SDMS Document
98453

THE
WHITMAN
COMPANIES, INC.

Setting the Standard in
Environmental Engineering & Management

FINAL REMEDIAL INVESTIGATION REPORT

FOR

ROCKAWAY BOROUGH WELL FIELD SITE
OPERABLE UNIT #3
FOR PROPERTY OF
KLOCKNER & KLOCKNER
ROCKAWAY BOROUGH, NEW JERSEY

VOLUME 8
LABORATORY QA/QC DATA PACKAGE
10/8/98 – JOB #I052

SUBMITTED TO
USEPA-REGION II
EMERGENCY & REMEDIAL RESPONSE DIVISION
NEW YORK, NEW YORK

SUBMITTED BY
THE WHITMAN COMPANIES, INC.
ON BEHALF OF KLOCKNER & KLOCKNER

IN ACCORDANCE WITH
ADMINISTRATIVE ORDER ON CONSENT
INDEX NO. II-CERCLA-95-0104

305400

MAY 2004

116 Tices Lane, Unit B-1, East Brunswick, NJ 08816
www.whitmanco.com

ENVIROTECH RESEARCH, INC.

777 New Durham Road
Edison, New Jersey 08817
Tel: (732) 549-3900
Fax: (732) 549-3679
www.enviro-lab.com

November 2, 1998

The Whitman Companies, Inc.
44 West Ferris Street
East Brunswick, NJ 08816

RECEIVED
NOV 17 1998
The Whitman Companies, Inc.

Attention: Mr. Michael Metlitz

Re: Job No. I052 - Klockner & Klockner

Dear Mr. Metlitz:

Enclosed are the results you requested for the following sample(s) received at our laboratory on October 09, 1998:

Lab No.	Client ID	Analysis Required
89299	TB-3	Purgeable Halocarbons
89300	SSOSS-1_1-1.5	Purgeable Halocarbons
89301	SSCP-1_3.5_4	Purgeable Halocarbons
89302	SSGC-1A_1.5-4	TOC
89303	SSCP-1_11-11.5	Purgeable Halocarbons
89304	SSFD-1_1.5-2	Purgeable Halocarbons
89305	SSCP-4_1-1.5	Purgeable Halocarbons

If you have any questions please contact your Project Manager, Robert McGrady, at (732) 549-3900.

Very truly yours,

Michael J. Urban
Laboratory Manager

305401

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ENVIROTECH RESEARCH, INC.

Client ID: TB-3
Site: Klockner & Klockner

Lab Sample No: 89299
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9587.d

Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	125
Chloromethane	ND	125
Vinyl Chloride	ND	125
Bromomethane	ND	125
Chloroethane	ND	125
Trichlorofluoromethane	ND	125
1,1-Dichloroethene	ND	125
Methylene Chloride	ND	125
trans-1,2-Dichloroethene	ND	125
1,1-Dichloroethane	ND	125
cis-1,2-Dichloroethene	ND	125
Chloroform	ND	125
1,1,1-Trichloroethane	ND	125
Carbon Tetrachloride	ND	125
1,2-Dichloroethane	ND	125
Trichloroethene	ND	125
1,2-Dichloropropane	ND	125
Bromodichloromethane	ND	125
2-Chloroethyl Vinyl Ether	ND	125
cis-1,3-Dichloropropene	ND	125
trans-1,3-Dichloropropene	ND	125
1,1,2-Trichloroethane	ND	125
Tetrachloroethene	ND	125
Dibromochloromethane	ND	125
Chlorobenzene	ND	125
Bromoform	ND	125
1,1,2,2-Tetrachloroethane	ND	125
1,3-Dichlorobenzene	ND	125
1,4-Dichlorobenzene	ND	125
1,2-Dichlorobenzene	ND	125

305403

ENVIROTECH RESEARCH, INC.

Client ID: SSOSS-1_1-1.5
Site: Klockner & Klockner

Lab Sample No: 89300
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/21/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9609.d

Matrix: SOIL
Level: HIGH
Sample Weight: 9 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 100.0
% Moisture: 8.7

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	294
Chloromethane	ND	294
Vinyl Chloride	ND	294
Bromomethane	ND	294
Chloroethane	ND	294
Trichlorofluoromethane	ND	294
1,1-Dichloroethene	ND	294
Methylene Chloride	ND	294
trans-1,2-Dichloroethene	ND	294
1,1-Dichloroethane	ND	294
cis-1,2-Dichloroethene	ND	294
Chloroform	ND	294
1,1,1-Trichloroethane	7250	294
Carbon Tetrachloride	ND	294
1,2-Dichloroethane	ND	294
Trichloroethene	ND	294
1,2-Dichloropropane	ND	294
Bromodichloromethane	ND	294
2-Chloroethyl Vinyl Ether	ND	294
cis-1,3-Dichloropropene	ND	294
trans-1,3-Dichloropropene	ND	294
1,1,2-Trichloroethane	ND	294
Tetrachloroethene	ND	294
Dibromochloromethane	ND	294
Chlorobenzene	ND	294
Bromoform	ND	294
1,1,2,2-Tetrachloroethane	ND	294
1,3-Dichlorobenzene	ND	294
1,4-Dichlorobenzene	ND	294
1,2-Dichlorobenzene	ND	294

ENVIROTECH RESEARCH, INC.

Client ID: SSCP-1_3.5_4
Site: Klockner & Klockner

Lab Sample No: 89301
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/16/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9508.d

Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 4.3

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	133
Chloromethane	ND	133
Vinyl Chloride	ND	133
Bromomethane	ND	133
Chloroethane	ND	133
Trichlorofluoromethane	ND	133
1,1-Dichloroethene	ND	133
Methylene Chloride	ND	133
trans-1,2-Dichloroethene	ND	133
1,1-Dichloroethane	ND	133
cis-1,2-Dichloroethene	ND	133
Chloroform	ND	133
1,1,1-Trichloroethane	ND	133
Carbon Tetrachloride	ND	133
1,2-Dichloroethane	ND	133
Trichloroethene	ND	133
1,2-Dichloropropane	ND	133
Bromodichloromethane	ND	133
2-Chloroethyl Vinyl Ether	ND	133
cis-1,3-Dichloropropene	ND	133
trans-1,3-Dichloropropene	ND	133
1,1,2-Trichloroethane	ND	133
Tetrachloroethene	ND	133
Dibromochloromethane	ND	133
Chlorobenzene	ND	133
Bromoform	ND	133
1,1,2,2-Tetrachloroethane	ND	133
1,3-Dichlorobenzene	ND	133
1,4-Dichlorobenzene	ND	133
1,2-Dichlorobenzene	ND	133

305405

ENVIROTECH RESEARCH, INC.

Site: Klockner & Klockner

Lab Job No: I052

Date Sampled: 10/8/98
Date Received: 10/9/98
Matrix: SOIL

Date Analyzed: 10/14/98
QA Batch: 1402

TOTAL ORGANIC CARBON

Envirotech Sample #	Client ID	% Moisture	Dilution Factor	Analytical Result mg/kg (Dry Wt.)
89302	SSGC-1A_1.5-4	13.7	4.0	16200

Quantitation Limit for Total Organic Carbon is 100 mg/kg for an undiluted sample.

305406

ENVIROTECH RESEARCH, INC.

Client ID: SSCP-1_11-11.5
Site: Klockner & Klockner

Lab Sample No: 89303
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/16/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9509.d

Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 7.1

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	142
Chloromethane	ND	142
Vinyl Chloride	ND	142
Bromomethane	ND	142
Chloroethane	ND	142
Trichlorofluoromethane	ND	142
1,1-Dichloroethene	ND	142
Methylene Chloride	ND	142
trans-1,2-Dichloroethene	ND	142
1,1-Dichloroethane	ND	142
cis-1,2-Dichloroethene	ND	142
Chloroform	ND	142
1,1,1-Trichloroethane	ND	142
Carbon Tetrachloride	ND	142
1,2-Dichloroethane	ND	142
Trichloroethene	ND	142
1,2-Dichloropropane	ND	142
Bromodichloromethane	ND	142
2-Chloroethyl Vinyl Ether	ND	142
cis-1,3-Dichloropropene	ND	142
trans-1,3-Dichloropropene	ND	142
1,1,2-Trichloroethane	ND	142
Tetrachloroethene	ND	142
Dibromochloromethane	ND	142
Chlorobenzene	ND	142
Bromoform	ND	142
1,1,2,2-Tetrachloroethane	ND	142
1,3-Dichlorobenzene	ND	142
1,4-Dichlorobenzene	ND	142
1,2-Dichlorobenzene	ND	142

305407

ENVIROTECH RESEARCH, INC.

Client ID: SSFD-1_1.5-2
Site: Klockner & Klockner

Lab Sample No: 89304
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9589.d

Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 6.2

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	137
Chloromethane	ND	137
Vinyl Chloride	ND	137
Bromomethane	ND	137
Chloroethane	ND	137
Trichlorofluoromethane	ND	137
1,1-Dichloroethene	ND	137
Methylene Chloride	ND	137
trans-1,2-Dichloroethene	ND	137
1,1-Dichloroethane	ND	137
cis-1,2-Dichloroethene	ND	137
Chloroform	ND	137
1,1,1-Trichloroethane	ND	137
Carbon Tetrachloride	ND	137
1,2-Dichloroethane	ND	137
Trichloroethene	ND	137
1,2-Dichloropropane	ND	137
Bromodichloromethane	ND	137
2-Chloroethyl Vinyl Ether	ND	137
cis-1,3-Dichloropropene	ND	137
trans-1,3-Dichloropropene	ND	137
1,1,2-Trichloroethane	ND	137
Tetrachloroethene	ND	137
Dibromochloromethane	ND	137
Chlorobenzene	ND	137
Bromoform	ND	137
1,1,2,2-Tetrachloroethane	ND	137
1,3-Dichlorobenzene	ND	137
1,4-Dichlorobenzene	ND	137
1,2-Dichlorobenzene	ND	137

305408

ENVIROTECH RESEARCH, INC.

Client ID: SSCP-4_1-1.5
Site: Klockner & Klockner

Lab Sample No: 89305
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9590.d

Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 3.7

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	130
Chloromethane	ND	130
Vinyl Chloride	ND	130
Bromomethane	ND	130
Chloroethane	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	ND	130
Methylene Chloride	ND	130
trans-1,2-Dichloroethene	ND	130
1,1-Dichloroethane	ND	130
cis-1,2-Dichloroethene	ND	130
Chloroform	ND	130
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
1,2-Dichloroethane	ND	130
Trichloroethene	ND	130
1,2-Dichloropropane	ND	130
Bromodichloromethane	ND	130
2-Chloroethyl Vinyl Ether	ND	130
cis-1,3-Dichloropropene	ND	130
trans-I,3-Dichloropropene	ND	130
1,1,2-Trichloroethane	ND	130
Tetrachloroethene	ND	130
Dibromochloromethane	ND	130
Chlorobenzene	ND	130
Bromoform	ND	130
1,1,2,2-Tetrachloroethane	ND	130
1,3-Dichlorobenzene	ND	130
1,4-Dichlorobenzene	ND	130
1,2-Dichlorobenzene	ND	130

305409

VALIDATE

CHAIN-OF-CUSTODY

PROJECT NAME: Klockner & Klockner

PROJECT NO: 95-03-02 Envirotech # 809003

LABORATORY: Envirotech Research, Inc.

SITE ADDRESS: Stickle Avenue & Elm Street, Rockaway Borough, NJ

SAMPLE DATE: 10/8/98

SAMPLER(S): Cheryl L. Coffee / L. WESTCOTT

PAGE 1 OF 1

I052

SAMPLE TIME	SAMPLE LOCATION	SAMPLE ID#	SAMPLE DEPTH	SAMPLE MATRIX	ANALYSIS REQUESTED	PRESER-VATIVE	NO. OF CONT.	SPECIAL INSTRUCTIONS
—	TRIP BLANK	TB-3	N/A	MEOH	PHAL (8021)	ICE	1	89299
1210	OIL STORAGE SHED	SSOSS-1	1-1.5'	SOIL	PHAL (8021)	ICE/MEOH	2	89300
1215	CONCRETE PAD	SSCP-1	3.5-4'	SOIL	PHAL (8021)	ICE/MEOH	2	1 WEEK TAT 89301
0950	(Concrete Pad SSCP-4) GEOLOGICAL CHARACTERISTICS	SSGC-1A	1.5-4'	SOIL	TOC, GRAIN SIZE	ICE	2	89302
1218	CONCRETE PAD	SSCP-1	11-11.5'	SOIL	PHAL (8021)	ICE/MEOH	2	1 WEEK TAT 89303
1500	FLOOR DRAIN	SSFD-1	1.5-2'	SOIL	PHAL (8021)	ICE/MEOH	2	89304
12:23	Concrete Pad	SSCP-4	1-1.5'	Soil	* PHAL Contingent	Ice/MEOH	2	89305
12:13	Concrete Pad	SSCP-2	1.5-2'	Soil	* PHAL Contingent	Ice/MEOH	2	89306
13:20	Concrete Pad	SSCP-3	1.5-2'	Soil	* PHAL Contingent	Ice/MEOH	2	89307
	~~TB-3~~			~~MEOH~~		~~MEOH~~	~~X~~	

RELINQUISHED BY: Cheryl L. Coffee DATE: 10/9/98 TIME: 1600 RECEIVED BY: Steve Johnson DATE: 10-9-98 TIME 1600

RELINQUISHED BY: Steve Johnson DATE: 10-9-98 TIME: 1810 RECEIVED BY: [illegible] DATE: 10/9/98 TIME 1810

TOTAL NO. CONTAINERS 17

ANALYTICAL PARAMETER IDENTIFICATION KEY:

PHC PETROLEUM HYDROCARBONS
VOC VOLATILE ORGANICS BY GC/MS WITH LIBRARY SEARCH
PAH POLYCYCLIC AROMATIC HYDROCARBONS IN BASE NEUTRAL SCAN WITH LIBRARY SEARCH
BN BASE NEUTRALS WITH LIBRARY SEARCH
AE ACID EXTRACTABLES WITH LIBRARY SEARCH
PPM PRIORITY POLLUTANT METALS
PP-40 PRIORITY POLLUTANT PLUS FORTY PEAKS

CT = CEILING TILE
FT = FLOOR TILE

TSI = THERMAL SYSTEM INSULATION

THE WHITMAN COMPANIES INC
44 WEST FERRIS STREET
EAST BRUNSWICK, NJ 08816

305410

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.

777 NEW DURHAM ROAD, EDISON, NJ
08817
(732) 549-3900

Job No: 1052 **Site:** Klockner & Klockner

Client: The Whitman Companies, Inc.

VOAGC

8021Be

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
SOLID							
89299	10/8/1998	10/09/1998			10.20.98	KB	3700
89300	10/8/1998	10/09/1998			10.21.98	KB	3700
89301	10/8/1998	10/09/1998			10.16.98	KB	3700
89303	10/8/1998	10/09/1998			↓	↓	↓
89304	10/8/1998	10/09/1998			10.20.98	↓	↓
89305	10/8/1998	10/09/1998			↓	↓	↓
89306	10/8/1998	10/09/1998					
89307	10/8/1998	10/09/1998					

305411

INTERNAL CUSTODY RECORD
AND
LABORATORY CHRONICLE
ENVIROTECH RESEARCH, INC.

777 NEW DURHAM ROAD, EDISON, NJ
08817
(732) 549-3900

Job No: 1052 **Site:** Klockner & Klockner

Client: The Whitman Companies, Inc.

WET CHEM

TOC

Lab Sample ID	Date Sampled	Date Received	Preparation Date	Technician's Name	Analysis Date	Analyst's Name	QA Batch
SOLID							
89302	10/8/1998	10/09/1998			10/14/98	BH	1402

305412

Analytical Methodology Summary

Volatile Organics:

Unless otherwise specified, water samples are analyzed for volatile organics by purge and trap GC/MS as specified in EPA Method 624. Drinking water samples are analyzed by EPA Method 524.2. Solid samples are analyzed for volatile organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8260B. Water samples are analyzed for volatile organics by purge and trap GC/PID and GC/ELCD as specified in EPA Methods 601 and 602. Solid samples are analyzed by GC/PID and GC/ELCD in accordance with SW-846, 3rd Edition Method 8021B.

Acid and Base/Neutral Extractable Organics:

Unless otherwise specified, water samples are analyzed for acid and/or base/neutral extractable organics by GC/MS in accordance with EPA Method 625. Solids are analyzed for acid and/or base/neutral extractable organics as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8270C.

GC/MS Nontarget Compound Analysis:

Analysis for nontarget compounds is conducted, upon request, in conjunction with GC/MS analyses by EPA Methods 624, 625, 8260B and 8270C. Nontarget compound analysis is conducted using a forward library search of the EPA/NIH/NBS mass spectral library of compounds at the greatest apparent concentration (10% or greater of the nearest internal standard) in each organic fraction (15 for volatile, 15 for base/neutrals and 10 for acid extractables).

Organochlorine Pesticides and PCBs:

Unless otherwise specified, water samples are analyzed for organochlorine pesticides and PCBs by dual column gas chromatography with electron capture detectors as specified in EPA Method 608. Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition) Method 8081A for organochlorine pesticides and Method 8082 for PCBs.

Total Petroleum Hydrocarbons:

Water samples are analyzed for petroleum hydrocarbons by I.R. using EPA Method 418.1. Solid samples are prepared for analysis by soxhlet extraction consistent with the March 1990 N.J. DEP "Remedial Investigation Guide" Appendix A, page 52, and analyzed by U.S. EPA Method 418.1

305413

Metals Analysis:

Metals analyses are performed by any of four techniques specified by a Method Code provided on each data report page, as follows:

P - Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)

A - Flame Atomic Absorption

F - Furnace Atomic Absorption

CV - Manual Cold Vapor (Mercury)

Water samples are digested and analyzed using EPA methods provided in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid samples are analyzed as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition); samples are digested according to Method 3050B "Acid Digestion of Soil, Sediments and Sludges."

Specific method references for ICP analyses are water Method 200.7 and solid Method 6010B. Mercury analyses are conducted by the manual cold vapor technique specified by water Method 245.1 and solid Method 7471A. Other specific Atomic Absorption method references are as follows:

	Water Test Method		Solid Test Method	
Element	Flame	Furnace	Flame	Furnace
Aluminum	202.1	202.2	7020	--
Antimony	204.1	204.2	7040	7041
Arsenic	--	206.2	--	7060
Barium	208.1	--	7080	--
Beryllium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Calcium	215.1	--	7140	--
Chromium, Total	218.1	218.2	7190	7191
Chromium, (+6)	218.4	218.5	7197	7195
Cobalt	219.1	219.2	7200	7201
Copper	220.1	220.2	7210	--
Iron	236.1	236.2	7380	--
Lead	239.1	239.2	7420	7421
Magnesium	242.1	--	7450	--
Manganese	243.1	243.2	7460	--
Nickel	249.1	249.2	7520	--
Potassium	258.1	--	7610	--
Selenium	--	270.2	--	7740
Silver	272.1	272.2	7760	--
Sodium	273.1	--	7770	--
Tin	283.1	283.2	7870	--
Thallium	279.1	279.2	7840	7841
Vanadium	286.1	286.2	7910	7911
Zinc	289.1	289.2	7950	--

Cyanide:

Water samples are analyzed for cyanide using EPA Method 335.3. Cyanide is determined in solid samples as specified in the EPA Contract Laboratory Program IFB dated July 1988, revised February 1989.

305414

Phenols:

Water samples are analyzed for total phenols using EPA Method 420.2. Total phenols are determined in solid samples by preparing the sample as outlined in the EPA Contract Laboratory Program IFB for cyanide, followed by a phenols determination using EPA Method 420.1.

Cleanup of Semivolatile Extracts:

Upon request Method 3611B Alumina Column Cleanup and/or Method 3650B Acid-Base Partition Cleanup are performed to improve detection limits by the removal of saturated hydrocarbon interferences.

Hazardous Waste Characteristics:

Samples for hazardous waste characteristics are analyzed as specified in the U.S. EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

Ignitability	- Method 1020A
Corrosivity	- Water pH Method 9040B Soil pH Method 9045C
Reactivity	- Chapter 7, Section 7.3.3 and 7.3.4 respectively for hydrogen cyanide and hydrogen sulfide release
Toxicity	- TCLP Method 1311

Miscellaneous Parameters:

Additional analyses performed on both aqueous and solid samples are in accordance with methods published in the following references:

- Test Methods for Evaluating Solid Wastes, SW-846 3rd Edition, November 1986.
- Standard Methods for the Examination of Water and Wastewater, 17th Edition.
- Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, 1979.

305415

DATA REPORTING QUALIFIERS

ND - The compound was not detected at the indicated concentration.

B - The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

P - For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

* - For dual column analysis, the lowest quantitated concentration is being reported due to coeluting interference.

305416

NON-CONFORMANCE SUMMARY

Envirotech Research, Inc. Job Number: I052

Volatile Organics Analysis:

All data conforms with method requirements ✓; or
Analysis was not requested ____; or
Non-conformance for the specific samples listed is as follows:

note: α,α,α-TFT surrogate std spiked prior to sampling / CH_2Br_2Cl surrogate std spiked upon receipt in laboratory.

