UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT BUILDING 2567 NJDEP FACILITY UST NO. 081515 UST NOS. 42, 43, 44 AND 45 TMS NO. C-92-2950 SPILL CASE NOS. 89-12-12-1442 AND 91-8-27-1414

Volume 2 of 2

January 1995

Work Order No.: 03886-088-001

Prepared For:

UNITED STATES ARMY
Directorate of Public Works
Building 167
Fort Monmouth, New Jersey 07703

Prepared by:

ROY F. WESTON, INC.
Raritan Plaza I
4th Floor
Raritan Center
Edison, New Jersey 08837

APPENDIX G

(CONTINUED FROM VOLUME I)

ANALYTICAL DATA PACKAGE

21ST CENTURY ENVIRONMENTAL

618 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489 • 609-467-9521

CERTIFICATE OF ANALYSIS

LEAD

U.S. ARMY FORT MONMOUTH

ANALYSIS NO:	CLIENT ID:	MDL (mg/kg)	RESULT (mg/kg)
A 0995	Site A	5.0	129
A 0996	Site B	5.0	55.1
A 0997	Site C	5.0	15.0
A 0998	Site D	5.0	N.D.
A 0999	Site E	5.0	N.D.
A 1000	Site F	5.0	19.6
A 1001	Site G	5.0	37.4
A 1002	Site H	5.0	15.2
A 1003	Site I	5.0	39.0
A 1004	Site J	5.0	15.5
A 1005	Site K	5.0	6.19
A 1006	Site L	5.0	25.8
A 1007	Site M	5.0	87.5
A 1008	Site N	5.0	49.3
A 1009	Site O	5.0	92.5
A 1010	Site P	5.0	N.D.
A 1011	Site Q	5.0	N.D.
A 1012	Site R	5.0	7.77
A 1013	Site S	5.0	10.8
A 1014	Site T	5.0	9.38
A 1015	Site U	5.0	N.D.
A 1016	Site V	5.0	22.7
A 1017	Site W	5.0	47.2
A 1019 *	Field Blank	0.05 mg/L	N.D.

* Aqueous Field Blank - Results in mg/L with an MDL of 0.05 mg/L

00069

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

EPA SAMPLE NO.
A0995

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Soil Lab Sample ID: SITE A

Sample wt/vol: 5 (g/mL) g Lab File ID: >A0851

Level: (low/med) LOW Date Received: 02/24/93

% Moisture: 17 Date Analyzed: 02/25/93

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

00062

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A0995	DILUTION FACTOR	1.00
CLIENT ID	SITE A US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0851	DATE ANALYZED	02/25/93

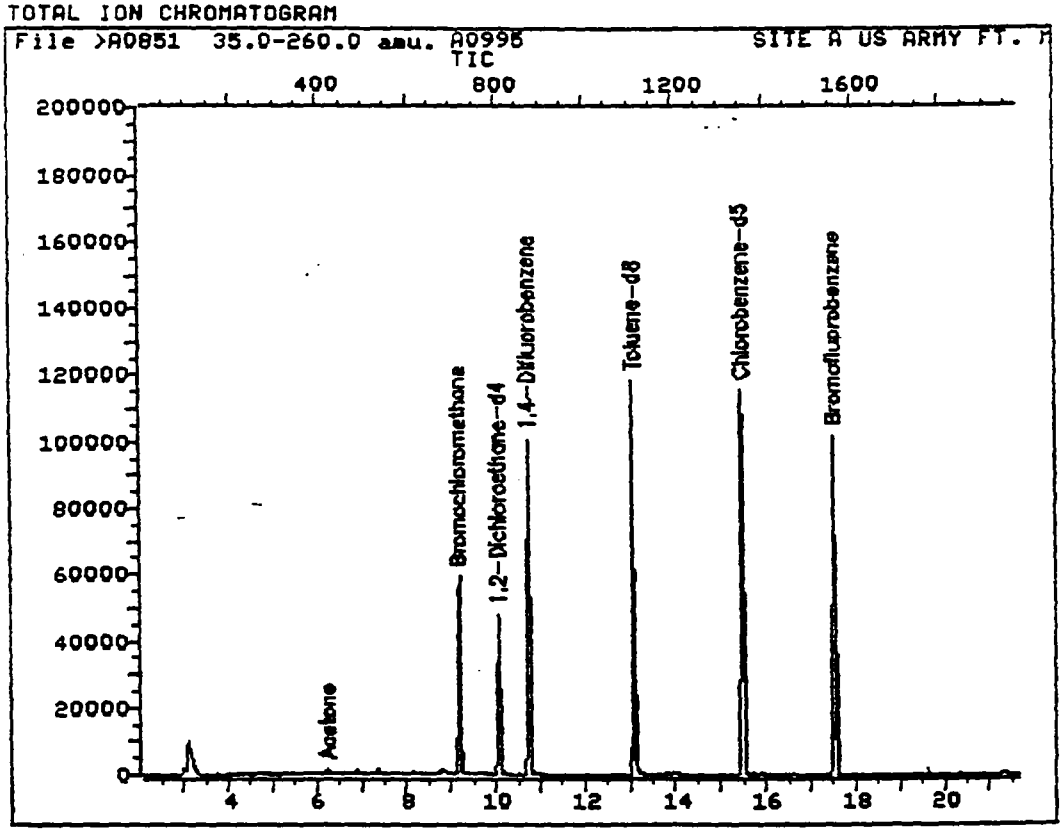
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	60	Bromodichloromethane	ND	6
Acrylonitrile	ND	60	2-Chloroethylvinylether	ND	12
Chloromethane	ND	12	2-Hexanone	ND	12
Bromomethane	ND	12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND	12	Toluene	ND	6
Chloroethane	ND	12	cis-1,3-Dichloropropene	ND	6
Acetone	14	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND	12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	ND	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6
Vinyl Acetate	ND	6	Ethylbenzene	ND	6
2-Butanone	ND	12	m&p-Xylenes	ND	6
Chloroform	ND	6	o-Xylene	ND	6
1,1,1-Trichloroethane	ND	6	Styrene	ND	6
Carbon Tetrachloride	ND	6	Bromoform	ND	6
1,2-Dichloroethane	ND	6	m-Dichlorobenzene	ND	6
Benzene	ND	6	p-Dichlorobenzene	ND	6
Trichloroethene	ND	6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND	6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	98.6	70 - 121	OK
Toluene-d8	97.2	81 - 117	OK
Bromofluorobenzene	95.7	74 - 121	OK

Percent Solid of 83.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0851::D2 Quant Output File: ^A0851::QT
Name: A0995
Misc: SITE A US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 13:23
Injected at: 930225 12:53

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930225 13:23
utput File: ^A0851::QT Injected at: 930225 12:53
ata File: >A0851::D2 Dilution Factor: 1.00000
ame: A0995
isc: SITE A US ARMY FT. MONMOUTH 5.0g/5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930225 12:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.17	713	30688	50.00	UG/L	100
9)	Acetone	6.23	416	3758	11.40	UG/L	80
1)	1,2-Dichloroethane-d4	10.06	802	66082	49.29	UG/L	100
2)	*1,4-Difluorobenzene	10.73	870	151316	50.00	UG/L	100
1)	Toluene-d8	13.07	1106	152491	48.60	UG/L	100
3)	*Chlorobenzene-d5	15.46	1348	122204	50.00	UG/L	100
6)	Bromofluorobenzene	17.51	1555	71922	47.87	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A0996

Matrix: (soil/water) SOIL

Lab Sample ID: SITE B

Sample wt/vol: .004 (g/mL) g

Lab File ID: >A0904

Level: MED

Date Received: 02/24/93

% Moisture: 35

Date Analyzed 02/28/93

Column: CAP

Dilution Factor: 1250

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	108872	Cyclohexane, methyl- (8CI9CI)	11.38	17000
2	592132	Hexane, 2,5-dimethyl- (8CI9CI)	12.34	20000
3	589811	Heptane, 3-methyl- (8CI9CI)	12.58	17000
4	111659	Octane (DOT)(8CI9CI)	13.26	12000
5	921471	Hexane, 2,3,4-trimethyl- (8CI9CI)	14.97	20000
6	2216333	Octane, 3-methyl- (8CI9CI)	15.18	12000
7	98828	Benzene, (1-methylethyl)- (9CI)	17.15	26000
8	103651	Benzene, propyl- (8CI9CI)	17.90	40000
9	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.05	200000
10	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.21	77000
11	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.59	37000
12	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.91	220000
13	622968	Benzene, 1-ethyl-3-methyl- (9CI)	19.68	58000
14	611154	Benzene, 1-ethenyl-2-methyl- (9CI)	20.06	89000
15	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.21	68000
16	1074551	Benzene, 1-methyl-4-propyl- (9CI)	20.56	12000
17	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.71	26000
18	2870044	Benzene, 2-ethyl-1,3-dimethyl- (9CI)	20.90	38000
19	55319727	Benzene, 1-ethenyl-3-ethyl-, mixt. with 1-et	21.12	25000
20	934805	Benzene, 4-ethyl-1,2-dimethyl- (9CI)	21.47	11000

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A0996	DILUTION FACTOR	1250.00
CLIENT ID	SITE B US ARMY FT MONMOUTH	QA BATCH	
DATA FILE	>A0904	DATE ANALYZED	02/28/93

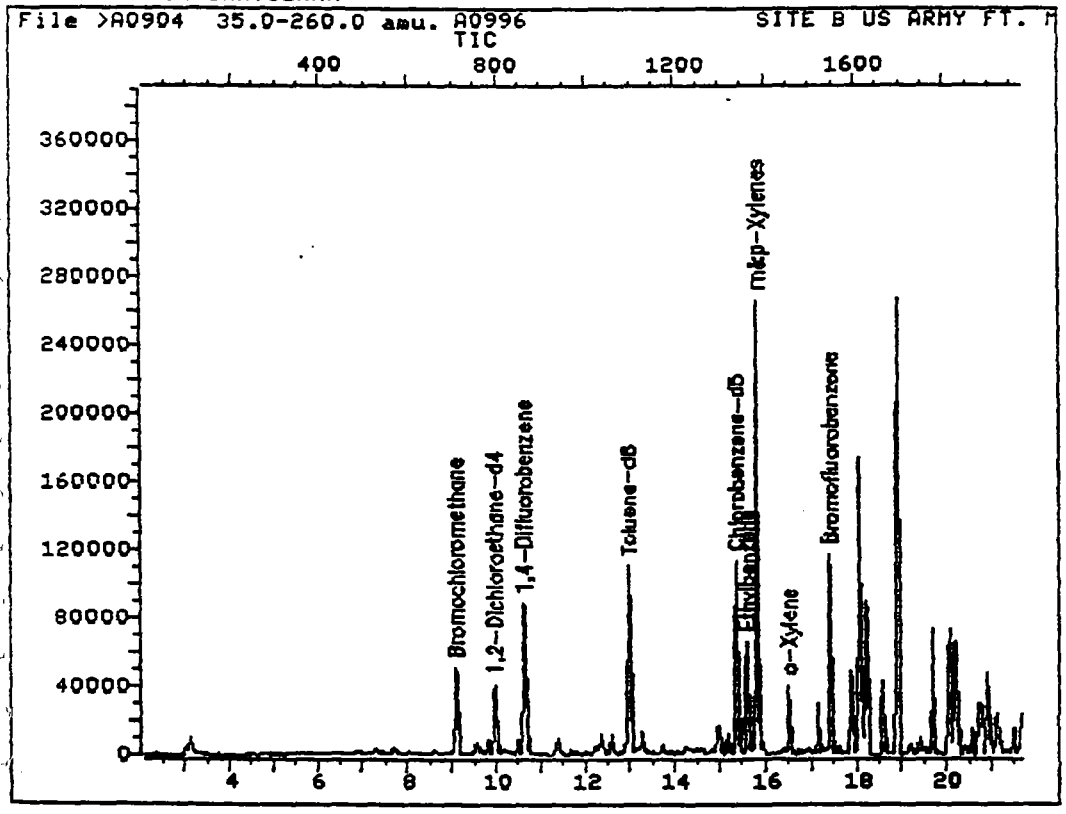
COMPOUND	UG/KG		MDL	COMPOUND	UG/KG	MDL
Acrolein	ND		96000	Bromodichloromethane	ND	9600
Acrylonitrile	ND		96000	2-Chloroethylvinylether	ND	19000
Chloromethane	ND		19000	2-Hexanone	ND	19000
Bromomethane	ND		19000	trans-1,3-Dichloropropene	ND	9600
Vinyl Chloride	ND		19000	Toluene	ND	9600
Chloroethane	ND		19000	cis-1,3-Dichloropropene	ND	9600
Acetone	ND	B	19000	1,1,2,2-Tetrachloroethane	ND	9600
1,1-Dichloroethene	ND		9600	1,1,2-Trichloroethane	ND	9600
Carbon Disulfide	ND		19000	4-Methyl-2-pentanone	ND	19000
Methylene Chloride	ND	B	9600	Tetrachloroethene	ND	9600
1,2-Dichloroethene(trans)	ND		9600	Dibromochloromethane	ND	9600
1,1-Dichloroethane	ND		9600	Chlorobenzene	ND	9600
Vinyl Acetate	ND		9600	Ethylbenzene	44000	9600
2-Butanone	ND		19000	m&p-Xylenes	170000	9600
Chloroform	ND		9600	o-Xylene	25000	9600
1,1,1-Trichloroethane	ND		9600	Styrene	ND	9600
Carbon Tetrachloride	ND		9600	Bromoform	ND	9600
1,2-Dichloroethane	ND		9600	m-Dichlorobenzene	ND	9600
Benzene	ND		9600	p-Dichlorobenzene	ND	9600
Trichloroethene	ND		9600	o-Dichlorobenzene	ND	9600
1,2-Dichloropropane	ND		9600			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	92.3	70 - 121	OK
Toluene-d8	101	81 - 117	OK
Bromofluorobenzene	100	74 - 121	OK

Percent Solid of 65.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0904::D3 Quant Output File: ^A0904::QT
Name: A0996
Misc: SITE B US ARMY FT. MONMOUTH 4g/10mL 10uL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930228 14:57

Operator ID: JEFF
Quant Time: 930228 20:22
Injected at: 930228 19:51

QUANT REPORT

perator ID: JEFF Quant Rev: 6 Quant Time: 930228 20:22
utput File: ^A0904::QT Injected at: 930228 19:51
ata File: >A0904::D3 Dilution Factor: 1.00000
ame: A0996
isc: SITE B US ARMY FT. MONMOUTH 4g/10mL 10uL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930228 14:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.09	704	27519	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	9.97	793	56114	46.17	UG/L	100
2)	*1,4-Difluorobenzene	10.63	860	144423	50.00	UG/L	100
1)	Toluene-d8	12.96	1095	149281	50.30	UG/L	100
3)	*Chlorobenzene-d5	15.37	1338	130446	50.00	UG/L	100
1)	Ethylbenzene	15.60	1361	101223	22.90	UG/L	82
2)	m&p-Xylenes	15.81	1382	344548	89.39	UG/L	92
3)	o-Xylene	16.50	1451	49178	13.15	UG/L	92
6)	Bromofluorobenzene	17.42	1544	83275	50.07	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A0997

Matrix: (soil/water) SOIL

Lab Sample ID: SITE C

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A0852

Level: LOW

Date Received: 02/24/93

% Moisture: 44

Date Analyzed 02/25/93

Column: CAP

Dilution Factor: 1

Number TICs Found 17

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	115071	1-Propene (9CI)	4.27	21
2	78784	Butane, 2-methyl- (8CI9CI)	5.02	250
3	109660	Pentane (ACN)(DOT)(8CI9CI)	5.16	36
4	109660	Pentane (ACN)(DOT)(8CI9CI)	5.47	180
5	1630940	Cyclopropane, 1,1-dimethyl- (8CI9CI)	5.99	38
6	67641	2-Propanone (9CI)	6.25	34
7	107835	Pentane, 2-methyl- (8CI9CI)	6.98	170
8	1438148	Oxirane, (1-methylethyl)- (9CI)	7.35	110
9	110543	Hexane (DOT)(8CI9CI)	7.77	23
10	616126	2-Pentene, 3-methyl-, (E)- (8CI9CI)	8.48	16
11	96377	Cyclopentane, methyl- (8CI9CI)	8.71	210
12	1120623	Cyclopentene, 3-methyl- (8CI9CI)	9.47	13
13	4806615	Cyclobutane, ethyl- (8CI9CI)	9.79	30
14	2532583	Cyclopentane, 1,3-dimethyl-, cis- (8CI9CI)	10.31	16
15	108872	Cyclohexane, methyl- (8CI9CI)	11.51	20
16		UNKNOWN	12.17	5
17	16491159	Cyclopentene, 1,5-dimethyl- (8CI9CI)	12.36	20

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A0997	DILUTION FACTOR	1.00
CLIENT ID	SITE C US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0852	DATE ANALYZED	02/25/93

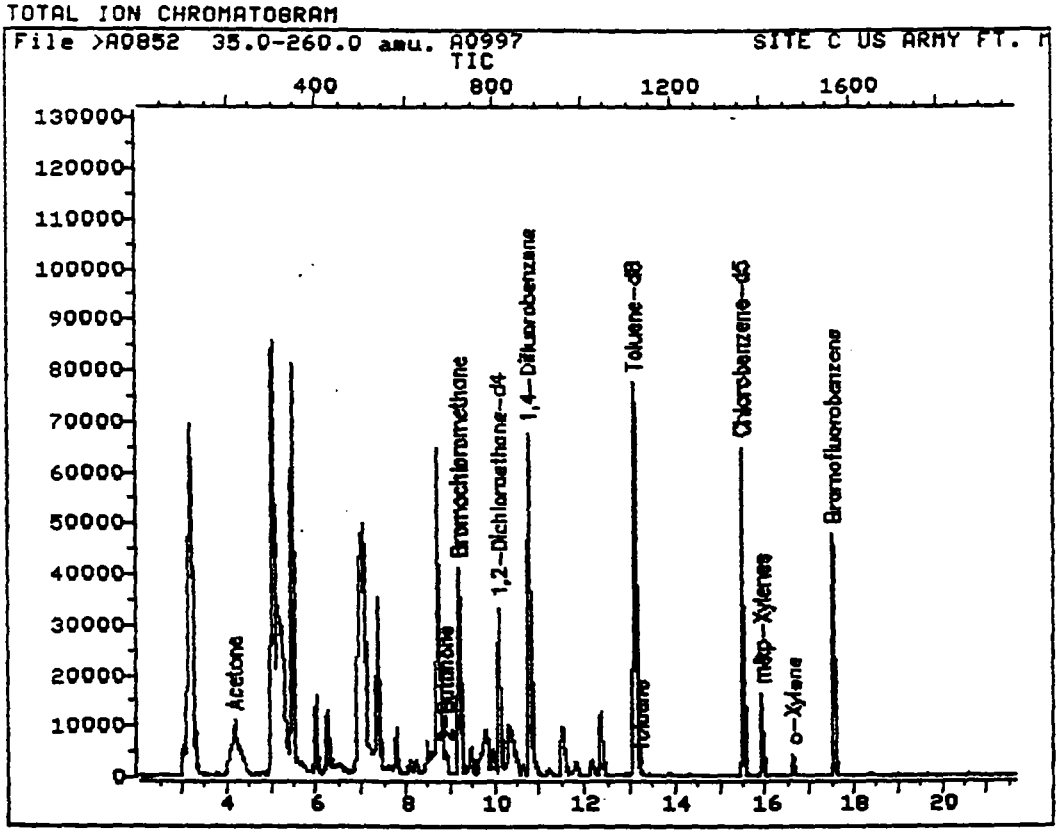
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	89	Bromodichloromethane	ND	9
Acrylonitrile	ND	89	2-Chloroethylvinylether	ND	18
Chloromethane	ND	18	2-Hexanone	ND	18
Bromomethane	ND	18	trans-1,3-Dichloropropene	ND	9
Vinyl Chloride	ND	18	Toluene	3.6 J	9
Chloroethane	ND	18	cis-1,3-Dichloropropene	ND	9
Acetone	350	18	1,1,2,2-Tetrachloroethane	ND	9
1,1-Dichloroethene	ND	9	1,1,2-Trichloroethane	ND	9
Carbon Disulfide	ND	18	4-Methyl-2-pentanone	ND	18
Methylene Chloride	ND	9	Tetrachloroethene	ND	9
1,2-Dichloroethene(trans)	ND	9	Dibromochloromethane	ND	9
1,1-Dichloroethane	ND	9	Chlorobenzene	ND	9
Vinyl Acetate	ND	9	Ethylbenzene	ND	9
2-Butanone	69	18	m&p-Xylenes	19	9
Chloroform	ND	9	o-Xylene	5.2 J	9
1,1,1-Trichloroethane	ND	9	Styrene	ND	9
Carbon Tetrachloride	ND	9	Bromoform	ND	9
1,2-Dichloroethane	ND	9	m-Dichlorobenzene	ND	9
Benzene	ND	9	p-Dichlorobenzene	ND	9
Trichloroethene	ND	9	o-Dichlorobenzene	ND	9
1,2-Dichloropropane	ND	9			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	102	70 - 121	OK
Toluene-d8	95.2	81 - 117	OK
Bromofluorobenzene	80.5	74 - 121	OK

Percent Solid of 56.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0852::D2 Quant Output File: ^A0852::QT
Name: A0997
Misc: SITE C US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 13:58
Injected at: 930225 13:28

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A0998	DILUTION FACTOR	1.00
CLIENT ID	SITE D US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0855	DATE ANALYZED	02/25/93

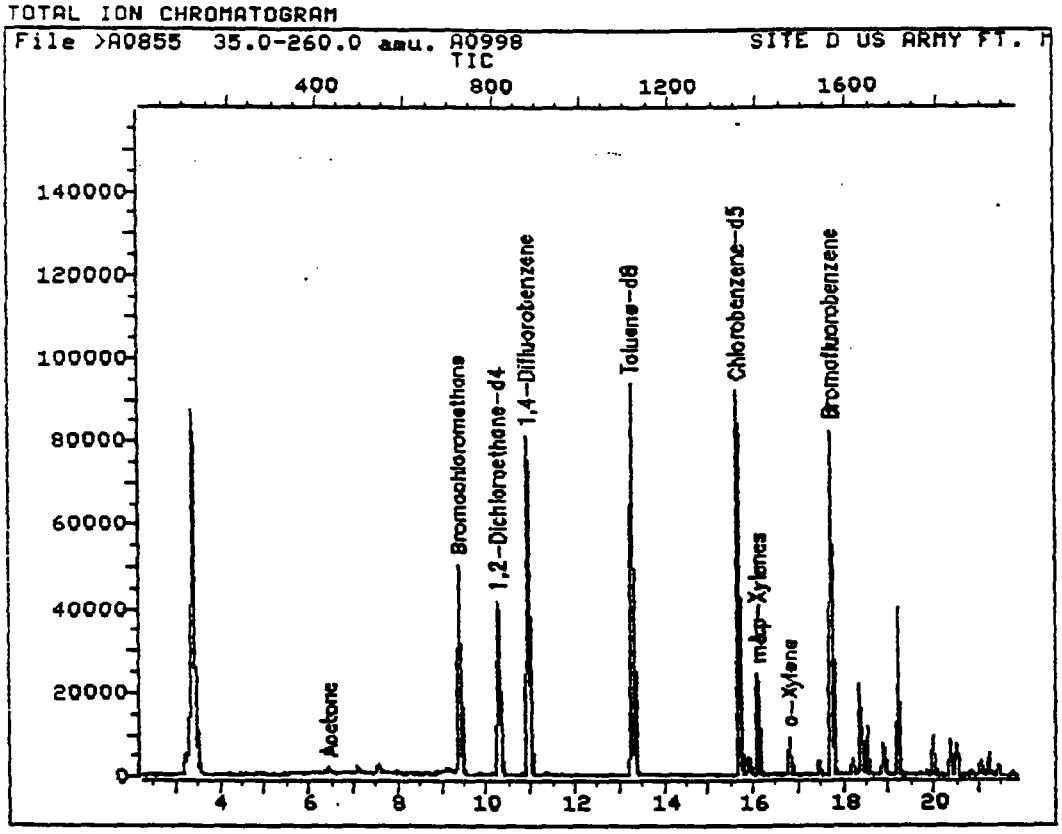
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	62	Bromodichloromethane	ND	6
Acrylonitrile	ND	62	2-Chloroethylvinylether	ND	12
Chloromethane	ND	12	2-Hexanone	ND	12
Bromomethane	ND	12	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND	12	Toluene	ND	6
Chloroethane	ND	12	cis-1,3-Dichloropropene	ND	6
Acetone	20	12	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND	12	4-Methyl-2-pentanone	ND	12
Methylene Chloride	ND	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6
Vinyl Acetate	ND	6	Ethylbenzene	ND	6
2-Butanone	ND	12	m&p-Xylenes	14	6
Chloroform	ND	6	o-Xylene	5.5 J	6
1,1,1-Trichloroethane	ND	6	Styrene	ND	6
Carbon Tetrachloride	ND	6	Bromoform	ND	6
1,2-Dichloroethane	ND	6	m-Dichlorobenzene	ND	6
Benzene	ND	6	p-Dichlorobenzene	ND	6
Trichloroethene	ND	6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND	6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	97.6	81 - 117	OK
Bromofluorobenzene	96.6	74 - 121	OK

Percent Solid of 81.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0855::D2 Quant Output File: ^A0855::QT
Name: A0998
Misc: SITE D US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 15:44
Injected at: 930225 15:13

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 930225 15:44
Output File: ^A0855::QT Injected at: 930225 15:13
Data File: >A0855::D2 Dilution Factor: 1.00000
Name: A0998
Misc: SITE D US ARMY FT. MONMOUTH 5.0g/5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.40	719	24988	50.00	UG/L	100
9)	Acetone	6.45	421	4438	16.53	UG/L	86
1)	1,2-Dichloroethane-d4	10.28	808	57703	52.86	UG/L	100
2)	*1,4-Difluorobenzene	10.95	876	118041	50.00	UG/L	100
1)	Toluene-d8	13.28	1110	119425	48.79	UG/L	100
3)	*Chlorobenzene-d5	15.68	1352	95234	50.00	UG/L	100
2)	m&p-Xylenes	16.11	1396	29645	11.28	UG/L	93
3)	o-Xylene	16.80	1466	11355	4.46	UG/L	88
6)	Bromofluorobenzene	17.73	1559	56534	48.29	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A0999

Matrix: (soil/water) SOIL

Lab Sample ID: SITE E

Sample wt/vol: 1 (g/mL) g

Lab File ID: >A0858

Level: LOW

Date Received: 02/24/93

% Moisture: 33

Date Analyzed 02/25/93

Column: CAP

Dilution Factor: 5

Number TICs Found 11

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	107017	2-Butene (8CI9CI)	4.13	42
2		UNKNOWN	5.11	40
3	109660	Pentane (ACN)(DOT)(8CI9CI)	5.56	64
4	513359	2-Butene, 2-methyl- (8CI9CI)	6.06	420
5	1191964	Cyclopropane, ethyl- (8CI9CI)	7.11	97
6	1634044	Propane, 2-methoxy-2-methyl- (9CI)	7.45	280
7	563791	2-Butene, 2,3-dimethyl- (8CI9CI)	8.16	110
8	922623	2-Pentene, 3-methyl-, (Z)- (8CI9CI)	8.28	40
9	616126	2-Pentene, 3-methyl-, (E)- (8CI9CI)	8.54	75
10	96377	Cyclopentane, methyl- (8CI9CI)	8.78	130
11	693890	Cyclopentene, 1-methyl- (8CI9CI)	9.52	120

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A0999	DILUTION FACTOR	5.00
CLIENT ID	SITE E US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0858	DATE ANALYZED	02/25/93

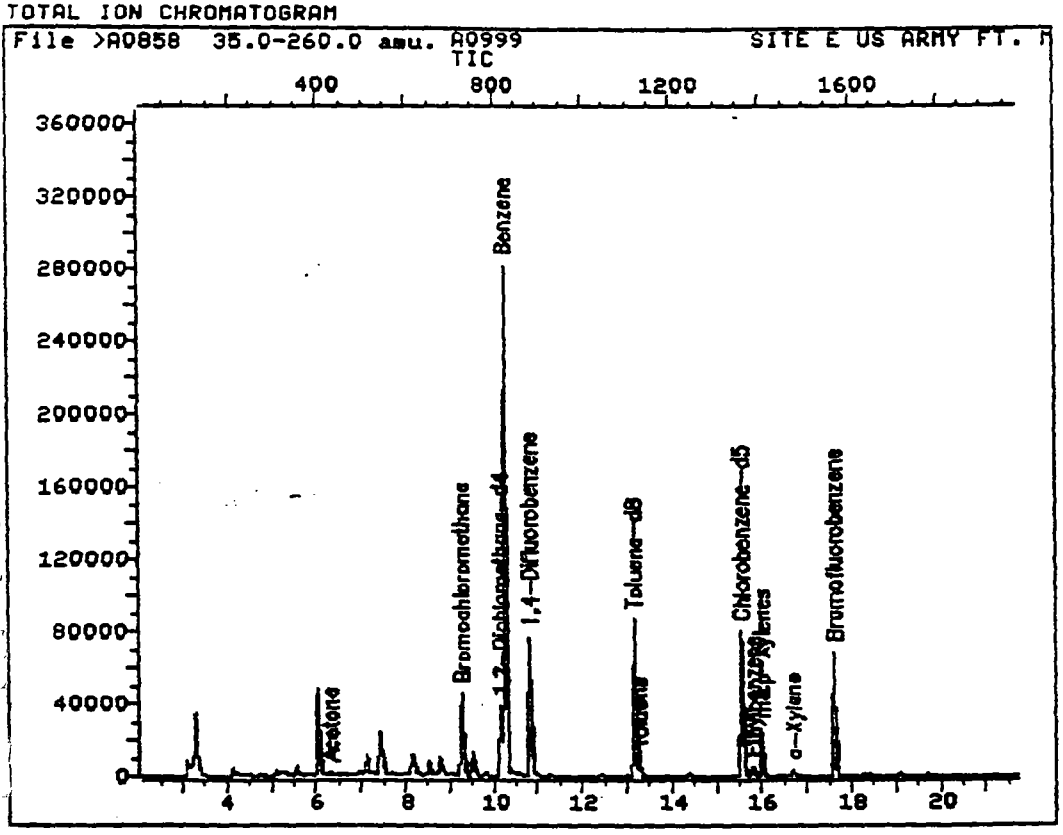
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	370	Bromodichloromethane	ND	37
Acrylonitrile	ND	370	2-Chloroethylvinylether	ND	75
Chloromethane	ND	75	2-Hexanone	ND	75
Bromomethane	ND	75	trans-1,3-Dichloropropene	ND	37
Vinyl Chloride	ND	75	Toluene	44	37
Chloroethane	ND	75	cis-1,3-Dichloropropene	ND	37
Acetone	140	75	1,1,2,2-Tetrachloroethane	ND	37
1,1-Dichloroethene	ND	37	1,1,2-Trichloroethane	ND	37
Carbon Disulfide	ND	75	4-Methyl-2-pentanone	ND	75
Methylene Chloride	ND	37	Tetrachloroethene	ND	37
1,2-Dichloroethene(trans)	ND	37	Dibromochloromethane	ND	37
1,1-Dichloroethane	ND	37	Chlorobenzene	ND	37
Vinyl Acetate	ND	37	Ethylbenzene	20 J	37
2-Butanone	ND	75	m&p-Xylenes	100	37
Chloroform	ND	37	o-Xylene	16 J	37
1,1,1-Trichloroethane	ND	37	Styrene	ND	37
Carbon Tetrachloride	ND	37	Bromoform	ND	37
1,2-Dichloroethane	ND	37	m-Dichlorobenzene	ND	37
Benzene	1900	37	p-Dichlorobenzene	ND	37
Trichloroethene	ND	37	o-Dichlorobenzene	ND	37
1,2-Dichloropropane	ND	37			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	107	70 - 121	OK
Toluene-d8	94.1	81 - 117	OK
Bromofluorobenzene	94.2	74 - 121	OK

Percent Solid of 67.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0858::D2 Quant Output File: ^A0858::QT
Name: A0999
Misc: SITE E US ARMY FT. MONMOUTH 1.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 17:31
Injected at: 930225 17:00

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930225 17:31
utput File: ^A0858::QT Injected at: 930225 17:00
ata File: >A0858::D2 Dilution Factor: 1.00000
ame: A0999
isc: SITE E US ARMY FT. MONMOUTH 1.0g/5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930225 12:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.27	721	24218	50.00	UG/L	100
9)	Acetone	6.33	424	4707	18.09	UG/L	82
1)	1,2-Dichloroethane-d4	10.17	811	56735	53.62	UG/L	100
2)	*1,4-Difluorobenzene	10.84	879	114008	50.00	UG/L	100
4)	Benzene	10.27	822	455906	254.15	UG/L	100
1)	Toluene-d8	13.17	1114	111204	47.04	UG/L	100
2)	Toluene	13.28	1125	14008	5.84	UG/L	99
3)	*Chlorobenzene-d5	15.57	1356	84619	50.00	UG/L	100
1)	Ethylbenzene	15.80	1380	7316	2.63	UG/L	80
2)	m&p-Xylenes	16.00	1400	31587	13.53	UG/L	92
3)	o-Xylene	16.70	1470	4767	2.11	UG/L	84
6)	Bromofluorobenzene	17.62	1563	48974	47.08	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1000

Matrix: (soil/water) SOIL

Lab Sample ID: SITE F

Sample wt/vol: .04 (g/mL) g

Lab File ID: >A0872

Level: MED

Date Received: 02/24/93

% Moisture: 24

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 125

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	107835	Pentane, 2-methyl- (8CI9CI)	6.89	6100
2	16747254	Hexane, 2,2,3-trimethyl- (8CI9CI)	7.28	3400
3	110543	Hexane (DOT)(8CI9CI)	7.71	5500
4	96377	Cyclopentane, methyl- (8CI9CI)	8.65	5100
5	16747389	Pentane, 2,3,3,4-tetramethyl- (8CI9CI)	9.62	4900
6	589344	Hexane, 3-methyl- (8CI9CI)	9.90	4700
7	4468648	Oxetane, 2-propyl- (9CI)	10.57	2600
8	108872	Cyclohexane, methyl- (8CI9CI)	11.48	2900
9	592278	Heptane, 2-methyl- (8CI9CI)	12.45	2400
10	589811	Heptane, 3-methyl- (8CI9CI)	12.68	2400
11	111659	Octane (DOT)(8CI9CI)	13.38	1800
12	921471	Hexane, 2,3,4-trimethyl- (8CI9CI)	15.09	2100
13	103651	Benzene, propyl- (8CI9CI)	18.00	1800
14	611143	Benzene, 1-ethyl-3-methyl- (9CI)	18.16	7900
15	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.32	3600
16	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.68	2400
17	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.00	7600
18	611143	Benzene, 1-ethyl-2-methyl- (9CI)	19.78	2200
19	496117	1H-Indene, 2,3-dihydro- (9CI)	20.15	3200
20	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.29	2500

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1000	DILUTION FACTOR	125.00
CLIENT ID	SITE F US ARMY FT MONMOUTH	QA BATCH	
DATA FILE	>A0872	DATE ANALYZED	02/26/93

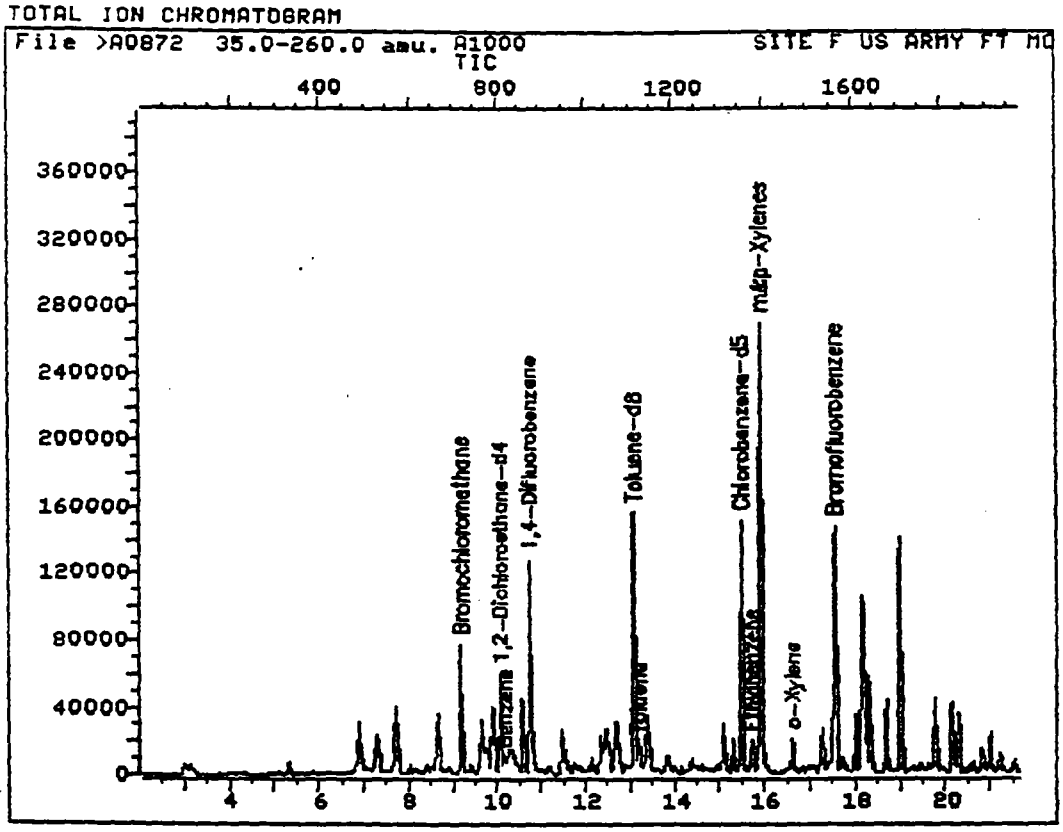
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	8200	Bromodichloromethane	ND	820
Acrylonitrile	ND	8200	2-Chloroethylvinylether	ND	1600
Chloromethane	ND	1600	2-Hexanone	ND	1600
Bromomethane	ND	1600	trans-1,3-Dichloropropene	ND	820
Vinyl Chloride	ND	1600	Toluene	1000	820
Chloroethane	ND	1600	cis-1,3-Dichloropropene	ND	820
Acetone	ND	1600	1,1,2,2-Tetrachloroethane	ND	820
1,1-Dichloroethene	ND	820	1,1,2-Trichloroethane	ND	820
Carbon Disulfide	ND	1600	4-Methyl-2-pentanone	ND	1600
Methylene Chloride	ND	820	Tetrachloroethene	ND	820
1,2-Dichloroethene(trans)	ND	820	Dibromochloromethane	ND	820
1,1-Dichloroethane	ND	820	Chlorobenzene	ND	820
Vinyl Acetate	ND	820	Ethylbenzene	780 J	820
2-Butanone	ND	1600	m&p-Xylenes	11000	820
Chloroform	ND	820	o-Xylene	740 J	820
1,1,1-Trichloroethane	ND	820	Styrene	ND	820
Carbon Tetrachloride	ND	820	Bromoform	ND	820
1,2-Dichloroethane	ND	820	m-Dichlorobenzene	ND	820
Benzene	680 J	820	p-Dichlorobenzene	ND	820
Trichloroethene	ND	820	o-Dichlorobenzene	ND	820
1,2-Dichloropropane	ND	820			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	105	70 - 121	OK
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	98.9	74 - 121	OK

