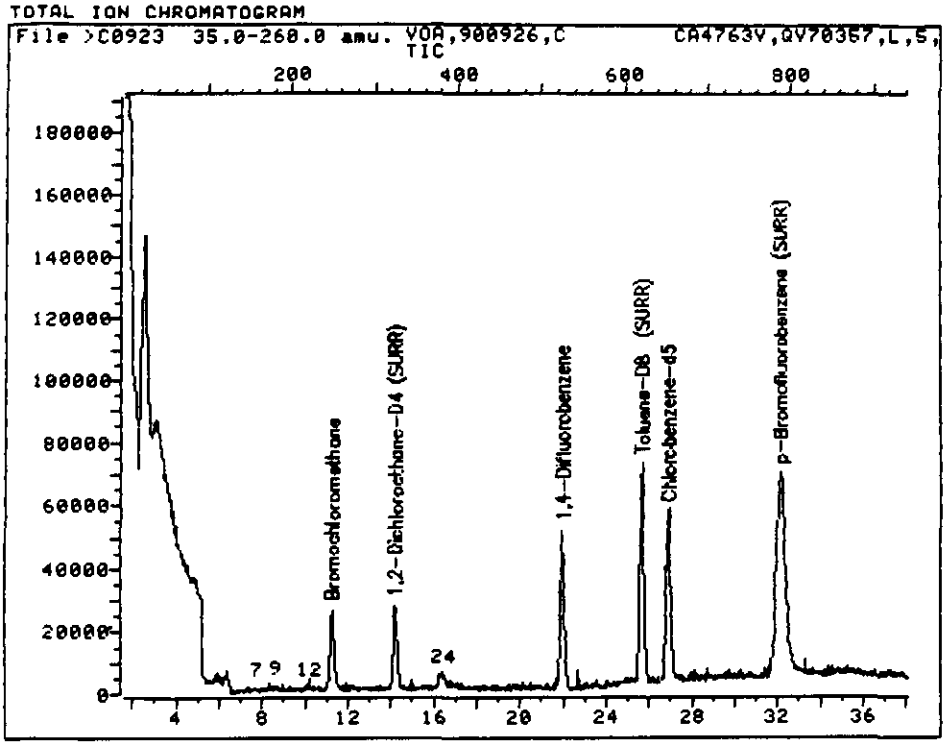
% Moisture: not dec. _____ Date Analyzed: 09/26/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0923::U0 Quant Output File: ^C0923::AQ
Name: VOA,900926,C
Misc: CA4763V,QV70357,L,5,,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 22:11
Injected at: 900926 21:32

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 22:11
Output File: ^C0923::AQ Injected at: 900926 21:32
Data File: >C0923::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: CA4763V,QV70357,L,5,,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.24	249	45139	250.00	NG	96
7)	Methylene chloride	7.64	156	2379	~~7.96~~	~~NG~~	84
9)	Acetone	8.53	179	5165	~~47.22~~	~~NG~~	74
12)	Trichlorofluoromethane	10.00	217	4109	~~5.32~~	~~NG~~	94
18)	1,2-Dichloroethane-D4 (SURR)	14.19	325	162300	257.57	NG	99
20)	*1,4-Difluorobenzene	21.95	525	219122	250.00	NG	99
24)	Vinyl acetate	16.29	379	3767	~~9.36~~	~~NG~~	73
36)	*Chlorobenzene-d5	26.88	652	207394	250.00	NG	77
41)	Toluene-D8 (SURR)	25.67	621	306516	250.94	NG	86
45)	p-Bromofluorobenzene (SURR)	32.12	787	241814	267.92	NG	84

* Compound is ISTD

EA 10-17-90.

STANDARDS DATA

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date(s) 09/26/90 09/26/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>C0915 RRF50 =>C0914
RRF100=>C0913 RRF150=>C0912 RRF200=>C0911

COMPOUND		RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane	#	.746	.648	.619	.587	.587	.637	10.3#
Bromomethane		.474	.298	.216	.308	.148	.289	42.4
Vinyl Chloride	*	1.598	1.187	1.061	1.282	1.057	1.237	18.0*
Chloroethane		1.014	.827	.797	.869	.967	.895	10.3
Methylene Chloride		1.913	1.631	1.621	1.579	1.529	1.655	9.1
Acetone		.606	.631	.561	.612	.619	.606	4.5
Carbon Disulfide		5.121	4.577	4.609	4.680	4.514	4.700	5.2
1,1-Dichloroethene	*	1.669	1.462	1.440	1.456	1.375	1.480	7.5*
1,1-Dichloroethane	#	3.113	2.697	2.675	2.710	2.570	2.753	7.6#
1,2-Dichlorethene (total)		1.677	1.434	1.409	1.491	1.356	1.473	8.4
Chloroform	*	5.511	4.748	4.641	4.702	4.508	4.822	8.2*
1,2-Dichloroethane		4.718	4.074	3.899	3.949	3.856	4.099	8.7
2-Butanone		.027	.024	.023	.023	.021	.024	8.0
1,1,1-Trichloroethane		1.082	.953	.915	.932	.979	.972	6.8
Carbon Tetrachloride		1.070	.936	.908	.933	.993	.968	6.7
Vinyl Acetate		.505	.461	.405	.461	.463	.459	7.8
Bromodichloromethane		.901	.801	.773	.795	.806	.815	6.1
1,2-Dichloropropane	*	.283	.253	.248	.249	.238	.254	6.7*
cis-1,3-Dichloropropene		.526	.479	.462	.464	.462	.478	5.7
Trichloroethene		.482	.420	.454	.413	.414	.437	7.0
Dibromochloromethane		.666	.619	.598	.614	.628	.625	4.1
1,1,2-Trichloroethane		.345	.312	.308	.318	.321	.321	4.5
Benzene		1.003	.898	.939	.978	.952	.954	4.2
trans-1,3-Dichloropropene		.703	.645	.634	.653	.668	.661	4.1
Bromoform	#	.603	.574	.551	.568	.565	.572	3.3#
4-Methyl-2-Pentanone		.347	.322	.277	.281	.249	.295	13.2
2-Hexanone		.280	.278	.233	.246	.227	.253	9.9
Tetrachloroethene		.537	.469	.447	.448	.446	.470	8.3
1,1,2,2-Tetrachloroethane	#	.553	.517	.404	.528	.491	.498	11.5#
Toluene	*	.878	.789	.784	.796	.780	.805	5.1*
Chlorobenzene	#	1.302	1.157	1.121	1.134	1.111	1.165	6.7#
Ethylbenzene	*	.715	.644	.630	.647	.641	.655	5.2*
Styrene		1.776	1.594	1.560	1.622	1.641	1.639	5.0
Xylene (total)		.983	.892	.878	.916	.936	.921	4.4
Toluene-d8		1.475	1.457	1.461	1.470	1.498	1.472	1.1
Bromofluorobenzene		1.077	1.078	1.070	1.085	1.130	1.088	2.2
1,2-Dichloroethane-d4		3.407	3.393	3.454	3.586	3.610	3.490	2.9

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ETCNJ Contract: ____________

Lab Code: ________ Case No.: ________ SAS No.: ________ SDG No.: ________

Instrument ID: GC/MS C Calibration Date(s): 09/26/90 09/26/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

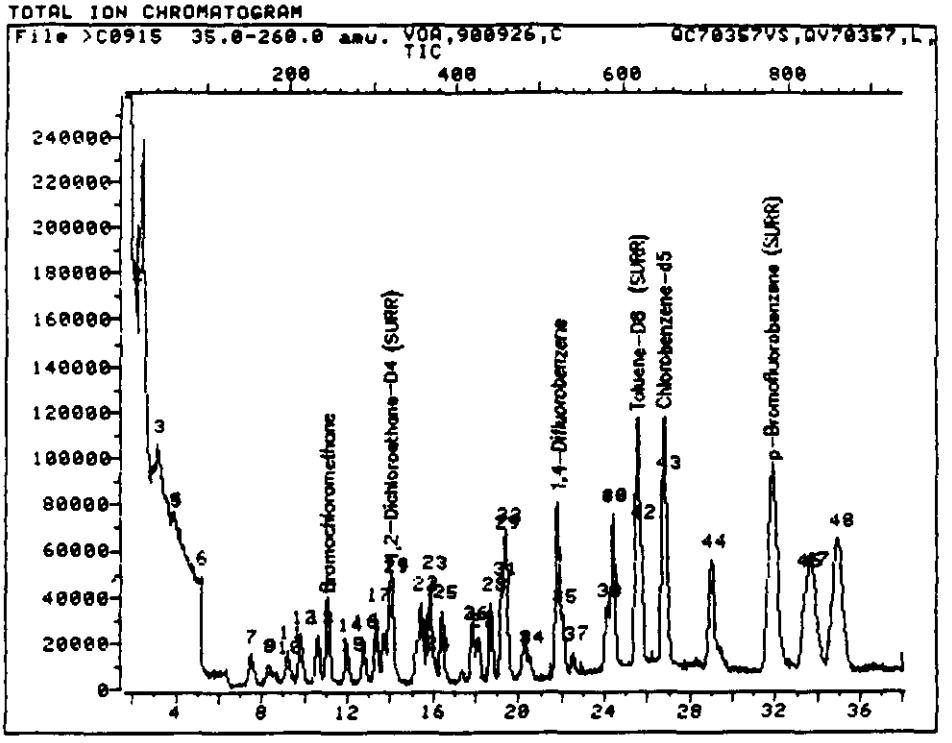
Min $\overline{RRF}$ for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = >C0915 RRF50 = >C0914
RRF100= >C0913 RRF150= >C0912 RRF200= >C0911

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Tetrahydrofuran	.209	.176	.167	.169	.164	.177	10.4
Toluene-d8							
Bromofluorobenzene							
1,2-Dichloroethane-d4							

FORM VI VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0915::U0 Quant Output File: ^C0915::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 2UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:57
Injected at: 900926 14:41

Operator ID: MGRMS
Output File: ^C0915::AQ
Data File: >C0915::U0
Name: ~~UQA,900926,C~~ VSTD50
Misc: QC70357US,QU70357,L,5,, 2UL CAL I,II,XUOA

Quant Rev: 7 Quant Time: 900926 15:57
Injected at: 900926 14:41
Dilution Factor: 1.00000

ID File: IC1171::US
Title: IFB, PP/UOA, TCL, XUOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.05	244	67956	250.00	NG	99
2)	Methyl chloride	2.16	15	20268	115.01	NG	98
3)	Methyl bromide	3.17	41	12898	159.04	NG	95
4)	Dichlorodifluoromethane	3.95	61	28289	138.98	NG	93
5)	Vinyl chloride	3.99	62	43431	134.61	NG	94
6)	Chloroethane	5.15	92	27553	122.53	NG	93
7)	Methylene chloride	7.52	153	52013	117.33	NG	95
8)	Acrolein	8.30	173	55190	1636.79	NG	86
9)	Acetone	8.34	174	16459M	95.88	NG	
10)	Acrylonitrile	9.11	194	12522	176.63	NG	92
11)	Carbon disulfide	9.23	197	139206	111.88	NG	97
12)	Trichlorofluoromethane	9.85	213	129947	115.44	NG	93
13)	1,1-Dichloroethylene	10.63	233	45358	114.17	NG	91
14)	1,1-Dichloroethane	11.98	268	84606	109.42	NG	94
15)	Tetrahydrofuran	12.06	270	5680	3163.62	NG	100
16)	1,2-Trans-dichloroethylene	12.76	288	45577	83.81	NG	99
17)	Chloroform	13.38	304	149809	151.86	NG	97
18)	1,2-Dichloroethane-D4 (SURR)	14.04	321	231517	333.78	NG	95
19)	1,2-Dichloroethane	14.12	323	128237	144.20	NG	97
20)	*1,4-Difluorobenzene	21.84	522	339584	250.00	NG	99
21)	Methyl ethyl ketone	14.12	323	3600	14.05	NG	67
22)	1,1,1-Trichloroethane	15.48	358	146924	138.75	NG	96
~~23)~~	~~Carbon tetrachloride~~	~~15.48~~	~~358~~	~~15976~~	~~17.00~~	~~NG~~	~~93~~
23)	Carbon tetrachloride	15.90	369	145279	154.62	NG	98
24)	Vinyl acetate	16.10	374	68655	88.17	NG	99
25)	Dichlorobromomethane	16.45	383	122422	135.70	NG	98
26)	1,2-Dichloropropane	17.88	420	38455	71.03	NG	92
27)	cis-1,3-Dichloropropylene	18.16	427	71381	92.25	NG	92
28)	Trichloroethylene	18.70	441	65499	105.06	NG	92
29)	Chlorodibromomethane	19.36	458	90526	134.62	NG	99
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.36~~	~~458~~	~~37275~~	~~464.95~~	~~NG~~	~~100~~
31)	Benzene	19.24	455	136244	80.94	NG	89
32)	1,1,2-Trichloroethane	19.44	460	46896	99.99	NG	93
33)	trans-1,3-Dichloropropylene	19.44	460	95520	117.98	NG	89
34)	2-Chloroethylvinyl ether	20.52	488	24448	83.44	NG	100
35)	Bromoform	22.08	528	81887	212.65	NG	95
36)	*Chlorobenzene-d5	26.79	649	326537	250.00	NG	78
37)	Methyl-iso-butyl ketone	22.54	540	45299	81.27	NG	91
38)	2-Hexanone	24.10	580	36575	72.64	NG	87
39)	1,1,2,2-Tetrachloroethane	24.41	588	72212	81.69	NG	99
40)	Tetrachloroethylene	24.41	588	70134	64.45	NG	95
41)	Toluene-D8 (SURR)	25.53	617	481657	231.97	NG	90
42)	Toluene	25.73	622	114626	45.85	NG	97

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:57
Output File: ^C0915::AQ Injected at: 900926 14:41
Data File: >C0915::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 2UL CAL I,II,XVOA

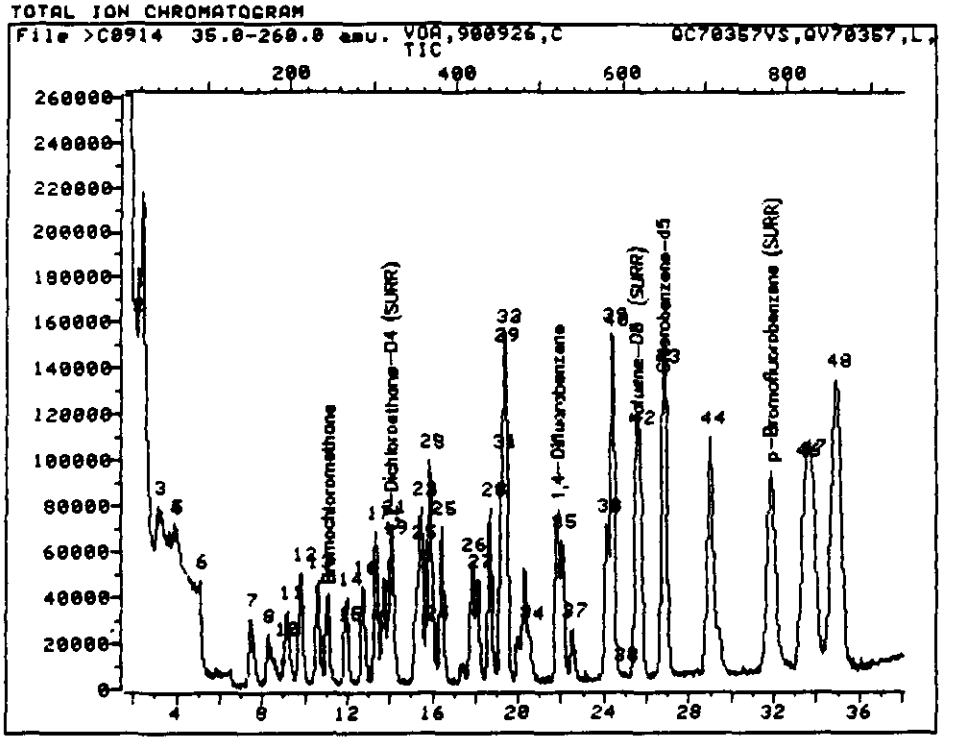
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
43)	Chlorobenzene	26.90	652	170050	92.20	NG	97
44)	Ethylbenzene	29.04	707	93449	27.15	NG	79
45)	p-Bromofluorobenzene (SURR)	31.84	779	351619	263.74	NG	85
46)	Styrene	33.51	822	231937	85.74	NG	89
47)	m-Xylene	33.82	830	125328	37.63	NG	90
48)	o+p-Xylenes	34.98	860	256790	40.41	NG	88

* Compound is ISTD

Eak 10/15/90

TOTAL ION CHROMATOGRAM



Data File: >C0914::U0 Quant Output File: ^C0914::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: MGRMS
Quant Time: 900926 16:20
Injected at: 900926 13:52

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 16:20
Output File: ^C0914::AQ Injected at: 900926 13:52
Data File: >C0914::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.09	245	70232	250.00	NG	97
2)	Methyl chloride	2.16	15	45532	254.27	NG	98
3)	Methyl bromide	3.17	41	20954	258.19	NG	88
4)	Dichlorodifluoromethane	3.91	60	52592	233.25	NG	96
5)	Vinyl chloride	3.99	62	83361	239.87	NG	95
6)	Chloroethane	5.15	92	58101	231.15	NG	99
7)	Methylene chloride	7.48	152	114536	246.38	NG	95
8)	Acrolein	8.30	173	139391	3727.47	NG	86
9)	Acetone	8.33	174	44351	260.62	NG	82
10)	Acrylonitrile	9.07	193	29308	401.95	NG	83
11)	Carbon disulfide	9.23	197	321471	243.46	NG	99
12)	Trichlorofluoromethane	9.85	213	290849	241.86	NG	93
13)	1,1-Dichloroethylene	10.62	233	102651	246.84	NG	91
14)	1,1-Dichloroethane	11.98	268	189423	244.94	NG	94
~~14)~~	~~1,1-Dichloroethane~~	~~12.76~~	~~288~~	~~54508~~	~~70.40~~	~~NG~~	~~58~~
15)	Tetrahydrofuran	12.06	270	12343	248.30	NG	100
16)	1,2-Trans-dichloroethylene	12.76	288	100678	243.26	NG	96
17)	Chloroform	13.34	303	333431	246.15	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	14.04	321	238291	243.05	NG	97
19)	1,2-Dichloroethane	14.16	324	286158	248.48	NG	97
20)	*1,4-Difluorobenzene	21.84	522	342312	250.00	NG	98
21)	Methyl ethyl ketone	14.12	323	8313	256.28	NG	87
22)	1,1,1-Trichloroethane	15.48	358	326236	245.09	NG	95
~~23)~~	~~Carbon tetrachloride~~	~~15.48~~	~~358~~	~~34127~~	~~25.75~~	~~NG~~	~~97~~
23)	Carbon tetrachloride	15.90	369	320401	241.74	NG	98
24)	Vinyl acetate	16.10	374	157868	251.11	NG	95
~~25)~~	~~Dichlorobromomethane~~	~~15.55~~	~~360~~	~~2699~~	~~2.42~~	~~NG~~	~~86~~
~~25)~~	~~Dichlorobromomethane~~	~~15.90~~	~~369~~	~~4779~~	~~4.28~~	~~NG~~	~~92~~
25)	Dichlorobromomethane	16.45	383	274289	245.70	NG	99
26)	1,2-Dichloropropane	17.88	420	86444	248.47	NG	98
27)	cis-1,3-Dichloropropylene	18.11	426	163824	250.08	NG	96
28)	Trichloroethylene	18.70	441	143838	240.61	NG	91
29)	Chlorodibromomethane	19.36	458	212019	247.68	NG	98
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.36~~	~~458~~	~~83203~~	~~245.15~~	~~NG~~	~~100~~
31)	Benzene	19.24	455	307266	235.22	NG	90
32)	1,1,2-Trichloroethane	19.43	460	106714	242.96	NG	91
33)	trans-1,3-Dichloropropylene	19.43	460	220924	244.17	NG	90
34)	2-Chloroethylvinyl ether	20.52	488	62156	256.96	NG	100
35)	Bromoform	22.07	528	196579	250.82	NG	99
36)	*Chlorobenzene-d5	26.78	649	318334	250.00	NG	77
37)	Methyl-iso-butyl ketone	22.54	540	102645	272.99	NG	95
38)	2-Hexanone	24.13	581	88566	275.20	NG	87
~~38)~~	~~2-Hexanone~~	~~24.95~~	~~602~~	~~2369~~	~~7.36~~	~~NG~~	~~93~~

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 16:20
Output File: ^C0914::AQ Injected at: 900926 13:52
Data File: >C0914::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

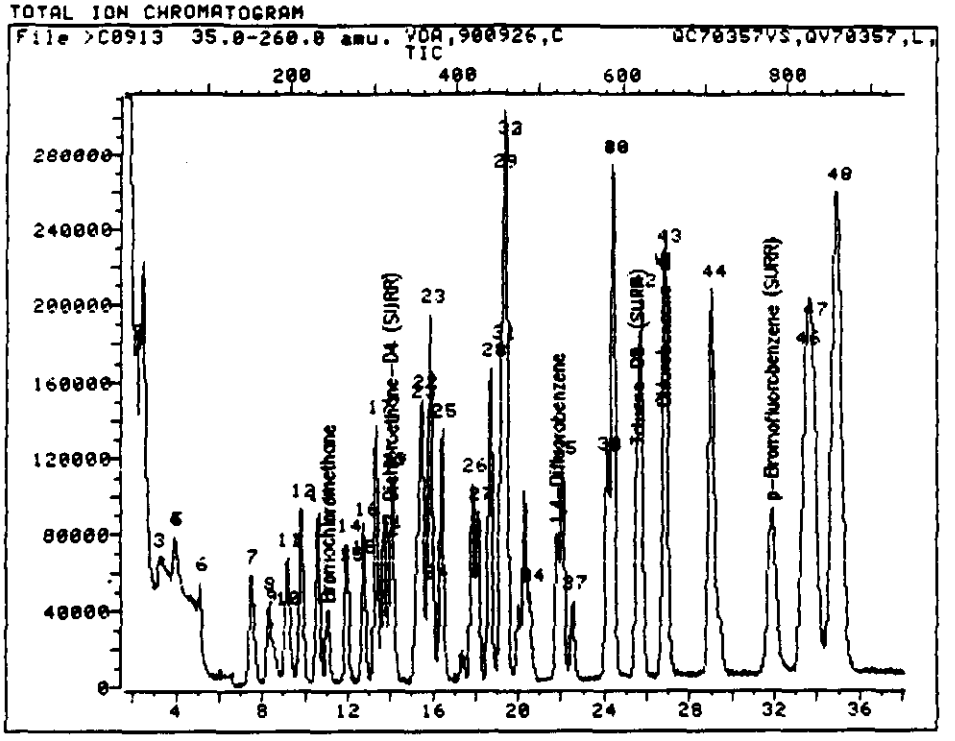
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
39)	1,1,2,2-Tetrachloroethane	24.40	588	164492	259.15	NG	97
40)	Tetrachloroethylene	24.44	589	149308	249.68	NG	98
41)	Toluene-D8 (SURR)	25.53	617	463917	247.45	NG	90
42)	Toluene	25.72	622	251169	244.99	NG	95
43)	Chlorobenzene	26.90	652	368430	248.34	NG	98
44)	Ethylbenzene	29.03	707	205107	245.75	NG	78
45)	p-Bromofluorobenzene (SURR)	31.87	780	343104	247.66	NG	85
46)	Styrene	33.50	822	507414	243.18	NG	90
47)	m-Xylene	33.81	830	272301	242.18	NG	92
48)	o+p-Xylenes	34.94	859	568101	484.31	NG	87

* Compound is ISTD

EAL 10/15/90

TOTAL ION CHROMATOGRAM



Data File: >C0913::U0 Quant Output File: ^C0913::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 10UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:53
Injected at: 900926 13:03

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:53
Output File: ^C0913::AQ Injected at: 900926 13:03
Data File: >C0913::U0 Dilution Factor: 1.00000
Name: U0A,900926,C
Misc: QC70357US,QU70357,L,5,, 10UL CAL I,II,XU0A

ID File: IC1171::US
Title: IFB, PP/U0A, TCL, XU0A13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.05	244	68225	250.00	NG	99
2)	Methyl chloride	2.16	15	84438	477.26	NG	97
3)	Methyl bromide	3.21	42	29462	361.85	NG	90
4)	Dichlorodifluoromethane	3.95	61	95209	465.90	NG	97
5)	Vinyl chloride	3.99	62	144780	446.97	NG	97
6)	Chloroethane	5.15	92	108717	481.55	NG	97
7)	Methylene chloride	7.48	152	221249	497.13	NG	98
8)	Acrolein	8.30	173	265559	7844.73	NG	91
9)	Acetone	8.37	175	76485	443.82	NG	80
10)	Acrylonitrile	9.07	193	57919	813.74	NG	78
11)	Carbon disulfide	9.19	196	628910	503.48	NG	98
12)	Trichlorofluoromethane	9.81	212	550069	486.72	NG	95
13)	1,1-Dichloroethylene	10.62	233	196535	492.73	NG	90
14)	1,1-Dichloroethane	11.94	267	364980	470.16	NG	95
15)	Tetrahydrofuran	12.02	269	22793	12645.10	NG	100
~~15)~~	~~Tetrahydrofuran~~	~~12.68~~	~~286~~	~~3651~~	~~2025.50~~	~~NG~~	~~100~~
16)	1,2-Trans-dichloroethylene	12.72	287	192283	352.18	NG	96
17)	Chloroform	13.34	303	633220	639.36	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	14.00	320	235624	338.36	NG	99
19)	1,2-Dichloroethane	14.12	323	532039	595.89	NG	97
20)	*1,4-Difluorobenzene	21.80	521	340907	250.00	NG	99
21)	Methyl ethyl ketone	14.08	322	15681	60.98	NG	86
22)	1,1,1-Trichloroethane	15.48	358	623521	586.57	NG	95
~~23)~~	~~Carbon tetrachloride~~	~~15.44~~	~~357~~	~~66844~~	~~70.86~~	~~NG~~	~~98~~
23)	Carbon tetrachloride	15.86	368	619317	656.56	NG	97
24)	Vinyl acetate	16.06	373	276192	353.33	NG	95
25)	Dichlorobromomethane	16.45	383	526976	581.86	NG	98
26)	1,2-Dichloropropane	17.84	419	168757	310.51	NG	98
27)	cis-1,3-Dichloropropylene	18.12	426	315197	405.77	NG	94
28)	Trichloroethylene	18.70	441	309255	494.10	NG	88
29)	Chlorodibromomethane	19.32	457	408046	604.43	NG	92
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.32~~	~~457~~	~~159828~~	~~1985.88~~	~~NG~~	~~100~~
31)	Benzene	19.20	454	640063	378.77	NG	91
32)	1,1,2-Trichloroethane	19.44	460	209992	445.98	NG	88
33)	trans-1,3-Dichloropropylene	19.44	460	432174	531.71	NG	91
34)	2-Chloroethylvinyl ether	20.52	488	118333	402.29	NG	100
35)	Bromoform	22.08	528	375897	972.35	NG	97
36)	*Chlorobenzene-d5	26.74	648	322654	250.00	NG	78
37)	Methyl-iso-butyl ketone	22.54	540	178675	324.43	NG	93
38)	2-Hexanone	24.09	580	150372	302.24	NG	88
39)	1,1,2,2-Tetrachloroethane	24.40	588	260722	298.50	NG	97
40)	Tetrachloroethylene	24.40	588	288656	268.45	NG	99
41)	Toluene-D8 (SURR)	25.53	617	471320	229.73	NG	90

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:53
Output File: ^C0913::AQ Injected at: 900926 13:03
Data File: >C0913::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 10UL CAL I,II,XVOA

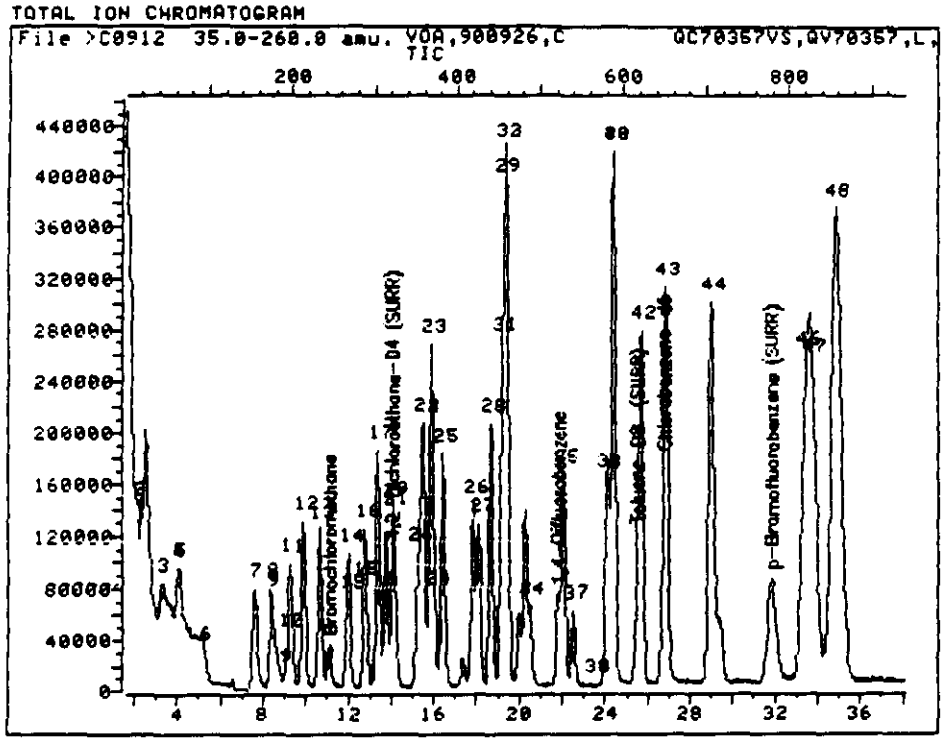
ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
42)	Toluene	25.72	622	505696	204.72	NG	95
43)	Chlorobenzene	26.90	652	723198	396.83	NG	98
44)	Ethylbenzene	29.03	707	406333	119.47	NG	78
45)	p-Bromofluorobenzene (SURR)	31.83	779	345303	262.12	NG	86
46)	Styrene	33.46	821	1006763	376.65	NG	90
47)	m-Xylene	33.77	829	541251	164.48	NG	91
48)	o+p-Xylenes	34.94	859	1133798	180.56	NG	89

* Compound is ISTD

EAL 4/15/91

TOTAL ION CHROMATOGRAM



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Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 15UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:49
Injected at: 900926 12:13

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:49
Output File: ^C0912::AQ Injected at: 900926 12:13
Data File: >C0912::U0 Dilution Factor: 1.00000
Name: V0A,900926,C
Misc: QC70357VS,QV70357,L,5,, 15UL CAL I,II,XV0A

ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.12	245	61517	250.00	NG	98
2)	Methyl chloride	2.23	16	108400	679.50	NG	97
3)	Methyl bromide	3.28	43	56817	773.91	NG	93
4)	Dichlorodifluoromethane	4.05	63	151377	821.52	NG	96
5)	Vinyl chloride	4.09	64	236659	810.29	NG	99
6)	Chloroethane	5.30	95	160295	787.44	NG	98
7)	Methylene chloride	7.63	155	291356	726.04	NG	97
8)	Acrolein	8.40	175	441660	14469.49	NG	89
9)	Acetone	8.44	176	112895	726.53	NG	86
~~9)~~	~~Acetone~~	~~9.02~~	~~191~~	~~2503~~	~~16.11~~	~~NG~~	~~22~~
10)	Acrylonitrile	9.14	194	77255	1203.76	NG	92
11)	Carbon disulfide	9.29	198	863774	766.90	NG	98
12)	Trichlorofluoromethane	9.92	214	753293	739.22	NG	95
13)	1,1-Dichloroethylene	10.65	233	268737	747.21	NG	91
14)	1,1-Dichloroethane	12.01	268	500082	714.45	NG	95
15)	Tetrahydrofuran	12.09	270	31236	19218.72	NG	100
~~15)~~	~~Tetrahydrofuran~~	~~12.71~~	~~286~~	~~6132~~	~~3772.87~~	~~NG~~	~~100~~
16)	1,2-Trans-dichloroethylene	12.79	288	275091	558.79	NG	97
17)	Chloroform	13.37	303	867721	971.67	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	14.07	321	220621	351.37	NG	99
19)	1,2-Dichloroethane	14.15	323	728878	905.38	NG	97
20)	*1,4-Difluorobenzene	21.83	521	307690	250.00	NG	99
21)	Methyl ethyl ketone	14.11	322	21496	92.62	NG	85
22)	1,1,1-Trichloroethane	15.51	358	860583	896.98	NG	95
~~23)~~	~~Carbon tetrachloride~~	~~15.51~~	~~358~~	~~90308~~	~~106.07~~	~~NG~~	~~93~~
23)	Carbon tetrachloride	15.89	368	861224	1011.59	NG	96
~~24)~~	~~Vinyl acetate~~	~~15.27~~	~~352~~	~~198487~~	~~281.34~~	~~NG~~	~~75~~
24)	Vinyl acetate	16.09	373	425268	602.78	NG	96
25)	Dichlorobromomethane	16.44	382	733919	897.83	NG	97
26)	1,2-Dichloropropane	17.83	418	229684	468.24	NG	99
27)	cis-1,3-Dichloropropylene	18.11	425	428246	610.82	NG	92
28)	Trichloroethylene	18.69	440	381133	674.68	NG	89
29)	Chlorodibromomethane	19.35	457	566804	930.24	NG	96
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.35~~	~~457~~	~~222702~~	~~3865.82~~	~~NG~~	~~100~~
31)	Benzene	19.23	454	903092	592.12	NG	92
32)	1,1,2-Trichloroethane	19.43	459	293592	690.84	NG	89
33)	trans-1,3-Dichloropropylene	19.43	459	603037	822.02	NG	93
34)	2-Chloroethylvinyl ether	20.51	487	161877	609.74	NG	100
35)	Bromoform	22.07	527	524398	1502.93	NG	98
36)	*Chlorobenzene-d5	26.74	647	298374	250.00	NG	77
37)	Methyl-iso-butyl ketone	22.53	539	251487	493.79	NG	94
~~38)~~	~~2-Hexanone~~	~~23.50~~	~~564~~	~~2978~~	~~6.47~~	~~NG~~	~~87~~
38)	2-Hexanone	24.09	579	220079	478.34	NG	91

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:49
Output File: ^C0912::AQ Injected at: 900926 12:13
Data File: >C0912::U0 Dilution Factor: 1.00000
Name: V0A,900926,C
Misc: QC70357VS,QV70357,L,5,, 15UL CAL I,II,XV0A

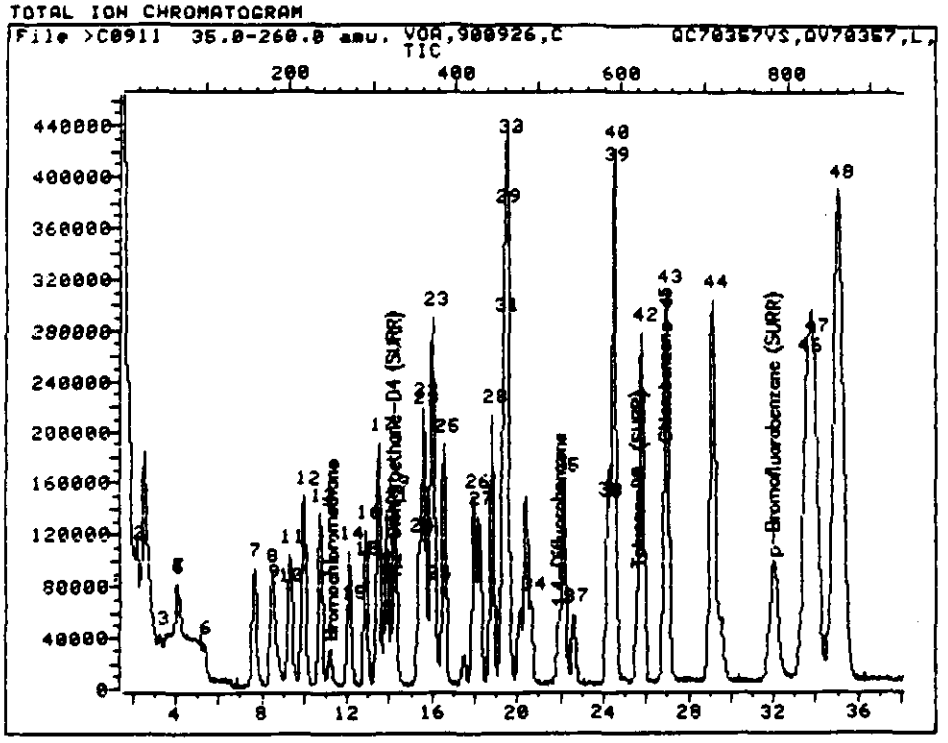
ID File: IC1171::US
Title: IFB, PP/V0A, TCL, XV0A13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
39)	1,1,2,2-Tetrachloroethane	24.40	587	472274	584.70	NG	97
40)	Tetrachloroethylene	24.40	587	401360	403.63	NG	97
41)	Toluene-D8 (SURR)	25.52	616	438728	231.24	NG	95
42)	Toluene	25.72	621	712541	311.93	NG	95
43)	Chlorobenzene	26.86	650	1015436	602.53	NG	98
44)	Ethylbenzene	28.99	705	578703	183.99	NG	78
45)	p-Bromofluorobenzene (SURR)	31.83	778	323728	265.74	NG	84
46)	Styrene	33.46	820	1452199	587.50	NG	91
47)	m-Xylene	33.77	828	776028	255.02	NG	94
48)	o+p-Xylenes	34.86	856	1640544	282.52	NG	89

* Compound is ISTD

EWK 10/15/90

TOTAL ION CHROMATOGRAM



Data File: >C0911::U0 Quant Output File: ^C0911::AQ
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 20UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

Operator ID: MGRMS
Quant Time: 900926 15:43
Injected at: 900926 11:24

Operator ID: MGRMS
Output File: ^C0911::AQ
Data File: >C0911::U0
Name: VOA,900926,C
Misc: QC70357VS,QV70357,L,5,, 20UL CAL I,II,XVOA

Quant Rev: 7 Quant Time: 900926 15:43
Injected at: 900926 11:24
Dilution Factor: 1.00000

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.23	249	49370	250.00	NG	97
2)	Methyl chloride	2.25	18	115927	905.48	NG	98
3)	Methyl bromide	3.30	45	29185	495.34	NG	99
4)	Dichlorodifluoromethane	4.04	64	139319	942.11	NG	95
5)	Vinyl chloride	4.08	65	208786	890.74	NG	96
6)	Chloroethane	5.32	97	191040	1169.37	NG	98
7)	Methylene chloride	7.65	157	302039	937.85	NG	97
8)	Acrolein	8.47	178	453160	18499.02	NG	88
9)	Acetone	8.55	180	122291	980.63	NG	81
10)	Acrylonitrile	9.25	198	70170	1362.38	NG	84
11)	Carbon disulfide	9.32	200	891360	986.11	NG	99
12)	Trichlorofluoromethane	9.98	217	862656	1054.83	NG	93
13)	1,1-Dichloroethylene	10.76	237	271510	940.66	NG	89
14)	1,1-Dichloroethane	12.12	272	507563	903.54	NG	94
15)	Tetrahydrofuran	12.20	274	32334	24789.09	NG	100
~~15)~~	~~Tetrahydrofuran~~	~~12.82~~	~~290~~	~~9922~~	~~7606.77~~	~~NG~~	~~100~~
16)	1,2-Trans-dichloroethylene	12.90	292	267830	677.90	NG	99
17)	Chloroform	13.48	307	890236	1242.16	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	14.14	324	178226	353.68	NG	96
19)	1,2-Dichloroethane	14.26	327	761552	1178.71	NG	96
20)	*1,4-Difluorobenzene	21.90	524	232529	250.00	NG	99
21)	Methyl ethyl ketone	14.22	326	19882	113.35	NG	87
22)	1,1,1-Trichloroethane	15.61	362	910803	1256.17	NG	94
~~23)~~	~~Carbon tetrachloride~~	~~15.58~~	~~361~~	~~88064~~	~~136.87~~	~~NG~~	~~97~~
23)	Carbon tetrachloride	16.00	372	923576	1435.47	NG	95
~~24)~~	~~Vinyl acetate~~	~~15.38~~	~~356~~	~~206336~~	~~387.80~~	~~NG~~	~~76~~
24)	Vinyl acetate	16.20	377	430938	808.26	NG	97
25)	Dichlorobromomethane	16.55	386	749680	1213.56	NG	96
26)	1,2-Dichloropropane	17.98	423	221792	598.30	NG	95
27)	cis-1,3-Dichloropropylene	18.22	429	429536	810.69	NG	95
28)	Trichloroethylene	18.80	444	385137	902.14	NG	89
29)	Chlorodibromomethane	19.42	460	583657	1267.52	NG	98
~~30)~~	~~bis(Chloromethyl)ether~~	~~19.42~~	~~460~~	~~228974~~	~~4171.04~~	~~NG~~	~~100~~
31)	Benzene	19.34	458	885817	768.53	NG	91
32)	1,1,2-Trichloroethane	19.54	463	298426	929.20	NG	89
33)	trans-1,3-Dichloropropylene	19.54	463	621566	1121.14	NG	90
34)	2-Chloroethylvinyl ether	20.62	491	160736	801.14	NG	100
35)	Bromoform	22.14	530	525932	1994.55	NG	98
36)	*Chlorobenzene-d5	26.85	650	228594	250.00	NG	81
37)	Methyl-iso-butyl ketone	22.60	542	227996	584.32	NG	91
38)	2-Hexanone	24.16	582	207178	587.76	NG	86
39)	1,1,2,2-Tetrachloroethane	24.47	590	449164	725.84	NG	97
40)	Tetrachloroethylene	24.51	591	408254	535.89	NG	97

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900926 15:43
Output File: ^C0911::AQ Injected at: 900926 11:24
Data File: >C0911::U0 Dilution Factor: 1.00000
Name: UOA,900926,C
Misc: QC70357US,QU70357,L,5,, 20UL CAL I,II,XUOA

ID File: IC1171::US
Title: IFB, PP/UOA, TCL, XUOA13
Last Calibration: 900926 15:42

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.59	619	342513	235.64	NG	92
42)	Toluene	25.79	624	712783	407.28	NG	94
43)	Chlorobenzene	26.97	653	1015905	786.82	NG	96
44)	Ethylbenzene	29.10	708	586369	243.34	NG	77
45)	p-Bromofluorobenzene (SURR)	31.94	781	258347	276.81	NG	82
46)	Styrene	33.57	823	1500542	792.37	NG	92
47)	m-Xylene	33.88	831	817849	350.81	NG	91
48)	o+p-Xylenes	35.05	861	1711432	384.69	NG	88

* Compound is ISTD

EAW 10/15/90

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date: 09/27/90 Time: 1656

Lab File ID: >C0927 Init Calib. Dates(s): 09/26/90 09/26/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 25.0%

COMPOUND		RRF	RRF50	%D
Chloromethane	#	.637	1.077	69.0#
Bromomethane		.289	.346	19.8
Vinyl Chloride	*	1.237	1.461	18.1*
Chloroethane		.895	1.032	15.4
Methylene Chloride		1.655	1.661	.4
Acetone		.606	.713	17.7
Carbon Disulfide		4.700	4.402	6.3
1,1-Dichloroethene	*	1.480	1.375	7.1*
1,1-Dichloroethane	#	2.753	2.529	8.1#
1,2-Dichloroethene (total)		1.473	1.335	9.4
Chloroform	*	4.822	4.530	6.1*
1,2-Dichloroethane		4.099	3.918	4.4
2-Butanone		.024	.024	2.2
1,1,1-Trichloroethane		.972	1.081	11.2
Carbon Tetrachloride		.968	1.119	15.6
Vinyl Acetate		.459	.421	8.3
Bromodichloromethane		.815	.836	2.5
1,2-Dichloropropane	*	.254	.238	6.2*
cis-1,3-Dichloropropene		.478	.465	2.7
Trichloroethene		.437	.442	1.3
Dibromochloromethane		.625	.654	4.7
1,1,2-Trichloroethane		.321	.301	6.1
Benzene		.954	.840	11.9
trans-1,3-Dichloropropene		.661	.650	1.7
Bromoform	#	.572	.584	2.1#
4-Methyl-2-Pentanone		.295	.283	4.0
2-Hexanone		.253	.264	4.4
Tetrachloroethene		.470	.491	4.6
1,1,2,2-Tetrachloroethane	#	.498	.437	12.3#
Toluene	*	.805	.749	7.0*
Chlorobenzene	#	1.165	1.161	.3#
Ethylbenzene	*	.655	.671	2.4*
Styrene		1.639	1.583	3.4
Xylene (total)		.921	.970	5.3
Toluene-d8		1.472	1.460	.8
Bromofluorobenzene		1.088	1.129	3.8
1,2-Dichloroethane-d4		3.490	3.231	7.4

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ETC NJ Contract: ____________

Lab Code: ________ Case No.: ______ SAS No.: _______ SDG No.: _______

Instrument ID: GC/MS C Calibration Date: 09/27/90 Time: 1656

Lab File ID: >C0927 Init. Calib. Date(s): 09/26/90 09/26/90

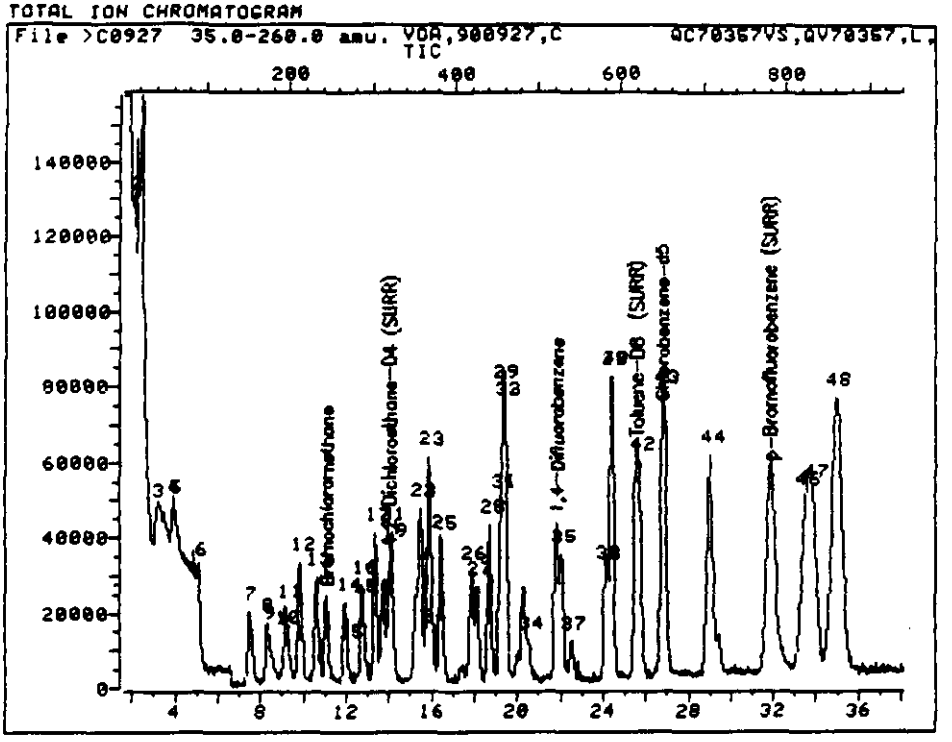
Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF50 for SPCC(#) = 0.300 (0.250 for Bromoform) Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Tetrahydrofuran	.177	.178	0.50
Toluene-d8			
Bromofluorobenzene			
1,2-Dichloroethane-d4			

FORM VII VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0927::U4 Quant Output File: ^C0927::AQ
Name: VOA,900927,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: MGRMS
Quant Time: 900927 17:35
Injected at: 900927 16:56

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 17:35
Output File: ^C0927::AQ Injected at: 900927 16:56
Data File: >C0927::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.08	245	40844	250.00	NG	93
2)	Methyl chloride	2.16	15	44000	422.50	NG	96
3)	Methyl bromide	3.17	41	14140	299.60	NG	97
4)	Dichlorodifluoromethane	3.94	61	39082	298.05	NG	94
5)	Vinyl chloride	3.98	62	59670	295.24	NG	99
6)	Chloroethane	5.15	92	42159	288.41	NG	95
7)	Methylene chloride	7.48	152	67827	250.88	NG	98
8)	Acrolein	8.33	174	85031	3909.88	NG	86
9)	Acetone	8.37	175	29128	294.32	NG	77
10)	Acrylonitrile	9.11	194	14484	341.57	NG	98
11)	Carbon disulfide	9.22	197	179802	234.14	NG	99
12)	Trichlorofluoromethane	9.84	213	182861	261.47	NG	92
13)	1,1-Dichloroethylene	10.62	233	56160	232.21	NG	87
14)	1,1-Dichloroethane	11.98	268	103305	229.69	NG	95
15)	Tetrahydrofuran	12.09	271	7263	251.24	NG	100
15)	Tetrahydrofuran	12.71	287	2777	96.06	NG	100
16)	1,2-Trans-dichloroethylene	12.75	288	54510	226.47	NG	98
17)	Chloroform	13.37	304	185021	234.87	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	14.03	321	131980	231.47	NG	99
19)	1,2-Dichloroethane	14.15	324	160047	238.97	NG	97
20)	*1,4-Difluorobenzene	21.83	522	179047	250.00	NG	99
21)	Methyl ethyl ketone	14.11	323	4335	255.50	NG	81
22)	1,1,1-Trichloroethane	15.47	358	193583	278.04	NG	95
23)	Carbon tetrachloride	15.47	358	19284	27.82	NG	96
23)	Carbon tetrachloride	15.90	369	200265	288.88	NG	99
24)	Vinyl acetate	16.09	374	75362	229.18	NG	99
25)	Dichlorobromomethane	16.48	384	149611	256.22	NG	97
26)	1,2-Dichloropropane	17.87	420	42662	234.44	NG	95
27)	cis-1,3-Dichloropropylene	18.11	426	83309	243.14	NG	96
28)	Trichloroethylene	18.69	441	79170	253.20	NG	90
29)	Chlorodibromomethane	19.35	458	117146	261.64	NG	96
30)	bis(Chloromethyl)ether	19.35	458	45649	257.15	NG	100
31)	Benzene	19.23	455	150448	220.19	NG	88
32)	1,1,2-Trichloroethane	19.47	461	53921	234.71	NG	92
33)	trans-1,3-Dichloropropylene	19.47	461	116317	245.78	NG	86
34)	2-Chloroethylvinyl ether	20.55	489	28248	223.27	NG	100
35)	Bromoform	22.07	528	104650	255.28	NG	96
36)	*Chlorobenzene-d5	26.77	649	171595	250.00	NG	75
37)	Methyl-iso-butyl ketone	22.53	540	48634	239.95	NG	92
38)	2-Hexanone	24.08	580	45280	261.02	NG	80
39)	1,1,2,2-Tetrachloroethane	24.39	588	75058	219.37	NG	98
40)	Tetrachloroethylene	24.43	589	84284	261.47	NG	97
41)	Toluene-D8 (SURR)	25.56	618	250546	247.92	NG	87

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 17:35
Jutput File: ^C0927::AQ Injected at: 900927 16:56
Data File: >C0927::U4 Dilution Factor: 1.00000
Name: VOA,900927,C
Misc: QC70357VS,QV70357,L,5,, 5UL CAL I,II,XVOA

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
42)	Toluene	25.71	622	128494	232.51	NG	97
43)	Chlorobenzene	26.89	652	199297	249.22	NG	98
44)	Ethylbenzene	29.02	707	115137	255.93	NG	77
45)	p-Bromofluorobenzene (SURR)	31.82	779	193769	259.47	NG	92
46)	Styrene	33.53	823	271632	241.51	NG	85
47)	m-Xylene	33.84	831	153657	253.53	NG	94
48)	o+p-Xylenes	34.96	860	333036	526.71	NG	87

* Compound is ISTD

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name:ETCNJ Contract:

Lab Code:F2 Case No.: SAS No.: SDG No.:

Instrument ID:GC/MS C Calibration Date(s) 10/03/90 10/03/90

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 =>C0978 RRF50 =>C0972
RRF100=>C0977 RRF150=>C0976 RRF200=>C0975

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	$\overline{RRF}$	% RSD
Chloromethane #	.573	.735	1.123	.521	1.488	.888	46.2#
Bromomethane	.240	.302	.140	.103	.165	.190	42.3
Vinyl Chloride *	.705	.854	.683	.478	.857	.715	21.8*
Chloroethane	.426	.567	.460	.366	.622	.488	21.4
Methylene Chloride	1.204	1.588	1.176	1.067	1.516	1.310	17.4
Acetone	.957	.896	.582	.544	.668	.729	25.6
Carbon Disulfide	5.944	7.468	4.613	7.465	6.830	6.464	18.7
1,1-Dichloroethene *	1.678	1.666	1.635	1.717	1.794	1.698	3.6*
1,1-Dichloroethane #	3.608	3.578	3.360	3.473	3.611	3.526	3.1#
1,2-Dichloroethene (total)	1.660	1.572	1.556	1.657	1.641	1.617	3.0
Chloroform *	5.094	5.263	4.600	4.849	5.013	4.964	5.1*
1,2-Dichloroethane	4.185	4.302	3.690	3.764	3.965	3.981	6.6
2-Butanone	.058	.072	.032	.032	.029	.045	43.2
1,1,1-Trichloroethane	.911	1.039	.750	.799	.812	.862	13.3
Carbon Tetrachloride	.826	.940	.699	.736	.765	.793	11.9
Vinyl Acetate	.568	.570	.581	.623	.528	.574	5.9
Bromodichloromethane	.825	.899	.695	.738	.736	.779	10.5
1,2-Dichloropropane *	.356	.331	.323	.347	.323	.336	4.5*
cis-1,3-Dichloropropene	.509	.553	.485	.513	.491	.510	5.2
Trichloroethene	.408	.373	.353	.366	.362	.372	5.7
Dibromochloromethane	.545	.538	.511	.528	.520	.528	2.6
1,1,2-Trichloroethane	.321	.304	.322	.335	.330	.322	3.7
Benzene	1.159	1.120	1.118	1.243	1.203	1.169	4.6
trans-1,3-Dichloropropene	.686	.732	.650	.663	.673	.681	4.6
Bromoform #	.477	.403	.445	.429	.409	.433	6.9#
4-Methyl-2-Pentanone	.426	.298	.342	.340	.289	.339	16.1
2-Hexanone	.389	.267	.323	.329	.274	.316	15.6
Tetrachloroethene	.403	.345	.349	.330	.329	.351	8.6
1,1,2,2-Tetrachloroethane #	.548	.412	.537	.535	.458	.498	12.1#
Toluene *	.849	.845	.817	.867	.888	.853	3.1*
Chlorobenzene #	1.214	1.141	1.135	1.119	1.161	1.154	3.2#
Ethylbenzene *	.743	.730	.699	.678	.738	.718	3.9*
Styrene	1.859	1.866	1.696	1.586	1.760	1.753	6.7
Xylene (total)	1.092	1.143	.987	.921	1.026	1.034	8.4
Toluene-d8	1.456	1.544	1.498	1.432	1.463	1.478	3.0
Bromofluorobenzene	1.116	1.275	1.085	1.042	1.116	1.127	7.8
1,2-Dichloroethane-d4	3.274	3.769	3.321	3.511	3.837	3.543	7.2

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: ETCNJ Contract: ____

Lab Code: ____ Case No.: ____ SAS No.: ____ SDG No.: ____

Instrument ID: GC/MS C Calibration Date(s): ____ ____

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) PACK

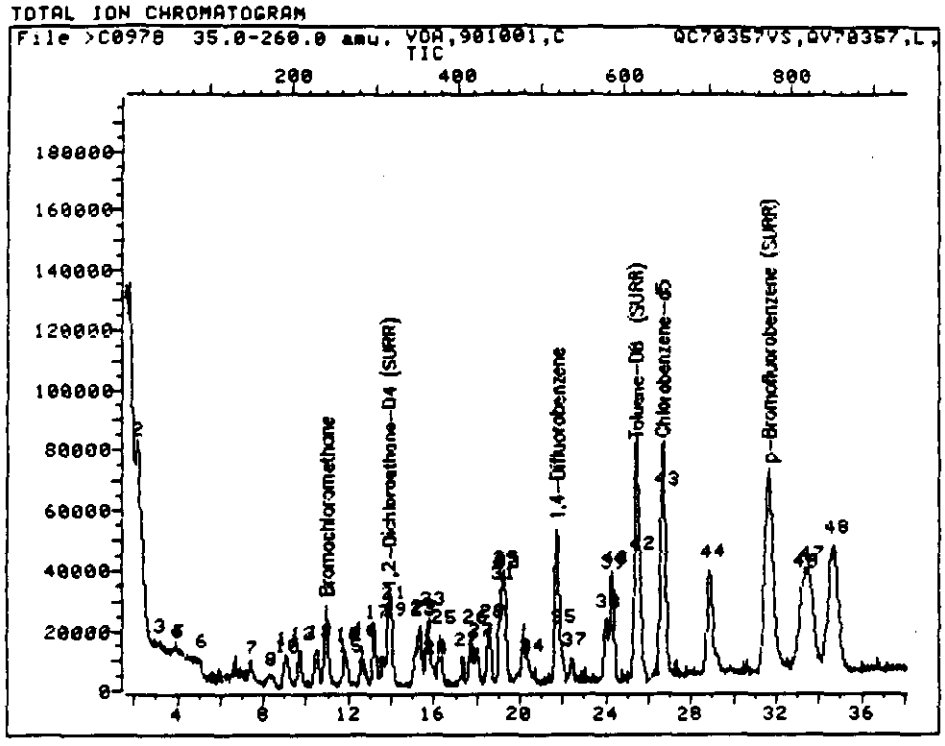
Min RRF for SPCC(#) = 0.300 (0.250 for Bromoform) Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = >C0978 RRF50 = >C0972
RRF100= >C0977 RRF150= >C0976 RRF200= >C0975

COMPOUND	RRF20	RRF50	RRF100	RRF150	RRF200	RRF (mean)	% RSD
Tetrahydrofuran	.172	.313	.267	.316	.268	.267	21.9
Toluene-d8							
Bromofluorobenzene							
1,2-Dichloroethane-d4							

FORM VI VOA 1/87 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0978::U4 Quant Output File: ^C0978::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 2UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 16:40
Injected at: 901003 15:35

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:40
Output File: ^C0978::AQ Injected at: 901003 15:35
Data File: >C0978::U4 Dilution Factor: 1.00000
Name: UOA,901001,C
Misc: QC70357US,QU70357,L,5, 2UL

ID File: IC1171::US
Title: IFB, PP/UOA, TCL, XUOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.94	241	42566	250.00	NG	97
2)	Methyl chloride	2.14	14	9755	55.41	NG	92
3)	Methyl bromide	3.15	40	4089	145.96	NG	84
4)	Dichlorodifluoromethane	3.88	59	8620	108.73	NG	92
5)	Vinyl chloride	3.96	61	11997	105.39	NG	94
6)	Chloroethane	5.12	91	7254	97.44	NG	84
7)	Methylene chloride	7.42	150	20507	108.72	NG	99
8)	Acrolein	8.31	173	23677	1213.71	NG	93
9)	Acetone	8.31	173	16293	166.33	NG	89
10)	Acrylonitrile	9.01	191	14008	163.35	NG	90
11)	Carbon disulfide	9.08	193	101202	102.51	NG	97
12)	Trichlorofluoromethane	9.70	209	69603	113.18	NG	91
13)	1,1-Dichloroethylene	10.48	229	28574	99.18	NG	93
14)	1,1-Dichloroethane	11.84	264	61430	105.91	NG	97
14)	1,1-Dichloroethane	12.65	285	14699	25.34	NG	65
15)	Tetrahydrofuran	11.87	265	2073	46.33	NG	100
15)	Tetrahydrofuran	11.95	267	2920	65.26	NG	100
16)	1,2-Trans-dichloroethylene	12.65	285	28272	101.38	NG	94
17)	Chloroform	13.23	300	86729	108.39	NG	97
18)	1,2-Dichloroethane-D4 (SURR)	13.89	317	139355	253.44	NG	95
19)	1,2-Dichloroethane	14.05	321	71261	115.00	NG	96
20)	*1,4-Difluorobenzene	21.73	519	210589	250.00	NG	98
21)	Methyl ethyl ketone	14.01	320	4914	167.54	NG	99
22)	1,1,1-Trichloroethane	15.37	355	76758	120.91	NG	95
23)	Carbon tetrachloride	15.33	354	8892	15.26	NG	81
23)	Carbon tetrachloride	15.75	365	69546	119.37	NG	96
24)	Vinyl acetate	15.99	371	47815	111.21	NG	97
25)	Dichlorobromomethane	16.34	380	69506	117.20	NG	98
26)	1,2-Dichloropropane	17.73	416	30006	101.97	NG	99
27)	cis-1,3-Dichloropropylene	17.38	407	2119	5.08	NG	71
27)	cis-1,3-Dichloropropylene	18.00	423	42910	102.94	NG	92
28)	Trichloroethylene	18.59	438	34378	110.49	NG	86
29)	Chlorodibromomethane	19.21	454	45927	105.86	NG	99
30)	bis(Chloromethyl)ether	19.17	453	18986	107.49	NG	100
31)	Benzene	19.13	452	97590	99.50	NG	90
32)	1,1,2-Trichloroethane	19.32	457	27035	97.47	NG	84
33)	trans-1,3-Dichloropropylene	19.32	457	57788	106.35	NG	88
34)	2-Chloroethylvinyl ether	20.45	486	21125	100.71	NG	100
35)	Bromoform	21.92	524	40197	111.90	NG	98
36)	*Chlorobenzene-d5	26.65	643	243193	250.00	NG	80
37)	Methyl-iso-butyl ketone	22.43	537	41488	124.66	NG	95
38)	2-Hexanone	23.98	577	37852	117.71	NG	83
39)	1,1,2,2-Tetrachloroethane	24.25	584	53349	105.59	NG	97