See continuation page if checked ( )

Base/Neutral and/or Acid Extractable Organics:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

PCBs and/or Organochlorine Pesticides:

All data conforms with method requirements ____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

305417

Non-conformance Summary, Page 2 of 2
Envirotech Research, Inc. Job Number: I052

Metals Analysis:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

Total Petroleum Hydrocarbons:

All data conforms with method requirements _____; or
Analysis was not requested ✓; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

General Chemistry/Disposal Parameters:

All data conforms with method requirements ✓; or
Analysis was not requested _____; or
Non-conformance for the specific samples listed is as follows:

See continuation page if checked ( )

Signature of
Laboratory Manager: _____ Date: 11/2/98

305418

Client ID: **TB-3**
Site: Klockner & Klockner

Lab Sample No: **89299**
Lab Job No: I052

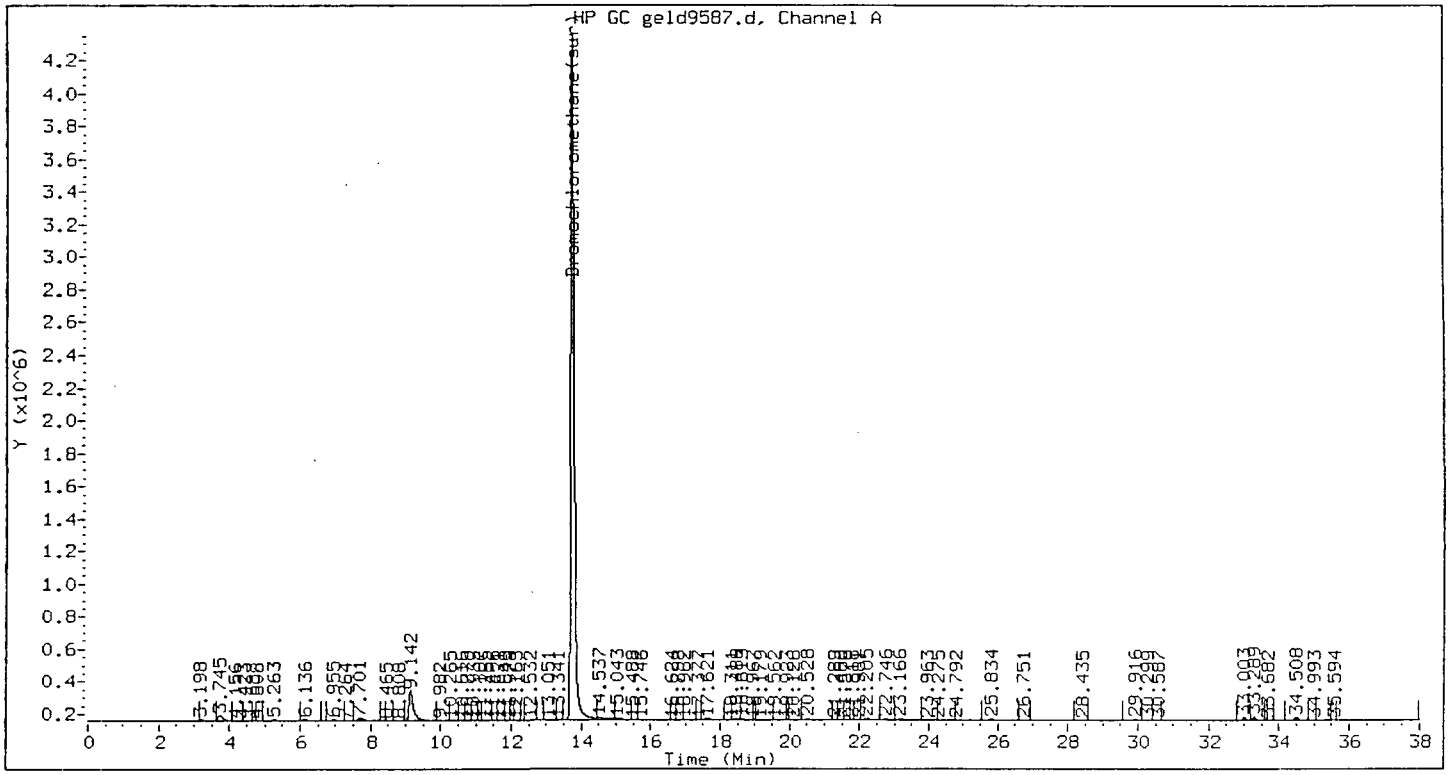
Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9587.d

Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	125
Chloromethane	ND	125
Vinyl Chloride	ND	125
Bromomethane	ND	125
Chloroethane	ND	125
Trichlorofluoromethane	ND	125
1,1-Dichloroethene	ND	125
Methylene Chloride	ND	125
trans-1,2-Dichloroethene	ND	125
1,1-Dichloroethane	ND	125
cis-1,2-Dichloroethene	ND	125
Chloroform	ND	125
1,1,1-Trichloroethane	ND	125
Carbon Tetrachloride	ND	125
1,2-Dichloroethane	ND	125
Trichloroethene	ND	125
1,2-Dichloropropane	ND	125
Bromodichloromethane	ND	125
2-Chloroethyl Vinyl Ether	ND	125
cis-1,3-Dichloropropene	ND	125
trans-1,3-Dichloropropene	ND	125
1,1,2-Trichloroethane	ND	125
Tetrachloroethene	ND	125
Dibromochloromethane	ND	125
Chlorobenzene	ND	125
Bromoform	ND	125
1,1,2,2-Tetrachloroethane	ND	125
1,3-Dichlorobenzene	ND	125
1,4-Dichlorobenzene	ND	125
1,2-Dichlorobenzene	ND	125

305419



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/8021E.m
Sample Info : 89299;;50
Lab ID : 89299
Inj Date : 20-OCT-98 17:32:00
Operator : KB
Cpnd Sublist: 601
Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.745	13.735	0.010	137515560	29.587	3698.351

305420

Client ID: **SSOSS-1_1-1.5**
Site: Klockner & Klockner

Lab Sample No: **89300**
Lab Job No: I052

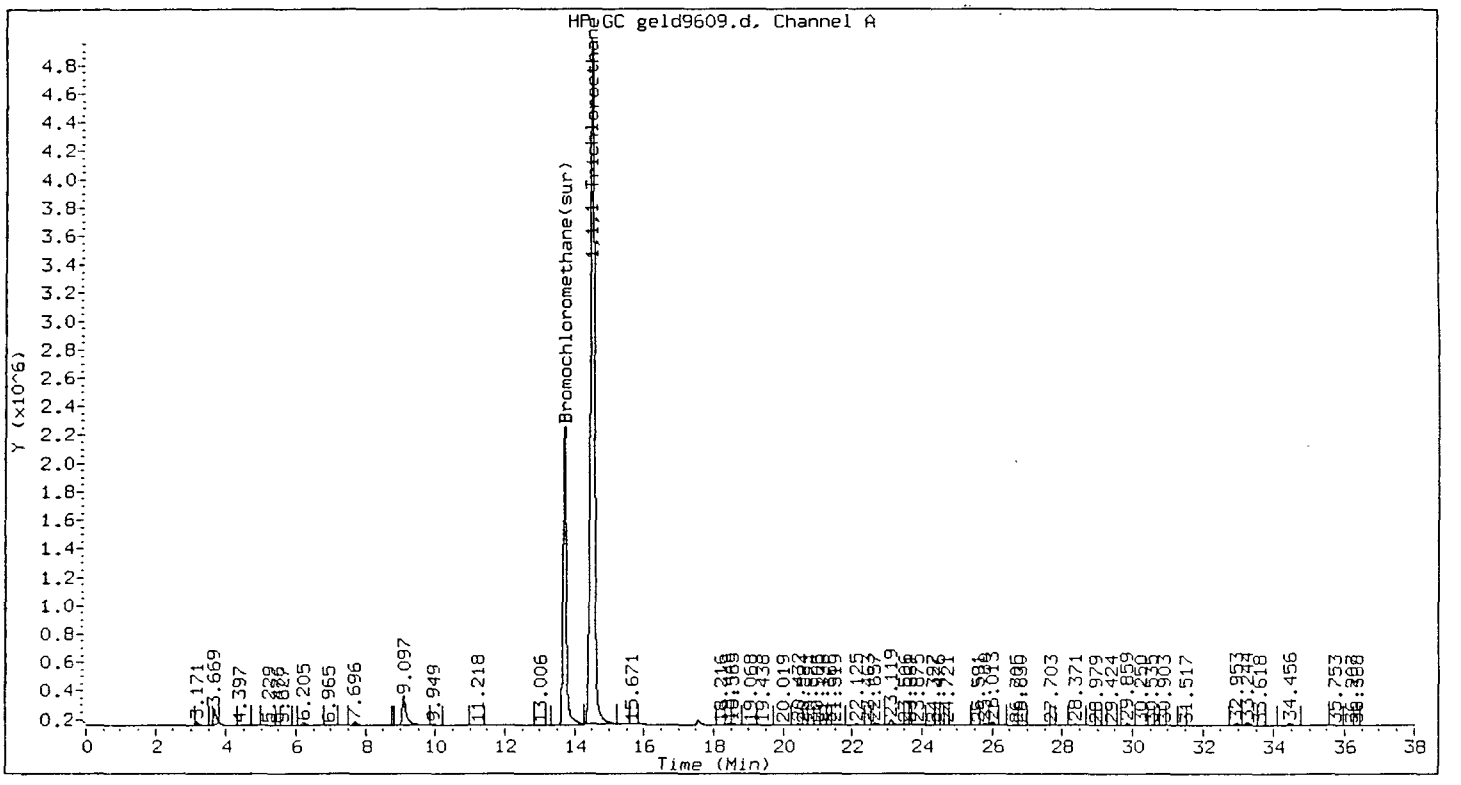
Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/21/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9609.d

Matrix: SOIL
Level: HIGH
Sample Weight: 9 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 100.0
% Moisture: 8.7

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	294
Chloromethane	ND	294
Vinyl Chloride	ND	294
Bromomethane	ND	294
Chloroethane	ND	294
Trichlorofluoromethane	ND	294
1,1-Dichloroethene	ND	294
Methylene Chloride	ND	294
trans-1,2-Dichloroethene	ND	294
1,1-Dichloroethane	ND	294
cis-1,2-Dichloroethene	ND	294
Chloroform	ND	294
1,1,1-Trichloroethane	7250	294
Carbon Tetrachloride	ND	294
1,2-Dichloroethane	ND	294
Trichloroethene	ND	294
1,2-Dichloropropane	ND	294
Bromodichloromethane	ND	294
2-Chloroethyl Vinyl Ether	ND	294
cis-1,3-Dichloropropene	ND	294
trans-1,3-Dichloropropene	ND	294
1,1,2-Trichloroethane	ND	294
Tetrachloroethene	ND	294
Dibromochloromethane	ND	294
Chlorobenzene	ND	294
Bromoform	ND	294
1,1,2,2-Tetrachloroethane	ND	294
1,3-Dichlorobenzene	ND	294
1,4-Dichlorobenzene	ND	294
1,2-Dichlorobenzene	ND	294

305421



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/21oct98.b/8021E.m
Sample Info : 89300;;100
Lab ID : 89300
Inj Date : 21-OCT-98 16:48:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 100
Sample Matrix : SOIL
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
1,1,1-Trichloroethane	14.496	14.531	0.035	198298520	24.622	7249.661
Bromochloromethane(sur)	13.700	13.735	0.035	67618476	14.548	4283.492

305422

Client ID: **SSCP-1_3.5_4**
Site: Klockner & Klockner

Lab Sample No: **89301**
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/16/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9508.d

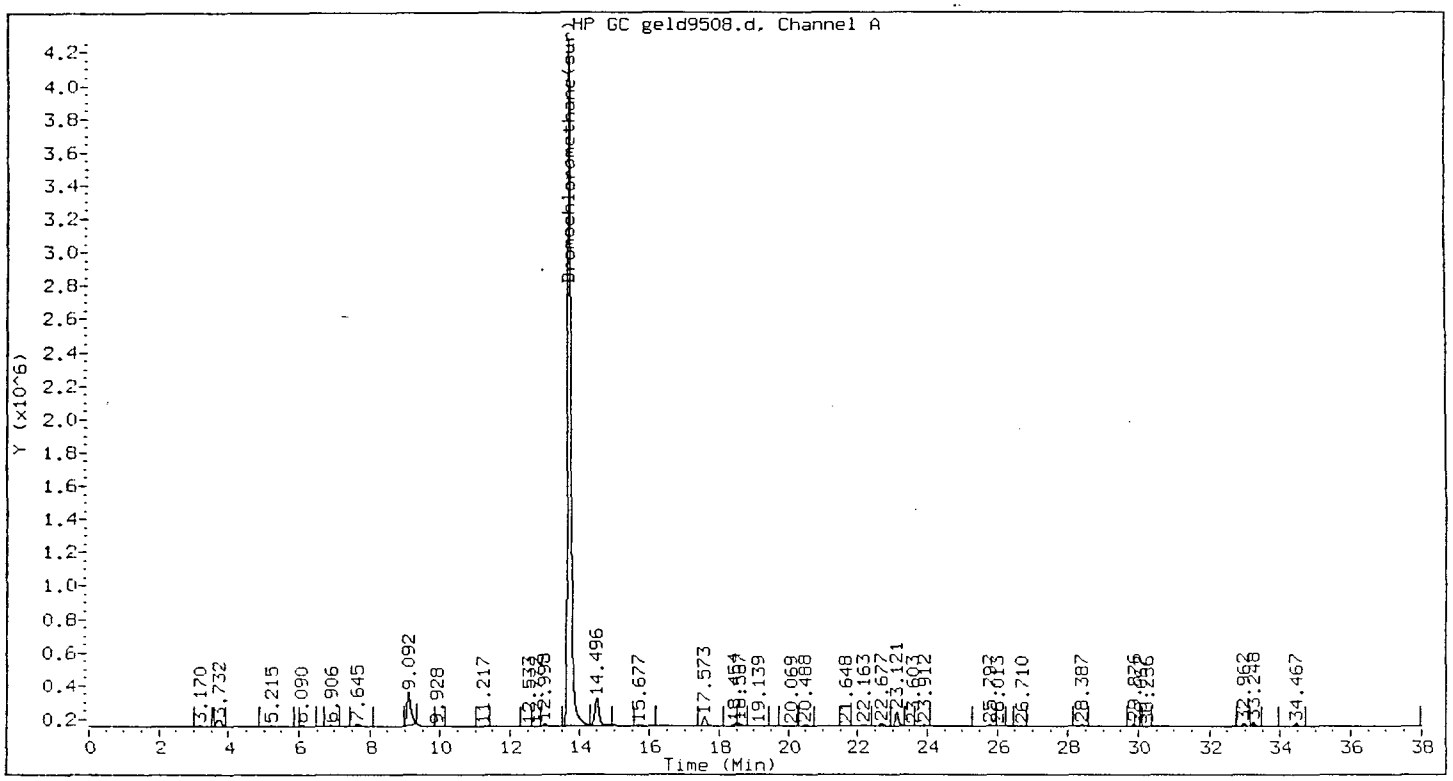
Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 4.3

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	133
Chloromethane	ND	133
Vinyl Chloride	ND	133
Bromomethane	ND	133
Chloroethane	ND	133
Trichlorofluoromethane	ND	133
1,1-Dichloroethene	ND	133
Methylene Chloride	ND	133
trans-1,2-Dichloroethene	ND	133
1,1-Dichloroethane	ND	133
cis-1,2-Dichloroethene	ND	133
Chloroform	ND	133
1,1,1-Trichloroethane	ND	133
Carbon Tetrachloride	ND	133
1,2-Dichloroethane	ND	133
Trichloroethene	ND	133
1,2-Dichloropropane	ND	133
Bromodichloromethane	ND	133
2-Chloroethyl Vinyl Ether	ND	133
cis-1,3-Dichloropropene	ND	133
trans-1,3-Dichloropropene	ND	133
1,1,2-Trichloroethane	ND	133
Tetrachloroethene	ND	133
Dibromochloromethane	ND	133
Chlorobenzene	ND	133
Bromoform	ND	133
1,1,2,2-Tetrachloroethane	ND	133
1,3-Dichlorobenzene	ND	133
1,4-Dichlorobenzene	ND	133
1,2-Dichlorobenzene	ND	133

305423

Data File: /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/geld9508.d Page 1
Report Date 10/17/98 08:40



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : 89301;;50
Lab ID : 89301 Inst ID : VOAGC1.i
Inj Date : 16-OCT-98 15:31:00 Dil Factor : 50
Operator : KB Sample Matrix : SOIL
Cpnd Sublist: 601 Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
Bromochloromethane(sur)	13.697	13.730	0.033	135812122	33.333	4442.651

305424

Client ID: **SSCP-1_11-11.5**
Site: Klockner & Klockner

Lab Sample No: **89303**
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/16/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9509.d

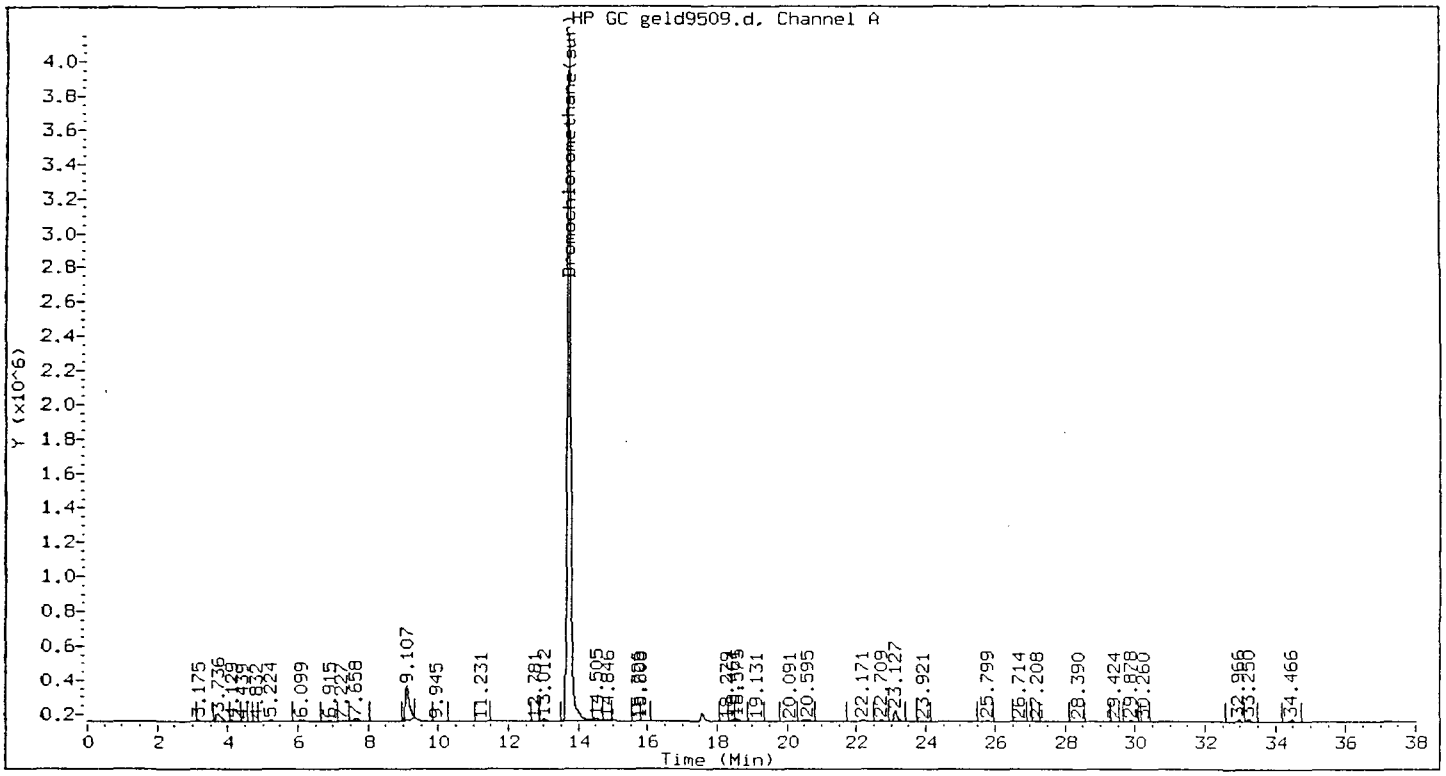
Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 7.1

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	142
Chloromethane	ND	142
Vinyl Chloride	ND	142
Bromomethane	ND	142
Chloroethane	ND	142
Trichlorofluoromethane	ND	142
1,1-Dichloroethene	ND	142
Methylene Chloride	ND	142
trans-1,2-Dichloroethene	ND	142
1,1-Dichloroethane	ND	142
cis-1,2-Dichloroethene	ND	142
Chloroform	ND	142
1,1,1-Trichloroethane	ND	142
Carbon Tetrachloride	ND	142
1,2-Dichloroethane	ND	142
Trichloroethene	ND	142
1,2-Dichloropropane	ND	142
Bromodichloromethane	ND	142
2-Chloroethyl Vinyl Ether	ND	142
cis-1,3-Dichloropropene	ND	142
trans-1,3-Dichloropropene	ND	142
1,1,2-Trichloroethane	ND	142
Tetrachloroethene	ND	142
Dibromochloromethane	ND	142
Chlorobenzene	ND	142
Bromoform	ND	142
1,1,2,2-Tetrachloroethane	ND	142
1,3-Dichlorobenzene	ND	142
1,4-Dichlorobenzene	ND	142
1,2-Dichlorobenzene	ND	142

305425

Data File: /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/geld9509.d Page 1
Report Date 10/17/98 08:40



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : 89303;;50
Lab ID : 89303 Inst ID : VOAGC1.i
Inj Date : 16-OCT-98 16:16:00 Dil Factor : 50
Operator : KB Sample Matrix : SOIL
Cpnd Sublist: 601 Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.712	13.730	0.018	133733888	32.823	4648.832

305426

Client ID: **SSFD-1_1.5-2**
Site: Klockner & Klockner

Lab Sample No: **89304**
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9589.d

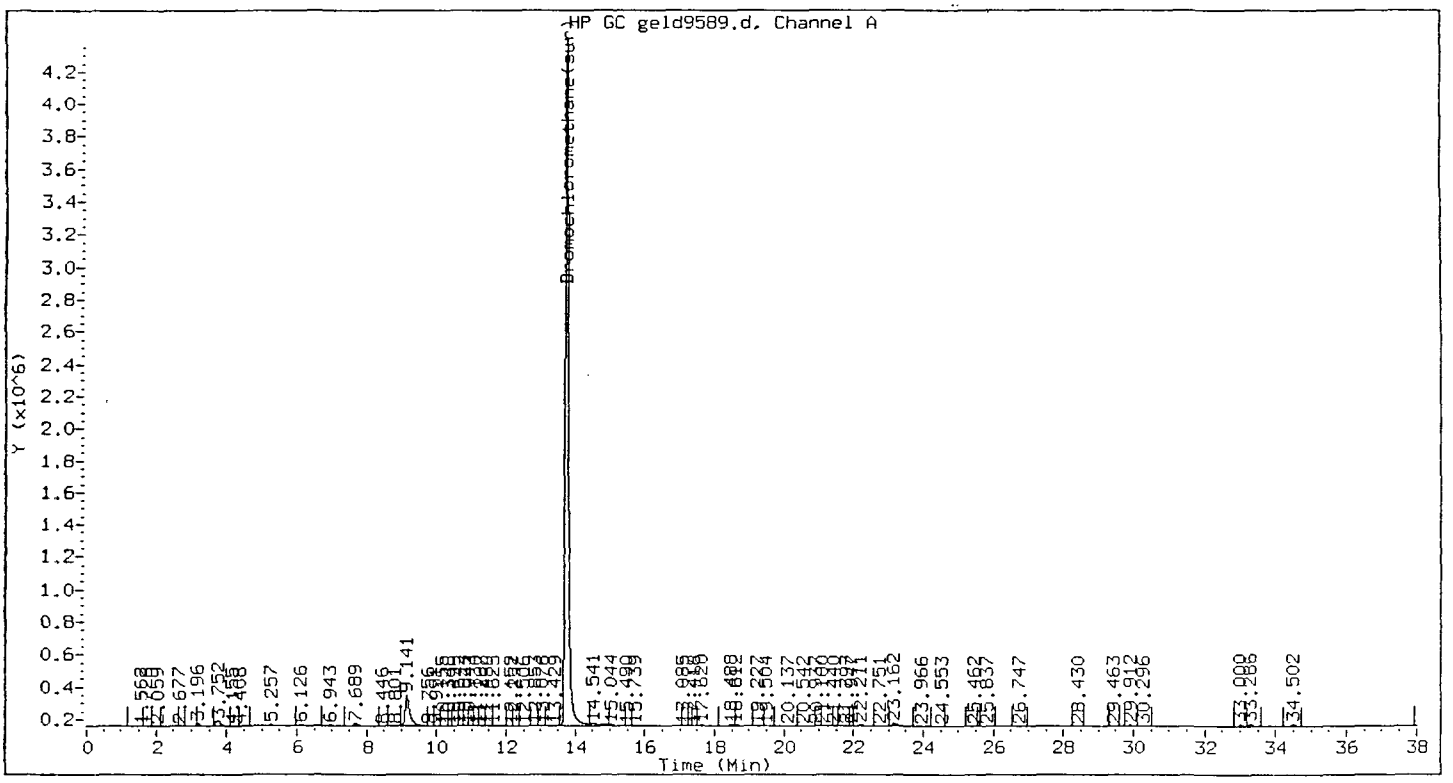
Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 6.2

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	137
Chloromethane	ND	137
Vinyl Chloride	ND	137
Bromomethane	ND	137
Chloroethane	ND	137
Trichlorofluoromethane	ND	137
1,1-Dichloroethene	ND	137
Methylene Chloride	ND	137
trans-1,2-Dichloroethene	ND	137
1,1-Dichloroethane	ND	137
cis-1,2-Dichloroethene	ND	137
Chloroform	ND	137
1,1,1-Trichloroethane	ND	137
Carbon Tetrachloride	ND	137
1,2-Dichloroethane	ND	137
Trichloroethene	ND	137
1,2-Dichloropropane	ND	137
Bromodichloromethane	ND	137
2-Chloroethyl Vinyl Ether	ND	137
cis-1,3-Dichloropropene	ND	137
trans-1,3-Dichloropropene	ND	137
1,1,2-Trichloroethane	ND	137
Tetrachloroethene	ND	137
Dibromochloromethane	ND	137
Chlorobenzene	ND	137
Bromoform	ND	137
1,1,2,2-Tetrachloroethane	ND	137
1,3-Dichlorobenzene	ND	137
1,4-Dichlorobenzene	ND	137
1,2-Dichlorobenzene	ND	137

305427

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/geld9589.d Page 1
Report Date 10/21/98 08:53



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/8021E.m
Sample Info : 89304;;50
Lab ID : 89304
Inj Date : 20-OCT-98 19:02:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.745	13.735	0.010	138174259	29.729	4084.218

305428

Client ID: **SSCP-4_1-1.5**
Site: Klockner & Klockner

Lab Sample No: **89305**
Lab Job No: I052

Date Sampled: 10/08/98
Date Received: 10/09/98
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9590.d