Percent Solid of 76.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0872::D2 Quant Output File: ^A0872::QT
Name: A1000
Misc: SITE F US ARMY FT MONMOUTH 100ul/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 03:43
Injected at: 930226 03:13

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 03:43
utput File: ^A0872::QT Injected at: 930226 03:13
ata File: >A0872::D2 Dilution Factor: 1.00000
ame: A1000
isc: SITE F US ARMY FT MONMOUTH 100ul/5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.18	715	39509	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.07	805	80180	52.26	UG/L	100
2)	*1,4-Difluorobenzene	10.74	873	198346	50.00	UG/L	100
4)	Benzene	10.17	815	13621	4.15	UG/L	100
1)	Toluene-d8	13.08	1108	205293	51.10	UG/L	100
2)	Toluene	13.18	1119	26077	6.30	UG/L	99
3)	*Chlorobenzene-d5	15.49	1351	167856	50.00	UG/L	100
1)	Ethylbenzene	15.71	1374	26829	4.77	UG/L	83
2)	m&p-Xylenes	15.91	1394	342631	68.94	UG/L	94
3)	o-Xylene	16.61	1464	20584	4.52	UG/L	91
6)	Bromofluorobenzene	17.53	1557	102159	49.43	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1001

Matrix: (soil/water) SOIL

Lab Sample ID: SITE G

Sample wt/vol: .02 (g/mL) g

Lab File ID: >A0873

Level: MED

Date Received: 02/24/93

% Moisture: 34

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 250

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	107835	Pentane, 2-methyl- (8CI9CI)	6.91	24000
2	110543	Hexane (DOT)(8CI9CI)	7.73	15000
3	96377	Cyclopentane, methyl- (8CI9CI)	8.69	14000
4	591764	Hexane, 2-methyl- (8CI9CI)	9.66	18000
5	589344	Hexane, 3-methyl- (8CI9CI)	9.94	17000
6	142825	Heptane (DOT)(8CI9CI)	10.62	8000
7	108872	Cyclohexane, methyl- (8CI9CI)	11.51	8500
8	565753	Pentane, 2,3,4-trimethyl- (8CI9CI)	12.16	6400
9	560214	Pentane, 2,3,3-trimethyl- (8CI9CI)	12.36	10000
10	592278	Heptane, 2-methyl- (8CI9CI)	12.47	8500
11	589811	Heptane, 3-methyl- (8CI9CI)	12.71	8600
12	111659	Octane (DOT)(8CI9CI)	13.41	6200
13	921471	Hexane, 2,3,4-trimethyl- (8CI9CI)	15.10	10000
14	2216333	Octane, 3-methyl- (8CI9CI)	15.31	6200
15	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.19	21000
16	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.35	14000
17	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.72	6400
18	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.03	24000
19	1074437	Benzene, 1-methyl-3-propyl- (9CI)	20.20	12000
20	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.32	13000

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1001	DILUTION FACTOR	250.00
CLIENT ID	SITE 6 US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0873	DATE ANALYZED	02/26/93

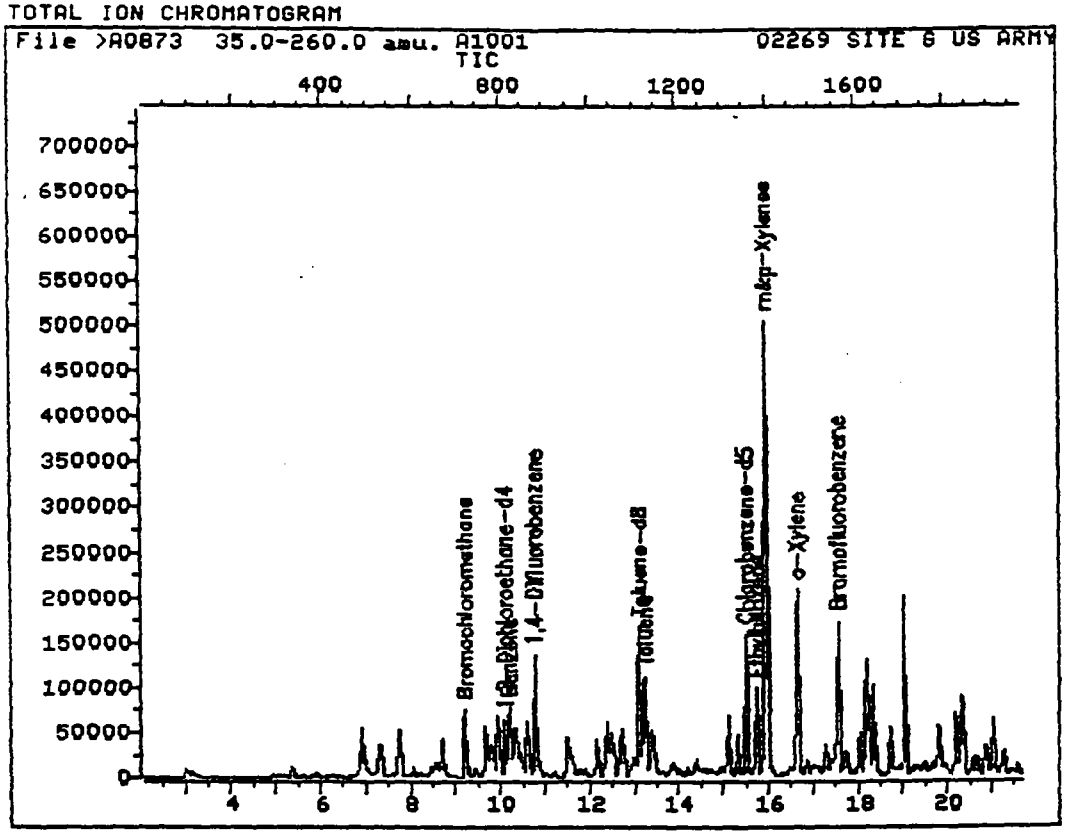
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	19000	Bromodichloromethane	ND	1900
Acrylonitrile	ND	19000	2-Chloroethylvinylether	ND	3800
Chloromethane	ND	3800	2-Hexanone	ND	3800
Bromomethane	ND	3800	trans-1,3-Dichloropropene	ND	1900
Vinyl Chloride	ND	3800	Toluene	14000	1900
Chloroethane	ND	3800	cis-1,3-Dichloropropene	ND	1900
Acetone	ND	3800	1,1,2,2-Tetrachloroethane	ND	1900
1,1-Dichloroethene	ND	1900	1,1,2-Trichloroethane	ND	1900
Carbon Disulfide	ND	3800	4-Methyl-2-pentanone	ND	3800
Methylene Chloride	ND	1900	Tetrachloroethene	ND	1900
1,2-Dichloroethene(trans)	ND	1900	Dibromochloromethane	ND	1900
1,1-Dichloroethane	ND	1900	Chlorobenzene	ND	1900
Vinyl Acetate	ND	1900	Ethylbenzene	9300	1900
2-Butanone	ND	3800	m&p-Xylenes	47000	1900
Chloroform	ND	1900	o-Xylene	20000	1900
1,1,1-Trichloroethane	ND	1900	Styrene	ND	1900
Carbon Tetrachloride	ND	1900	Bromoform	ND	1900
1,2-Dichloroethane	ND	1900	m-Dichlorobenzene	ND	1900
Benzene	14000	1900	p-Dichlorobenzene	ND	1900
Trichloroethene	ND	1900	o-Dichlorobenzene	ND	1900
1,2-Dichloropropane	ND	1900			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	98.9	74 - 121	OK

Percent Solid of 66.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0873::D2 Quant Output File: ^A0873::QT
Name: A1001
Misc: 02269 SITE G US ARMY FT. MONMOUTH 50UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 04:18
Injected at: 930226 03:48

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 04:18
utput File: ^A0873::QT Injected at: 930226 03:48
ata File: >A0873::D2 Dilution Factor: 1.00000
ame: A1001
isc: 02269 SITE G US ARMY FT. MONMOUTH 50UL/5.0ML

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.21	717	40506	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.10	807	83030	52.79	UG/L	100
2)	*1,4-Difluorobenzene	10.78	875	206130	50.00	UG/L	100
4)	Benzene	10.20	817	127711	37.40	UG/L	100
1)	Toluene-d8	13.11	1110	212356	50.86	UG/L	100
2)	Toluene	13.22	1121	161685	37.56	UG/L	97
3)	*Chlorobenzene-d5	15.50	1351	173605	50.00	UG/L	100
1)	Ethylbenzene	15.74	1375	142907	24.58	UG/L	81
2)	m&p-Xylenes	15.94	1395	643198	125.13	UG/L	92
3)	o-Xylene	16.63	1465	247258	52.45	UG/L	89
6)	Bromofluorobenzene	17.56	1558	105756	49.47	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1002

Matrix: (soil/water) SOIL

Lab Sample ID: SITE H

Sample wt/vol: .04 (g/mL) g

Lab File ID: >A0880

Level: MED

Date Received: 02/24/93

% Moisture: 31

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 125

Number TICs Found 19

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	540841	Pentane, 2,2,4-trimethyl- (8CI9CI)	10.32	1600
2	584941	Hexane, 2,3-dimethyl- (8CI9CI)	12.33	1300
3	592132	Hexane, 2,5-dimethyl- (8CI9CI)	12.43	1300
4	589811	Heptane, 3-methyl- (8CI9CI)	12.67	1400
5	111659	Octane (DOT)(8CI9CI)	13.37	990
6	2216344	Octane, 4-methyl- (8CI9CI)	15.06	1400
7	2216333	Octane, 3-methyl- (8CI9CI)	15.28	900
8	103651	Benzene, propyl- (8CI9CI)	17.99	1200
9	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.15	6400
10	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.31	3200
11	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.67	1400
12	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.98	8100
13	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.76	1900
14	1074437	Benzene, 1-methyl-3-propyl- (9CI)	20.15	3600
15	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.27	3900
16	1120214	Undecane (8CI9CI)	20.51	900
17	933982	Benzene, 1-ethyl-2,3-dimethyl- (9CI)	20.78	1400
18	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.97	2000
19	767588	1H-Indene, 2,3-dihydro-1-methyl- (9CI)	21.20	1400

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1002	DILUTION FACTOR	125.00
CLIENT ID	SITE H USA ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0880	DATE ANALYZED	02/26/93

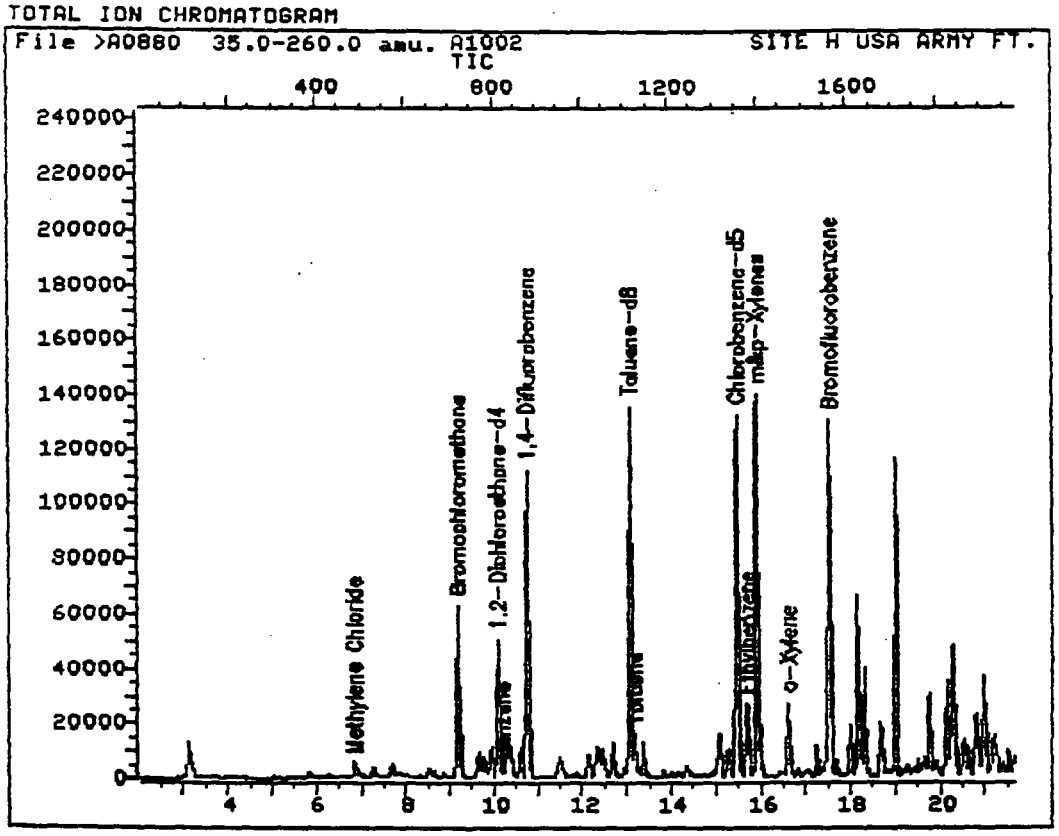
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	9000	Bromodichloromethane	ND	900
Acrylonitrile	ND	9000	2-Chloroethylvinylether	ND	1800
Chloromethane	ND	1800	2-Hexanone	ND	1800
Bromomethane	ND	1800	trans-1,3-Dichloropropene	ND	900
Vinyl Chloride	ND	1800	Toluene	1200	900
Chloroethane	ND	1800	cis-1,3-Dichloropropene	ND	900
Acetone	ND	1800	1,1,2,2-Tetrachloroethane	ND	900
1,1-Dichloroethene	ND	900	1,1,2-Trichloroethane	ND	900
Carbon Disulfide	ND	1800	4-Methyl-2-pentanone	ND	1800
Methylene Chloride	390 J	900	Tetrachloroethene	ND	900
1,2-Dichloroethene(trans)	ND	900	Dibromochloromethane	ND	900
1,1-Dichloroethane	ND	900	Chlorobenzene	ND	900
Vinyl Acetate	ND	900	Ethylbenzene	1400	900
2-Butanone	ND	1800	m&p-Xylenes	7100	900
Chloroform	ND	900	o-Xylene	1500	900
1,1,1-Trichloroethane	ND	900	Styrene	ND	900
Carbon Tetrachloride	ND	900	Bromoform	ND	900
1,2-Dichloroethane	ND	900	m-Dichlorobenzene	ND	900
Benzene	250 J	900	p-Dichlorobenzene	ND	900
Trichloroethene	ND	900	o-Dichlorobenzene	ND	900
1,2-Dichloropropane	ND	900			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	103	70 - 121	OK
Toluene-d8	101	81 - 117	OK
Bromofluorobenzene	100	74 - 121	OK

Percent Solid of 69.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0880::D2 Quant Output File: ^A0880::QT
Name: A1002
Misc: SITE H USA ARMY FT. MONMOUTH 4.0g/5mL 100ul

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 11:43
Injected at: 930226 11:12

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 11:43
utput File: ^A0880::QT Injected at: 930226 11:12
ata File: >A0880::D2 Dilution Factor: 1.00000
ame: A1002
isc: SITE H USA ARMY FT. MONMOUTH 4.0g/5mL 100ul

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.17	718	33531	50.00	UG/L	100
3)	Methylene Chloride	6.83	482	2625	2.17	UG/L	70
1)	1,2-Dichloroethane-d4	10.08	810	66986	51.44	UG/L	100
2)	*1,4-Difluorobenzene	10.75	877	174782	50.00	UG/L	100
4)	Benzene	10.18	820	3948	1.36	UG/L	100
1)	Toluene-d8	13.07	1111	178815	50.51	UG/L	100
2)	Toluene	13.17	1121	23465	6.43	UG/L	98
3)	*Chlorobenzene-d5	15.47	1353	148269	50.00	UG/L	100
1)	Ethylbenzene	15.70	1376	39293	7.91	UG/L	82
2)	m&p-Xylenes	15.90	1397	172592	39.31	UG/L	92
3)	o-Xylene	16.60	1467	32530	8.08	UG/L	90
6)	Bromofluorobenzene	17.52	1560	91647	50.20	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1003

Matrix: (soil/water) SOIL

Lab Sample ID: SITE I

Sample wt/vol: .004 (g/mL) g

Lab File ID: >A0874

Level: MED

Date Received: 02/24/93

% Moisture: 18

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: ~~1250~~

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	591764	Hexane, 2-methyl- (8CI9CI)	9.61	72000
2	589344	Hexane, 3-methyl- (8CI9CI)	9.90	70000
3	590738	Hexane, 2,2-dimethyl- (8CI9CI)	10.30	80000
4	142825	Heptane (DOT)(8CI9CI)	10.56	30000
5	592132	Hexane, 2,5-dimethyl- (8CI9CI)	11.47	43000
6	565753	Pentane, 2,3,4-trimethyl- (8CI9CI)	12.12	56000
7	20278879	Heptane, 3,3,4-trimethyl- (8CI9CI)	12.32	78000
8	592278	Heptane, 2-methyl- (8CI9CI)	12.43	45000
9	589811	Heptane, 3-methyl- (8CI9CI)	12.67	48000
10	111659	Octane (DOT)(8CI9CI)	13.36	33000
11	17302282	Nonane, 2,6-dimethyl- (8CI9CI)	15.07	44000
12	103651	Benzene, propyl- (8CI9CI)	17.99	37000
13	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.15	180000
14	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.31	78000
15	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.68	45000
16	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.00	200000
17	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.77	44000
18	1074437	Benzene, 1-methyl-3-propyl- (9CI)	20.18	71000
19	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.30	71000
20	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	21.00	37000

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1003	DILUTION FACTOR	1250.00
CLIENT ID	SITE I US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0874	DATE ANALYZED	02/26/93

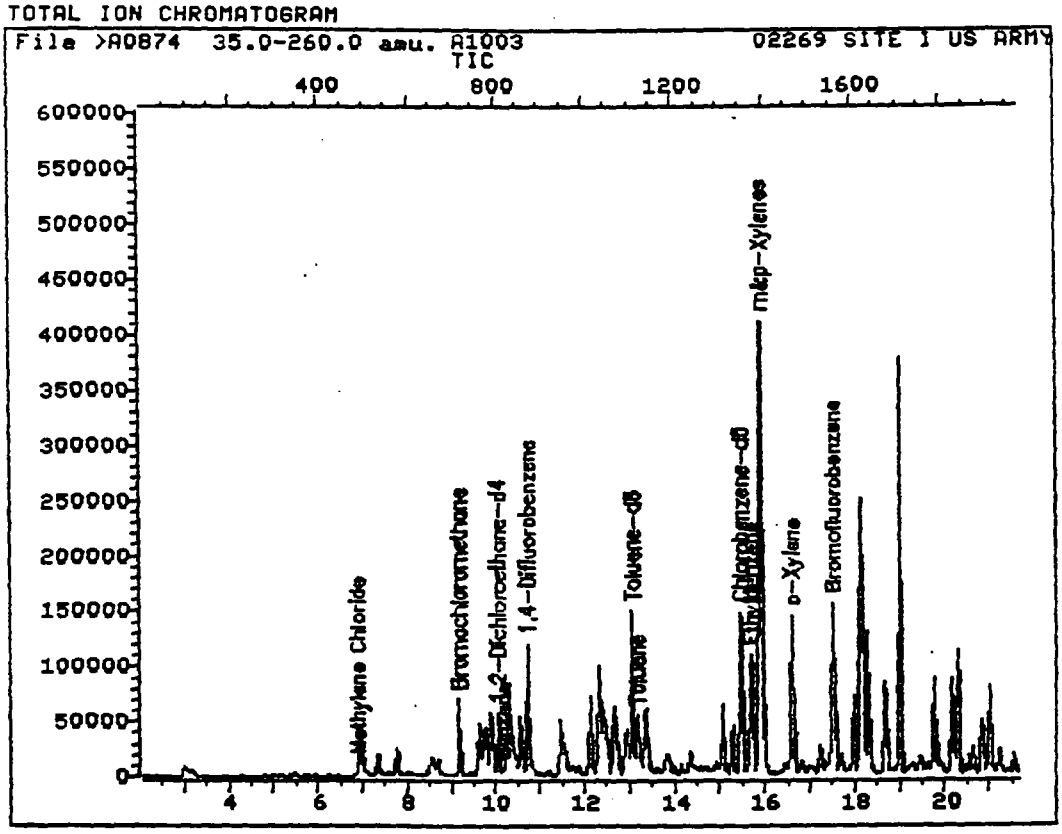
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	76000	Bromodichloromethane	ND	7600
Acrylonitrile	ND	76000	2-Chloroethylvinylether	ND	15000
Chloromethane	ND	15000	2-Hexanone	ND	15000
Bromomethane	ND	15000	trans-1,3-Dichloropropene	ND	7600
Vinyl Chloride	ND	15000	Toluene	30000	7600
Chloroethane	ND	15000	cis-1,3-Dichloropropene	ND	7600
Acetone	ND	15000	1,1,2,2-Tetrachloroethane	ND	7600
1,1-Dichloroethene	ND	7600	1,1,2-Trichloroethane	ND	7600
Carbon Disulfide	ND	15000	4-Methyl-2-pentanone	ND	15000
Methylene Chloride	2400 J	7600	Tetrachloroethene	ND	7600
1,2-Dichloroethene(trans)	ND	7600	Dibromochloromethane	ND	7600
1,1-Dichloroethane	ND	7600	Chlorobenzene	ND	7600
Vinyl Acetate	ND	7600	Ethylbenzene	45000	7600
2-Butanone	ND	15000	m&p-Xylenes	170000	7600
Chloroform	ND	7600	o-Xylene	60000	7600
1,1,1-Trichloroethane	ND	7600	Styrene	ND	7600
Carbon Tetrachloride	ND	7600	Bromoform	ND	7600
1,2-Dichloroethane	ND	7600	m-Dichlorobenzene	ND	7600
Benzene	2900 J	7600	p-Dichlorobenzene	ND	7600
Trichloroethene	ND	7600	o-Dichlorobenzene	ND	7600
1,2-Dichloropropane	ND	7600			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	107	70 - 121	OK
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	98.0	74 - 121	OK

Percent Solid of 82.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0874::D2 Quant Output File: ^A0874::QT
Name: A1003
Misc: 02269 SITE I US ARMY FT. MONMOUTH 10UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 04:53
Injected at: 930226 04:23

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 04:53
utput File: ^A0874::QT Injected at: 930226 04:23
ata File: >A0874::D2 Dilution Factor: 1.00000
ame: A1003
isc: 02269 SITE I US ARMY FT. MONMOUTH 10UL/5.0ML

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.17	714	37450	50.00	UG/L	100
3)	Methylene Chloride	6.89	485	2104	1.56	UG/L	83
1)	1,2-Dichloroethane-d4	10.05	803	77632	53.38	UG/L	100
2)	*1,4-Difluorobenzene	10.72	871	185084	50.00	UG/L	100
4)	Benzene	10.16	814	5827	1.90	UG/L	100
1)	Toluene-d8	13.06	1106	190573	50.83	UG/L	100
2)	Toluene	13.17	1117	75815	19.61	UG/L	97
3)	*Chlorobenzene-d5	15.46	1348	157351	50.00	UG/L	100
1)	Ethylbenzene	15.70	1372	155745	29.56	UG/L	82
2)	m&p-Xylenes	15.90	1392	532413	114.28	UG/L	93
3)	o-Xylene	16.59	1462	169471	39.66	UG/L	90
6)	Bromofluorobenzene	17.52	1555	94962	49.01	UG/L	100

* Compound is ISTD

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1004	DILUTION FACTOR	1250.00
CLIENT ID	SITE J US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0871	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	76000	Bromodichloromethane	ND	7600
Acrylonitrile	ND	76000	2-Chloroethylvinylether	ND	15000
Chloromethane	ND	15000	2-Hexanone	ND	15000
Bromomethane	ND	15000	trans-1,3-Dichloropropene	ND	7600
Vinyl Chloride	ND	15000	Toluene	68000	7600
Chloroethane	ND	15000	cis-1,3-Dichloropropene	ND	7600
Acetone	ND	15000	1,1,2,2-Tetrachloroethane	ND	7600
1,1-Dichloroethene	ND	7600	1,1,2-Trichloroethane	ND	7600
Carbon Disulfide	ND	15000	4-Methyl-2-pentanone	ND	15000
Methylene Chloride	ND	7600	Tetrachloroethene	ND	7600
1,2-Dichloroethene(trans)	ND	7600	Dibromochloromethane	ND	7600
1,1-Dichloroethane	ND	7600	Chlorobenzene	ND	7600
Vinyl Acetate	ND	7600	Ethylbenzene	37000	7600
2-Butanone	ND	15000	m&p-Xylenes	160000	7600
Chloroform	ND	7600	o-Xylene	69000	7600
1,1,1-Trichloroethane	ND	7600	Styrene	ND	7600
Carbon Tetrachloride	ND	7600	Bromoform	ND	7600
1,2-Dichloroethane	ND	7600	m-Dichlorobenzene	ND	7600
Benzene	1800 J	7600	p-Dichlorobenzene	ND	7600
Trichloroethene	ND	7600	o-Dichlorobenzene	ND	7600
1,2-Dichloropropane	ND	7600			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	103	81 - 117	OK
Bromofluorobenzene	99.1	74 - 121	OK

Percent Solid of 82.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 03:08
utput File: ^A0871::QT Injected at: 930226 02:37
ata File: >A0871::D2 Dilution Factor: 1.00000
ame: A1004
isc: 02269 SITE J US ARMY FT. MONMOUTH 10UL/5.0ML

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.20	720	37806	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.08	809	77617	52.87	UG/L	100
2)	*1,4-Difluorobenzene	10.74	876	191658	50.00	UG/L	100
4)	Benzene	10.19	820	3869	1.22	UG/L	100
1)	Toluene-d8	13.07	1110	199214	51.32	UG/L	100
2)	Toluene	13.17	1120	178184	44.52	UG/L	97
3)	*Chlorobenzene-d5	15.46	1351	163655	50.00	UG/L	100
1)	Ethylbenzene	15.70	1375	132417	24.16	UG/L	81
2)	m&p-Xylenes	15.90	1395	521008	107.52	UG/L	93
3)	o-Xylene	16.59	1465	200186	45.04	UG/L	89
6)	Bromofluorobenzene	17.52	1558	99814	49.53	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1004

Matrix: (soil/water) SOIL

Lab Sample ID: SITE J

Sample wt/vol: .004 (g/mL) g

Lab File ID: >A0871

Level: MED

Date Received: 02/24/93

% Moisture: 18

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 1250

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	591764	Hexane, 2-methyl- (8CI9CI)	9.64	50000
2	589344	Hexane, 3-methyl- (8CI9CI)	9.92	50000
3	590738	Hexane, 2,2-dimethyl- (8CI9CI)	10.32	23000
4	142825	Heptane (DOT)(8CI9CI)	10.59	27000
5	108872	Cyclohexane, methyl- (8CI9CI)	11.48	26000
6	560214	Pentane, 2,3,3-trimethyl- (8CI9CI)	12.33	34000
7	592278	Heptane, 2-methyl- (8CI9CI)	12.44	44000
8	589811	Heptane, 3-methyl- (8CI9CI)	12.67	44000
9	921471	Hexane, 2,3,4-trimethyl- (8CI9CI)	15.07	48000
10	2216333	Octane, 3-methyl- (8CI9CI)	15.27	28000
11	103651	Benzene, propyl- (8CI9CI)	17.98	24000
12	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.14	150000
13	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.31	74000
14	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.68	40000
15	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.99	170000
16	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.77	40000
17	1074437	Benzene, 1-methyl-3-propyl- (9CI)	20.17	65000
18	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.30	62000
19	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.81	23000
20	527844	Benzene, 1-methyl-2-(1-methylethyl)- (9CI)	21.00	33000

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1005	DILUTION FACTOR	250.00
CLIENT ID	SITE K US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0876	DATE ANALYZED	02/26/93

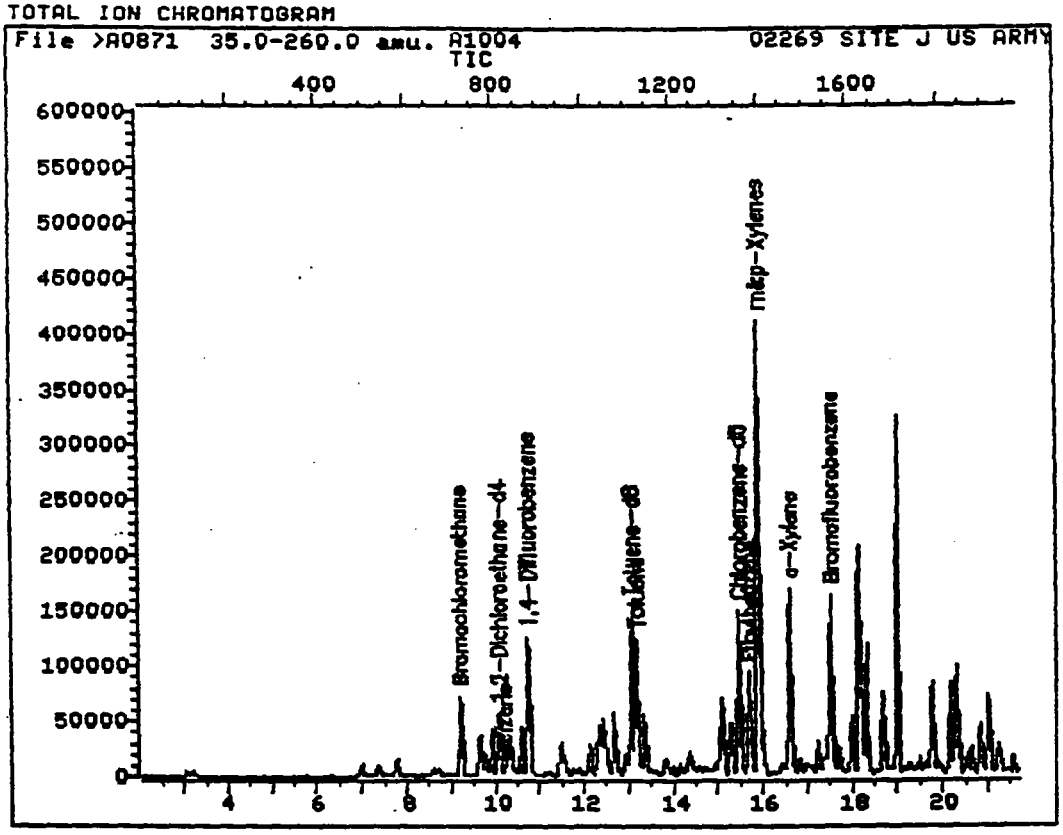
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	18000	Bromodichloromethane	ND	1800
Acrylonitrile	ND	18000	2-Chloroethylvinylether	ND	3600
Chloromethane	ND	3600	2-Hexanone	ND	3600
Bromomethane	ND	3600	trans-1,3-Dichloropropene	ND	1800
Vinyl Chloride	ND	3600	Toluene	32000	1800
Chloroethane	ND	3600	cis-1,3-Dichloropropene	ND	1800
Acetone	ND	3600	1,1,2,2-Tetrachloroethane	ND	1800
1,1-Dichloroethene	ND	1800	1,1,2-Trichloroethane	ND	1800
Carbon Disulfide	ND	3600	4-Methyl-2-pentanone	ND	3600
Methylene Chloride	ND	1800	Tetrachloroethene	ND	1800
1,2-Dichloroethene(trans)	ND	1800	Dibromochloromethane	ND	1800
1,1-Dichloroethane	ND	1800	Chlorobenzene	ND	1800
Vinyl Acetate	ND	1800	Ethylbenzene	14000	1800
2-Butanone	ND	3600	m&p-Xylenes	51000	1800
Chloroform	ND	1800	o-Xylene	23000	1800
1,1,1-Trichloroethane	ND	1800	Styrene	ND	1800
Carbon Tetrachloride	ND	1800	Bromoform	ND	1800
1,2-Dichloroethane	ND	1800	m-Dichlorobenzene	ND	1800
Benzene	2300	1800	p-Dichlorobenzene	ND	1800
Trichloroethene	ND	1800	o-Dichlorobenzene	ND	1800
1,2-Dichloropropane	ND	1800			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	100.0	74 - 121	OK

Percent Solid of 69.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

TOTAL ION CHROMATOGRAM



Data File: >A0871::D2 Quant Output File: ^A0871::QT
Name: A1004
Misc: 02269 SITE J US ARMY FT. MONMOUTH 10UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 03:08
Injected at: 930226 02:37

QUANT REPORT

erator ID: MANAGER Quant Rev: 6 Quant Time: 930226 06:03
tput File: ^A0876::QT Injected at: 930226 05:33
ata File: >A0876::D2 Dilution Factor: 1.00000
ame: A1005
sc: 02269 SITE K US ARMY FT. MONMOUTH 50UL/5.0ML

D File: ID0127::M1
tle: USEPA 624 VOLATILES
st Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.20	716	37453	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.06	803	76746	52.77	UG/L	100
2	*1,4-Difluorobenzene	10.73	871	189025	50.00	UG/L	100
4	Benzene	10.17	814	19625	6.27	UG/L	100
1)	Toluene-d8	13.05	1104	194503	50.80	UG/L	100
2	Toluene	13.16	1115	354123	89.70	UG/L	96
3	*Chlorobenzene-d5	15.44	1345	160018	50.00	UG/L	100
1)	Ethylbenzene	15.67	1368	205014	38.26	UG/L	82
2)	m&p-Xylenes	15.87	1388	671268	141.68	UG/L	92
3	o-Xylene	16.56	1458	279756	64.38	UG/L	89
6	Bromofluorobenzene	17.48	1551	98519	50.00	UG/L	100

* Compound is ISTD

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1005

Matrix: (soil/water) SOIL

Lab Sample ID: SITE K

Sample wt/vol: .02 (g/mL) g

Lab File ID: >A0876

Level: MED

Date Received: 02/24/93

% Moisture: 31

Date Analyzed 02/26/93

Column: CAP

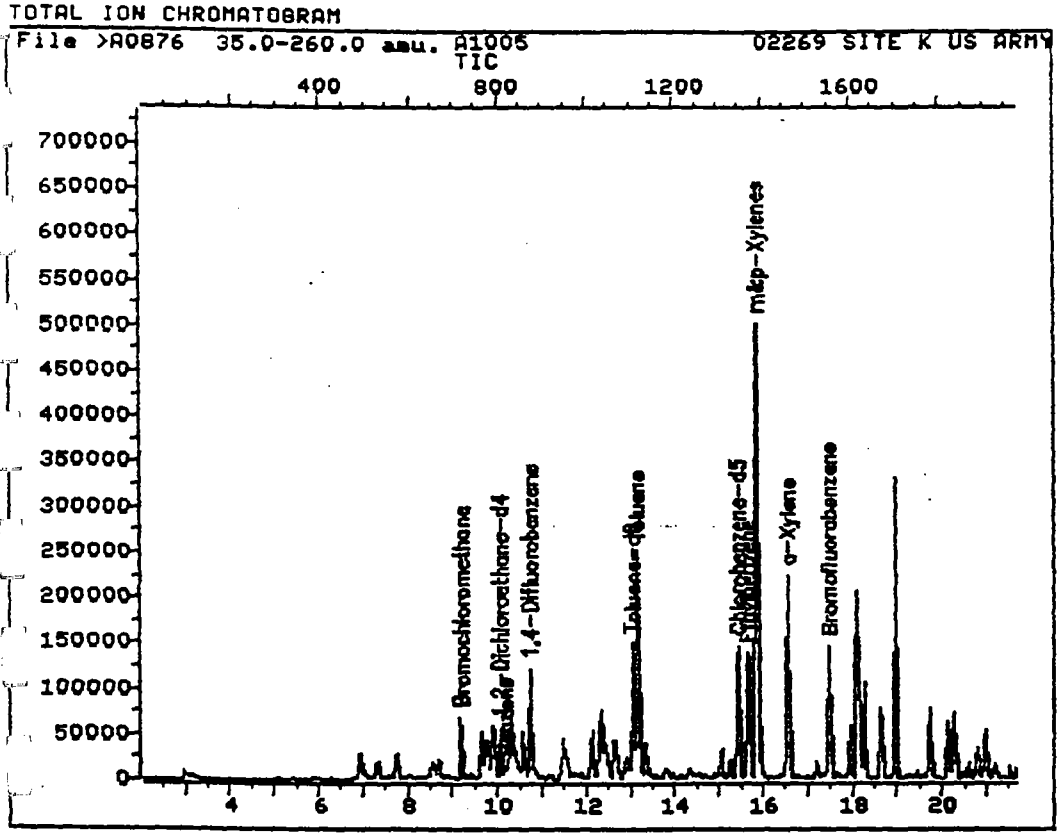
Dilution Factor: 250

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	107835	Pentane, 2-methyl- (8CI9CI)	6.94	13000
2	16747287	Hexane, 2,3,3-trimethyl- (8CI9CI)	9.63	16000
3	107119	2-Propen-1-amine (9CI)	9.76	14000
4	589344	Hexane, 3-methyl- (8CI9CI)	9.91	14000
5	590738	Hexane, 2,2-dimethyl- (8CI9CI)	10.31	16000
6	142825	Heptane (DOT)(8CI9CI)	10.58	7400
7	108872	Cyclohexane, methyl- (8CI9CI)	11.46	9000
8	565753	Pentane, 2,3,4-trimethyl- (8CI9CI)	12.11	9400
9	56728100	1-Hexene, 3,4,5-trimethyl- (9CI)	12.31	13000
10	592132	Hexane, 2,5-dimethyl- (8CI9CI)	12.42	7100
11	1067089	Pentane, 3-ethyl-3-methyl- (8CI9CI)	12.65	7200
12	103651	Benzene, propyl- (8CI9CI)	17.95	7100
13	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.11	36000
14	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.27	14000
15	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.65	9700
16	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.96	41000
17	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.74	9400
18	873494	Benzene, cyclopropyl- (8CI9CI)	20.12	12000
19	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.25	11000
20	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.96	6200

TOTAL ION CHROMATOGRAM



Data File: >A0876::D2 Quant Output File: ^A0876::QT
Name: A1005
Misc: 02269 SITE K US ARMY FT. MONMOUTH 50UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 06:03
Injected at: 930226 05:33

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1006	DILUTION FACTOR	6250.00
CLIENT ID	SITE L US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0877	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	390000	Bromodichloromethane	ND	39000
Acrylonitrile	ND	390000	2-Chloroethylvinylether	ND	78000
Chloromethane	ND	78000	2-Hexanone	ND	78000
Bromomethane	ND	78000	trans-1,3-Dichloropropene	ND	39000
Vinyl Chloride	ND	78000	Toluene	320000	39000
Chloroethane	ND	78000	cis-1,3-Dichloropropene	ND	39000
Acetone	ND	78000	1,1,2,2-Tetrachloroethane	ND	39000
1,1-Dichloroethene	ND	39000	1,1,2-Trichloroethane	ND	39000
Carbon Disulfide	ND	78000	4-Methyl-2-pentanone	ND	78000
Methylene Chloride	ND	39000	Tetrachloroethene	ND	39000
1,2-Dichloroethene(trans)	ND	39000	Dibromochloromethane	ND	39000
1,1-Dichloroethane	ND	39000	Chlorobenzene	ND	39000
Vinyl Acetate	ND	39000	Ethylbenzene	170000	39000
2-Butanone	ND	78000	m&p-Xylenes	620000	39000
Chloroform	ND	39000	o-Xylene	270000	39000
1,1,1-Trichloroethane	ND	39000	Styrene	ND	39000
Carbon Tetrachloride	ND	39000	Bromoform	ND	39000
1,2-Dichloroethane	ND	39000	m-Dichlorobenzene	ND	39000
Benzene	11000 J	39000	p-Dichlorobenzene	ND	39000
Trichloroethene	ND	39000	o-Dichlorobenzene	ND	39000
1,2-Dichloropropane	ND	39000			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	109	70 - 121	OK
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	100	74 - 121	OK