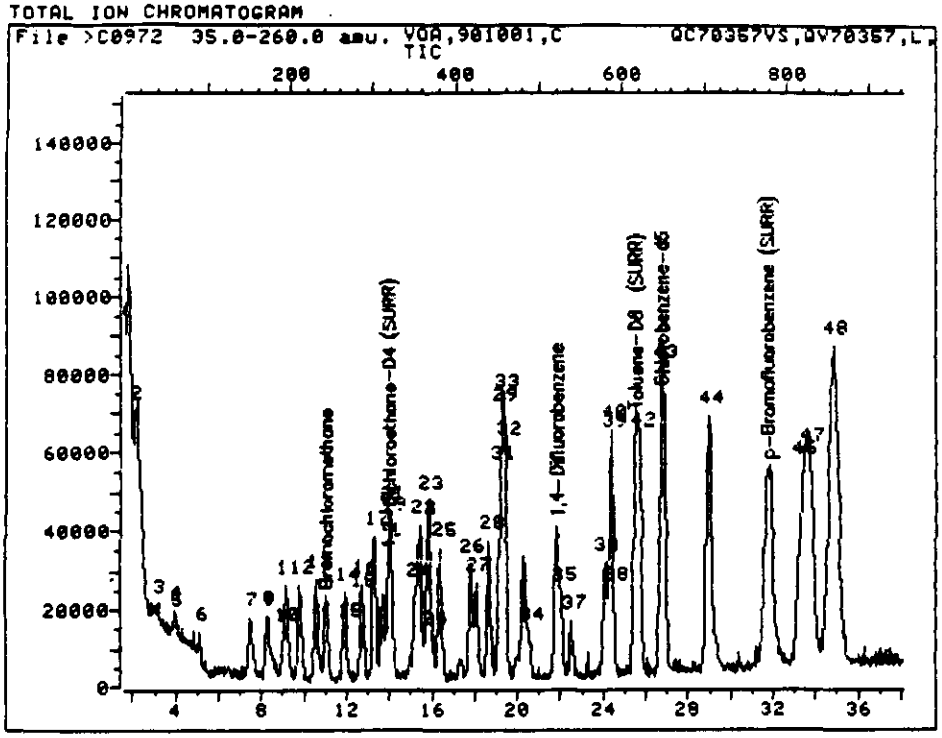
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:40
Output File: ^C0978::AQ Injected at: 901003 15:35
Data File: >C0978::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 2UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.33	586	39161	116.70	NG	93
41)	Toluene-D8 (SURR)	25.42	614	354032	248.58	NG	92
42)	Toluene	25.61	619	82575	102.30	NG	93
43)	Chlorobenzene	26.76	646	118136	104.58	NG	96
44)	Ethylbenzene	28.86	700	72302	106.37	NG	78
45)	p-Bromofluorobenzene (SURR)	31.65	772	271522	269.90	NG	83
46)	Styrene	33.28	814	180878	112.95	NG	98
47)	m-Xylene	33.56	821	102366	114.96	NG	96
48)	o+p-Xylenes	34.72	851	212529	231.16	NG	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0972::U4 Quant Output File: ^C0972::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 10:39
Injected at: 901003 10:01

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 10:39
Output File: ^C0972::AQ Injected at: 901003 10:01
Data File: >C0972::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 501

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.00	243	33439	250.00	NG	92
2)	Methyl chloride	2.12	14	24563	177.60	NG	92
3)	Methyl bromide	3.17	41	10088	458.39	NG	89
4)	Dichlorodifluoromethane	3.94	61	20601	330.79	NG	95
5)	Vinyl chloride	3.98	62	28559	319.36	NG	99
6)	Chloroethane	5.14	92	18945	323.95	NG	97
7)	Methylene chloride	7.47	152	53114	358.46	NG	92
8)	Acrolein	8.25	172	105297	6870.91	NG	88
9)	Acetone	8.29	173	29974	389.52	NG	97
10)	Acrylonitrile	9.02	192	30914	458.88	NG	93
11)	Carbon disulfide	9.14	195	249726	321.98	NG	97
12)	Trichlorofluoromethane	9.80	212	145098	300.35	NG	93
13)	1,1-Dichloroethylene	10.57	232	55695	246.08	NG	87
14)	1,1-Dichloroethane	11.93	267	119653	262.60	NG	98
15)	Tetrahydrofuran	12.01	269	10461	297.63	NG	100
15)	Tetrahydrofuran	12.67	286	2117	60.23	NG	100
16)	1,2-Trans-dichloroethylene	12.71	287	52582	240.03	NG	89
17)	Chloroform	13.29	302	175991	279.98	NG	97
18)	1,2-Dichloroethane-D4 (SURR)	13.95	319	126037	291.78	NG	99
19)	1,2-Dichloroethane	14.06	322	143848	295.50	NG	97
20)	*1,4-Difluorobenzene	21.78	521	154748	250.00	NG	95
21)	Methyl ethyl ketone	14.03	321	11158	517.72	NG	91
22)	1,1,1-Trichloroethane	15.42	357	160852	344.79	NG	98
23)	Carbon tetrachloride	15.42	357	16473	38.48	NG	93
23)	Carbon tetrachloride	15.81	367	145452	339.75	NG	97
24)	Vinyl acetate	15.23	352	49264	155.92	NG	78
24)	Vinyl acetate	16.04	373	88161	279.03	NG	89
25)	Dichlorobromomethane	16.39	382	139050	319.07	NG	95
26)	1,2-Dichloropropane	17.79	418	51182	236.69	NG	98
27)	cis-1,3-Dichloropropylene	18.06	425	85652	279.63	NG	91
28)	Trichloroethylene	18.64	440	57747	252.56	NG	78
29)	Chlorodibromomethane	19.26	456	83180	260.92	NG	99
30)	bis(Chloromethyl)ether	19.26	456	38771	298.72	NG	100
31)	Benzene	19.18	454	173359	240.54	NG	89
32)	1,1,2-Trichloroethane	19.42	460	47019	230.69	NG	88
33)	trans-1,3-Dichloropropylene	19.38	459	113305	283.77	NG	85
34)	2-Chloroethylvinyl ether	20.50	488	32319	209.68	NG	100
35)	Bromoform	22.02	527	62340	236.16	NG	97
36)	*Chlorobenzene-d5	26.72	648	176233	250.00	NG	69
37)	Methyl-iso-butyl ketone	22.48	539	52446	217.46	NG	91
38)	2-Hexanone	24.07	580	47055	201.94	NG	80
38)	2-Hexanone	24.50	591	2192	9.41	NG	96
39)	1,1,2,2-Tetrachloroethane	24.34	587	72692	198.54	NG	99

71

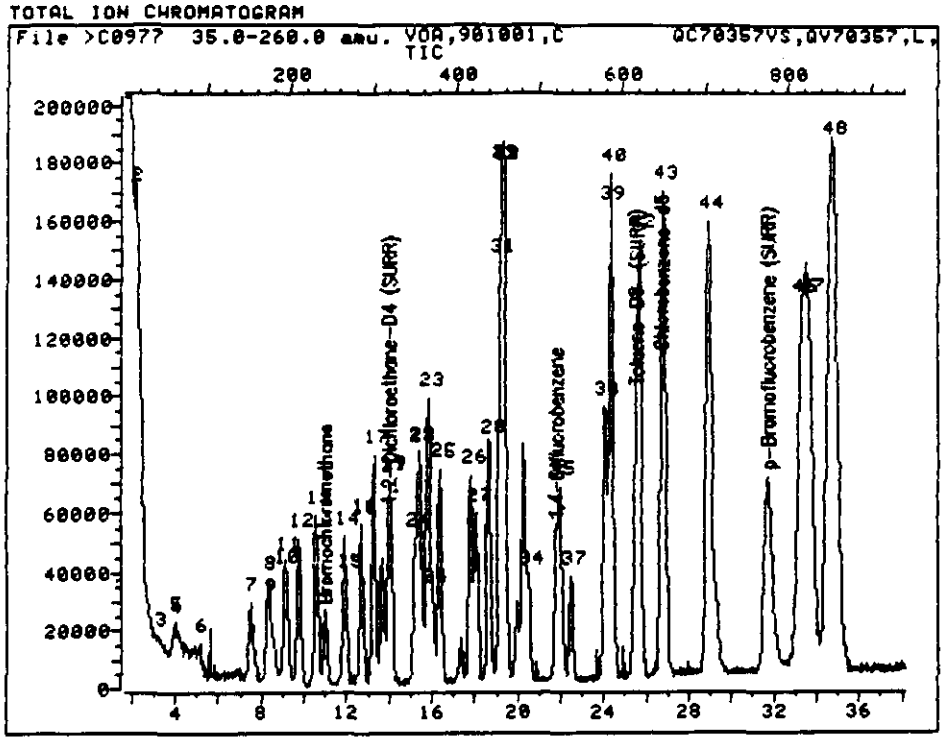
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 10:39
Output File: ^C0972::AQ Injected at: 901003 10:01
Data File: >C0972::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5,

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.38	588	60842	250.20	NG	98
41)	Toluene-D8 (SURR)	25.51	617	272171	263.72	NG	93
42)	Toluene	25.70	622	148919	254.58	NG	99
43)	Chlorobenzene	26.83	651	201006	245.54	NG	96
44)	Ethylbenzene	28.97	706	128615	261.10	NG	78
45)	p-Bromofluorobenzene (SURR)	31.72	777	224676	308.20	NG	73
46)	Styrene	33.39	820	328857	283.38	NG	98
47)	m-Xylene	33.70	828	189326	293.41	NG	96
48)	o+p-Xylenes	34.83	857	402974	604.82	NG	90

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0977::U4 Quant Output File: ^C0977::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 10UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 16:43
Injected at: 901003 14:45

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:43
Output File: ^C0977::AQ Injected at: 901003 14:45
Data File: >C0977::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 10UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.94	240	40449	250.00	NG	95
2)	Methyl chloride	2.17	14	90814	542.83	NG	97
3)	Methyl bromide	3.22	41	11319	425.19	NG	98
4)	Dichlorodifluoromethane	3.92	59	37369	496.04	NG	93
5)	Vinyl chloride	3.96	60	55220	510.48	NG	97
6)	Chloroethane	5.16	91	37245	526.51	NG	97
7)	Methylene chloride	7.45	150	95143	530.82	NG	98
8)	Acrolein	8.31	172	244743	13202.43	NG	95
9)	Acetone	8.38	174	47100	506.01	NG	94
10)	Acrylonitrile	9.04	191	58471	717.52	NG	97
11)	Carbon disulfide	9.12	193	373170	397.76	NG	98
12)	Trichlorofluoromethane	9.74	209	293996	503.09	NG	95
13)	1,1-Dichloroethylene	10.52	229	132241	483.02	NG	93
14)	1,1-Dichloroethane	11.87	264	271805	493.15	NG	95
15)	Tetrahydrofuran	11.95	266	21639	508.97	NG	100
15)	Tetrahydrofuran	12.65	284	2620	61.62	NG	100
16)	1,2-Trans-dichloroethylene	12.69	285	125902	475.11	NG	96
17)	Chloroform	13.27	300	372092	489.36	NG	95
18)	1,2-Dichloroethane-D4 (SURR)	13.97	318	134320	257.07	NG	98
19)	1,2-Dichloroethane	14.05	320	298525	506.96	NG	97
20)	*1,4-Difluorobenzene	21.77	519	216201	250.00	NG	98
21)	Methyl ethyl ketone	14.01	319	14033	466.04	NG	95
22)	1,1,1-Trichloroethane	15.40	355	324364	497.66	NG	96
23)	Carbon tetrachloride	15.36	354	35214	58.87	NG	95
23)	Carbon tetrachloride	15.79	365	302117	505.11	NG	94
24)	Vinyl acetate	15.21	350	80279	181.86	NG	78
24)	Vinyl acetate	16.02	371	251350	569.41	NG	93
25)	Dichlorobromomethane	16.37	380	300604	493.71	NG	97
26)	1,2-Dichloropropane	17.77	416	139502	461.75	NG	91
27)	cis-1,3-Dichloropropylene	18.04	423	209777	490.21	NG	93
28)	Trichloroethylene	18.66	439	152596	477.69	NG	87
29)	Chlorodibromomethane	19.24	454	220994	496.17	NG	97
30)	bis(Chloromethyl)ether	19.20	453	89735	494.86	NG	100
31)	Benzene	19.17	452	483500	480.18	NG	94
32)	1,1,2-Trichloroethane	19.36	457	139077	488.40	NG	82
33)	trans-1,3-Dichloropropylene	19.36	457	281099	503.90	NG	89
34)	2-Chloroethylvinyl ether	20.49	486	105157	488.32	NG	100
35)	Bromoform	21.96	524	192370	521.61	NG	99
36)	*Chlorobenzene-d5	26.67	645	245701	250.00	NG	82
37)	Methyl-iso-butyl ketone	22.46	537	167817	499.10	NG	94
38)	2-Hexanone	24.02	577	158671	488.41	NG	94
39)	1,1,2,2-Tetrachloroethane	24.29	584	264065	517.32	NG	97
40)	Tetrachloroethylene	24.33	585	171398	505.56	NG	97

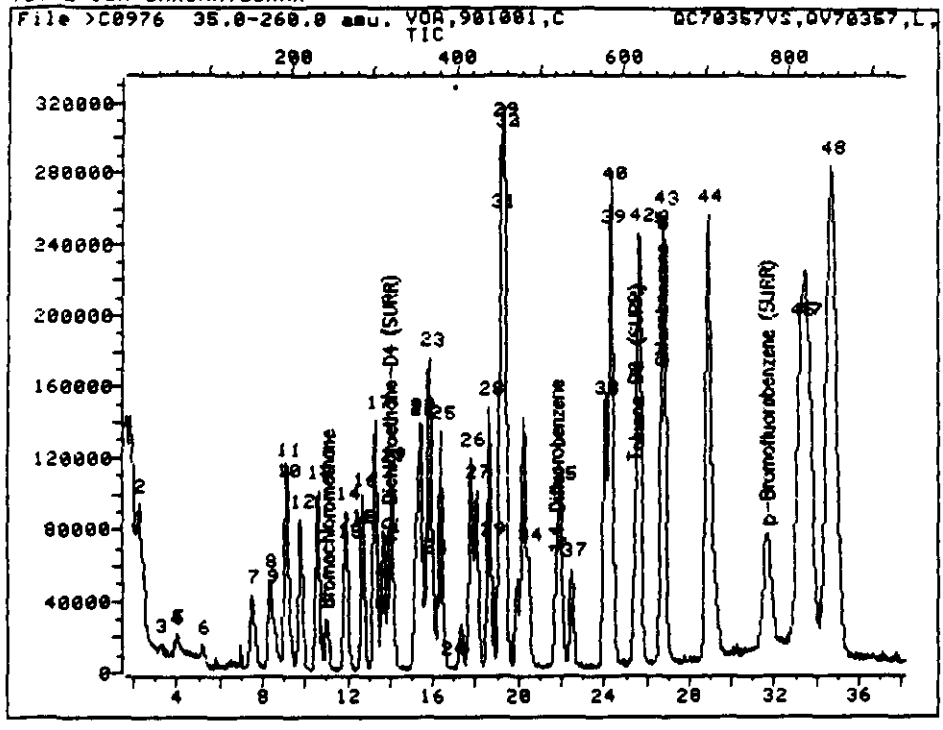
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:43
Output File: ^C0977::AQ Injected at: 901003 14:45
Data File: >C0977::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 10UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.49	615	367994	255.75	NG	91
42)	Toluene	25.65	619	401656	492.50	NG	95
43)	Chlorobenzene	26.79	648	557897	488.82	NG	94
44)	Ethylbenzene	28.88	702	343471	500.13	NG	79
45)	p-Bromofluorobenzene (SURR)	31.67	774	266698	262.40	NG	84
46)	Styrene	33.31	816	833355	515.07	NG	94
47)	m-Xylene	33.62	824	460640	512.04	NG	97
48)	o+p-Xylenes	34.70	852	969564	1043.78	NG	87

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C0976::U4 Quant Output File: ^C0976::AQ
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 15UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 16:46
Injected at: 901003 13:55

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:46
Output File: ^C0976::AQ Injected at: 901003 13:55
Data File: >C0976::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 15UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.98	242	44783	250.00	NG	99
2)	Methyl chloride	2.21	16	69987	377.85	NG	99
3)	Methyl bromide	3.22	42	13798	468.15	NG	97
4)	Dichlorodifluoromethane	3.92	60	44312	531.28	NG	93
5)	Vinyl chloride	4.00	62	64172	535.83	NG	98
6)	Chloroethane	5.16	92	49183	627.98	NG	98
7)	Methylene chloride	7.49	152	143319	722.22	NG	98
8)	Acrolein	8.31	173	370346	18044.55	NG	90
9)	Acetone	8.38	175	73037	708.72	NG	95
10)	Acrylonitrile	9.04	192	138313	1533.03	NG	90
11)	Carbon disulfide	9.12	194	1002979	965.61	NG	99
12)	Trichlorofluoromethane	9.74	210	504835	780.28	NG	96
13)	1,1-Dichloroethylene	10.56	231	230701	761.10	NG	92
14)	1,1-Dichloroethane	11.87	265	466532	764.54	NG	96
15)	Tetrahydrofuran	11.95	267	42526	903.44	NG	100
15)	Tetrahydrofuran	12.61	284	8088	171.83	NG	100
16)	1,2-Trans-dichloroethylene	12.65	285	222632	758.83	NG	98
17)	Chloroform	13.27	301	651450	773.84	NG	98
18)	1,2-Dichloroethane-D4 (SURR)	13.93	318	157254	271.83	NG	97
19)	1,2-Dichloroethane	14.05	321	505720	775.71	NG	97
20)	*1,4-Difluorobenzene	21.73	519	235893	250.00	NG	99
21)	Methyl ethyl ketone	14.01	320	22639	689.08	NG	94
22)	1,1,1-Trichloroethane	15.40	356	565553	795.28	NG	97
23)	Carbon tetrachloride	15.37	355	57679	88.38	NG	92
23)	Carbon tetrachloride	15.79	366	520609	797.74	NG	91
24)	Vinyl acetate	15.99	371	440600	914.82	NG	97
24)	Vinyl acetate	16.84	393	2264	4.70	NG	73
25)	Dichlorobromomethane	16.34	380	522200	786.07	NG	95
26)	1,2-Dichloropropane	17.73	416	245780	745.62	NG	99
27)	cis-1,3-Dichloropropylene	18.00	423	362807	777.03	NG	93
28)	Trichloroethylene	18.59	438	258713	742.27	NG	87
29)	Chlorodibromomethane	18.70	441	2087	4.29	NG	57
29)	Chlorodibromomethane	19.21	454	373799	769.19	NG	96
30)	bis(Chloromethyl)ether	19.21	454	152055	768.54	NG	100
31)	Benzene	19.13	452	879768	800.80	NG	94
32)	1,1,2-Trichloroethane	19.32	457	237165	763.34	NG	87
33)	trans-1,3-Dichloropropylene	19.32	457	469529	771.42	NG	92
34)	2-Chloroethylvinyl ether	20.41	485	176943	753.08	NG	100
35)	Bromoform	21.96	525	303909	755.25	NG	99
36)	*Chlorobenzene-d5	26.65	644	269685	250.00	NG	85
37)	Methyl-iso-butyl ketone	22.43	537	275155	745.56	NG	94
38)	2-Hexanone	23.98	577	266545	747.49	NG	95
39)	1,1,2,2-Tetrachloroethane	24.25	584	432936	772.72	NG	98

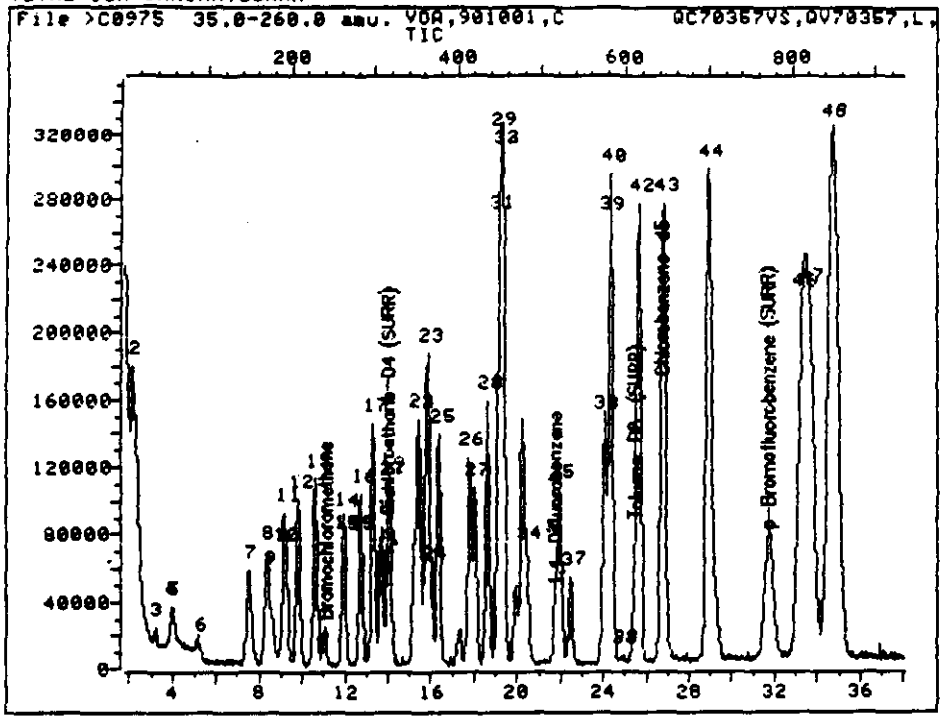
Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 16:46
Output File: ^C0976::AQ Injected at: 901003 13:55
Data File: >C0976::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 15UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
40)	Tetrachloroethylene	24.33	586	267038	717.61	NG	98
41)	Toluene-D8 (SURR)	25.45	615	386124	244.48	NG	93
42)	Toluene	25.61	619	701550	783.72	NG	97
43)	Chlorobenzene	26.77	647	905631	722.93	NG	94
44)	Ethylbenzene	28.86	701	548559	727.73	NG	80
45)	p-Bromofluorobenzene (SURR)	31.62	772	280987	251.88	NG	83
46)	Styrene	33.21	813	1283190	722.57	NG	91
47)	m-Xylene	33.60	823	716403	725.52	NG	96
48)	o+p-Xylenes	34.65	850	1489830	1461.23	NG	89

* Compound is ISTD

TOTAL ION CHROMATOGRAM



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Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 20UL

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

Operator ID: KB6656
Quant Time: 901003 14:45
Injected at: 901003 13:05

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 14:45
Output File: ^C0975::AQ Injected at: 901003 13:05
Data File: >C0975::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 20UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.07	240	33082	250.00	NG	93
2)	Methyl chloride	2.19	11	196957	1439.46	NG	97
3)	Methyl bromide	3.20	37	21780	1000.34	NG	96
4)	Dichlorodifluoromethane	3.93	56	79248	1286.20	NG	93
5)	Vinyl chloride	3.97	57	113382	1281.58	NG	94
6)	Chloroethane	5.21	89	82361	1423.55	NG	96
7)	Methylene chloride	7.50	148	200574	1368.24	NG	99
8)	Acrolein	8.36	170	442510	29186.55	NG	91
9)	Acetone	8.44	172	88336	1160.35	NG	92
10)	Acrylonitrile	9.10	189	107700	1615.94	NG	99
11)	Carbon disulfide	9.17	191	903789	1177.87	NG	99
12)	Trichlorofluoromethane	9.83	208	590028	1234.52	NG	92
13)	1,1-Dichloroethylene	10.61	228	237397	1060.21	NG	87
14)	1,1-Dichloroethane	11.93	262	477859	1060.08	NG	95
15)	Tetrahydrofuran	12.00	264	35476	1020.24	NG	100
15)	Tetrahydrofuran	12.66	281	8973	258.05	NG	100
16)	1,2-Trans-dichloroethylene	12.74	283	217086	1001.64	NG	92
17)	Chloroform	13.32	298	663299	1066.60	NG	96
18)	1,2-Dichloroethane-D4 (SURR)	13.98	315	126950	297.07	NG	98
19)	1,2-Dichloroethane	14.10	318	524656	1089.39	NG	96
20)	*1,4-Difluorobenzene	21.74	515	183065	250.00	NG	98
21)	Methyl ethyl ketone	14.06	317	21244	833.22	NG	93
22)	1,1,1-Trichloroethane	15.42	352	594519	1077.26	NG	97
23)	Carbon tetrachloride	15.42	352	58362	115.24	NG	99
23)	Carbon tetrachloride	15.84	363	560082	1105.89	NG	96
24)	Vinyl acetate	16.04	368	386372	1033.72	NG	97
25)	Dichlorobromomethane	16.39	377	539072	1045.63	NG	96
26)	1,2-Dichloropropane	17.78	413	236212	923.39	NG	96
27)	cis-1,3-Dichloropropylene	18.06	420	359779	992.91	NG	93
28)	Trichloroethylene	18.64	435	265049	979.90	NG	84
29)	Chlorodibromomethane	19.26	451	380714	1009.49	NG	99
30)	bis(Chloromethyl)ether	19.26	451	161033	1048.79	NG	100
31)	Benzene	19.18	449	880604	1032.87	NG	94
32)	1,1,2-Trichloroethane	19.37	454	242009	1003.71	NG	81
33)	trans-1,3-Dichloropropylene	19.37	454	492760	1043.22	NG	89
34)	2-Chloroethylvinyl ether	20.46	482	172878	948.11	NG	100
35)	Bromoform	21.97	521	299168	958.02	NG	99
36)	*Chlorobenzene-d5	26.69	641	214016	250.00	NG	80
37)	Methyl-iso-butyl ketone	22.48	534	247124	843.78	NG	96
38)	2-Hexanone	24.03	574	234177	827.55	NG	95
38)	2-Hexanone	24.92	597	6261	22.13	NG	44
39)	1,1,2,2-Tetrachloroethane	24.30	581	391687	880.94	NG	96
40)	Tetrachloroethylene	24.34	582	281542	953.38	NG	97

80

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 14:45
Output File: ^C0975::AQ Injected at: 901003 13:05
Data File: >C0975::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357VS,QV70357,L,5, 20UL

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901002 16:53

	Compound	R.T.	Scan#	Area	Conc	Units	q
41)	Toluene-D8 (SURR)	25.47	611	313012	249.74	NG	91
42)	Toluene	25.66	616	760493	1070.55	NG	91
43)	Chlorobenzene	26.81	644	993619	999.48	NG	94
44)	Ethylbenzene	28.90	698	631612	1055.86	NG	77
45)	p-Bromofluorobenzene (SURR)	31.66	769	238765	269.70	NG	80
46)	Styrene	33.29	811	1506277	1068.82	NG	93
47)	m-Xylene	33.64	820	842266	1074.86	NG	95
48)	o+p-Xylenes	34.73	848	1756527	2170.94	NG	88

* Compound is ISTD

VOLATILE INTERNAL 8A STANDARD AREA SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0914 Data Analyzed: 09/26/90

Instrument ID: GC/MS C Time Analyzed: 1352

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	70232	11.09	342312	21.84	318334	26.78
UPPER LIMIT	140464		684624		636668	
LOWER LIMIT	35116		171156		159167	
	EPA SAMPLE NO.						
01	VBLK01	47287	11.08	219376	21.83	199092	26.79
02	A4753	46998	11.19	224774	21.94	207367	26.92
03	A4755	51014	11.20	234507	21.98	216956	26.92
04	A4763	45139	11.24	219122	21.95	207394	26.88
05	A4756	44376	11.26	215254	21.96	204163	26.90
06	A4758	41198	11.30	192371	21.96	182527	26.90
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19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

Column used to flag internal standard area values with an asterisk.

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0927 Data Analyzed: 09/27/90

Instrument ID: GC/MS C Time Analyzed: 1656

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	40844	11.08	179047	21.83	171595	26.77
	UPPER LIMIT	81688		358094		343190	
	LOWER LIMIT	20422		89523		85798	
	EPA SAMPLE NO.						
01	VBLK2	36606	11.11	178010	21.86	167977	26.79
02	A4754	42061	11.10	196522	21.85	185259	26.82
03	~~VBA~~ A4757	39142	11.10	183849	21.84	173277	26.78
04	A4759	42889	11.11	192985	21.85	186569	26.79
05							
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21							
22							

CA 10/16/90

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

* Column used to flag internal standard area values with an asterisk.

page + of +

FORM VIII VOA 1/87 Rev.

8A

VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Lab File ID (Standard): >C0972 Data Analyzed: 10/03/90

Instrument ID: GC/MS C Time Analyzed: 1001

Matrix:(soil/water) WATER Level:(low/med) LOW Column:(pack/cap) PACK

		IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
	12 HOUR STD	33439	11.00	154748	21.78	176233	26.72
	UPPER LIMIT	66878		309496		352466	
	LOWER LIMIT	16719		77374		88117	
	EPA SAMPLE NO.						
01	VBLK5	32787	10.99	159758	21.73	189232	26.68
02	A4755MS	31333	11.02	158395	21.80	191425	26.75
03	A4755MSD	33706	10.96	166042	21.74	193787	26.68
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18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

UPPER LIMIT = + 100% of internal standard area.
LOWER LIMIT = - 50% of internal standard area.

\# Column used to flag internal standard area values with an asterisk.

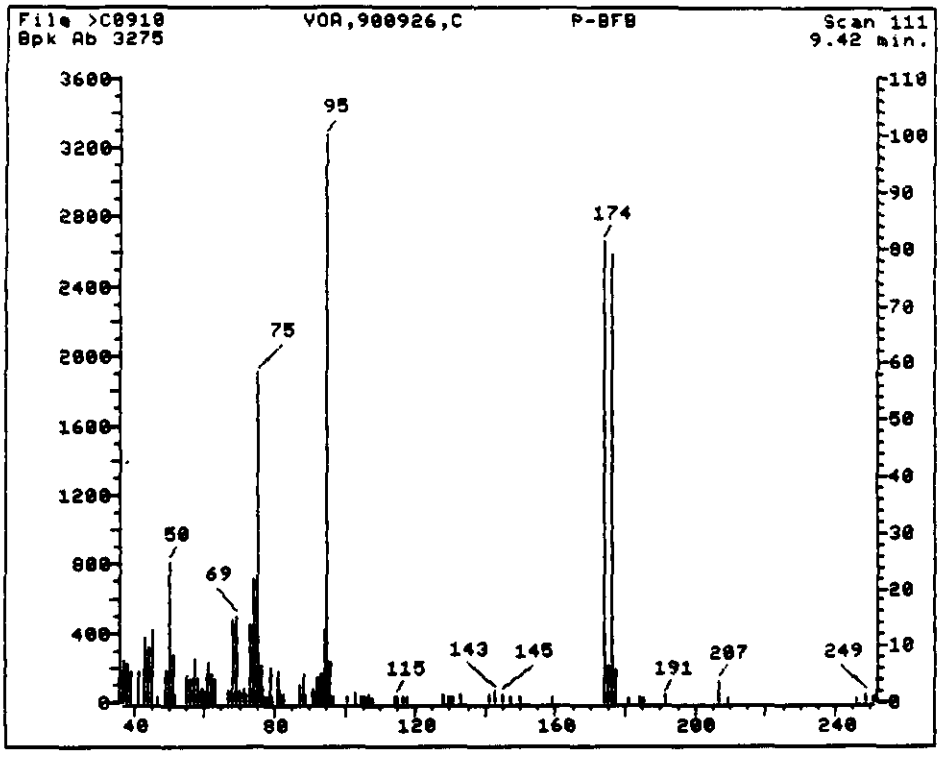
page 1 of 1

FORM VIII VOA 1/87 Rev.