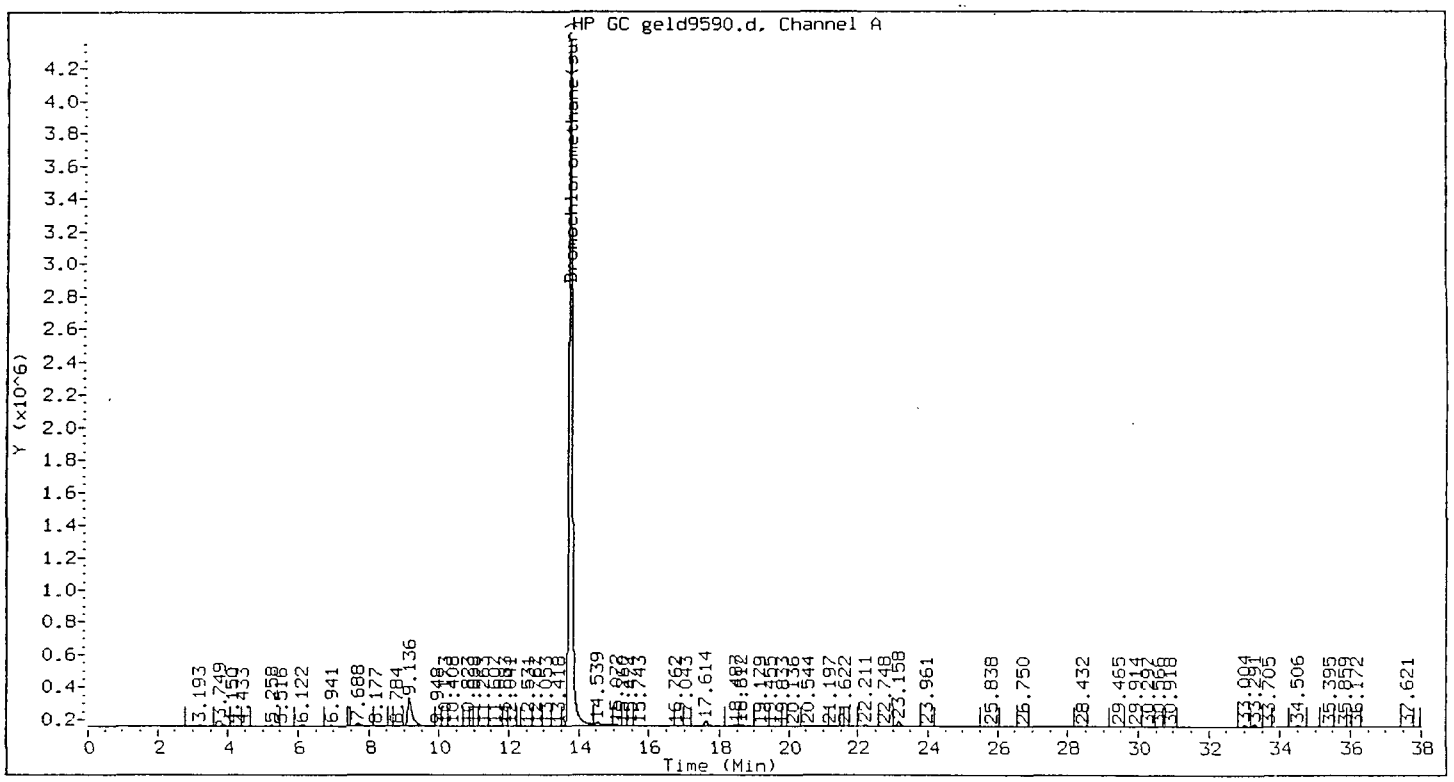
Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 3.7

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	130
Chloromethane	ND	130
Vinyl Chloride	ND	130
Bromomethane	ND	130
Chloroethane	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	ND	130
Methylene Chloride	ND	130
trans-1,2-Dichloroethene	ND	130
1,1-Dichloroethane	ND	130
cis-1,2-Dichloroethene	ND	130
Chloroform	ND	130
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
1,2-Dichloroethane	ND	130
Trichloroethene	ND	130
1,2-Dichloropropane	ND	130
Bromodichloromethane	ND	130
2-Chloroethyl Vinyl Ether	ND	130
cis-1,3-Dichloropropene	ND	130
trans-1,3-Dichloropropene	ND	130
1,1,2-Trichloroethane	ND	130
Tetrachloroethene	ND	130
Dibromochloromethane	ND	130
Chlorobenzene	ND	130
Bromoform	ND	130
1,1,2,2-Tetrachloroethane	ND	130
1,3-Dichlorobenzene	ND	130
1,4-Dichlorobenzene	ND	130
1,2-Dichlorobenzene	ND	130

305429

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/geld9590.d Page 1
Report Date 10/21/98 08:54



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/8021E.m
Sample Info : 89305;;50
Lab ID : 89305
Inj Date : 20-OCT-98 19:46:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: SAMPLE

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.743	13.735	0.008	136797536	29.432	3820.395

305430

LAB SAMPLE NO.

VOLATILE METHOD BLANK SUMMARY

GG289

Date Analyzed: 10/16/98

Instrument ID: VOAGC1

Time Analyzed: 1432

Lab File ID: GELD9507

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

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01	SSCP-1_3.5_4	89301	GELD9508	1531
02	SSCP-1_11-11	89303	GELD9509	1616
03				
04				
05				
06				
07				
08				
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COMMENTS:

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305431

Client ID: **GG289**
Site:

Lab Sample No: **GG289**
Lab Job No: I052

Date Sampled: _____
Date Received: _____
Date Analyzed: 10/16/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9507.d

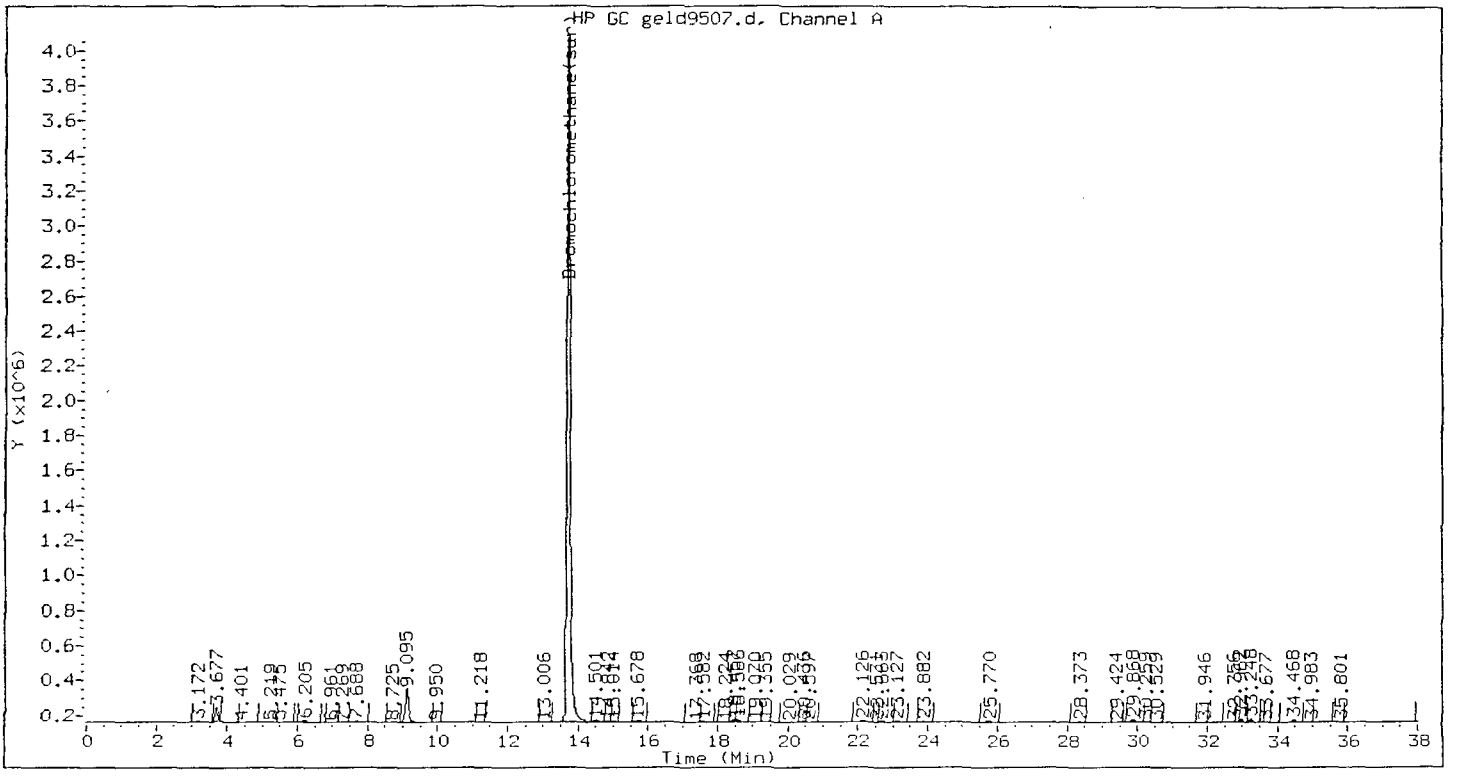
Matrix: SOIL
Level: HIGH
Sample Weight: 1 g
Methanol Ext. Volume: 5.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	250
Chloromethane	ND	250
Vinyl Chloride	ND	250
Bromomethane	ND	250
Chloroethane	ND	250
Trichlorofluoromethane	ND	250
1,1-Dichloroethene	ND	250
Methylene Chloride	ND	250
trans-1,2-Dichloroethene	ND	250
1,1-Dichloroethane	ND	250
cis-1,2-Dichloroethene	ND	250
Chloroform	ND	250
1,1,1-Trichloroethane	ND	250
Carbon Tetrachloride	ND	250
1,2-Dichloroethane	ND	250
Trichloroethene	ND	250
1,2-Dichloropropane	ND	250
Bromodichloromethane	ND	250
2-Chloroethyl Vinyl Ether	ND	250
cis-1,3-Dichloropropene	ND	250
trans-1,3-Dichloropropene	ND	250
1,1,2-Trichloroethane	ND	250
Tetrachloroethene	ND	250
Dibromochloromethane	ND	250
Chlorobenzene	ND	250
Bromoform	ND	250
1,1,2,2-Tetrachloroethane	ND	250
1,3-Dichlorobenzene	ND	250
1,4-Dichlorobenzene	ND	250
1,2-Dichlorobenzene	ND	250

305432

Data File: /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/geld9507.d Page 1
Report Date 10/17/98 08:39



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : GG289
Lab ID : GG289
Inj Date : 16-OCT-98 14:32:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: BLANK

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.699	13.730	0.031	125196925	30.727	7681.842

305433

LAB SAMPLE NO.

VOLATILE METHOD BLANK SUMMARY

GG293A

Date Analyzed: 10/20/98

Instrument ID: VOAGC1

Time Analyzed: 1543

Lab File ID: GELD9585

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

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01	TB-3	89299	GELD9587	1732
02	SSFD-1_1.5-2	89304	GELD9589	1902
03	SSCP-4_1-1.5	89305	GELD9590	1946
04				
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COMMENTS:

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305434

Client ID: **GG293A**
Site:

Lab Sample No: **GG293A**
Lab Job No: I052

Date Sampled: _____
Date Received: _____
Date Analyzed: 10/20/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9585.d

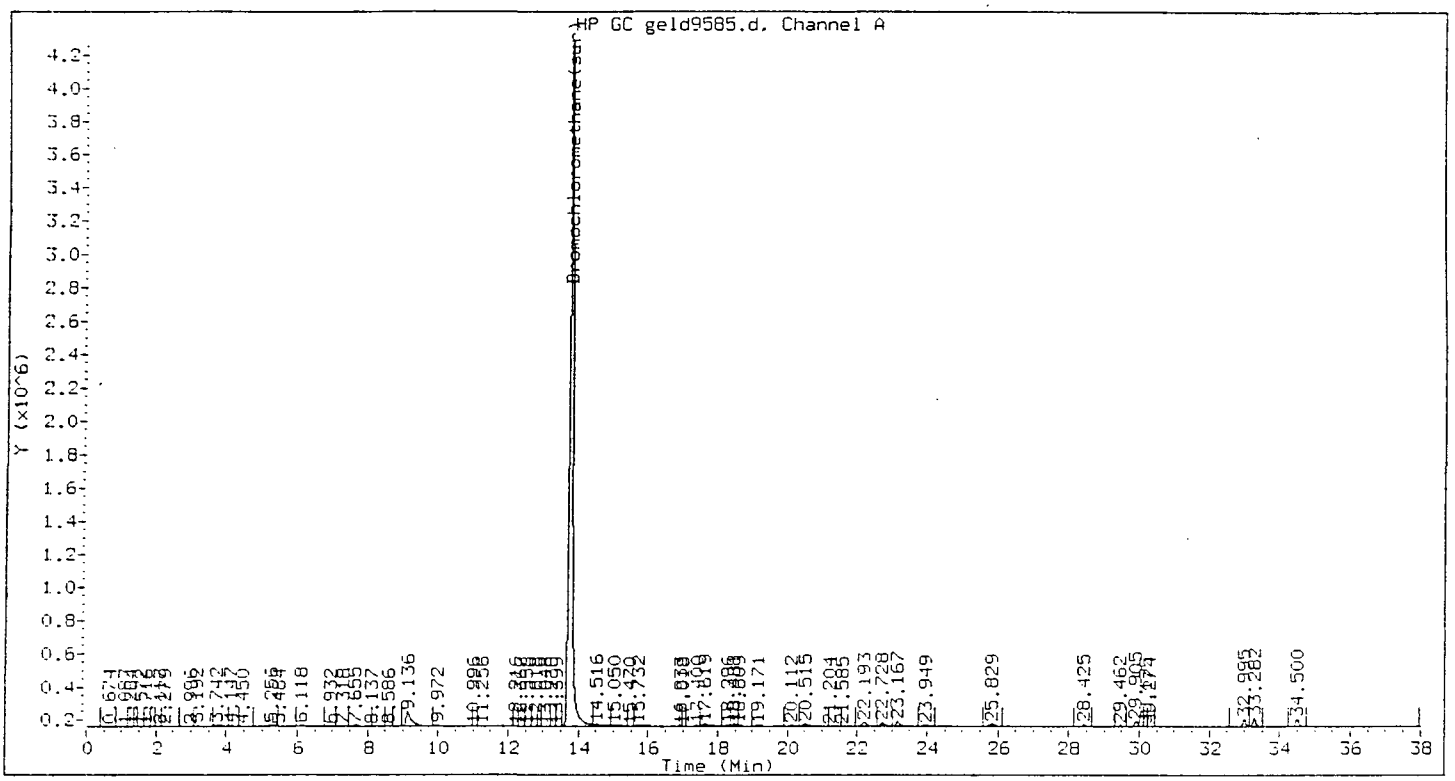
Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	125
Chloromethane	ND	125
Vinyl Chloride	ND	125
Bromomethane	ND	125
Chloroethane	ND	125
Trichlorofluoromethane	ND	125
1,1-Dichloroethene	ND	125
Methylene Chloride	ND	125
trans-1,2-Dichloroethene	ND	125
1,1-Dichloroethane	ND	125
cis-1,2-Dichloroethene	ND	125
Chloroform	ND	125
1,1,1-Trichloroethane	ND	125
Carbon Tetrachloride	ND	125
1,2-Dichloroethane	ND	125
Trichloroethene	ND	125
1,2-Dichloropropane	ND	125
Bromodichloromethane	ND	125
2-Chloroethyl Vinyl Ether	ND	125
cis-1,3-Dichloropropene	ND	125
trans-1,3-Dichloropropene	ND	125
1,1,2-Trichloroethane	ND	125
Tetrachloroethene	ND	125
Dibromochloromethane	ND	125
Chlorobenzene	ND	125
Bromoform	ND	125
1,1,2,2-Tetrachloroethane	ND	125
1,3-Dichlorobenzene	ND	125
1,4-Dichlorobenzene	ND	125
1,2-Dichlorobenzene	ND	125

305435

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/geld9585.d Page 1
Report Date 10/21/98 09:33



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/8021E.m
Sample Info : gg293a
Lab ID : gg293a
Inj Date : 20-OCT-98 15:43:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: BLANK

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.740	13.735	0.005	137466461	29.576	3697.031

305436

LAB SAMPLE NO.

GG294

VOLATILE METHOD BLANK SUMMARY

Date Analyzed: 10/21/98

Instrument ID: VOAGC1

Time Analyzed: 1003

Lab File ID: GELD9601

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

	CLIENT ID.	LAB SAMPLE NO	LAB FILE ID	TIME ANALYZED
01	SSOSS-1_1-1.	89300	GELD9609	1648
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
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17				
18				
19				
20				
21				
22				
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24				
25				
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27				
28				
29				
30				

COMMENTS:

305437

Client ID: **GG294**
Site:

Lab Sample No: **GG294**
Lab Job No: I052

Date Sampled: _____
Date Received: _____
Date Analyzed: 10/21/98
GC Column: DB624
Instrument ID: VOAGC1.i
Lab File ID: geld9601.d

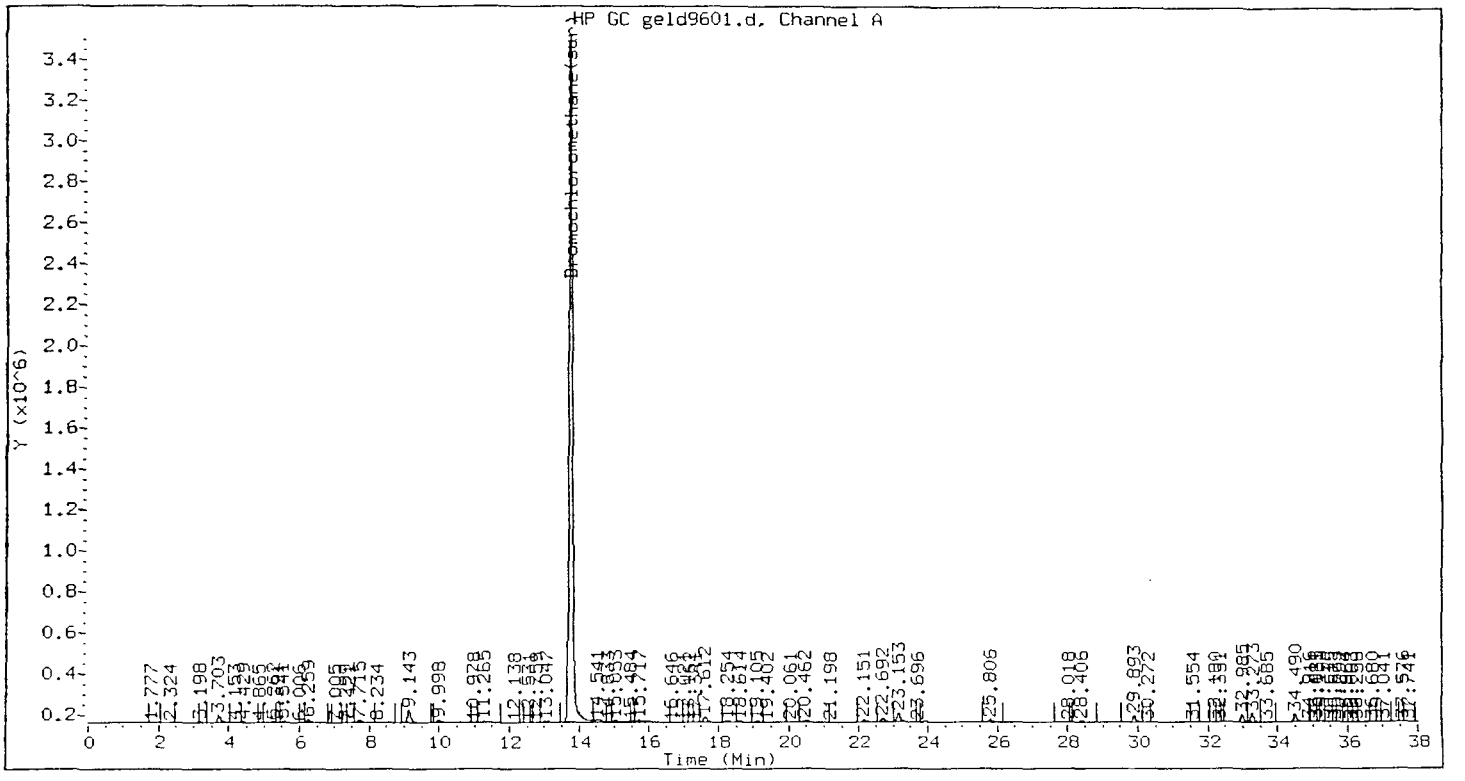
Matrix: SOIL
Level: HIGH
Sample Weight: 10 g
Methanol Ext. Volume: 25.0 ml
Ext. Dilution Factor: 50.0
% Moisture: 0.0

VOLATILE ORGANICS - GC/ELCD
METHOD 8021B

Parameter	Analytical Results Units: ug/kg (Dry Weight)	Quantitation Limit Units: ug/kg
Dichlorodifluoromethane	ND	125
Chloromethane	ND	125
Vinyl Chloride	ND	125
Bromomethane	ND	125
Chloroethane	ND	125
Trichlorofluoromethane	ND	125
1,1-Dichloroethene	ND	125
Methylene Chloride	ND	125
trans-1,2-Dichloroethene	ND	125
1,1-Dichloroethane	ND	125
cis-1,2-Dichloroethene	ND	125
Chloroform	ND	125
1,1,1-Trichloroethane	ND	125
Carbon Tetrachloride	ND	125
1,2-Dichloroethane	ND	125
Trichloroethene	ND	125
1,2-Dichloropropane	ND	125
Bromodichloromethane	ND	125
2-Chloroethyl Vinyl Ether	ND	125
cis-1,3-Dichloropropene	ND	125
trans-1,3-Dichloropropene	ND	125
1,1,2-Trichloroethane	ND	125
Tetrachloroethene	ND	125
Dibromochloromethane	ND	125
Chlorobenzene	ND	125
Bromoform	ND	125
1,1,2,2-Tetrachloroethane	ND	125
1,3-Dichlorobenzene	ND	125
1,4-Dichlorobenzene	ND	125
1,2-Dichlorobenzene	ND	125

305438

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/21oct98.b/geld9601.d Page 1
Report Date 10/22/98 10:37



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/21oct98.b/8021E.m
Sample Info : gg294
Lab ID : gg294
Inj Date : 21-OCT-98 10:03:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: BLANK

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Bromochloromethane(sur)	13.740	13.735	0.005	107196293	23.064	2882.943

305439

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VOAGC1 Calibration Date(s): 10/16/98 10/16/98

Calibration Time(s): 0824 1336

LAB FILE ID: RRF1: GELD9504 RRF5: GELD9503 RRF10: GELD9506
RRF20: GELD9500 RRF40: GELD9505

COMPOUND	RRF1	RRF5	RRF10	RRF20	RRF40
Dichlorodifluoromethane	2058610	2254253	2045925	1842446	1596711
Chloromethane	636320	737470	726239	781645	678076
Vinyl Chloride	1971681	1838601	2290820	2316070	2289969
Bromomethane	588123	480984	717186	823386	628766
Chloroethane	1287549	961165	2097812	1474834	1617534
Trichlorofluoromethane	5576219	4950282	6064911	5514218	4900772
1,1-Dichloroethene	6221697	5649825	6243596	5907064	5101788
Methylene Chloride	10887490	7972341	7928055	7411136	6565985
trans-1,2-Dichloroethene	6706692	5844679	6649954	6320582	5408280
1,1-Dichloroethane	6750334	6114151	6752584	6359271	5517354
cis-1,2-Dichloroethene	4381414	4793863	5889912	5314233	4648755
Chloroform	9055979	7862049	8401090	8046696	6642699
1,1,1-Trichloroethane	7959067	7380012	7421948	7154100	5949500
Carbon Tetrachloride	8755519	8342923	8663696	8082346	6693481
1,2-Dichloroethane	6471622	5803342	6399306	6009578	5351596
Trichloroethene	7831512	7566184	7832732	7205958	6549598
1,2-Dichloropropane	6061151	5646735	6045766	5654029	5000279
Bromodichloromethane	5985025	5881419	6033880	5769085	4993128
2-Chloroethyl Vinyl Ether	1754073	1534312	1915356	1381456	1808922
cis-1,3-Dichloropropene	6131085	5371062	5779664	5441528	4681420
trans-1,3-Dichloropropene	5425692	5003137	5403255	5083067	4436175
1,1,2-Trichloroethane	6869242	6283592	6756327	6299075	5597952
Tetrachloroethene	8082300	7519364	7845978	7305232	6232018
Dibromochloromethane	4379253	4159169	4478119	4387774	3969768
Chlorobenzene	3047210	2880349	3071938	2935858	2656918
Bromoform	2702299	2691310	2977105	2928975	2780837
1,1,2,2-Tetrachloroethane	4652162	4488062	4709537	4474704	3833522
1,3-Dichlorobenzene	4282947	4028128	4215962	4116702	3607379
1,4-Dichlorobenzene	4461256	4263653	4438300	4256539	3771680
1,2-Dichlorobenzene	4149457	4121859	4226886	4099053	3664022
Bromochloromethane(sur)	4320578	3792802	4223823	4186005	3849010