Percent Solid of 80.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1006

Matrix: (soil/water) SOIL

Lab Sample ID: SITE L

Sample wt/vol: .0008 (g/mL) g

Lab File ID: >A0877

Level: MED

Date Received: 02/24/93

% Moisture: 20

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 6250

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	591764	Hexane, 2-methyl- (8CI9CI)	9.61	150000
2	565593	Pentane, 2,3-dimethyl- (8CI9CI)	9.74	130000
3	589344	Hexane, 3-methyl- (8CI9CI)	9.89	140000
4	590738	Hexane, 2,2-dimethyl- (8CI9CI)	10.29	200000
5	142825	Heptane (DOT)(8CI9CI)	10.56	73000
6	108872	Cyclohexane, methyl- (8CI9CI)	11.45	98000
7	589537	Heptane, 4-methyl- (8CI9CI)	12.11	120000
8	584941	Hexane, 2,3-dimethyl- (8CI9CI)	12.31	190000
9	592132	Hexane, 2,5-dimethyl- (8CI9CI)	12.42	94000
10	16747389	Pentane, 2,3,3,4-tetramethyl- (8CI9CI)	12.64	100000
11	921471	Hexane, 2,3,4-trimethyl- (8CI9CI)	15.06	81000
12	103651	Benzene, propyl- (8CI9CI)	17.98	91000
13	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.14	480000
14	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.30	190000
15	620144	Benzene, 1-ethyl-3-methyl- (9CI)	18.67	120000
16	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.99	510000
17	98828	Benzene, (1-methylethyl)- (9CI)	19.75	110000
18	1074437	Benzene, 1-methyl-3-propyl- (9CI)	20.15	150000
19	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.28	140000
20	933982	Benzene, 1-ethyl-2,3-dimethyl- (9CI)	20.97	78000

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 06:38
utput File: ^A0877::QT Injected at: 930226 06:07
ata File: >A0877::D2 Dilution Factor: 1.00000
ame: A1006
isc: 02269 SITE L US ARMY FT. MONMOUTH 2 UL/5.0ML

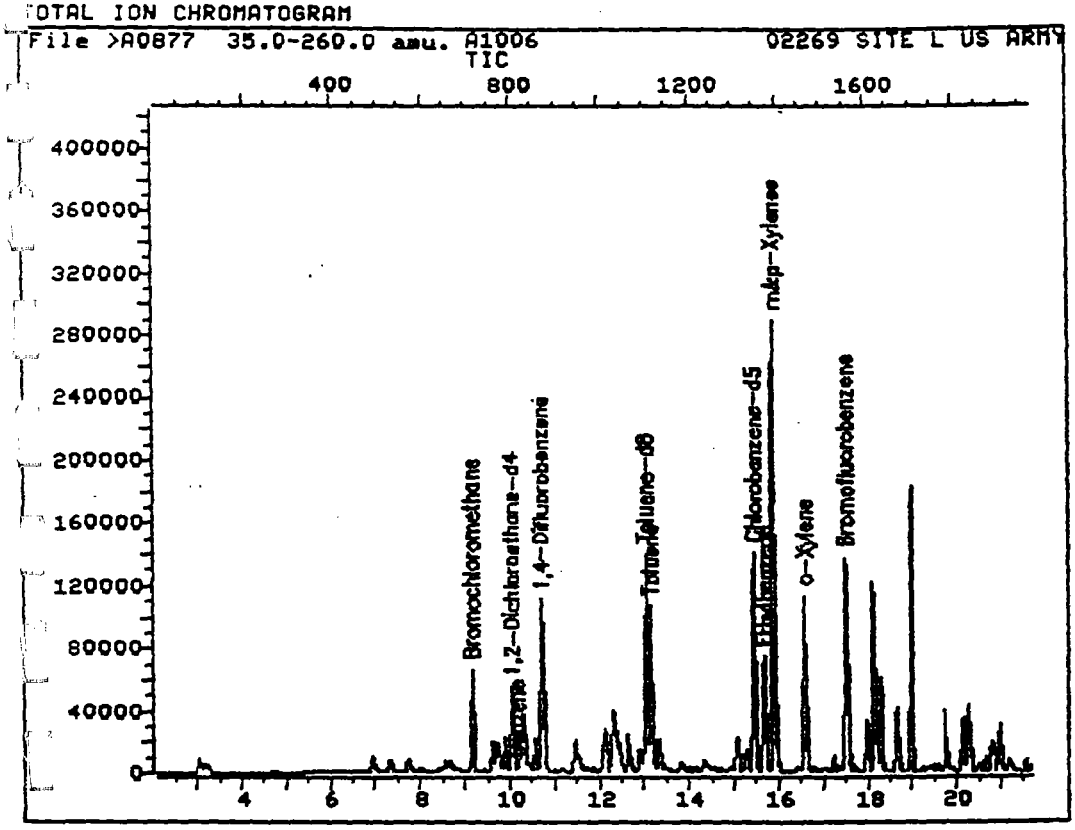
D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.15	710	35901	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.05	800	75810	54.38	UG/L	100
2)	*1,4-Difluorobenzene	10.71	867	178233	50.00	UG/L	100
4)	Benzene	10.14	810	4066	1.38	UG/L	100
1)	Toluene-d8	13.04	1102	183342	50.78	UG/L	100
2)	Toluene	13.15	1113	151798	40.78	UG/L	98
3)	*Chlorobenzene-d5	15.45	1345	152212	50.00	UG/L	100
1)	Ethylbenzene	15.69	1369	108485	21.28	UG/L	81
2)	m&p-Xylenes	15.89	1389	358202	79.48	UG/L	93
3)	o-Xylene	16.58	1459	141292	34.18	UG/L	89
6)	Bromofluorobenzene	17.51	1552	93790	50.04	UG/L	100

* Compound is ISTD

00107

TOTAL ION CHROMATOGRAM



Data File: >A0877::D2 Quant Output File: ^A0877::QT
Name: A1006
Misc: 02269 SITE L US ARMY FT. MONMOUTH 2 UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 06:38
Injected at: 930226 06:07

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1007	DILUTION FACTOR	2500.00
CLIENT ID	SITE M US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0875	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	210000	Bromodichloromethane	ND	21000
Acrylonitrile	ND	210000	2-Chloroethylvinylether	ND	42000
Chloromethane	ND	42000	2-Hexanone	ND	42000
Bromomethane	ND	42000	trans-1,3-Dichloropropene	ND	21000
Vinyl Chloride	ND	42000	Toluene	110000	21000
Chloroethane	ND	42000	cis-1,3-Dichloropropene	ND	21000
Acetone	ND	42000	1,1,2,2-Tetrachloroethane	ND	21000
1,1-Dichloroethene	ND	21000	1,1,2-Trichloroethane	ND	21000
Carbon Disulfide	ND	42000	4-Methyl-2-pentanone	ND	42000
Methylene Chloride	ND	21000	Tetrachloroethene	ND	21000
1,2-Dichloroethene(trans)	ND	21000	Dibromochloromethane	ND	21000
1,1-Dichloroethane	ND	21000	Chlorobenzene	ND	21000
Vinyl Acetate	ND	21000	Ethylbenzene	140000	21000
2-Butanone	ND	42000	m&p-Xylenes	520000	21000
Chloroform	ND	21000	o-Xylene	230000	21000
1,1,1-Trichloroethane	ND	21000	Styrene	ND	21000
Carbon Tetrachloride	ND	21000	Bromoform	ND	21000
1,2-Dichloroethane	ND	21000	m-Dichlorobenzene	ND	21000
Benzene	5600 J	21000	p-Dichlorobenzene	ND	21000
Trichloroethene	ND	21000	o-Dichlorobenzene	ND	21000
1,2-Dichloropropane	ND	21000			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	108	70 - 121	OK
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	100	74 - 121	OK

Percent Solid of 59.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1007

Matrix: (soil/water) SOIL

Lab Sample ID: SITE M

Sample wt/vol: .002 (g/mL) g

Lab File ID: >A0875

Level: MED

Date Received: 02/24/93

Moisture: 41

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 2500

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
	591764	Hexane, 2-methyl- (8CI9CI)	9.66	69000
		UNKNOWN	9.78	69000
3	590738	Hexane, 2,2-dimethyl- (8CI9CI)	10.33	120000
	108872	Cyclohexane, methyl- (8CI9CI)	11.49	56000
	589537	Heptane, 4-methyl- (8CI9CI)	12.15	78000
6	560214	Pentane, 2,3,3-trimethyl- (8CI9CI)	12.35	110000
7	592278	Heptane, 2-methyl- (8CI9CI)	12.45	53000
	589811	Heptane, 3-methyl- (8CI9CI)	12.68	59000
9	111659	Octane (DOT)(8CI9CI)	13.37	41000
10	921471	Hexane, 2,3,4-trimethyl- (8CI9CI)	15.06	49000
11	103651	Benzene, propyl- (8CI9CI)	17.99	78000
12	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.15	370000
13	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.31	130000
14	620144	Benzene, 1-ethyl-3-methyl- (9CI)	18.68	93000
15	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.99	410000
16	98828	Benzene, (1-methylethyl)- (9CI)	19.77	85000
17	1074437	Benzene, 1-methyl-3-propyl- (9CI)	20.16	110000
18	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.29	100000
19	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.80	39000
20	527844	Benzene, 1-methyl-2-(1-methylethyl)- (9CI)	20.99	56000

QUANT REPORT

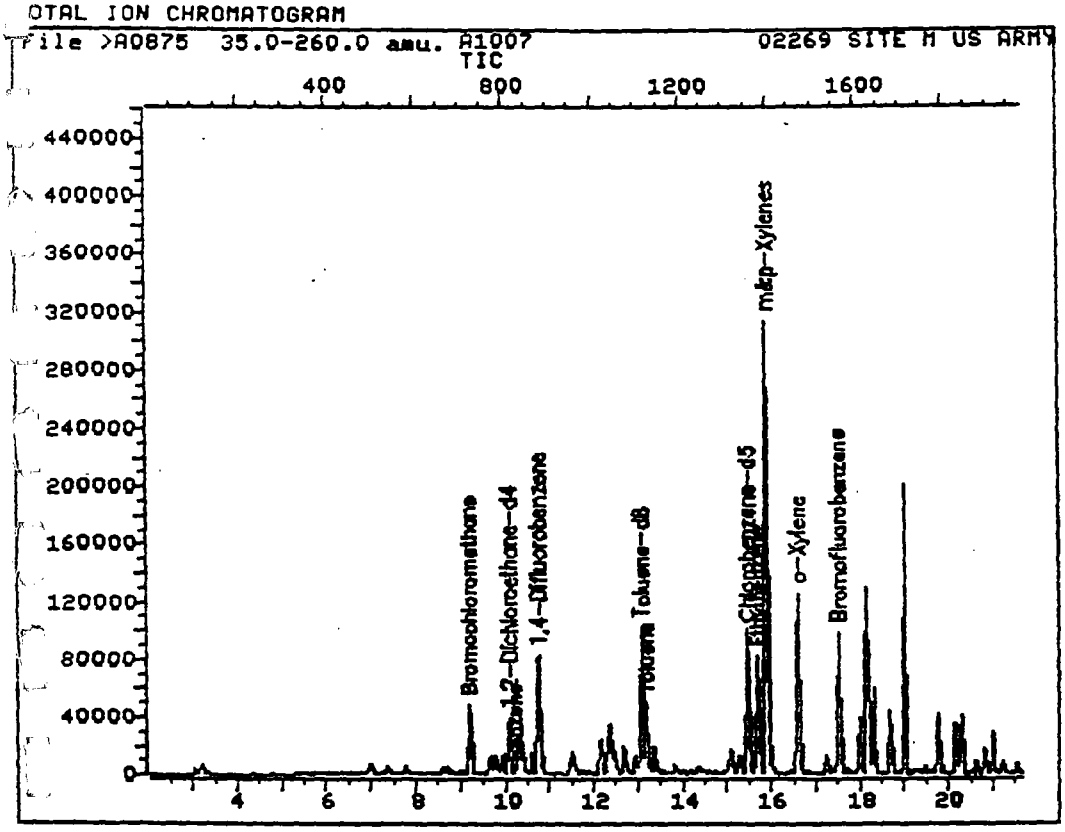
perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 05:28
utput File: ^A0875::QT Injected at: 930226 04:58
ata File: >A0875::D2 Dilution Factor: 1.00000
ame: A1007
isc: 02269 SITE M US ARMY FT. MONMOUTH 5 UL/5.0ML

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.19	719	26014	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.08	809	54606	54.06	UG/L	100
2)	*1,4-Difluorobenzene	10.76	877	129521	50.00	UG/L	100
4)	Benzene	10.19	820	2856	1.33	UG/L	100
1)	Toluene-d8	13.08	1111	134449	51.25	UG/L	100
2)	Toluene	13.19	1122	70311	25.99	UG/L	97
3)	*Chlorobenzene-d5	15.46	1351	110243	50.00	UG/L	100
1)	Ethylbenzene	15.70	1375	123184	33.37	UG/L	82
2)	m&p-Xylenes	15.91	1396	404343	123.87	UG/L	92
3)	o-Xylene	16.59	1465	160146	53.49	UG/L	90
6)	Bromofluorobenzene	17.51	1558	68201	50.24	UG/L	100

* Compound is ISTD

OTAL ION CHROMATOGRAM



Data File: >A0875::D2 Quant Output File: ^A0875::QT
Name: A1007
Misc: 02269 SITE M US ARMY FT. MONMOUTH 5 UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 05:28
Injected at: 930226 04:58

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX -	Soil
SAMPLE NUMBER	A1008	DILUTION FACTOR	2500.00
CLIENT ID	SITE N US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0888	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	220000	Bromodichloromethane	ND	22000
Acrylonitrile	ND	220000	2-Chloroethylvinylether	ND	44000
Chloromethane	ND	44000	2-Hexanone	ND	44000
Bromomethane	ND	44000	trans-1,3-Dichloropropene	ND	22000
Vinyl Chloride	ND	44000	Toluene	460000	22000
Chloroethane	ND	44000	cis-1,3-Dichloropropene	ND	22000
Acetone	39000 JB	44000	1,1,2,2-Tetrachloroethane	ND	22000
1,1-Dichloroethene	ND	22000	1,1,2-Trichloroethane	ND	22000
Carbon Disulfide	ND	44000	4-Methyl-2-pentanone	ND	44000
Methylene Chloride	ND	22000	Tetrachloroethene	ND	22000
1,2-Dichloroethene(trans)	ND	22000	Dibromochloromethane	ND	22000
1,1-Dichloroethane	ND	22000	Chlorobenzene	ND	22000
Vinyl Acetate	ND	22000	Ethylbenzene	210000	22000
2-Butanone	ND	44000	m&p-Xylenes	840000	22000
Chloroform	ND	22000	o-Xylene	360000	22000
1,1,1-Trichloroethane	ND	22000	Styrene	ND	22000
Carbon Tetrachloride	ND	22000	Bromoform	ND	22000
1,2-Dichloroethane	ND	22000	m-Dichlorobenzene	ND	22000
Benzene	27000	22000	p-Dichlorobenzene	ND	22000
Trichloroethene	ND	22000	o-Dichlorobenzene	ND	22000
1,2-Dichloropropane	ND	22000			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	105	70 - 121	OK
Toluene-d8	101	81 - 117	OK
Bromofluorobenzene	101	74 - 121	OK

Percent Solid of 57.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1008

Matrix: (soil/water) SOIL

Lab Sample ID: SITE N

Sample wt/vol: .002 (g/mL) g

Lab File ID: >A0888

Level: MED

Date Received: 02/24/93

% Moisture: 43

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 2500

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	107835	Pentane, 2-methyl- (8CI9CI)	6.96	190000
2	591764	Hexane, 2-methyl- (8CI9CI)	9.66	190000
3	589344	Hexane, 3-methyl- (8CI9CI)	9.94	170000
4	590738	Hexane, 2,2-dimethyl- (8CI9CI)	10.35	160000
5	142825	Heptane (DOT)(8CI9CI)	10.62	82000
6	108872	Cyclohexane, methyl- (8CI9CI)	11.51	100000
7	565753	Pentane, 2,3,4-trimethyl- (8CI9CI)	12.16	110000
8	560214	Pentane, 2,3,3-trimethyl- (8CI9CI)	12.36	150000
9	592278	Heptane, 2-methyl- (8CI9CI)	12.47	98000
10	589811	Heptane, 3-methyl- (8CI9CI)	12.71	110000
11	2213232	Heptane, 2,4-dimethyl- (8CI9CI)	15.10	91000
12	103651	Benzene, propyl- (8CI9CI)	18.01	98000
13	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.17	530000
14	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.33	210000
15	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.70	140000
16	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.01	600000
17	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.79	140000
18		UNKNOWN	20.17	190000
19	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.31	170000
20	527844	Benzene, 1-methyl-2-(1-methylethyl)- (9CI)	21.00	96000

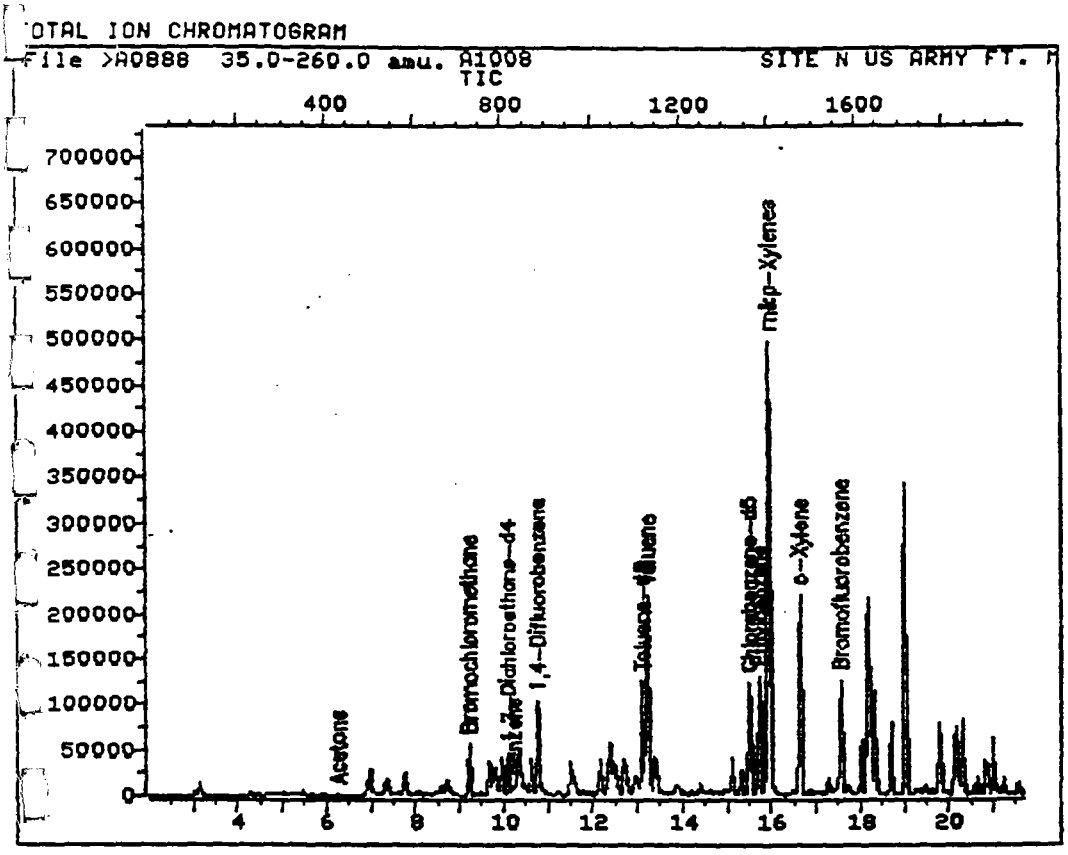
QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 17:29
utput File: ^A0888::QT Injected at: 930226 16:55
ata File: >A0888::D3 Dilution Factor: 1.00000
ame: A1008
isc: SITE N US ARMY FT. MONMOUTH 4.0g/10mL 5ul

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 17:12

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.21	722	30492	50.00	UG/L	100
9)	Acetone	6.25	424	2656	9.00	UG/L	84
1)	1,2-Dichloroethane-d4	10.10	812	64626	52.49	UG/L	100
2)	*1,4-Difluorobenzene	10.77	880	156244	50.00	UG/L	100
4)	Benzene	10.21	823	14113	6.15	UG/L	100
1)	Toluene-d8	13.10	1114	161350	50.59	UG/L	100
2)	Toluene	13.20	1125	314690	104.12	UG/L	96
3)	*Chlorobenzene-d5	15.50	1356	134751	50.00	UG/L	100
1)	Ethylbenzene	15.73	1379	198653	48.32	UG/L	82
2)	m&p-Xylenes	15.94	1400	659739	191.15	UG/L	91
3)	o-Xylene	16.62	1469	275941	81.48	UG/L	89
6)	Bromofluorobenzene	17.54	1562	83815	50.28	UG/L	100

* Compound is ISTD



Data File: >A0888::D3 Quant Output File: ^A0888::QT
Name: A1008
Misc: SITE N US ARMY FT. MONMOUTH 4.0g/10mL 5ul

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 17:12

Operator ID: MANAGER
Quant Time: 930226 17:29
Injected at: 930226 16:55

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1011	DILUTION FACTOR	6250.00
CLIENT ID	SITE 9 US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0889	DATE ANALYZED	02/26/93

COMPOUND	UG/KG		MDL
Acrolein	ND		370000
Acrylonitrile	ND		370000
Chloromethane	ND		74000
Bromomethane	ND		74000
Vinyl Chloride	ND		74000
Chloroethane	ND		74000
Acetone	110000	B	74000
1,1-Dichloroethene	ND		37000
Carbon Disulfide	ND		74000
Methylene Chloride	ND		37000
1,2-Dichloroethene(trans)	ND		37000
1,1-Dichloroethane	ND		37000
Vinyl Acetate	ND		37000
2-Butanone	ND		74000
Chloroform	ND		37000
1,1,1-Trichloroethane	ND		37000
Carbon Tetrachloride	ND		37000
1,2-Dichloroethane	ND		37000
Benzene	8500	J	37000
Trichloroethene	ND		37000
1,2-Dichloropropane	ND		37000

COMPOUND	UG/KG	MDL
Bromodichloromethane	ND	37000
2-Chloroethylvinylether	ND	74000
2-Hexanone	ND	74000
trans-1,3-Dichloropropene	ND	37000
Toluene	220000	37000
cis-1,3-Dichloropropene	ND	37000
1,1,2,2-Tetrachloroethane	ND	37000
1,1,2-Trichloroethane	ND	37000
4-Methyl-2-pentanone	ND	74000
Tetrachloroethene	ND	37000
Dibromochloromethane	ND	37000
Chlorobenzene	ND	37000
Ethylbenzene	120000	37000
m&p-Xylenes	510000	37000
o-Xylene	200000	37000
Styrene	ND	37000
Bromoform	ND	37000
m-Dichlorobenzene	ND	37000
p-Dichlorobenzene	ND	37000
o-Dichlorobenzene	ND	37000

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	70 - 121	OK
Toluene-d8	100	81 - 117	OK
Bromofluorobenzene	100	74 - 121	OK

Percent Solid of 84.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1011

atrix: (soil/water) SOIL

Lab Sample ID: SITE Q

Sample wt/vol: .0008 (g/mL) g

Lab File ID: >A0889

evel: MED

Date Received: 02/24/93

Moisture: 16

Date Analyzed 02/26/93

Column: CAP

Dilution Factor: 6250

umber TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	591764	Hexane, 2-methyl- (8CI9CI)	9.70	150000
	565593	Pentane, 2,3-dimethyl- (8CI9CI)	9.83	240000
	589344	Hexane, 3-methyl- (8CI9CI)	9.98	140000
4	540841	Pentane, 2,2,4-trimethyl- (8CI9CI)	10.38	260000
	142825	Heptane (DOT)(8CI9CI)	10.65	68000
	108872	Cyclohexane, methyl- (8CI9CI)	11.54	90000
7	109900	Ethane, isocyanato- (9CI)	12.19	120000
8	111717	Heptanal (8CI9CI)	12.40	130000
	592278	Heptane, 2-methyl- (8CI9CI)	12.51	99000
1	589811	Heptane, 3-methyl- (8CI9CI)	12.73	100000
11	111659	Octane (DOT)(8CI9CI)	13.44	71000
1	17302237	Nonane, 4,5-dimethyl- (8CI9CI)	15.14	95000
1	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.20	330000
14	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	18.37	150000
15	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.73	81000
1	108678	Benzene, 1,3,5-trimethyl- (9CI)	19.05	380000
17	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.82	79000
18	135988	Benzene, (1-methylpropyl)- (9CI)	20.21	120000
1	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.34	110000
2	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	21.04	58000

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 18:02
utput File: ^A0889::QT Injected at: 930226 17:32
ata File: >A0889::D3 Dilution Factor: 1.00000
ame: A1011
isc: SITE Q US ARMY FT. MONMOUTH 4.0g/10mL 2ul

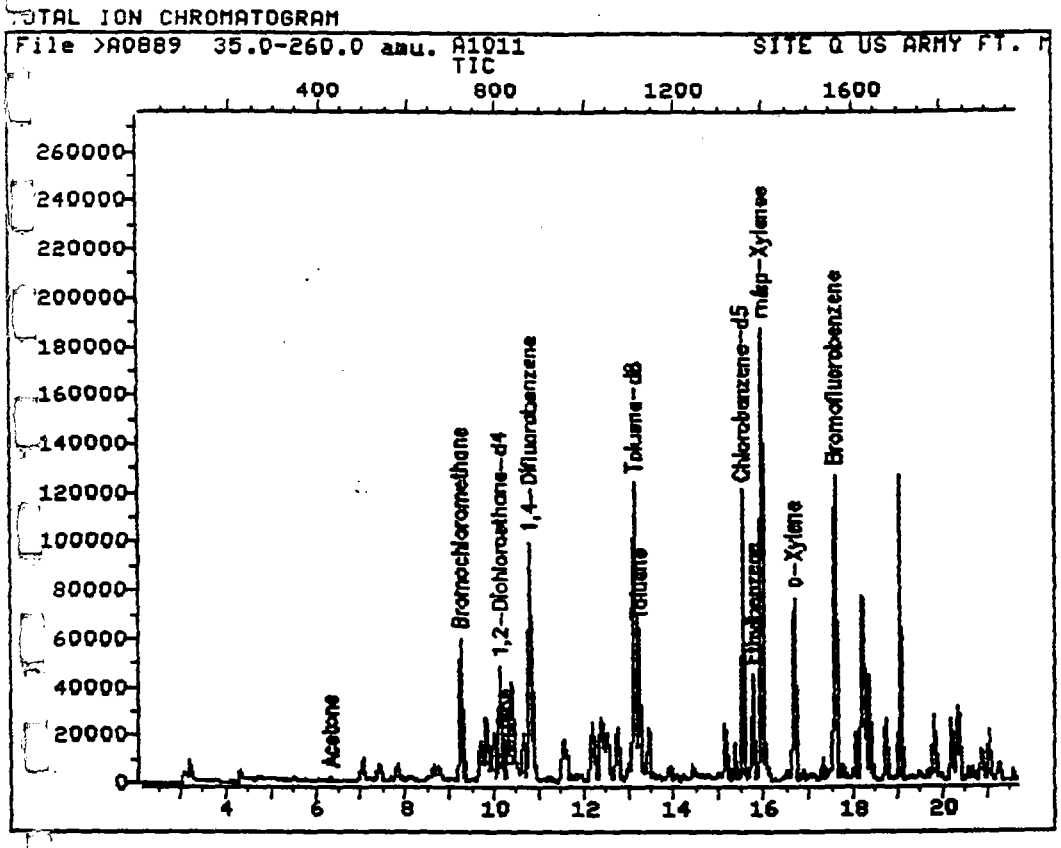
D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 17:12

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.24	713	31212	50.00	UG/L	100
9)	Acetone	6.32	418	4461	14.77	UG/L	83
1)	1,2-Dichloroethane-d4	10.14	803	66768	52.98	UG/L	100
2)	*1,4-Difluorobenzene	10.81	871	154867	50.00	UG/L	100
4)	Benzene	10.24	814	2606	1.15	UG/L	100
1)	Toluene-d8	13.14	1106	158576	50.16	UG/L	100
2)	Toluene	13.24	1116	88144	29.42	UG/L	99
3)	*Chlorobenzene-d5	15.53	1347	133309	50.00	UG/L	100
1)	Ethylbenzene	15.77	1371	64386	15.83	UG/L	81
2)	m&p-Xylenes	15.97	1391	234205	68.59	UG/L	93
3)	o-Xylene	16.66	1461	91862	27.42	UG/L	89
6)	Bromofluorobenzene	17.58	1553	82844	50.23	UG/L	100

* Compound is ISTD

00127

TOTAL ION CHROMATOGRAM



Data File: >A0889::D3 Quant Output File: ^A0889::QT
Name: A1011
Misc: SITE Q US ARMY FT. MONMOUTH 4.0g/10mL 2ul

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 17:12

Operator ID: MANAGER
Quant Time: 930226 18:02
Injected at: 930226 17:32

QUANT REPORT

ator ID: JEFF Quant Rev: 6 Quant Time: 930302 15:11
ut File: ^A0929::QT Injected at: 930302 14:41
File: >A0929::D2 Dilution Factor: 1.00000
: A1013
: SITE S US ARMY FT. MONMOUTH 5.0g/5mL

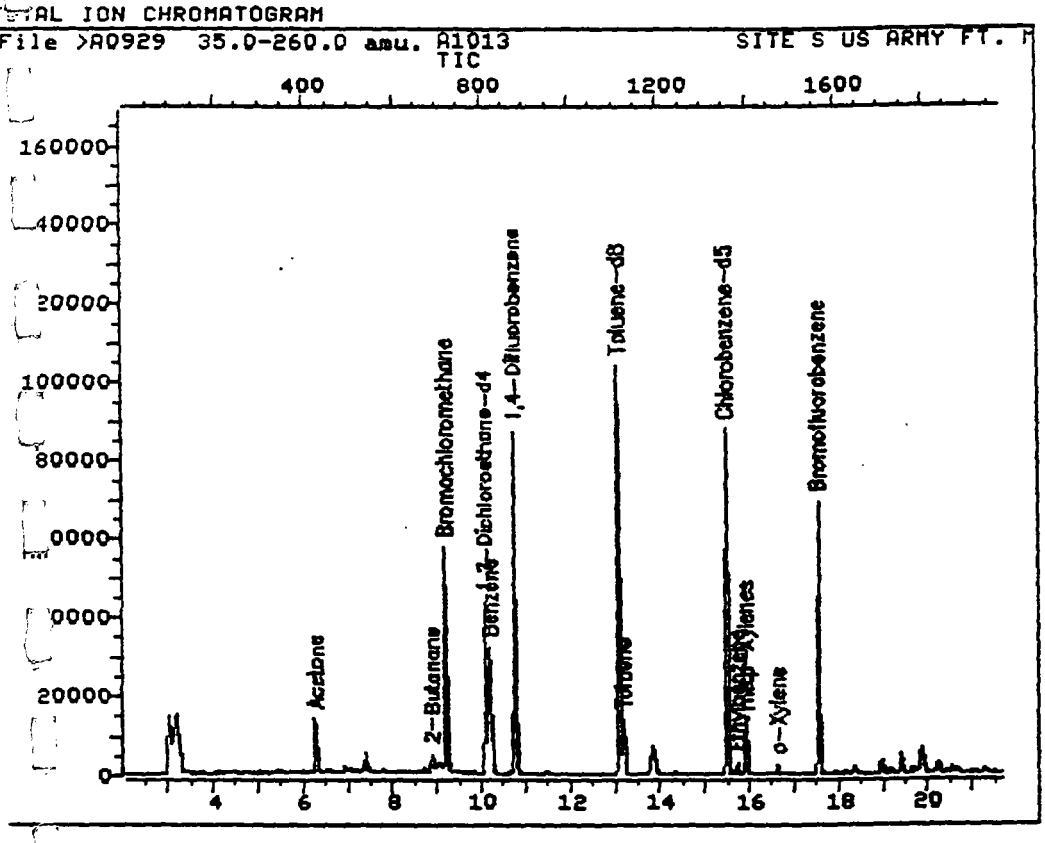
ile: ID0127::M1
e: USEPA 624 VOLATILES
Calibration: 930302 12:52

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.20	715	30036	50.00	UG/L	100
Acetone	6.27	420	32026	104.08	UG/L	86
2-Butanone	8.88	683	11627	27.92	UG/L	71
1,2-Dichloroethane-d4	10.09	805	57426	51.04	UG/L	100
*1,4-Difluorobenzene	10.76	873	137214	50.00	UG/L	100
Benzene	10.20	816	54336	22.12	UG/L	100
Toluene-d8	13.09	1108	137634	49.16	UG/L	100
Toluene	13.20	1119	20118	6.55	UG/L	97
*Chlorobenzene-d5	15.48	1350	99057	50.00	UG/L	100
Ethylbenzene	15.72	1374	5313	1.49	UG/L	81
m&p-Xylenes	15.92	1394	17487	6.12	UG/L	94
o-Xylene	16.62	1465	3591	1.26	UG/L	91
Bromofluorobenzene	17.54	1558	49941	40.48	UG/L	100

ompound is ISTD

00135

TAL ION CHROMATOGRAM



Data File: >A0929::D2 Quant Output File: ^A0929::QT
Name: A1013
Misc: SITE S US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930302 12:52

Operator ID: JEFF
Quant Time: 930302 15:11
Injected at: 930302 14:41

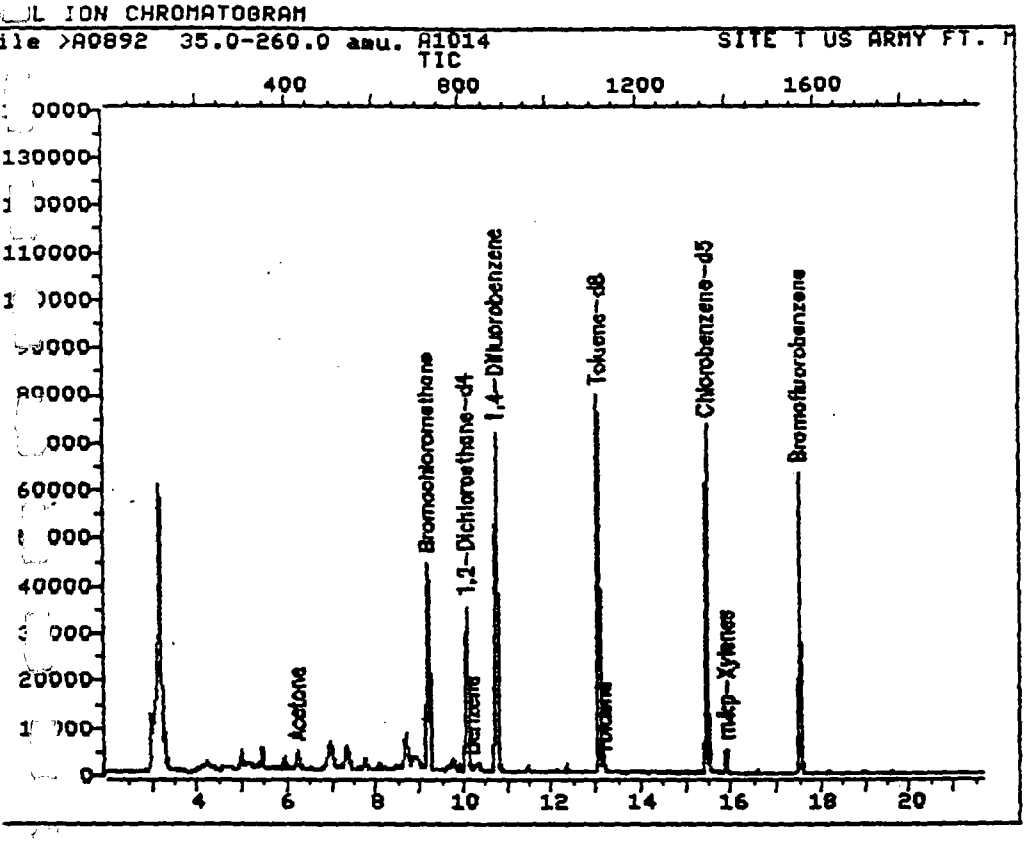
QUANT REPORT

ator ID: MANAGER Quant Rev: 6 Quant Time: 930226 20:08
ut File: ^A0892::QT Injected at: 930226 19:38
File: >A0892::D3 Dilution Factor: 1.00000
: A1014
: SITE T US ARMY FT. MONMOUTH 5.0g/5

ile: ID0127::M1
e: USEPA 624 VOLATILES
Calibration: 930226 17:12

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.18	720	23012	50.00	UG/L	100
Acetone	6.22	421	9962	44.74	UG/L	82
1,2-Dichloroethane-d4	10.06	809	51919	55.88	UG/L	100
*1,4-Difluorobenzene	10.74	878	108789	50.00	UG/L	100
Benzene	10.17	820	2464	1.54	UG/L	100
Toluene-d8	13.06	1112	107889	48.59	UG/L	100
Toluene	13.17	1123	2939	1.40	UG/L	99
*Chlorobenzene-d5	15.45	1353	83120	50.00	UG/L	100
m&p-Xylenes	15.88	1397	6435	3.02	UG/L	92
Bromofluorobenzene	17.50	1560	43732	42.53	UG/L	100

ompound is ISTD



Data File: >A0892::D3 Quant Output File: ^A0892::QT
Name: A1014
Misc: SITE T US ARMY FT. MONMOUTH 5.0g/5