RAW QC DATA

MS Data File: >C0910::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 8:54
Misc: P-BFB



MS Data File: >C0910::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 8:54
Misc: P-BFB

>C0910 VOA,900926,C P-BFB
111 NRM

File: >C0910 Scan #: 111 Retn. time: 9.42

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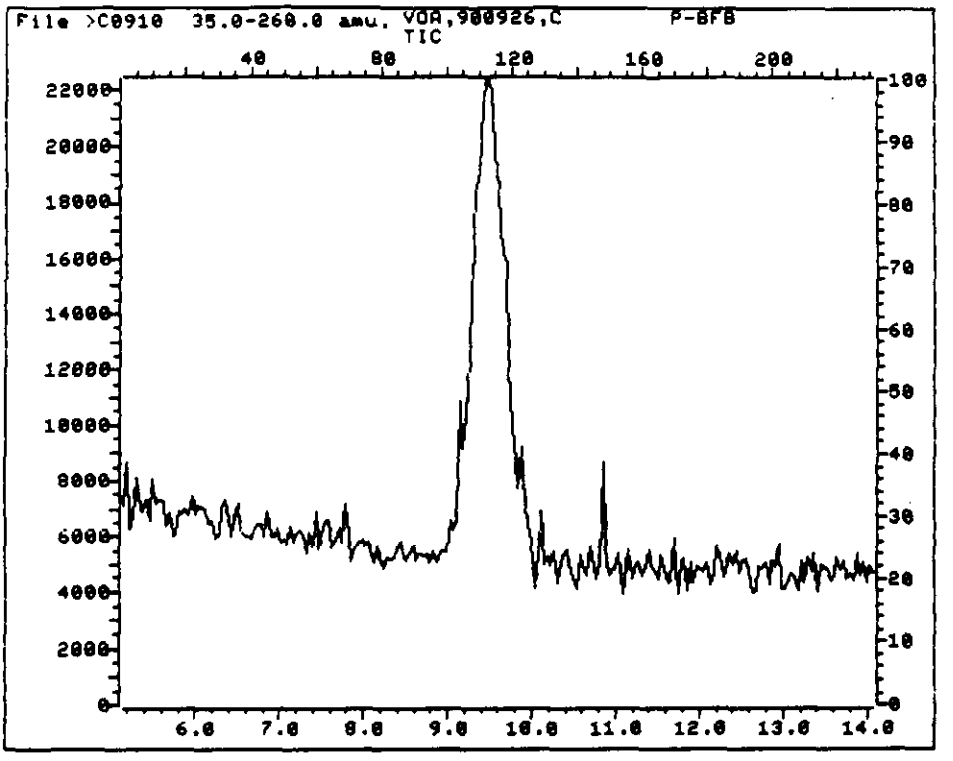
37.00	7.481	61.00	6.931	79.70	1.008	104.70	.977	145.15	1.527
38.00	6.595	62.00	5.191	80.90	5.435	105.30	.794	147.05	1.130
39.00	5.374	63.00	4.031	81.90	2.137	105.60	.977	149.95	1.008
41.10	5.282	67.10	2.107	82.50	1.038	105.80	.916	158.95	.947
43.10	11.328	68.00	14.443	83.00	1.435	106.90	1.374	173.95	81.405
44.00	9.802	69.00	15.298	87.00	3.084	108.00	.733	175.05	6.504
45.00	12.855	70.00	2.076	88.00	5.069	114.60	.885	175.95	78.870
46.90	1.069	70.30	1.893	89.00	1.221	114.90	1.130	176.95	5.863
49.00	5.802	71.10	2.351	91.00	2.382	116.80	1.130	180.95	.702
50.00	24.947	72.00	1.221	92.00	4.275	117.80	1.008	184.05	1.069
51.00	8.519	73.00	13.802	93.00	5.130	128.05	1.435	185.55	.824
51.90	1.405	74.00	21.893	94.00	12.947	129.85	1.069	191.15	1.221
55.10	4.733	75.00	58.290	95.00	100.000	131.05	.947	206.95	3.878
56.00	4.061	76.00	6.321	96.00	7.023	132.95	1.496	209.15	.641
57.00	7.847	77.00	2.321	97.00	1.160	140.95	1.221	245.75	.794
58.00	4.305	78.10	1.191	101.00	1.160	141.15	1.252	248.95	1.405
59.10	2.351	78.90	5.924	103.00	1.740	142.85	1.985	250.95	.977
60.00	2.168								

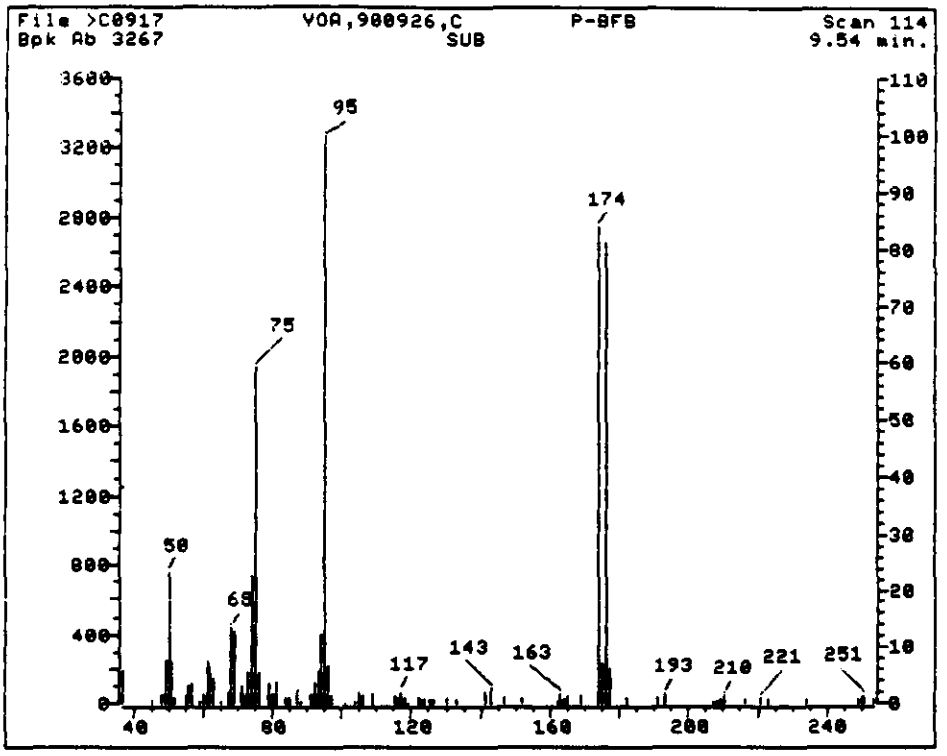
MS Data File: >C0910::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 8:54
Misc: P-BFB



MS Data File: >C0917::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 16:25
Misc: P-BFB



MS Data File: >C0917::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 16:25
Misc: P-BFB

C0917 VOA,900926,C P-BFB
114 SUB NRM

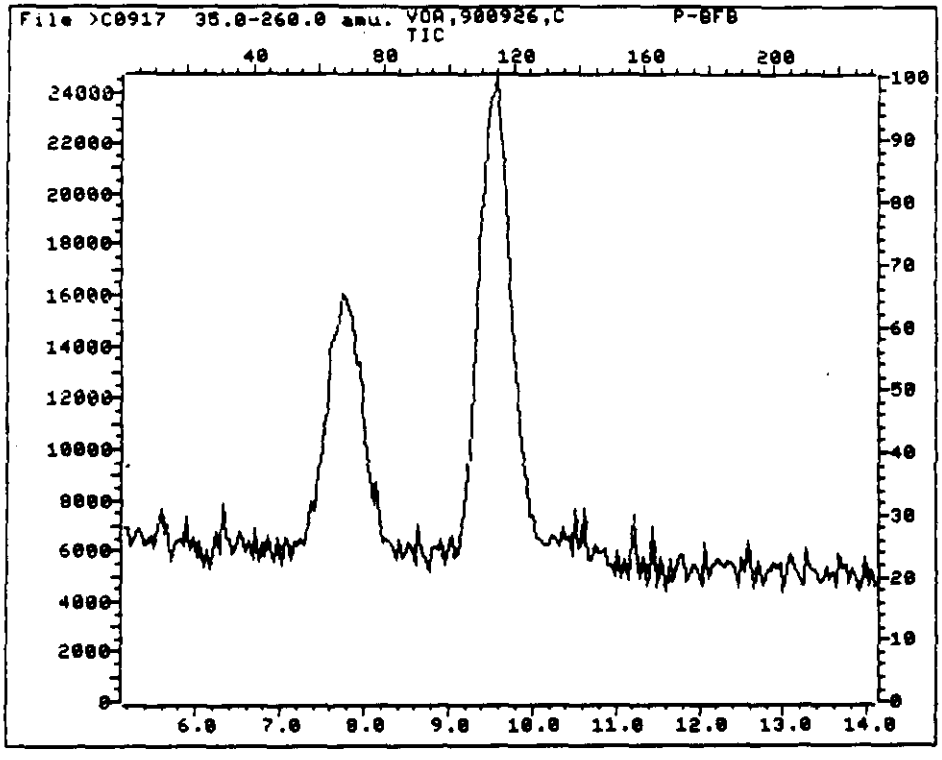
File: >C0917 Scan #: 114 Retn. time: 9.54

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.00	5.908	69.00	12.856	95.00	100.000	123.90	.765	177.05	6.030
45.10	.857	71.10	3.122	96.00	6.856	125.20	.673	182.05	.979
48.00	1.592	72.00	1.622	97.30	1.408	126.60	.857	190.95	.949
49.00	7.836	73.00	5.510	101.10	.184	130.05	1.194	192.95	1.561
50.00	23.263	74.00	22.467	103.90	.275	132.95	.796	207.05	.429
51.00	7.530	75.00	59.443	105.10	1.928	141.05	2.173	208.05	.490
51.80	1.071	76.00	5.448	106.00	1.439	142.95	2.694	209.05	.582
55.10	1.377	79.00	3.520	109.00	1.714	147.05	1.133	210.05	1.377
56.00	3.183	79.90	1.653	115.10	1.500	152.05	.888	216.15	.735
57.00	3.275	80.90	3.826	115.80	1.163	162.15	.398	221.05	.888
59.00	.367	84.10	.918	116.20	.796	162.95	1.622	222.85	.735
59.90	1.745	85.10	.888	117.00	2.173	163.85	.765	233.85	.765
61.00	7.254	87.00	2.418	118.00	1.163	164.95	1.408	234.05	.826
62.00	6.367	88.10	.429	119.00	.122	169.15	1.224	249.05	.551
63.00	4.561	91.10	1.622	121.90	.888	173.95	84.022	249.85	1.071
65.00	.398	92.00	3.887	122.40	.643	175.05	7.040	250.85	1.224
67.10	2.204	93.00	5.877	123.00	.367	175.95	81.267	253.45	.857
68.00	13.315	94.00	12.489						

40243 cont.

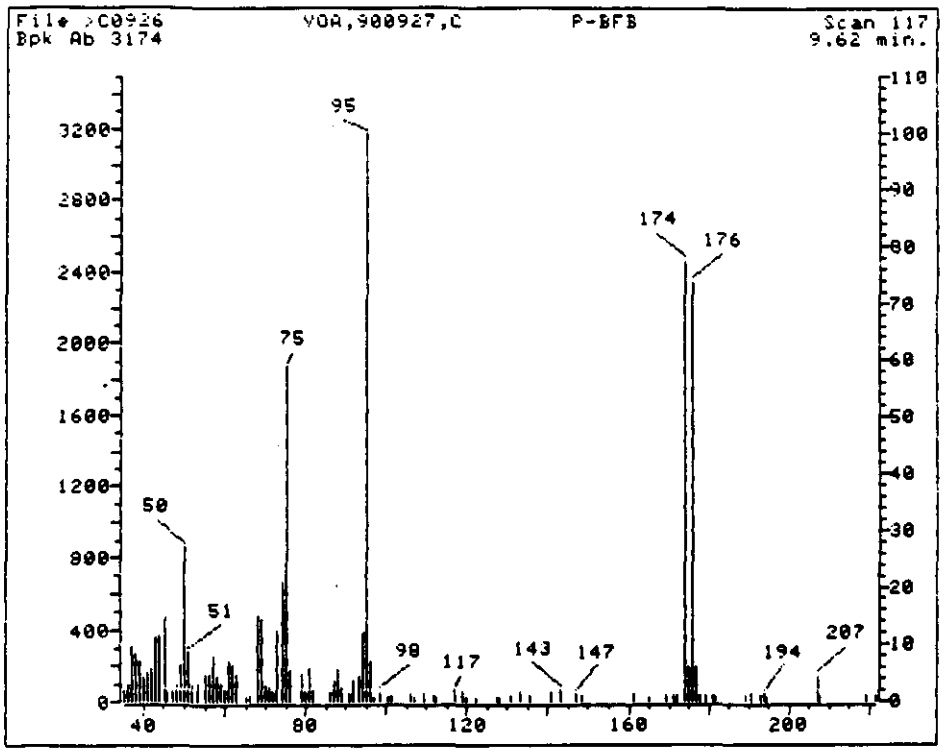
MS Data File: >C0917::U4

Name: VOA,900926,C Operator: JA8781 Date/Time: 9/26/90 16:25
Misc: P-BFB



MS Data File: >C0926::U8

Name: VOA,900927,C Operator: JA8781 Date/Time: 9/27/90 8:58
Misc: P-BFB



MS Data File: >C0926::U8

Name: VOA,900927,C Operator: JA8781 Date/Time: 9/27/90 8:58
Misc: P-BFB

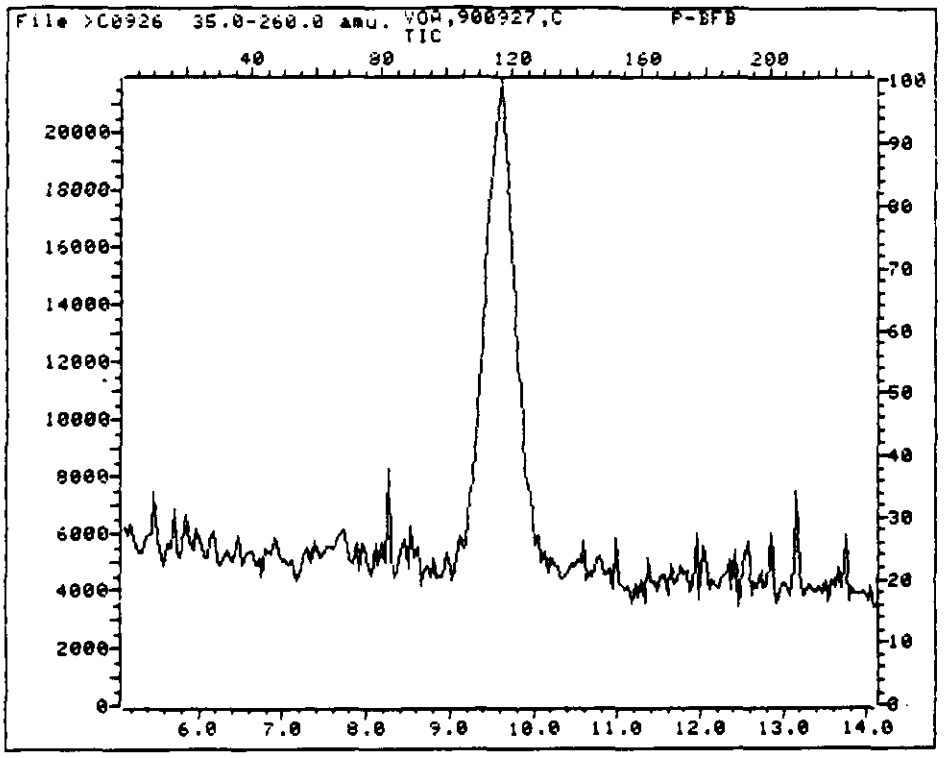
>C0926 VOA,900927,C P-BFB
117 NRM

File: >C0926 Scan #: 117 Retn. time: 9.62

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.30	2.048	56.00	4.820	78.90	4.789	109.20	1.229	171.95	.977
36.00	3.214	57.00	8.255	80.10	1.701	111.80	1.040	172.25	.914
37.00	9.704	58.00	4.505	80.90	5.577	112.40	.630	173.95	77.347
38.00	8.349	59.00	2.962	81.90	2.016	117.00	1.953	175.05	5.986
39.10	7.089	60.00	2.016	85.90	1.638	119.00	1.796	175.95	73.661
39.90	4.348	61.00	7.057	86.90	3.749	119.80	.756	176.95	5.923
41.10	5.230	62.00	6.364	88.00	5.640	122.30	.819	177.95	1.197
42.00	5.577	63.00	4.789	89.10	2.331	127.25	.819	179.45	.945
43.00	11.374	65.10	.851	90.90	1.481	128.05	.756	180.95	1.134
44.00	11.815	66.00	.882	91.90	3.718	130.95	.977	181.75	.788
45.10	14.808	66.30	.851	93.00	4.505	132.95	1.670	189.05	.882
45.90	1.701	68.00	15.028	94.00	12.130	135.45	1.040	190.55	1.071
47.10	2.048	69.00	14.556	95.00	100.000	140.95	1.638	190.85	1.260
47.90	2.615	70.00	2.804	96.00	7.120	142.95	1.953	193.05	1.008
49.00	6.301	71.10	2.268	97.10	.851	146.85	1.292	193.85	1.323
50.00	27.221	72.00	1.575	98.30	1.512	148.25	.914	194.55	.756
51.00	8.727	73.00	12.508	100.20	.662	161.25	1.292	207.05	4.474
52.00	2.615	74.00	20.983	101.20	.977	164.95	.693	207.85	1.103
53.10	3.088	75.00	59.074	106.00	1.260	169.45	.945	219.05	.977
55.00	4.789	76.00	5.325	106.90	.788	171.15	.977	221.55	1.134

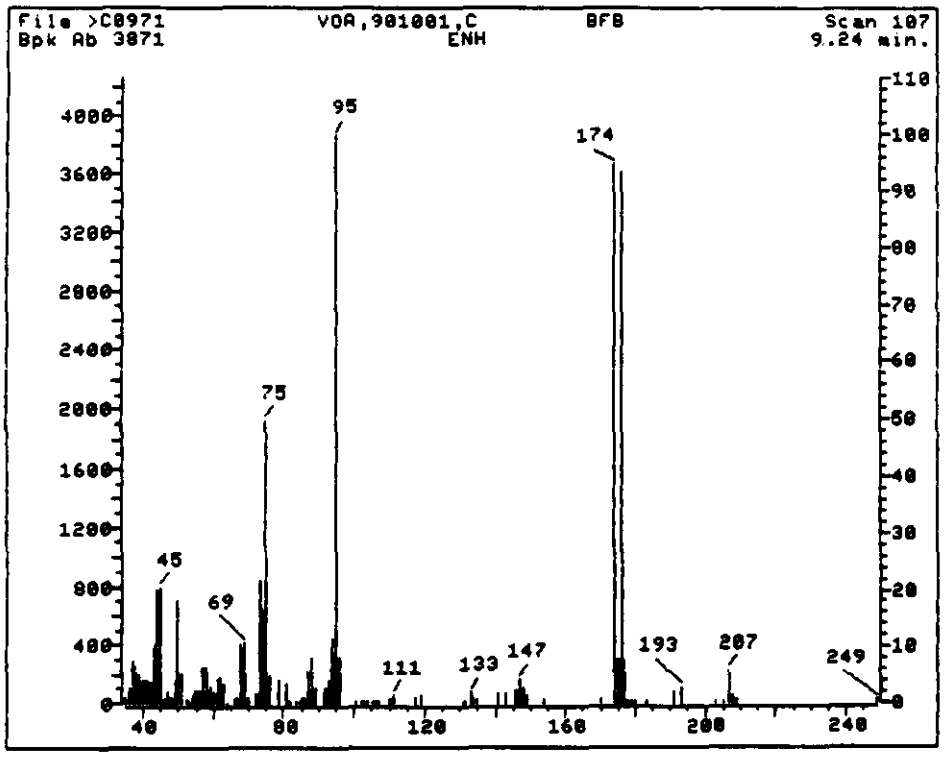
MS Data File: >C0926::U8

Name: VOA,900927,C Operator: JA8781 Date/Time: 9/27/90 8:58
Misc: P-BFB



MS Data File: >C0971::U5

Name: VOA,901001,C Operator: KB6656 Date/Time: 10/03/90 9:30
Misc: BFB



MS Data File: >C0971::U5

Name: VOA,901001,C Operator: KB6656 Date/Time: 10/03/90 9:30
Misc: BFB

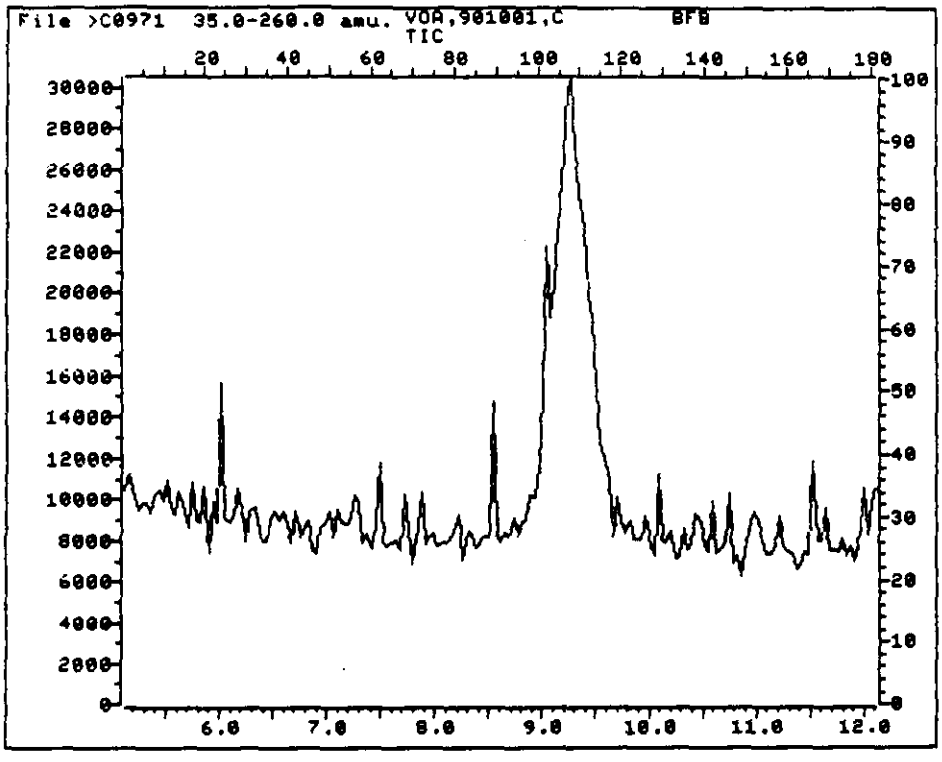
C0971 VOA,901001,C BFB
107 NRM ENH

File: >C0971 Scan #: 107 Retn. time: 9.24

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.10	1.121	54.90	2.423	78.80	4.128	105.60	.377	148.05	2.640
35.90	2.743	55.90	2.392	80.90	3.250	105.80	.356	149.05	1.271
37.00	7.316	57.00	6.494	81.50	.232	106.50	.269	153.85	.661
38.00	6.396	57.90	6.256	82.00	.393	107.10	.382	170.15	.568
39.00	5.228	59.10	3.079	83.50	.258	110.10	.599	173.95	94.932
39.90	4.133	59.90	2.191	84.50	.284	110.40	.372	174.95	7.889
41.00	4.112	61.00	4.422	85.00	.951	111.10	1.503	175.95	93.521
42.00	3.653	61.90	4.707	85.90	1.142	111.40	.537	176.95	7.579
43.00	10.297	63.00	3.270	87.00	5.735	117.10	.914	177.95	.517
44.00	20.149	64.10	.196	88.00	8.209	118.80	1.209	178.85	.372
45.00	20.660	65.90	.837	88.90	2.692	130.90	.336	180.25	.248
45.90	.770	66.90	.997	92.00	2.749	131.20	.258	183.45	.511
47.00	2.067	68.00	10.519	92.90	4.180	131.50	.232	190.85	2.206
48.20	1.199	69.00	10.710	94.00	11.314	133.00	2.025	192.95	2.795
49.00	4.221	70.20	.883	95.00	100.000	133.80	.610	202.85	.253
49.90	18.056	71.90	1.679	96.00	7.992	134.80	.672	205.15	.449
51.00	5.409	73.00	21.766	100.70	.315	141.05	1.875	206.95	5.884
52.60	.599	74.00	16.956	101.90	.253	142.95	1.571	207.95	1.297
53.00	.387	75.00	49.752	102.90	.537	145.95	2.304	209.15	.873
53.90	1.374	75.90	4.686	103.50	.269	146.95	4.402	248.75	.594

MS Data File: >C0971::U5

Name: VOA,901001,C Operator: KB6656 Date/Time: 10/03/90 9:30
Misc: BFB



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK01

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357U

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0918

Level: (low/med) LOW Date Received: ~~10/~~ 09/26/90

% Moisture: not dec. Date Analyzed: 09/26/90 10-16-90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC7035 7

Sample wt/vol: 5 (g/mL) ML Lab File ID: >CC91C

Level: (low/med) LOW Date Received: 04/26/90

% Moisture: not dec. _____ Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK01

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: GC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0418

Level: (low/med) LOW Date Received: 04/26/90

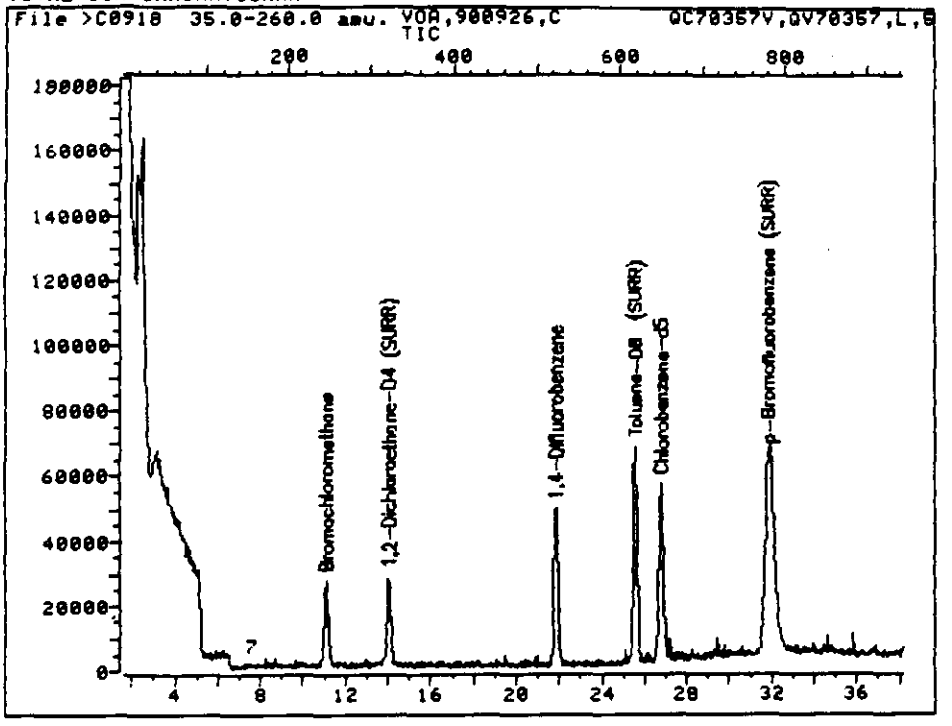
% Moisture: not dec. _____ Date Analyzed: 04/26/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0918::U0 Quant Output File: ^C0918::AQ
Name: VOA,900926,C
Misc: QC70357V,QV70357,L,5,, BLANK

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

Operator ID: JA8781
Quant Time: 900926 18:05
Injected at: 900926 17:25

Operator ID: JA8781 Quant Rev: 7 Quant Time: 900926 18:05
Output File: ^C0918::AQ Injected at: 900926 17:25
Data File: >C0918::U0 Dilution Factor: 1.00000
Name: VOA,900926,C
Misc: QC70357V,QV70357,L,5,, BLANK

ID File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900926 16:16

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.08	245	47287	250.00	NG	97
7)	Methylene chloride	7.48	152	3530	~~11.20~~	~~NG~~	96
18)	1,2-Dichloroethane-D4 (SURR)	14.03	321	157251	238.22	NG	99
20)	*1,4-Difluorobenzene	21.83	522	219376	250.00	NG	99
36)	*Chlorobenzene-d5	26.79	649	199092	250.00	NG	80
41)	Toluene-D8 (SURR)	25.55	618	295439	251.96	NG	93
45)	p-Bromofluorobenzene (SURR)	31.83	779	228780	264.05	NG	85

* Compound is ISTD

CP
10-17-90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357V2

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0929

Level: (low/med) LOW Date Received: ~~10/ /90~~ 09/27/90 10/16/90

% Moisture: not dec. Date Analyzed: 09/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: ETC/T Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C09-9

Level: (low/med) LOW Date Received: 04/27/90

% Moisture: not dec. _____ Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK2

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: GC70337

Sample wt/vol: 5 (g/ML) ML Lab File ID: >C0409

Level: (low/med) LOW Date Received: 04/27/90

% Moisture: not dec. _____ Date Analyzed: 04/27/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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18.					
19.					
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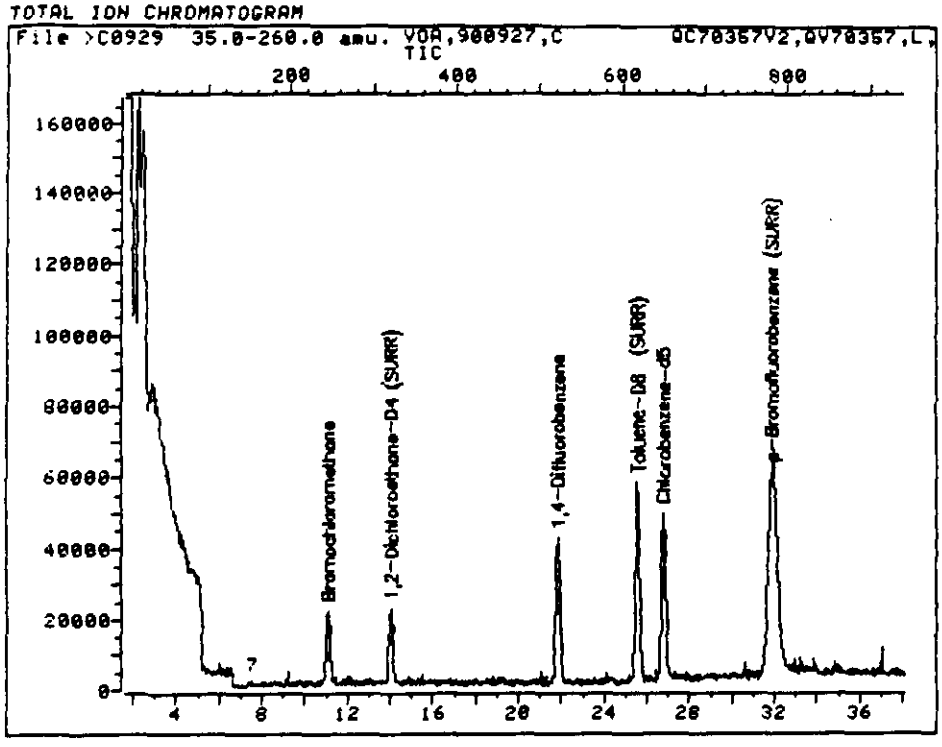
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0929::U4 Quant Output File: ^C0929::AQ
Name: VOA,900927,C
Misc: QC70357V2,QV70357,L,5,, BLANK

Id File: IC1171::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 900927 17:41

Operator ID: MGRMS
Quant Time: 900927 18:53
Injected at: 900927 18:14

QUANT REPORT Page 1

Operator ID: MGRMS Quant Rev: 7 Quant Time: 900927 18:53
Output File: ^C0929::AQ Injected at: 900927 18:14
Data File: >C0929::U4 Dilution Factor: 1.00000
Name: UOA,900927,C
Misc: QC70357U2,QU70357,L,5,, BLANK

ID File: IC1171::US
Title: IFB, PP/UOA, TCL, XUOA13
Last Calibration: 900927 17:41

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.11	245	36606	250.00	NG	94
7)	Methylene chloride	7.47	151	3941	~~16.21~~	~~NG~~	82
18)	1,2-Dichloroethane-D4 (SURR)	14.06	321	128055	270.65	NG	99
20)	*1,4-Difluorobenzene	21.86	522	178010	250.00	NG	99
36)	*Chlorobenzene-d5	26.79	649	167977	250.00	NG	82
41)	Toluene-D8 (SURR)	25.58	618	243972	248.68	NG	92
45)	p-Bromofluorobenzene (SURR)	31.88	780	195124	257.17	NG	85

* Compound is ISTD

CA
10-16-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK5

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: QC70357V5

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0979

Level: (low/med) LOW Date Received: 10/03/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKE

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: QC70357

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0979

Level: (low/med) LOW Date Received: ~~10/10/90~~ 10/03/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90 (CS) 10/16/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK5