305440

VOLATILE ORGANICS INITIAL CALIBRATION DATA

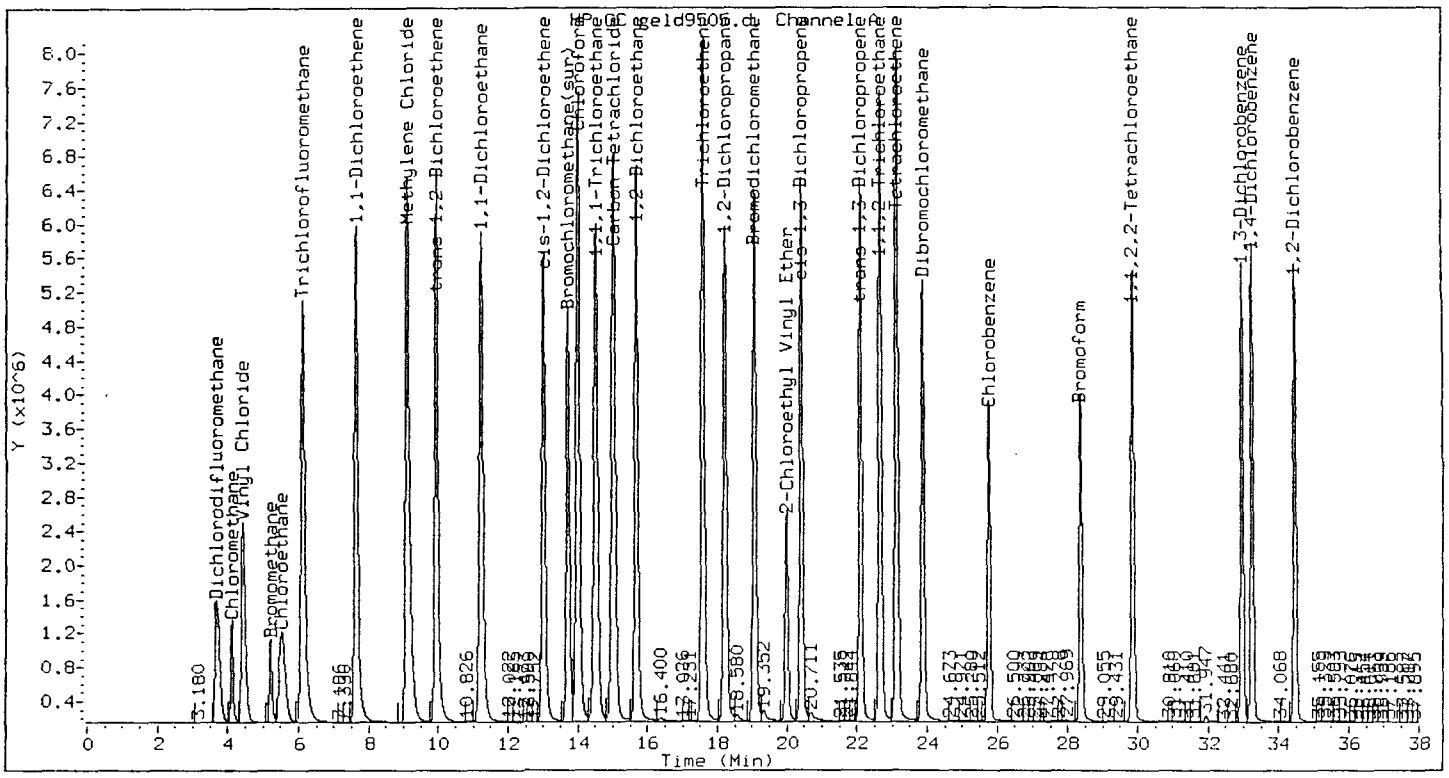
Instrument ID: VOAGC1 Calibration Date(s): 10/16/98 10/16/98

Calibration Time(s): 0824 1336

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Dichlorodifluoromethane	AVRG	1959589	13*
Chloromethane	AVRG	711950	7.9*
Vinyl Chloride	AVRG	2141428	10*
Bromomethane	AVRG	647689	20*
Chloroethane	AVRG	1487779	28*
Trichlorofluoromethane	AVRG	5401280	9.0*
1,1-Dichloroethene	AVRG	5824794	8.1*
Methylene Chloride	AVRG	8153001	20*
trans-1,2-Dichloroethene	AVRG	6186037	8.9*
1,1-Dichloroethane	AVRG	6298739	8.2*
cis-1,2-Dichloroethene	AVRG	5005636	12*
Chloroform	AVRG	8001703	11*
1,1,1-Trichloroethane	AVRG	7172925	10*
Carbon Tetrachloride	AVRG	8107593	10*
1,2-Dichloroethane	AVRG	6007089	7.6*
Trichloroethene	AVRG	7397197	7.3*
1,2-Dichloropropane	AVRG	5681592	7.6*
Bromodichloromethane	AVRG	5732507	7.4*
2-Chloroethyl Vinyl Ether	AVRG	1678824	13*
cis-1,3-Dichloropropene	AVRG	5480952	9.8*
trans-1,3-Dichloropropene	AVRG	5070265	7.9*
1,1,2-Trichloroethane	AVRG	6361238	7.9*
Tetrachloroethene	AVRG	7396978	9.7*
Dibromochloromethane	AVRG	4274817	4.8*
Chlorobenzene	AVRG	2918454	5.7*
Bromoform	AVRG	2816105	4.6*
1,1,2,2-Tetrachloroethane	AVRG	4431597	7.9*
1,3-Dichlorobenzene	AVRG	4050224	6.6*
1,4-Dichlorobenzene	AVRG	4238286	6.6*
1,2-Dichlorobenzene	AVRG	4052255	5.5*
Bromochloromethane(sur)	AVRG	4074444	5.8*

* Compounds with required maximum %RSD values.

305441



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : GSTD040
Lab ID : GSTD040
Inj Date : 16-OCT-98 12:51:00
Operator : KB
Cpnd Sublist: 601

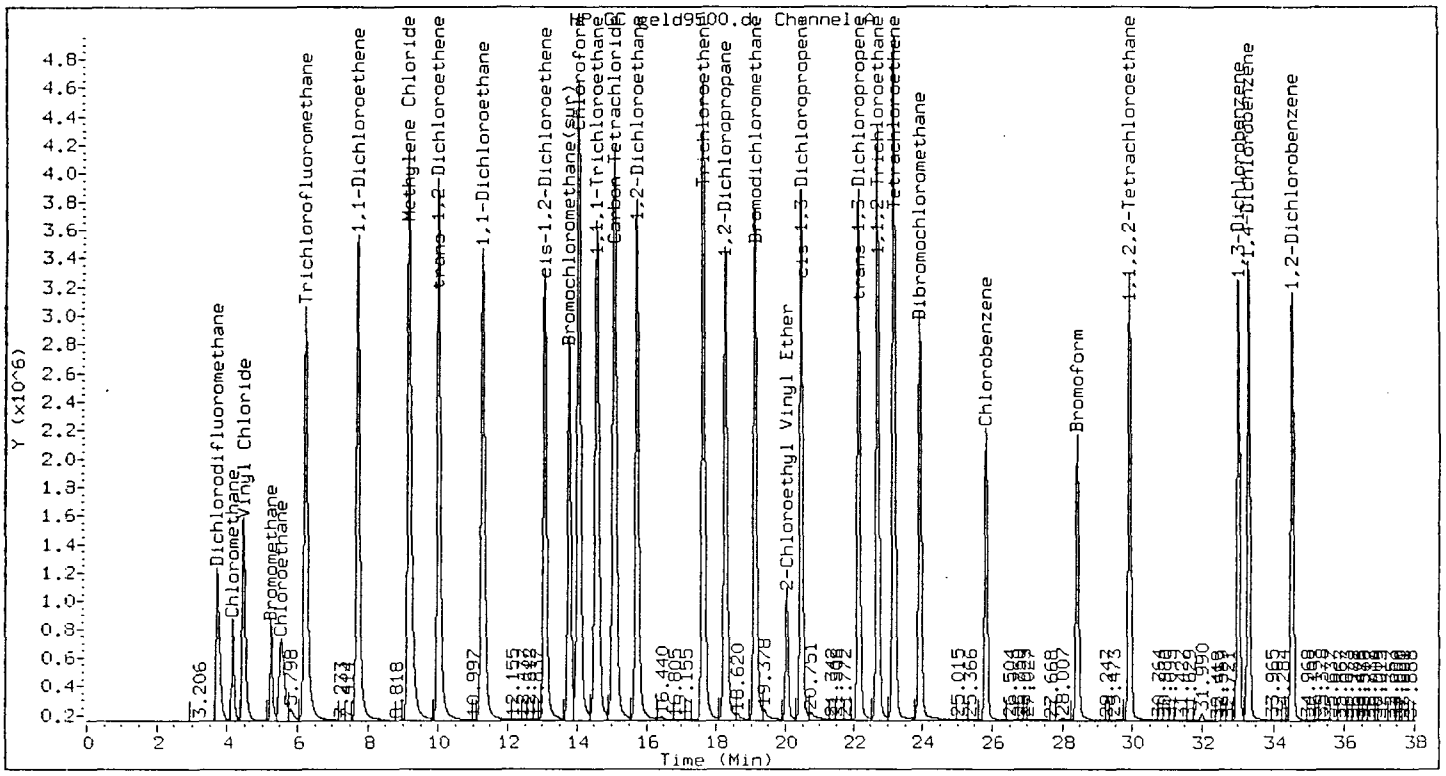
Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_5

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Dichlorodifluoromethane	3.685	3.691	0.006	63868434	32.956	32.956
Chloromethane	4.124	4.131	0.007	27123055	38.289	38.289
Vinyl Chloride	4.428	4.421	0.007	91598750	43.534	43.534
Bromomethane	5.215	5.231	0.016	25150637	39.902	39.902
Chloroethane	5.535	5.521	0.014	64701350	48.456	48.456
Trichlorofluoromethane	6.119	6.207	0.088	196030900	37.444	37.444
1,1-Dichloroethene	7.634	7.679	0.045	204071507	35.676	35.676
Methylene Chloride	9.110	9.121	0.011	262639418	31.993	31.993
trans-1,2-Dichloroethene	9.947	9.968	0.021	216331199	35.639	35.639

305442

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1,1-Dichloroethane	11.227	11.240	0.013	220694154	35.681	35.681
cis-1,2-Dichloroethene	13.010	13.022	0.012	185950214	38.865	38.865
Chloroform	14.002	14.009	0.007	265707970	33.626	33.626
1,1,1-Trichloroethane	14.514	14.526	0.012	237980005	33.468	33.468
Carbon Tetrachloride	15.023	15.037	0.014	267739225	33.599	33.599
1,2-Dichloroethane	15.675	15.685	0.010	214063821	36.227	36.227
Trichloroethene	17.581	17.592	0.011	261983923	35.946	35.946
1,2-Dichloropropane	18.221	18.230	0.009	200011148	35.777	35.777
Bromodichloromethane	19.076	19.082	0.006	199725103	35.305	35.305
2-Chloroethyl Vinyl Ether	19.997	20.008	0.011	72356896	44.673	44.673
cis-1,3-Dichloropropene	20.422	20.431	0.009	187256782	34.637	34.637
trans-1,3-Dichloropropene	22.107	22.116	0.009	177447004	35.582	35.582
1,1,2-Trichloroethane	22.661	22.668	0.007	223918088	35.756	35.756
Tetrachloroethene	23.130	23.139	0.009	249280738	34.220	34.220
Dibromochloromethane	23.880	23.887	0.007	158790705	37.593	37.593
Chlorobenzene	25.772	25.782	0.010	106276735	36.901	36.901
Bromoform	28.371	28.379	0.008	111233484	40.072	40.072
1,1,2,2-Tetrachloroethane	29.870	29.878	0.008	153340860	35.153	35.153
1,3-Dichlorobenzene	32.961	32.970	0.009	144295179	35.995	35.995
1,4-Dichlorobenzene	33.249	33.258	0.009	150867185	36.021	36.021
1,2-Dichlorobenzene	34.468	34.478	0.010	146560891	36.562	36.562
Bromochloromethane(sur)	13.720	13.730	0.010	153960396	38.136	38.136

305443



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : GSTD020
Lab ID : GSTD020
Inj Date : 16-OCT-98 08:24:00
Operator : KB
Cpnd Sublist: 601

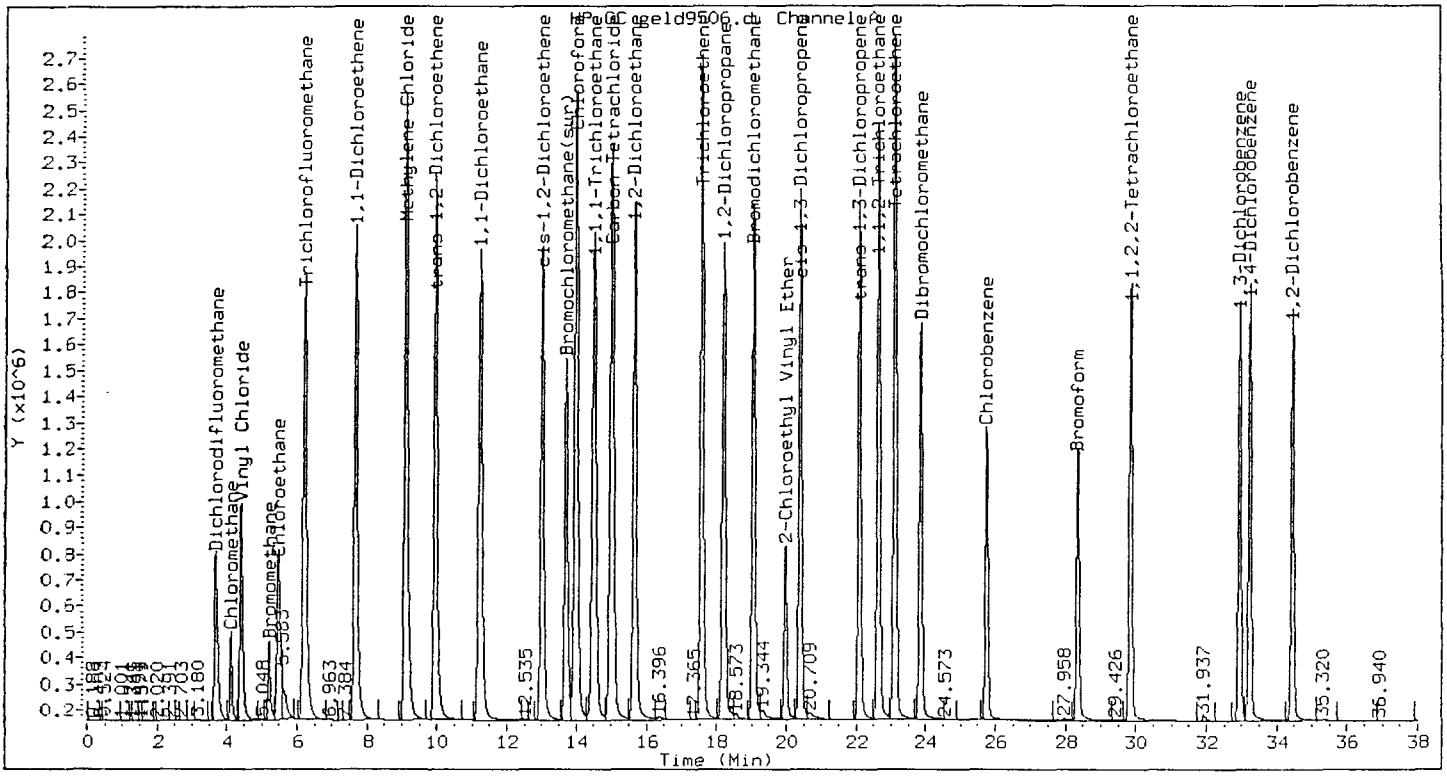
Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_4

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Dichlorodifluoromethane	3.708	3.691	0.017	36848916	20.000	20.000
Chloromethane	4.150	4.131	0.019	15632906	20.000	20.000
Vinyl Chloride	4.447	4.421	0.026	46321400	20.000	20.000
Bromomethane	5.243	5.231	0.012	16467723	20.000	20.000
Chloroethane	5.523	5.521	0.002	29496688	20.000	20.000
Trichlorofluoromethane	6.218	6.207	0.011	110284355	20.000	20.000
1,1-Dichloroethene	7.704	7.679	0.025	118141272	20.000	20.000
Methylene Chloride	9.151	9.121	0.030	148222714	20.000	20.000
trans-1,2-Dichloroethene	9.997	9.968	0.029	126411633	20.000	20.000

305444

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1,1-Dichloroethane	11.269	11.240	0.029	127185422	20.000	20.000
cis-1,2-Dichloroethene	13.052	13.022	0.030	106284658	20.000	20.000
Chloroform	14.040	14.009	0.031	160933931	20.000	20.000
1,1,1-Trichloroethane	14.558	14.526	0.032	143082000	20.000	20.000
Carbon Tetrachloride	15.069	15.037	0.032	161646931	20.000	20.000
1,2-Dichloroethane	15.717	15.685	0.032	120191560	20.000	20.000
Trichloroethene	17.624	17.592	0.032	144119166	20.000	20.000
1,2-Dichloropropane	18.262	18.230	0.032	113080585	20.000	20.000
Bromodichloromethane	19.114	19.082	0.032	115381697	20.000	20.000
2-Chloroethyl Vinyl Ether	20.036	20.008	0.028	27629126	20.000	20.000
cis-1,3-Dichloropropene	20.462	20.431	0.031	108830557	20.000	20.000
trans-1,3-Dichloropropene	22.148	22.116	0.032	101661342	20.000	20.000
1,1,2-Trichloroethane	22.702	22.668	0.034	125981498	20.000	20.000
Tetrachloroethene	23.174	23.139	0.035	146104631	20.000	20.000
Dibromochloromethane	23.921	23.887	0.034	87755477	20.000	20.000
Chlorobenzene	25.816	25.782	0.034	58717151	20.000	20.000
Bromoform	28.414	28.379	0.035	58579495	20.000	20.000
1,1,2,2-Tetrachloroethane	29.912	29.878	0.034	89494085	20.000	20.000
1,3-Dichlorobenzene	33.006	32.970	0.036	82334034	20.000	20.000
1,4-Dichlorobenzene	33.294	33.258	0.036	85130776	20.000	20.000
1,2-Dichlorobenzene	34.513	34.478	0.035	81981058	20.000	20.000
Bromochloromethane(sur)	13.761	13.730	0.030	83720107	20.000	20.000

305445



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : GSTD010
Lab ID : GSTD010
Inj Date : 16-OCT-98 13:36:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_3

Compounds		RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Dichlorodifluoromethane		3.683	3.691	0.008	20459254	10.441	10.441
Chloromethane		4.125	4.131	0.006	7262387	10.201	10.201
Vinyl Chloride		4.410	4.421	0.011	22908204	10.698	10.698
Bromomethane		5.214	5.231	0.017	7171859	11.073	11.073
Chloroethane	(M)	5.473	5.521	0.048	20978119	14.100	14.100
Trichlorofluoromethane		6.211	6.207	0.004	60649107	11.229	11.229
1,1-Dichloroethene		7.675	7.679	0.004	62435961	10.719	10.719
Methylene Chloride		9.111	9.121	0.010	79280548	9.724	9.724
trans-1,2-Dichloroethene		9.957	9.968	0.011	66499539	10.750	10.750

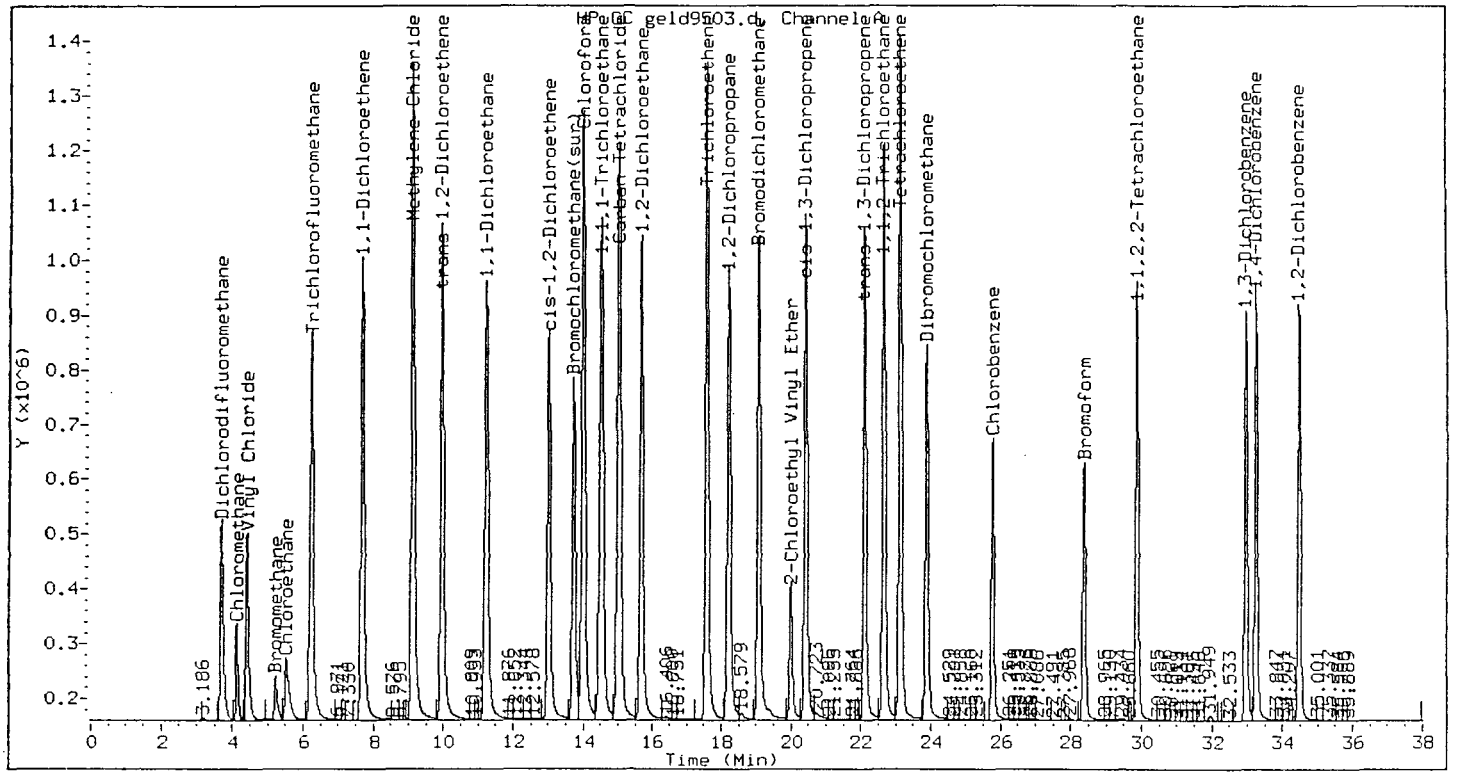
305446

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1,1-Dichloroethane	11.228	11.240	0.012	67525841	10.721	10.721
cis-1,2-Dichloroethene	13.008	13.022	0.014	58899125	11.767	11.767
Chloroform	13.994	14.009	0.015	84010900	10.499	10.499
1,1,1-Trichloroethane	14.512	14.526	0.014	74219475	10.347	10.347
Carbon Tetrachloride	15.023	15.037	0.014	86636965	10.686	10.686
1,2-Dichloroethane	15.670	15.685	0.015	63993058	10.653	10.653
Trichloroethene	17.577	17.592	0.015	78327321	10.589	10.589
1,2-Dichloropropane	18.214	18.230	0.016	60457660	10.641	10.641
Bromodichloromethane	19.067	19.082	0.015	60338804	10.526	10.526
2-Chloroethyl Vinyl Ether	19.989	20.008	0.019	19153557	11.409	11.409
cis-1,3-Dichloropropene	20.413	20.431	0.018	57796635	10.545	10.545
trans-1,3-Dichloropropene	22.098	22.116	0.018	54032547	10.657	10.657
1,1,2-Trichloroethane	22.650	22.668	0.018	67563274	10.621	10.621
Tetrachloroethene	23.123	23.139	0.016	78459775	10.607	10.607
Dibromochloromethane	23.868	23.887	0.019	44781192	10.476	10.476
Chlorobenzene	25.764	25.782	0.018	30719384	10.526	10.526
Bromoform	28.361	28.379	0.018	29771051	10.572	10.572
1,1,2,2-Tetrachloroethane	29.860	29.878	0.018	47095369	10.627	10.627
1,3-Dichlorobenzene	32.951	32.970	0.019	42159625	10.409	10.409
1,4-Dichlorobenzene	33.239	33.258	0.019	44383005	10.472	10.472
1,2-Dichlorobenzene	34.458	34.478	0.020	42268859	10.431	10.431
Bromochloromethane(sur)	13.715	13.730	0.015	42238230	10.367	10.367

COMMENTS:

M - Compound response manually integrated.