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 17:12

Operator ID: MANAGER
Quant Time: 930226 20:08
Injected at: 930226 19:38

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

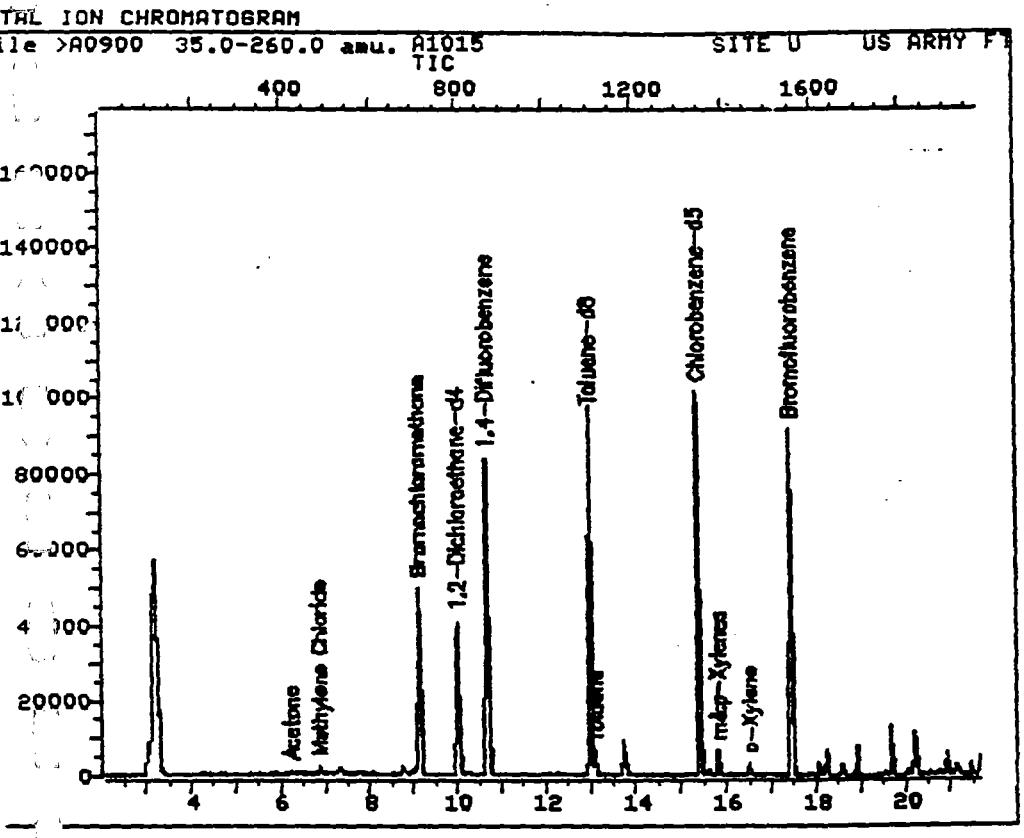
JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1015	DILUTION FACTOR	1.00
CLIENT ID	SITE U US ARMY FT MONMOUTH	QA BATCH	
DATA FILE	>A0900	DATE ANALYZED	02/28/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	63	Bromodichloromethane	ND	6
Acrylonitrile	ND	63	2-Chloroethylvinylether	ND	13
Chloromethane	ND	13	2-Hexanone	ND	13
Bromomethane	ND	13	trans-1,3-Dichloropropene	ND	6
Vinyl Chloride	ND	13	Toluene	3.8 J	6
Chloroethane	ND	13	cis-1,3-Dichloropropene	ND	6
Acetone	7.3 JB	13	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND	13	4-Methyl-2-pentanone	ND	13
Methylene Chloride	3.3 JB	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6
Vinyl Acetate	ND	6	Ethylbenzene	ND	6
2-Butanone	ND	13	m&p-Xylenes	3.4 J	6
Chloroform	ND	6	o-Xylene	1.8 J	6
1,1,1-Trichloroethane	ND	6	Styrene	ND	6
Carbon Tetrachloride	ND	6	Bromoform	ND	6
1,2-Dichloroethane	ND	6	m-Dichlorobenzene	ND	6
Benzene	ND	6	p-Dichlorobenzene	ND	6
Trichloroethene	ND	6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND	6			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	102	70 - 121	OK
Toluene-d8	98.4	81 - 117	OK
Bromofluorobenzene	93.5	74 - 121	OK

Percent Solid of 79.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected



Data File: >A0900::D3 Quant Output File: ^A0900::QT
Name: A1015
Disc: SITE U US ARMY FT MONMOUTH 5G/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930228 14:57

Operator ID: JEFF
Quant Time: 930228 17:53
Injected at: 930228 17:23

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1016	DILUTION FACTOR	1.00
CLIENT ID	SITE V US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0931	DATE ANALYZED	03/02/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	76	Bromodichloromethane	ND	8
Acrylonitrile	ND	76	2-Chloroethylvinylether	ND	15
Chloromethane	ND	15	2-Hexanone	ND	15
Bromomethane	ND	15	trans-1,3-Dichloropropene	ND	8
Vinyl Chloride	ND	15	Toluene	9.7	8
Chloroethane	ND	15	cis-1,3-Dichloropropene	ND	8
Acetone	120 B	15	1,1,2,2-Tetrachloroethane	ND	8
1,1-Dichloroethene	ND	8	1,1,2-Trichloroethane	ND	8
Carbon Disulfide	ND	15	4-Methyl-2-pentanone	ND	15
Methylene Chloride	7.0 J	8	Tetrachloroethene	ND	8
1,2-Dichloroethene(trans)	ND	8	Dibromochloromethane	ND	8
1,1-Dichloroethane	ND	8	Chlorobenzene	ND	8
Vinyl Acetate	ND	8	Ethylbenzene	2.0 J	8
2-Butanone	31	15	m&p-Xylenes	8.2	8
Chloroform	ND	8	o-Xylene	1.7 J	8
1,1,1-Trichloroethane	ND	8	Styrene	ND	8
Carbon Tetrachloride	ND	8	Bromoform	ND	8
1,2-Dichloroethane	ND	8	m-Dichlorobenzene	ND	8
Benzene	26	8	p-Dichlorobenzene	ND	8
Trichloroethene	ND	8	o-Dichlorobenzene	ND	8
1,2-Dichloropropane	ND	8			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.7	70 - 121	OK
Toluene-d8	98.9	81 - 117	OK
Bromofluorobenzene	93.9	74 - 121	OK

Percent Solid of 66.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1016

Matrix: (soil/water) SOIL

Lab Sample ID: SITE V

Sample wt/vol: 5 (g/mL) g

Lab File ID: >A0931

Level: LOW

Date Received: 02/24/93

% Moisture: 34

Date Analyzed 03/02/93

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	3522949	Hexane, 2,2,5-trimethyl- (8CI9CI)	18.87	8
2	4316658	1-Hexene, 3,5,5-trimethyl- (8CI9CI)	19.32	9
3	1071814	Hexane, 2,2,5,5-tetramethyl- (8CI9CI)	19.80	18
4	4418615	1H-Tetrazol-5-amine (9CI)	20.17	8

QUANT REPORT

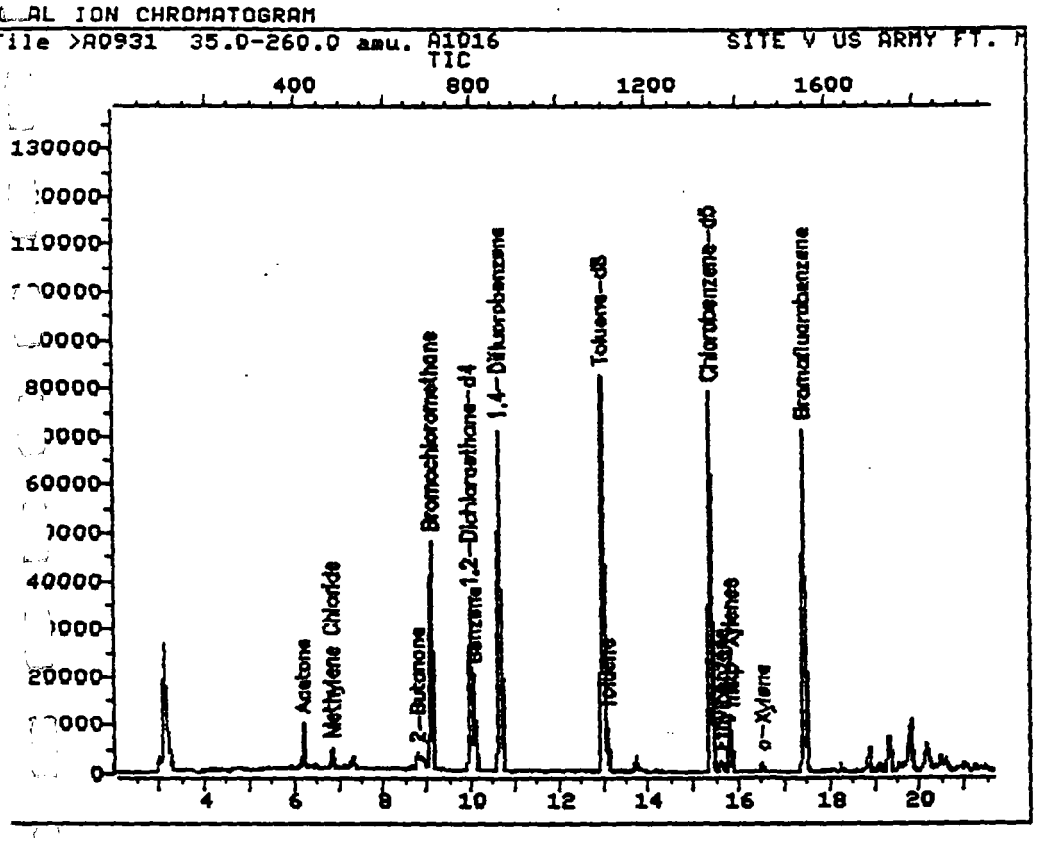
ator ID: JEFF Quant Rev: 6 Quant Time: 930302 17:36
ut File: ^A0931::QT Injected at: 930302 17:06
File: >A0931::D2 Dilution Factor: 1.00000
: A1016
: SITE V US ARMY FT. MONMOUTH 5.0g/5 mL

ile: ID0127::M1
e: USEPA 624 VOLATILES
Calibration: 930302 12:52

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.10	705	25733	50.00	UG/L	100
1,1,2-Trichlorotrifluoroethane	6.15	407	1082	2.52	UG/L	100
Acetone	6.19	412	20565	78.01	UG/L	87
Methylene Chloride	6.84	477	4203	4.65	UG/L	82
2-Butanone	8.79	674	7270	20.38	UG/L	73
1,2-Dichloroethane-d4	9.98	794	48050	49.85	UG/L	100
*1,4-Difluorobenzene	10.65	862	111219	50.00	UG/L	100
Benzene	10.09	805	33687	16.92	UG/L	100
Toluene-d8	12.97	1096	112273	49.47	UG/L	100
Toluene	13.08	1107	16016	6.43	UG/L	97
*Chlorobenzene-d5	15.37	1339	89658	50.00	UG/L	100
Ethylbenzene	15.61	1363	4340	1.34	UG/L	83
m&p-Xylenes	15.81	1383	13952	5.39	UG/L	93
o-Xylene	16.51	1454	2938	1.14	UG/L	90
Bromofluorobenzene	17.43	1547	52439	46.96	UG/L	100

ompound is ISTD

00147



Data File: >A0931::D2 Quant Output File: ^A0931::QT
Name: A1016
isc: SITE V US ARMY FT. MONMOUTH 5.0g/5 mL

Id File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930302 12:52

perator ID: JEFF
uant Time: 930302 17:36
njected at: 930302 17:06

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	A1017	DILUTION FACTOR	6250.00
CLIENT ID	SITE W US ARMY FT. MONMOUTH 4.	QA BATCH	
DATA FILE	>A0960	DATE ANALYZED	03/04/93

COMPOUND	UG/KG		MDL
Acrolein	ND		510000
Acrylonitrile	ND		510000
Chloromethane	ND		100000
Bromomethane	ND		100000
Vinyl Chloride	ND		100000
Chloroethane	ND		100000
Acetone	ND	B	100000
1,1-Dichloroethene	ND		51000
Carbon Disulfide	ND		100000
Methylene Chloride	ND		51000
1,2-Dichloroethene(trans)	ND		51000
1,1-Dichloroethane	ND		51000
Vinyl Acetate	ND		51000
2-Butanone	ND		100000
Chloroform	ND		51000
1,1,1-Trichloroethane	ND		51000
Carbon Tetrachloride	ND		51000
1,2-Dichloroethane	ND		51000
Benzene	25000	J	51000
Trichloroethene	ND		51000
1,2-Dichloropropane	ND		51000

COMPOUND	UG/KG	MDL
Bromodichloromethane	ND	51000
2-Chloroethylvinylether	ND	100000
2-Hexanone	ND	100000
trans-1,3-Dichloropropene	ND	51000
Toluene	450000	51000
cis-1,3-Dichloropropene	ND	51000
1,1,2,2-Tetrachloroethane	ND	51000
1,1,2-Trichloroethane	ND	51000
4-Methyl-2-pentanone	ND	100000
Tetrachloroethene	ND	51000
Dibromochloromethane	ND	51000
Chlorobenzene	ND	51000
Ethylbenzene	200000	51000
m&p-Xylenes	840000	51000
o-Xylene	360000	51000
Styrene	ND	51000
Bromoform	ND	51000
m-Dichlorobenzene	ND	51000
p-Dichlorobenzene	ND	51000
o-Dichlorobenzene	ND	51000

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	97.4	70 - 121	OK
Toluene-d8	98.6	81 - 117	OK
Bromofluorobenzene	98.9	74 - 121	OK

Percent Solid of 61.0 is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

US ARMY FT. MONMOUTH
E1
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

A1017

atrix: (soil/water) SOIL

ample wt/vol: .0008 (g/mL) g

Level: MED

Moisture: 39

Column: CAP

Number TICs Found 19

Lab Sample ID: SITE W

Lab File ID: >A0960

Date Received: 02/24/93

Date Analyzed 03/04/93

Dilution Factor: 6250

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	594821	Butane, 2,2,3,3-tetramethyl- (8CI9CI)	10.43	72000
2	108872	Cyclohexane, methyl- (8CI9CI)	11.60	51000
3	565753	Pentane, 2,3,4-trimethyl- (8CI9CI)	12.25	62000
4	560214	Pentane, 2,3,3-trimethyl- (8CI9CI)	12.46	100000
5	592132	Hexane, 2,5-dimethyl- (8CI9CI)	12.57	61000
6	589811	Heptane, 3-methyl- (8CI9CI)	12.80	64000
7	111659	Octane (DOT)(8CI9CI)	13.50	48000
8	2213232	Heptane, 2,4-dimethyl- (8CI9CI)	15.21	62000
9	103651	Benzene, propyl- (8CI9CI)	18.14	100000
10	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.30	570000
11	108678	Benzene, 1,3,5-trimethyl- (9CI)	18.46	210000
12	622968	Benzene, 1-ethyl-4-methyl- (9CI)	18.82	150000
13	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	19.13	670000
14	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.90	150000
15	873494	Benzene, cyclopropyl- (8CI9CI)	20.28	200000
16	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.42	180000
17	934805	Benzene, 4-ethyl-1,2-dimethyl- (9CI)	20.94	61000
18	535773	Benzene, 1-methyl-3-(1-methylethyl)- (9CI)	20.97	46000
19	2870044	Benzene, 2-ethyl-1,3-dimethyl- (9CI)	21.11	95000

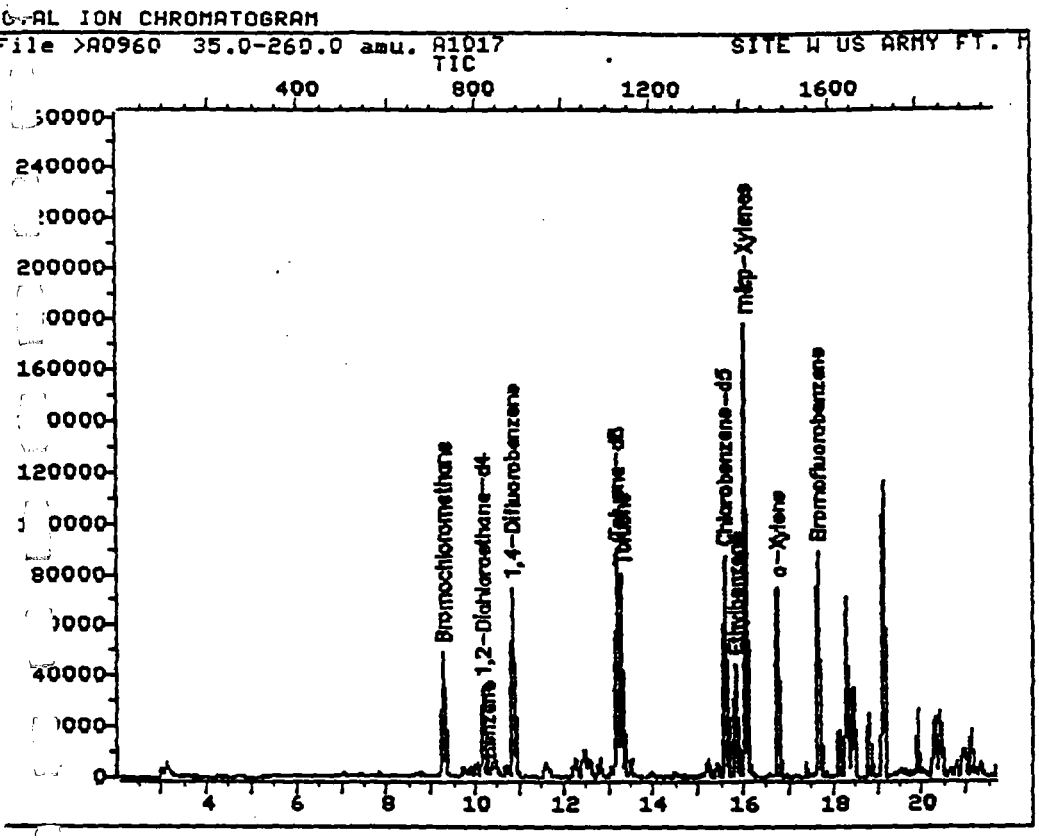
QUANT REPORT

erator ID: MANAGER Quant Rev: 6 Quant Time: 930304 02:02
tput File: ^A0960::QT Injected at: 930304 01:32
ta File: >A0960::D2 Dilution Factor: 1.00000
me: A1017
sc: SITE W US ARMY FT. MONMOUTH 4.0g/10mL 2ul

File: ID0127::M1
le: USEPA 624 VOLATILES
st Calibration: 930303 16:29

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.28	723	26512	50.00	UG/L	100
1,2-Dichloroethane-d4	10.18	814	49115	48.71	UG/L	100
*1,4-Difluorobenzene	10.85	882	122586	50.00	UG/L	100
Benzene	10.28	824	5041	2.40	UG/L	100
Toluene-d8	13.20	1119	122840	49.30	UG/L	100
Toluene	13.31	1130	117402	43.89	UG/L	97
*Chlorobenzene-d5	15.61	1362	101432	50.00	UG/L	100
Ethylbenzene	15.85	1386	67381	19.33	UG/L	83
m&p-Xylenes	16.05	1406	232886	82.02	UG/L	94
o-Xylene	16.75	1477	97351	34.70	UG/L	90
Bromofluorobenzene	17.66	1569	61847	49.47	UG/L	100

Compound is ISTD



Data File: >A0960::D2 Quant Output File: ^A0960::QT
Name: A1017
Misc: SITE W US ARMY FT. MONMOUTH 4.0g/10mL 2ul

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930303 16:29

Operator ID: MANAGER
Quant Time: 930304 02:02
Injected at: 930304 01:32

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	A1018	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLK US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0897	DATE ANALYZED	02/28/93

COMPOUND	UG/L		MDL	COMPOUND	UG/L	MDL
Acrolein	ND		50	Bromodichloromethane	ND	5
Acrylonitrile	ND		50	2-Chloroethylvinylether	ND	10
Chloromethane	ND		10	2-Hexanone	ND	10
Bromomethane	ND		10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND		10	Toluene	ND	5
Chloroethane	ND		10	cis-1,3-Dichloropropene	ND	5
Acetone	6.5	JB	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND		5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND		10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	B	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND		5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND		5	Chlorobenzene	ND	5
Vinyl Acetate	ND		5	Ethylbenzene	ND	5
2-Butanone	ND		10	m&p-Xylenes	ND	5
Chloroform	ND		5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND		5	Styrene	ND	5
Carbon Tetrachloride	ND		5	Bromoform	ND	5
1,2-Dichloroethane	ND		5	m-Dichlorobenzene	ND	5
Benzene	ND		5	p-Dichlorobenzene	ND	5
Trichloroethene	ND		5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND		5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	107	76 - 114	OK
Toluene-d8	99.8	88 - 110	OK
Bromofluorobenzene	99.7	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

EPA SAMPLE NO.
A1018

Name:21st Century Environmental Contract:N/A

Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Water Lab Sample ID: TRIP BLANK

Sample wt/vol: 5 (g/mL) mL Lab File ID: >A0897

Level: (low/med) LOW Date Received: 02/24/93

Moisture: NA Date Analyzed: 02/28/93

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

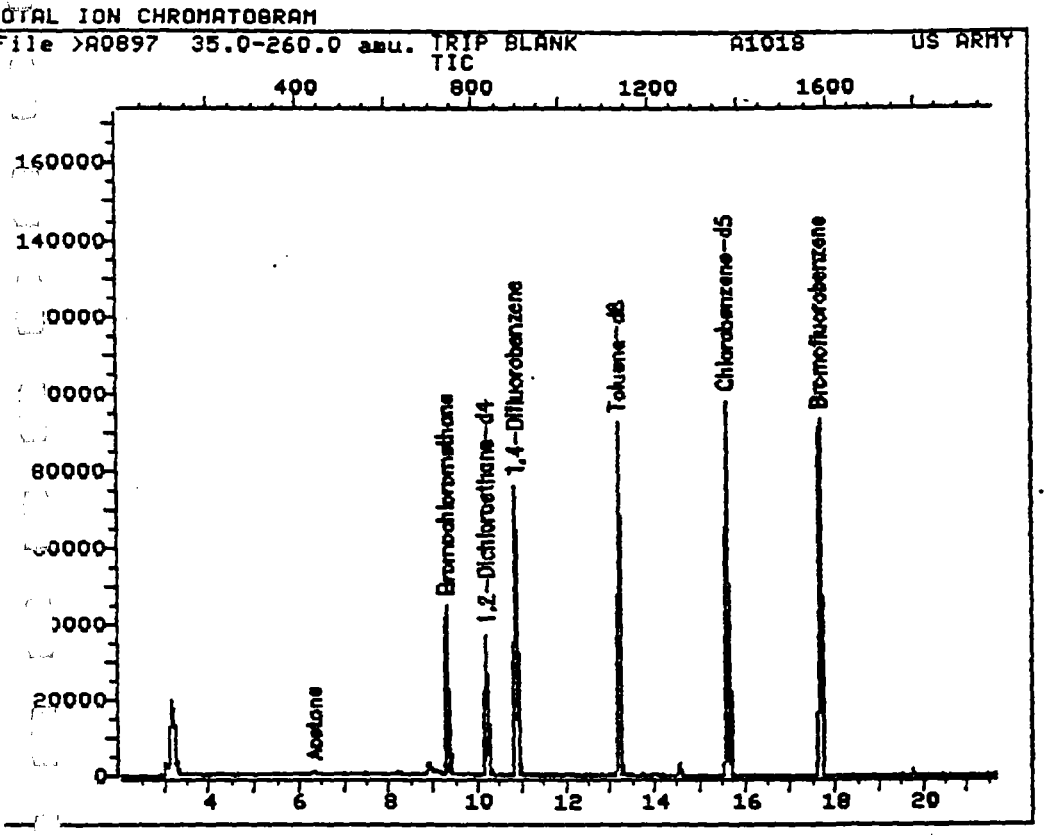
ator ID: JEFF Quant Rev: 6 Quant Time: 930228 16:02
ut File: ^A0897::QT Injected at: 930228 15:32
File: >A0897::D3 Dilution Factor: 1.00000
: TRIP BLANK
: A1018 US ARMY FT.MONMOUTH 5.0ML PURGE

ile: ID0127::M1
e: USEPA 624 VOLATILES
Calibration: 930228 14:57

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.31	733	23119	50.00	UG/L	100
Acetone	6.34	433	1897	6.51	UG/L	83
1,2-Dichloroethane-d4	10.20	823	54405	53.28	UG/L	100
*1,4-Difluorobenzene	10.88	892	116004	50.00	UG/L	100
Toluene-d8	13.21	1127	118954	49.90	UG/L	100
*Chlorobenzene-d5	15.61	1370	102941	50.00	UG/L	100
Bromofluorobenzene	17.66	1577	65419	49.85	UG/L	100

Compound is ISTD

OTAL ION CHROMATOGRAM



Data File: >A0897::D3 Quant Output File: ^A0897::QT
Name: TRIP BLANK
Misc: A1018 US ARMY FT.MONMOUTH 5.0ML PURGE

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930228 14:57

Operator ID: JEFF
Quant Time: 930228 16:02
Injected at: 930228 15:32

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	A1019	DILUTION FACTOR	50.00
CLIENT ID	FIELD US ARMY FT. MONMOUTH	QA BATCH	
DATA FILE	>A0927	DATE ANALYZED	03/02/93

COMPOUND	UG/L		MDL	COMPOUND	UG/L		MDL
Acrolein	ND		2500	Bromodichloromethane	ND		250
Acrylonitrile	ND		2500	2-Chloroethylvinylether	ND		500
Chloromethane	ND		500	2-Hexanone	ND		500
Bromomethane	ND		500	trans-1,3-Dichloropropene	ND		250
Vinyl Chloride	ND		500	Toluene	290		250
Chloroethane	ND		500	cis-1,3-Dichloropropene	ND		250
Acetone	3300	B	500	1,1,2,2-Tetrachloroethane	ND		250
1,1-Dichloroethene	ND		250	1,1,2-Trichloroethane	ND		250
Carbon Disulfide	ND		500	4-Methyl-2-pentanone	ND		500
Methylene Chloride	ND		250	Tetrachloroethene	ND		250
1,2-Dichloroethene(trans)	ND		250	Dibromochloromethane	ND		250
1,1-Dichloroethane	ND		250	Chlorobenzene	ND		250
Vinyl Acetate	ND		250	Ethylbenzene	74	J	250
2-Butanone	ND		500	m&p-Xylenes	310		250
Chloroform	ND		250	o-Xylene	70	J	250
1,1,1-Trichloroethane	ND		250	Styrene	ND		250
Carbon Tetrachloride	ND		250	Bromoform	ND		250
1,2-Dichloroethane	ND		250	m-Dichlorobenzene	ND		250
Benzene	380		250	p-Dichlorobenzene	ND		250
Trichloroethene	ND		250	o-Dichlorobenzene	ND		250
1,2-Dichloropropane	ND		250				

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

EPA SAMPLE NO.
A1019

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Water Lab Sample ID: FIELD BLANK

Sample wt/vol: .1 (g/mL) mL Lab File ID: >A0927

Level: (low/med) MED Date Received: 02/24/93

% Moisture: NA Date Analyzed: 03/02/93

GC Column: DB-624 Dilution Factor: 50

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

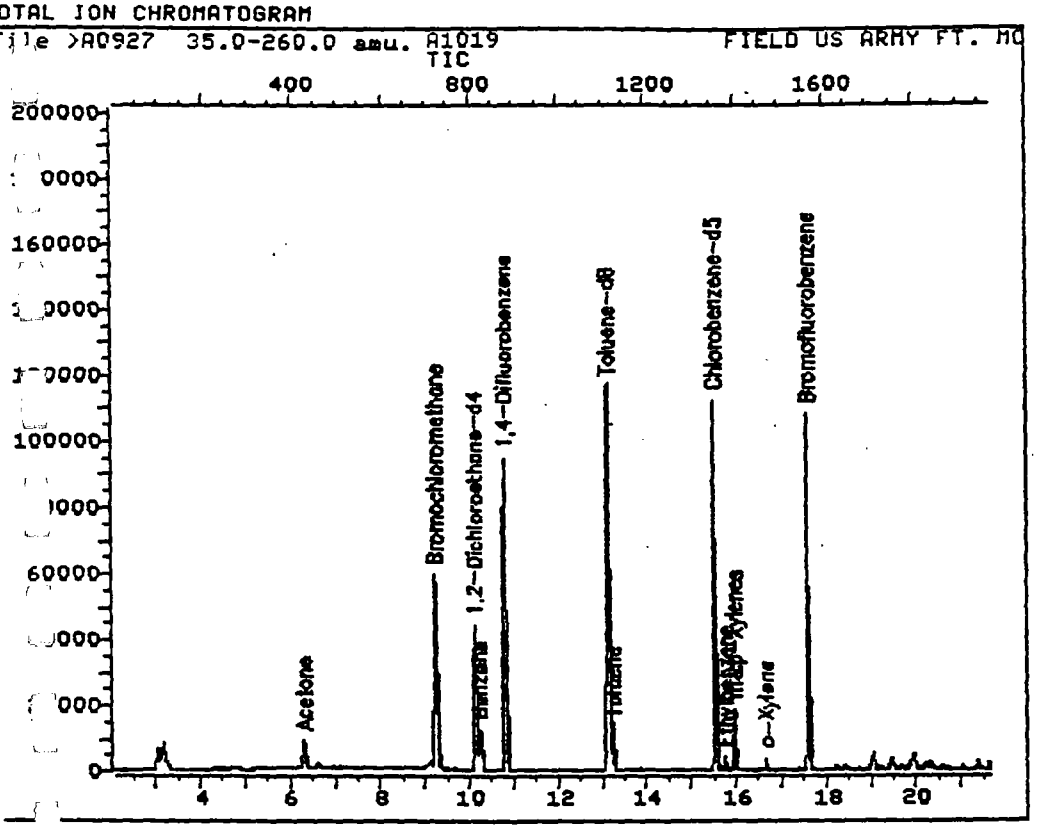
rator ID: MANAGER Quant Rev: 6 Quant Time: 930302 13:56
out File: ^A0927::QT Injected at: 930302 13:26
a File: >A0927::D2 Dilution Factor: 1.00000
e: A1019
c: FIELD US ARMY FT. MONMOUTH 100ul/5mL

File: ID0127::M1
le: USEPA 624 VOLATILES
t Calibration: 930302 12:52

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.24	720	31336	50.00	UG/L	100
Acetone	6.31	424	21208	66.07	UG/L	87
1,2-Dichloroethane-d4	10.13	809	59533	50.72	UG/L	100
*1,4-Difluorobenzene	10.80	877	150364	50.00	UG/L	100
Benzene	10.23	820	20686	7.69	UG/L	100
Toluene-d8	13.13	1112	156331	50.95	UG/L	100
Toluene	13.24	1123	19703	5.85	UG/L	96
*Chlorobenzene-d5	15.53	1355	125517	50.00	UG/L	100
Ethylbenzene	15.77	1379	6723	1.49	UG/L	83
m&p-Xylenes	15.97	1399	22283	6.15	UG/L	96
o-Xylene	16.66	1469	5075	1.41	UG/L	91
Bromofluorobenzene	17.58	1562	78223	50.04	UG/L	100

Compound is ISTD

DTAL ION CHROMATOGRAM



Data File: >A0927::D2 Quant Output File: ^A0927::QT
ame: A1019
isc: FIELD US ARMY FT. MONMOUTH 100ul/5mL

d File: ID0127::M1
itle: USEPA 624 VOLATILES
Last Calibration: 930302 12:52

perator ID: MANAGER
Quant Time: 930302 13:56
Injected at: 930302 13:26

Q C RESULTS

QUALITY CONTROL DATA

LEAD

ANALYSIS NO: A 0995

BATCH NO: M 025

DATE EXTRACTED: 2/25/93

AMOUNT OF SPIKE (ppm)	% SPIKE RECOVERY	% SPIKE RECOVERY DUP
1.00	91	125

QUALITY CONTROL DATA

LEAD

BATCH NO: M 025

DATE EXTRACTED: 2/25/93

METHOD BLANK (mg/L)	AMOUNT OF SPIKE (ug/L)	% SPIKE RECOVERY
N.D.	55.2	124

QUALITY CONTROL DATA

LEAD

ANALYSIS NO: A 1005

BATCH NO: M 026

DATE EXTRACTED: 2/25/93

AMOUNT OF SPIKE (mg/L)	% SPIKE RECOVERY	% SPIKE RECOVERY DUP
1.00	104	102

QUALITY CONTROL DATA

LEAD

BATCH NO: M 026

DATE EXTRACTED: 2/25/93

METHOD BLANK (mg/L)	AMOUNT OF SPIKE (ug/L)	% SPIKE RECOVERY
N.D.	55.0	123

21st Century Environmental Inc
SOIL VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	98	98	98	0
A0995	99	97	96	0
A0997	102	95	81	0
A0997MS	102	93	79	0
A0997MSD	104	97	85	0
A0998	106	98	97	0
A0999	107	94	94	0
MEOH BLAN	103	100	98	0
A1004	106	103	99	0
A1000	105	102	99	0
A1001	106	102	99	0
A1003	107	102	98	0
A1007	108	102	100	0
A1005	106	102	100	0
A1006	109	102	100	0
A1010	104	101	98	0
A1002	103	101	100	0

	QC LIMITS
S1 (DCE) = 1,2-Dichloroethane-d4	70-121
S2 (TOL) = Toluene-d8	81-117
S3 (BFB) = Bromofluorobenzene	74-121

Column used to flag surrogate recovery values

21st Century Environmental Inc
SOIL VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	104	100	99	0
MEOH BLAN	110	99	100	0
A1008	105	101	101	0
A1011	106	100	100	0
A1012	107	100	99	0
A1014	112	97	85	0
AQEUOS BL	104	99	99	0
A1018	107	100	100	0
MEOH BLAN	101	100	98	0
A1015	102	98	93	0
A0996	92	101	100	0
BLANK	97	100	99	0
A1019	101	102	100	0
A1013	102	98	81	0
A1016	100	99	94	0
BLANK	93	99	98	0
MEOH BLAN	105	100	99	0
A1009	101	99	100	0
A1017	97	99	99	0

	QC LIMITS
S1 (DCE) = 1,2-Dichloroethane-d4	70-121
S2 (TOL) = Toluene-d8	81-117
S3 (BFB) = Bromofluorobenzene	74-121

Column used to flag surrogate recovery values

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: Contract:N/A

ode: Case No.: N/A SAS No.: N/A SDG No.: N/A

rix Spike - EPA Sample No.: A0997 Level:(low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
,1-Dichloroethene	50.0	ND	54.9	110	59-172
r chloroethene	50.0	ND	58.1	116	62-137
enzene	50.0	ND	67.5	135	66-142
oluene	50.0	2.0	54.8	106	59-139
hl robenzene	50.0	ND	57.9	116	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
,1 Dichloroethene	50.00	48.9	98	12	22	59-172
ichloroethene	50.00	49.6	99	16	24	62-137
ne	50.00	55.2	110	20	21	66-142
ne	50.00	47.5	91	15	21	59-139
lorobenzene	50.00	48.2	96	19	21	60-133

lu in to be used to flag recovery and RPD values with an asterisk

lues outside of qc limits

0 out of 5 outside limits
e Recovery: 0 out of 10 outside limits

EN S: _____

_____

00169

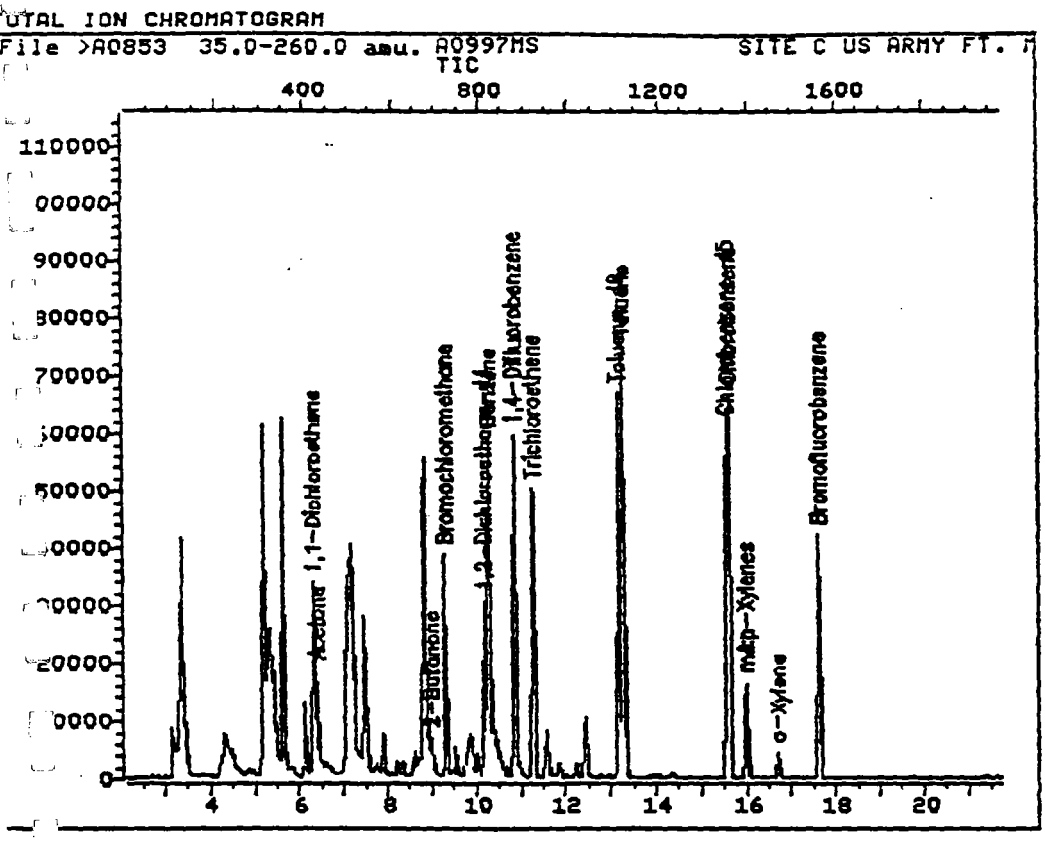
QUANT REPORT

tor ID: MANAGER Quant Rev: 6 Quant Time: 930225 14:33
t File: ^A0853::QT Injected at: 930225 14:03
File: >A0853::D2 Dilution Factor: 1.00000
A0997MS
SITE C US ARMY FT. MONMOUTH 5.0g/5mL

le: ID0127::M1
: USEPA 624 VOLATILES
Calibration: 930225 12:01

Compound	R.T.	Scan#	Area	Conc	Units	q
Bromochloromethane	9.31	719	19683	50.00	UG/L	100
Acetone	6.38	424	40354	190.85	UG/L	81
1,1-Dichloroethene	6.30	416	42269	54.92	UG/L	100
2-Butanone	8.98	686	15466	62.25	UG/L	70
1,2-Dichloroethane-d4	10.18	807	43825	50.96	UG/L	100
1,4-Difluorobenzene	10.84	874	89740	50.00	UG/L	100
Benzene	10.29	818	95319	67.51	UG/L	100
Trichloroethene	11.26	916	32328	58.09	UG/L	88
Toluene-d8	13.16	1108	86534	46.50	UG/L	100
Toluene	13.27	1119	103446	54.80	UG/L	99
Chlorobenzene-d5	15.55	1349	60859	50.00	UG/L	100
Chlorobenzene	15.60	1354	62793	57.85	UG/L	96
m&p-Xylenes	15.99	1393	20459	12.18	UG/L	91
o-Xylene	16.68	1463	5395	3.31	UG/L	91
Bromofluorobenzene	17.60	1556	29615	39.58	UG/L	100

mpound is ISTD



Data File: >A0853::D2 Quant Output File: ^A0853::QT
Name: A0997MS
Misc: SITE C US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 14:33
Injected at: 930225 14:03