Lab Name: ETC NJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: BC7035-7

Sample wt/vol: 5 (g/mL) ML Lab File ID: >CC479

Level: (low/med) LOW Date Received: 10/03/90

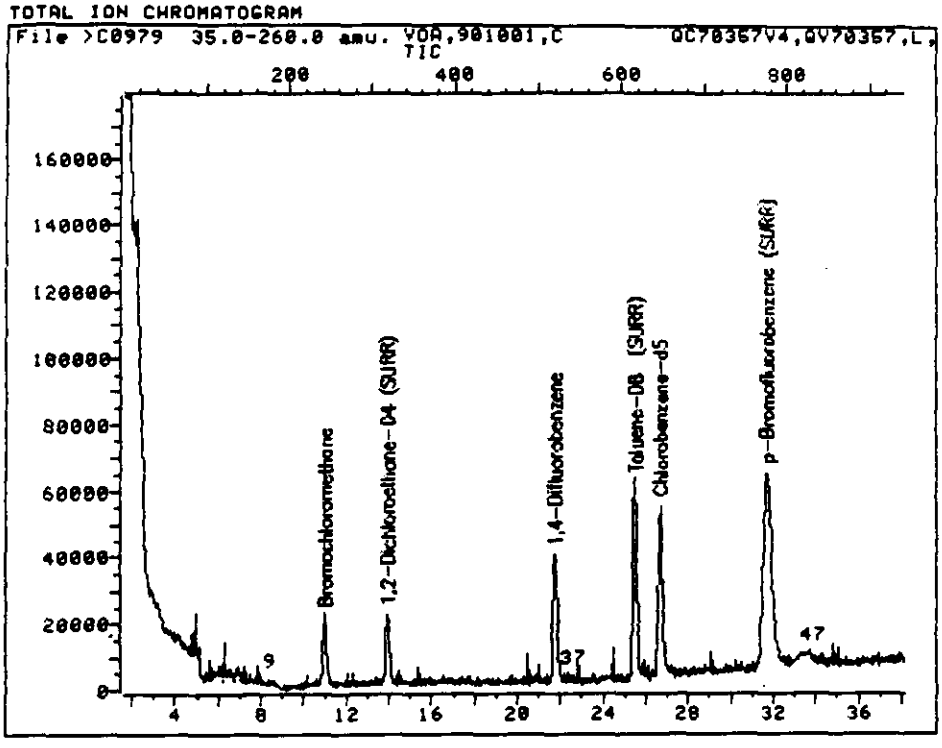
% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TOTAL ION CHROMATOGRAM



Data File: >C0979::U4 Quant Output File: ^C0979::AQ
Name: VOA,901001,C
Misc: QC70357V4,QV70357,L,5,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: KB6656
Quant Time: 901003 17:10
Injected at: 901003 16:25

Operator ID: KB6656 Quant Rev: 7 Quant Time: 901003 17:10
Output File: ^C0979::AQ Injected at: 901003 16:25
Data File: >C0979::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: QC70357V4,QV70357,L,5,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.99	242	32787	250.00	NG	98
9)	Acetone	8.31	173	2343	~~24.50~~	~~NG~~	94
18)	1,2-Dichloroethane-D4 (SURR)	13.93	318	112633	242.43	NG	90
20)	*1,4-Difluorobenzene	21.73	519	159758	250.00	NG	95
36)	*Chlorobenzene-d5	26.68	646	189232	250.00	NG	75
37)	Methyl-iso-butyl ketone	22.47	538	3765	~~14.68~~	~~NG~~	82
41)	Toluene-D8 (SURR)	25.49	616	272990	243.94	NG	86
45)	p-Bromofluorobenzene (SURR)	31.69	775	239059	280.27	NG	83
47)	m-Xylene	33.71	827	2049	~~2.74~~	~~NG~~	91

* Compound is ISTD

10-16-90.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755MS

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4755US

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0981

Level: (low/med) LOW Date Received: ~~10/~~ ~~/90~~ 9/28/90 10/16/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	54	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichlorethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	48	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	42	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	49	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A475545

Lab Name: ETCNT Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA475545

Sample wt/vol: 5 (g/mL) ML Lab File ID: >C0981

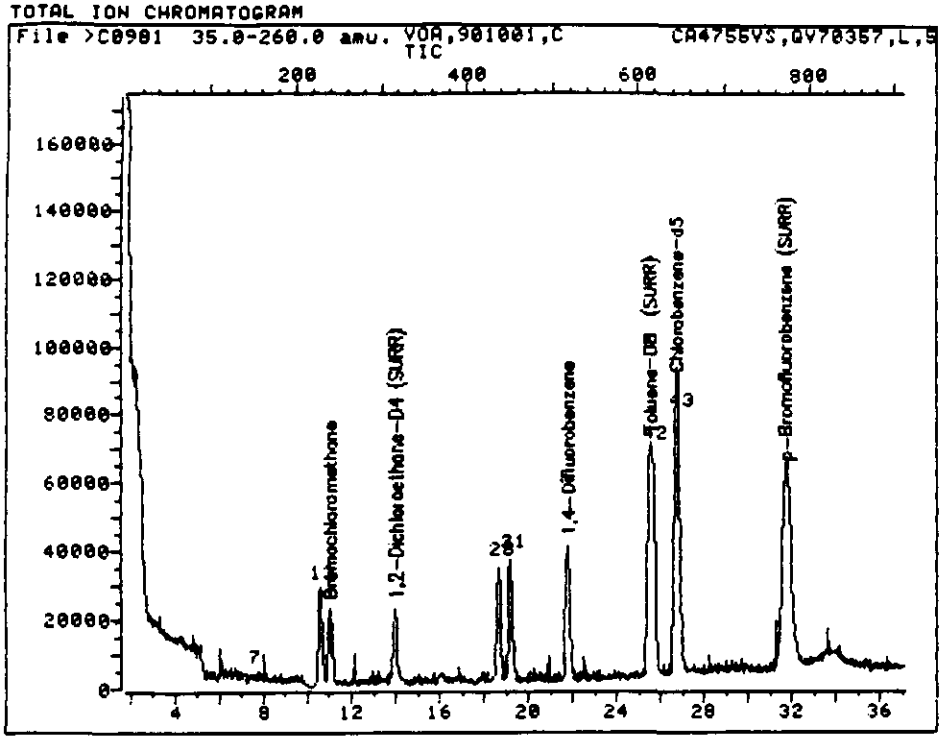
Level: (low/med) LOW Date Received: 09/20/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

TOTAL ION CHROMATOGRAM



Data File: >C0981::U4 Quant Output File: ^C0981::AQ
Name: VOA,901001,C
Misc: CA4755VS,QV70357,L,5,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 20:28
Injected at: 901003 18:19

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 20:28
Output File: ^C0981::AQ Injected at: 901003 18:19
Data File: >C0981::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4755V5,QV70357,L,5,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	11.02	240	31333	250.00	NG	98
7)	Methylene chloride	7.53	150	4026	~~24.52~~	~~NG~~	76
13)	1,1-Dichloroethylene	10.56	228	57573	270.54	NG	89
18)	1,2-Dichloroethane-D4 (SURR)	14.01	317	120617	271.66	NG	99
20)	*1,4-Difluorobenzene	21.80	518	158395	250.00	NG	98
28)	Trichloroethylene	18.70	438	56640	240.09	NG	79
30)	bis(Chloromethyl)ether	19.21	451	10705	~~75.34~~	~~NG~~	100
31)	Benzene	19.21	451	153911	207.88	NG	87
36)	*Chlorobenzene-d5	26.75	643	191425	250.00	NG	78
41)	Toluene-D8 (SURR)	25.53	614	297943	263.19	NG	90
42)	Toluene	25.68	618	161625	247.36	NG	93
43)	Chlorobenzene	26.86	646	211336	239.16	NG	95
45)	p-Bromofluorobenzene (SURR)	31.71	771	241906	280.36	NG	81

* Compound is ISTD

CN
10-16-90

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755MSD

Lab Name: ETCNJ Contract:

Lab Code: F2 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: CA4755VR

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: >C0982

Level: (low/med) LOW Date Received: ~~10/~~/90 (2) 10/4/90

% Moisture: not dec. Date Analyzed: 10/03/90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	51	
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	50	
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	43	
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	46	
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

A4755MSD

Lab Name: ETCNJ Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: CA4755VR

Sample wt/vol: 5 (g/mL) ML Lab File ID: ZC0952

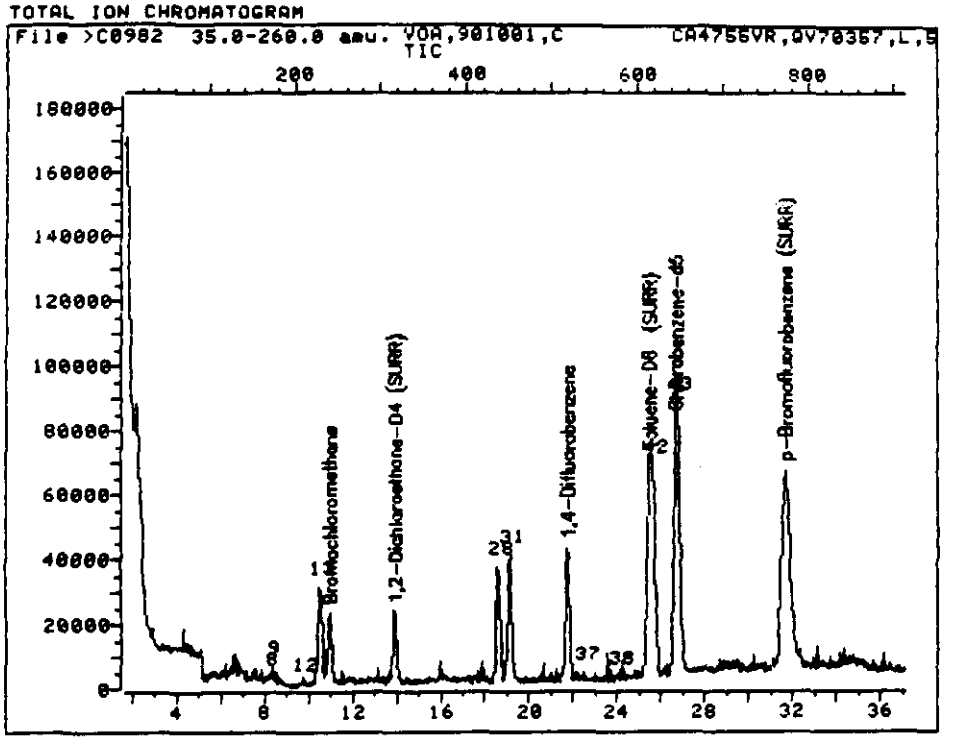
Level: (low/med) LOW Date Received: 09/20/90

% Moisture: not dec. _____ Date Analyzed: 10/03/90 (CA) 10.6.90

Column: (pack/cap) PACK Dilution Factor: 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Tetrahydrofuran	10	U

TOTAL ION CHROMATOGRAM



Data File: >C0982::U4 Quant Output File: ^C0982::AQ
Name: VOA,901001,C
Misc: CA4755VR,QV70357,L,5,,

Id File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

Operator ID: PT1575
Quant Time: 901003 20:38
Injected at: 901003 19:07

Operator ID: PT1575 Quant Rev: 7 Quant Time: 901003 20:38
Output File: ^C0982::AQ Injected at: 901003 19:07
Data File: >C0982::U4 Dilution Factor: 1.00000
Name: VOA,901001,C
Misc: CA4755VR,QV70357,L,5,,

ID File: IC1172::US
Title: IFB, PP/VOA, TCL, XVOA13
Last Calibration: 901003 17:09

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.96	240	33706	250.00	NG	93
8)	Acrolein	8.28	171	3252	~~141.20~~	~~NG~~	77
9)	Acetone	8.36	173	3871	~~59.37~~	~~NG~~	77
12)	Trichlorofluoromethane	9.72	208	3383	~~6.19~~	~~NG~~	72
13)	1,1-Dichloroethylene	10.49	228	58885	257.23	NG	84
18)	1,2-Dichloroethane-D4 (SURR)	13.94	317	126631	265.13	NG	98
20)	*1,4-Difluorobenzene	21.74	518	166042	250.00	NG	96
28)	Trichloroethylene	18.60	437	61635	249.23	NG	81
30)	bis(Chloromethyl)ether	19.14	451	10810	~~72.57~~	~~NG~~	100
31)	Benzene	19.14	451	166534	214.57	NG	86
36)	*Chlorobenzene-d5	26.68	644	193787	250.00	NG	73
37)	Methyl-iso-butyl ketone	22.47	537	3213	~~12.23~~	~~NG~~	97
38)	2-Hexanone	24.07	578	4067	~~16.58~~	~~NG~~	95
41)	Toluene-D8 (SURR)	25.46	614	281173	245.35	NG	86
42)	Toluene	25.66	619	151333	228.78	NG	93
43)	Chlorobenzene	26.79	647	219237	245.07	NG	91
45)	p-Bromofluorobenzene (SURR)	31.68	773	243679	278.97	NG	81

* Compound is ISTD

CA
10-16-90.

CHAIN OF CUSTODY

ETC Environmental Testing and Certification Corp.

Seal No. 175355 ETC Job # CA4253

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: WJ-2GWBL (Source Code from below; Your Sample Point ID left justify) | 900919 (Start Date YY/MM/DD) | 0705 (Start Time 2400 hr. clock) | _____ (Elapsed Hours composite)

Source Codes:
Well ..(W) Outfall .....(O) Bottom Sediment ....(B) Surface Impoundment....(I) Leachate Collection Sys.....(C) Other .....(X)
Soil ...(S) River/Stream..(R) Generation Point ....(G) Treatment Facility .....(T) Lake/Ocean .....(L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK	N	HCL	✓
2	VOA	40	HCL	VOLATILES	N		✓
1	VS	40	HCL	VOA SCREEN	N		✓
1	CONU	125	NONE	CHLORIDE	N		✓
1	CONS	125	H2SO4	TOC2	N		✓
1	CONS	125	H2SO4	PHENOLS/NO2/NO3	N		✓
1	MET	1000	HNO3	METALS	N		✓
1	CYAN	~~500~~ 1000	NaOH	CY/T	N		✓ Rec'd 1L
1	FL	125	NONE	FLUORIDE	N		✓
					N		

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 1315
   Signature: _____ Seal #: 0175355 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: John Y. Rudd Signature: John Y Rudd
   Date: 9/18/90 Time: 14:10 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) John Y. Rudd Date: 9/19/90 Time: 0900
   Signature: John Y Rudd Seal #: 0175356 Intact: OK

LAB USE ONLY Opened By: _____ Date: 9/20/90 Time: 925

SHUTTLE # 234 TEMP. °C 4.0 SEAL # 175356 COND. Intact 22

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4753

Sample Point [ ] Source Code [ ] Sample Point I.D.

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901019	0705			50

SAMPLING METHOD: PRIVATE WELL PUMP

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] N
Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) [ ]
Depth to Ground water (ft) [ ]
Groundwater Elevation (ft msl) [ ]
Well Depth (ft) [ ]
Sample Depth (non-well) (ft) [ ]

	pH	(STD)		spec. cond.	umho/cm at 25° C	(other parameter)	value	units
1st	7.46	(STD)	1st	816	umho/cm at 25° C			
2nd	7.43	(STD)	2nd	816	umho/cm at 25°C			
3rd	7.43	(STD)	3rd	815	umho/cm at 25°C			
4th	7.42	(STD)	4th	816	umho/cm at 25°C			

12.2 (°C) Sample Temp [ ] NTU Turbidity

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR
Weather Conditions: OVERCAST, FOGGY, 46°F, MISTY, WIND W 2
Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John G. Rudd Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/19/90 (Date) John G Rudd (Signature)

ORIGINAL

ENVIRONMENTAL TESTING and CERTIFICATION

Seal No. 1376-1377 ETC Job # CA4753

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Date Sealed 9-5-90 By: KTS

Company: WMT Attn.: Dan Green

Facility/Site: Town of Dunn (405) Phone: (608) 835-3733

Address:

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-2GW8L (Source Code (from below) / Your Sample Point ID (left justify)) 900919 (Start Date (YY/MM/DD)) TF 9/24/90 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

Source Codes:

Well ..(W) Outfall.....(O) Bottom Sediment....(B) Surface Impoundment....(I) Leachate Collection Sys.....(L) Other .....(X)

Soil ...(S) River/Stream..(R) Generation Point.....(G) Treatment Facility.....(T) Lake/Ocean.....(D) Specify

SHUTTLE CONTENTS

BOTTLE				ANALYSIS	SAMPLER		LAB
No	Type	Size	Preserv.		Filt. (Y/N)	Observations	Observations
1	P	250	Ø	TDS, Bicarbonate, Sulfate	N		full, clear
1	P	250	H_2SO_4	NH_3, TKN	N		↓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) Dan Green Date: 9-9-90 Time: 14:15
   Signature: Dan Green Seal #: 01376-01377 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: John G. Rudd Signature: John G. Rudd
   Date: 9/18/90 Time: 1400 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) John G. Rudd Date: 9-19-90 Time: 12:15
   Signature: John G Rudd Seal #: 01378 Intact: OK

LAB USE ONLY Opened By: Kelly Schultz Date: 9-20-90 Time: 13:10

SHUTTLE # TEMP. °C 4 SEAL # 1378 COND. Intact 124

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4753

Sample Point [ ] Source Code [ ] Sample Point I.D.

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
910919	0710 15	1.5		610

SAMPLING METHOD: PRIVATE WELL PUMP

Sampler Type [A] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel — X-Other JR ~~Bailer~~ JR Pump (SPECIFY OTHER)

Sampler Material [E] JR — A-Teflon, B-Metal, C-PVC, D-Plastic — X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon — X-Other (SPECIFY OTHER)

Sample Composited [Y/N] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl)
Depth to Ground water (ft)
Groundwater Elevation (ft msl)
Well Depth (ft)
Sample Depth (non-well) (ft)

	ph		spec. cond.		(other parameter)	value	units
1st	7.46 (STD)	1st	816	um/cm at 25 °C			
2nd	7.43 (STD)	2nd	816	um/cm at 25 °C			
3rd	7.43 (STD)	3rd	815	um/cm at 25 °C			
4th	7.42 (STD)	4th	816	um/cm at 25 °C			

Sample Temp: 12.2 (°C)
Turbidity: [ ] NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR
Weather Conditions: OVERCAST, 76°F, 46°F, MISTY, WIND W 2
Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John V. Rudd Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/19/91 (Date) John V Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175359 ETC Job # CA4754

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 4 0 5 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W-2 GW LA (Source Code (from below) / Your Sample Point ID (left justify)) 9 0 0 9 1 9 (Start Date (YY/MM/DD)) 1 0 1 0 (Start Time (2400 hr clock)) _____ (Elapsed Hours (composite))

Source Codes

Well (W) Soil (S) Outfall (O) River/Stream (R) Bottom Sediment (B) Generation Point (G) Surface Impoundment (I) Treatment Facility (T) Leachate Collection Sys. (C) Lake/Ocean (L) Other (X) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK	N	HCL	✓
2	VOA	40	HCL	VOLATILES	N		✓
1	VS	40	HCL	VOA SCREEN	N		✓
1	CONU	125	NONE	CHLORIDE	N		✓
1	CONS	125	H2SO4	TOC2	N		✓
1	CONS	125	H2SO4	PHENOLS/NO2/NO3	N		✓
1	MET	1000	HNO3	METALS	N		Rec'd empty ~~Not Rec'd~~ 9/20
1	CYAN	~~500~~ 1000	NaOH	CY/T	N	HL	~~Not Rec'd~~
1	FL	125	NONE	FLUORIDE	N		✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 13:30
   Signature: Dan Green Seal #: 0175359 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: John G. RUDD Signature: John G Rudd
   Date: 9/18/90 Time: 1420 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) John G. Rudd Date: 9/19/90 Time: 1130
   Signature: John G Rudd Seal #: 0175354 Intact: OK

LAB USE ONLY Opened By: R. Stoeckler Date: 9/20/90 Time: 1215

SHUTTLE # 147 TEMP °C 30 SEAL # 175354 COND. Intact 26

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4754

Sample Point WJ (Source Code) 12GWLIA (Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL IN CASING (Gallons)	VOLUME PURGED (Gallons)
910919	1010	1.50		30

SAMPLING METHOD: PRIVATE well pump

Sampler Type: A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material: A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material: A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited (Y/N): N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl)

Depth to Ground water (ft)

Groundwater Elevation (ft msl)

Well Depth (ft)

Sample Depth (non-well) (ft)

	ph	(STD)		spec. cond.	um/cm at 25 °C	(other parameter)	value	units
1st	7.65	(STD)	1st	648	um/cm at 25 °C			
2nd	7.63	(STD)	2nd	648	um/cm at 25 °C			
3rd	7.63	(STD)	3rd	648	um/cm at 25 °C			
4th	7.63	(STD)	4th	647	um/cm at 25 °C			

Sample Temp: 10.8 (°C)

Turbidity: NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR

Weather Conditions: OVERCAST, COOL 50°F, WIND NW 6

Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: John G. Rudd (Print) Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/19/90 (Date) John G Rudd (Signature)

ORIGINAL

ENVIRONMENTAL TESTING and CERTIFICATION

Seal No. 1376-1377 ETC Job # CA4754

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Date Sealed 9-5-90 By: KTS

Company: WMI Attn.: Dan Green

Facility/Site: Town of Dunn (465) Phone:

Address:

SAMPLE IDENTIFICATION

Facility: 4015 (Facility/Site Code)

Sample Point: W-216-W-LA-1 (Source Code (from below); Your Sample Point ID (left justify)) 9 0 0 9 1 9 (Start Date (YY/MM/DD)) 1 0 1 1 0 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

Source Codes:

Well ..(W) Outfall .....(O) Bottom Sediment ....(B) Surface Impoundment....(I) Leachate Collection Sys.....(L) Other .....(X)

Soil ....(S) River/Stream..(R) Generation Point ....(G) Treatment Facility .....(T) Lake/Ocean ..... Specify

SHUTTLE CONTENTS

BOTTLE No	BOTTLE Type	BOTTLE Size	BOTTLE Preserv.	ANALYSIS	SAMPLER Fill. (Y/N)	SAMPLER Observations	LAB Observations
1	P	250	Ø	TDS, Bicarbonate, Sulfate	N		full, clear
1	P	250	H_2SO_4	NH_3, TKN	N		
					N		
					N		
					N		
					N		
					N		
					N		
					N		

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-6-90 Time: 14:15
   Signature: Dan Green Seal #: 01376-01377 Intact: ~

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y Rudd
   Date: 9/18/90 Time: 1420 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) John Y. Rudd Date: 9/15/90 Time: 1215
   Signature: John Y Rudd Seal #: 01378 Intact: OK

LAB USE ONLY Opened By: Kelly Schuer Date: 9-20-90 Time: 13:00

SHUTTLE # TEMP. °C 4° SEAL # 1378 COND. Intact 128

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4754

Sample Point [ ] [ ] (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
900915	1010	5.0		

SAMPLING METHOD: PRIVATE WELL PUMP

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/(N)] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl) [ ]
Depth to Ground water (ft) [ ]
Groundwater Elevation (ft msl) [ ]
Well Depth (ft) [ ]
Sample Depth (non-well) (ft) [ ]

	ph	(STD)		spec. cond.	um/cm at 25°C	(other parameter)	value	units
1st	7.65	(STD)	1st	648	um/cm at 25°C			
2nd	7.63	(STD)	2nd	648	um/cm at 25°C			
3rd	7.63	(STD)	3rd	648	um/cm at 25°C			
4th	7.63	(STD)	4th	647	um/cm at 25°C			

Sample Temp: 10.8 (°C)
Turbidity: [ ] NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR
Weather Conditions: OVERCAST, COOL 50°2, WIND NW 6
Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) JOHN Y RUDD Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/15/90 (Date) John Y Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175361 ETC Job # CA4755

CHAIN OF CUSTODY FORM (CC1) ORIGINAL Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) (Optional Sample Point Description)

Sample Point: W-26WSW (Source Code (from below); Your Sample Point ID (left justify)) 910919 (Start Date (YY/MM/DD)) TP 9/21/90 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

Source Codes

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)
Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK		HCl	✓
2	VOA	40	HCL	VOLATILES			✓ ~~(1)~~ 4
1	VS	40	HCL	VOA SCREEN			✓
1	CONU	125	NONE	CHLORIDE			✓
1	CONS	125	H2SO4	TOC2			✓
1	CONS	125	H2SO4	PHENOLS/NO2/NO3			✓
1	MET	1000	HNO3	METALS			✓
1	CYAN	~~500~~ 125	NaOH	CY/T			✓ (1) 1L
1	FL	125	NONE	FLUORIDE			✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 13:40
   Signature: [signature] Seal #: 0175361 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y. Rudd
   Date: 9/18/90 Time: 1430 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) JOHN Y. RUDD Date: 9/19/90 Time: 1735
   Signature: John Y Rudd Seal #: 0175360 Intact: OK

LAB USE ONLY Opened By: [signature] Date: 9/20/90 Time: 913

SHUTTLE # 928 TEMP °C 5° SEAL # 175360 COND. Intact 430

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4755

Sample Point [W] [2|6|4|5|W] (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
9 0 0 6 1 7	1 6 3 5			2 0

SAMPLING METHOD: PRIVATE WELL PUMP

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] N — Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl)

Depth to Ground water (ft)

Groundwater Elevation (ft msl)

Well Depth (ft)

Sample Depth (non-well) (ft)

	pH	(STD)		spec. cond.	um/cm at 25° C	(other parameter)	value	units
1st	7 4 4	(STD)	1st	6 9 1	um/cm at 25° C			
2nd	7 4 2	(STD)	2nd	6 9 1	um/cm at 25°C			
3rd	7 4 1	(STD)	3rd	6 9 0	um/cm at 25°C			
4th	7 4 1	(STD)	4th	6 9 0	um/cm at 25°C			

Sample Temp: 1 2 2 (°C)

Turbidity: [ ] NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR

Weather Conditions: PARTLY CLOUDY, 50°F

Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: John Y. Rudd (Print) Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

(Date) (Signature) John Y Rudd

ORIGINAL

ENVIRONMENTAL TESTING and CERTIFICATION

Seal No. 1376-1377 ETC Job # CA4755

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Date Sealed 9-5-90 By: KTS

Company: WMI Attn.: Dan Green

Facility/Site: Town of Dunn Phone:

Address:

SAMPLE IDENTIFICATION

Facility: 4015 (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-2 GW SW 9 0 0 9 9 TC 9124 lab

(Source Code (from below) | Your Sample Point ID (left justify) | Start Date (YY/MM/DD) | Start Time (2400 hr. clock) | Elapsed Hours (composite))

Source Codes:

Well ...(W) Outfall .....(O) Bottom Sediment ....(B) Surface Impoundment ....(I) Leachate Collection Sys. ....(L) Other .....(X)

Soil ...(S) River/Stream ..(R) Generation Point ....(G) Treatment Facility .....(T) Lake/Ocean .....(K) Specify

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
1	P	250	Ø	TDS, Bicarbonate, Sulfate	N		full, clear
1	P	250	H_2SO_4	NH_3, TKN	N		↓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-9-90 Time: 14:15
   Signature: Dan Green Seal #: 01376-01377 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y Rudd
   Date: 9/18/90 Time: 1430 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) JOHN Y. RUDD Date: 9/19/90 Time: 1730
   Signature: John Y Rudd Seal #: CA4755 Intact: OK

LAB USE ONLY Opened By: Kelly Schenk Date: 9-20-90 Time: 13:00

SHUTTLE # TEMP. °C 4° SEAL # 4755 COND. intact 132

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4755

Sample Point [W] (Source Code) [216W SW] (Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)

SAMPLING METHOD: PRIVATE well pump

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel — X-Other _____ (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic — X-Other _____ (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon — X-Other _____ (SPECIFY OTHER)

Sample Composited [Y/N] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl) _____ Well Depth (ft) _____

Depth to Ground water (ft) _____ Sample Depth (non-well) (ft) _____

Groundwater Elevation (ft msl) _____

	ph		spec. cond.		(other parameter)	value	units
1st	7.4 (STD)	1st	691	um/cm at 25° C			
2nd	7.42 (STD)	2nd	691	um/cm at 25°C			
3rd	7.41 (STD)	3rd	690	um/cm at 25°C			
4th	7.41 (STD)	4th	690	um/cm at 25°C			

Sample Temp: 12.2 (°C) Turbidity: _____ NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR

Weather Conditions: PARTLY CLOUDY, 50°F

Other: _____

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: John Y. Rudd (Print) Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

(Date) John Y Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

Seal No. 175399 ETC Job # CA4756

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: _____, DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 405 (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: W-2GW IH (Source Code (from below) / Your Sample Point ID (left justify)) 900920 (Start Date (YY/MM/DD)) 1738 (Start Time (2400 hr clock)) 5 (Elapsed Hours (composite))

Source Codes

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill. (Y/N)	SAMPLER Observations	LAB Observations
1	TB	40	GC/MS	TRIP BLANK	N		✓
2	VOA	40	HCL	VOLATILES	N		✓ BUBBLES
1	VS	40	HCL	VOA SCREEN	N		✓
1	CONU	125	NONE	CHLORIDE	N		✓
1	CONS	125	H2SO4	TOC2	N		✓
1	CONS	125	H2SO4	PHENOLS/NO2/NO3	N		✓
1	MET	1000	HNO3	METALS	N		✓
1	CYAN	1000 500	NaOH	CY/T	N		✓
1	FL	125	NONE	FLUORIDE	N		✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 14:00
   Signature: _____ Seal #: 0175399 Intact: NO

2. I have received these materials in good condition from the above person.
   Name: JOHN V. RUDD Signature: _____
   Date: 09/18/90 Time: 1400 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) JOHN V. RUDD Date: 9/20/90 Time: 1900
   Signature: _____ Seal #: 0175399 Intact: OK

LAB USE ONLY Opened By: _____ Date: 9/21/90 Time: 1032

SHUTTLE # 79 TEMP. °C 5° SEAL # 175398 COND. Intact

ETC

FIELD PARAMETER FORM (CC2)

Form
Sample Management
12/89

ETC JOB # CA4756

Sample Point WS (Source Code) 2GWIH (Sample Point I.D)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901920	1738	.5		

SAMPLING METHOD: PRIVATE well pump Plumbing

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other _____ (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other _____ (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other _____ (SPECIFY OTHER)

Sample Composited (Y/N) N/ (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl) _____ Well Depth (ft) _____

Depth to Ground water (ft) _____ Sample Depth (non-well) (ft) _____

Groundwater Elevation (ft msl) _____

	pH		Spec. Cond.		(other parameter)	value	units
1st	7.07 (STD)	1st	436	um/cm at 25°C			
2nd	7.07 (STD)	2nd	437	um/cm at 25°C			
3rd	7.07 (STD)	3rd	439	um/cm at 25°C			
4th	7.08 (STD)	4th	438	um/cm at 25°C			

Sample Temp: 13.3 (°C) Turbidity: _____ NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR

Weather Conditions: PC - 60°F OUTSIDE Temp

Other: Sample taken in Basement, approx temp 68°F

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John V. Rudd Employer: John V Rudd PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/20/90 (Date) John V Rudd (Signature)

ORIGINAL 135

ENVIRONMENTAL TESTING and CERTIFICATION

Seal No. 1376-1377 ETC Job # CA4756

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Date Sealed 9-5-90 By: KTS

Company: Wmt Attn.: Dan Green

Facility/Site: Town of Dunn Phone:

Address:

SAMPLE IDENTIFICATION

Facility: 4105 (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-26WIH | 910909201800 | | (Source Code (from below) | Your Sample Point ID (left justify) | Start Date (YY/MM/DD) | Start Time (2400 hr. clock) | Elapsed Hours (composite))

Source Codes:

Well ...(W) Outfall.....(O) Bottom Sediment ....(B) Surface Impoundment....(I) Leachate Collection Sys.....(X)

Soil ....(S) River/Stream...(R) Generation Point ....(G) Treatment Facility .....(T) Lake/Ocean ..... Specify

SHUTTLE CONTENTS

BOTTLE No	BOTTLE Type	BOTTLE Size	BOTTLE Preserv.	ANALYSIS	SAMPLER Fill. (Y/N)	SAMPLER Observations	LAB Observations
1	P	250	Ø	TDS, Bicarbonate, Sulfate			full, Clear
1	P	250	H_2SO_4	NH_3, TKN			↓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-6-90 Time: 14:15
   Signature: Seal #: 01376-01377 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y Rudd
   Date: 9/18/90 Time: 1250 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) JOHN Y. RUDD Date: 20 Sept 90 Time: 1845
   Signature: John Y Rudd Seal #: CA4756 Intact: yes

LAB USE ONLY Opened By: Kelly Schick Date: 9-21-90 Time: 12:00

SHUTTLE # TEMP. °C 4° SEAL # 1378 COND. Intact

136

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4756

Sample Point W (Source Code) 26WIH (Sample Point I.D)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901920	1731	1.5		

SAMPLING METHOD: PRIVATE well pump plumbing

Sampler Type [ ] A-Submersible Pump B-ISCO C-Bladder Pump D-Dipper/Bottle E-Bailer F-Scoop/Shovel X-Other ____ (SPECIFY OTHER)

Sampler Material [ ] A-Teflon B-Metal C-PVC D-Plastic X-Other ____ (SPECIFY OTHER)

Tubing Material [ ] A-Teflon B-Tygon C-Polyethylene D-Silicon X-Other ____ (SPECIFY OTHER)

Sample Composited [Y/N] N (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl) ____ Well Depth (ft) ____

Depth to Ground water (ft) ____ Sample Depth (non-well) (ft) ____

Groundwater Elevation (ft msl) ____

	pH		spec. cond.		(other parameter)	value	units
1st	7.07 (STD)	1st	4319	um/cm at 25° C			
2nd	7.07 (STD)	2nd	4317	um/cm at 25°C			
3rd	7.07 (STD)	3rd	4315	um/cm at 25°C			
4th	7.08 (STD)	4th	4318	um/cm at 25°C			

Sample Temp 13.3 (°C) Turbidity ____ NTU

FIELD COMMENTS

Sample Appearance: CLEAR - NO ODOR

Weather Conditions: PC - 60°F OUTSIDE.