305447



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : GSTD005
Lab ID : GSTD005
Inj Date : 16-OCT-98 11:02:00
Operator : KB
Cpnd Sublist: 601

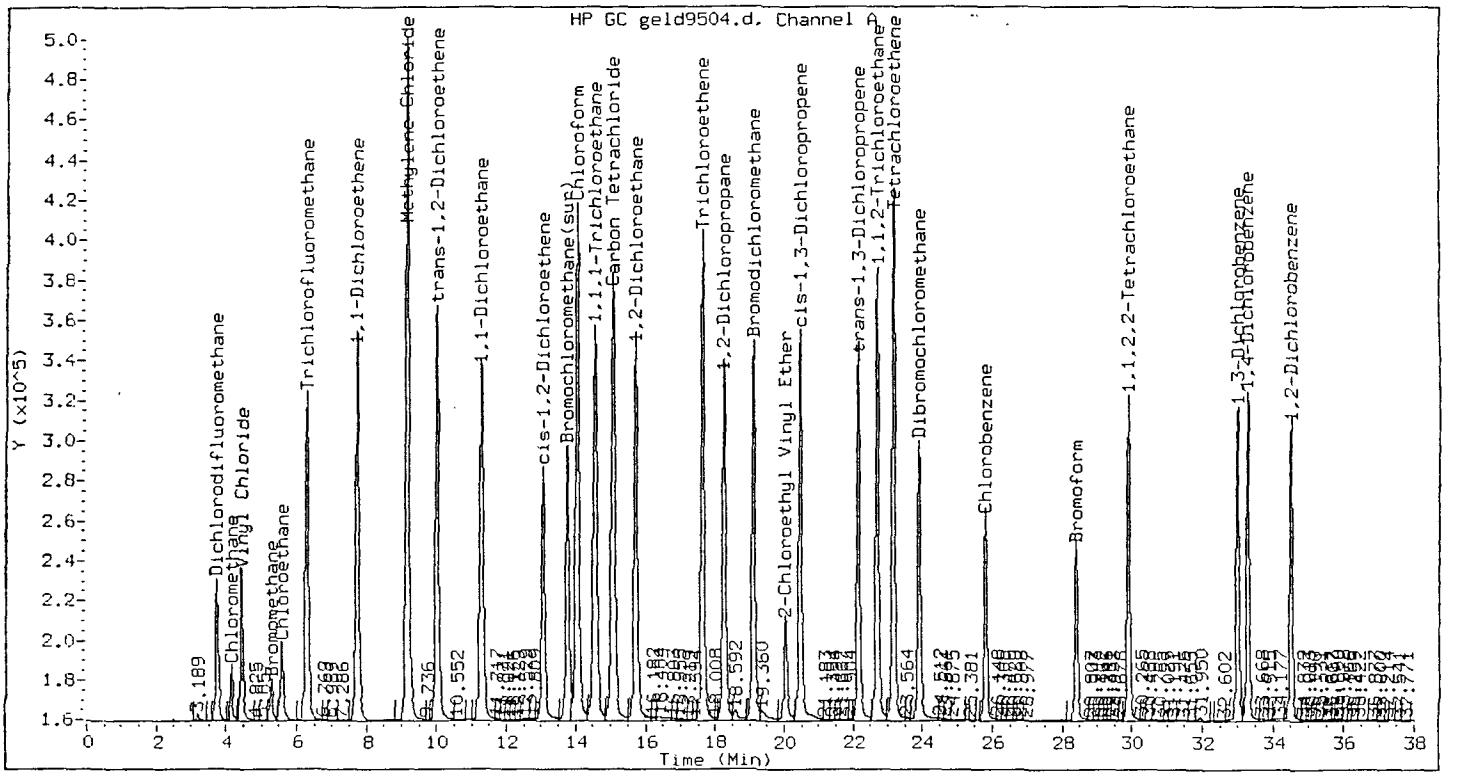
Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_2

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Dichlorodifluoromethane	3.686	3.691	0.005	11271266	5.503	5.503
Chloromethane	4.122	4.131	0.009	3687352	4.855	4.855
Vinyl Chloride	4.411	4.421	0.010	9193005	4.425	4.425
Bromomethane	5.221	5.231	0.010	2404919	3.687	3.687
Chloroethane	5.531	5.521	0.010	4805824	3.946	3.946
Trichlorofluoromethane	6.239	6.207	0.032	24751408	4.731	4.731
1,1-Dichloroethene	7.686	7.679	0.007	28249125	4.889	4.889
Methylene Chloride	9.114	9.121	0.007	39861705	5.182	5.182
trans-1,2-Dichloroethene	9.964	9.968	0.004	29223397	4.804	4.804

305448

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1,1-Dichloroethane	11.234	11.240	0.006	30570753	4.902	4.902
cis-1,2-Dichloroethene	13.015	13.022	0.007	23969316	4.743	4.743
Chloroform	14.000	14.009	0.009	39310246	4.942	4.942
1,1,1-Trichloroethane	14.520	14.526	0.006	36900061	5.078	5.078
Carbon Tetrachloride	15.031	15.037	0.006	41714614	5.079	5.079
1,2-Dichloroethane	15.678	15.685	0.007	29016710	4.913	4.913
Trichloroethene	17.586	17.592	0.006	37830919	5.122	5.122
1,2-Dichloropropane	18.223	18.230	0.007	28233676	4.997	4.997
Bromodichloromethane	19.074	19.082	0.008	29407093	5.048	5.048
2-Chloroethyl Vinyl Ether	20.000	20.008	0.008	7671561	5.262	5.262
cis-1,3-Dichloropropene	20.423	20.431	0.008	26855310	4.967	4.967
trans-1,3-Dichloropropene	22.109	22.116	0.007	25015685	4.960	4.960
1,1,2-Trichloroethane	22.660	22.668	0.008	31417959	4.994	4.994
Tetrachloroethene	23.132	23.139	0.007	37596820	5.072	5.072
Dibromochloromethane	23.880	23.887	0.007	20795847	4.866	4.866
Chlorobenzene	25.776	25.782	0.006	14401743	4.952	4.952
Bromoform	28.373	28.379	0.006	13456550	4.789	4.789
1,1,2,2-Tetrachloroethane	29.871	29.878	0.007	22440309	5.007	5.007
1,3-Dichlorobenzene	32.965	32.970	0.005	20140638	4.946	4.946
1,4-Dichlorobenzene	33.253	33.258	0.005	21318266	5.004	5.004
1,2-Dichlorobenzene	34.473	34.478	0.005	20609295	5.014	5.014
Bromochloromethane(sur)	13.722	13.730	0.008	18964012	4.754	4.754

305449



Method : /chem/VOAGC1.i/8021ELCD/10-16-98/16oct98.b/8021E.m
Sample Info : GSTD001
Lab ID : GSTD001
Inj Date : 16-OCT-98 12:06:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : WATER
Sample Type: CALIB_1

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
Dichlorodifluoromethane	3.691	3.691	0.000	2058610	1.003	1.003
Chloromethane	4.131	4.131	0.000	636320	0.886	0.886
Vinyl Chloride	4.411	4.421	0.010	1971681	0.966	0.966
Bromomethane	5.260	5.231	0.029	588123	0.932	0.932
Chloroethane	5.542	5.521	0.021	1287549	1.037	1.037
Trichlorofluoromethane	6.249	6.207	0.042	5576219	1.043	1.043
1,1-Dichloroethene	7.695	7.679	0.016	6221697	1.050	1.050
Methylene Chloride	9.120	9.121	0.001	10887490	1.243	1.243
trans-1,2-Dichloroethene	9.974	9.968	0.006	6706692	1.066	1.066

305450

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1,1-Dichloroethane	11.241	11.240	0.001	6750334	1.053	1.053
cis-1,2-Dichloroethene	13.024	13.022	0.002	4381414	0.907	0.907
Chloroform	14.008	14.009	0.001	9055979	1.088	1.088
1,1,1-Trichloroethane	14.527	14.526	0.001	7959067	1.062	1.062
Carbon Tetrachloride	15.038	15.037	0.001	8755519	1.043	1.043
1,2-Dichloroethane	15.687	15.685	0.002	6471622	1.062	1.062
Trichloroethene	17.594	17.592	0.002	7831512	1.039	1.039
1,2-Dichloropropane	18.230	18.230	0.000	6061151	1.047	1.047
Bromodichloromethane	19.081	19.082	0.001	5985025	1.018	1.018
2-Chloroethyl Vinyl Ether	20.016	20.008	0.008	1754073	1.127	1.127
cis-1,3-Dichloropropene	20.433	20.431	0.002	6131085	1.086	1.086
trans-1,3-Dichloropropene	22.119	22.116	0.003	5425692	1.049	1.049
1,1,2-Trichloroethane	22.668	22.668	0.000	6869242	1.059	1.059
Tetrachloroethene	23.138	23.139	0.001	8082300	1.058	1.058
Dibromochloromethane	23.885	23.887	0.002	4379253	1.016	1.016
Chlorobenzene	25.783	25.782	0.001	3047210	1.031	1.031
Bromoform	28.377	28.379	0.002	2702299	0.974	0.974
1,1,2,2-Tetrachloroethane	29.876	29.878	0.002	4652162	1.025	1.025
1,3-Dichlorobenzene	32.969	32.970	0.001	4282947	1.034	1.034
1,4-Dichlorobenzene	33.257	33.258	0.001	4461256	1.031	1.031
1,2-Dichlorobenzene	34.476	34.478	0.002	4149457	1.006	1.006
Bromochloromethane(sur)	13.731	13.730	0.001	4320578	1.054	1.054

305451

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Instrument ID: VOAGC1 Calibration Date(s): 10/17/98 10/18/98

Calibration Time(s): 1954 0322

LAB FILE ID: RRF1: GELD9543 RRF5: GELD9545 RRF10: GELD9549
RRF20: GELD9540 RRF40: GELD9548

COMPOUND	RRF1	RRF5	RRF10	RRF20	RRF40
Dichlorodifluoromethane	3785363	2326074	2215526	2419116	2005138
Chloromethane	529704	1121719	1083116	1126210	1306965
Vinyl Chloride	2179365	2702294	2602969	3065504	2852693
Bromomethane	935729	1315208	1376323	1370418	1267561
Chloroethane	1915077	2950557	3297237	2911292	2562951
Trichlorofluoromethane	6007936	6691789	6201573	6932560	5500765
1,1-Dichloroethene	5589911	6945691	6989978	7211116	5197467
Methylene Chloride	14135960	9902342	9802574	9050576	7044052
trans-1,2-Dichloroethene	6197624	7219984	7612156	7423938	5578560
1,1-Dichloroethane	6472943	7507232	7988794	7647297	5823311
cis-1,2-Dichloroethene	5980270	6601352	5980267	6505889	5507911
Chloroform	8886178	9987323	10334531	9629355	7335783
1,1,1-Trichloroethane	7702423	8657024	8826278	8636736	6445353
Carbon Tetrachloride	8156168	9737475	9818272	9781603	7245115
1,2-Dichloroethane	6605250	7185375	7752427	7201432	5702633
Trichloroethene	7414712	8769247	8940400	8599328	6500467
1,2-Dichloropropane	6047070	6795158	7323470	6848789	5340334
Bromodichloromethane	6355533	6776262	7260011	6826301	5405655
2-Chloroethyl Vinyl Ether	1940673	1898597	2124362	2284726	1929758
cis-1,3-Dichloropropene	6079641	6243875	6584483	6334215	4866035
trans-1,3-Dichloropropene	5301337	5846493	6189532	5931202	4612462
1,1,2-Trichloroethane	7219318	7768015	8347985	7632788	6001234
Tetrachloroethene	7596420	8795693	8495946	8499941	6408688
Dibromochloromethane	4483298	4998603	5473239	5336514	4408078
Chlorobenzene	2999218	3378674	3505994	3507714	2782950
Bromoform	2787239	3211401	3670923	3603024	3027879
1,1,2,2-Tetrachloroethane	5009749	5137267	5622233	5411952	4255708
1,3-Dichlorobenzene	4065371	4673992	4740932	4643046	3713313
1,4-Dichlorobenzene	4484768	4918219	5081380	4859547	3879275
1,2-Dichlorobenzene	4209351	4720208	4961038	4775168	3771087
Bromochloromethane(sur)	4399468	4786975	4833237	4978264	4241393

305452

VOLATILE ORGANICS INITIAL CALIBRATION DATA

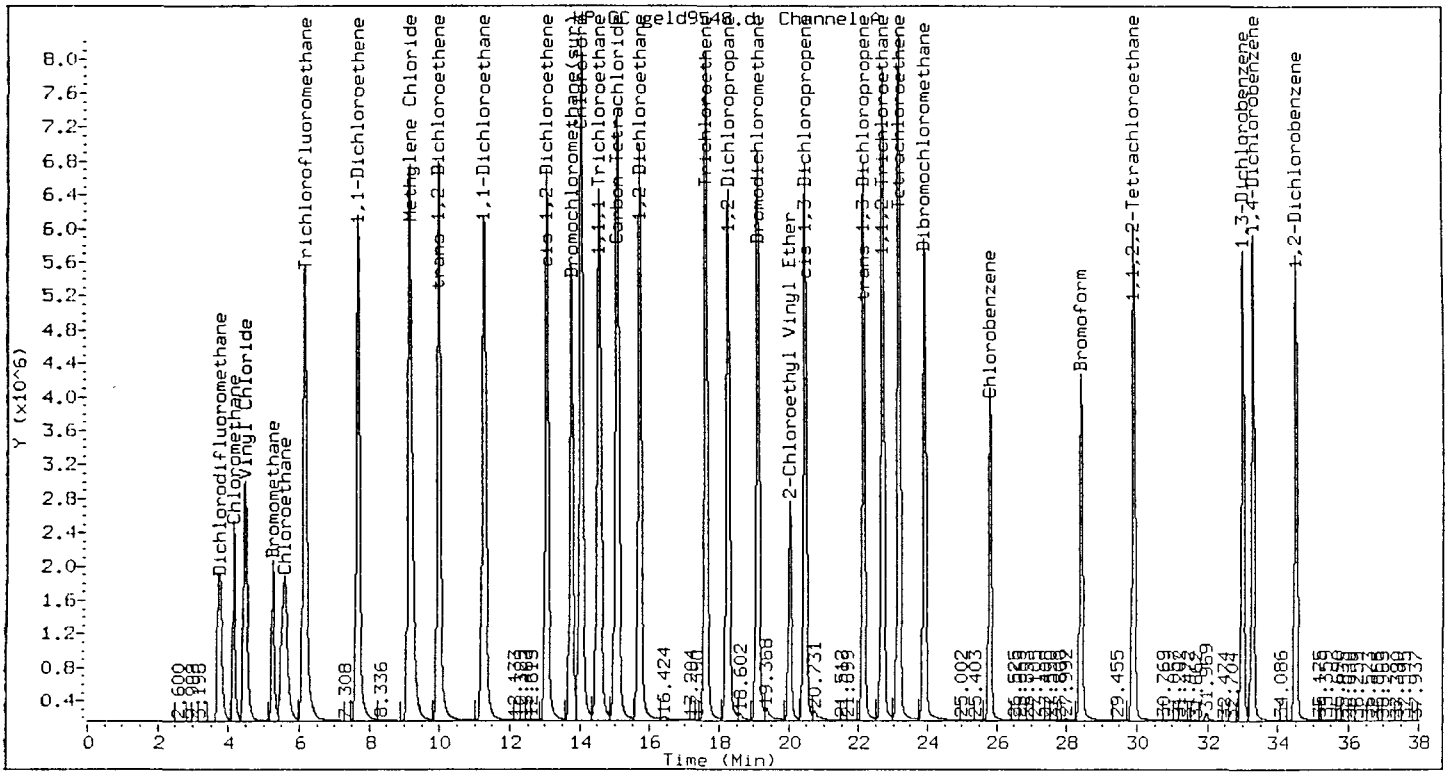
Instrument ID: VOAGC1 Calibration Date(s): 10/17/98 10/18/98

Calibration Time(s): 1954 0322

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Dichlorodifluoromethane	AVRG	2550243	28*
Chloromethane	AVRG	1033543	28*
Vinyl Chloride	AVRG	2680565	12*
Bromomethane	AVRG	1253048	14*
Chloroethane	AVRG	2727423	19*
Trichlorofluoromethane	AVRG	6266925	9.0*
1,1-Dichloroethene	AVRG	6386833	14*
Methylene Chloride	AVRG	9987101	26*
trans-1,2-Dichloroethene	AVRG	6806452	13*
1,1-Dichloroethane	AVRG	7087915	13*
cis-1,2-Dichloroethene	AVRG	6115138	7.3*
Chloroform	AVRG	9234634	13*
1,1,1-Trichloroethane	AVRG	8053563	12*
Carbon Tetrachloride	AVRG	8947727	13*
1,2-Dichloroethane	AVRG	6889423	11*
Trichloroethene	AVRG	8044831	13*
1,2-Dichloropropane	AVRG	6470964	12*
Bromodichloromethane	AVRG	6524752	11*
2-Chloroethyl Vinyl Ether	AVRG	2035623	8.1*
cis-1,3-Dichloropropene	AVRG	6021650	11*
trans-1,3-Dichloropropene	AVRG	5576205	11*
1,1,2-Trichloroethane	AVRG	7393868	12*
Tetrachloroethene	AVRG	7959338	12*
Dibromochloromethane	AVRG	4939946	9.8*
Chlorobenzene	AVRG	3234910	10*
Bromoform	AVRG	3260093	12*
1,1,2,2-Tetrachloroethane	AVRG	5087382	10*
1,3-Dichlorobenzene	AVRG	4367331	10*
1,4-Dichlorobenzene	AVRG	4644638	10*
1,2-Dichlorobenzene	AVRG	4487370	11*
Bromochloromethane(sur)	AVRG	4647867	6.7*

* Compounds with required maximum %RSD values.

305453



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/8021E.m
Sample Info : gstd040a
Lab ID : gstd040a
Inj Date : 18-OCT-98 01:52:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CALIB_5

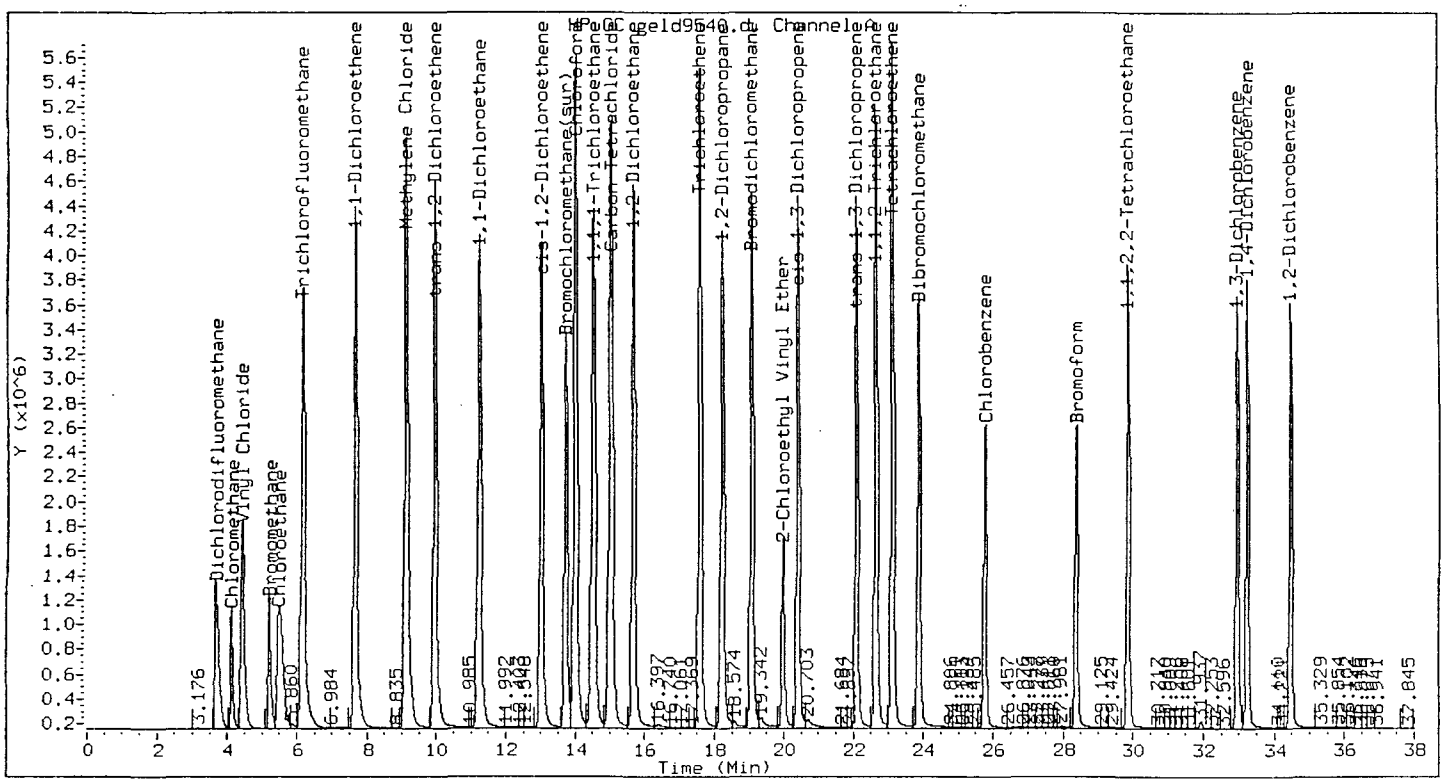
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane	3.725	3.701	0.024	80205506	31.391	31.391
Chloromethane	4.144	4.141	0.003	52278608	50.377	50.377
Vinyl Chloride	4.453	4.431	0.022	114107713	42.289	42.289
Bromomethane	5.237	5.240	0.002	50702459	40.193	40.193
Chloroethane	5.560	5.533	0.027	102518025	37.226	37.226
Trichlorofluoromethane	6.130	6.210	0.080	220030589	34.873	34.873
1,1-Dichloroethene	7.655	7.685	0.030	207898681	32.442	32.442
Methylene Chloride	9.132	9.129	0.003	281762091	28.099	28.099
trans-1,2-Dichloroethene	9.967	9.974	0.007	223142383	32.437	32.437

305454

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.246	11.245	0.000	232932434	32.621	32.621
cis-1,2-Dichloroethene	13.030	13.027	0.003	220316453	35.788	35.788
Chloroform	14.022	14.014	0.008	293431304	31.695	31.695
1,1,1-Trichloroethane	14.534	14.531	0.003	257814125	31.908	31.908
Carbon Tetrachloride	15.043	15.041	0.002	289804614	32.265	32.265
1,2-Dichloroethane	15.696	15.689	0.007	228105322	32.956	32.956
Trichloroethene	17.601	17.595	0.006	260018664	32.166	32.166
1,2-Dichloropropane	18.241	18.232	0.009	213613381	32.832	32.832
Bromodichloromethane	19.095	19.084	0.011	216226194	33.002	33.002
2-Chloroethyl Vinyl Ether	20.016	20.009	0.008	77190319	37.332	37.332
cis-1,3-Dichloropropene	20.442	20.433	0.010	194641403	32.176	32.176
trans-1,3-Dichloropropene	22.126	22.117	0.008	184498484	32.978	32.978
1,1,2-Trichloroethane	22.681	22.670	0.011	240049367	32.384	32.384
Tetrachloroethene	23.150	23.141	0.009	256347538	32.043	32.043
Dibromochloromethane	23.902	23.889	0.013	176323142	35.330	35.330
Chlorobenzene	25.795	25.785	0.010	111318010	34.121	34.121
Bromoform	28.394	28.382	0.012	121115169	36.783	36.783
1,1,2,2-Tetrachloroethane	29.894	29.879	0.015	170228335	33.237	33.237
1,3-Dichlorobenzene	32.985	32.972	0.013	148532513	33.971	33.971
1,4-Dichlorobenzene	33.274	33.261	0.013	155171014	33.219	33.219
1,2-Dichlorobenzene	34.493	34.480	0.013	150843464	33.497	33.497
Bromochloromethane(sur)	13.740	13.735	0.005	169655727	36.377	36.377

305455

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/geld9540.d Page 1
Report Date 10/20/98 09:08



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/8021E.m
Sample Info : gstd020a
Lab ID : gstd020a
Inj Date : 17-OCT-98 19:54:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CALIB_4