QUANT REPORT

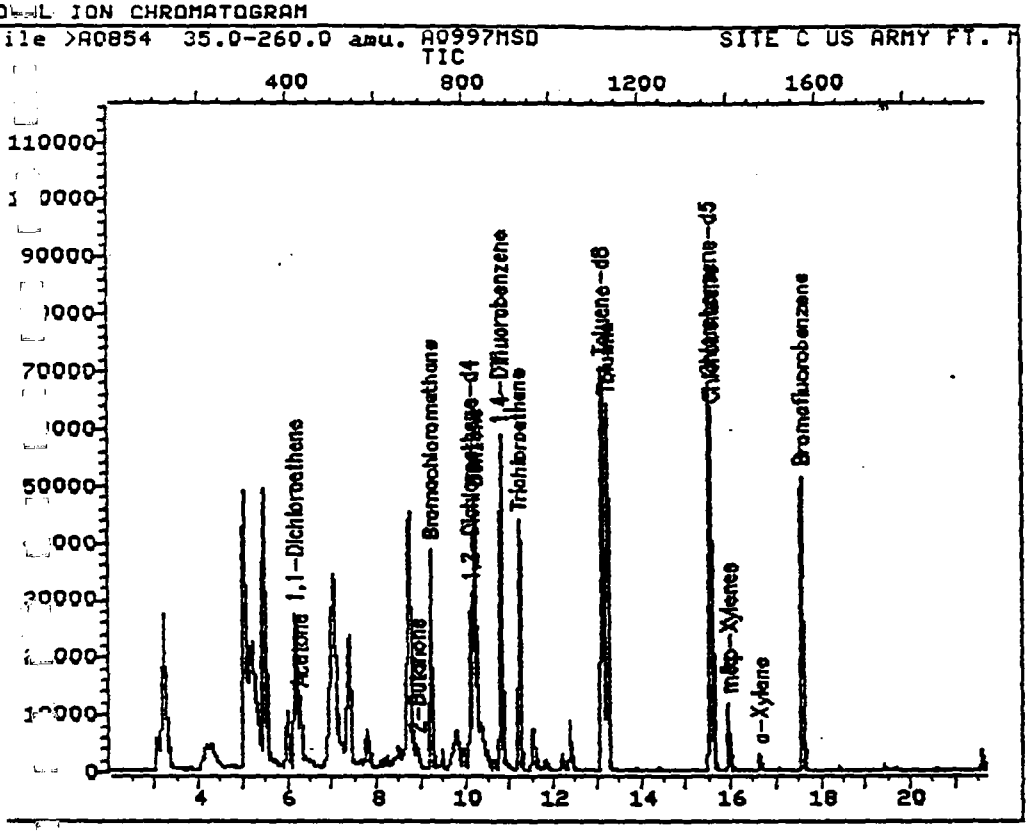
stor ID: MANAGER Quant Rev: 6 Quant Time: 930225 15:08
ut File: ^A0854::QT Injected at: 930225 14:38
File: >A0854::D2 Dilution Factor: 1.00000
: A0997MSD
: SITE C US ARMY FT. MONMOUTH 5.0g/5mL

ile: ID0127::M1
e: USEPA 624 VOLATILES
Calibration: 930225 12:01

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	9.23	724	19178	50.00	UG/L	100
Acetone	6.28	426	28286	137.29	UG/L	81
1,1-Dichloroethene	6.18	416	36647	48.87	UG/L	100
2-Butanone	8.91	692	8953	36.98	UG/L	69
1,2-Dichloroethane-d4	10.11	813	43713	52.17	UG/L	100
1,4-Difluorobenzene	10.80	882	89769	50.00	UG/L	100
Benzene	10.22	824	78006	55.23	UG/L	100
Trichloroethene	11.22	924	27631	49.64	UG/L	86
Toluene-d8	13.12	1116	90454	48.59	UG/L	100
Toluene	13.23	1127	89590	47.45	UG/L	97
Chlorobenzene-d5	15.52	1358	67011	50.00	UG/L	100
Chlorobenzene	15.57	1363	57587	48.18	UG/L	97
m&p-Xylenes	15.95	1402	13971	7.56	UG/L	90
o-Xylene	16.65	1472	3623	2.02	UG/L	90
Bromofluorobenzene	17.57	1565	35171	42.69	UG/L	100

mpound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A0854::D2 Quant Output File: ^A0854::QT
Name: A0997MSD
Misc: SITE C US ARMY FT. MONMOUTH 5.0g/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 15:08
Injected at: 930225 14:38

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

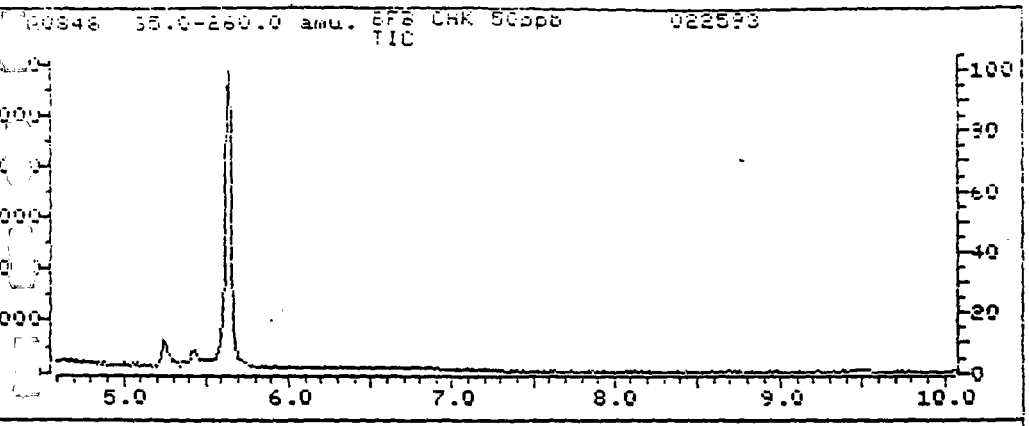
DATE AND TIME OF INJECTION: 2/25/93 10:43
INSTRUMENT ID: 5995

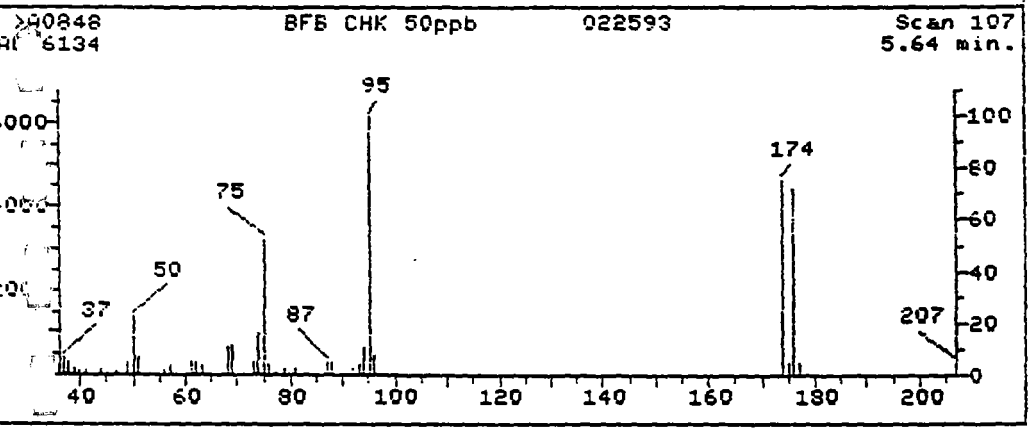
DATA RELEASE AUTHORIZED BY Richard W Lynch

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	22.20	22.20	Ok
75	30-60% of mass 95	52.23	52.23	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.73	7.73	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	75.40	75.40	Ok
175	5-9% of mass 174	5.40	7.16	Ok
176	95-101% of mass 174	71.75	95.16	Ok
177	5-9% of mass 176	4.76	6.63	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID	LAB ID		DATE TIME
>A0848::D2	BFB CHK 50ppb		2/25/93 10:43
>A0849::D2	HSL CAL CHK 50ppb		2/25/93 11:19
>A0850::D2	BLANK		2/25/93 12:03
>A0851::D2	A0995		2/25/93 12:53
>A0852::D2	A0997		2/25/93 13:28
>A0853::D2	A0997MS		2/25/93 14:03
>A0854::D2	A0997MSD		2/25/93 14:38
>A0855::D2	A0998		2/25/93 15:13
>A0856::D2	A0929MS		2/25/93 15:49
>A0857::D2	A0929MSD		2/25/93 16:25
>A0858::D2	A0999		2/25/93 17:00





BFB CHK 50ppb 022593
NRM

Scan #: 107 Retn. time: 5.64

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
.0	1.206	46.95	1.369	63.10	3.000	79.00	2.396	95.10	100.000
.05	6.651	49.05	4.956	68.10	10.972	81.00	2.690	96.10	7.727
.05	5.184	50.05	22.204	69.10	11.607	87.00	4.744	174.00	75.399
.1	2.396	51.05	6.798	73.10	4.842	88.00	4.744	175.00	5.396
.95	2.038	56.05	2.119	74.10	15.797	92.10	2.462	176.00	71.748
05	1.369	57.05	3.326	75.10	52.233	93.00	3.815	177.00	4.760
9	2.233	61.10	4.907	76.10	4.222	94.10	10.743	207.05	4.402
0	1.321	62.10	4.679	77.00	1.174				

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

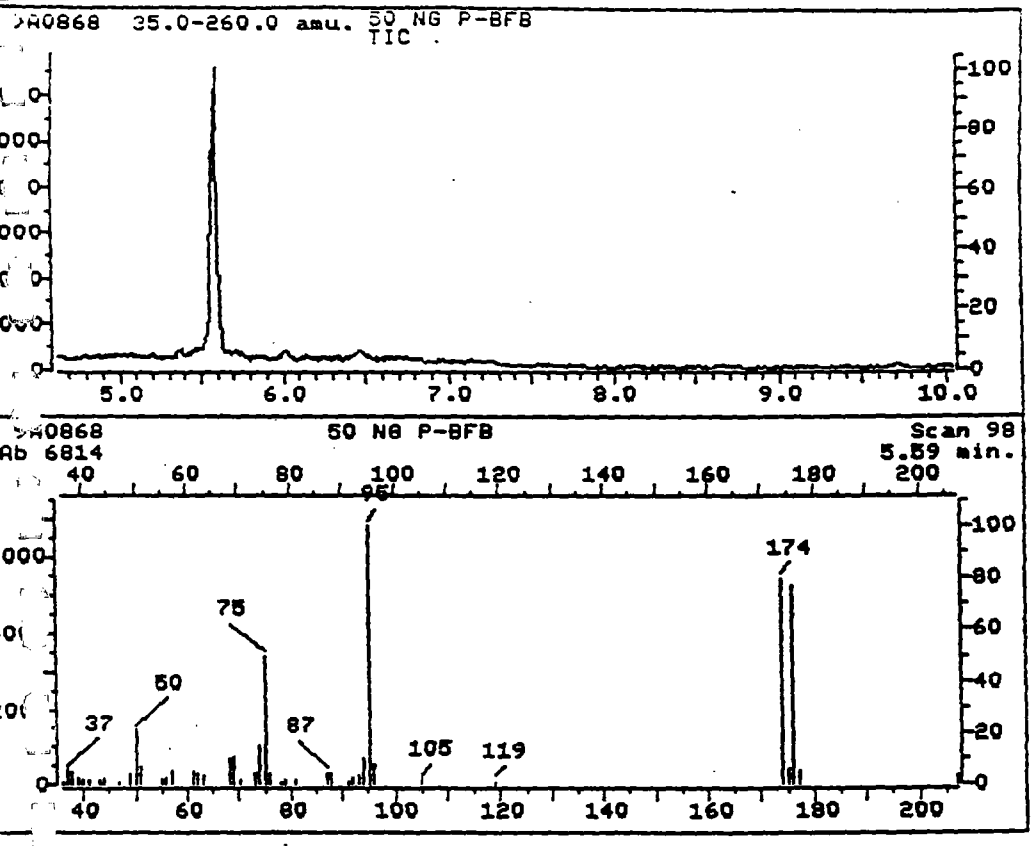
DATE AND TIME OF INJECTION: 2/26/93 0:48
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY Richard W Lynch

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.57	21.57	Ok
75	30-60% of mass 95	49.94	49.94	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.31	7.31	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	79.75	79.75	Ok
175	5-9% of mass 174	5.53	6.94	Ok
176	95-101% of mass 174	76.86	96.37	Ok
177	5-9% of mass 176	5.02	6.53	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A0868::D21		50 NG P-BFB		2/26/93	0:48
>A0869::D21		50 PPB VOA STD		2/26/93	1:28
>A0870::D21		METH BLANK		2/26/93	2:03
>A0871::D21		A1004		2/26/93	2:37
>A0872::D21		A1000		2/26/93	3:13
>A0873::D21		A1001		2/26/93	3:48
>A0874::D21		A1003		2/26/93	4:23
>A0875::D21		A1007		2/26/93	4:58
>A0876::D21		A1005		2/26/93	5:33
>A0877::D21		A1006		2/26/93	6:07
>A0879::D21		A1010		2/26/93	10:38
>A0880::D21		A1002		2/26/93	11:12



868 50 NG P-BFB
98 NRM

e: >A0868 Scan #: 98 Retn. time: 5.59

/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
.0	1.071	49.05	4.623	68.10	10.390	81.00	2.055	96.10	7.308
.0	5.503	50.05	21.573	69.10	10.625	87.00	4.623	105.15	1.673
.05	4.828	51.05	6.531	70.10	1.526	88.00	4.608	119.05	.939
.05	2.421	55.05	1.556	73.10	4.095	91.10	1.218	174.00	79.748
.9	2.040	56.05	2.495	74.10	15.072	92.10	2.392	175.00	5.533
.0	1.878	57.05	5.122	75.10	49.941	93.10	3.757	176.00	76.856
.05	2.084	61.10	4.682	76.10	4.036	94.10	10.346	177.00	5.019
.0	2.363	62.10	4.212	78.00	.925	95.10	100.000	207.15	3.053
.9	1.262	63.10	3.038	79.00	2.128				

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

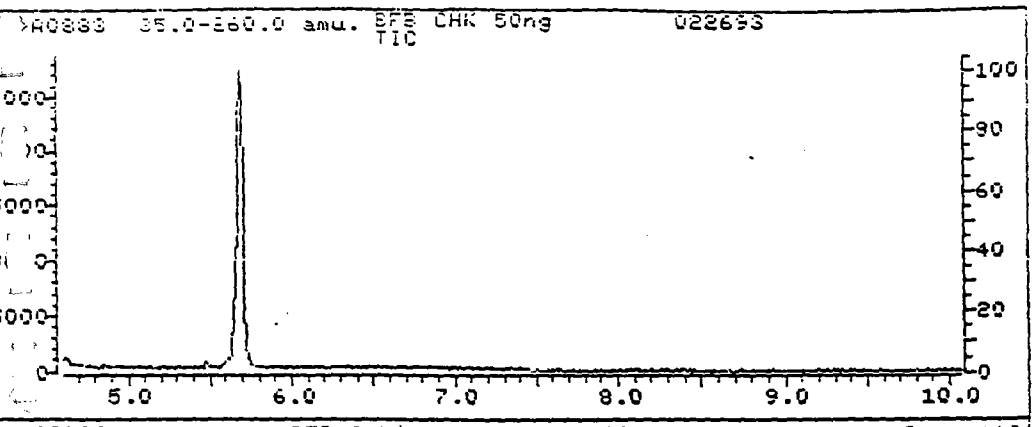
DATE AND TIME OF INJECTION: 2/26/93 13:46
INSTRUMENT ID: 5995

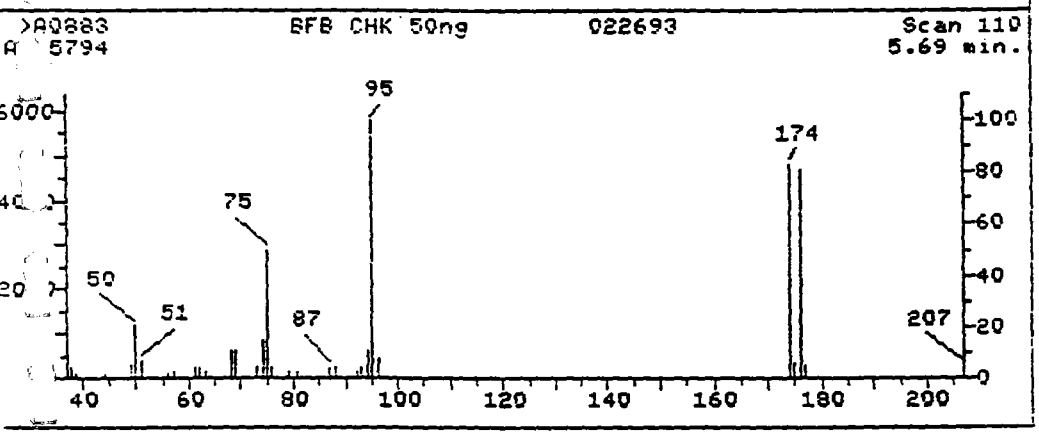
DATA RELEASE AUTHORIZED BY Richard W Lynch

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	20.40	20.40	Ok
75	30-60% of mass 95	49.84	49.84	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.54	7.54	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	82.98	82.98	Ok
175	5-9% of mass 174	6.09	7.34	Ok
176	95-101% of mass 174	80.69	97.23	Ok
177	5-9% of mass 176	5.33	6.61	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID	LAB ID		DATE TIME
>A0883::D3	BFB CHK 50ng		2/26/93 13:46
>A0884::D3	HSL CAL CHK 50ppb		2/26/93 14:21
>A0885::D3	BLANK		2/26/93 15:01
>A0886::D3	MEOH BLANK		2/26/93 15:43
>A0888::D3	A1008		2/26/93 16:55
>A0889::D3	A1011		2/26/93 17:32
>A0890::D3	A1012		2/26/93 18:10
>A0892::D3	A1014		2/26/93 19:38





883 BFB CHK 50ng 022693
1) NRM

e: >A0883 Scan #: 110 Retn. time: 5.69

/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
.0	5.471	56.05	1.622	73.10	4.539	87.00	4.522	96.10	7.542
.05	4.453	57.05	2.813	74.10	15.050	88.00	4.142	174.00	82.982
.05	1.968	61.10	4.280	75.10	49.845	92.10	2.468	175.00	6.093
.0	2.071	62.10	4.246	76.10	4.108	93.10	3.814	176.00	80.687
.0	4.729	63.10	2.813	79.00	2.244	94.10	10.649	177.00	5.333
.05	20.400	68.10	10.735	81.00	2.295	95.10	100.000	207.05	4.798
.0	6.800	69.10	10.632						

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

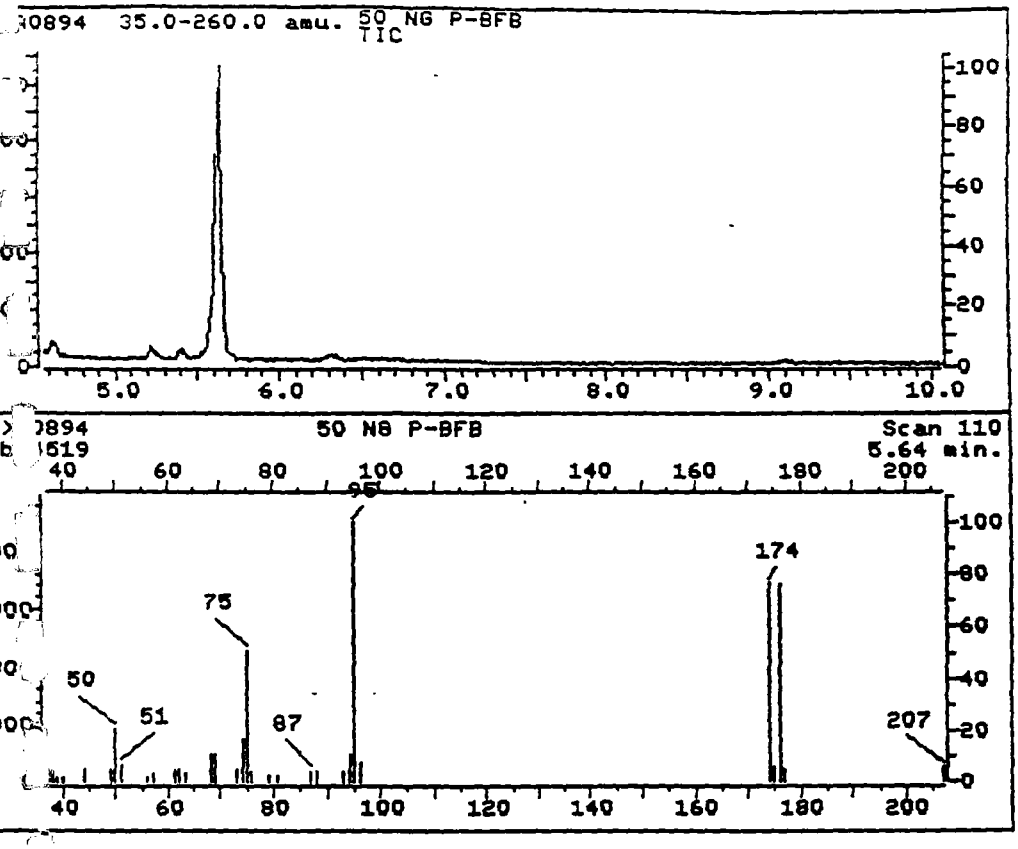
DATE AND TIME OF INJECTION: 2/28/93 13:31
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY Richard W Lynch

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	21.07	21.07	Ok
75	30-60% of mass 95	50.56	50.56	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.57	7.57	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	76.54	76.54	Ok
175	5-9% of mass 174	5.58	7.29	Ok
176	95-101% of mass 174	75.90	99.16	Ok
177	5-9% of mass 176	4.78	6.30	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID	LAB ID		DATE	TIME
>A0894::D3	50 NG P-BFB		2/28/93	13:31
>A0895::D3	50 PPB VOLATILE STD		2/28/93	14:00
>A0896::D3	AQEUOS BLANK		2/28/93	14:57
>A0897::D3	TRIP BLANK		2/28/93	15:32
>A0899::D3	MEOH BLANK		2/28/93	16:43
>A0900::D3	A1015		2/28/93	17:23
>A0904::D3	A0996		2/28/93	19:51
>A0905::D3	A0917	AGA	2/28/93	20:26
>A0906::D3	A0918	AGA	2/28/93	21:01
>A0907::D3	A0919	AGA	2/28/93	21:36
>A0908::D3	A0920	AGA	2/28/93	22:11
>A0909::D3	A0921	AGA	2/28/93	22:45



89 50 NG P-BFB
110 NRM

e:→A0894 Scan #: 110 Retn. time: 5.64

z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
05	5.112	51.05	6.771	69.10	10.909	81.00	2.501	96.10	7.568
05	4.625	56.05	1.837	73.10	4.824	87.00	4.315	174.00	76.543
05	2.124	57.05	3.142	74.10	16.508	88.00	4.050	175.00	5.576
95	1.881	61.10	5.289	75.10	50.564	93.00	3.917	176.00	75.902
05	5.090	62.10	4.935	76.10	4.337	94.10	10.732	177.00	4.780
05	4.713	63.10	3.120	79.00	2.456	95.10	100.000	207.05	5.532
05	21.067	68.10	11.131						

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

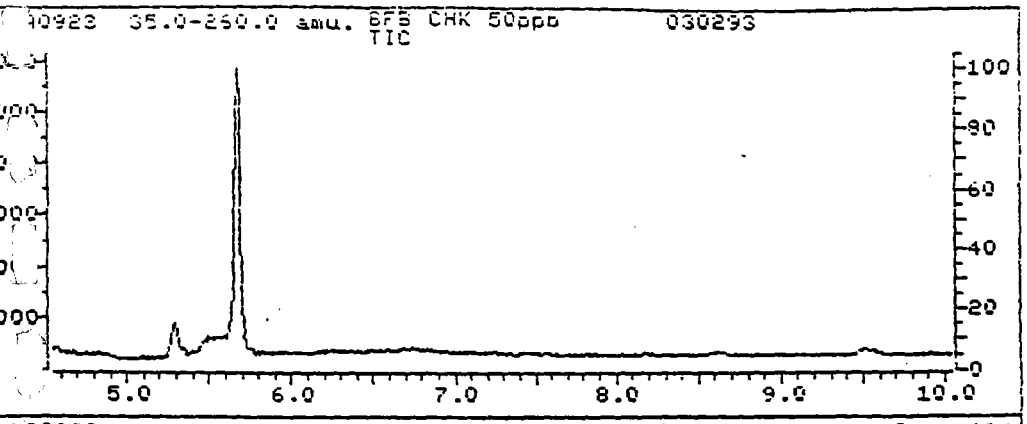
DATE AND TIME OF INJECTION: 3/02/93 10:33
INSTRUMENT ID: 5995

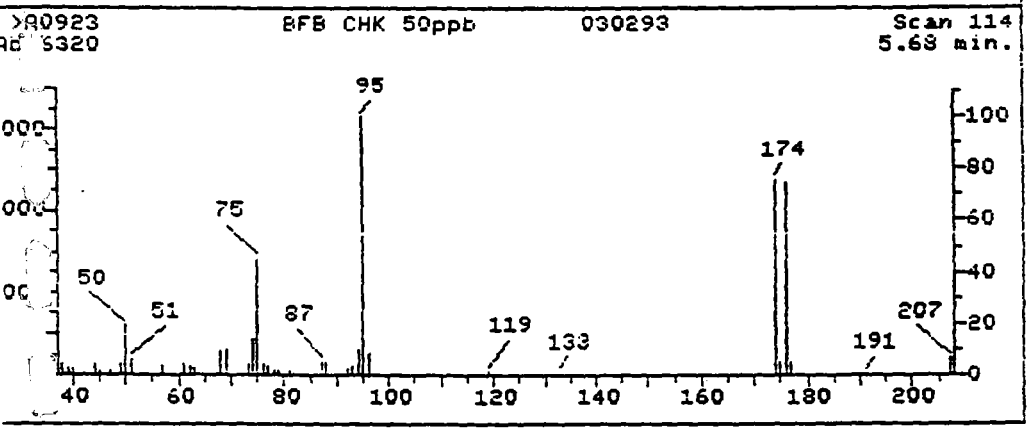
DATA RELEASE AUTHORIZED BY Richard Wright

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.94	18.94	Ok
75	30-60% of mass 95	44.98	44.98	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.13	8.13	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	75.49	75.49	Ok
175	5-9% of mass 174	5.35	7.08	Ok
176	95-101% of mass 174	74.46	98.64	Ok
177	5-9% of mass 176	5.09	6.84	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A0923::D3		BFB CHK 50ppb		3/02/93	10:33
>A0924::D3		HSL CAL CHK 50ppb		3/02/93	11:07
>A0925::D2		BLANK		3/02/93	12:14
>A0927::D2		A1019		3/02/93	13:26
>A0929::D2		A1013		3/02/93	14:41
>A0931::D2		A1016		3/02/93	17:06
>A0939::D2		A0900		3/02/93	23:15





923 BFB CHK 50ppb 030293
11 NRM

e: >A0923 Scan #: 114 Retn. time: 5.68

z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
0	5.127	50.05	18.940	73.10	4.462	87.00	5.316	133.05	1.155
05	4.209	51.05	6.092	74.10	13.861	88.00	4.842	174.00	75.490
15	2.342	57.05	3.402	75.10	44.984	92.10	2.231	175.00	5.348
9	2.405	61.10	4.209	76.10	3.940	93.10	3.402	176.00	74.462
05	3.829	62.10	3.797	77.10	3.560	94.10	9.984	177.00	5.095
05	1.756	63.10	2.848	78.10	1.614	95.10	100.000	191.05	.886
0	1.456	68.10	9.573	79.00	2.104	96.10	8.133	207.15	6.598
05	4.035	69.10	9.873	81.00	1.930	119.05	1.329	208.05	1.535

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

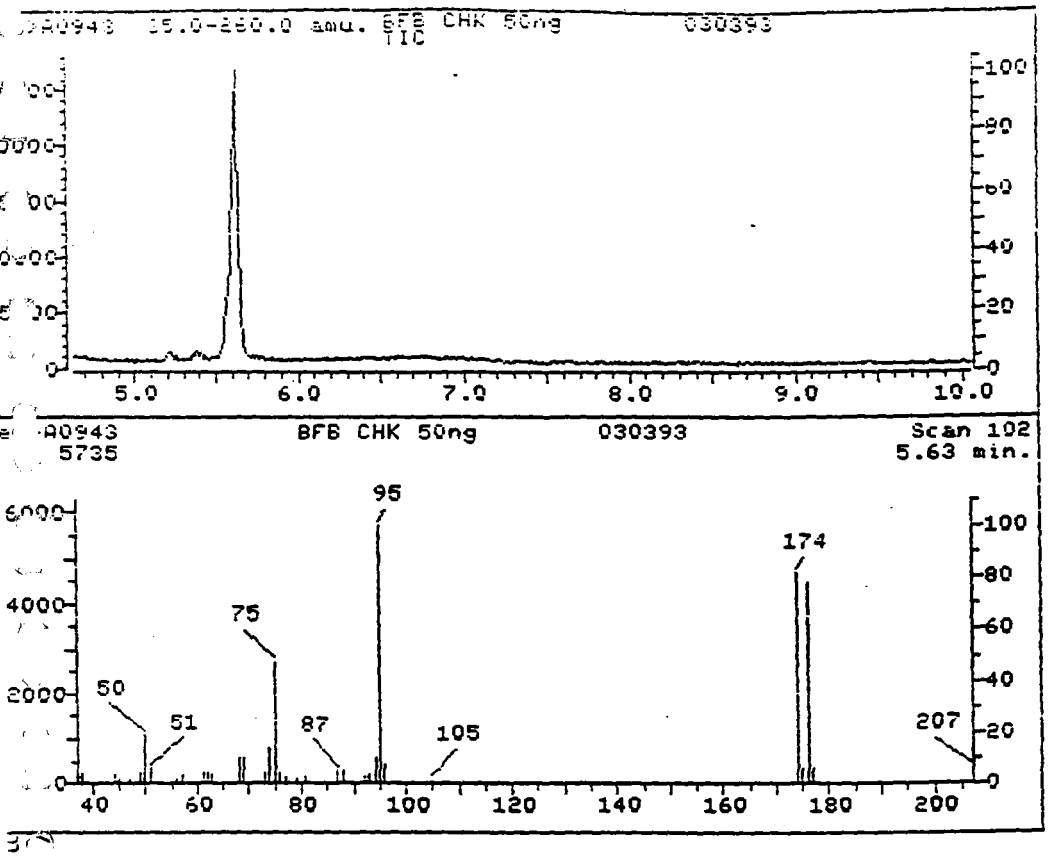
DATE AND TIME OF INJECTION: 3/03/93 14:48
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY Richard W Lynch

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.76	18.76	Ok
75	30-60% of mass 95	47.39	47.39	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.92	7.92	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	81.71	81.71	Ok
175	5-9% of mass 174	5.88	7.19	Ok
176	95-101% of mass 174	77.70	95.09	Ok
177	5-9% of mass 176	5.49	7.07	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A0943::D21		BFB CHK 50ng		3/03/93	14:48
>A0944::D21		HSL CAL CHK 50ppb		3/03/93	15:31
>A0945::D21		BLANK		3/03/93	16:38
>A0946::D21		A0891		3/03/93	17:13
>A0947::D21		A0922		3/03/93	17:49
>A0948::D21		A0923		3/03/93	18:24
>A0949::D21		A0924		3/03/93	19:00
>A0955::D21		A0901		3/03/93	22:34
>A0956::D21		A0903		3/03/93	23:09
>A0957::D21		METH BLANK		3/03/93	23:45
>A0958::D21		A0902		3/04/93	0:20
>A0959::D21		A1009		3/04/93	0:56
>A0960::D21		A1017		3/04/93	1:32



1943 BFB CHK 50ng 030393
102 NRM

e: >A0943 Scan #: 102 Retn. time: 5.63

	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
.05	5.248	51.05	5.859	69.10	9.660	81.00	2.197	96.10	7.916
. 5	4.551	56.05	1.656	73.10	4.289	87.00	4.969	105.05	1.151
.05	3.609	57.05	3.226	74.10	14.194	88.00	4.708	174.00	81.709
.05	1.482	61.10	4.342	75.10	47.393	92.10	2.371	175.00	5.876
. 5	1.500	62.10	3.958	76.10	4.080	93.10	3.313	176.00	77.698
.05	3.976	63.10	2.999	77.10	2.755	94.10	10.218	177.00	5.493
.05	18.762	68.10	10.096	79.00	1.953	95.10	100.000	207.15	5.493

Continuing Calibration Check
HSL Compounds

Calibration Date: 02/25/93

Time: 11:19

Laboratory ID: >A0849

Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
omethane	.72295	.63420	12.28		**	
ethane	.85848	.84354	1.74			
Chloride	.77812	.69088	11.21	*		
ethane	.80522	.77057	4.30			
in	.08779	.08924	1.65			(Conc=80.00)
-Trichlorotrifluoroethane	1.75078	1.60956	8.07			
orofluromethane	2.00202	1.98601	.80			
e	.47593	.53714	12.86			
chloroethene	1.98187	1.95504	1.35	*		
Disulfide	2.55506	2.69508	5.48			
nitrile	.36097	.32360	10.35			
ene Chloride	1.84333	1.68957	8.34			
chloroethene(trans)	1.98838	1.87132	5.89			
chloroethane	2.54490	2.38104	6.44		**	
Acetate	.90051	.82012	8.93			
none	.66397	.63113	4.95			
form	3.04756	2.87541	5.65	*		
Trichloroethane	2.11667	2.06655	2.37			
Tetrachloride	1.86772	1.80153	3.54			
chloroethane-d4	2.05653	2.18439	6.22			(Conc=50.00)
chloroethane	.44280	.41344	6.63			
e	.85784	.78671	8.29			
roethene	.33530	.31005	7.53			
chloropropane	.31278	.28141	10.03	*		
chloromethane	.54649	.51113	6.47			
oethylvinylether	.20742	.19268	7.11			
one	.22036	.20648	6.30			
,3-Dichloropropene	.50555	.47315	6.41			
-d8	1.02615	1.03687	1.05			
	1.09948	1.05172	4.34	*		
-Dichloropropene	.49292	.44979	8.75			
-Tetrachloroethane	.53237	.45591	14.36		**	

Response Factor from daily standard file at 50.00 UG/L

Average Response Factor from Initial Calibration Form VI

% Difference from original average or curve

Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00185

Continuing Calibration Check
HSL Compounds

o: Calibration Date: 02/25/93

ractor: 21ST Century Env Time: 11:19

t No: Laboratory ID: A0849

ment ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2-dichloroethane	.35825	.32979	7.94		
tl 1-2-pentanone	.27107	.24847	8.34		
achloroethene	.41527	.37834	8.89		
om chloromethane	.49377	.45531	7.79		
rc nzene	.95461	.89176	6.58		**
lbenzene	1.79874	1.64140	8.75	*	
Xylenes	1.46072	1.37949	5.56		
le	1.40966	1.33801	5.08		
en	1.00140	1.01006	.86		
oform	.32074	.28683	10.57		**
off robenzene	.62312	.61472	1.35		
ch robenzene	.82488	.66901	18.90		
chlorobenzene	.83330	.68545	17.74		
chlorobenzene	.74989	.61865	17.50		

esponse Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- Difference from original average or curve

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

: Calibration Date: 02/26/93

ractor: 21ST Century Env Time: 01:28

t No: Laboratory ID: >A0869

ument ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

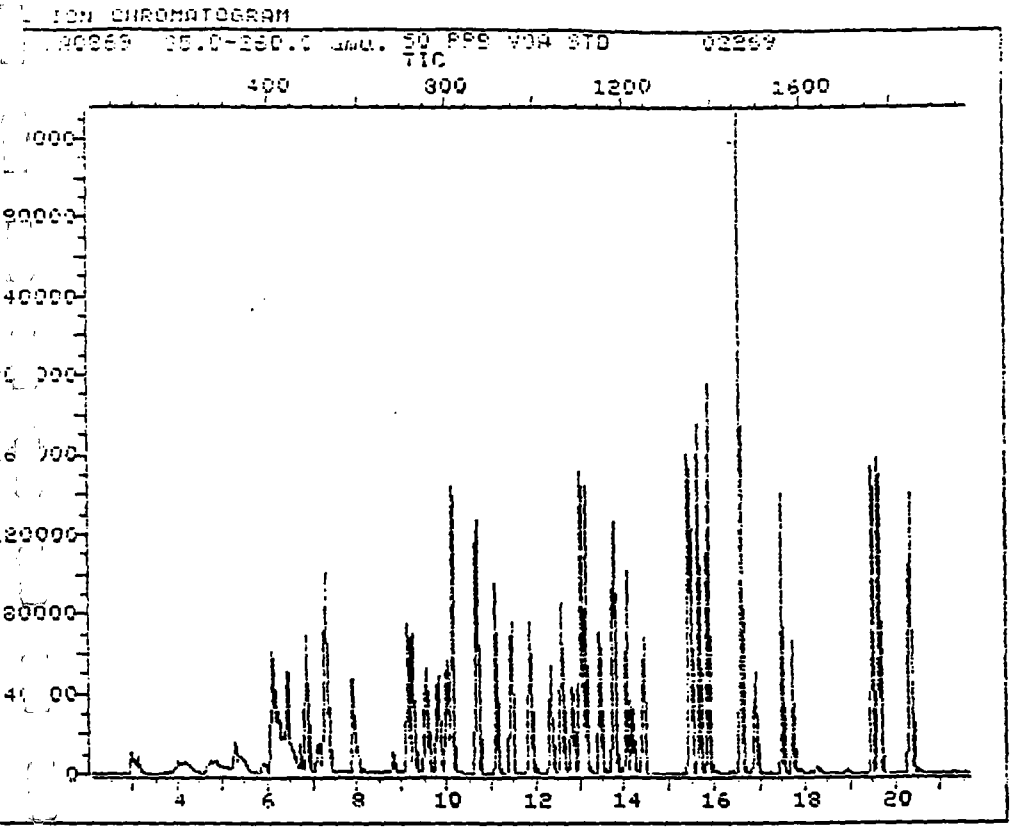
Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
ro thane	.72295	.55632	23.05		**	
ox hane	.85848	.77632	9.57			
l Chloride	.77812	.67547	13.19	*		
roethane	.80522	.73296	8.97			
le	.08779	.09635	9.74			(Conc=80.00)
,2- ichlorotrifluoroethane	1.75078	1.72140	1.68			
chlorofluromethane	2.00202	1.82187	9.00			
on	.47593	.50652	6.43			
Di oroethene	1.98187	1.69460	14.49	*		
on Disulfide	2.55506	2.37546	7.03			
lor trile	.36097	.36425	.91			
yl Chloride	1.84333	1.80234	2.22			
Dichloroethene(trans)	1.98838	1.93365	2.75			
Dichloroethane	2.54490	2.39466	5.90		**	
l tate	.90051	.95437	5.98			
tan e	.66397	.69169	4.17			
roform	3.04756	2.84113	6.77	*		
1-T chloroethane	2.11667	1.94218	8.24			
on trachloride	1.86772	1.67863	10.12			
Dichloroethane-d4	2.05653	1.94163	5.59			(Conc=50.00)
Dich oroethane	.44280	.40113	9.41			
ne	.85784	.82828	3.45			
lor ethene	.33530	.31178	7.01			
ichloropropane	.31278	.29702	5.04	*		
di loromethane	.54649	.50179	8.18			
ord hylvinylether	.20742	.22635	9.13			
anone	.22036	.24079	9.27			
-1, -Dichloropropene	.50555	.48375	4.31			
ne-	1.02615	1.01279	1.30			
ne	1.09948	1.04424	5.02	*		
,3-Dichloropropene	.49292	.45566	7.56			
,2- trachloroethane	.53237	.48306	9.26		**	