Other: Sample Taken in BASEMENT, Approx Temp 80°F

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John Y Rudd Employer: John Y Rudd PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

9/20/90 (Date) John Y Rudd (Signature)

ORIGINAL

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1)

Seal No. 175393 / 185151 w.w. 8-30-90 ETC Job # CA4263

ORIGINAL Date Sealed 90/08/30 By: MM

Company: WASTE MANAGEMENT, INC. Attn.: DEE BENCICH

Facility/Site: _____ Phone: (708) 409 - 0700

Address: , DANE COUNTY, WI

SAMPLE IDENTIFICATION

Facility: 4 0 F (Facility/Site Code) _____ (Optional Sample Point Descriptions)

Sample Point: X - 2 F B (Source Code (from below) / Your Sample Point ID (left justify)) 9 0 0 9 1 9 (Start Date (YY/MM/DD)) _____ (Start Time (2400 hr. clock)) _____ (Elapsed Hours (composite))

Source Codes.

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (L) Other LAB (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (K) Specify _____

SHUTTLE CONTENTS

BOTTLE No	BOTTLE Type	BOTTLE Size	BOTTLE Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	SAMPLER Observations	LAB Observations
2	VOA	40	HCL	VOLATILES	N		✓
1	CONU	125	NONE	CHLORIDE	N		✓
1	FL	125	NONE	FLUORIDE	N		✓
1	CONS	125	H2SO4	TOC2	N		✓
1	CONS	125	H2SO4	PHENOLS/NO2/NO3	N		✓
1	MET	1000	HNO3	METALS	N		✓
1	CYAN	1000 w.w. 8-30-90 500	NaOH	CY/T	N		✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-3-90 Time: 15:15
   Signature: Dan Green Seal #: 0165151 Intact: NO

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y Rudd
   Date: 9/19/90 Time: 1000 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) JOHN Y. RUDD Date: 9/19/90 Time: 1205
   Signature: John Y Rudd Seal #: 0175392 Intact: OK

LAB USE ONLY Opened By: [illegible] Date: 9/20/90 Time: 920

SHUTTLE # 500 TEMP. °C 6° SEAL # 175392 COND. Intact 58

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4763

Sample Point [X] [2] [F] [B]
Source Code | Sample Point I.D.

FIELD PROCEDURES

PURGE DATE (YY MM DD) | START PURGE (2400 Hr Clock) | ELAPSED HRS | WATER VOL. IN CASING (Gallons) | VOLUME PURGED (Gallons)

SAMPLING METHOD: FIELD BLANK

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl)
Depth to Ground water (ft)
Groundwater Elevation (ft msl)
Well Depth (ft)
Sample Depth (non-well) (ft)

	ph	(STD)	spec. cond.	um/cm at 25 °C	(other parameter)	value	units
1st							
2nd							
3rd							
4th							

Sample Temp (°C)
Turbidity NTU

FIELD COMMENTS

Sample Appearance:
Weather Conditions: OVERCAST, COOL 50°F, WIND NW 6
Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John Y. Rudd Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

6/15/90 (Date) John Y. Rudd (Signature)

ORIGINAL

ENVIRONMENTAL TESTING and CERTIFICATION

Seal No. 1376-1377 ETC Job # CA4763

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Date Sealed 9-5-90 By: KJS

Company: WMT Attn.: Dan Green

Facility/Site: Town of Dean Phone:

Address:

SAMPLE IDENTIFICATION

Facility: 4015 (Facility/Site Code) (Optional Sample Point Description)

Sample Point: X-2 FB | 9 0 0 9 1 5 | | | (Source Code (from below) | Your Sample Point ID (left justify) | Start Date (YY/MM/DD) | Start Time (2400 hr. clock) | Elapsed Hours (composite))

Source Codes:
Well ..(W) Outfall .....(O) Bottom Sediment ....(B) Surface Impoundment ....(I) Leachate Collection Sys. ....
Soil ....(S) River/Stream ..(R) Generation Point .....(G) Treatment Facility .....(T) Lake/Ocean .....

LAB ..... (X)
Specify

SHUTTLE CONTENTS

BOTTLE No	BOTTLE Type	BOTTLE Size	BOTTLE Preserv.	ANALYSIS	SAMPLER Fill (Y/N)	SAMPLER Observations	LAB Observations
1	P	250	Ø	TDS, Bicarbonate, Sulfate			full, clear
1	P	250	H_2SO_4	NH_3, TKN			↓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) DAN GREEN Date: 9-9-90 Time: 14:15
   Signature: Dan Green Seal #: 01376-01377 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: JOHN Y. RUDD Signature: John Y Rudd
   Date: 9/19/90 Time: 1000 Remarks: OK

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) John Y. RUDD Date: 9/19/90 Time: 1215
   Signature: John Y. Rudd Seal #: 01378 Intact: OK

LAB USE ONLY Opened By: Kelly Schultz Date: 9-20-90 Time: 13:00

SHUTTLE # TEMP. °C 4° SEAL # 1378 COND. Intact 140

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # CA4763

Sample Point [X] (Source Code) [2FIB] (Sample Point I.D)

FIELD PROCEDURES

PURGE DATE (YY MM DD) | START PURGE (2400 Hr Clock) | ELAPSED HRS | WATER VOL. IN CASING (Gallons) | VOLUME PURGED (Gallons)

SAMPLING METHOD: FIELD BLANK

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other (SPECIFY OTHER)

Sample Composited [Y/N] (Procedure/Proportions)

FIELD MEASUREMENTS

Well Elevation (ft/msl)

Depth to Ground water (ft)

Groundwater Elevation (ft msl)

Well Depth (ft)

Sample Depth (non-well) (ft)

	pH	(STD)		Spec. cond.	umho/cm at 25° C	(other parameter)	value	units
1st			1st					
2nd			2nd					
3rd			3rd					
4th			4th					

Sample Temp (°C)

Turbidity NTU

FIELD COMMENTS

Sample Appearance:

Weather Conditions: OVERCAST, COOL 50°F, WIND NW 6

Other:

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) John G. Rudd Employer: PELA

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

5/15/90 (Date) John G. Rudd (Signature)

ORIGINAL

Date 9/26/90 Instr. C

A-Type PP/VOA, TCL / IFB XVOA13
Tune file APEI01
Seq. file JA1
Method file VOATC
ID file IC1171
CB file CC1171
Analyst [illegible]
Reviewed by/Date [illegible]

Batch #'s QV 70357

__ Standards Updated CBUP, CBCAL, CBMLS
Date _____ By [illegible] 9/26

Tape # _____ Inj. __ ul

Standard	Conc ppm	Lot No.	Lot Vol. (uL)
P-BEB	50	9871	1.0
INT STD/SURR	25	9972	10.0
CAL I	50	9996	20, 5, 1.0, 5.2
CAL II	↓	9997	↓
XVOA	↓	9505	↓
IFB MATRIX SPIKE	25	9673	10.0

	R	NAME	DATA File	Init. (ml) g	ALS #	Dil	Inj. Time	Comments	P
9/26		p-BEB	>C0910	1uL	-		854	ok 111	
		QC70357VS	>C0911	5mL	6		1124	ok 20 uL CAL I, II, XVOA	
		QC70357VS	>C0912	↓	7	CBUPD	1213	ok 15 uL IC1171	
		QC70357VS	>C0913		8	CBCAL	1303	ok 10 uL CC1172	
		QC70357VS	>C0914		9	CBMLS	1352	ok 5 uL	
		QC70357VS	>C0915		10		1441	ok 2 uL	
		QC70357V	>C0916		1	— NOT USED		BLANK	
		p-BEB	>C0917	1uL	—		1625	(114-109)	
		QC70357V	>C0918	5mL	6		1705	ok	
		QC70357V	>C0919		7			not used	
		CA4753V	>C0920		8		1904	ok	
		CA4754V	>C0921		9		1954	ok rerun, pos leak	
		CA4755V	>C0922		10		2043	ok	
		CA4763V	>C0923		1		2132	ok	
		CA4756V	>C0924		2		2221	ok	
		CA4758V	>C0925	↓	3		2310	ok	
9/27		p-BEB	>C0926	1uL	—		858	ok	
		QC70357VS	>C0927	5mL	1	QCR	1656	ok 5 uL CAL I, II, XVOA	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U16 Page 2 of 5

Date 9/27/90 Instr. C

A-Type IFB - XVOA13 / PP/UOA, TCL
Tune file AFEI01
Seq. file JA1 , JA2
Method file VOAC
ID file IC1171
CB file CC1171
Analyst JO
Reviewed by/Date

Batch #'s QV70357

__ Standards Updated
Date By

Tape # R-135 Inj. __ ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p.1			

R	NAME	DATA File	Init. (m)/g	ALS #	Dil	Inj. Time	Comments	+ P
	p-BFB							
	~~QC 70357V2~~	~~>C0928~~	~~5mL~~	2			~~BLANK~~ ~~9/27~~	
	p-BFB	>C0928	1uL	—		1241	OK (109-70)	
	QC70357V2	>C0929	5mL	6		1814	OK Blank	
	QC70357V2	>C093D		7		NOT USED	~~9/27~~ Blank	
R	CA4754V2	>C0931		8		1952	OK	
	CA4757V2	>C0932		9		2041	NG SURR OUT, RERUN	
	CA4759V1	>C0933		10		213D	dc RERUN 1:5 FOR C25	
	CA4760V2	>C0934		1			NG. RERUN 1:1000 (RUN POSCHK)	
	CA4761V2	>C0935		2			DID NOT	
	CA4762V2	>C0936		3			RUN ~~9/28/90~~	
9/28/90	POS/SVSCHK	>C0938	5mL	1		957	RUN IMMEBLANK	
	~~POS/SVSCHK~~	>C0939		1		1125	RUN IMMEBLANK	
		>C0940	5mL	1			OK	
	~~QC70357V5~~	~~>C0942~~	~~5mL~~	~~2~~			~~5mL CAL I, II, XVOA~~ NOT USED	
	~~QC70357V3~~	~~>C0943~~		~~3~~			~~BLANK~~ (PRINT - NO RUN)	
	p-BFB	>C0941	1uL	—		N24	(RAN PRIOR TO CBCHKCOMP2)	
10-1-90	p-BFB	>C0942	1uL			1253	OK (SEA 114)	
	QC70357V5	>C0943	5mL	3	CBUPD CBCAL	RBT	5mL CAL I, II, XVOA	

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R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U11 Page 3 of 5

Date 10-1-90 Instr. Q

A-Type IFB/PP VOA
Tune file APEI01
Seq. file JA1 , JA2
Method file VOAC
ID file IC1171 , IC1174
CB file CC1171 , CC1174
Analyst
Reviewed By/Date

Batch #'s QV70357

1 Standards Updated CBVPD, CBCAL 11/21
Date By

Tape # R-135 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
SOP p-1			

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	QC70357VS	>C0944	5mL	1		Not Needed	50 ul CAL I, II, XVOA	
	QC70357VS	>C0945		2	CBVPD1		15 ul	
	QC70357VS	>C0946		3	CBCAL		10 ul	
	QC70357VS	>C0947		4			2 ul	
	QC70357V3	>C0948		5			NG BLANK	
	QC70357V3	>C0949		6		2241	NG	
	QC70357V3	>C0950		7		2334	NG	
R	CA4757V3	>C0951		8		0019	NG	
	CA4757VS	>C0952		9		0109	NG 10ul IFB MATRIX SPIKE	
	CA4757VR	>C0953	↓	10		0158	NG ↓	
	P-BFB	>C0954	1ml	—		08:58	OK	
	QC70357VS	>C0955	5ml	1			NG 5ul CAL I+II, XVOA	
	QC70357V4	>C0956	↓	2			Not USED	
	BFB LS Tune	>C0957	5ml			11:48	OK 10-8-93	
	QC70357VS	>C0958	5ml	6		12:15	20ul CAL I+II, XVOA	
	QC70357VS	>C0959		7		13:04	15ul " " " IH174	
	QC70357VS	>C0960		8	CBVD CBCAL	13:53	10ul " " " CC1174	
	QC70357VS	>C0961	↓	9	QT	14:43	5ul " " " 144	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department Page 4 of 5

Date 10-2-90 Instr. C

A-Type IEB/VOA
Tune file BFB102
Seq. file
Method file VOAC
ID file IC1171 & IC1172
CB file CC1171 + CC1172
Analyst K. Baylor
Reviewed by/Date

Batch #'s QV70357

__ Standards Updated
Date By

Tape # Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
See page 1			

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	QC7035VS	>C0962	5ml	10		CB/DD CBCalc	2ul CalC I+II, XVOA	
	QC7035VA	>C0963	5ml	61		16:21	OK ~~ORNL sub out KB10/4/90~~	
	CA4757V4	>C0964		6		17:31	OK surr out confirmed by >C0985	
	CA4758V5	>C0965		7			Not USED	
	CA4758VR	>C0966		8			Not USED	
	CA4759V4	>C0967	1ml	9			"	
	CA4760V4	>C0968	0.005ml	10	1:1000	20:48	OK " confirms >C0984	
	CA4762V4	>C0969	0.5ml	1	1:10	21:37	OK " Confirmed by >C0985	
	CA4761V4	>C0970	0.02ml	2	1:250	22:25	~~OK~~ Confirms surrogates ~~NG possible carryover~~ KB 10/8/90	
	BFB	>C0971	1ml	—		09:30	OK	
	QC7035VS	>C0972	5ml	1		10:01	~~NG~~ OK 5ul CalC I+II, XVOA	
	QC7035VS	>C0973		2			Not RUN	
	QC7035VS	>C0974		1			NG 5ul CalC I+II, XVOA	
	QC7035VS	>C0975	5ml	8	CB/DD CBCalc at	13:05	2ul	IC1172 CC1172
	QC7035VS	>C0976		9		13:55	15ul	
	QC7035VS	>C0977		10		14:45	10ul	
	QC7035VS	>C0978		1		15:35	2ul	
	QC7035VA	>C0979		2		16:25	OK	145

KB 10/8/90

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department Page 5 of 5

Date 12/4/90 Instr. C

A-Type EFB|VOA
Tune file APE12I
Seq. file
Method file VOA.C
ID file EC1172
CB file CC1172
Analyst K. Brown
Reviewed by/Date
Batch #'s QC QV70357
LCS 10/4/90

__ Standards Updated
Date By

Tape # Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
R	CA4757V4F	>C0980	5ml	6		17:29	OK Confirm >C0964	
	CA4755VS	>C0981	5ml	7		18:19	OK 10 µl IFB matrix spike	
	CA4755VR	>C0982	5ml	8		19:07	OK 10 µl " " "	
	CA4759V4F	>C0983	1ml	9		19:55	OK Dilution for >C0933	
	CA4760V4F	>C0984	0.025ml	10	1:200	20:44	OK Confirmed by >C0968	
	CA4762V4F	>C0985	0.025ml	1	1:200	21:33	OK Dilution Data for >C0986	
	CA4761V4F	>C0986	0.001ml	2	1:500	22:21	OK Confirmed by >C0970	

R : redo , P : Aroclor search , + : Plus search

L I C

P.1/2

WET CHEMISTRIES QC DATA

S-Batch: QW30597 / QW60813
QC-Batch: QW70264
Verified: [signature] 9/27/90

Parameter: CHLORIDE
Method Ref: 325.2
Det Limit: 1.0
Instrument: GTPC
Matrix: H2O

Date: 9-25-90
Time: 12:00 PM.
Analyst: H. Chandler

INSTRUMENT CALIBRATION STANDARDS: Units = MG/L

Standard	200	100	75	50	5	
Observed	200.9	100.5	76.0	49.6	4.75	(abs)
% Recovr	100	101	101	99	95	

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [M]
Comments:

Source Lot:
y = mx + b
Slope: NA
Intcp:
Corr:
Corr. Coef > 0.99500 [ ]

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%				[ ]	Lot #
—	ICBLK	< MDL				[ ]	
13, 14	M. BLK - 1	< MDL	0.611			[✓]	
15, 16	S. BLK - 1	+/- 15%	49.8	50	99	[✓]	Lot #
17, 18	EXRQC - 1	+/- 20%	97.9	97	101	[✓]	Lot # ERA 9932
33	CCV - 1	+/- 15%	104.9	100	105	[✓]	
32	CCB - 1	< MDL	0.797			[✓]	
48	CCV - 2	+/- 15%	105.2	100	105	[✓]	
47	CCB - 2	< MDL	1.3			[✓]	Low level C/O
63	CCV - 3	+/- 15%	106.4	100	106	[✓]	
62	CCB - 3	< MDL	1.9			[✓]	Low Level C/O
—	M. BLK - 2	< MDL	—			{ }	
—	S. BLK - 2	+/- 15%	—	—	—	{ }	Lot #
—	EXRQC - 2	+/- 20%	—	—	—	{ }	Lot #
78	CCV - 4	+/- 15%	109.3	100	108	[✓]	
77	CCB - 4	< MDL	1.9			[✓]	Low level C/O.
93	CCV - 5	+/- 15%	107.8	100	108	[✓]	
92	CCB - 5	< MDL	1.8			[✓]	Low Level C/O.
108	CCV - 6	+/- 15%	109.0	1.2	108	[✓]	
107	CCB - 6	< MDL	1.2			[✓]	Low Level C/O.
—	M. BLK - 3	< MDL	—			{ }	
—	S. BLK - 3	+/- 15%	—	—	—	{ }	Lot #
—	EXRQC - 3	+/- 20%	—	—	—	{ }	Lot #
123	CCV - 7	+/- 15%	106.5	100	107	[✓]	
122	CCB - 7	< MDL	1.5			[✓]	Low level C/O.
138	CCV - 8	+/- 15%	106.5	100	107	[✓]	
137	CCB - 8	< MDL	0.710			[✓]	%R & ISs Out of 153 limits, high on Percent
153	CCV - 9	+/- 15%	115.2	100	115 *	[✓]	
152	CCB - 9	< MDL	1.2			[✓]	Samples from Cuts # 139-166

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R
20		GB2974	9.3	9.5	02	GB2974	9.3	50	58.2	98
34		GB2982	5.6	5.4	04	GB2982	5.6	50	56.1	101
49		GB3528	over	over	—	GB3519	over	50	over	
64		GB2985	81.2	81.2	00	GB2985	81.2	50	129.8	97.2
79		GB3527	over	over	—	GB3527	over	50	over	
94		GB3538	over	over	—	GB3528	over	50	over	

CV-16 5/90 Rev. 0

CLC

P.2/2.

WET CHEMISTRIES QC DATA

S-Batch: QW30597 / QW30813
QC-Batch: QW70264
Verified: _____

Parameter: CHLORIDE
Method Ref: 325.2
Det Limit: 1.0
Instrument: GTPC
Matrix: H2O

Date: 9-25-90
Time: 12:00 PM
Analyst: M. Chandler

INSTRUMENT CALIBRATION STANDARDS: Units = MG/L

Standard — — — — —
Observed — See Page 1/2. — — — (abs)
% Recovr — — — — —
Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],
Comments: _____

Source Lot: _____
y = mx + b
Slope: _____
Intcp: _____
Corr: _____
Corr. Coef > 0.99500 [ ]

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%				[ ]	Lot #
—	ICBLK	< MDL				[ ]	
—	M. BLK - 1	< MDL	—			{ }	
—	S. BLK - 1	+/- 15%	—	—	—	{ }	Lot #
—	EXRQC - 1	+/- 20%	—	—	—	{ }	Lot #
168	CCV - 10	+/- 15%	101.0	100	101	[H]	
167	CCB - 10	< MDL	0.710			[H]	
183	CCV - # 11	+/- 15%	101.6	100	102	[H]	
182	CCB - # 11	< MDL	0.797			[H]	
198	CCV - # 12	+/- 15%	102.5	100	103	[H]	
197	CCB - # 12	< MDL	-0.160			[H]	
—	M. BLK - 2	< MDL	—			{ }	
—	S. BLK - 2	+/- 15%	—	—	—	{ }	Lot #
—	EXRQC - 2	+/- 20%	—	—	—	{ }	Lot #
213	CCV - # 13	+/- 15%	102.3	100	102	[H]	
212	CCB - # 13	< MDL	2.6			[H]	Low Level Qc.
238	CCV - # 14	+/- 15%	103.6	100	104	[H]	
237	CCB - # 14	< MDL	0.281			[H]	
259	CCV - # 15	+/- 15%	103.7	100	104	[H]	
258	CCB - # 15	< MDL	1.2			[H]	Low Level C/o.
—	M. BLK - 3	< MDL	—			{ }	
—	S. BLK - 3	+/- 15%	—	—	—	{ }	Lot #
~~281~~	EXRQC - 3	+/- 20%	—	—	—	{ }	Lot #
283	CCV - # 16	+/- 15%	104.0	100	104	[H]	
MC 9/24 ~~281~~ 282	CCB - # 16	< MDL	0.3			[H]	
~~290~~	CCV - # 17	+/- 15%				[ ]	
	CCB - # 17	< MDL				[ ]	
	CCV - # 18	+/- 15%				[ ]	
	CCB - # 19	< MDL				[ ]	

QUALITY CONTROL

Seq #	QTC #	Duplicates ETC #	Orig	Dupe	% RPD	Matrix Spikes ETC #	Orig	Added	Result	% R	
109		FB2214	87.5	87.6	0.0	FB2214	87.3	50	136.4	98	
124		FB1951	1.0	0.6		FB1951	1.0	50	50.6	99	
139		~~FB2262~~	~~1.5~~	~~1.0~~	~~0.5~~	~~FB2262~~	~~1.5~~	~~50~~	~~47.8~~	~~92~~	Do not use FB2262
154		CA4753	3.5	3.9	0.4	CA4753	3.5	50	53.4	102	
						See 9/24 Analysis				48	CA4753 for QC.

CV-16 5/90 Rev. 0

ETC

P.2/2 9/27/90

CHLORIDE

QW-Batch: QW30597
QC-Batch: QW70264
Verified: ~~ZMA~~ 9/27/90
Instrument: AA II

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Date: 9-25-90
Time: 12:00 PM
Analyst: M. Chaudhry

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
20	GB2974	9.31	-	9.3	
24	GB2975	5.09	-	5.1	
25	GB2980	55.2	-	55.2	
26	GB2983	4.73	-	4.7	
27	GB4103	0.421	-	BMDL	
28	GB3506	OVER.	1:10		
30	GB3510	OVER	1:10		
34	GB2982	5.57	-	5.6	
38	GB3511	OVER	1:10		
40	GB3514	OVER	1:10		
42	GB3519	76.0	1:10	760	
44	GB3520	OVER	1:10		
46	GB3538	87.3	1:10	873	
49	GB3518	OVER	-		
54	GB4075	Cobby OVER.	-		
55	GB3505	OVER	1:10		
56	GB3508.	OVER	1:10		
57	GB3509	OVER	1:10		
58	GB2976	C. OVER.	-		
59	GB2981	19.9	-	19.9	
60	GB2995	OVER	1:10		
61	GB2984	C. OVER.	-		
64	GB2985	81.2	-	81.2	
68	GB2986	2.11	-	2.1	

CHLORIDE

QW-Batch: QW30597
QC-Batch: QW30597
Verified: RPH 9/27/90
Instrument: AA II

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Page 2 of 7
Date: 9-25-90
Time: 12:00 PM
Analyst: M. Chaudhry

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
69	GB3400	OVER	-		
70	GB3579	C. OVER	-		
71	GB3408	C. OVER	-		
72	GB3058	46.6	-	46.6	
73	GB3701	21.6	-	21.6	
74	GB2997	OVER	-		
75	GB3517	OVER	-		
76	GB3524	OVER	-		
79	GB3527	OVER	-		
83	GB3502	OVER	1:10		
84	GB3522	OVER	-		
85	GB3582	C-OVER	1:10		
86	GB3529	OVER	-		
87	GB3531	OVER	-		
88	GB3537	OVER	-		
89	GB3540	OVER	-		
90	GB3525.	OVER	-		
91	GB3526	OVER	-		
94	GB3528	OVER	-		
98	GB3533	OVER	-		
99	GB3534	OVER	-		
100	GB3536	OVER	-		
101	GB2968	C. OVER	-		
102	GB2969	12.7	-	12.7	

CHLORIDE

QW-Batch: QW30597 QW60813
QC-Batch: QW702264 QT05389
Verified: RH 9/27/90
Instrument: AA II.

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Page 3 of 7
Date: 9-25-90
Time: 12:00 PM.
Analyst: H. Chaudhry

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
103	GB2970	14.9	-	14.9	
104	FB2604	129.9	-	130 ~~129~~	H.C 9/26
105	FB2605	115.8	-	116	
106	FB2613	128.4	-	128	
109	FB2614	87.3	-	87.3	
113	FB2615	95.7	-	95.7	
114	FB2616	152.4	-	152	
115	FB2618	142.2	-	142	
116	FB2623	172.5	-	173	
117	FB2625	95.6	-	95.6	
118	FB2634	119.2	-	119	
119	FB2637	1.15	-	1.2	
120	FB2655	20.6	1:10	206	
121	FB1849	over	-		
124	FB1851	1.04	-	1.0	
128	FB2782	2.77	1:20		
129	FB2645	42.3	-	42.3	
130	FB2646	42.6	-	42.6	
131	FB2647	44.6	-	44.6	
132	FB2648	43.6	-	43.6	
133	FB2649	11.6	-	11.6	
134	FB2650	42.5	-	42.5	
135	FB2607	12.2	-	12.2	
136	FB2602	10.7	-	10.7	

CHLORIDE

QW-Batch: QW30597 QW60813
QC-Batch: QW70264 QC10599
Verified: RJAS 9/24/90
Instrument: AAII.

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Page 4 of 7
Date: 9-25-90
Time: 12:00 PM.
Analyst: M. Chaudhry

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
139	FB2603	10.3	-		
143	FB2606	20.8	-		
144	FB2608	10.3	-		
145	FB2609	2.93	-		
146	FB2610	47.0	-		%R of Iss Cal#153
147	FB2611	21.3	-		out of Range - Rerun
148	FB2622	24.8	-		Samples from
149	FB2636	1.22	-		Cal#139 — 166.
150	HA2842	OVER.	-		
151	HA2843	13.3	-		
154	CA4753	~~12.1~~ 31.3	MC 9/26		
158	CA4754	27.9	-		
159	CA4755	14.5	-		
160	CA4756	9.00	-		
161	CA4763	1.45	-		
163	GB3506	OVER.	1:50		
165	GB3506	90.6	1:100		
166	GB3506	42.4	1:200		
169	GB3510	OVER	1:50		
171	GB3510	162.3	1:100	16200	
172	GB3510	76.4	1:200		
174	GB3511	187.3	1:50	9370	
176	GB3511	87.2	1:100		
177	GB3511	43.1	1:200		

CHLORIDE

QW-Batch: QW30597 QW50813
QC-Batch: QW7026A9 PB7C05259
Verified: RJH 9/27/90
Instrument: AA II

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Page 5 of 7
Date: 9-25-90
Time: 12:00 PM
Analyst: M. Chaudhry

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
179	GB3514	OVER	1:50		
181	GB3514	115.2	1:100	11500	
185	GB3514	MC 9/26/90 ~~LOT 6~~ 49.6	1:200		
186	GB3520	195.5	1:50		
188	GB3520	91.7	1:100	9200	
189	GB3520	45.4	1:200		
191	GB3518	79.4	1:5	397	
193	GB3518	39.1	1:10		
194	GB3518	20.6	1:20		
196	GB4075	-0.0541	-	BMDL	
199	GB3505	OVER	1:50		
201	GB3505	187.1	1:100	18700	
202	GB3505	84.2	1:200		
204	GB3508	OVER	1:50		
206	GB3508	OVER	1:100		
207	GB3508	OVER	1:200		Rerun on 9/26/90 with batch # QW30597A
209	GB3509	OVER	1:50		
211	GB3509	OVER	1:100		
214	GB3509	156.2	1:200	31200	
216	GB2976	4.37	STR	4.4	
217	GB2995	OVER	1:50		
219	GB2995	OVER	1:100		
220	GB2995	121.6	1:200	24300	
222	GB2984	4.12	STR	4.1	

CHLORIDE

QW-Batch: QW30597
QC-Batch: QW60813 QW70264
Verified: ZH 9/24/90
Instrument: AAII.
QTC05289

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Date: 9-25-90
Time: 12:00 PM.
Analyst: M. Chandley

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
223	GB3400	189.1	1:5		
225	GB3400	44.5	1:20		
226	GB3400	91.8	1:10	918	
228	GB3579	86.1	1:2	172	
230	GB3408	99.9	STR	99.9	
231	GB2997	99.7	1:2	199	
233	GB3517	115.3	1:2	231	
235	GB3524	42.9	1:5	215	
239	GB3527	86.0	1:5	430	
241	GB3527	20.7	1:20		
242	GB3527	40.3	1:10		
244	GB3502	OVER	1:50		
246	GB3502	62.0	1:200		
247	GB3502	144.2	1:100	14400	
249	GB3522	39.0	1:10		
251	GB3522	19.3	1:20		
252	GB3522	80.7	1:5	404	
254	GB3582	30.8	1:10	308	
255	GB3582	OVER.	STR		
260	GB3529	12.3	1:20		
261	GB3529	24.7	1:10	247	
263	GB3531	15.3	1:20		
264	GB3531	32.9	1:10	329	
266	GB3537	103.2	1:2	206	

ETC

CHLORIDE

QW-Batch: QW30597 QW60813
QC-Batch: QW702649 GTC05289
Verified: [illegible] 9/27/90
Instrument: AA II.