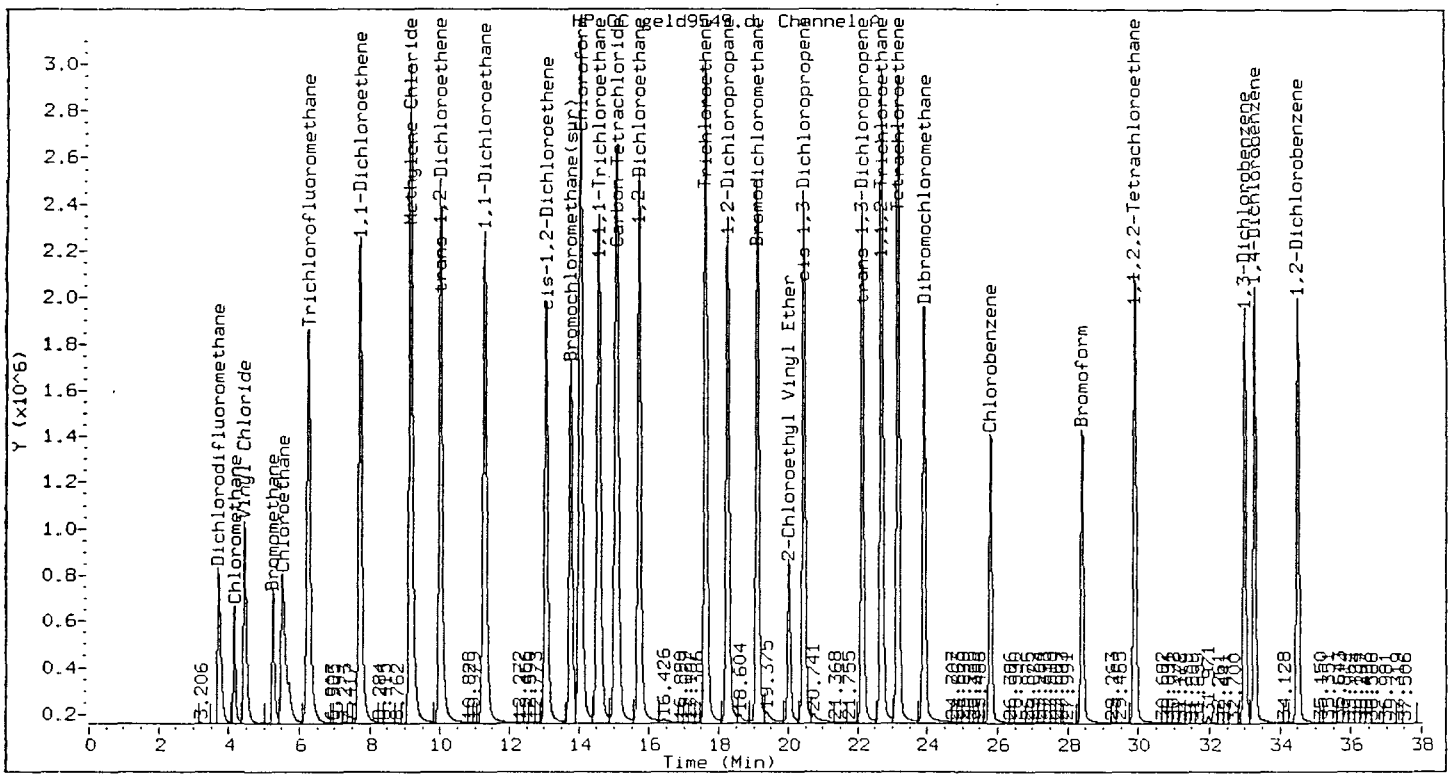
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
Dichlorodifluoromethane	3.678	3.701	0.022	48382318	18.972	18.972
Chloromethane	4.126	4.141	0.015	22524192	21.793	21.793
Vinyl Chloride	4.418	4.431	0.013	61310079	22.872	22.872
Bromomethane	5.212	5.240	0.028	27408352	21.873	21.873
Chloroethane	5.503	5.533	0.029	58225840	21.348	21.348
Trichlorofluoromethane	6.160	6.210	0.049	138651210	22.124	22.124
1,1-Dichloroethene	7.655	7.685	0.030	144222330	22.581	22.581
Methylene Chloride	9.106	9.129	0.023	181011519	18.125	18.125
trans-1,2-Dichloroethene	9.948	9.974	0.026	148478763	21.814	21.814

305456

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
1,1-Dichloroethane	11.223	11.245	0.023	152945932	21.578	21.578
cis-1,2-Dichloroethene	13.004	13.027	0.023	130117778	21.278	21.278
Chloroform	13.994	14.014	0.020	192587098	20.855	20.855
1,1,1-Trichloroethane	14.510	14.531	0.021	172734715	21.448	21.448
Carbon Tetrachloride	15.020	15.041	0.021	195632056	21.864	21.864
1,2-Dichloroethane	15.668	15.689	0.021	144028632	20.906	20.906
Trichloroethene	17.574	17.595	0.021	171986568	21.379	21.379
1,2-Dichloropropane	18.213	18.232	0.019	136975778	21.168	21.168
Bromodichloromethane	19.065	19.084	0.018	136526017	20.924	20.924
2-Chloroethyl Vinyl Ether	19.987	20.009	0.022	45694523	22.447	22.447
cis-1,3-Dichloropropene	20.412	20.433	0.020	126684300	21.038	21.038
trans-1,3-Dichloropropene	22.098	22.117	0.020	118624038	21.273	21.273
1,1,2-Trichloroethane	22.651	22.670	0.019	152655758	20.646	20.646
Tetrachloroethene	23.122	23.141	0.019	169998820	21.358	21.358
Dibromochloromethane	23.871	23.889	0.019	106730278	21.606	21.606
Chlorobenzene	25.767	25.785	0.018	70154271	21.687	21.687
Bromoform	28.363	28.382	0.018	72060475	22.104	22.104
1,1,2,2-Tetrachloroethane	29.860	29.879	0.019	108239045	21.276	21.276
1,3-Dichlorobenzene	32.953	32.972	0.020	92860922	21.263	21.263
1,4-Dichlorobenzene	33.241	33.261	0.019	97190934	20.925	20.925
1,2-Dichlorobenzene	34.461	34.480	0.019	95503356	21.283	21.283
Bromochloromethane(sur)	13.714	13.735	0.021	99565270	21.422	21.422

305457

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/geld9549.d Page 1
Report Date 10/20/98 09:08



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/8021E.m
Sample Info : gstd010a
Lab ID : gstd010a
Inj Date : 18-OCT-98 02:37:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CALIB_3

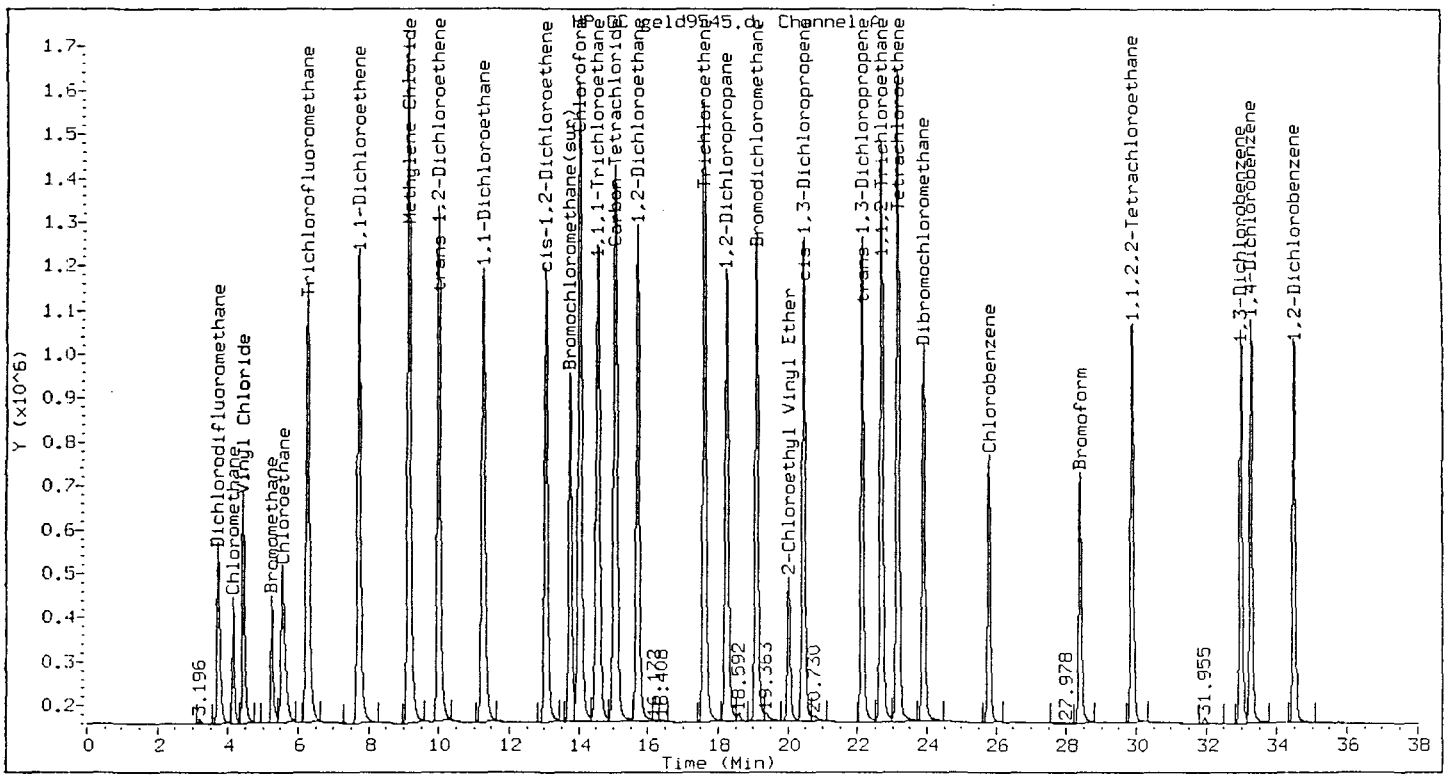
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
Dichlorodifluoromethane	3.709	3.701	0.008	22155261	8.228	8.228
Chloromethane	4.152	4.141	0.011	10831162	11.161	11.161
Vinyl Chloride	4.442	4.431	0.011	26029690	9.787	9.787
Bromomethane	5.244	5.240	0.004	13763230	10.923	10.923
Chloroethane	5.508	5.533	0.025	32972374	11.769	11.769
Trichlorofluoromethane	6.241	6.210	0.031	62015726	9.524	9.524
1,1-Dichloroethene	7.705	7.685	0.020	69899776	10.416	10.416
Methylene Chloride	9.143	9.129	0.015	98025745	9.099	9.099
trans-1,2-Dichloroethene	9.991	9.974	0.017	76121559	10.566	10.566

305458

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.262	11.245	0.016	79887941	10.695	10.695
cis-1,2-Dichloroethene	13.041	13.027	0.014	59802666	9.465	9.465
Chloroform	14.028	14.014	0.014	103345312	10.612	10.612
1,1,1-Trichloroethane	14.547	14.531	0.015	88262784	10.398	10.398
Carbon Tetrachloride	15.056	15.041	0.016	98182723	10.427	10.427
1,2-Dichloroethane	15.702	15.689	0.013	77524266	10.728	10.728
Trichloroethene	17.608	17.595	0.014	89403997	10.544	10.544
1,2-Dichloropropane	18.246	18.232	0.013	73234695	10.773	10.773
Bromodichloromethane	19.097	19.084	0.013	72600108	10.617	10.617
2-Chloroethyl Vinyl Ether	20.020	20.009	0.011	21243620	10.106	10.106
cis-1,3-Dichloropropene	20.445	20.433	0.012	65844833	10.377	10.377
trans-1,3-Dichloropropene	22.128	22.117	0.011	61895320	10.598	10.598
1,1,2-Trichloroethane	22.681	22.670	0.012	83479846	10.750	10.750
Tetrachloroethene	23.154	23.141	0.013	84959461	10.117	10.117
Dibromochloromethane	23.902	23.889	0.012	54732392	10.656	10.656
Chlorobenzene	25.797	25.785	0.012	35059936	10.366	10.366
Bromoform	28.394	28.382	0.013	36709230	10.929	10.929
1,1,2,2-Tetrachloroethane	29.893	29.879	0.014	56222334	10.532	10.532
1,3-Dichlorobenzene	32.986	32.972	0.013	47409323	10.449	10.449
1,4-Dichlorobenzene	33.274	33.261	0.013	50813805	10.436	10.436
1,2-Dichlorobenzene	34.494	34.480	0.014	49610377	10.586	10.586
Bromochloromethane(sur)	13.750	13.735	0.015	48332369	10.134	10.134

305459

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/geld9545.d Page 1
Report Date 10/20/98 09:08



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/8021E.m
Sample Info : gstd005a
Lab ID : gstd005a
Inj Date : 17-OCT-98 23:38:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CALIB_2

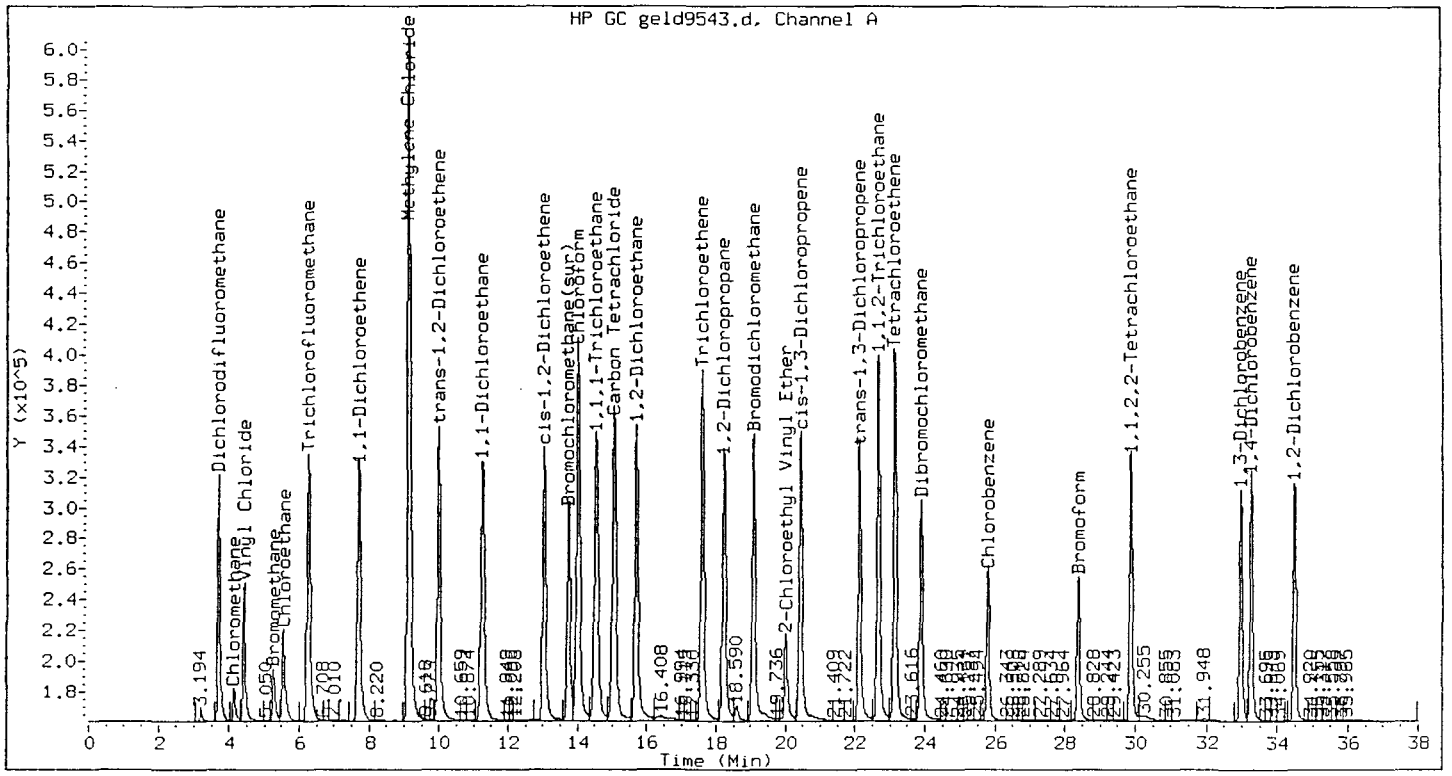
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane	3.700	3.701	0.001	11630368	4.560	4.560
Chloromethane	4.141	4.141	0.000	5608594	5.427	5.427
Vinyl Chloride	4.427	4.431	0.004	13511470	5.041	5.041
Bromomethane	5.238	5.240	0.002	6576042	5.248	5.248
Chloroethane	5.543	5.533	0.011	14752787	5.409	5.409
Trichlorofluoromethane	6.256	6.210	0.047	33458947	5.339	5.339
1,1-Dichloroethene	7.706	7.685	0.021	34728455	5.438	5.438
Methylene Chloride	9.135	9.129	0.006	49511710	4.958	4.958
trans-1,2-Dichloroethene	9.984	9.974	0.010	36099920	5.304	5.304

305460

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.251	11.245	0.006	37536159	5.296	5.296
cis-1,2-Dichloroethene	13.031	13.027	0.004	33006760	5.398	5.398
Chloroform	14.015	14.014	0.001	49936613	5.408	5.408
1,1,1-Trichloroethane	14.535	14.531	0.004	43285122	5.375	5.375
Carbon Tetrachloride	15.044	15.041	0.003	48687377	5.441	5.441
1,2-Dichloroethane	15.690	15.689	0.001	35926874	5.215	5.215
Trichloroethene	17.597	17.595	0.002	43846237	5.450	5.450
1,2-Dichloropropane	18.233	18.232	0.001	33975791	5.250	5.250
Bromodichloromethane	19.083	19.084	0.001	33881311	5.193	5.193
2-Chloroethyl Vinyl Ether	20.008	20.009	0.000	9492986	4.663	4.663
cis-1,3-Dichloropropene	20.432	20.433	0.000	31219373	5.185	5.185
trans-1,3-Dichloropropene	22.118	22.117	0.001	29232463	5.242	5.242
1,1,2-Trichloroethane	22.670	22.670	0.001	38840077	5.253	5.253
Tetrachloroethene	23.142	23.141	0.001	43978464	5.525	5.525
Dibromochloromethane	23.888	23.889	0.001	24993016	5.059	5.059
Chlorobenzene	25.785	25.785	0.000	16893369	5.222	5.222
Bromoform	28.381	28.382	0.000	16057006	4.925	4.925
1,1,2,2-Tetrachloroethane	29.877	29.879	0.002	25686336	5.049	5.049
1,3-Dichlorobenzene	32.972	32.972	0.000	23369959	5.351	5.351
1,4-Dichlorobenzene	33.260	33.261	0.000	24591094	5.295	5.295
1,2-Dichlorobenzene	34.479	34.480	0.001	23601041	5.259	5.259
Bromochloromethane(sur)	13.738	13.735	0.003	23934873	5.150	5.150

305461

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/geld9543.d Page 1
Report Date 10/20/98 09:09



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/17oct98a.b/8021E.m
Sample Info : gstd001a
Lab ID : gstd001a
Inj Date : 17-OCT-98 22:09:00
Operator : KB
Cpnd Sublist: 601
Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CALIB_1

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane	3.691	3.701	0.009	3785363	1.484	1.484
Chloromethane	4.142	4.141	0.001	529704	0.513	0.513
Vinyl Chloride	4.415	4.431	0.016	2179365	0.813	0.813
Bromomethane	5.268	5.240	0.028	935729	0.747	0.747
Chloroethane	5.550	5.533	0.017	1915077	0.702	0.702
Trichlorofluoromethane	6.261	6.210	0.051	6007936	0.959	0.959
1,1-Dichloroethene	7.703	7.685	0.018	5589911	0.875	0.875
Methylene Chloride	9.128	9.129	0.001	14135960	1.415	1.415
trans-1,2-Dichloroethene	9.981	9.974	0.006	6197624	0.911	0.911

305462

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.246	11.245	0.001	6472943	0.913	0.913
cis-1,2-Dichloroethene	13.028	13.027	0.001	5980270	0.978	0.978
Chloroform	14.010	14.014	0.004	8886178	0.962	0.962
1,1,1-Trichloroethane	14.530	14.531	0.001	7702423	0.956	0.956
Carbon Tetrachloride	15.040	15.041	0.001	8156168	0.912	0.912
1,2-Dichloroethane	15.689	15.689	0.000	6605250	0.959	0.959
Trichloroethene	17.594	17.595	0.001	7414712	0.922	0.922
1,2-Dichloropropane	18.228	18.232	0.004	6047070	0.934	0.934
Bromodichloromethane	19.079	19.084	0.005	6355533	0.974	0.974
2-Chloroethyl Vinyl Ether	20.013	20.009	0.004	1940673	0.953	0.953
cis-1,3-Dichloropropene	20.431	20.433	0.002	6079641	1.010	1.010
trans-1,3-Dichloropropene	22.118	22.117	0.000	5301337	0.951	0.951
1,1,2-Trichloroethane	22.665	22.670	0.005	7219318	0.976	0.976
Tetrachloroethene	23.136	23.141	0.005	7596420	0.954	0.954
Dibromochloromethane	23.883	23.889	0.006	4483298	0.908	0.908
Chlorobenzene	25.781	25.785	0.004	2999218	0.927	0.927
Bromoform	28.376	28.382	0.006	2787239	0.855	0.855
1,1,2,2-Tetrachloroethane	29.871	29.879	0.008	5009749	0.985	0.985
1,3-Dichlorobenzene	32.966	32.972	0.006	4065371	0.931	0.931
1,4-Dichlorobenzene	33.254	33.261	0.007	4484768	0.966	0.966
1,2-Dichlorobenzene	34.474	34.480	0.006	4209351	0.938	0.938
Bromochloromethane(sur)	13.734	13.735	0.001	4399468	0.947	0.947

305463

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK

Instrument ID: VOAGC1 Calibration Date: 10/20/98 Time: 1402

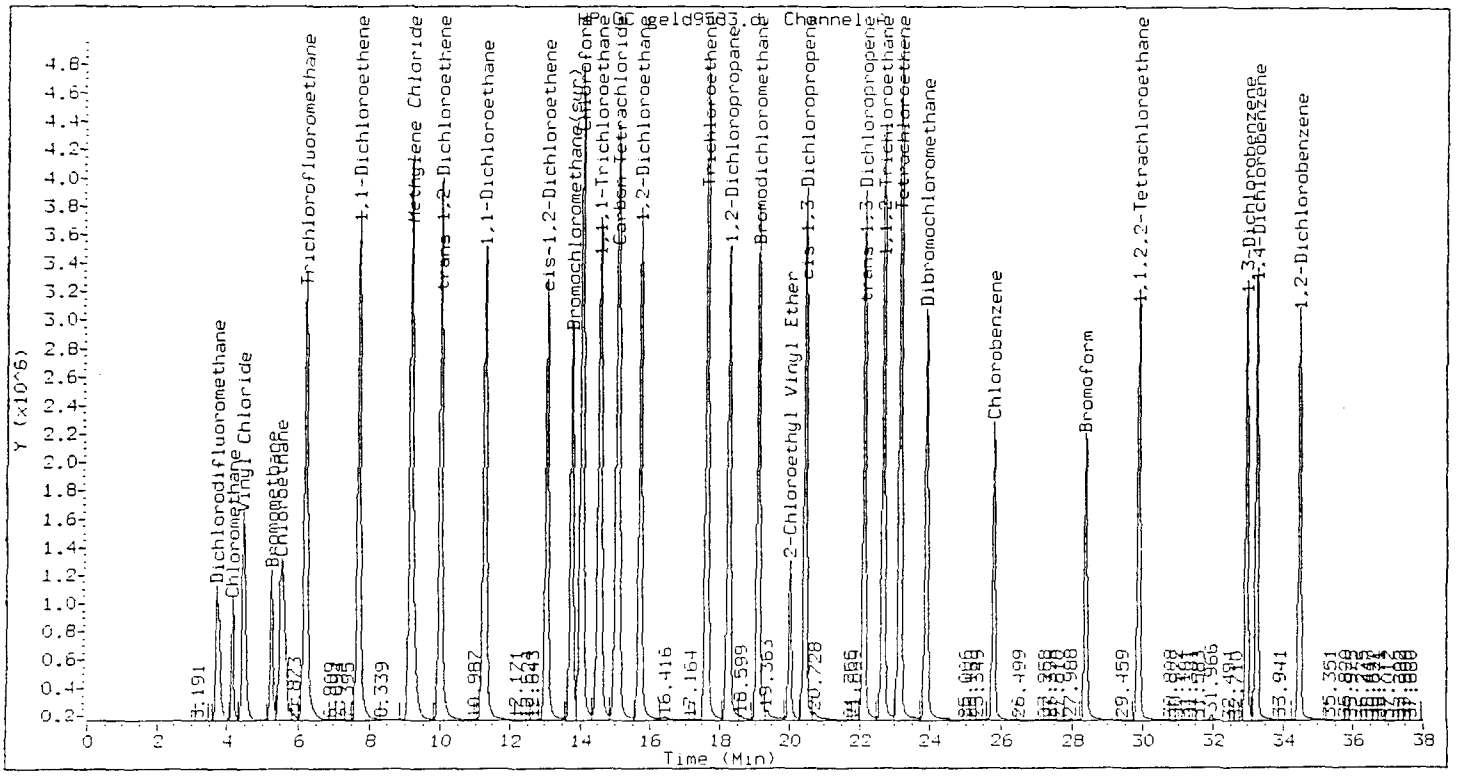
Lab File ID: GELD9583 Init. Calib. Date(s): 10/17/98 10/18/98