- esponse Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- Difference from original average or curve

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)



Data File: >A0869::D2 Quant Output File: ^A0869::QT
Name: 50 PPB VOA STD
Misc: 02269

Lab File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930226 01:58
Injected at: 930226 01:28

Continuing Calibration Check
HSL Compounds

No: | Calibration Date: 02/26/93

actor: 21ST Century Env | Time: 14:21

act No: | Laboratory ID: >A0884

ument ID: Volatile Inst A | Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
omethane	.72295	.55552	23.16		**	
methane	.85848	.78630	8.41			
Chloride	.77812	.61111	21.46	*		
oethane	.80522	.70061	12.99			
ein	.08779	.07350	16.28			(Conc=80.00)
-Trichlorotrifluoroethane	1.75078	1.50943	13.79			
lorofluromethane	2.00202	1.73731	13.22			
ne	.47593	.48376	1.65			
Dichloroethene	1.98187	1.66895	15.79	*		
n Disulfide	2.55506	2.18503	14.48			
onitrile	.36097	.32578	9.75			
lene Chloride	1.84333	1.56196	15.26			
ichloroethene(trans)	1.98838	1.77156	10.90			
ichloroethane	2.54490	2.26794	10.88		**	
Acetate	.90051	.78268	13.09			
anone	.66397	.57320	13.67			
oform	3.04756	2.69899	11.44	*		
-Trichloroethane	2.11667	1.88970	10.72			
n Tetrachloride	1.86772	1.63915	12.24			
ichloroethane-d4	2.05653	2.01877	1.84			(Conc=50.00)
ichloroethane	.44280	.38411	13.25			
ne	.85784	.73397	14.44			
loroethene	.33530	.29518	11.97			
chloropropane	.31278	.26275	15.99	*		
ichloromethane	.54649	.47812	12.51			
roethylvinylether	.20742	.18894	8.91			
none	.22036	.19038	13.61			
1,3-Dichloropropene	.50555	.44042	12.88			
e-d8	1.02615	1.02058	.54			
e	1.09948	.96724	12.03	*		
3-Dichloropropene	.49292	.40979	16.86			
2-Tetrachloroethane	.53237	.42022	21.07		**	

- Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- % Difference from original average or curve

Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

No: _____ Calibration Date: 02/26/93

Contractor: 21ST Century Env Time: 14:21

Project No: _____ Laboratory ID: >A0884

Instrument ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

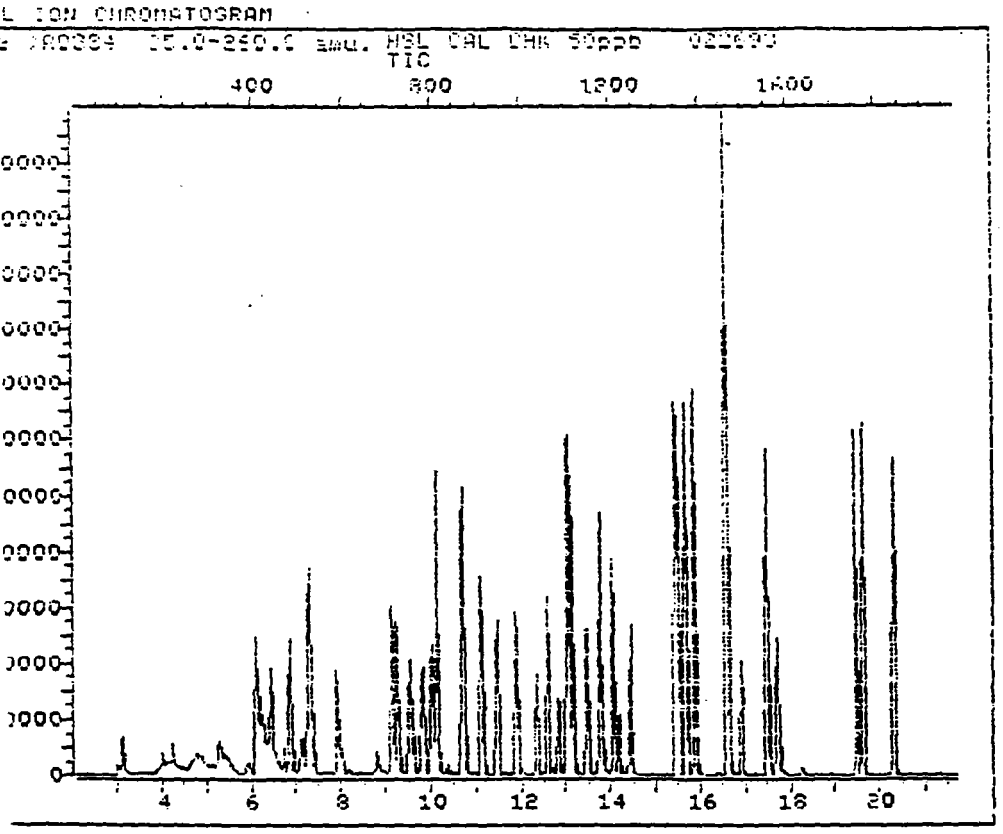
Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
,? Trichloroethane	.35825	.31251	12.77		
et l-2-pentanone	.27107	.22522	16.91		
rachloroethene	.41527	.35824	13.73		
romochloromethane	.49377	.42248	14.44		
or enzene	.95461	.83151	12.90		**
ylbenzene	1.79874	1.52561	15.18	*	
-Xylenes	1.46072	1.28069	12.32		
yl e	1.40966	1.25668	10.85		
re	1.00140	.96730	3.41		
moform	.32074	.27456	14.40		**
mof uorobenzene	.62312	.61854	.73		
icl orobenzene	.82488	.74530	9.65		
ichlorobenzene	.83330	.75950	8.86		
ichlorobenzene	.74989	.67935	9.41		

- Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- % Difference from original average or curve

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)



Data File: >A0884::D3 Quant Output File: >A0884::QT
Name: HSL CAL CHK 50ppb
Misc: 022693

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 14:51
Injected at: 930226 14:21

Continuing Calibration Check
HSL Compounds

e No: Calibration Date: 02/28/93

actor: 21ST Century Env Time: 14:00

ract No: Laboratory ID: >A0895

trument ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
oromethane	.72295	.55082	23.81		**	
mo ethane	.85848	.90658	5.60			
y Chloride	.77812	.61766	20.62	*		
oroethane	.80522	.74675	7.26			
olein	.08779	.11940	36.00			(Conc=80.00)
,2 richlorotrifluoroethane	1.75078	1.89570	8.28			
ch rofluromethane	2.00202	2.17661	8.72			
tone	.47593	.63053	32.48			
-D hloroethene	1.98187	1.52535	23.03	*		
bo Disulfide	2.55506	1.69794	33.55			
ylonitrile	.36097	.42308	17.21			
hyl ne Chloride	1.84333	1.64022	11.02			
-D loroethene(trans)	1.98838	2.05519	3.36			
-Dichloroethane	2.54490	2.66312	4.65		**	
yl Acetate	.90051	1.00557	11.67			
ut ne	.66397	.85598	28.92			
or rm	3.04756	3.22758	5.91	*		
,1-Trichloroethane	2.11667	2.18225	3.10			
bon Tetrachloride	1.86772	1.89502	1.46			
-Di loroethane-d4	2.05653	2.20819	7.37			(Conc=50.00)
-Dichloroethane	.44280	.50174	13.31			
ene	.85784	.83223	2.99			
hl oethene	.33530	.33274	.76			
-Di loropropane	.31278	.30683	1.90	*		
odichloromethane	.54649	.60143	10.05			
lo ethylvinylether	.20742	.23773	14.61			
xa e	.22036	.28670	30.11			
s-1,3-Dichloropropene	.50555	.53976	6.77			
ene-d8	1.02615	1.02742	.12			
en	1.09948	1.22082	11.04	*		
1,3-Dichloropropene	.49292	.51031	3.53			
2,2-Tetrachloroethane	.53237	.55037	3.38		**	

- Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- % Difference from original average or curve

-- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 02/28/93

Contractor: 21ST Century Env Time: 14:00

Contract No: Laboratory ID: >A0895

Instrument ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

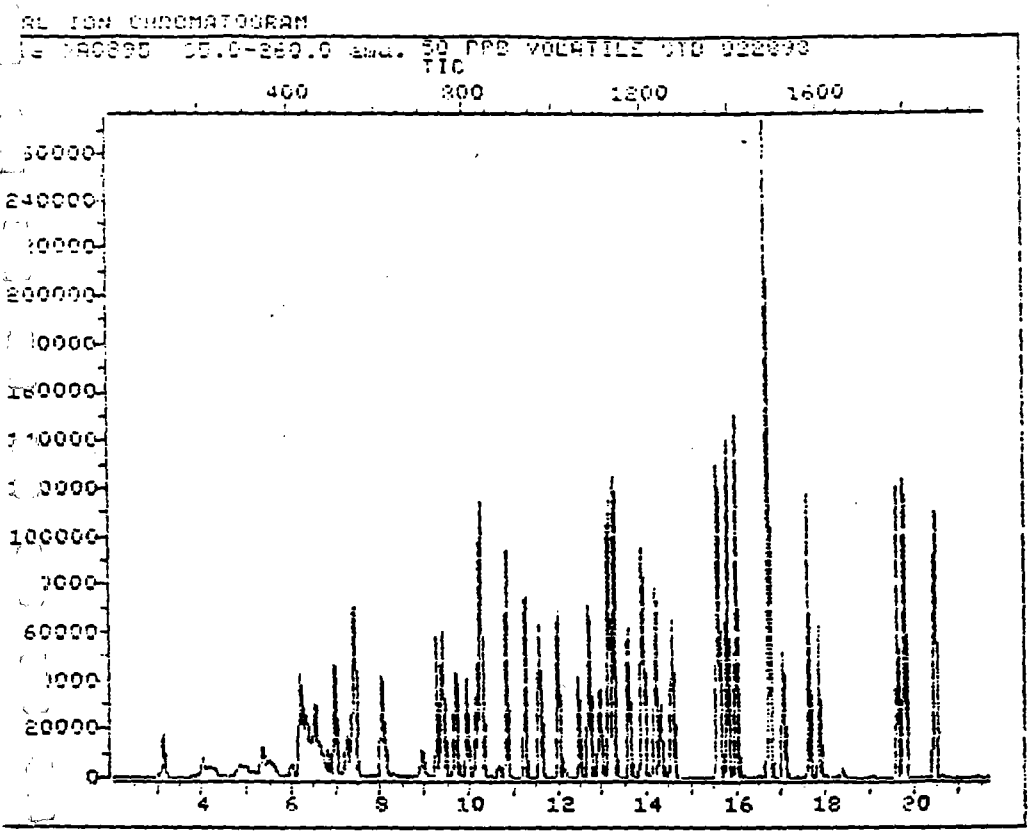
Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
1,1,2-Trichloroethane	.35825	.36840	2.84		
4-Methyl-2-pentanone	.27107	.32641	20.41		
Tetrachloroethene	.41527	.38138	8.16		
Dibromochloromethane	.49377	.53790	8.94		
Chlorobenzene	.95461	.93083	2.49		**
Ethylbenzene	1.79874	1.69393	5.83	*	
m&p-Xylenes	1.46072	1.47742	1.14		
o-Xylene	1.40966	1.43323	1.67		
Styrene	1.00140	1.15600	15.44		
Bromoform	.32074	.36263	13.06		**
Bromofluorobenzene	.62312	.63743	2.30		
m-Dichlorobenzene	.82488	.76660	7.07		
p-Dichlorobenzene	.83330	.78113	6.26		
o-Dichlorobenzene	.74989	.71549	4.59		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)



ata File: >A0895::D3 Quant Output File: ^A0895::QT
Name: 50 PPB VOLATILE STD
Misc: 022893

d File: ID0127::M1
Title: USEPA 624 VOLATILES
ast Calibration: 930226 17:12

Operator ID: JEFF
Quant Time: 930228 14:30
jected at: 930228 14:00

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 03/02/93

Contractor: 21ST Century Env Time: 11:07

Contract No: Laboratory ID: >A0924

Instrument ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Chloromethane	.72295	.67504	6.63		**	
Bromomethane	.85848	.81732	4.79			
Vinyl Chloride	.77812	.74066	4.81	*		
Chloroethane	.80522	.79679	1.05			
Acrolein	.08779	.09797	11.59			(Conc=80.00)
1,1,2-Trichlorotrifluoroethane	1.75078	1.66723	4.77			
Trichlorofluromethane	2.00202	1.67472	16.35			
Acetone	.47593	.51221	7.62			
1,1-Dichloroethene	1.98187	1.87589	5.35	*		
Carbon Disulfide	2.55506	2.72572	6.68			
Acrylonitrile	.36097	.39117	8.37			
Methylene Chloride	1.84333	1.75645	4.71			
1,2-Dichloroethene(trans)	1.98838	1.89442	4.73			
1,1-Dichloroethane	2.54490	2.39098	6.05		**	
Vinyl Acetate	.90051	.78062	13.31			
2-Butanone	.66397	.69313	4.39			
Chloroform	3.04756	2.82453	7.32	*		
,1,1-Trichloroethane	2.11667	1.90382	10.06			
Carbon Tetrachloride	1.86772	1.61631	13.46			
,2-Dichloroethane-d4	2.05653	1.87291	8.93			(Conc=50.00)
,2-Dichloroethane	.44280	.38641	12.73			
enzene	.85784	.89494	4.32			
richloroethene	.33530	.33498	.09			
,2-Dichloropropane	.31278	.32407	3.61	*		
romodichloromethane	.54649	.50702	7.22			
-Chloroethylvinylether	.20742	.21826	5.23			
-Hexanone	.22036	.22296	1.18			
rans-1,3-Dichloropropene	.50555	.51730	2.33			
oluene-d8	1.02615	1.02029	.57			
oluene	1.09948	1.11964	1.83	*		
is-1,3-Dichloropropene	.49292	.49329	.08			
,1,2,2-Tetrachloroethane	.53237	.53416	.34		**	

F - Response Factor from daily standard file at 50.00 UG/L

F - Average Response Factor from Initial Calibration Form VI

Diff - % Difference from original average or curve

CC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

o: Calibration Date: 03/02/93

ractor: 21ST Century Env Time: 11:07

t No: Laboratory ID: >A0924

ent ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
2[illegible]ichloroethane	.35825	.36699	2.44		
t[illegible]l-2-pentanone	.27107	.27822	2.64		
achloroethene	.41527	.40698	2.00		
or chloromethane	.49377	.47241	4.33		
r[illegible]nzene	.95461	.97519	2.16		**
lbenzene	1.79874	1.80038	.09	*	
-Xylenes	1.46072	1.44326	1.20		
le	1.40966	1.43866	2.06		
en	1.00140	1.06536	6.39		
oform	.32074	.30566	4.70		**
of orobenzene	.62312	.62274	.06		
ch robenzene	.82488	.71645	13.14		
chlorobenzene	.83330	.73253	12.09		
ch robenzene	.74989	.65964	12.03		

- esponse Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- Difference from original average or curve

- alibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

ase No: Calibration Date: 03/03/93

ontractor: 21ST Century Env Time: 15:31

ontract No: Laboratory ID: >A0944

nstrument ID: Volatile Inst A Initial Calibration Date: 02/18/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
,1,2-Trichloroethane	.35825	.36159	.93		
-Methyl-2-pentanone	.27107	.29230	7.83		
etrachloroethene	.41527	.42219	1.67		
ibromochloromethane	.49377	.47763	3.27		
hlorobenzene	.95461	.94274	1.24		**
thylbenzene	1.79874	1.71812	4.48	*	
&p-Xylenes	1.46072	1.39959	4.18		
-Xylene	1.40966	1.38307	1.89		
tyrene	1.00140	1.02151	2.01		
romoform	.32074	.33488	4.41		**
romofluorobenzene	.62312	.61624	1.10		
-Dichlorobenzene	.82488	.84114	1.97		
-Dichlorobenzene	.83330	.85908	3.09		
-Dichlorobenzene	.74989	.78285	4.39		

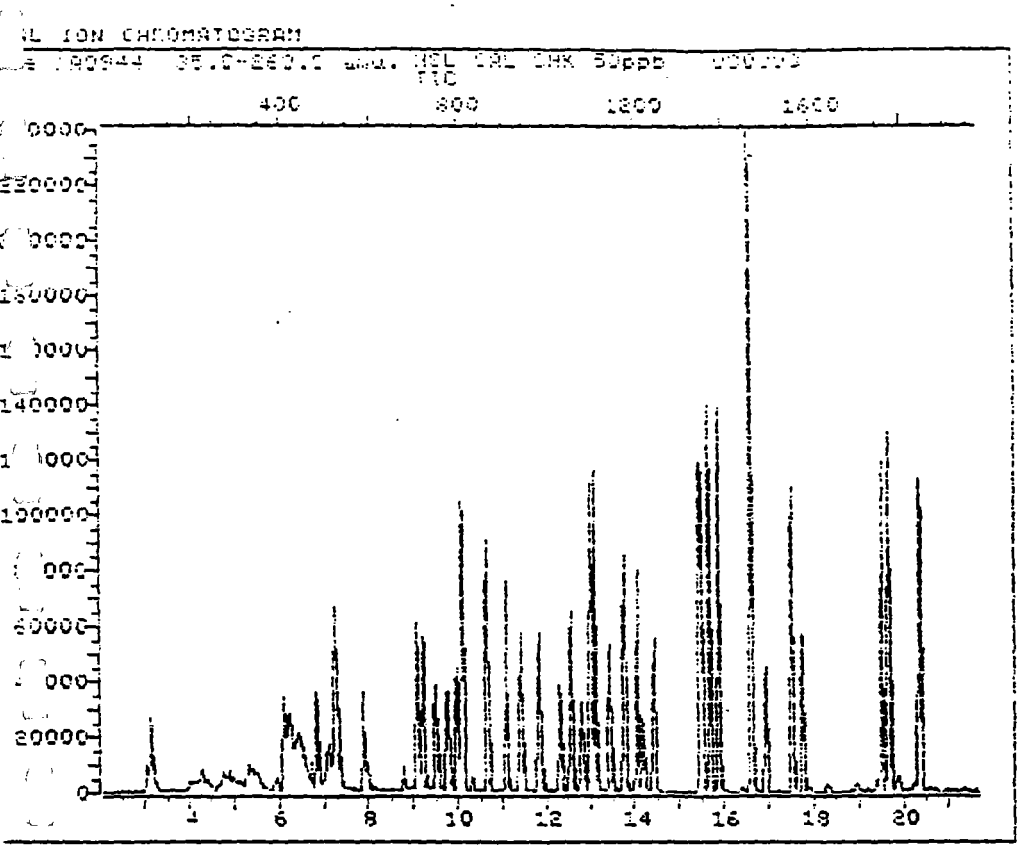
- Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

ff - % Difference from original average or curve

: - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00201



ata File: >A0944::D2 Quant Output File: ^A0944::QT
Name: HSL CAL CHK 50ppb
Misc: 030393

d File: ID0127::M1
Title: USEPA 624 VOLATILES
st Calibration: 930303 14:03

Operator ID: MANAGER
uant Time: 930303 16:01
jected at: 930303 15:31

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

DATE AND TIME OF INJECTION: 2/17/93 10:33
INSTRUMENT ID: 5995

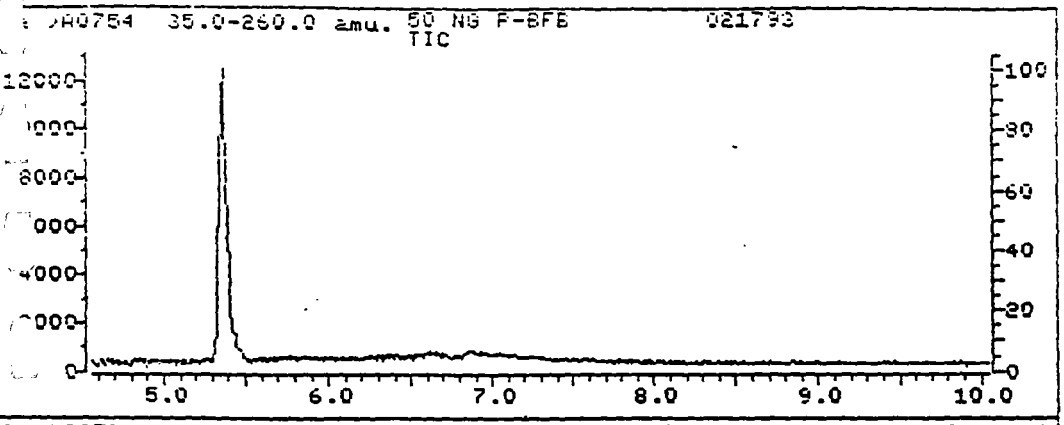
DATA RELEASE AUTHORIZED BY Richard Wright

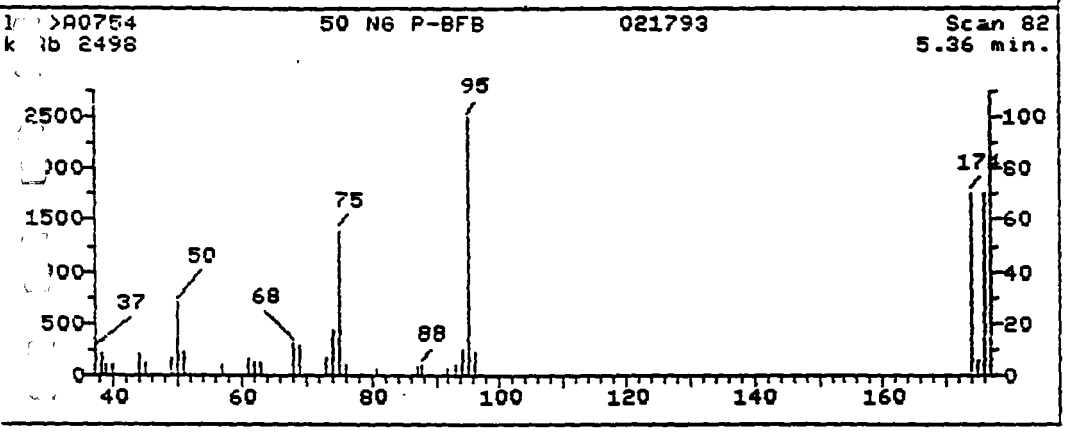
m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	27.98	27.98	Ok
75	30-60% of mass 95	55.52	55.52	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.93	8.93	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	70.70	70.70	Ok
175	5-9% of mass 174	5.68	8.04	Ok
176	95-101% of mass 174	70.46	99.66	Ok
177	5-9% of mass 176	5.32	7.56	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A0754::D3		50 NG P-BFB		2/17/93	10:33
>A0755::D3		50 PPB VOLATILE STD		2/17/93	11:01
>A0757::D3		20 PPB VOLATILE STD		2/17/93	15:03
>A0758::D3		100PPB VOLATILE STD		2/17/93	15:38
>A0760::D3		150 PPB VOLATILE ST		2/17/93	16:15
>A0761::D3		200 PPB VOLATILE ST		2/17/93	16:46
>A0762::D3		PROCEDURE BLANK		2/17/93	17:17
>A0765::D3		TCLP BLANK		2/17/93	18:50
>A0766::D3		A0650 CLEAN VENTURE		2/17/93	19:21

00203





AC 54 50 NG P-BFB 021793
82 NRM

il : >A0754 Scan #: 82 Retn. time: 5.36

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
7.05	9.768	50.05	27.982	68.10	12.450	80.90	2.722	95.10	100.000
8.05	8.046	51.05	9.007	69.10	11.649	87.00	3.443	96.10	8.927
9.05	4.243	57.05	4.243	73.10	6.765	87.90	4.123	174.00	70.697
0.05	3.923	61.10	6.605	74.10	17.054	92.00	2.802	175.00	5.685
4.05	8.727	62.10	5.324	75.10	55.524	93.10	3.923	176.00	70.456
5.05	5.364	63.10	4.964	76.10	4.604	94.10	9.888	177.00	5.324
9.05	6.485								

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: Volatile Inst A

Contractor: 21ST Century Env Calibration Date: 02/18/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .300 Maximum % RSD for CCC is 30%

Laboratory ID:	>A0757	>A0755	>A0758	>A0760	>A0761					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Chloromethane	.60601	.81116	.72008	.70398	.77352	.430	.72295	10.799		**
Bromomethane	.82761	.76137	.91654	.86027	.92659	.522	.85848	7.900		
Vinyl Chloride	.60144	.87713	.78188	.77089	.85927	.454	.77812	14.030	*	
Chloroethane	.70758	.74387	.85885	.81377	.90204	.555	.80522	9.939		
Acrolein	.07434	.08628	.09903	.08401	.09531	.653	.08779	11.110		(Conc=32.0,80.0,160.0,240
1,1,2-Trichlorotrifluoroethane	1.37244	1.56222	1.90713	1.88036	2.03174	.675	1.75078	15.613		
Trichlorofluromethane	1.66461	1.66171	2.23631	2.08689	2.36059	.579	2.00202	16.192		
Acetone	.61990	.45383	.45059	.40173	.45358	.680	.47593	17.537		
1,1-Dichloroethene	1.69240	1.92554	2.16859	2.07270	2.05013	.670	1.98187	9.261	*	
Carbon Disulfide	2.94185	1.86518	2.91337	2.72241	2.33255	.704	2.55506	17.845		
Acrylonitrile	.30439	.39161	.35567	.36037	.39280	.791	.36097	9.972		
Methylene Chloride	1.76914	1.82627	1.89847	1.81891	1.90387	.751	1.84333	3.104		
1,2-Dichloroethene(trans)	1.74109	2.01348	2.04273	1.99545	2.14915	.797	1.98838	7.570		
1,1-Dichloroethane	2.19471	2.61887	2.59036	2.52356	2.79700	.866	2.54490	8.658		**
Vinyl Acetate	.87161	.96500	.88189	.84261	.94147	.877	.90051	5.655		
2-Butanone	.67400	.79156	.61500	.56255	.67676	.966	.66397	12.874		
Chloroform	2.64351	3.10922	3.13454	2.97999	3.37056	1.014	3.04756	8.736	*	
1,1,1-Trichloroethane	1.66737	2.14161	2.20405	2.12858	2.44172	1.046	2.11667	13.277		
Carbon Tetrachloride	1.41786	1.82126	1.97379	1.92632	2.19940	1.075	1.86772	15.361		
1,2-Dichloroethane-d4	2.06999	2.00409	2.09821	2.06008	2.05031	1.097	2.05653	1.670		(Conc=50.0,50.0,50.0,50.0
1,2-Dichloroethane	.38920	.45496	.46454	.43131	.47399	.948	.44280	7.657		
Benzene	.73100	.91895	.88055	.83208	.92664	.947	.85784	9.350		
Trichloroethene	.27684	.35040	.34192	.33026	.37709	1.039	.33530	11.020		
1,2-Dichloropropane	.26475	.32983	.31886	.30480	.34568	1.070	.31278	9.829	*	
Bromodichloromethane	.46071	.54086	.57265	.54645	.61177	1.109	.54649	10.162		
2-Chloroethylvinylether	.19156	.22451	.20674	.19252	.22176	1.152	.20742	7.513		
2-Hexanone	.20491	.24303	.21575	.19621	.24189	1.324	.22036	9.682		
trans-1,3-Dichloropropene	.41683	.51485	.52527	.50198	.56880	1.175	.50555	10.996		
Toluene-d8	1.01534	1.01844	1.03353	1.03017	1.03326	1.216	1.02615	.840		(Conc=50.0,50.0,50.0,50.0
Toluene	.92370	1.14929	1.12754	1.08087	1.21600	1.226	1.09948	9.973	*	

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: Volatile Inst A

Contractor: 21ST Century Env Calibration Date: 02/18/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .300 Maximum % RSD for CCC is 30%

Laboratory ID:	>A0757	>A0755	>A0758	>A0760	>A0761					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
cis-1,3-Dichloropropene	.38984	.49506	.51226	.49637	.57104	.873	.49292	13.272		
1,1,2,2-Tetrachloroethane	.44639	.57987	.54275	.50404	.58880	1.148	.53237	11.010		**
1,1,2-Trichloroethane	.30282	.38460	.36521	.34436	.39424	.893	.35825	10.164		
4-Methyl-2-pentanone	.25003	.29994	.26316	.24260	.29961	.919	.27107	10.042		
Tetrachloroethene	.32644	.43725	.42456	.41636	.47175	.911	.41527	12.997		
Dibromochloromethane	.40237	.49033	.51385	.49527	.56703	.935	.49377	12.040		
Chlorobenzene	.82595	.99618	.97720	.93231	1.04141	1.003	.95461	8.578		**
Ethylbenzene	1.50261	1.87783	1.84340	1.77840	1.99146	1.016	1.79874	10.156	*	
m&p-Xylenes	1.33764	1.51382	1.47824	1.40676	1.56714	1.029	1.46072	6.172		
o-Xylene	1.26702	1.50924	1.46641	1.35690	1.44871	1.073	1.40966	6.895		
Styrene	1.05416	1.08021	1.01131	.91474	.94661	1.075	1.00140	6.991		
Bromoform	.24747	.31767	.33397	.32166	.38291	1.095	.32074	15.129		**
Bromofluorobenzene	.61033	.60831	.62391	.63355	.63947	1.133	.62312	2.212		(Conc=50.0,50.0,50.0,50.0
1,3-Dichlorobenzene	.93344	.71440	.80491	.80815	.86350	1.261	.82488	9.804		
1,4-Dichlorobenzene	.94894	.72693	.81093	.81298	.86672	1.271	.83330	9.807		
1,2-Dichlorobenzene	.84399	.65118	.72974	.73453	.79001	1.315	.74989	9.628		

$\overline{RF}$ - Response Factor (Subscript is amount in UG/L)

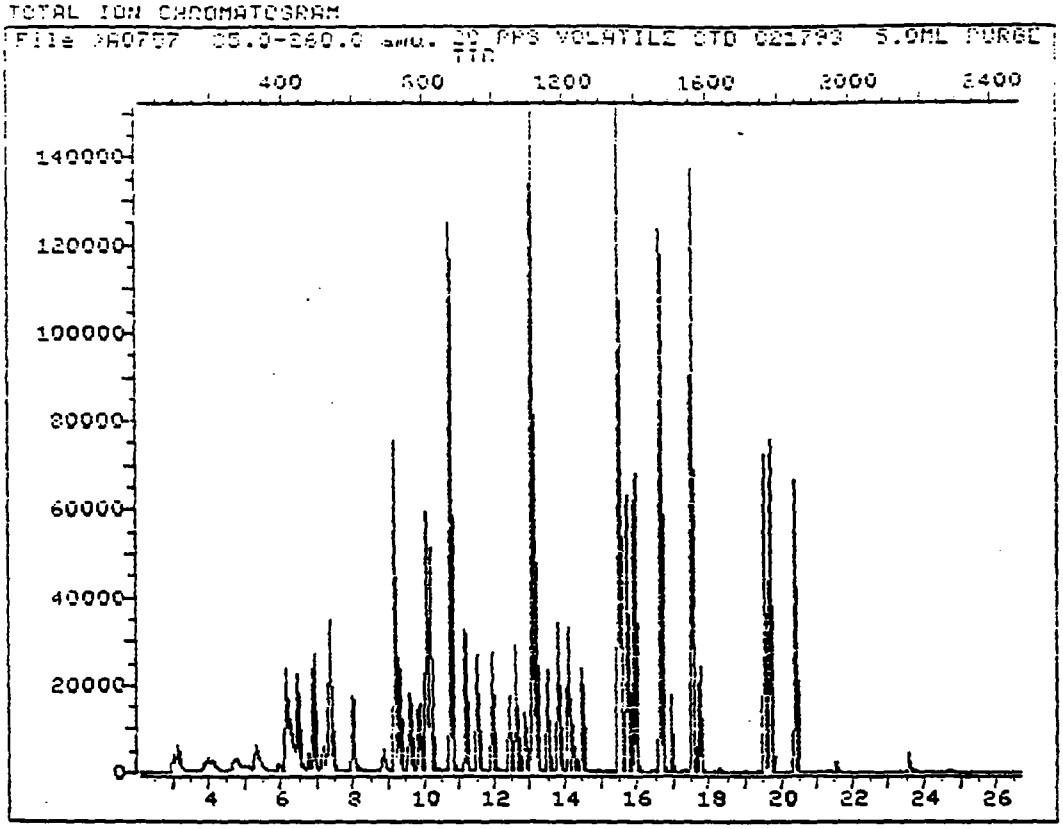
$\overline{RT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

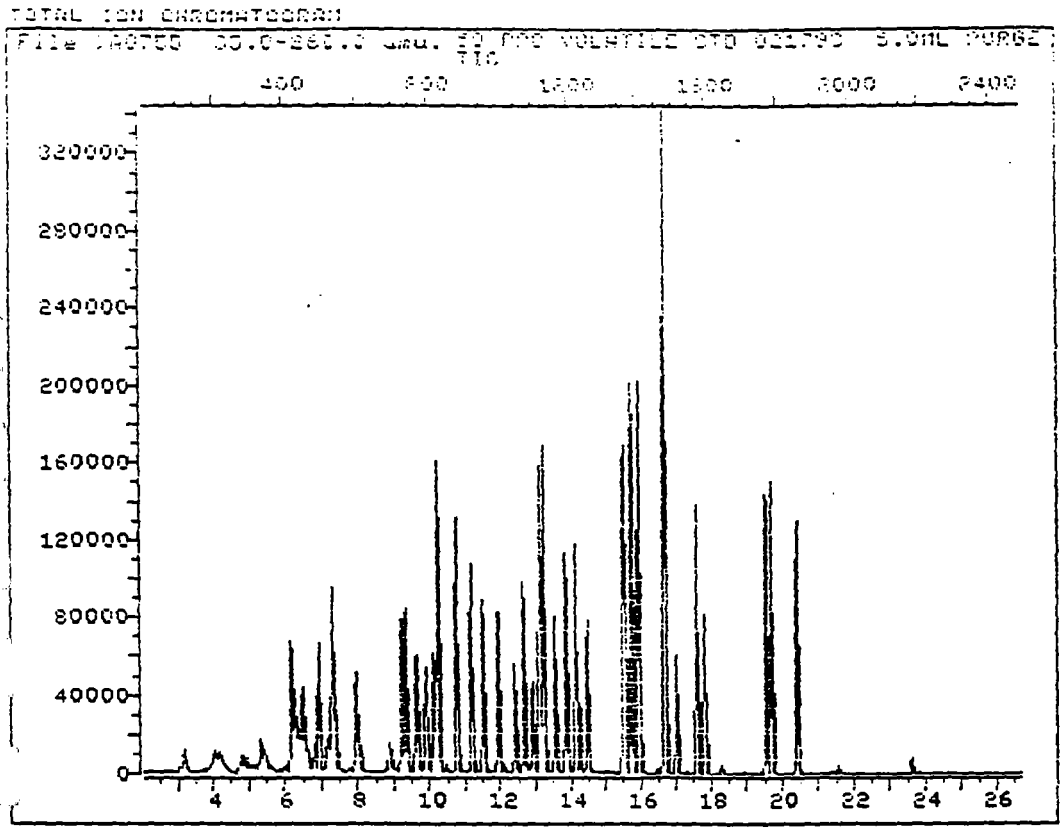
TOTAL ION CHROMATOGRAM



Data File: >A0757::D3 Quant Output File: ^A0757::D1
Name: 20 PPB VOLATILE STD
Misc: 021793 5.0ML PURGE

Id File: ID0216::EX
Title: USEPA 624 VOLATILES
Last Calibration: 930216 16:59

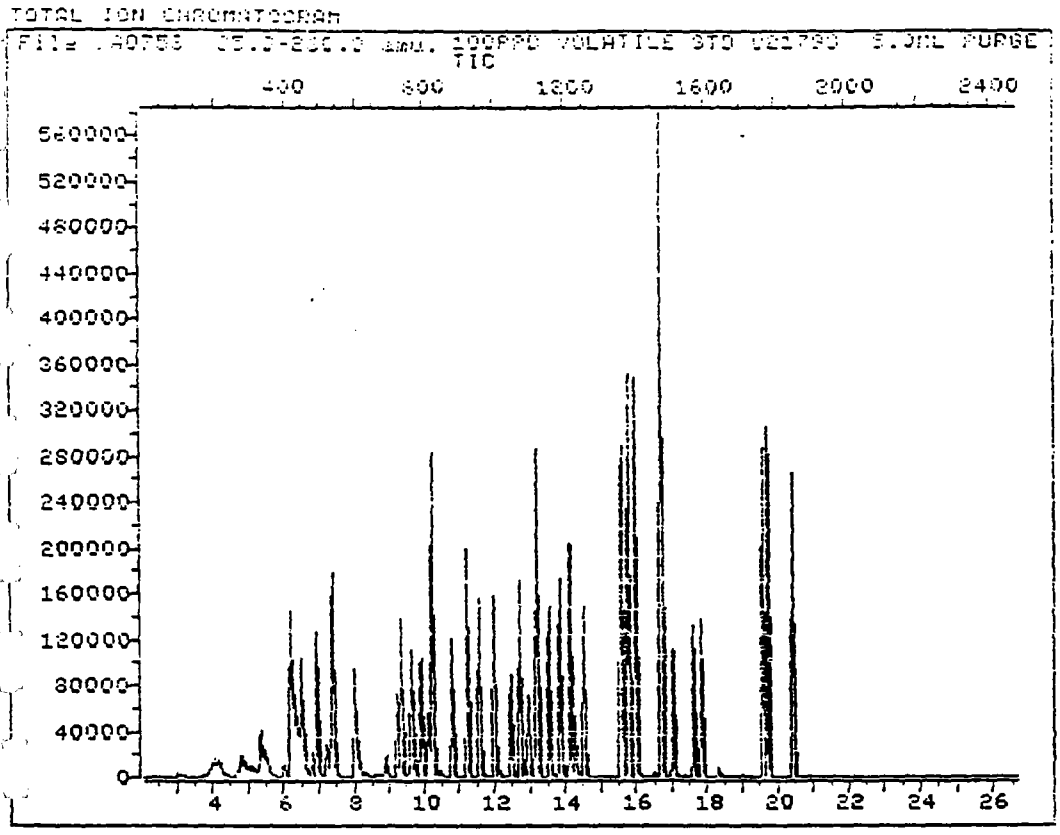
Operator ID: JEFF
Quant Time: 930217 15:31
Injected at: 930217 15:03



Data File: >A0755::D3 Quant Output File: ^A0755::EX
Name: 50 PPB VOLATILE STD
Misc: 021793 5.0ML PURGE