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Date: 9-25-90
Time: 12:00 PM.
Analyst: M. Chaudhry

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
267	GB3540	11.9	1:20		
268	GB3540	24.3	1:10		
269	GB3540	46.5	1:5	233	
271	GB3525	20.1	1:20		
272	GB3525	41.0	1:10		
273	GB3525	85.7	1:5	429	
275	GB3526	15.6	1:20		
276	GB3526	32.4	1:10		
277	GB3526	65.1	1:5	326	
					Rerun sample after cuvp # 281 ∴ Computer took cuvp # upto 269.

ETC

P. 1/1.

WET CHEMISTRIES QC DATA

S-Batch: QW30597A, QW30731A
QC-Batch: QW70264A
Verified: RHAC 9/27/90

Parameter: CHLORIDE
Method Ref: 325.2
Det Limit: 1.0
Instrument: GTPC
Matrix: H2O

Date: 9-26-90
Time: 9:00 AM
Analyst: H. Chandley

INSTRUMENT CALIBRATION STANDARDS: Units = MG/L

Source Lot:
y = mx + b
Slope: N/A
Intcp:
Corr:

Standard	200	100	75	50	5	
Observed	202.6	100.4	75.2	50.1	5.07	(abs)
% Recovr	100	100	100	100	101	

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ], Corr. Coef > 0.99500 [ ]
Comments:

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
	ICVER	+/- 15%				[ ]	Lot #
	ICBLK	< MDL				[ ]	
12, 14	M. BLK - 1	< MDL	0.133			[✓]	
15, 16	S. BLK - 1	+/- 15%	50.0	50	100	[✓]	Lot #
17, 13	EXRQC - 1	+/- 20%	99.1	97.0	102	[✓]	Lot # 5932 - ERA
33	CCV - 1	+/- 15%	100.4	100	100	[✓]	
32	CCB - 1	< MDL	0.438			[✓]	
48	CCV - 2	+/- 15%	101.1	100	101	[✓]	
47	CCB - 2	< MDL	0.850			[✓]	
63	CCV - 3	+/- 15%	101.9	100	102	[✓]	
62	CCB - 3	< MDL	2.4			[✓]	
—	M. BLK - 2	< MDL	—			{ }	
—	S. BLK - 2	+/- 15%	—	—	—	{ }	Lot #
—	EXRQC - 2	+/- 20%	—	—	—	{ }	Lot #
78	CCV - 4	+/- 15%	101.5	100	102	[✓]	
77	CCB - 4	< MDL	0.238			[✓]	
	CCV - 5	+/- 15%				[ ]	
	CCB - 5	< MDL				[ ]	
	CCV - 6	+/- 15%				[ ]	
	CCB - 6	< MDL				[ ]	
	M. BLK - 3	< MDL				{ }	
	S. BLK - 3	+/- 15%				{ }	Lot #
	EXRQC - 3	+/- 20%				{ }	Lot #
	CCV - 7	+/- 15%				[ ]	
	CCB - 7	< MDL				[ ]	
	CCV - 8	+/- 15%				[ ]	
	CCB - 8	< MDL				[ ]	
	CCV - 9	+/- 15%				[ ]	
	CCB - 9	< MDL				[ ]	

QUALITY CONTROL

Seq #	QTC #	Duplicates ETC #	Orig	Dupe	% RPD	Matrix Spikes ETC #	Orig	Added	Result	% R
20 · 23		FB2603	9.2	9.3	01	FB2603	9.2	50	58.6	99
34 · 37		CA4753	30.7	30.7	00	CA4753	30.7	50	76.4	91

WET CHEMISTRIES QC DATA

S-Batch: QW30597 QW60813 QW70264

QC-Batch: _____

Verified: RHS 9/27/90

Parameter: CHLORIDE

Method Ref: EPA 325.2

Det Limit: 1.0 mg/L

Instrument: GTPC

Matrix: H2O

Date: 9/25/90

Time: 12:00pm

Analyst: M. Chandler

COMMENTS/CONFORMANCE SUMMARY

CCV failure @ 115.2% - Analyst judgment to re-analyze affected samples. Some low level carryover on CCBs however this is not method performance criteria. All other Method performance criteria were acceptable.

Verification: RHS

Date: 9/27/90

Analyst Signature: RHS for MC

Date: 9/27/90

CHLORIDE

QW-Batch: QW30597A QW60813A
QC-Batch: QW70264A QTC05388
Verified: RJH 9/27/90
Instrument: GTPC

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Page 1 of 2
Date: 9-26-90
Time: 9:00 AM
Analyst: M. Chanelly

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
20	FB 2603	9.18	-	9.2	
24	FB 2606	19.8	-	19.8	
25	FB 2608	9.87	-	9.9	
26	FB 2609	2.66	-	2.7	
27	FB 2610	44.8	-	44.8	
28	FB 2611	19.9	-	19.9	
29	FB 2622	22.4	-	22.4	
30	FB 2636	0.537	-	BMDL	
31	HA 2843	11.6	-	11.6	
34	CA 4753	30.7	-	30.7	
38	CA 4754	26.3	-	26.3	
39	CA 4755	13.6	-	13.6	
40	CA 4756	8.27	-	8.3	
41	CA 4763	0.447	-	BMDL	
42	HA 2842	83.6	1:10	836	
44	HA 2842	41.9	1:20		
46	GB 3506	89.3	1:100	8930	
50	GB 3528	43.7	1:5		
51	GB 3528	116.3	1:2	233	
53	GB 3533	82.6	1:5	413	
54	GB 3533	over.	1:2		
57	GB 3534	91.4	1:10	914	
59	GB 3536	140.7	1:20	~~140~~ 1410	M·C 9/27/90
60	GB 3536	67.5	1:20		

M·C

CHLORIDE

QW-Batch: QW30597A / QW30813A
QC-Batch: QW24264A
Verified: 9/27/90

Method Ref: EPA 325.2, SW-846 9251
(Colorimetric/Automated Ferri Cyanide)
MDL: 1.0 mg/l
Matrix: Aqueous

Page 2 of 2
Date: 9-26-90
Time: 9:00 AM
Analyst: M. Chandler

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
65	GB2968	12.2	STR	12.2	
66	FB1849	81.6	1:5	408	
68	FB2782	46.9	STR	46.9	
71	GB3508	67.0	1:500	33500	
73	GB3508	32.9	1:1000		
75	GB3508	191.4	1:200		

ETC

WET CHEMISTRIES QC DATA

S-Batch: BW70261, 30621 | Parameter: Fluoride | Date: 9-28-90
Method Ref: 413.2
QC-Batch: QTC05299 | Det Limit: 0.1 mg/L | Time: 8:00am
Instrument: 6TP2
Verified: SbrooT 10/2/90 | Matrix: Water | Analyst: [illegible]
per data sheets

INSTRUMENT CALIBRATION STANDARDS: Units = mg/L | Source Lot:

Standard	2.00	1.50	1.00	0.50	0.10	y = mx + b
Observed	1.94	1.161	1.07	0.53	0.108	(abs) Slope: Intcp: Corr:
% Recovr	97%	107%	107%	106%	108%	

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ], Corr. Coef > 0.99500 [ ]

Comments: Inst start time 11:30am - Warm-up & set up started 10:30 (1 hr run) 9:00am.

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
16	ICVER	+/- 15%	.499	.500	99.8%	[ ]	Lot #
14	ICBLK	< MDL	<mdl			[ ]	
15	M. BLK - 1	< MDL	<mdl			{ }	
17	S. BLK - 1	+/- 15%	.480	.500	96%	{ }	Lot #
13	EXRQC - 1	+/- 20%	1.21	1.12	108%	{ }	Lot #
36	CCV - 1	+/- 15%	1.08	1.00	108%	[ ]	
39	CCB - 1	< MDL	<mdl			[ ]	
47	CCV - 2	+/- 15%	1.11	1.00	111.0%	[ ]	
46	CCB - 2	< MDL	<mdl			[ ]	
63	CCV - 3	+/- 15%	.998	1.00	99.8%	[ ]	
62	CCB - 3	< MDL	<mdl			[ ]	
/	M. BLK - 2	< MDL	/			{ }	
/	S. BLK - 2	+/- 15%	/	/	/	{ }	Lot #
/	EXRQC - 2	+/- 20%	/	/	/	{ }	Lot #
76	CCV - 4	+/- 15%	1.06	1.00	106%	[ ]	
73	CCB - 4	< MDL	<mdl			[ ]	
92	CLV - 5	+/- 15%	1.22	1.00	122% -out	[ ]	C/O Rerun
91	CCB - 5	< MDL	<mdl			[ ]	
122	CCV - 6	+/- 15%	1.23	1.00	123% -out	[ ]	
121	CCB - 6	< MDL	<mdl			[ ]	
/	M. BLK - 3	< MDL	/			{ }	
/	S. BLK - 3	+/- 15%	/	/	/	{ }	Lot #
/	EXRQC - 3	+/- 20%	/	/	/	{ }	Lot #
144	CCV - 7	+/- 15%	1.17	1.00	117% -cv	[ ]	
143	CCB - 7	< MDL	<mdl			[ ]	
156	CCV - 8	+/- 15%	1.14	1.00	114%	[ ]	
157	CCB - 8	< MDL	<mdl	/	/	[ ]	
/	CCV - 9	+/- 15%	/			[ ]	
/	CCB - 9	< MDL	/			[ ]	

Redo all samples from 76 - 157

QUALITY CONTROL

Seq #	QTC #	Duplicates ETC #	Orig	Dupe	% RPD	Matrix Spikes ETC #	Orig	Added	Result	% R
		CA4753	.261	.234	6	CA4753	.261	1.00	1.37	111%
		6B3529	1.23	1.30	6	6B3529	over	Double Spks 1:2		
		6B3426	.147	.173	13	6B3426	.147	1.00	1.28	108%
		6B3515	1.08	1.12	4	6B3515	over	Double Spks 1:2		

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ETC

FLUORIDE

QW-Batch: QW70261 30621 | Method Ref: SM 413 E | Page 1 of 2
QC-Batch: QTC05299 | (Colorimetric, Automated Conplexone) | Date: 9-28-90
Verified: BG 10/2/90 | MDL: 0.1 mg/l | Time: 8:00 am
Instrument: GTPC | Matrix: Aqueous | Analyst: DB

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
20	CA4753	.261	✓	0.3	
24	CA4703	.148	✓	Dec. Cup # 145 c/o	
25	CA4755	.245	✓	0.2	
26	CA4754	.242	✓	0.2	
27	CA4756	.194	✓	0.2	
31	6B3529	1.23	✓	1.2	
35	6B3540	.800	✓	0.8	
36	6B3537	1.18	✓	1.2	
37	6B3531	.951	✓	1.0	
38	6B3528	1.30	✓	1.3	
39	6B3533	1.21	✓	1.2	
40	6B3525	1.02	✓	1.0	
41	6B3526	1.55	✓	1.6	
42	6B4069	.419	✓	0.5	
43	6B4067	.226	✓	0.2	
44	6B4073	.0706	✓	BMDL	
48	6B4070	.197	✓	0.2	
53	6B3531	.992	✓	1.0	confirmed ✓
54	6B3534	1.17	✓	1.2	
55	6B4075	.0860	✓	BMDL	
56	6B4072	.0307	✓	BMDL	
57	6B4068	.165	✓	0.2	
58	6B4071	.187	✓	0.2	
59	6B4074	.0138	✓	BMDL	

FLUORIDE

QW-Batch: QW702161.30621 Method Ref: SM 413 E Page 2 of 2
QC-Batch: QC05299 (Colorimetric, Automated Conplexone) Date: 9-28-90
Verified: [signature] 10/2/90 MDL: 0.1 mg/l Time: 8:00am
Instrument: GTPC Matrix: Aqueous Analyst: MR

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
60	6B4076	-.0109	—	BMDL	
64	6B3518	1.08	—	1.1	
69	6B3527	1.12	—	1.1	
70	6B3536	OVER - Redo 1:10			—
71	6B2966	C/O Redo STR.			—
72	6B4066	.292	—	~~0.3~~	Redo str C/O
73	6B3535	Redo	1:2 - OVER	—	—
82	6B3000	Redo 1:5		ISS FAILED C/O	
84	6B3503	Redo STR		↓	
98	6B3501	Redo 1:5			
101	6B3509	Redo 1:100, 1:200		↓	
113	6B3502	C/O on Wash / ISS 1:20 Redo.			
116	6B3508	Redo 1:2, 1:5		ISS FAILED - C/O	
123	6B2995	Redo 1:10		↓	
128	6B3505	Redo 1:10			
133	6B3504	Redo 1:50			
138	6B3515	Redo 1:50		↓	
145	CA4763	.0815	—	~~BMDL~~	Redo str
153	6B2991	.237	—	~~0.3~~	Redo str
155	6B3522	.982	—	~~1.0~~	Redo str

ETC

WET CHEMISTRIES QC DATA

S-Batch: QW702161 | Parameter: Fluoride | Date: 10-17-95

QC-Batch: QTC05342 | Method Ref: 413.2 | Time: 8:00 am

Verified: mc 10/18/95 | Det Limit: 0.10 | Analyst: [illegible]

Instrument: IC-PC

Matrix: WATER

INSTRUMENT CALIBRATION STANDARDS: Units = mg/L

Standard	2.0	1.5	1.0	0.5	0	
Observed	1.99	1.49	1.04	.476	/	(abs)
% Recovr	99%	99%	104%	95%		

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],

Comments:

Source Lot: —

y = mx + b

Slope:

Intcp:

Corr:

Corr. Coef > 0.99500 [ ]

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
18	ICVER	+/- 15%	.493	.500	98%	[ ]	Lot #
16	ICBLK	< MDL	<mdl			[ ]	
15	M. BLK - 1	< MDL	<mdl.			{ }	
17	S. BLK - 1	+/- 15%	.476	.500	95%	{ }	Lot #
19	EXRQC - 1	+/- 20%	.46	.97	120%	{ }	Lot #
27	CCV - 1	+/- 15%	.956	1.00	96%	[ ]	
28	CCB - 1	< MDL	<mdl			[ ]	
31	CCV - 2	+/- 15%	1.026	1.00	103%	[ ]	
32	CCB - 2	< MDL	<mdl			[ ]	
	CCV - 3	+/- 15%				[ ]	
	CCB - 3	< MDL				[ ]	
	M. BLK - 2	< MDL				{ }	
	S. BLK - 2	+/- 15%				{ }	Lot #
	EXRQC - 2	+/- 20%				{ }	Lot #
	CCV - 4	+/- 15%				[ ]	
	CCB - 4	< MDL				[ ]	
	CCV - 5	+/- 15%				[ ]	
	CCB - 5	< MDL				[ ]	
	CCV - 6	+/- 15%				[ ]	
	CCB - 6	< MDL				[ ]	
	M. BLK - 3	< MDL				{ }	
	S. BLK - 3	+/- 15%				{ }	Lot #
	EXRQC - 3	+/- 20%				{ }	Lot #
	CCV - 7	+/- 15%				[ ]	
	CCB - 7	< MDL				[ ]	
	CCV - 8	+/- 15%				[ ]	
	CCB - 8	< MDL				[ ]	
	CCV - 9	+/- 15%				[ ]	
	CCB - 9	< MDL				[ ]	

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R
—	—	[illegible]	<mdl	<mdl	0	[illegible]	<mdl	1.0	1.075	108%

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ETC

FLUORIDE

QW-Batch: QW70261 | Method Ref: SM 413 E | Page 1 of 1
QC-Batch: QTC05342 | (Colorimetric, Automated Conplexone) | Date: 10-17-90
Verified: m.c. 10/19/90 | MDL: 0.1 mg/l | Time: 8:00 am
Instrument: AA II | Matrix: Aqueous | Analyst: Brace

Seq #	ETC Job #	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
22	CA4763	.0455	—	1 mdl	

10/17/90

ETC

WET CHEMISTRIES QC DATA

S-Batch: QW60812 Parameter: NO3-N Date: 9/27/90

Method Ref: 353.2

QC-Batch: _____ Det Limit: 0.1 mg/L Time: —

Instrument: CTPC

Verified: ~~[illegible]~~ 9/28/90 Matrix: H2O Analyst: C.O.

COMMENTS/CONFORMANCE SUMMARY

ISS (CCU) failure @ Season # 217. ALL analyses to be re-analyzed from Season # 211 → 266. ALL other QC criteria were acceptable.

Verification: [signature] Analyst Signature: [signature] C.O.

Date: 9/28/90 Date: 9/28/90

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ETC

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WET CHEMISTRIES QC DATA

S-Batch: QW60812 | Parameter: NO3-N | Date: 9/27/90
Method Ref: 353.2
QC-Batch: _____ | Det Limit: 0.1 mg/L | Time: —
Instrument: ETTC
Verified: [illegible] 9/28/90 | Matrix: H2O's | Analyst: CO.

INSTRUMENT CALIBRATION STANDARDS: Units = mg/L | Source Lot: _____

Standard	2.00	1.00	0.50	0.10		
Observed	2.01	1.01	0.504	0.107		mg/L (abs)
% Recovr	100	101	101	107		

y = mx + b
Slope: N/A
Intcp:
Corr:

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [illegible]
Corr. Coef > 0.99500 [illegible]
Comments: _____

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%				[ ]	Lot #
—	ICBLK	< MDL				[ ]	
19,20	M. BLK - 1	< MDL	0.013			[✓]	
21,22	S. BLK - 1	+/- 15%	0.506	0.500	101	[✓]	Lot #
25,26	EXROC - 1	+/- 20%	0.964	0.98	98.4	[✓]	Lot # ERA 9920
41	CCV - 1	+/- 15%	0.991	1.00	99.1	[✓]	
40	CCB - 1	< MDL	0.018			[✓]	
57	CCV - 2	+/- 15%	1.02	1.00	102	[✓]	
56	CCB - 2	< MDL	0.015			[✓]	
73	CCV - 3	+/- 15%	1.03	1.00	103	[✓]	
72	CCB - 3	< MDL	0.018			[ ]	
—	M. BLK - 2	< MDL				[✓]	
—	S. BLK - 2	+/- 15%				[✓]	Lot #
—	EXROC - 2	+/- 20%				[✓]	Lot #
89	CCV - 4	+/- 15%	1.04	1.00	104	[✓]	
88	CCB - 4	< MDL	0.019			[✓]	
105	CCV - 5	+/- 15%	1.05	1.00	105	[✓]	
104	CCB - 5	< MDL	0.020			[✓]	
121	CCV - 6	+/- 15%	1.05	1.00	105	[✓]	
120	CCB - 6	< MDL	0.021			[✓]	
—	M. BLK - 3	< MDL				[✓]	
—	S. BLK - 3	+/- 15%				[✓]	Lot #
—	EXROC - 3	+/- 20%				[✓]	Lot #
137	CCV - 7	+/- 15%	1.03	1.00	103	[✓]	
136	CCB - 7	< MDL	0.025			[✓]	
148	CCV - 8	+/- 15%	1.02	1.00	102	[✓]	
147	CCB - 8	< MDL	0.023			[✓]	
153,154	CCV - 9	+/- 15%	1.04	1.00	104	[✓]	
152	CCB - 9	< MDL	0.023			[✓]	

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	%RPD	ETC #	Orig	Added	Result	%R
32 · 35		FB2604	0.03	0.03	0	FB2604	0.03	0.50	0.524	99
43 · 46		FB2616	0.02	0.02	0	FB2616	0.02	0.50	0.522	100
59 · 62		FB2647	0.05	0.05	0	FB2647	0.05	0.50	0.538	98
76 · 79		FB2610	0.04	0.03	29	FB2610	0.04	0.50	0.532	98
93 · 100		GB3525	0.05	0.05	0	GB3525	0.05	0.50	0.554	101
107 · 110		GB3533	0.03	0.03	0	GB3533	0.03	0.50	0.528	100

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ETC

P. 2 of 3.

WET CHEMISTRIES QC DATA

S-Batch: QW60812 | Parameter: NO3-N | Date: 9/27/90

QC-Batch: _____ | Method Ref: 353.2 | Time: —

Verified: [illegible] 9/28/90 | Det Limit: 0.1 mg/L | Analyst: CO.

Instrument: ETIC

Matrix: H2O

INSTRUMENT CALIBRATION STANDARDS: Units = _____

Standard _____

Observed See p 1/1 (abs)

% Recovr _____

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],

Comments: _____

Source Lot: _____

y = mx + b

Slope: _____

Intcp: _____

Corr: _____

Corr. Coef > 0.99500 [ ]

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%					Lot #
—	ICBLK	< MDL					
—	M. BLK - 1	< MDL					
—	S. BLK - 1	+/- 15%					Lot #
—	EXRQC - 1	+/- 20%					Lot #
163	CCV - 10	+/- 15%	1.03	1.00	103		
162	CCB - 10	< MDL	0.024				
169	CCV - 11	+/- 15%	1.06	1.00	106		
168	CCB - 11	< MDL	0.020				
185	CCV - 12	+/- 15%	1.07	1.00	107		
184	CCB - 12	< MDL	0.032				
—	M. BLK - 2	< MDL					
—	S. BLK - 2	+/- 15%					Lot #
—	EXRQC - 2	+/- 20%					Lot #
193	CCV - 13	+/- 15%	1.07	1.00	107		
192	CCB - 13	< MDL	0.035				
201	CCV - 14	+/- 15%	1.08	1.00	108		
200	CCB - 14	< MDL	0.034				
209	CCV - 15	+/- 15%	0.945	1.00	94.5		
208	CCB - 15	< MDL	0.041				
—	M. BLK - 3	< MDL					
—	S. BLK - 3	+/- 15%					Lot #
—	EXRQC - 3	+/- 20%					Lot #
216 218	CCV - 16	+/- 15%	0.421	1.00	42 %		FAILED
216 219	CCB - 16	< MDL					
225	CCV - 17	+/- 15%	FAILED				
224	CCB - 17	< MDL					
233	CCV - 18	+/- 15%	FAILED				
232	CCB - 18	< MDL					

RDMS 9/28/90

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	%RPD	ETC #	Orig	Added	Recvr	%R
124 - 127		CA 47-53	— OFF SCALE			— OFF SCALE				
132 - 135		GB 2981	0.099	0.099	0	GB 2981	0.099	0.50	0.593	99

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WET CHEMISTRIES QC DATA

S-Batch: QW60812 | Parameter: NO3-N | Date: 9/27/90

QC-Batch: _____ | Method Ref: 353.2 | Time: —

Verified: [illegible] 9/28/90 | Det Limit: 0.1 mg/L | Analyst: C.O.

Instrument: ETC

Matrix: H2O

INSTRUMENT CALIBRATION STANDARDS: Units = _____ | Source Lot: _____

Standard _____ | y = mx + b

Observed See P 19 (abs) | Slope: _____ | Intcp: _____ | Corr: _____

% Recovr Limits: % Rec. = _____ =/- 10.0 %, low std _____ +/- 15% [ ], Corr. Coef > 0.99500 [ ]

Comments: _____

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%				[✓]	Lot #
—	ICBLK	< MDL				[✓]	
—	M. BLK - 1	< MDL				[✓]	
—	S. BLK - 1	+/- 15%				[✓]	Lot #
—	EXROC - 1	+/- 20%				[✓]	Lot #
241	CCV - 19	+/- 15%	FAILED			[ ]	
240	CCB - 19	< MDL				[✓]	
249	CCV - 20	+/- 15%	FAILED			[ ]	
248	CCB - 20	< MDL				[✓]	
257	CCV - #21	+/- 15%	FAILED			[ ]	
256	CCB - #21	< MDL				[ ]	
—	M. BLK - 2	< MDL				{ }	
—	S. BLK — 2	+/- 15%				{ }	Lot #
—	EXROC - 2	+/- 20%				{ }	Lot #
265	CCV - #22	+/- 15%	FAILED			[✓]	
264	CCB - #22	< MDL				[ ]	
	CCV - #23	+/- 15%	End of Run			[ ]	
	CCB - #23	< MDL				[ ]	
	CCV - #24	+/- 15%				[ ]	
	CCB - #24	< MDL				[ ]	
—	M. BLK - 3	< MDL				{ }	
	S. BLK — 3	+/- 15%				{ }	Lot #
	EXROC - 3	+/- 20%				{ }	Lot #
	CCV - 7	+/- 15%				[ ]	
	CCB - 7	< MDL				[ ]	
	CCV - 8	+/- 15%				[ ]	
	CCB - 8	< MDL				[ ]	
	CCV - 9	+/- 15%				[ ]	
	CCB - 9	< MDL				[ ]	

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R

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WET CHEMISTRIES QC DATA

S-Batch: QW 70262 | Parameter: NO2-N | Date: 9/27/90

QC-Batch: _____ | Method Ref: 353.2 | Time: ~

Verified: RJH 9/28/90 | Det Limit: 0.1 MG/L | Instrument: GTR | Analyst: CO.

Matrix: H2O3

INSTRUMENT CALIBRATION STANDARDS: Units = MG/L

Source Lot: _____

Standard	1.00	0.500	0.200	0.100		
Observed	1.00	0.499	0.198	0.100		mg/L (abs)
% Recovr	100	99.8	99	100		

y = mx + b
Slope: N/A.
Intcp:
Corr:

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ]%

Corr. Coef > 0.99500 ++

Comments: _____

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%				[ ]	Lot #
—	ICBLK	< MDL				[ ]	
19,20	M. BLK - 1	< MDL	0.006			[✓]	
23,24	S. BLK - 1	+/- 15%	0.198	0.200	99	[✓]	Lot #
24,25	EXROC - 1	+/- 20%	NA	—	—	[✓]	Lot #
40 42	CCV - 1	+/- 15%	0.503	0.500	100.6	[✓]	
42,40	CCB - 1	< MDL	0.005			[✓]	
58	CCV - 2	+/- 15%	0.504	0.500	100.8	[✓]	
56	CCB - 2	< MDL	0.003			[✓]	
74	CCV - 3	+/- 15%	0.507	0.500	101	[✓]	
72	CCB - 3	< MDL	0.002			[✓]	
—	M. BLK - 2	< MDL	—			[✓]	
—	S. BLK — 2	+/- 15%	—	—	—	[✓]	Lot #
—	EXROC - 2	+/- 20%	—	—	—	[✓]	Lot #
90	CCV - 4	+/- 15%	0.508	0.500	102	[✓]	
88	CCB - 4	< MDL	0.003			[✓]	
106	CCV - 5	+/- 15%	0.510	0.500	102	[✓]	
104	CCB - 5	< MDL	0.003			[✓]	
122	CCV - 6	+/- 15%	0.518	0.500	104	[✓]	
120	CCB - 6	< MDL	0.005			[✓]	
—	M. BLK - 3	< MDL	—			[✓]	
—	S. BLK — 3	+/- 15%	—	—	—	[✓]	Lot #
—	EXROC - 3	+/- 20%	—	—	—	[✓]	Lot #
138	CCV - 7	+/- 15%	0.518	0.500	104	[✓]	
136	CCB - 7	< MDL	0.005			[✓]	
149	CCV - 8	+/- 15%	0.487	0.500	97.4	[✓]	
147	CCB - 8	< MDL	0.002			[✓]	
154	CCV - 9	+/- 15%	0.519	0.500	104	[✓]	
152	CCB - 9	< MDL	0.003	0.005		[✓]	

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R

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ETC

P. 2 of 3.

WET CHEMISTRIES QC DATA

S-Batch: QW70262 | Parameter: NO2-N | Date: 9/27/90
QC-Batch: _____ | Method Ref: 3532 | Time: —
Verified: RJH 9/28/90 | Det Limit: 0.1 mg/L | Instrument: GFC | Analyst: CO
Matrix: H2O's

INSTRUMENT CALIBRATION STANDARDS: Units = _____

Standard _____

Observed See 2 1/1 (abs)

% Recovr _____

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],

Comments: _____

Source Lot: _____
y = mx + b
Slope: _____
Intcp: _____
Corr: _____

Corr. Coef > 0.99500 [ ]

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%					Lot #
—	ICBLK	< M D L					
	M. BLK - 1	< M D L					
—	S. BLK - 1	+/- 15%					Lot #
—	EXRQC - 1	+/- 20%					Lot #
164	CCV - 10	+/- 15%	0.526	0.500	105		
162	CCB - 10	< M D L	0.002				
170	CCV - Z11	+/- 15%	0.518	0.500	104		
168	CCB - Z11	< M D L	0.002				
186	CCV - Z12	+/- 15%	0.525	0.500	105		
184	CCB - Z12	< M D L	0.003				
—	M. BLK - 2	< M D L					
—	S. BLK - 2	+/- 15%					Lot #
—	EXRQC - 2	+/- 20%					Lot #
194	CCV - Z13	+/- 15%	0.519	0.500	104		
192	CCB - Z13	< M D L	0.003				
202	CCV - Z14	+/- 15%	0.530	0.500	106		
200	CCB - Z14	< M D L	0.005				
210	CCV - Z15	+/- 15%	0.528	0.500	106		
208	CCB - Z15	< M D L	0.005				
—	M. BLK - 3	< M D L					
—	S. BLK - 3	+/- 15%					Lot #
—	EXRQC - 3	+/- 20%					Lot #
218	CCV - Z16	+/- 15%	0.528	0.500	106		
216	CCB - Z16	< M D L	0.008				
226	CCV - Z17	+/- 15%	0.529	0.500	106		
224	CCB - Z17	< M D L	0.005	0.005			
234	CCV - Z18	+/- 15%	0.536	0.500	107		
232	CCB - Z18	< M D L	0.008				

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R

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ETC

P.3 of 3.

WET CHEMISTRIES QC DATA
S-Batch: QW70262
QC-Batch: _____
Verified: [illegible] 9/28/90

Parameter: NO2-N
Method Ref: 353.2
Det Limit: 0.1
Instrument: CTAC
Matrix: H2O

Date: 9/27/90
Time: —
Analyst: CO.