Heated Purge: (Y/N) N Init. Calib. Times: 1954 0322

COMPOUND	$\overline{RRF}$	RRF20	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	2550243.2	1951789.8		23.5	15.0
Chloromethane	1033542.8	975133.55		5.6	15.0
Vinyl Chloride	2680565.0	2776273.0		-3.4	15.0
Bromomethane	1253047.9	1374316.1		-9.5	15.0
Chloroethane	2727422.9	3282001.6		-20.3	15.0
Trichlorofluoromethane	6266924.6	6026879.0		3.8	15.0
1,1-Dichloroethene	6386832.6	6077199.4		4.8	15.0
Methylene Chloride	9987100.9	7660664.5		23.3	15.0
trans-1,2-Dichloroethene	6806452.3	6422179.6		5.6	15.0
1,1-Dichloroethane	7087915.3	6482125.3		8.5	15.0
cis-1,2-Dichloroethene	6115137.8	5166888.5		15.5	15.0
Chloroform	9234633.8	8145637.3		11.8	15.0
1,1,1-Trichloroethane	8053562.9	7279220.0		9.6	15.0
Carbon Tetrachloride	8947726.8	8307792.8		7.2	15.0
1,2-Dichloroethane	6889423.2	5923821.3		14.0	15.0
Trichloroethene	8044830.8	7474819.2		7.1	15.0
1,2-Dichloropropane	6470964.2	5740950.2		11.3	15.0
Bromodichloromethane	6524752.3	5777504.2		11.4	15.0
2-Chloroethyl Vinyl Ether	2035623.3	1691203.4		16.9	15.0
cis-1,3-Dichloropropene	6021649.8	5493914.5		8.8	15.0
trans-1,3-Dichloropropene	5576205.1	5165359.0		7.4	15.0
1,1,2-Trichloroethane	7393868.0	6343695.4		14.2	15.0
Tetrachloroethene	7959337.7	7484447.5		6.0	15.0
Dibromochloromethane	4939946.6	4488726.3		9.1	15.0
Chlorobenzene	3234909.8	3012287.7		6.9	15.0
Bromoform	3260093.2	3041736.7		6.7	15.0
1,1,2,2-Tetrachloroethane	5087382.0	4453671.2		12.4	15.0
1,3-Dichlorobenzene	4367330.8	4107584.1		5.9	15.0
1,4-Dichlorobenzene	4644637.9	4316622.0		7.1	15.0
1,2-Dichlorobenzene	4487370.3	4036571.7		10.0	15.0
Bromochloromethane(sur)	4647867.2	4368825.5		6.0	15.0

305464

Data File: /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/geld9583.d Page 1
Report Date 10/21/98 09:33



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98a.b/8021E.m
Sample Info : gstd020a
Lab ID : gstd020a
Inj Date : 20-OCT-98 14:02:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CCALIB_4

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane	3.692	3.701	0.009	39035795	15.307	15.307
Chloromethane	4.137	4.141	0.004	19502671	18.870	18.870
Vinyl Chloride	4.433	4.431	0.002	55525460	20.714	20.714
Bromomethane	5.229	5.240	0.011	27486321	21.936	21.936
Chloroethane	5.498	5.533	0.035	65640033	24.067	24.067
Trichlorofluoromethane	6.176	6.210	0.034	120537581	19.224	19.234
1,1-Dichloroethene	7.675	7.685	0.010	121543988	19.030	19.030
Methylene Chloride	9.126	9.129	0.003	153213289	15.341	15.341
trans-1,2-Dichloroethene	9.969	9.974	0.005	128443592	18.871	18.871

305465

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.243	11.245	0.003	129642507	18.291	18.291
cis-1,2-Dichloroethene	13.026	13.027	0.000	103337769	16.899	16.899
Chloroform	14.015	14.014	0.001	162912746	17.641	17.641
1,1,1-Trichloroethane	14.532	14.531	0.001	145584400	18.077	18.077
Carbon Tetrachloride	15.042	15.041	0.001	166155856	18.570	18.570
1,2-Dichloroethane	15.690	15.689	0.001	118476427	17.197	17.197
Trichloroethene	17.598	17.595	0.003	149496384	18.583	18.583
1,2-Dichloropropane	18.236	18.232	0.003	114819004	17.744	17.744
Bromodichloromethane	19.089	19.084	0.006	115550084	17.709	17.709
2-Chloroethyl Vinyl Ether	20.012	20.009	0.003	33824069	16.616	16.616
cis-1,3-Dichloropropene	20.437	20.433	0.005	109878291	18.247	18.247
trans-1,3-Dichloropropene	22.121	22.117	0.004	103307181	18.526	18.526
1,1,2-Trichloroethane	22.676	22.670	0.006	126873908	17.159	17.159
Tetrachloroethene	23.148	23.141	0.007	149688951	18.807	18.807
Dibromochloromethane	23.897	23.889	0.008	89774526	18.173	18.173
Chlorobenzene	25.791	25.785	0.006	60245754	18.624	18.624
Bromoform	28.391	28.382	0.009	60834734	18.660	18.660
1,1,2,2-Tetrachloroethane	29.888	29.879	0.009	89073425	17.509	17.509
1,3-Dichlorobenzene	32.980	32.972	0.008	82151682	18.811	18.811
1,4-Dichlorobenzene	33.269	33.261	0.008	86332441	18.588	18.588
1,2-Dichlorobenzene	34.489	34.480	0.009	80731434	17.991	17.991
Bromochloromethane(sur)	13.736	13.735	0.001	87376509	18.799	18.799

305466

VOLATILE ORGANICS CONTINUING CALIBRATION CHECK

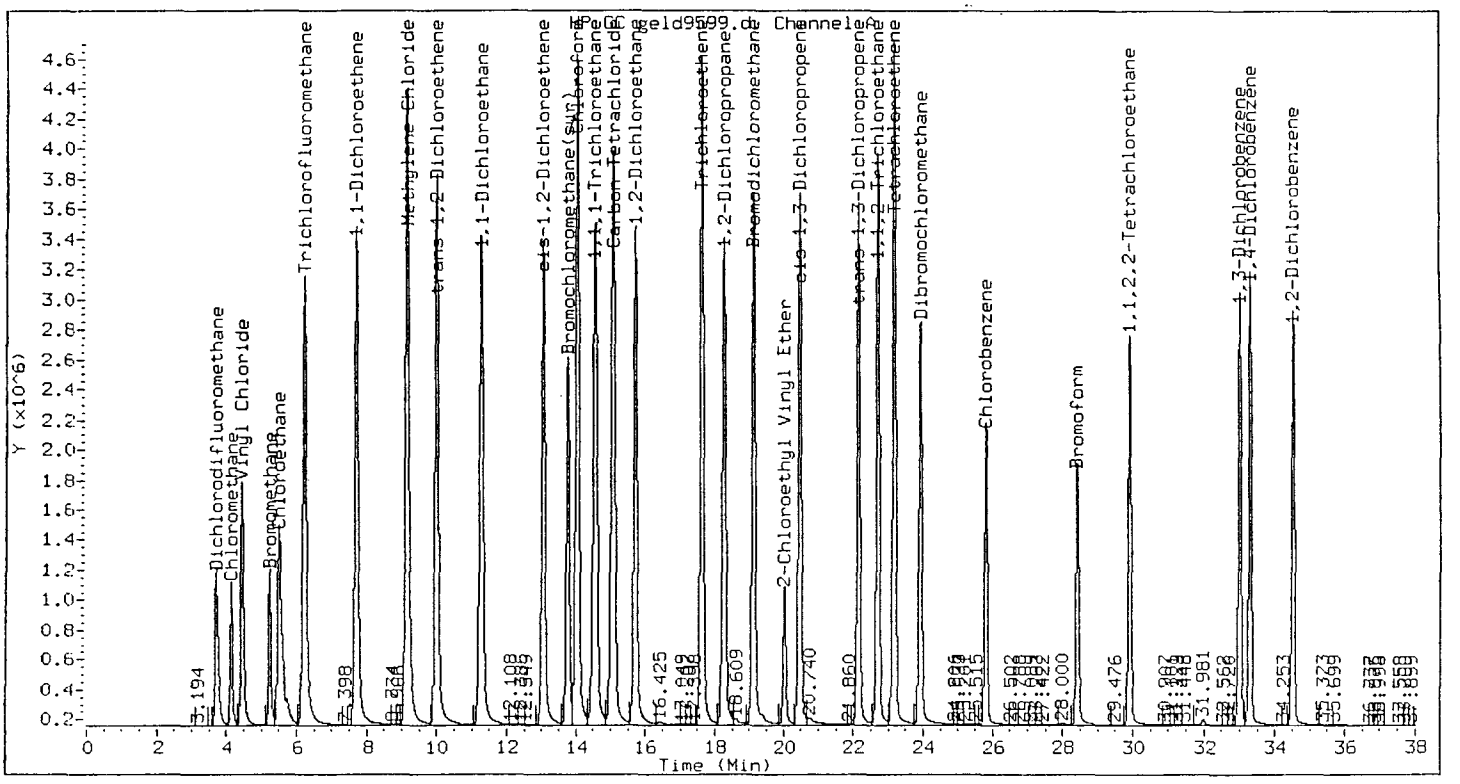
Instrument ID: VOAGC1 Calibration Date: 10/21/98 Time: 0813

Lab File ID: GELD9599 Init. Calib. Date(s): 10/17/98 10/18/98

Heated Purge: (Y/N) N Init. Calib. Times: 1954 0322

COMPOUND	$\overline{RRF}$	RRF20	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	2550243.2	1727276.8		32.3	15.0
Chloromethane	1033542.8	1022920.7		1.0	15.0
Vinyl Chloride	2680565.0	2458296.7		8.3	15.0
Bromomethane	1253047.9	1179424.5		5.9	15.0
Chloroethane	2727422.9	3124840.5		-14.4	15.0
Trichlorofluoromethane	6266924.6	5707989.7		8.9	15.0
1,1-Dichloroethene	6386832.6	5712547.5		10.6	15.0
Methylene Chloride	9987100.9	7490763.6		25.0	15.0
trans-1,2-Dichloroethene	6806452.3	6172732.3		9.3	15.0
1,1-Dichloroethane	7087915.3	6329357.7		10.7	15.0
cis-1,2-Dichloroethene	6115137.8	5392748.0		11.8	15.0
Chloroform	9234633.8	7975614.8		13.6	15.0
1,1,1-Trichloroethane	8053562.9	6939536.7		13.8	15.0
Carbon Tetrachloride	8947726.8	7750765.9		13.4	15.0
1,2-Dichloroethane	6889423.2	5547868.2		19.5	15.0
Trichloroethene	8044830.8	7082675.8		12.0	15.0
1,2-Dichloropropane	6470964.2	5588521.8		13.6	15.0
Bromodichloromethane	6524752.3	5916684.3		9.3	15.0
2-Chloroethyl Vinyl Ether	2035623.3	1389479.5		31.7	15.0
cis-1,3-Dichloropropene	6021649.8	5242631.2		12.9	15.0
trans-1,3-Dichloropropene	5576205.1	4830171.1		13.4	15.0
1,1,2-Trichloroethane	7393868.0	5785160.7		21.8	15.0
Tetrachloroethene	7959337.7	6992125.3		12.2	15.0
Dibromochloromethane	4939946.6	4176979.6		15.4	15.0
Chlorobenzene	3234909.8	2884447.4		10.8	15.0
Bromoform	3260093.2	2623097.9		19.5	15.0
1,1,2,2-Tetrachloroethane	5087382.0	3764420.7		26.0	15.0
1,3-Dichlorobenzene	4367330.8	3807581.6		12.8	15.0
1,4-Dichlorobenzene	4644637.9	4061364.2		12.6	15.0
1,2-Dichlorobenzene	4487370.3	3769280.9		16.0	15.0
Bromochloromethane(sur)	4647867.2	3793346.8		18.4	15.0

305467



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/21oct98.b/8021E.m
Sample Info : gstd020
Lab ID : gstd020
Inj Date : 21-OCT-98 08:13:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 1
Sample Matrix : SOIL
Sample Type: CCALIB_4

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane	3.692	3.701	0.009	34545536	13.546	13.546
Chloromethane	4.136	4.141	0.005	20458413	19.794	19.794
Vinyl Chloride	4.428	4.431	0.003	49165934	18.342	18.342
Bromomethane	5.227	5.240	0.013	23588489	18.825	18.825
Chloroethane	5.491	5.533	0.042	62496809	22.914	22.914
Trichlorofluoromethane	6.216	6.210	0.006	114159793	18.216	18.216
1,1-Dichloroethene	7.691	7.685	0.006	114250949	17.889	17.889
Methylene Chloride	9.132	9.129	0.004	149815272	15.001	15.001
trans-1,2-Dichloroethene	9.979	9.974	0.005	123454646	18.138	18.138

305468

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.252	11.245	0.006	126587154	17.860	17.860
cis-1,2-Dichloroethene	13.034	13.027	0.008	107854960	17.637	17.637
Chloroform	14.023	14.014	0.008	159512295	17.273	17.273
1,1,1-Trichloroethane	14.541	14.531	0.010	138790734	17.233	17.233
Carbon Tetrachloride	15.052	15.041	0.011	155015317	17.325	17.325
1,2-Dichloroethane	15.697	15.689	0.008	110957364	16.105	16.105
Trichloroethene	17.608	17.595	0.013	141653515	17.608	17.608
1,2-Dichloropropane	18.247	18.232	0.014	111770436	17.273	17.273
Bromodichloromethane	19.102	19.084	0.018	118333686	18.136	18.136
2-Chloroethyl Vinyl Ether	20.025	20.009	0.016	27789589	13.652	13.652
cis-1,3-Dichloropropene	20.450	20.433	0.017	104852623	17.413	17.413
trans-1,3-Dichloropropene	22.135	22.117	0.017	96603422	17.324	17.324
1,1,2-Trichloroethane	22.689	22.670	0.019	115703213	15.649	15.649
Tetrachloroethene	23.161	23.141	0.020	139842505	17.570	17.570
Dibromochloromethane	23.909	23.889	0.020	83539592	16.911	16.911
Chlorobenzene	25.805	25.785	0.020	57688947	17.833	17.833
Bromoform	28.405	28.382	0.023	52461957	16.092	16.092
1,1,2,2-Tetrachloroethane	29.902	29.879	0.023	75288413	14.799	14.799
1,3-Dichlorobenzene	32.996	32.972	0.024	76151631	17.437	17.437
1,4-Dichlorobenzene	33.285	33.261	0.024	81227284	17.488	17.488
1,2-Dichlorobenzene	34.505	34.480	0.025	75385617	16.800	16.800
Bromochloromethane(sur)	13.743	13.735	0.008	75866936	16.323	16.323

305469

VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Matrix: SOIL Level: HIGH Lab Job No: I052

	LAB SAMPLE NO.	SMC1 #	SMC2 #	OTHER	TOT OUT
01	GG289	102			0
02	89301	111			0
03	89303	109			0
04	GG293A	98			0
05	89299	99			0
06	89304	99			0
07	89305	98			0
08	GG294	77			0
09	89300	97			0
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

QC LIMITS

SMC1 = Bromochloromethane(sur (70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

305470

VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Matrix: SOIL Level: HIGH Lab Job No: I052

	LAB SAMPLE NO.	SMC1 #	SMC2 #	OTHER	TOT OUT
01	GG289	76			0
02	89301	92			0
03	89303	92			0
04	IG293A	88			0
05	89299	90			0
06	89304	88			0
07	89305	87			0
08	89300	106			0
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

QC LIMITS

SMC1 = a,a,a,-Trifluorotoluen (70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

305471

VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY
METHOD 8021

Matrix: SOIL

Level: HIGH

Matrix Spike - Lab Sample No.: 88681

MS Sample from Lab Job No: 20oc

QA Batch: 3700

Compound	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
Chloromethane	2770	0.00	2500	90	70-130
Vinyl Chloride	2770	0.00	3230	117	70-130
Bromomethane	2770	0.00	2860	103	70-130
Chloroethane	2770	0.00	3190	115	70-130
Trichlorofluoromethane	2770	0.00	2550	92	70-130
1,1-Dichloroethene	2770	0.00	2460	89	70-130
Methylene Chloride	2770	0.00	2090	75	70-130
trans-1,2-Dichloroethene	2770	0.00	2490	90	70-130
1,1-Dichloroethane	2770	0.00	2440	88	70-130
Chloroform	2770	0.00	2380	86	70-130
1,1,1-Trichloroethane	2770	0.00	2370	86	70-130
Carbon Tetrachloride	2770	0.00	2390	86	70-130
1,2-Dichloroethane	2770	0.00	2320	84	70-130
Trichloroethene	2770	159	2580	87	70-130
1,2-Dichloropropane	2770	0.00	2390	86	70-130
Bromodichloromethane	2770	0.00	2330	84	70-130
2-Chloroethyl Vinyl Ethe	2770	0.00	2710	98	70-130
cis-1,3-Dichloropropene	2770	0.00	2450	88	70-130
trans-1,3-Dichloropropen	2770	0.00	2500	90	70-130
1,1,2-Trichloroethane	2770	0.00	2320	84	70-130
Tetrachloroethene	2770	0.00	2370	86	70-130
Dibromochloromethane	2770	0.00	2360	85	70-130
Chlorobenzene	2770	0.00	2410	87	70-130
Bromoform	2770	0.00	2440	88	70-130
1,1,2,2-Tetrachloroethan	2770	0.00	2170	78	70-130
1,3-Dichlorobenzene	2770	0.00	2390	86	70-130
1,4-Dichlorobenzene	2770	0.00	2370	86	70-130
1,2-Dichlorobenzene	2770	0.00	2310	83	70-130

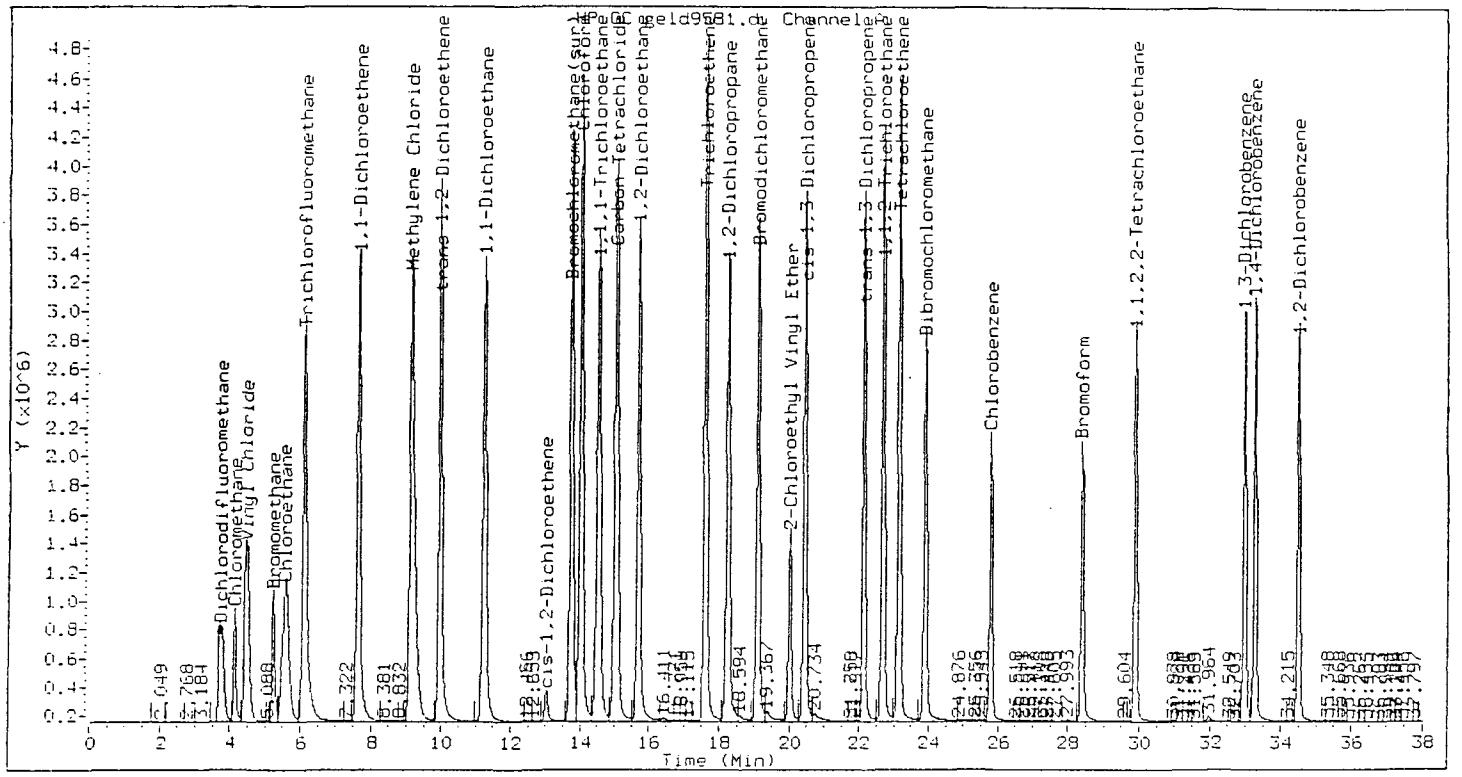
305472

Compound	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chloromethane	2770	2750	99	10	40	70-130
Vinyl Chloride	2770	3270	118	1	40	70-130
Bromomethane	2770	2870	104	0	40	70-130
Chloroethane	2770	3160	114	1	40	70-130
Trichlorofluoromethane	2770	2660	96	4	40	70-130
1,1-Dichloroethene	2770	2610	94	6	40	70-130
Methylene Chloride	2770	2180	79	4	40	70-130
trans-1,2-Dichloroethene	2770	2590	94	4	40	70-130
1,1-Dichloroethane	2770	2530	91	4	40	70-130
Chloroform	2770	2450	88	3	40	70-130
1,1,1-Trichloroethane	2770	2500	90	5	40	70-130
Carbon Tetrachloride	2770	2560	92	7	40	70-130
1,2-Dichloroethane	2770	2410	87	4	40	70-130
Trichloroethene	2770	2680	91	4	40	70-130
1,2-Dichloropropane	2770	2480	90	4	40	70-130
Bromodichloromethane	2770	2410	87	3	40	70-130
2-Chloroethyl Vinyl Ethe	2770	2850	103	5	40	70-130
cis-1,3-Dichloropropene	2770	2530	91	3	40	70-130
trans-1,3-Dichloropropen	2770	2560	92	2	40	70-130
1,1,2-Trichloroethane	2770	2410	87	4	40	70-130
Tetrachloroethene	2770	2590	94	9	40	70-130
Dibromochloromethane	2770	2540	92	7	40	70-130
Chlorobenzene	2770	2550	92	6	40	70-130
Bromoform	2770	2580	93	6	40	70-130
1,1,2,2-Tetrachloroethan	2770	2340	84	8	40	70-130
1,3-Dichlorobenzene	2770	2520	91	5	40	70-130
1,4-Dichlorobenzene	2770	2510	91	6	40	70-130
1,2-Dichlorobenzene	2770	2470	89	7	40	70-130

Column to be used to flag recovery and RPD values with an asterik
* Values outside of QC limits
RPD: 0 out of 28 outside limits
Spike Recovery: 0 out of 56 outside limits

COMMENTS: _____

305473



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98.b/8021E.m
Sample Info : 88681ms;;50
Lab ID : 88681ms
Inj Date : 20-OCT-98 12:26:00
Operator : KB
Cpnd Sublist: 601