Id File: ID0216::EX
Title: USEPA 624 VOLATILES
Last Calibration: 930216 16:59

Operator ID: JEFF
Quant Time: 930217 11:29
Injected at: 930217 11:01

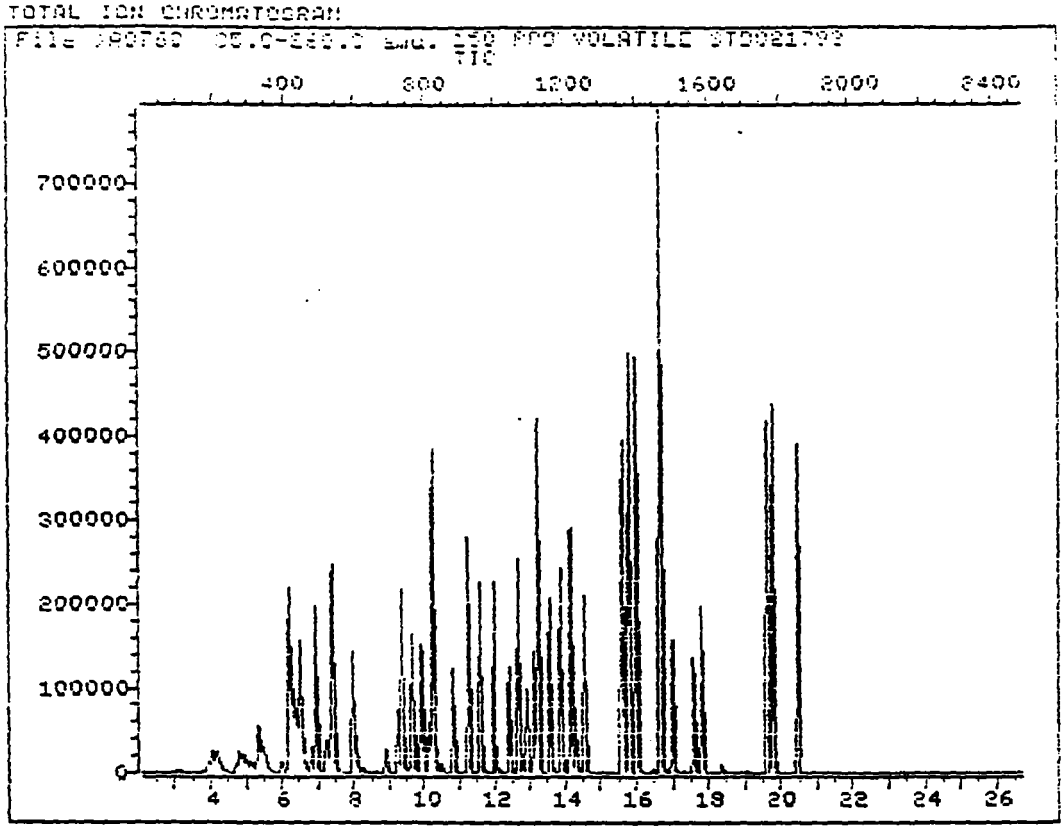


Data File: >A0758::D3 Quant Output File: ^A0758::D1
Name: 100PPB VOLATILE STD
Misc: 021793 5.0ML PURGE

Id File: ID0216::EX
Title: USEPA 624 VOLATILES
Last Calibration: 930216 16:59

Operator ID: JEFF
Quant Time: 930217 16:06
Injected at: 930217 15:38

TOTAL ION CHROMATOGRAM

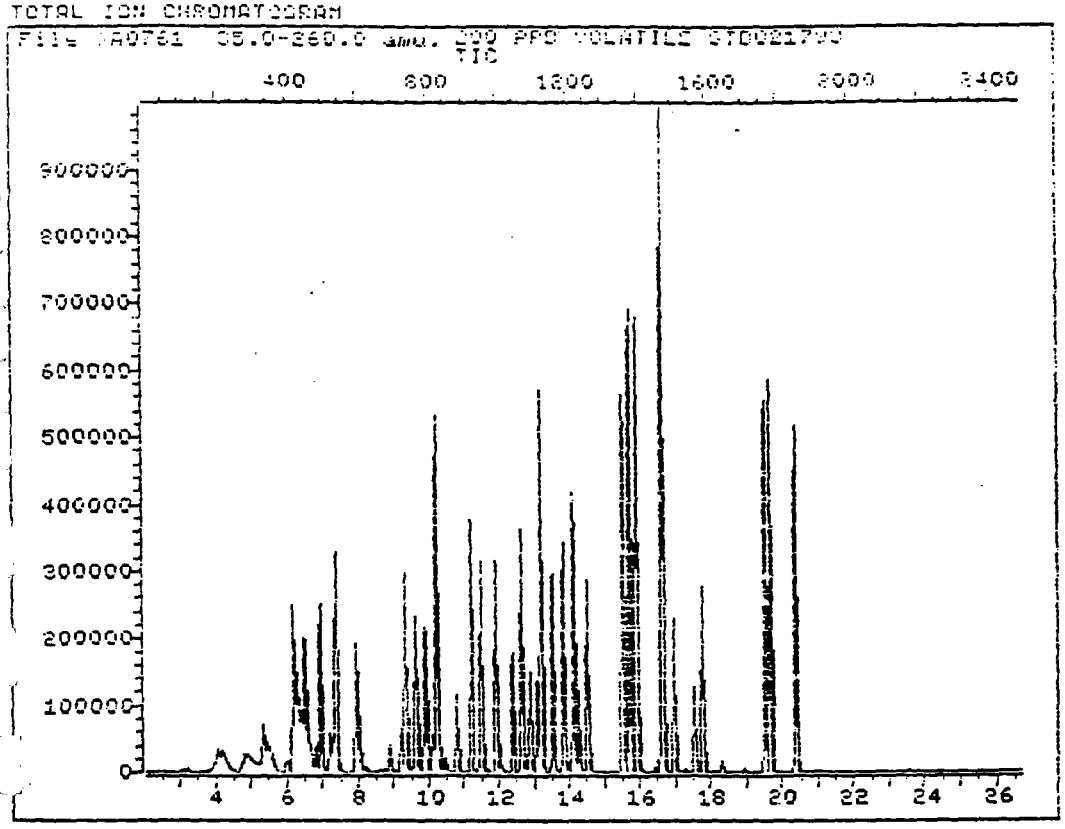


Data File: >A0760::D3 Quant Output File: ^A0760::D1
Name: 150 PPB VOLATILE STD
Misc: 021793

Id File: ID0216::EX
Title: USEPA 624 VOLATILES
Last Calibration: 930216 16:59

Operator ID: JEFF
Quant Time: 930217 16:43
Injected at: 930217 16:15

TOTAL ION CHROMATOGRAM



Data File: >A0761::D3 Quant Output File: ^A0761::D1
Name: 200 PPB VOLATILE STD
Misc: 021793

Id File: ID0216::EX
Title: USEPA 624 VOLATILES
Last Calibration: 930216 16:59

Operator ID: JEFF
Quant Time: 930217 17:14
Injected at: 930217 16:46

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A0850 DATE ANALYZED: 02/25/93

INSTRUMENT ID: A TIME ANALYZED: 12:03

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	A0995	>A0851	02/25/93	12:53
2	A0997	>A0852	02/25/93	13:28
3	A0997MS	>A0853	02/25/93	14:03
4	A0997MSD	>A0854	02/25/93	14:38
5	A0998	>A0855	02/25/93	15:13
6	A0929MS	>A0856	02/25/93	15:49
7	A0929MSD	>A0857	02/25/93	16:25
8	A0999	>A0858	02/25/93	17:00
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MMENTS: _____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	022593 BLK 5mL	QA BATCH	
DATA FILE	>A0850	DATE ANALYZED	02/25/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	ND	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	97.7	70 - 121	OK
Toluene-d8	98.4	81 - 117	OK
Bromofluorobenzene	98.4	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BLANK

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Soil Lab Sample ID: BLANK

Sample wt/vol: 5 (g/mL) g Lab File ID: >A0850

Level: (low/med) LOW Date Received: NA

% Moisture: ~~6~~ NA Date Analyzed: 02/25/93

Column: DB-624 Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

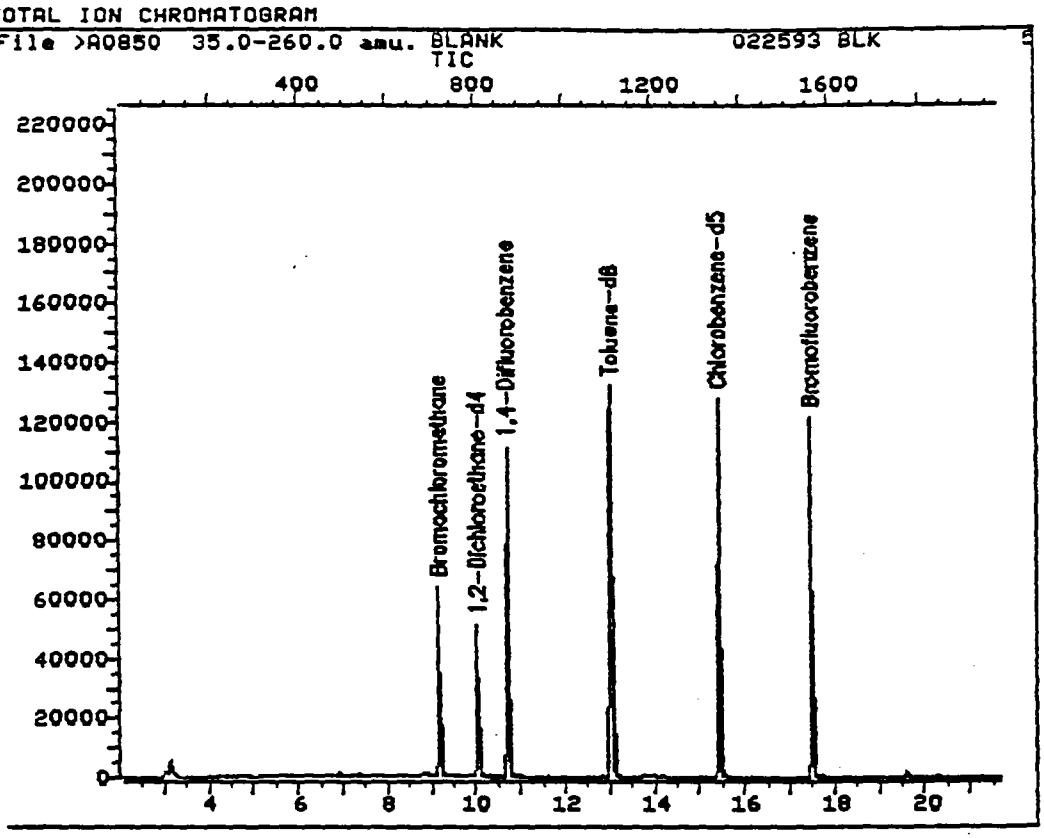
QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930225 12:34
Output File: ^A0850::QT Injected at: 930225 12:03
Data File: >A0850::D2 Dilution Factor: 1.00000
ame: BLANK
isc: 022593 BLK 5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.16	714	34003	50.00	UG/L	100
1)	1,2-Dichloroethane-d4	10.04	803	72552	48.84	UG/L	100
2)	*1,4-Difluorobenzene	10.71	870	168426	50.00	UG/L	100
31)	Toluene-d8	13.03	1105	171847	49.20	UG/L	100
7)	*Chlorobenzene-d5	15.43	1347	139655	50.00	UG/L	100
)	Bromofluorobenzene	17.48	1554	84433	49.18	UG/L	100

* Compound is ISTD



Data File: >A0850::D2 Quant Output File: ^A0850::QT
Name: BLANK
Misc: 022593 BLK 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930225 12:01

Operator ID: MANAGER
Quant Time: 930225 12:34
Injected at: 930225 12:03

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A0870 DATE ANALYZED: 02/26/93

INSTRUMENT ID: A TIME ANALYZED: 02:03

Matrix: SOIL Level:(low/med) LOW Column:(pack/cap)

Sample ID: MEOH BLAN

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	A1004	>A0871	02/26/93	02:37
2	A1000	>A0872	02/26/93	03:13
3	A1001	>A0873	02/26/93	03:48
4	A1003	>A0874	02/26/93	04:23
5	A1007	>A0875	02/26/93	04:58
6	A1005	>A0876	02/26/93	05:33
7	A1006	>A0877	02/26/93	06:07
8	A1010	>A0879	02/26/93	10:38
9	A1002	>A0880	02/26/93	11:12
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COMMENTS: _____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	BLANK	QA BATCH	
DATA FILE	>A0870	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	ND	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	103	70 - 121	OK
Toluene-d8	100	81 - 117	OK
Bromofluorobenzene	98.0	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

EPA SAMPLE NO.

BLANK

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Soil Lab Sample ID: BLANK

Sample wt/vol: 5 (g/mL) g Lab File ID: >A0870

Level: (low/med) LOW Date Received: NA

% Moisture: NA Date Analyzed: 02/26/93

Column: DB-624 Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

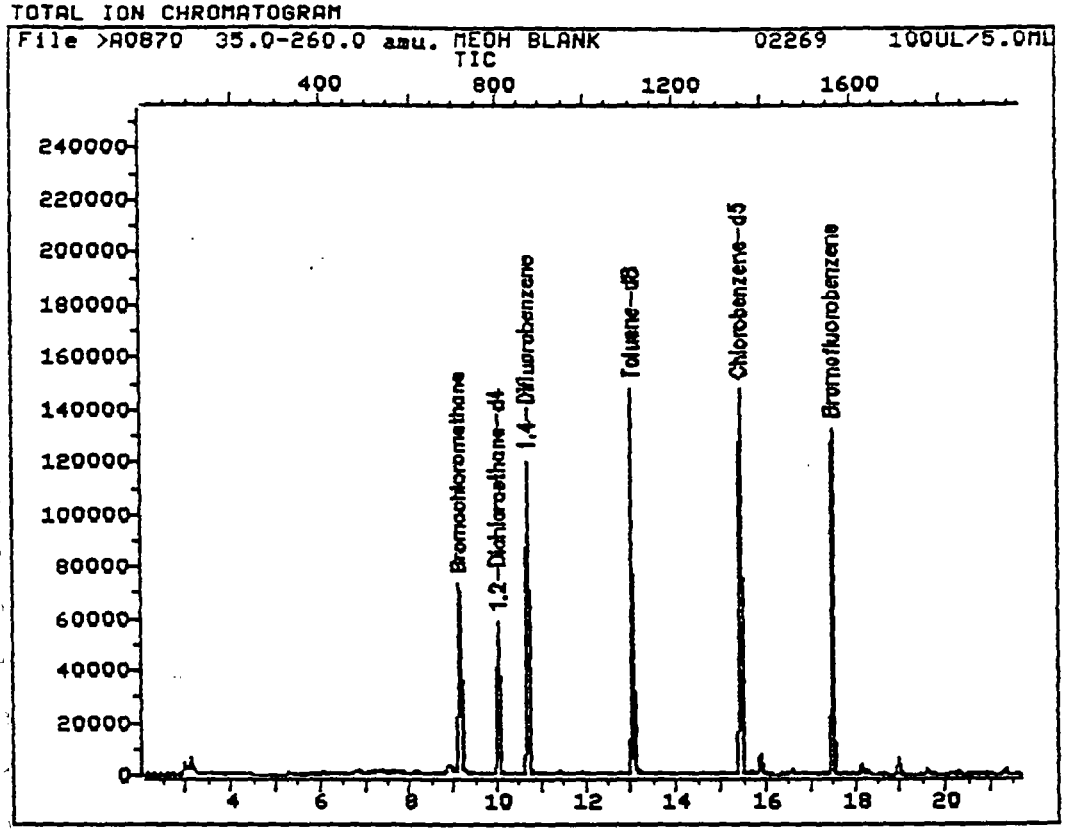
erator ID: MANAGER Quant Rev: 6 Quant Time: 930226 02:33
tput File: ^A0870::QT Injected at: 930226 02:03
ta File: >A0870::D2 Dilution Factor: 1.00000
me: MEOH BLANK
sc: 02269 100UL/5.0ML

File: ID0127::M1
tle: USEPA 624 VOLATILES
st Calibration: 930226 02:10

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	9.12	708	39627	50.00	UG/L	100
)	1,2-Dichloroethane-d4	10.03	799	79244	51.50	UG/L	100
)	*1,4-Difluorobenzene	10.69	866	194372	50.00	UG/L	100
)	Toluene-d8	13.03	1102	197570	50.18	UG/L	100
)	*Chlorobenzene-d5	15.43	1345	162231	50.00	UG/L	100
)	Bromofluorobenzene	17.49	1553	97918	49.02	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A0870::D2 Quant Output File: ^A0870::QT
Name: MEOH BLANK
Misc: 02269 100UL/5.0ML

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 02:10

Operator ID: MANAGER
Quant Time: 930226 02:33
Injected at: 930226 02:03

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A0885 DATE ANALYZED: 02/26/93

INSTRUMENT ID: A TIME ANALYZED: 15:01

Matrix: SOIL Level:(low/med) LOW Column:(pack/cap)

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	MEOH BLAN	>A0886	02/26/93	15:43
2	A1008	>A0888	02/26/93	16:55
3	A1011	>A0889	02/26/93	17:32
4	A1012	>A0890	02/26/93	18:10
5	A1014	>A0892	02/26/93	19:38
6				
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IMMENTS: _____

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21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	022693 BLK	QA BATCH	
DATA FILE	>A0885	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	8.5 J	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	104	70 - 121	OK
Toluene-d8	99.8	81 - 117	OK
Bromofluorobenzene	98.7	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

EPA SAMPLE NO.

BLANK

Lab Name:21st Century Environmental Contract:N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Soil Lab Sample ID: BLANKA

Sample wt/vol: 5 (g/mL) g Lab File ID: >A0885

Level: (low/med) LOW Date Received: NA

% Moisture: NA Date Analyzed: 02/26/93

Column: DB-624 Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

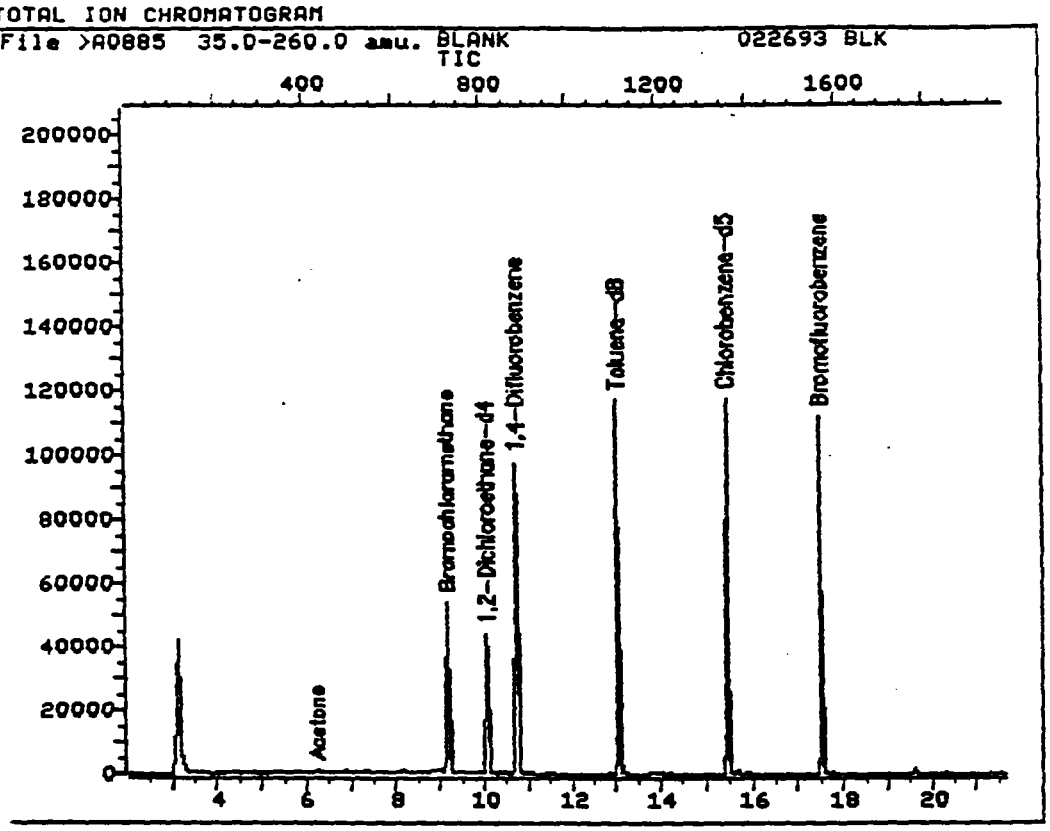
QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 930226 17:12
utput File: ^A0885::QT Injected at: 930226 15:01
)ata File: >A0885::D3 Dilution Factor: 1.00000
ame: BLANK
isc: 022693 BLK 5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930226 17:12

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.17	719	29104	50.00	UG/L	100
9)	Acetone	6.24	423	2390	8.49	UG/L	88
)	1,2-Dichloroethane-d4	10.05	808	61144	52.03	UG/L	100
2)	*1,4-Difluorobenzene	10.72	876	151907	50.00	UG/L	100
1)	Toluene-d8	13.05	1111	154676	49.88	UG/L	100
)	*Chlorobenzene-d5	15.45	1354	127973	50.00	UG/L	100
)	Bromofluorobenzene	17.51	1562	78113	49.34	UG/L	100

Compound is ISTD



Data File: >A0885::D3 Quant Output File: ^A0885::QT
Name: BLANK
Misc: 022693 BLK 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 17:12

Operator ID: MANAGER
Quant Time: 930226 17:12
Injected at: 930226 15:01

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	MEOH BLA	DILUTION FACTOR	1.00
CLIENT ID	022693 MEOH	QA BATCH	
DATA FILE	>A0886	DATE ANALYZED	02/26/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	ND	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	110	70 - 121	OK
Toluene-d8	99.1	81 - 117	OK
Bromofluorobenzene	99.9	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

QUANT REPORT

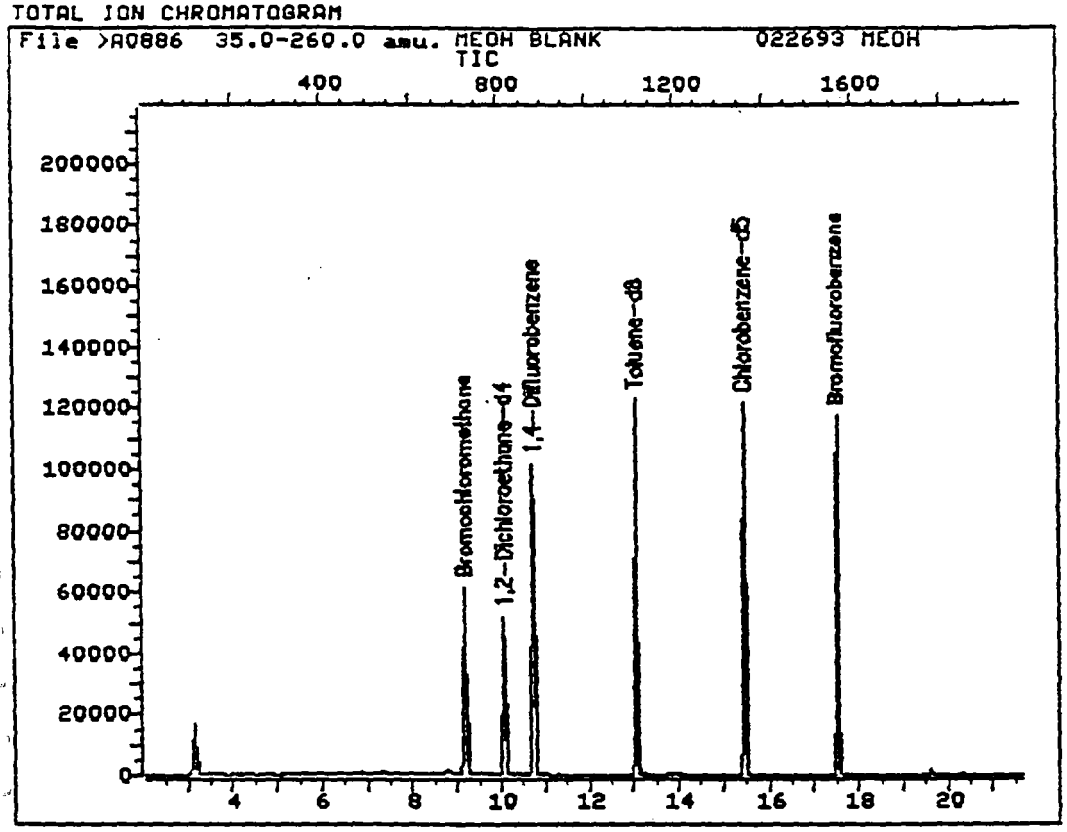
erator ID: MANAGER Quant Rev: 6 Quant Time: 930226 17:18
tput File: ^A0886::QT Injected at: 930226 15:43
ta File: >A0886::D3 Dilution Factor: 1.00000
me: MEOH BLANK
sc: 022693 MEOH 100ul/5mL

File: ID0127::M1
tle: USEPA 624 VOLATILES
st Calibration: 930226 17:12

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	9.16	718	32347	50.00	UG/L	100
)	1,2-Dichloroethane-d4	10.05	808	71796	54.97	UG/L	100
)	*1,4-Difluorobenzene	10.72	876	157785	50.00	UG/L	100
)	Toluene-d8	13.05	1111	159557	49.54	UG/L	100
)	*Chlorobenzene-d5	15.46	1354	133035	50.00	UG/L	100
)	Bromofluorobenzene	17.51	1561	82192	49.94	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A0886::D3 Quant Output File: ^A0886::QT
Name: MEOH BLANK
Misc: 022693 MEOH 100ul/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930226 17:12

Operator ID: MANAGER
Quant Time: 930226 17:18
Injected at: 930226 15:43

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A0896 DATE ANALYZED: 02/28/93

INSTRUMENT ID: A TIME ANALYZED: 14:57

Matrix: SOIL Level:(low/med) LOW Column:(pack/cap)

Sample ID: AQEUOS BL

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	TRIP BLAN	>A0897	02/28/93	15:32
2	MEOH BLAN	>A0899	02/28/93	16:43
3	A1015	>A0900	02/28/93	17:23
4	A0996	>A0904	02/28/93	19:51
5	A0917 AG	>A0905	02/28/93	20:26
6	A0918 AG	>A0906	02/28/93	21:01
7	A0919 AG	>A0907	02/28/93	21:36
8	A0920 AG	>A0908	02/28/93	22:11
9	A0921 AG	>A0909	02/28/93	22:45
10				
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OMMENTS: _____

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21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	022893 BLK	QA BATCH	
DATA FILE	>A0896	DATE ANALYZED	02/28/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	4.0 J	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	2.3 J	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	104	70 - 121	OK
Toluene-d8	99.3	81 - 117	OK
Bromofluorobenzene	98.9	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

EPA SAMPLE NO.

BLANK

ab Name:21st Century Environmental Contract:N/A

ab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

atrix: (soil/water) Soil Lab Sample ID: BLANK

ample wt/vol: 5 (g/mL) g Lab File ID: >A0896

evel: (low/med) LOW Date Received: NA

Moisture: NA Date Analyzed: 02/28/93

olumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

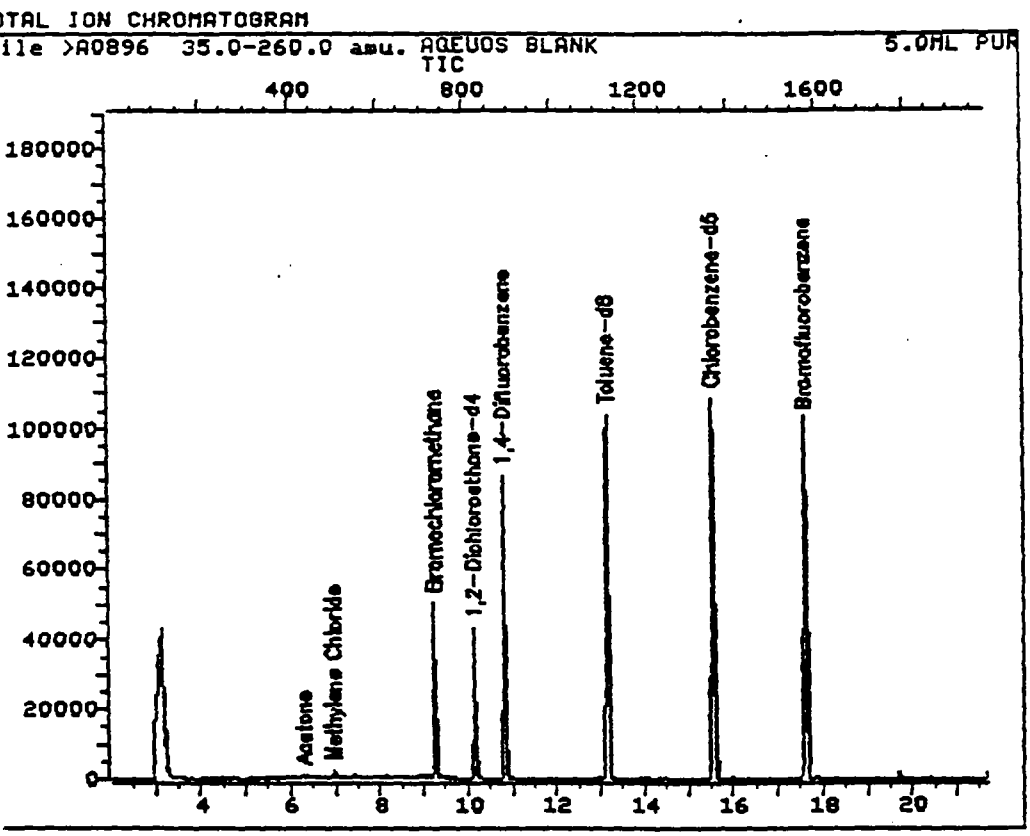
Operator ID: JEFF
Output File: ^A0896::QT
Data File: >A0896::D3
Name: AQEUOS BLANK
Misc: 5.0ML PURGE

Quant Rev: 6 Quant Time: 930228 15:27
Injected at: 930228 14:57
Dilution Factor: 1.00000

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930228 14:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.25	727	26694	50.00	UG/L	100
9)	Acetone	6.29	428	1341	3.98	UG/L	83
13)	Methylene Chloride	6.95	495	2051	2.34	UG/L	84
21)	1,2-Dichloroethane-d4	10.14	817	61359	52.05	UG/L	100
22)	*1,4-Difluorobenzene	10.82	885	130738	50.00	UG/L	100
31)	Toluene-d8	13.15	1121	133420	49.66	UG/L	100
33)	*Chlorobenzene-d5	15.56	1364	115018	50.00	UG/L	100
46)	Bromofluorobenzene	17.62	1572	72534	49.47	UG/L	100

* Compound is ISTD



Data File: >A0896::D3 Quant Output File: ^A0896::QT
Name: AQEUOS BLANK
Misc: 5.0ML PURGE

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930228 14:57

Operator ID: JEFF
Quant Time: 930228 15:27
Injected at: 930228 14:57

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	MEOH BLANK	DILUTION FACTOR	1.00
CLIENT ID	022893 MEOH	QA BATCH	
DATA FILE	>A0899	DATE ANALYZED	02/28/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	ND	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101	70 - 121	OK
Toluene-d8	100	81 - 117	OK
Bromofluorobenzene	98.4	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

QUANT REPORT

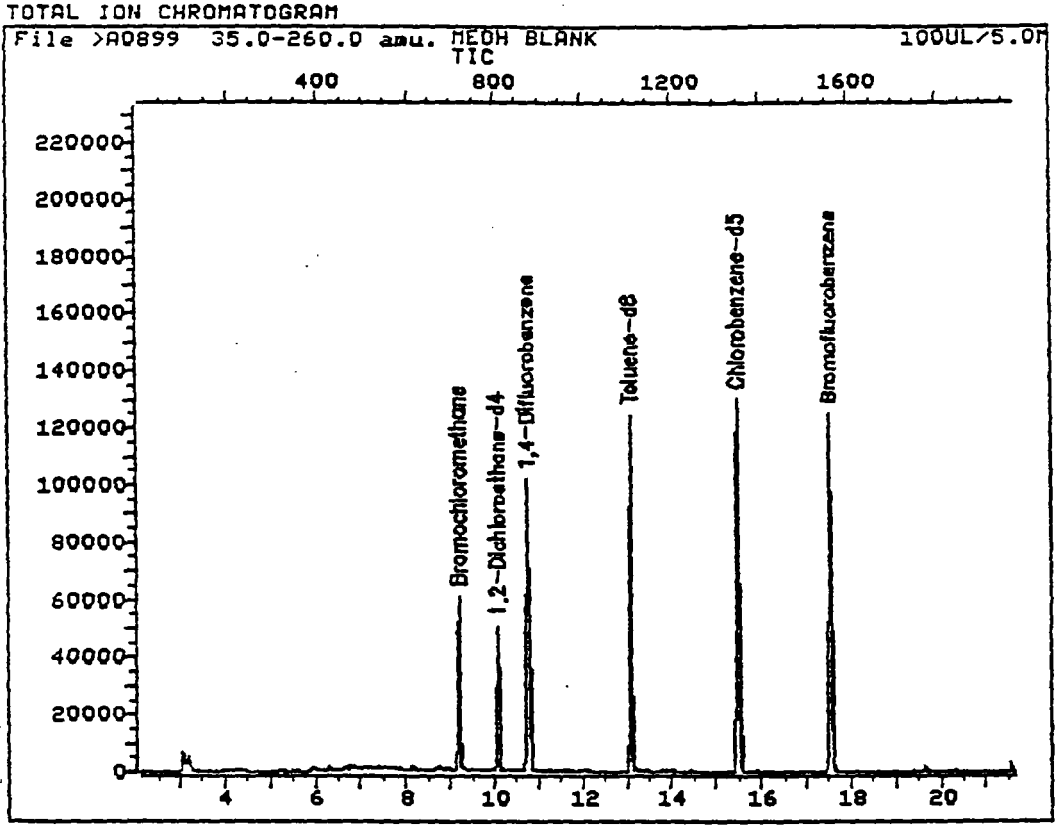
erator ID: JEFF Quant Rev: 6 Quant Time: 930228 17:13
tput File: ^A0899::QT Injected at: 930228 16:43
ta File: >A0899::D3 Dilution Factor: 1.00000
me: MEOH BLANK
sc: 100UL/5.0ML PURGE

File: ID0127::M1
tle: USEPA 624 VOLATILES
st Calibration: 930228 14:57

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	9.19	713	31599	50.00	UG/L	100
)	1,2-Dichloroethane-d4	10.08	803	70247	50.34	UG/L	100
)	*1,4-Difluorobenzene	10.75	871	156732	50.00	UG/L	100
)	Toluene-d8	13.08	1106	161173	50.04	UG/L	100
)	*Chlorobenzene-d5	15.48	1349	139438	50.00	UG/L	100
)	Bromofluorobenzene	17.52	1555	87432	49.18	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A0899::D3 Quant Output File: ^A0899::QT
Name: MEOH BLANK
Misc: 100UL/5.0ML PURGE

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930228 14:57

Operator ID: JEFF
Quant Time: 930228 17:13
Injected at: 930228 16:43

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A0925 DATE ANALYZED: 03/02/93

INSTRUMENT ID: A TIME ANALYZED: 12:14

Matrix: SOIL Level:(low/med) LOW Column:(pack/cap)

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	A1019	>A0927	03/02/93	13:26
2	A1013	>A0929	03/02/93	14:41
3	A1016	>A0931	03/02/93	17:06
4	A0900	>A0939	03/02/93	23:15
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1MENTS: _____

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21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	030293 AQ BLANK	QA BATCH	
DATA FILE	>A0925	DATE ANALYZED	03/02/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	4.4 J	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	97.5	70 - 121	OK
Toluene-d8	100	81 - 117	OK
Bromofluorobenzene	98.9	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BLANK

b Name:21st Century Environmental Contract:N/A

b Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

trix: (soil/water) Soil Lab Sample ID: BLANK

mple wt/vol: 5 (g/mL) g Lab File ID: >A0925

vel: (low/med) LOW Date Received: NA

Moisture: NA Date Analyzed: 03/02/93

lumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

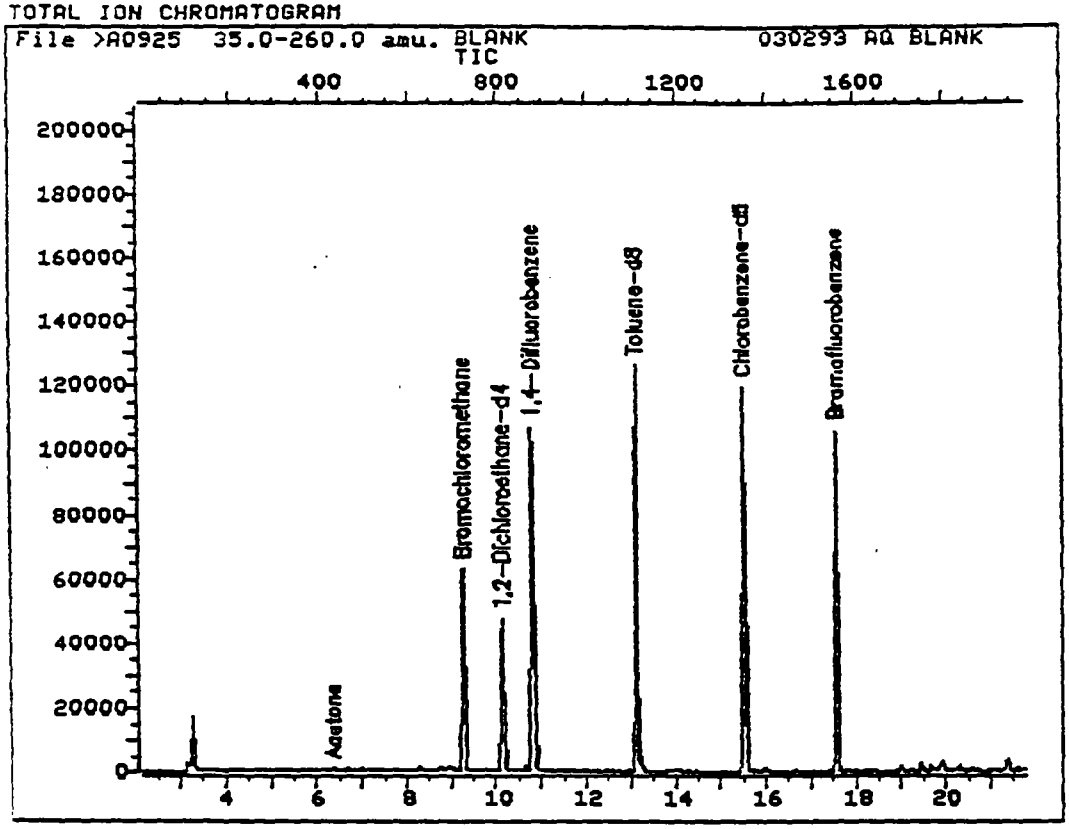
Operator ID: MANAGER Quant Rev: 6 Quant Time: 930302 12:44
Output File: ^A0925::QT Injected at: 930302 12:14
Data File: >A0925::D2 Dilution Factor: 1.00000
Name: BLANK
Misc: 030293 AQ BLANK

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930301 16:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	9.25	716	33906	50.00	UG/L	100
9)	Acetone	6.35	423	1356	4.42	UG/L	88
2?)	1,2-Dichloroethane-d4	10.14	805	60741	48.73	UG/L	100
2:)	*1,4-Difluorobenzene	10.80	872	169660	50.00	UG/L	100
31)	Toluene-d8	13.11	1105	171875	50.21	UG/L	100
33)	*Chlorobenzene-d5	15.50	1347	135476	50.00	UG/L	100
4( )	Bromofluorobenzene	17.56	1555	81300	49.44	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A0925::D2 Quant Output File: ^A0925::QT
Name: BLANK
Misc: 030293 AQ BLANK