INSTRUMENT CALIBRATION STANDARDS: Units = _____

Standard _____
Observed See P1/1 (abs)

Source Lot: _____
y = mx + b
Slope: _____
Intcp: _____
Corr: _____

% Recovr Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],
Corr. Coef > 0.99500 [ ]

Comments: _____

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
—	ICVER	+/- 15%				[ ]	Lot #
—	ICBLK	< MDL				[ ]	
—	M. BLK - 1	< MDL	—				
—	S. BLK - 1	+/- 15%	—				Lot #
—	EXROC - 1	+/- 20%	—				Lot #
242	CCV - 19	+/- 15%	0.540	0.500	108		
240	CCB - 19	< MDL	0.010				
250	CCV - 20	+/- 15%	0.534	0.500	107		
248	CCB - 20	< MDL	0.008				
258	CCV - 521	+/- 15%	0.524	0.500	105		
256	CCB - 521	< MDL	0.013				
—	M. BLK - 2	< MDL	—				
—	S. BLK - 2	+/- 15%	—				Lot #
—	EXROC - 2	+/- 20%	—				Lot #
266	CCV - 522	+/- 15%	0.526	0.500	105		
264	CCB - 522	< MDL	0.004				
Eval	CCV - 523	+/- 15%	Good Run				
Run	CCB - 523	< MDL					
	CCV - 524	+/- 15%					
	CCB - 524	< MDL					
	M. BLK - 3	< MDL					
	S. BLK - 3	+/- 15%					Lot #
	EXROC - 3	+/- 20%					Lot #
	CCV - 7	+/- 15%					
	CCB - 7	< MDL					
	CCV - 8	+/- 15%					
	CCB - 8	< MDL					
	CCV - 9	+/- 15%					
	CCB - 9	< MDL					

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R

CV-16 5/90 Rev. 0

ETC

NITRITE

GW-Batch: GW70262
QC-Batch: _____
Verified: [illegible] 9/28/90
Instrument: GTPC

Method Ref: EPA 353.2
(Colorimetric, Automated Diazotation)
MDL: 0.1 mg/l
Matrix: Aqueous

Date: 9/27/90
Time: —
Analyst: CO.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
124	CA4753		0.0057	—	<0.1	
128	CA4754		0.0060	—	<0.1	
129	CA4755		0.0048	—	<0.1	
131	CA4763		0.0068	—	<0.1	
130	CA4756		0.0068	—	<0.1	

NITRATE-NITRITE

QW-Batch: QW60812
QC-Batch: QTC05286
Verified: R Hu 9/26/90
Instrument: GTPC

Method Ref: EPA 353.2
(Colorimetric, Automated Cd-Reduction)
MDL: 0.1 mg/l
Matrix: Aqueous

Page 1 of 5
Date: 9/27/90
Time: —
Analyst: C.O.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
28	FB 2637	<2	0.0271	—	<0.1	
29	FB 1851	<2	0.0468	—	<0.1	
30	FB 2636	<2	0.0212	—	<0.1	
31	FB 2638	<2	0.0476	—	<0.1	
32	FB 2604	<2	0.0292	—	<0.1	
36	FB 2605	<2	0.116	—	~~0.12~~	.1 c.o. 10/1/90
37	FB 2613	<2	0.0185	—	<0.1	
38	FB 2614	<2	0.0298	—	<0.1	
39	FB 2615	<2	0.0512	—	<0.1	
43	FB 2616	<2	0.0213	—	<0.1	
47	FB 2618	<2	0.103	—	0.10	
48	FB 2618 23	<2	0.0565	—	<0.1	
49	FB 2625	<2	0.164	—	~~0.16~~	.2 c.o. 10/1/90
50	FB 2635	<2	0.0231	—	<0.1	
52	FB ~~2634~~	1849 <2	OFF SCALE	—		See Seq 123
53	FB 2782	<2	0.0346	—	<0.1	
54	FB 2645	<2	0.0941	—	<0.1	
55	FB 2646	<2	0.0841	—	<0.1	
59	FB 2647	<2	0.0470	—	<0.1	
63	FB 2648	<2	0.0686	—	<0.1	
64	FB 2649	<2	0.0212	—	<0.1	
65	FB 2650	<2	0.0884	—	<0.1	
66	FB 2607	<2	0.609	—	~~0.61~~	.60 c.o. 10/1/90
67	FB 2603	<2	0.0293	—	<0.1	

NITRATE-NITRITE

QW-Batch: QW60812
QC-Batch: GTCC5286
Verified: [illegible] 9/28/90
Instrument: GTPC

Method Ref: EPA 353.2
(Colorimetric, Automated Cd-Reduction)
MDL: 0.1 mg/l
Matrix: Aqueous

Date: 9/27/90
Time: —
Analyst: C.O.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
68	FB2606	<2	0.262	—	~~0.26~~	.3 C.O. 10/1/90
69	FB2607	<2	0.0933	—	<0.1	
70	FB2608	<2	1.70	—	1.7	
71	FB2609	<2	0.0347	—	<0.1	
76	FB2610	<2	0.0352	—	<0.1	
80	FB2611	<2	0.268	—	~~0.27~~	.3 C.O. 10/1/90
81	FB2622	<2	0.0256	—	<0.1	
82	FB2617	<2	0.0453	—	<0.1	
83	FB2619	<2	0.129	—	~~0.13~~	.1 C.O. 10/1/90
84	FB2620	<2	0.0595	—	<0.1	
85	FB2621	<2	0.0316	—	<0.1	
86	FB2624	<2	0.0401	—	<0.1	
87	FB2626	<2	0.551	—	~~0.55~~	.6 C.O. 10/1/90
91	FB2627	<2	0.0714	—	<0.1	
92	FB2628	<2	0.642	—	~~0.64~~	.6 C.O. 10/1/90
93	FB2629	<2	0.0996	—	<0.1	
94	FB2630	<2	0.205	—	~~0.20~~	.2 C.O. 10/1/90
95	FB2632	<2	0.0975	—	<0.1	
96	FB2633	<2	0.0344	—	<0.1	
97	GB3525	<2	0.0529	—	<0.1	
101	GB3526	<2	1.76	—	~~1.76~~	1.8 C.O. 10/1/90
102	GB3528	<2	0.0338	—	<0.1	
107	GB3533	<2	0.0338	—	<0.1	
112	GB3534	<2	0.278	—	~~0.28~~	C.O. 10/1/90

NITRATE-NITRITE

QW-Batch: QW60812
QC-Batch: QTC05286
Verified: ~~9/28/90~~
Instrument: GTPC

Method Ref: EPA 353.2
(Colorimetric, Automated Cd-Reduction)
MDL: 0.1 mg/l
Matrix: Aqueous

Date: 9/27/90
Time: —
Analyst: C.O.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
113	GB 3536		0.0467	—	~~<0.1~~	C.O. 10/1/90
114	GB 2968		1.62	—	~~1.62~~	1.6 10/1/90
115	GB 2969		0.113	—	~~0.11~~	.1 10/1/90
116	GB 2970		0.335	—	~~0.34~~	.3 10/1/90
117	GB 2980		0.0554	—	<0.1	
118	GB 2983		0.0634	—	<0.1	
123	FB 1849		~~1:5~~ 1:2		2.3	
124	CA 4753		OFFSCALE	—		
128	CA 4754		0.127	—	~~0.13~~	C/Over C.O. 10/1/90
129	CA 4755		OFFSCALE	—		
130	CA 4756		0.0662	—	<0.1	
131	CA 4763		0.0546	—	<0.1	
132	GB 2981		0.0978	—	<0.1	
139	GB 2982		0.0346	—	<0.1	
140	GB 2984		0.0403	—	<0.1	
141	GB 2985		0.0304	—	<0.1	
142	GB 2986		0.0327	—	<0.1	
143	GB 2991		1.43	—	~~1.45~~	1.4 C.O. 10/1/90
144	GB 2999		0.0598	—	<0.1	
146	GB 3523		0.0325	—	<0.1	
150	FB 2655		0.0542	1:2		
151	FB 2655		0.0224	STR	<0.1	
155	GB 3534		0.281	—	~~0.28~~	.3 10/1/90
156	GB 3536		0.066	—	<0.1	

ETC

NITRATE-NITRITE

QW-Batch: QW60812
QC-Batch: QTC05286
Verified: ~~9/28/90~~
Instrument: GTPC

Method Ref: EPA 353.2
(Colorimetric, Automated Cd-Reduction)
MDL: 0.1 mg/l
Matrix: Aqueous

Date: 9/27/90
Time: —
Analyst: C.O.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
157	GB 2968		1.60	—	~~1.60~~	C.O. 10/1/90
158	GB 2969		0.122	—	~~0.12~~	C.O. 10/1/90
159	GB 2970		0.329	—	~~0.33~~	C.O. 10/1/90
160	GB 2980		0.0569	—	~~<0.1~~	C.O. 10/1/90
161	GB 2983		0.0536	—	~~<0.1~~	C.O. 10/1/90
165	CA 4753		1.07	1:10	10.7	
166	CA 4754		0.0961	STR	<0.1	
167	CA 4755		0.865	1:10	~~8.65~~	8.7 10/1/90
171	GB 3503		0.0288	1:20		
172	GB 3000		0.0435	1:20		
173	GB 3520		0.0374	1:20		REDO@ 1:2
174	GB 3538		0.0582	STR	<0.1	
175	GB 3501		0.0488	1:20		
176	GB 3511		0.178	1:20		SEE Seq# 199
177	GB 3509		0.03[illegible]	1:20		
178	GB 3519		0.0441	STR	<0.1	
179	GB 3535		0.0330	STR	<0.1	
180	GB 3506		0.815	1:20	~~16.3~~	C.O. 10/1/90
181	GB 3510		~~0.788~~ 0.643	1:20	12.9	
182	GB 3514		0.119	1:20		
183	GB 3502		1.303	1:20	26.1	
187	GB 3515		0.997	1:20	19.9	
188	GB 3504		0.555	1:20	11.1	
189	GB 3508		0.0614	1:20		REDO@1:5

ETC

NITRATE-NITRITE

QW-Batch: QW60812
QC-Batch: QTC05284
Verified: RR45 9/28/90
Instrument: CTPC

Method Ref: EPA 353.2
(Colorimetric, Automated Cd-Reduction)
MDL: 0.1 mg/l
Matrix: Aqueous

Date: 9/27/90
Time: —
Analyst: C.O.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
190	GB 2995		0.0771	1:20		REDO @ 1:10
191	GB 3505		~~1.62~~ 1.53	1:20	30.6	
195	GB 3503		0.0603	1:10		REDO 1:2
196	GB 3000		0.0772	1:10		REDO @ 1:2
197	GB 3520		0.0762	1:10		REDO @ 1:5
198	GB 3501		0.0774	1:10		REDO @ 1:5
199	GB 3511		0.342	1:10	3.42 OK	3.42
203	GB 3509		0.0521	1:10		REDO @ 1:2
204	GB 3506		1.70	1:10	17.0	
205	GB 3510		1.331	1:10	~~1.35~~	13.3 C.O.
206	GB 3514		0.186	1:10	1.86	1.9 C.O. 10/1/90
207	GB 3502		OFFSCALE	1:10		SEE SEQ 183

ETC

WET CHEMISTRIES QC DATA

S-Batch: QW 30613 / QW 60881 / QW 70267
QC-Batch: QTC05304
Verified: [signature] MC 1/9/4

Parameter: PHENOLS
Method Ref: 420.2
Det Limit: 0.05
Instrument: AA II
Matrix: H2O

Date: 9-29-90
Time: 6:30 AM
Analyst: M. Chandler

INSTRUMENT CALIBRATION STANDARDS: Units = MG/L

Source Lot:

Standard	0.300	0.250	0.200	0.100	0.050	
Observed	0.300	0.251	0.203	0.105	0.0523	(abs)
% Recovr	100	100	102	105	105	

y = mx + b
Slope:
Intcp:
Corr:

Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],
Corr. Coef > 0.99500 [ ]
Comments:

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
	ICVER	+/- 15%				[ ]	Lot #
	ICBLK	< M D L				[ ]	
13,14	M. BLK - 1	< M D L	0.00203			[ ]	
15,16	S. BLK - 1	+/- 15%	0.0998	0.100	99	[ ]	Lot #
17,18	EXTQC - 1	+/- 20%	0.235	0.208	113	[ ]	Lot # 9927
33	CCV - 1	+/- 15%	0.203	0.200	102	[ ]	
32	CCB - 1	< M D L	0.00208			[ ]	
48	CCV - 2	+/- 15%	0.200	0.200	100	[ ]	
47	CCB - 2	< M D L	0.00419			[ ]	
63	CCV - 3	+/- 15%	0.205	0.200	102	[ ]	
62	CCB - 3	< M D L	0.00621			[ ]	
—	M. BLK - 2	< M D L	—			[ ]	
—	S. BLK — 2	+/- 15%	—	—	—	[ ]	Lot #
—	EXTQC - 2	+/- 20%	—	—	—	[ ]	Lot #
78	CCV - 4	+/- 15%	0.204	0.200	102	[ ]	
77	CCB - 4	< M D L	0.00851			[ ]	
93	CCV - 5	+/- 15%	0.202	0.200	101	[ ]	
92	CCB - 5	< M D L	0.00909			[ ]	
108	CCV - 6	+/- 15%	0.196	0.200	98	[ ]	
107	CCB - 6	< M D L	0.00391			[ ]	
—	M. BLK - 3	< M D L	—			[ ]	
—	S. BLK — 3	+/- 15%	—	—	—	[ ]	Lot #
—	EXTQC - 3	+/- 20%	—	—	—	[ ]	Lot #
123	CCV - 7	+/- 15%	0.193	0.200	97	[ ]	
122	CCB - 7	< M D L	0.00179			[ ]	
138	CCV - 8	+/- 15%	0.194	0.200	98	[ ]	
137	CCB - 8	< M D L	-0.00871			[ ]	Ins info 153 Failed
153	CCV - 9	+/- 15%	0.145	0.200	73 *	[ ]	& Rerun Samples from
152	CCB - 9	< M D L	-0.00894			[ ]	Seq # 139 — 167

QUALITY CONTROL — Duplicates / Matrix Spikes

Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R
34		GB2970	BMDL	BMDL	00	GB2970	BMDL	0.100	0.0980	98
49		GB2985	BMDL	BMDL	00	GB2985	BMDL	0.100	0.101	101
64		GB4076	BMDL	BMDL	00	GB4076	BMDL	0.100	0.100	100
79		GA4756	BMDL	BMDL	00	GA4756	BMDL	0.100	0.0992	100
94		FB2981	BMDL	BMDL	00	FB2981	BMDL	0.100	0.0982	99
109		FB2939	BMDL	BMDL	00	FB2939	BMDL	0.100	0.0948	95

ETC

1 of 4

WET CHEMISTRIES QC DATA

S-Batch: ~~QW60891~~ QW30613
QC-Batch: ~~QC05304~~ QW70267 M-C
Verified: B Controller 10/4

Parameter: PHENOLS
Method Ref: 420.2
Det Limit: 0.05
Instrument: AA II
Matrix: H2O

Date: 9-29-90
Time: 6:30 AM
Analyst: M. Chaudhary

INSTRUMENT CALIBRATION STANDARDS: Units = _____
Standard _____
Observed _____ (abs)
% Recovr _____
Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ],
Comments: _____

Source Lot: _____
y = mx + b
Slope: _____
Intcp: _____
Corr: _____
Corr. Coef > 0.99500 [ ]

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	ETC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
_____	ICVER	+/- 15%	_____	_____	_____	[ ]	Lot # _____
_____	ICBLK	< MDL	_____			[ ]	_____
—	M. BLK - 1	< MDL	—			{ }	_____
—	S. BLK — 1	+/- 15%	—	—	—	{ }	Lot # _____
—	EXRQC - 1	+/- 20%	—	—	—	{ }	Lot # _____
168	CCV - 10	+/- 15%	0.190	0.200	95	[ ]	_____
167	CCB - 10	< MDL	-0.00232			[ ]	_____
183	CCV - 2	+/- 15%	0.191	0.200	96	[ ]	_____
182	CCB - 2	< MDL	∅			[ ]	_____
201	CCV - 3	+/- 15%	0.188	0.200	94	[ ]	_____
200	CCB - 3	< MDL	-0.00201			[ ]	_____
—	M. BLK - 2	< MDL	—			{ }	_____
—	S. BLK — 2	+/- 15%	—	—	—	{ }	Lot # _____
—	EXRQC - 2	+/- 20%	—	—	—	{ }	Lot # _____
218	CCV - 4	+/- 15%	0.193	0.200	97	[ ]	_____
217	CCB - 4	< MDL	~~0.193~~ -0.00134			[ ]	_____
_____	CCV - 5	+/- 15%	~~-0.00134~~ H.C 9/27		_____	[ ]	_____
_____	CCB - 5	< MDL	_____			[ ]	_____
_____	CCV - 6	+/- 15%	_____	_____	_____	[ ]	_____
_____	CCB - 6	< MDL	_____			[ ]	_____
_____	M. BLK - 3	< MDL	_____			{ }	_____
_____	S. BLK — 3	+/- 15%	_____	_____	_____	{ }	Lot # _____
_____	EXRQC - 3	+/- 20%	_____	_____	_____	{ }	Lot # _____
_____	CCV - 7	+/- 15%	_____	_____	_____	[ ]	_____
_____	CCB - 7	< MDL	_____			[ ]	_____
_____	CCV - 8	+/- 15%	_____	_____	_____	[ ]	_____
_____	CCB - 8	< MDL	_____			[ ]	_____
_____	CCV - 9	+/- 15%	_____	_____	_____	[ ]	_____
_____	CCB - 9	< MDL	_____			[ ]	_____

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R

TOTAL PHENOLICS

QW60831
QW-Batch: QW 301613
QC-Batch: QW 70267 QC 05304
Verified: B Grant 10/1/90
Instrument: _____ N-2 1/4

Method Ref: EPA 420.2, SW-846 9065
Colorimetric, Auto-4AAP, w/Distillation
MDL: 0.050 mg/l
Matrix: Aqueous

Page 1 of 4
Date: 9/29/90
Time: 6:30 AM
Analyst: M.C.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
	FB2565		.0165	str.	BmDL	
	GB2968		.00739	str.	BmDL	
	GB2969		.00329	str.	BmDL	
	GB2970		.00748	str.	BmDL	
	GB3582		.0276	str.	BmDL	
	GB2980		.00388	str.	BmDL	
	GB2983		.00266	str.	BmDL	
	GB3918		.00225	str.	BmDL	
	GB4075		.00176	str.	BmDL	
	GB2981		.00207	str.	BmDL	
	GB2982		.00221	str.	BmDL	
	GB2984		.00189	str.	BmDL	
	GB2985		.0109	str.	BmDL	
	GB2986		.00698	str.	BmDL	
	GB4068		.0102	str.	BmDL	
	GB4003		mx	2x		
	↓		mx	str		
	↓		mx	5x		
	↓		.00421	10x	<.500	
	↓		-.00246	20x		
	GB4069		.00856	str.	BmDL	
	GB4071		.0163	str.	BmDL	
	GB4072		.00396	str.	BmDL	
	GB4074		.00311	str.	BmDL	

TOTAL PHENOLICS

QW-Batch: QW60831 QW50613 MC 7/4/ Method Ref: EPA 420.2, SW-846 9066 Page 2 of 4

QC-Batch: QW70267 QC05304 Colorimetric, Auto-4AAP, w/Distillation Date: 9/29/90

Verified: B. G 10/1/90 MDL: 0.050 mg/l Time: 6:30 AM

Instrument: _____ Matrix: Aqueous Analyst: M.C.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
	GB4076		.00784	str.	BmDL	
	GB4066		.0116	str.	BmDL	
	GB4067		.0154	str.	BmDL	
	GB4070		.0288	str.	BmDL	
	GB4073		.00545	str.	BmDL	
	CA4753		.00738	str.	BmDL	
	CA4754		.00743	str.	BmDL	
	CA4755		.00531	str.	BmDL	
	CA4763		.00635	str.	BmDL	
	HA2998		mx	str.		
	↓		.00168	2x	< .100	
	↓		-.00435	5x		
	↓		-.00553	10x		
	CA4756		.00860	str.	BmDL	
	FB2492		.0469	str.	BmDL	
	FB2495		.00661	str.	BmDL	
	FB2922		.00612	str	BmDL	
	FB2925		.0124	str	BmDL	
	FB2926		.00639	str	BmDL	
	FB2931		.00798	str	BmDL	
	FB2923		.00792	str	BmDL	
	FB2927		.00562	str	BmDL	
	FB2921		.00999	str	BmDL	
	FB2924		.00603	str.	BmDL	

TOTAL PHENOLICS

QW-Batch: QW 60831 QW 30613
QC-Batch: QW 70267 VTC 05304
Verified: B. [illegible] 10/1/90
Instrument: _____

Method Ref: EPA 420.2, SW-846 9066
MC 10/4
Colorimetric, Auto-4AAP, w/Distillation
MDL: 0.050 mg/l
Matrix: Aqueous

Page 3 of 4
Date: 9/29/90
Time: 6:30 AM
Analyst: M.C.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
	FB2928		.109	str.	.109	
	FB2929		.0153	str.	BmDL	
	FB2930		.00733	str.	BmDL	
	FB2932		.00648	str.	BmDL	
	FB2933		.00454	str.	BmDL	
	FB2934		.00467	str.	BmDL	
	FB2935		.00346	str.	BmDL	
	FB2936		.00170	str.	BmDL	
	FB2939		.00490	str.	BmDL	
	FB2782		.0176	str.	BmDL	
	FB1851		.00296	str.	BmDL	
	FB1849		.00679	str.	BmDL	
	GB4116		.115	10x	1.15	
	↓		over	5x		
			mx/over	2x		
			mx/over	str		
	GB3753		.0253	200x		
	↓		.0540	100x		
			.116	50x	5.80	
	GB4119		.0147	200x		
	↓		.0438	100x		ISS FAILED
			.101	50x		ISS FAILED
			.117	50x	5.85	RERUN - OK
	GB3094		.0103	10x		ISS FAILED

TOTAL PHENOLICS

QW-Batch: QW60831 QW30613
QC-Batch: QW70267 05304
Verified: 10/11/90
Instrument:

Method Ref: EPA 420.2, SW-846 9066
Colorimetric, Auto-4AAP, w/Distillation
MDL: 0.050 mg/l
Matrix: Aqueous

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Date: 9/29/90
Time: 6:30 AM
Analyst: M.C.

Seq #	ETC Job #	pH Int.	Analyzed mg/l	Dilution Factor	Reported mg/l	Comments Calculations
	GB3099		.0269	5x		ISS FAILED
	↓		split peak .0802	2x		RERUN - OK
	↓		.122	str	.122	" "
	FB2494		.0145	10x		ISS FAILED
	↓		.0913	2x		RERUN - OK
	↓		.161	str.	.161	" "
	FB2493		-.00732	10x		ISS FAILED
	↓		.0291	2x		RERUN - OK
	↓		.0371	str.	BMDL	
	FB2490		over	50x		ISS FAILED
	↓		.144	1000x		RERUN - OK
	↓		.222	500x	111	
	FB2491		over	50x		
	↓		.216	1000x	216	
	↓		over	500x		
	↓		over	100x		
	FB2489		.277	50x	13.9	
	↓		.134	100x		

WET CHEMISTRIES QC DATA

S-Batch: QW30615 | Parameter: TOC | Date: 10/6/90
QC-Batch: QTC0532 | Method Ref: EPA 415.1, SW846, 9060 | Time: 11:00am
Verified: [signature] 10/4/90 | Det Limit: 1.0 | Analyst: Lui
Instrument: HG1299
Matrix: H2O

INSTRUMENT CALIBRATION STANDARDS: Units = mg/L | Source Lot:

Standard	10	20	50	100	400
Observed	10.7	21.8	50.7	98.9	399.8 (abs)
% Recovr	107	109	101	99	100

y = mx + b
Slope:
Intcp:
Corr:
Limits: % Rec. = +/- 10.0 %, low std +/- 15% [ ], Corr. Coef > 0.99500 [ ]
Comments:

QUALITY CONTROL DATA SUMMARY: Batch and Instrumental QC Results/Limits

Seq #	QTC ID	Limit	Obsv.	Known	% Rec.	[Ver]	Comments
	ICVER	+/- 15%				[ ]	Lot #
	ICBLK	< MDL				[ ]	
12	M. BLK - 1	< MDL	0.6			[ ]	
34	S. BLK - 1	+/- 15%	10.7	10	107	[ ]	Lot #
11.2	EXRQC - 1	+/- 20%	43	46	104	[ ]	Lot #
41	CCV - 1	+/- 15%	104.3	100	101	[ ]	
	CCB - 1	< MDL				[ ]	
69	CCV - 2	+/- 15%	103.7	100	103	[ ]	
	CCB - 2	< MDL				[ ]	
90	CCV - 3	+/- 15%	104.4	100	104	[ ]	
	CCB - 3	< MDL				[ ]	
	M. BLK - 2	< MDL				[ ]	
	S. BLK - 2	+/- 15%				[ ]	Lot #
	EXRQC - 2	+/- 20%				[ ]	Lot #
	CCV - 4	+/- 15%				[ ]	
	CCB - 4	< MDL				[ ]	
	CCV - 5	+/- 15%				[ ]	
	CCB - 5	< MDL				[ ]	
	CCV - 6	+/- 15%				[ ]	
	CCB - 6	< MDL				[ ]	
	M. BLK - 3	< MDL				[ ]	
	S. BLK - 3	+/- 15%				[ ]	Lot #
	EXRQC - 3	+/- 20%				[ ]	Lot #
	CCV - 7	+/- 15%				[ ]	
	CCB - 7	< MDL				[ ]	
	CCV - 8	+/- 15%				[ ]	
	CCB - 8	< MDL				[ ]	
	CCV - 9	+/- 15%				[ ]	
	CCB - 9	< MDL				[ ]	

QUALITY CONTROL		Duplicates				Matrix Spikes				
Seq #	QTC #	ETC #	Orig	Dupe	% RPD	ETC #	Orig	Added	Result	% R
17 : 18		HA2962	7.8	8.0	0.2	HA2962	7.8	20	25.5	94
44 : 45		CA4756	0.6	0.6	0	CA4756	0.6	20	21.3	103
72 : 73		HA2658	6.7	6.6	0.1	HA2658	6.7	20	27.6	104
:										
:										
:										

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ETC

Total Organic Carbon (Water)

QW-Batch: QW30615 Method Ref: EPA 415.1 SW846. 9060 Page 1 of 6

QC-Batch: QTC0532 (UV-Persulfate/IR) Date: 11/1/90

Verified: [illegible] MDL: 1.0 mg/l Time: 11:00 am

Instrument: HG1299 Matrix: Aqueous Analyst: Lee

Log Link or Bottle #	ETC Job # STD or known	pH Initial	Inject #	Analyzed Conc.	Dilution Factor	Reported Conc.	Comments % Rec. Calcs
	HCOppm		1	399.9			
			2	398.5			
			3	398.6			
			4	44.3			
	Cal			200 UL			
	Cal Ave.			HCO.3			
	Cal Ver.			399.8		399.8	100% rec
	YD. B		1	0.459		BMDL	
			2	0.637		BMDL	
	10 ppm		3	10.73		10.7	%R = 1 7
			4	10.74		10.7	
	20ppm		5	24.62		/	cancelled Re-spike Re-run
			6	21.49		21.5	%R = 1 0 9
			7	21.97		22.0	
	50ppm		8	49.56		50.0	%R = 1 0 1
			9	51.34		51.3	
			10	49.30		/	cancelled Re-run

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ETC

Total Organic Carbon (Water)

QW-Batch: QW30615 | Method Ref: EPA 415.1 SW846. 9060 | Page 2 of 6
QC-Batch: QTCA0324 | (UV-Persulfate/IR) | Date: 10/6/90
Verified: [illegible] | MDL: 1.0 mg/l | Time: 11:00am
Instrument: HG1299 | Matrix: Aqueous | Analyst: LW

Log Link or Bottle #	ETC Job # STD or known	pH Initial	Inject #	Analyzed Conc.	Dilution Factor	Reported Conc.	Comments % Rec. Calcs
	EPA "41"		11	47.40		47.4	%R = 100
			12	48.59		48.6	
	100ppm		13	97.16		97.2	%R = 99
			14	100.6		100.6	
100626	HA2992	<2	15	7.652		7.7	
			16	7.759		7.8	
	Dup		17	7.973		/	
			18	8.086		/	
	SPK		19	22.27		/	Cancelled C-Spare Re-run 10/11
			20	25.59		/	%R = ~~99~~ 89
			21	25.28		/	
100626	[redacted]2993	<2	22	28.62		28.6	
			23	28.57		28.6	
100626	HA2994	<2	24	10.55		10.6	
			25	10.67		10.7	
100626	HA2995	<2	26	11.89		11.9	
			27	11.85		11.9	

ETC

Total Organic Carbon (Water)

QW-Batch: QW30615 | Method Ref: EPA 415.1 SW846. 9060 | Page 3 of 6
QC-Batch: QTC053>4 | (UV-Persulfate/IR) | Date: 10/6/90
Verified: [illegible] | MDL: 1.0 mg/l | Time: 11:00am
Instrument: HG1299 | Matrix: Aqueous | Analyst: EW

Log Link or Bottle #	ETC Job # STD or known	pH Initial	Inject #	Analyzed Conc.	Dilution Factor	Reported Conc.	Comments % Rec. Calcs
100626	HA2996	<2	28	11.47		11.5	
			29	11.67		11.7	
100626	HA2998	<2	30	4.269		4.3	
			31	3.961		4.0	
100625	CA4753	<2	32	1.189		1.2	
			33	1.104		1.1	
100625	CA4754	<2	34	0.854	/	—	Incorrect Run extra for client
			35	1.127		1.1	
			36	1.175		1.2	
100625	CA4755	<2	37	1.945		1.9	
			38	2.111		2.1	
100625	CA4763	<2	39	1.597		1.6	
			40	1.801		1.8	
	100 ppm		41	101.3		101.3	%R = 101
100631	CA4756	<2	42	0.592		BMDL	
			43	0.599		BMDL	

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Total Organic Carbon (Water)

QW-Batch: QW30615
QC-Batch: QTC053>4
Verified: [illegible] 10/11/90
Instrument: HG1299

Method Ref: EPA 415.1 SW846. 9060
(UV-Persulfate/IR)
MDL: 1.0 mg/l
Matrix: Aqueous

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Date: 10/6/90
Time: 11:00am
Analyst: LW

Log Link or Bottle #	ETC Job # STD or known	pH Initial	Inject #	Analyzed Conc.	Dilution Factor	Reported Conc.	Comments % Rec. Calcs
	Dup		44	0.721			
			45	0.578			
	SPK		46	11.63			cancelled Re-run. Re-run
			47	11.71			cancelled Re-run. Re-run
			48	41.44			cancelled Re-run Re-run
			49	21.52			
			50	21.67			
302236	HB2976	<2	51	0.572		BMDL	
			52	0.698		BMDL	
302236	HB2981	<2	53	5.531		5.5	
			54	5.804		5.8	
302236	HB2982	<2	55	7.439		7.4	
	[redacted]		56	7.245		7.2	
302236	HB2984	<2	57	3.549		3.5	
			58	3.613		3.6	
302236	HB2985	<2	59	19.64		19.6	
			60	19.61		19.6	

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Total Organic Carbon (Water)

QW-Batch: QW30665
QC-Batch: QTC053 ✱
Verified: B Cam 10/11/90
Instrument: HG1299

Method Ref: EPA 415.1 SW846. 9060
(UV-Persulfate/IR)
MDL: 1.0 mg/l
Matrix: Aqueous

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Date: 10/6/10
Time: 11:00 a.m.
Analyst: LW

Log Link or Bottle #	ETC Job # STD or known	pH Initial	Inject #	Analyzed Conc.	Dilution Factor	Reported Conc.	Comments % Rec. Calcs
302236	HB2986	<2	61	2.229		2.2	
			62	2.261		2.3	
302250	HB2991	<2	63	1.885		1.9	
			64	1.769		1.8	
902250	HB3523	<2	65	9.381		9.4	
			66	9.127		9.1	
302274	HB3010	<2	67	39.25		39.3	
			68	39.35		39.4	
	100ppm		69	103.4		103.4	%R = 103
302271	HB2658	<2	70	6.527		6.5	
			71	6.938		6.9	
	Blank		72	6.532			
			73	6.752			
	SPK		74	27.10			%R = 1.2
			75	26.31			

ETC

Total Organic Carbon (Water)

QW-Batch: QW30615
QC-Batch: QTC053>4
Verified: [illegible]
Instrument: HG1299

Method Ref: EPA 415.1 SW846. 9060
(UV-Persulfate/IR)
MDL: 1.0 mg/l
Matrix: Aqueous

Date: 10/6/90
Time: 11:00 am
Analyst: LW

Log Link or Bottle #	ETC Job # STD or known	pH Initial	Inject #	Analyzed Conc.	Dilution Factor	Reported Conc.	Comments % Rec. Calcs
302250	YB2999	<2	76	4.216	1:20	/	"cancelled needs dilution"
			77	41.84	1:2	83.6	
			78	43.40	1:2	86.8	
			79	43.05	1:2	~~86.2~~ 86.1	%R=103
			80	43.40	1:2	86.8	
302250	YB3000	<2	81	24.68	1:20	494	LW 10/6/90
			82	24.67	1:20	~~494~~ 494	
			83	24.36	1:20	488	
			84	24.73	1:20	494	
302251	YB4003	<2	85	850.3	1:2	/	Cancelled needs dilution
			86	85.66	1:20	~~1944~~ 1710	
			87	86.62	1:20	~~1732~~ 1730	
302243							
~~302251~~	YB3501	<2	88	24.40	1:20	488	
			89	24.98	1:20	500	
	[illegible]						
	100ppm		90	104.4		1044	%R=104

LW 10/6/90