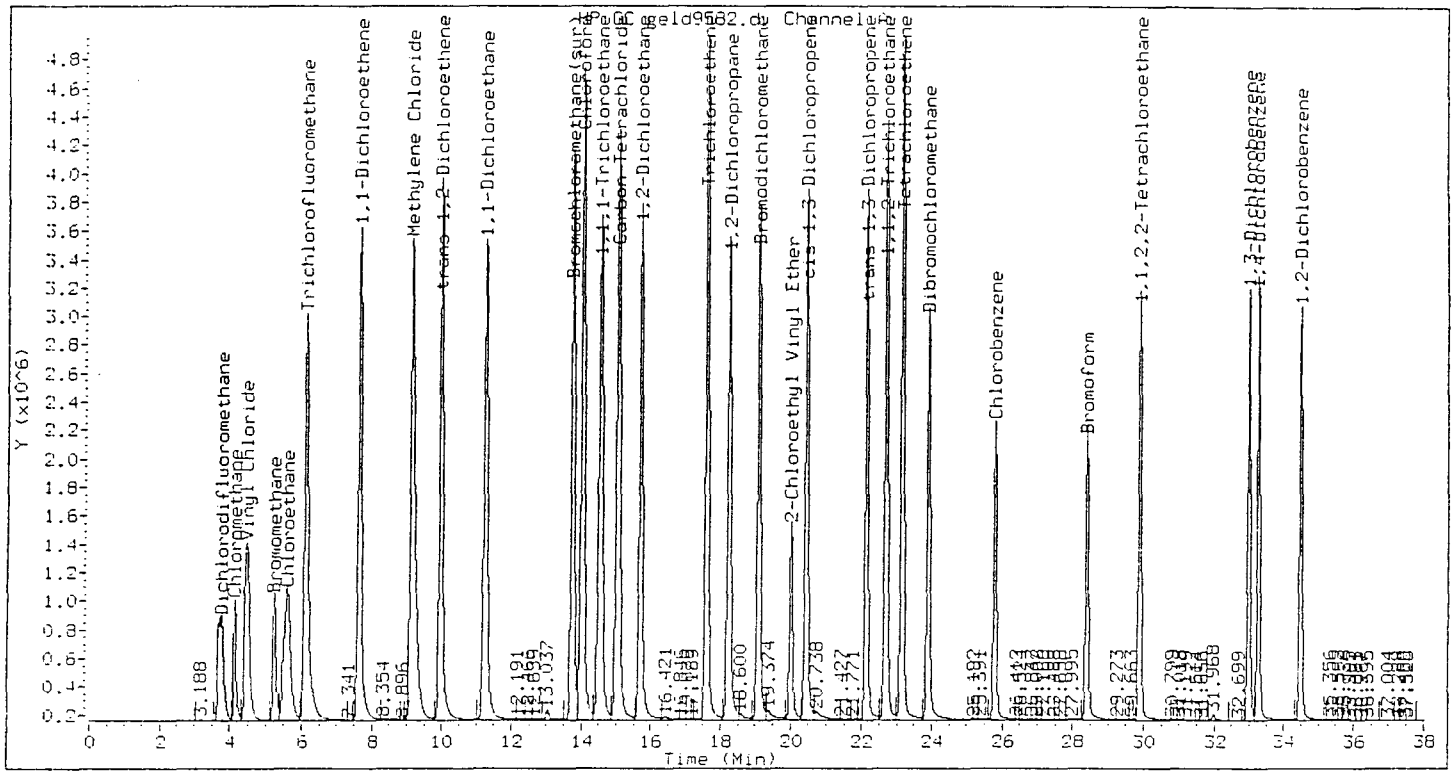
Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: MS

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane	3.747	3.701	0.047	37020708	14.517	2010.156
Chloromethane	4.134	4.141	0.007	18657806	18.052	2499.762
Vinyl Chloride	4.451	4.431	0.020	62523183	23.325	3229.842
Bromomethane	5.226	5.240	0.014	25850160	20.630	2856.684
Chloroethane	5.577	5.533	0.044	62846991	23.043	3190.793
Trichlorofluoromethane	6.104	6.210	0.105	115296223	18.398	2547.576
1,1-Dichloroethene	7.632	7.685	0.053	113356217	17.748	2457.686
Methylene Chloride	9.120	9.129	0.009	151010571	15.121	2093.797
trans-1,2-Dichloroethene	9.952	9.974	0.022	122307420	17.969	2488.276

305474

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
1,1-Dichloroethane	11.234	11.245	0.012	125040087	17.641	2442.853
cis-1,2-Dichloroethene	13.028	13.027	0.001	8037623	1.314	182.007
Chloroform	14.015	14.014	0.000	158887697	17.206	2382.523
1,1,1-Trichloroethane	14.524	14.531	0.008	138082464	17.146	2374.199
Carbon Tetrachloride	15.032	15.041	0.009	154640977	17.283	2393.197
1,2-Dichloroethane	15.687	15.689	0.002	115235562	16.726	2316.169
Trichloroethene	17.593	17.595	0.002	150146501	18.664	2584.431
1,2-Dichloropropane	18.233	18.232	0.000	111532375	17.236	2386.704
Bromodichloromethane	19.087	19.084	0.003	109677658	16.809	2327.666
2-Chloroethyl Vinyl Ether	20.009	20.009	0.000	39887847	19.595	2713.375
cis-1,3-Dichloropropene	20.433	20.433	0.001	106701895	17.720	2453.710
trans-1,3-Dichloropropene	22.120	22.117	0.003	100696434	18.058	2500.587
1,1,2-Trichloroethane	22.675	22.670	0.005	123627496	16.720	2315.314
Tetrachloroethene	23.141	23.141	0.000	136296618	17.124	2371.236
Dibromochloromethane	23.894	23.889	0.005	84231927	17.051	2361.136
Chlorobenzene	25.788	25.785	0.003	56414262	17.439	2414.868
Bromoform	28.390	28.382	0.008	57349836	17.591	2435.952
1,1,2,2-Tetrachloroethane	29.887	29.879	0.008	79707836	15.668	2169.568
1,3-Dichlorobenzene	32.978	32.972	0.005	75351179	17.253	2389.134
1,4-Dichlorobenzene	33.266	33.261	0.005	79558372	17.129	2371.923
1,2-Dichlorobenzene	34.486	34.480	0.006	75016210	16.717	2314.887
Bromochloromethane(sur)	13.731	13.735	0.004	129767291	27.920	3866.145

305475



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/20oct98.b/8021E.m
Sample Info : 88681msd;;50
Lab ID : 88681msd
Inj Date : 20-OCT-98 13:10:00
Operator : KB
Cpnd Sublist: 601

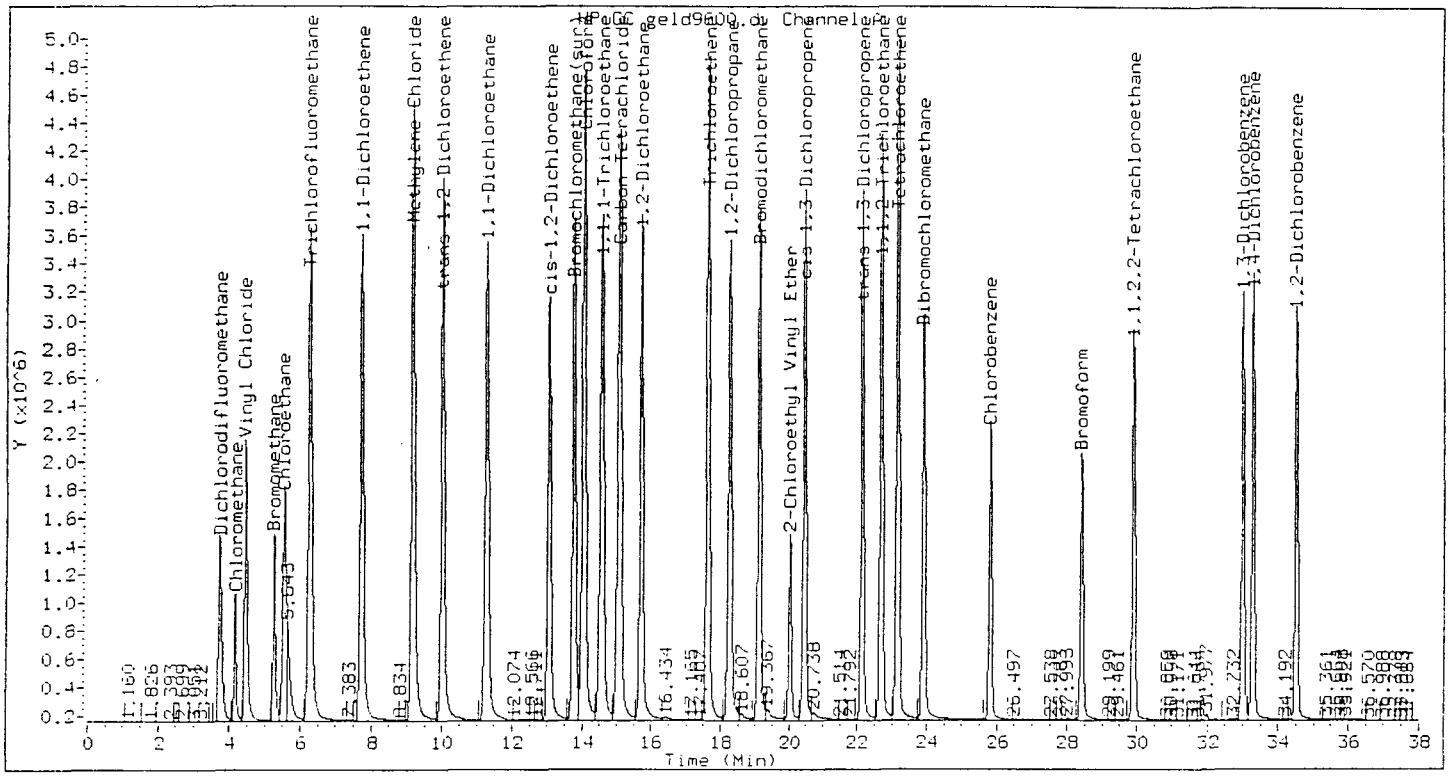
Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: MSD

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
Dichlorodifluoromethane	3.752	3.701	0.052	41622134	16.321	2260.005
Chloromethane	4.138	4.141	0.003	20531800	19.865	2750.839
Vinyl Chloride	4.461	4.431	0.030	63276785	23.606	3268.772
Bromomethane	5.232	5.240	0.008	25996916	20.747	2872.901
Chloroethane	5.588	5.533	0.055	62247224	22.823	3160.342
Trichlorofluoromethane	6.112	6.210	0.098	120272547	19.192	2657.533
1,1-Dichloroethene	7.641	7.685	0.044	120474468	18.863	2612.017
Methylene Chloride	9.127	9.129	0.002	156885185	15.709	2175.249
trans-1,2-Dichloroethene	9.960	9.974	0.014	127231365	18.693	2588.451

305476

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.242	11.245	0.003	129381760	18.254	2527.674
Chloroform	14.019	14.014	0.005	163279933	17.681	2448.385
1,1,1-Trichloroethane	14.530	14.531	0.001	145322889	18.045	2498.691
Carbon Tetrachloride	15.040	15.041	0.001	165386702	18.484	2559.496
1,2-Dichloroethane	15.695	15.689	0.006	120026255	17.422	2412.459
Trichloroethene	17.598	17.595	0.003	155746017	19.360	2680.814
1,2-Dichloropropane	18.238	18.232	0.006	115788455	17.894	2477.781
Bromodichloromethane	19.092	19.084	0.009	113676842	17.422	2412.540
2-Chloroethyl Vinyl Ether	20.014	20.009	0.006	41863394	20.565	2847.761
cis-1,3-Dichloropropene	20.439	20.433	0.006	110098354	18.284	2531.815
trans-1,3-Dichloropropene	22.125	22.117	0.007	103177845	18.503	2562.207
1,1,2-Trichloroethane	22.680	22.670	0.010	128569236	17.389	2407.864
Tetrachloroethene	23.147	23.141	0.006	148749507	18.689	2587.886
Dibromochloromethane	23.900	23.889	0.010	90766642	18.374	2544.313
Chlorobenzene	25.792	25.785	0.007	59547927	18.408	2549.007
Bromoform	28.392	28.382	0.011	60871547	18.672	2585.538
1,1,2,2-Tetrachloroethane	29.890	29.879	0.011	86048992	16.914	2342.168
1,3-Dichlorobenzene	32.980	32.972	0.008	79411587	18.183	2517.876
1,4-Dichlorobenzene	33.268	33.261	0.007	84097317	18.106	2507.245
1,2-Dichlorobenzene	34.489	34.480	0.008	80058203	17.841	2470.475
Bromochloromethane(sur)	13.737	13.735	0.002	126585609	27.235	3771.353

305477



Method : /chem/VOAGC1.i/8021ELCD/10-17-98/21oct98.b/8021E.m
Sample Info : 3700bs
Lab ID : 3700bs
Inj Date : 21-OCT-98 09:16:00
Operator : KB
Cpnd Sublist: 601

Inst ID : VOAGC1.i
Dil Factor : 50
Sample Matrix : SOIL
Sample Type: METHSPIKE

Compounds		RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/Kg)
Dichlorodifluoromethane		3.713	3.701	0.013	42517074	16.672	2083.971
Chloromethane		4.154	4.141	0.013	18924712	18.311	2288.816
Vinyl Chloride		4.442	4.431	0.011	57060899	21.287	2660.862
Bromomethane		5.248	5.240	0.008	29537095	23.572	2946.525
Chloroethane	(M)	5.537	5.533	0.004	58514302	21.454	2681.758
Trichlorofluoromethane		6.263	6.210	0.053	129486041	20.662	2582.727
1,1-Dichloroethene		7.718	7.685	0.033	118411279	18.540	2317.488
Methylene Chloride		9.152	9.129	0.023	152894608	15.309	1913.651
trans-1,2-Dichloroethene		9.998	9.974	0.024	126802062	18.630	2328.711

305478

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/Kg)
1,1-Dichloroethane	11.268	11.245	0.023	129963666	18.336	2291.994
cis-1,2-Dichloroethene	13.048	13.027	0.021	100820611	16.487	2060.882
Chloroform	14.033	14.014	0.019	165177862	17.887	2235.847
1,1,1-Trichloroethane	14.553	14.531	0.022	147399332	18.302	2287.797
Carbon Tetrachloride	15.063	15.041	0.023	166923518	18.655	2331.926
1,2-Dichloroethane	15.706	15.689	0.017	117233451	17.016	2127.055
Trichloroethene	17.614	17.595	0.019	149498139	18.583	2322.891
1,2-Dichloropropane	18.250	18.232	0.018	116758554	18.043	2255.432
Bromodichloromethane	19.101	19.084	0.017	115665597	17.727	2215.900
2-Chloroethyl Vinyl Ether	20.021	20.009	0.012	38825610	19.073	2384.135
cis-1,3-Dichloropropene	20.447	20.433	0.015	109783539	18.231	2278.934
trans-1,3-Dichloropropene	22.131	22.117	0.014	101878126	18.270	2283.769
1,1,2-Trichloroethane	22.685	22.670	0.015	123797865	16.743	2092.914
Tetrachloroethene	23.158	23.141	0.017	150044183	18.851	2356.418
Dibromochloromethane	23.905	23.889	0.016	90542428	18.329	2291.078
Chlorobenzene	25.800	25.785	0.015	60511152	18.706	2338.209
Bromoform	28.398	28.382	0.016	56523574	17.338	2167.253
1,1,2,2-Tetrachloroethane	29.896	29.879	0.017	80826278	15.888	1985.950
1,3-Dichlorobenzene	32.993	32.972	0.021	81190112	18.590	2323.791
1,4-Dichlorobenzene	33.282	33.261	0.021	85877682	18.490	2311.205
1,2-Dichlorobenzene	34.502	34.480	0.022	81278894	18.113	2264.101
Bromochloromethane(sur)	13.755	13.735	0.020	109180755	23.491	2936.313

COMMENTS:

M - Compound response manually integrated.

305479

Sublinear Reg: 5/6/1 [illegible]

DATE	DATAFILE ID	R S	SAMPLE	STD LOT	JOB	QA	UB	P N	WW	DF	SUB list	Comments	ANALYST
10/16/98	Qg15 9500	9	6STD020								601	G	KB
	9501	10	6STD010									NG	
	9502	11	6STD005	Stds								NG	
	9503	12	6STD005	V98-525								G	
	9504	13	6STD001	V98-527								G	
	9505	14	6STD040	V98-527								G	
	9506	15	6STD010									G	
	9507	16	66289									G	
	9508	1	89301	BS			66					G	
	9509	2	87303	V98-526	10052	3700	289		9.8 25ml	50x		G	
	9510	15	6STD020A	V98-525	↓	↓	↓		9.53 25ml	↓		G	
	9511	14	3699BS	Stuff								(new vial) G	
	9512	15	BS	V98-525								NU ~~(OK)~~ G	
	9513	16	66289A									~~NU~~ G	
	9514	1	66289A									G	
	9515	2	88551		11941	3699	66		10.0 25ml	50x		NU	
	9516		88552				289A		10.2 25ml	1000x		G	
	9517		88553						9.8 25ml	50x		G	
	9518		88554						10.4 25ml			G	
	9519		88555						10.5 25ml			G	
	9520		88556						10.3 25ml			~~MCCL 1.17~~ G	
	9521		88558						10.7 25ml			G	
	9522		88561						10.0 25ml			G	
	9523		88568						10.2 25ml			G	
	9524		88569						10.3 25ml	2500x		G	
	9525		6STD020									G	
	9526		6STD020									NG	
												G	

Kimberly Botin
Signed

10/16/98
Date

Signed

Date

305480

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Subdirectory: E101798 / E101798a Analysis: 8021e

DATE	DATAFILE ID	ALS	SAMPLE	STD LOT	JOB	QA	LPB	PH	W/V	DF	Sub list	Comments	ANALYST
10/17/98	gcld 9527	9	GSTD020				GG 290				G01	G	MDB
	9528	10	BS									G	
	9529	11	GG 290									G	
	9530	9	88554ms	std	H941	3699						NG	
	9531	10	88554msd	V98525	↓	↓						NG	
	9532	9	Gstd020a	V98-527								NU (~~check~~)	
	9533	11	88555	V98-529	H941	3699			10.58 / 25ml	50X		NG	
	9534	12	88570		↓				25	↓			
	9535	13	886104	BS	H950				25			end check did not pass	
	9536	14	886065	V98-526					25	↓			
	9537	15	886067	V98-528					25	1000X			
	9538	16	886068						25	↓			
	9539	1	886069	Sar	↓	↓			25	50X			
	9540	2	gstd020a	~~V98-530~~								G (new calibration)	
	9541	3	gstd020a	V98-545								NG	
	9542	4	gstd001a									NG	
	9543	5	gstd001a									G	
	9544	6	gstd005a									NG	
	9545	7	gstd005a									G	
	9546	8	gstd010a									NG	
	9547	9	gstd040a									NG	
	9548	10	gstd040a									G	
	9549	11	gstd010a									G	

Melissa Bond 10/17/98
Signed Date

Read and Understood By
Signed Date

Continued on Page

305481

PROJECT

Notebook No. _____

Continued From Page

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Subdirectory: E102098/E102098a Analysis: 8021e

DATE	DATAFILE ID	A/S	SAMPLE	PH	STD LOT	JOB	QA	LPB	W/V	DF	Sub List	Comments	ANALYZED
10-20-98	gsld 9576	9	gsld 020					GG293			601	G	MZB
	9577	10	~~3700~~ BS									ok NU	
	9578	11	gg 293									G	
	9579	12	88681		SWN	H950	3700		10.3 25	50X		G	
	9580	9	88554 msd			H950	3699		10.47 25	50X		G	
	9581	10	88681 ms		V98-565		3700		10.34 25	50X		G	
	9582	11	88681 msd						10.29 25			G	
	9583	10	GSTD 020		std			GG293				G	
	9584	12	~~3700~~ BS		V98-525							G	
	9585	13	GG293		V98-527							G	
	9586	13	88682		V98-529	H950	3700		10.3 25ml	50X		G	
	9587	14	89299			I052			25ml			G	
	9588 ~~9589~~	15	89300		BS				9.37 25ml			RR x100	
	9589 ~~9590~~	16	89304						9.79 25ml			G	
	9590 ~~9591~~	1	89305		V98-526				10.03 25ml			G	
	9591/~~9592~~	2	89308		V98-528	I053			10.27 25ml			bad purge	
	9592 ~~9593~~	4	89298			I051	~~3701~~	3701	1.03 10ml	1000X		surrt (RR x500)	
	9593 ~~9594~~	5	88674			H950	~~3699~~	3699	10.37 25ml			G ~~RR~~	
	9594 ~~9595~~	6	88678				3700		10.47 25ml			G	
	9595 ~~9596~~	7	88679						10.09 25ml	100X		G	
	9596 ~~9597~~	9	gsld 020									NG	
	9597 ~~9598~~	10	gsld 020									NG	
	9598 ~~9599~~	11	gsld 020									G	
	~~9600~~	11											

Melissa Board 10-20-98
Signed Date

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PROJECT

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Subdirectory: E102198 Analysis: 8021e

DATE	DATA FILE ID	ANS	SAMPLE	Std Lot #	JOB	QA	LPB	PH	W/V	D.F.	SubList	Comments	Analyst
10/21/98	geld 9599	9	6STD020				66				601	G	KB
	9600	10	3700BS				2941					G	
	9601	11	66294	Std								G	
	9602	11	88667	V98-525	H950	3699			10.3g / 25ml	50x		G	
	9603	9	6STD020	V98-527								G → NU	
	9609*	15	89300	V98-529	I052	3700			9.3g / 25ml	100x		G	
	9610	16	89308		I053				10.2g / 25ml	50x		KR 100x (TCE 4/9)	
	9611	1	89309	BS	I053				10.8 / 25ml			G	
	9612	2	89310	V98-526	↓	↓			10.0 / 25ml	↓		G	
	9613	9	6STD020	V98 528								NG	
	9614	10	6STD020									G	
				Surr V98-565									

* missing files include samples run under different method.

305483

Kimberly Bohn
Signed

10/21/98
Date

Read and Understood By

Signed

Date

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PROJECT

Notebook No. _____

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Site: Klockner & Klockner

Lab Job No: I052

Date Sampled: 10/8/98
Date Received: 10/9/98
Matrix: SOIL

Date Analyzed: 10/14/98
QA Batch: 1402

TOTAL ORGANIC CARBON

Envirotech Sample #	Client ID	% Moisture	Dilution Factor	Analytical Result mg/kg (Dry Wt.)
89302	SSGC-1A_1.5-4	13.7	4.0	16200

Quantitation Limit for Total Organic Carbon is 100 mg/kg for an undiluted sample.

305484

TOTAL ORGANIC CARBON

Matrix: SOLID

Lab Sample No.: 88329

QA Batch No: 1402

Lab Job No.: H911

Laboratory Blank	
Blank Conc. (mg/kg)	Quant Limit (mg/kg)
ND	100

Sample Replicates				
#1 (mg/kg)	#2 (mg/kg)	#3 (mg/kg)	#4 (mg/kg)	AVG (mg/kg)
61300	67400	75500	74100	69575

Standard Deviation	%RSD	Control Limits
6552.04	9.42	26.3

LCS				
Vendor Name	Lot #	Mean Value (mg/kg)	Range (mg/kg)	Measured Value (mg/kg)
ERA	6103	22500	18000-27000	19200

305485

PROJECT TOC

Notebook No. 01123

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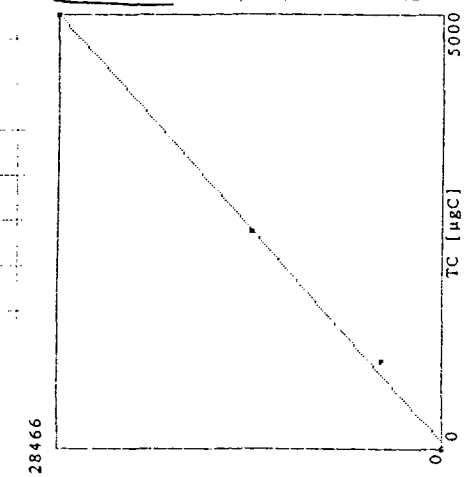

CAL CURVE F# 2
TC 4-POINT
PROTECTED
LEAST SQUARES r=0.999

[CONDITIONS]
RANGE : x5
CELL LENGTH : W-SHORT
DATE : 10(OCT)-14-1998

[DATA]

STD CONC	AMNT	µgC	AREA	#
5000ppm	1000mg	5000	28466	1
2500ppm	1000mg	2500	14156	1
1000ppm	1000mg	1000	4414	1
0.0ppm	1000mg	0.0	0	1

Batch	Job	Sample	#	Dil	Sample amt(s)	Loaded	% solid	Results	spk	% Rec
		ICV	1			1433		1430	1500	95
		ICB	2			99.43		ND		
		PB	3			99.43		ND		
1402	H941	88549	4	2x	0.5046	7992	91.7	8720		
	H950	88670	5	4x	0.2519	12311	82.6	14900		
		88673	6	4x	0.2600	5430	81.5	6663		
		88680	7		low range	390.8	96.3	16200		
	I052	89302	8	4x	0.2621	13987	86.3	~~16210~~ FH		
	I099	89621	9	10x	0.1025	36922	51.1	72200		
		89622	10	10x	0.0928	40983	50.7	80800		
		89623	11	20x	0.0505	66157	44.7	148000		
		89624	12	20x	0.0547	44904	54.9	81800		
		CCV	13			1600		1600	1500	107
		CCB	14			99.43		ND		
		89625	15	2x	0.4960	3339	80.6	4140		
		89626	16		0.9840	2771	87.0	3180		
		CCV	17			1503		1500	1500	100
		CCB	18			99.43		ND		

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Signed [signature] Date 10/14/98 Signed Date