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930301 16:17

Operator ID: MANAGER
Quant Time: 930302 12:44
Injected at: 930302 12:14

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A0945 DATE ANALYZED: 03/03/93

INSTRUMENT ID: A TIME ANALYZED: 16:38

Matrix: SOIL Level:(low/med) LOW Column:(pack/cap)

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	A0891	>A0946	03/03/93	17:13
2	A0922	>A0947	03/03/93	17:49
3	A0923	>A0948	03/03/93	18:24
4	A0924	>A0949	03/03/93	19:00
5	A0901	>A0955	03/03/93	22:34
6	A0903	>A0956	03/03/93	23:09
7	MEOH BLAN	>A0957	03/03/93	23:45
8	A0902	>A0958	03/04/93	00:20
9	A1009	>A0959	03/04/93	00:56
10	A1017	>A0960	03/04/93	01:32
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COMMENTS: _____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	030393	QA BATCH	
DATA FILE	>A0945	DATE ANALYZED	03/03/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	13	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	93.0	70 - 121	OK
Toluene-d8	98.9	81 - 117	OK
Bromofluorobenzene	98.3	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS
US ARMY FT. MONMOUTH

BLANK

Lab Name:21st Century Environmental Contract:N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix: (soil/water) Soil Lab Sample ID: BLANK

Sample wt/vol: 5 (g/mL) g Lab File ID: >A0945

Level: (low/med) LOW Date Received: NA

% Moisture: NA Date Analyzed: 03/03/93

Column: DB-624 Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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00245

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Soil
SAMPLE NUMBER	METH BLA	DILUTION FACTOR	1.00
CLIENT ID	10	QA BATCH	
DATA FILE	>A0957	DATE ANALYZED	03/03/93

COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	MDL
Acrolein	ND	50	Bromodichloromethane	ND	5
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethane	ND	10	trans-1,3-Dichloropropene	ND	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	ND	10	1,1,2,2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	ND	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	m-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1,2-Dichloropropane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	105	70 - 121	OK
Toluene-d8	99.8	81 - 117	OK
Bromofluorobenzene	99.0	74 - 121	OK

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 930304 00:15
Output File: ^A0957::QT Injected at: 930303 23:45
Data File: >A0957::D2 Dilution Factor: 1.00000
Name: MEOH BLANK
Misc: 100ul/5mL

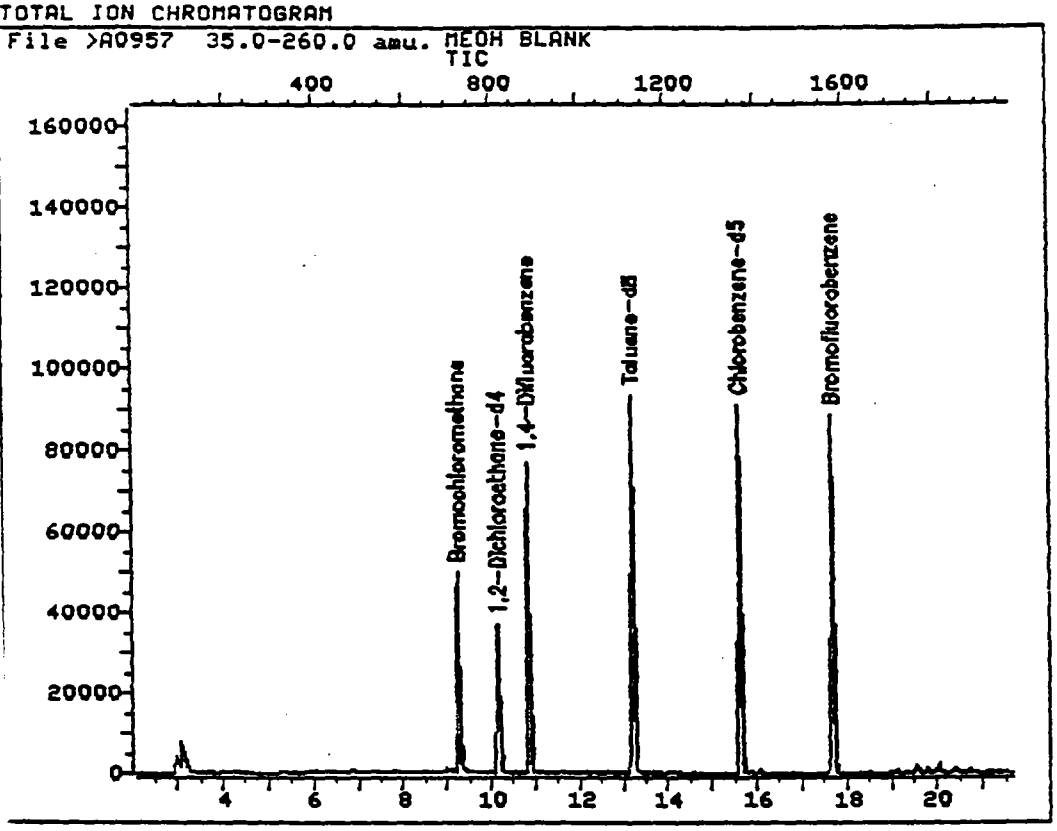
ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930303 16:29

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.26	721	26464	50.00	UG/L	100
21)	1,2-Dichloroethane-d4	10.16	812	53035	52.69	UG/L	100
2)	*1,4-Difluorobenzene	10.84	881	125500	50.00	UG/L	100
3)	Toluene-d8	13.20	1119	127325	49.91	UG/L	100
33)	*Chlorobenzene-d5	15.62	1364	103812	50.00	UG/L	100
4)	Bromofluorobenzene	17.68	1572	63346	49.51	UG/L	100

* Compound is ISTD

00249

TOTAL ION CHROMATOGRAM



Data File: >A0957::D2 Quant Output File: ^A0957::QT
Name: MEOH BLANK
Misc: 100ul/5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930303 16:29

Operator ID: MANAGER
Quant Time: 930304 00:15
Injected at: 930303 23:45

618 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489 • 609-467-9521

E-SYSTEMS

PROJECT: UST BLDG 2567

U.S. ARMY-FORT MONMOUTH, NJ

ANALYSIS NO:	CLIENT ID:
A 1633	MW 4-2926948
A 1634	MW 1-2926925
A 1635	MW 1-2926925 Dup
A 1636	MW 2-2926926
A 1637	MW 3-2926947
A 1638	Field Blank
A 1639	Trip Blank

DATE RECEIVED: APRIL 21, 1993

TWENTY FIRST CENTURY
ENVIRONMENTAL, INC.

Richard W Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

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NARRATIVE

There were no problems encountered during the analysis of this batch of samples (A1633 to A1639). All analysis were completed within proper hold times. Please note that base neutral compounds were sampled on April 28, 1993 and are reported in package # A1745 to A1749.

CHAIN OF CUSTODY

21ST CENTURY ENVIRONMENTAL
618 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489
609.467.9521 • 609.467.4523 FAX

CUSTOMER: FORT MONMOUTH
ADDRESS:
TELEPHONE:
PROJECT: BLDG 2567
PROJECT MANAGER:
PROJECT LOCATION: STATE:
PO NUMBER: 91-8-27-1414

TURNAROUND (INDICATE CALENDAR DAYS, CONFIRM WITH LAB): 2 5 7 14 21 OTHER:
DELIVERABLES (PLEASE CIRCLE): TIER 1 (TIER II) ECRA
CLP RESULTS ONLY OTHER:_____ BIAS CORRECTION
FAX RESULTS TO:

ADDITIONAL INFORMATION / SPECIAL INSTRUCTIONS

A1633-A1639

SAMPLE NUMBER	SAMPLE DESCRIPTION	MATRIX	DATE	TIME	COMP	GRAB	NUMBER OF CONTAINERS	ANALYSIS / METHOD 624+15	VOLATILE ORGANICS	SEMI VOA'S (BNA'S)	PESTICIDES / PCB'S	PCB'S	BTEX	TPH-PETROLEUM HYDROCARBONS	CORROSIVITY	IGNITABILITY	FLASHPOINT	REACTIVITY	TOC	TCLP METALS	TCLP VOLATILE ORGANICS	TCLP SEMI VOA'S (BNA'S)	TCLP PEST. / HERB	PRIORITY POLLUTANT METALS (13)	HSL METALS (23)	STYRENE, MTBE, TBA	LEAD	ADDITIONAL ANALYSIS
HNU 0.0	MW4-2926948	WATER	4/21/93	10:30			3		✓																✓	✓	
0.2	MW1-2926925	WATER	4/21/93	10:45			3		✓																✓	✓	
0.2	MW1-2926925 DUP	WATER	4/21/93	10:45			3		✓																✓	✓	
0.0	MW2-2926926	WATER	4/21/93	11:45			3		✓																✓	✓	
0.0	MW3 2926947	WATER	4/21/93	12:15			3		✓																✓	✓	
	FIELD BLANK	WATER	4/21/93	12:30			3		✓																✓	✓	
	TRIP BLANK	WATER	4/21/93	5:00 PM			2		✓																✓		

Relinquished By:	Date	Time	Received By:	Date	Time
Dayton	4/21/93	18:45			

WHITE
LAB COPY

YELLOW
CUSTOMER COPY

Purgeables

U.S.E.P.A. Method 624 - This is a purge and trap Gas Chromatograph/ Mass Spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

An HP5996 GC/MS was used with a capillary column.

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8240 from SW846.

Metals

Soil samples for metal analysis were run in accordance with the methods prescribed in SW846. This includes a nitric acid digestion followed by either Furnace, Flame Atomic Absorption, Flameless Atomic Absorption. or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600-4-79-020 March 1983.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 4/21/93

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons/Oil & Grease NA

ANALYSIS

1. Volatiles 4/27/93
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons/Oil & Grease NA
6. Total Organic Carbon NA

Section Supervisor
Review & Approval Jeffrey L Martin

INORGANICS

1. Metals 4/26/93
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

Section Supervisor
Review & Approval Marie Wadsworth

Quality Control Supervisor
Review & Approval

Laboratory Director
Review & Approval Richard W Pyne

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

00001

RESULT SUMMARY

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
A 1633	MW 4-2926948	0.05	N.D.
A 1634	MW 1-2926925	0.05	0.07
A 1635	MW 1-2926925 Dup	0.05	N.D.
A 1636	MW 2-2926926	0.05	N.D.
A 1637	MW 3-2926947	0.05	0.06
A 1638	Field Blank	0.05	N.D.

00006

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1633	DILUTION FACTOR	1.00
CLIENT ID	MW4-2926948 BLDG 2567	COMMENTS	OVA ND
DATA FILE	>A1361	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	2.4 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	97.0	76 - 114	OK
Toluene-d8	97.9	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MW4-2926948

b Name:21st Century Environmental

ient Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

trix: (soil/water) WATER Lab Sample ID: A1633

mple wt/vol: 5 (g/mL) mL Lab File ID: >A1361

vel: (low/med) LOW Date Received: 04/21/93

Moisture: NA Date Analyzed: 04/27/93

lumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

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21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1634	DILUTION FACTOR	10.00
CLIENT ID	MW1-2926925 BLDG 2567	COMMENTS	HNU 0.2
DATA FILE	>A1368	DATE ANALYZED	04/27/93

COMPOUND	UG/L		MDL	COMPOUND	UG/L		MDL
Acrolein	ND		500	2-Chloroethylvinylether	ND		100
Acrylonitrile	ND		500	2-Hexanone	ND		100
Chloromethane	ND		100	trans-1,3-Dichloropropene	ND		50
Bromomethane	ND		100	Toluene	ND		50
Vinyl Chloride	ND		100	cis-1,3-Dichloropropene	ND		50
Chloroethane	ND		100	1,1,2,2-Tetrachloroethane	ND		50
Acetone	ND	B	100	1,1,2-Trichloroethane	ND		50
1,1-Dichloroethene	ND		50	4-Methyl-2-pentanone	ND		100
Carbon Disulfide	ND		100	Tetrachloroethene	ND		50
Methylene Chloride	16	J	50	Dibromochloromethane	ND		50
1,2-Dichloroethene(trans)	ND		50	Chlorobenzene	ND		50
1,1-Dichloroethane	ND		50	Ethylbenzene	ND		50
Vinyl Acetate	ND		50	m&p-Xylenes	ND		50
2-Butanone	ND		100	o-Xylene	ND		50
Chloroform	ND		50	Styrene	ND		50
1,1,1-Trichloroethane	ND		50	Bromoform	ND		50
Carbon Tetrachloride	ND		50	m-Dichlorobenzene	ND		50
1,2-Dichloroethane	ND		50	p-Dichlorobenzene	ND		50
Benzene	520		50	o-Dichlorobenzene	ND		50
Trichloroethene	ND		50	Methyl Tertiary Butyl Ether	890		100
1,2-Dichloropropane	ND		50	Tertiary Butyl Alcohol	470	J	500
Bromodichloromethane	ND		50				

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	76 - 114	OK
Toluene-d8	98.2	88 - 110	OK
Bromofluorobenzene	102	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW1-2926925

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: A1634

Sample wt/vol: .5 (g/mL) mL

Lab File ID: >A1368

Level: MED

Date Received: 04/21/93

% Moisture: 100

Date Analyzed 04/27/93

Column: CAP

Dilution Factor: 10

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	513359	2-Butene, 2-methyl- (8CI9CI)	6.01	64
3	96377	Cyclopentane, methyl- (8CI9CI)	8.64	65
4	496117	1H-Indene, 2,3-dihydro- (9CI)	20.09	87
5	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.95	29

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1635	DILUTION FACTOR	10.00
CLIENT ID	MW1-2926925-DUP BLDG 2567	COMMENTS	HNU 0.2
DATA FILE	>A1370	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	500	2-Chloroethylvinylether	ND	100
Acrylonitrile	ND	500	2-Hexanone	ND	100
Chloromethane	ND	100	trans-1,3-Dichloropropene	ND	50
Bromomethane	ND	100	Toluene	ND	50
Vinyl Chloride	ND	100	cis-1,3-Dichloropropene	ND	50
Chloroethane	ND	100	1,1,2,2-Tetrachloroethane	ND	50
Acetone	28 JB	100	1,1,2-Trichloroethane	ND	50
1,1-Dichloroethene	ND	50	4-Methyl-2-pentanone	ND	100
Carbon Disulfide	ND	100	Tetrachloroethene	ND	50
Methylene Chloride	ND	50	Dibromochloromethane	ND	50
1,2-Dichloroethene(trans)	ND	50	Chlorobenzene	ND	50
1,1-Dichloroethane	ND	50	Ethylbenzene	ND	50
Vinyl Acetate	ND	50	m&p-Xylenes	ND	50
2-Butanone	ND	100	o-Xylene	ND	50
Chloroform	ND	50	Styrene	ND	50
1,1,1-Trichloroethane	ND	50	Bromoform	ND	50
Carbon Tetrachloride	ND	50	m-Dichlorobenzene	ND	50
1,2-Dichloroethane	ND	50	p-Dichlorobenzene	ND	50
Benzene	470	50	o-Dichlorobenzene	ND	50
Trichloroethene	ND	50	Methyl Tertiary Butyl Ether	970	100
1,2-Dichloropropane	ND	50	Tertiary Butyl Alcohol	640	500
Bromodichloromethane	ND	50			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	114	76 - 114	OK
Toluene-d8	98.0	88 - 110	OK
Bromofluorobenzene	103	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW1-2926925-DUP

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: A1635

Sample wt/vol: .5 (g/mL) mL

Lab File ID: >A1370

Level: MED

Date Received: 04/21/93

% Moisture: 100

Date Analyzed 04/27/93

Column: CAP

Dilution Factor: 10

Number TICs Found 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	513359	2-Butene, 2-methyl- (8CI9CI)	5.95	65
2	624782	Ethanamine, N-methyl- (9CI)	7.12	81
4	96377	Cyclopentane, methyl- (8CI9CI)	8.60	74
5	496117	1H-Indene, 2,3-dihydro- (9CI)	20.05	87
6	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.91	32

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1636	DILUTION FACTOR	1.00
CLIENT ID	MW2-2926926 BLDG 2567	COMMENTS	HNU ND
DATA FILE	>A1364	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	2.5 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	2.0 J	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	95.7	76 - 114	OK
Toluene-d8	97.7	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MW2-2926926

ab Name:21st Century Environmental

lient Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

atrix: (soil/water) WATER Lab Sample ID: A1636

ample wt/vol: 5 (g/mL) mL Lab File ID: >A1364

evel: (low/med) LOW Date Received: 04/21/93

Moisture: NA Date Analyzed: 04/27/93

olumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

00014

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1637	DILUTION FACTOR	1.00
CLIENT ID	MW3-2926947 BLDG 2567	COMMENTS	HNU NO
DATA FILE	>A1365	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	15	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	7.7 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	71	5
2-Butanone	ND	10	o-Xylene	3.2 J	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	180	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	27	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.1	76 - 114	OK
Toluene-d8	98.1	88 - 110	OK
Bromofluorobenzene	102	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FIELD BLANK

b Name:21st Century Environmental

ient Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

trix: (soil/water) WATER Lab Sample ID: A1638

mple wt/vol: 5 (g/mL) mL Lab File ID: >A1366

vel: (low/med) LOW Date Received: 04/21/93

Moisture: NA Date Analyzed: 04/27/93

lumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1639	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 2567	COMMENTS	HNU ND
DATA FILE	>A1367	DATE ANALYZED	04/27/93

COMPOUND	UG/L		MDL	COMPOUND	UG/L	MDL
Acrolein	ND		50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND		50	2-Hexanone	ND	10
Chloromethane	ND		10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND		10	Toluene	ND	5
Vinyl Chloride	ND		10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND		10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	B	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND		5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND		10	Tetrachloroethene	ND	5
Methylene Chloride	4.8	J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND		5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND		5	Ethylbenzene	ND	5
Vinyl Acetate	ND		5	m&p-Xylenes	ND	5
2-Butanone	ND		10	o-Xylene	ND	5
Chloroform	ND		5	Styrene	ND	5
1,1,1-Trichloroethane	ND		5	Bromoform	ND	5
Carbon Tetrachloride	ND		5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND		5	p-Dichlorobenzene	ND	5
Benzene	ND		5	o-Dichlorobenzene	ND	5
Trichloroethene	ND		5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND		5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND		5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	95.9	76 - 114	OK
Toluene-d8	96.9	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

b Name:21st Century Environmental

ient Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

trix: (soil/water) WATER Lab Sample ID: A1639

mple wt/vol: 5 (g/mL) mL Lab File ID: >A1367

vel: (low/med) LOW Date Received: 04/21/93

Moisture: NA Date Analyzed: 04/27/93

lumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

00020

DATA PACKAGE

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
A 1633	MW 4-2926948	0.05	N.D.
A 1634	MW 1-2926925	0.05	0.07
A 1635	MW 1-2926925 Dup	0.05	N.D.
A 1636	MW 2-2926926	0.05	N.D.
A 1637	MW 3-2926947	0.05	0.06
A 1638	Field Blank	0.05	N.D.

00022

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1633	DILUTION FACTOR	1.00
CLIENT ID	MW4-2926948 BLDG 2567	COMMENTS	OVA ND
DATA FILE	>A1361	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	2.4 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	97.0	76 - 114	OK
Toluene-d8	97.9	88 - 110	OK
Bromofluorobenzene	100	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MW4-2926948

) Name:21st Century Environmental

.ent Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

:rix: (soil/water) WATER Lab Sample ID: A1633

ıple wt/vol: 5 (g/mL) mL Lab File ID: >A1361

'el: (low/med) LOW Date Received: 04/21/93

loisture: NA Date Analyzed: 04/27/93

umn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

perator ID: JEFF Quant Rev: 6 Quant Time: 930427 14:30
utput File: ^A1361::QT Injected at: 930427 13:59
Data File: >A1361::D2 Dilution Factor: 1.00000
ame: A1633
isc: MW4-2926948 BLDG 2567 5mL

D File: ID0127::M1
itle: USEPA 624 VOLATILES
ast Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.14	714	33361	50.00	UG/L	100
9)	Acetone	6.25	422	1510	2.46	UG/L	81
1)	1,2-Dichloroethane-d4	10.03	804	65635	48.49	UG/L	100
22)	*1,4-Difluorobenzene	10.70	871	160138	50.00	UG/L	100
31)	Toluene-d8	13.03	1107	163295	48.93	UG/L	100
3)	*Chlorobenzene-d5	15.44	1350	132717	50.00	UG/L	100
46)	Bromofluorobenzene	17.49	1557	81848	50.01	UG/L	100

Compound is ISTD

QUANT REPORT

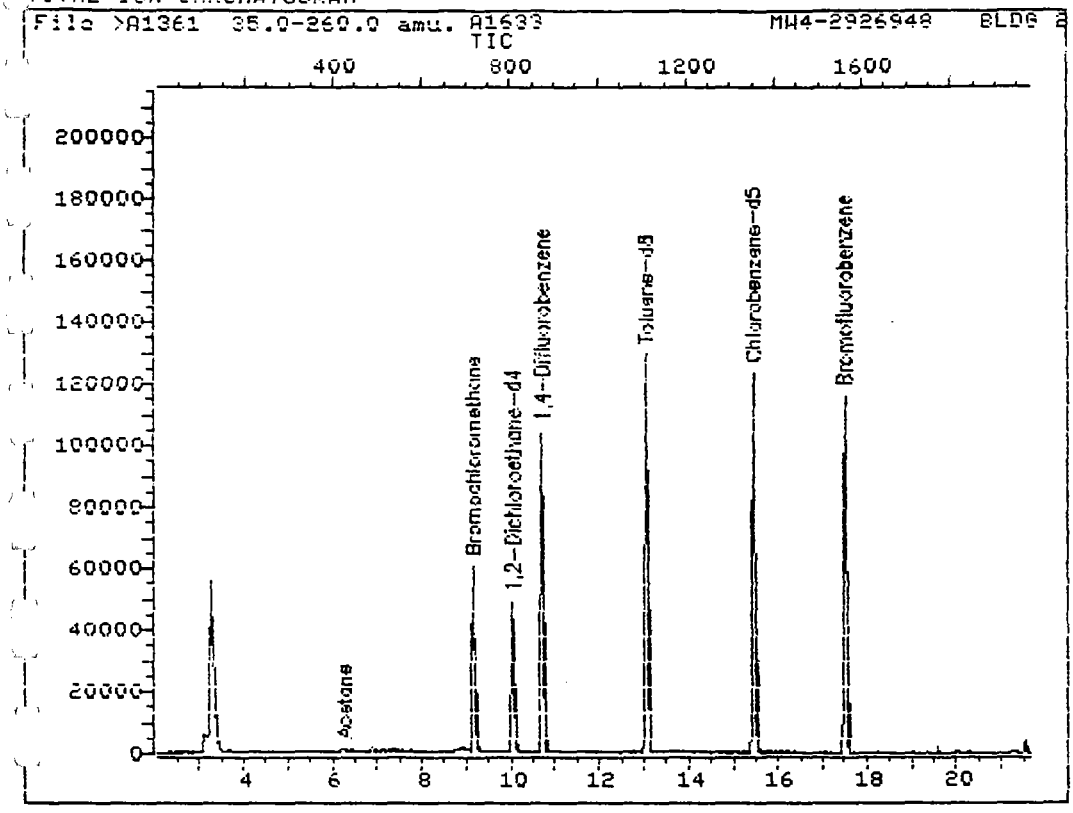
perator ID: JEFF Quant Rev: 6 Quant Time: 930430 15:15
utput File: MA1361::QT Injected at: 930427 13:59
ata File: >A1361::D2 Dilution Factor: 1.00000
ame: A1633
isc: MW4-2926948 BLDG 2567 5mL

) File: IDAUXA::M1
itle: INST A AUX. COMPOUNDS
ast Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.14	714	33361	50.00	ug/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1361::D2 Quant Output File: ^A1361::QT
Name: A1633
Misc: MW4-2926948 BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 14:30
Injected at: 930427 13:59

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1634	DILUTION FACTOR	10.00
CLIENT ID	MW1-2926925 BLDG 2567	COMMENTS	HNU 0.2
DATA FILE	>A1368	DATE ANALYZED	04/27/93

COMPOUND	UG/L		MDL	COMPOUND	UG/L		MDL
Acrolein	ND		500	2-Chloroethylvinylether	ND		100
Acrylonitrile	ND		500	2-Hexanone	ND		100
Chloromethane	ND		100	trans-1,3-Dichloropropene	ND		50
Bromomethane	ND		100	Toluene	ND		50
Vinyl Chloride	ND		100	cis-1,3-Dichloropropene	ND		50
Chloroethane	ND		100	1,1,2,2-Tetrachloroethane	ND		50
Acetone	ND	B	100	1,1,2-Trichloroethane	ND		50
1,1-Dichloroethene	ND		50	4-Methyl-2-pentanone	ND		100
Carbon Disulfide	ND		100	Tetrachloroethene	ND		50
Methylene Chloride	16	J	50	Dibromochloromethane	ND		50
1,2-Dichloroethene(trans)	ND		50	Chlorobenzene	ND		50
1,1-Dichloroethane	ND		50	Ethylbenzene	ND		50
Vinyl Acetate	ND		50	m&p-Xylenes	ND		50
2-Butanone	ND		100	o-Xylene	ND		50
Chloroform	ND		50	Styrene	ND		50
1,1,1-Trichloroethane	ND		50	Bromoform	ND		50
Carbon Tetrachloride	ND		50	m-Dichlorobenzene	ND		50
1,2-Dichloroethane	ND		50	p-Dichlorobenzene	ND		50
Benzene	520		50	o-Dichlorobenzene	ND		50
Trichloroethene	ND		50	Methyl Tertiary Butyl Ether	890		100
1,2-Dichloropropane	ND		50	Tertiary Butyl Alcohol	470	J	500
Bromodichloromethane	ND		50				

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	76 - 114	OK
Toluene-d8	98.2	88 - 110	OK
Bromofluorobenzene	102	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW1-2926925

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: A1634

Sample wt/vol: .5 (g/mL) mL

Lab File ID: >A1368

Level: MED

Date Received: 04/21/93

% Moisture: 100

Date Analyzed 04/27/93

Column: CAP

Dilution Factor: 10

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	513359	2-Butene, 2-methyl- (8CI9CI)	6.01	64
3	96377	Cyclopentane, methyl- (8CI9CI)	8.64	65
4	496117	1H-Indene, 2,3-dihydro- (9CI)	20.09	87
5	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.95	29

QUANT REPORT

Operator ID: JEFF
Output File: ^A1368::QT
Data File: >A1368::D3
Name: A1634
Misc: MW1-2926925 BLDG 2567

Quant Rev: 6
Quant Time: 930427 18:38
Injected at: 930427 18:07
Dilution Factor: 1.00000

.5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.11	706	29345	50.00	UG/L	100
13)	Methylene Chloride	6.90	483	2299	1.65	UG/L	73
21)	1,2-Dichloroethane-d4	10.00	796	63158	53.05	UG/L	100
22)	*1,4-Difluorobenzene	10.67	863	144413	50.00	UG/L	100
24)	Benzene	10.10	806	155015	52.20	UG/L	100
31)	Toluene-d8	13.01	1099	147768	49.10	UG/L	100
33)	*Chlorobenzene-d5	15.41	1342	123956	50.00	UG/L	100
46)	Bromofluorobenzene	17.47	1550	77657	50.80	UG/L	100

* Compound is ISTD

QUANT REPORT

Operator ID: JEFF
Output File: MA1368::QT
Data File: >A1368::D3
Name: A1634
Misc: MW1-2926925 BLDG 2567

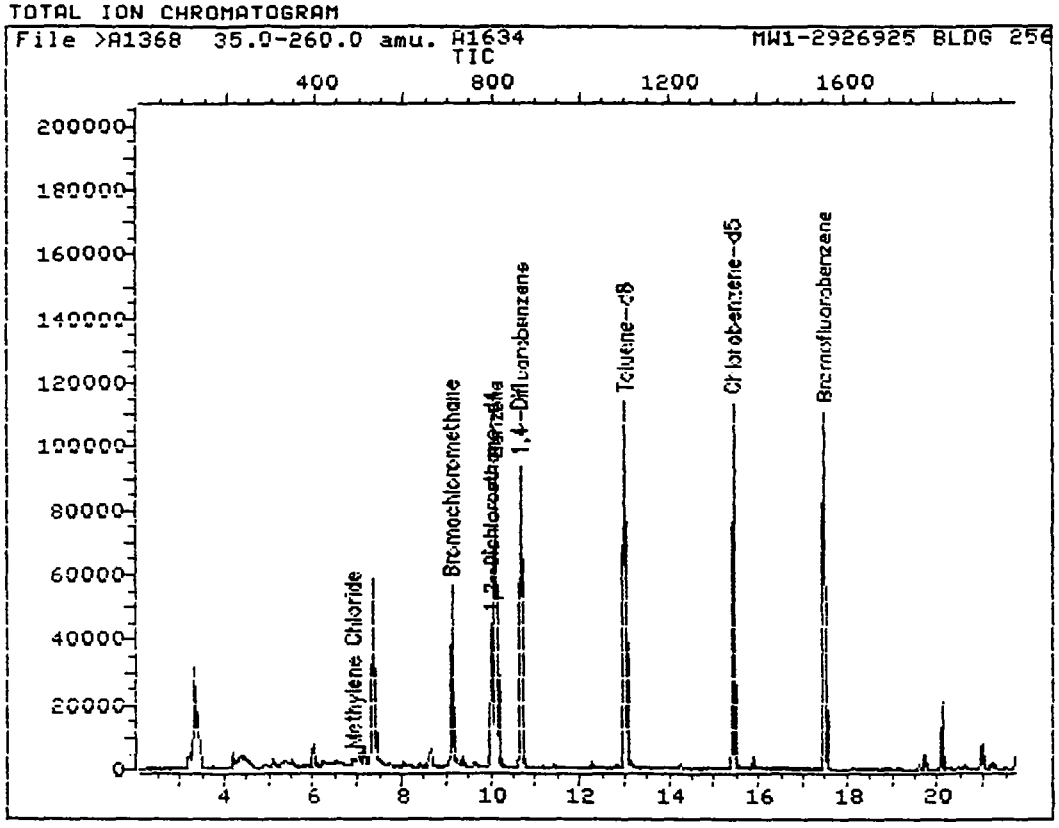
Quant Rev: 6
Quant Time: 930430 15:18
Injected at: 930427 18:07
Dilution Factor: 1.00000
.5mL

ID File: IDAUXA::M1
Title: INST A AUX. COMPOUNDS
Last Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.11	706	29345	50.00	ug/L	100
2)	Methyl Tertiary Butyl Ether	7.35	528	119736	88.70	ug/L	100
3)	Tertiary Butyl Alcohol	7.15	508	15249	47.31	ug/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1368::D3 Quant Output File: ^A1368::QT
Name: A1634
Misc: MW1-2926925 BLDG 2567 .5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 18:38
Injected at: 930427 18:07

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1535	DILUTION FACTOR	10.00
CLIENT ID	MW1-2926925-DUP BLDG 2567	COMMENTS	HNU 0.2
DATA FILE	>A1370	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	500	2-Chloroethylvinylether	ND	100
Acrylonitrile	ND	500	2-Hexanone	ND	100
Chloromethane	ND	100	trans-1,3-Dichloropropene	ND	50
Bromomethane	ND	100	Toluene	ND	50
Vinyl Chloride	ND	100	cis-1,3-Dichloropropene	ND	50
Chloroethane	ND	100	1,1,2,2-Tetrachloroethane	ND	50
Acetone	28 JB	100	1,1,2-Trichloroethane	ND	50
1,1-Dichloroethene	ND	50	4-Methyl-2-pentanone	ND	100
Carbon Disulfide	ND	100	Tetrachloroethene	ND	50
Methylene Chloride	ND	50	Dibromochloromethane	ND	50
1,2-Dichloroethene(trans)	ND	50	Chlorobenzene	ND	50
1,1-Dichloroethane	ND	50	Ethylbenzene	ND	50
Vinyl Acetate	ND	50	m&p-Xylenes	ND	50
2-Butanone	ND	100	o-Xylene	ND	50
Chloroform	ND	50	Styrene	ND	50
1,1,1-Trichloroethane	ND	50	Bromoform	ND	50
Carbon Tetrachloride	ND	50	m-Dichlorobenzene	ND	50
1,2-Dichloroethane	ND	50	p-Dichlorobenzene	ND	50
Benzene	470	50	o-Dichlorobenzene	ND	50
Trichloroethene	ND	50	Methyl Tertiary Butyl Ether	970	100
1,2-Dichloropropane	ND	50	Tertiary Butyl Alcohol	640	500
Bromodichloromethane	ND	50			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	114	76 - 114	OK
Toluene-d8	98.0	88 - 110	OK
Bromofluorobenzene	103	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW1-2926925-DUP

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: A1635

Sample wt/vol: .5 (g/mL) mL

Lab File ID: >A1370

Level: MED

Date Received: 04/21/93

% Moisture: 100

Date Analyzed 04/27/93

Column: CAP

Dilution Factor: 10

Number TICs Found 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	513359	2-Butene, 2-methyl- (8CI9CI)	5.95	65
2	624782	Ethanamine, N-methyl- (9CI)	7.12	81
4	96377	Cyclopentane, methyl- (8CI9CI)	8.60	74
5	496117	1H-Indene, 2,3-dihydro- (9CI)	20.05	87
6	1758889	Benzene, 2-ethyl-1,4-dimethyl- (9CI)	20.91	32

QUANT REPORT

Operator ID: JEFF Quant Rev: 6 Quant Time: 930427 19:49
Output File: ^A1370::QT Injected at: 930427 19:18
Data File: >A1370::D3 Dilution Factor: 1.00000
Name: A1635
Misc: MW1-2926925-DUP BLDG 2567 0.5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.07	709	28612	50.00	UG/L	100
2)	Acetone	6.24	423	1453	2.76	UG/L	84
2)	1,2-Dichloroethane-d4	9.96	799	66222	57.05	UG/L	100
22)	*1,4-Difluorobenzene	10.63	866	146903	50.00	UG/L	100
24)	Benzene	10.06	809	143387	47.47	UG/L	100
3)	Toluene-d8	12.96	1101	150046	49.01	UG/L	100
35)	*Chlorobenzene-d5	15.37	1345	127311	50.00	UG/L	100
46)	Bromofluorobenzene	17.42	1552	80871	51.51	UG/L	100

Compound is ISTD

QUANT REPORT

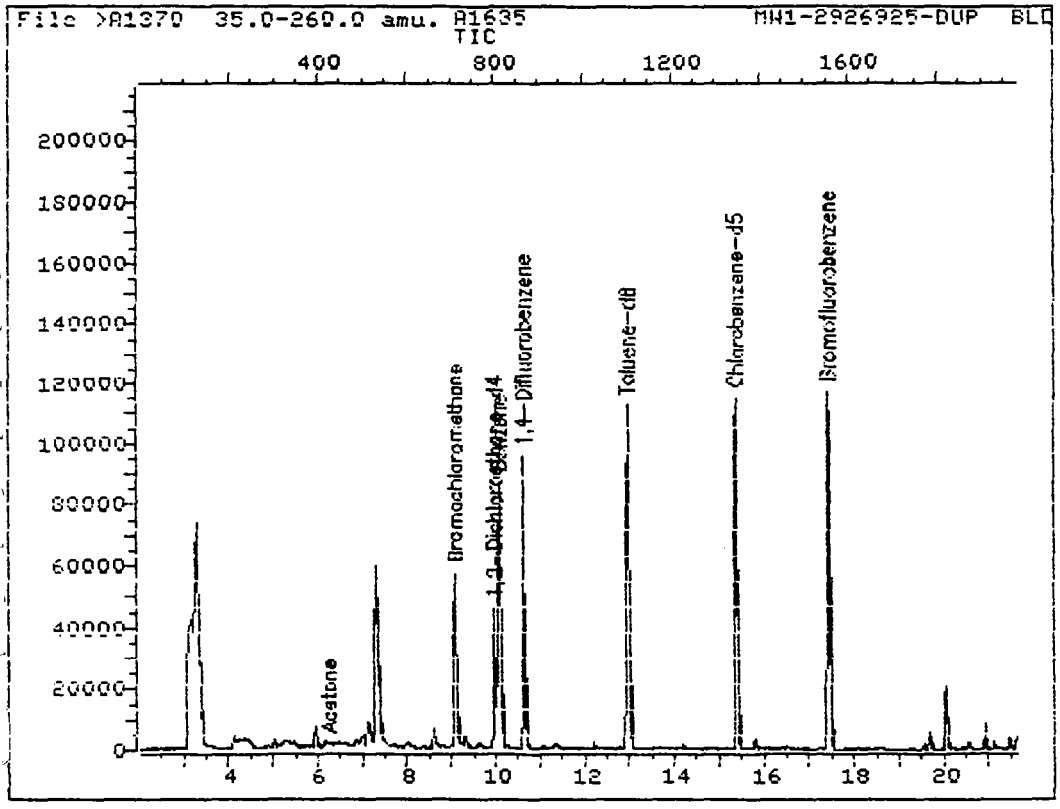
Operator ID: JEFF Quant Rev: 6 Quant Time: 930430 15:18
Output File: MA1370::QT Injected at: 930427 19:18
Data File: >A1370::D3 Dilution Factor: 1.00000
Name: A1635
Misc: MW1-2926925-DUP BLDG 2567 0.5mL

ID File: IDAUXA::M1
Title: INST A AUX. COMPOUNDS
Last Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.07	709	28612	50.00	ug/L	100
2)	Methyl Tertiary Butyl Ether	7.31	531	127527	96.89	ug/L	100
3)	Tertiary Butyl Alcohol	7.12	512	20151	64.12	ug/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1370::D3 Quant Output File: ^A1370::QT
Name: A1635
Misc: MW1-2926925-DUP BLDG 2567 0.5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 19:49
Injected at: 930427 19:18

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1636	DILUTION FACTOR	1.00
CLIENT ID	MW2-2926926 BLDG 2567	COMMENTS	HNU ND
DATA FILE	>A1364	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	2.5 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	2.0 J	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	95.7	76 - 114	OK
Toluene-d8	97.7	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
MW2-2926926

Lab Name:21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: A1636

Sample wt/vol: 5 (g/mL) mL Lab File ID: >A1364

Level: (low/med) LOW Date Received: 04/21/93

% Moisture: NA Date Analyzed: 04/27/93

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

00039

QUANT REPORT

perator ID: JEFF Quant Rev: 6 Quant Time: 930427 16:16
utput File: ^A1364::QT Injected at: 930427 15:46
ata File: >A1364::D3 Dilution Factor: 1.00000
ame: A1636
sc: MW2-2926926 BLDG 2567 5mL

D File: ID0127::M1
tle: USEPA 624 VOLATILES
ast Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
.)	*Bromochloromethane	9.10	711	33303	50.00	UG/L	100
)	Acetone	6.23	422	1512	2.46	UG/L	85
.)	1,2-Dichloroethane-d4	9.98	800	64660	47.86	UG/L	100
.)	*1,4-Difluorobenzene	10.64	867	153313	50.00	UG/L	100
)	Toluene-d8	12.98	1103	156027	48.84	UG/L	100
)	*Chlorobenzene-d5	15.39	1346	128450	50.00	UG/L	100
)	m&p-Xylenes	15.82	1390	8699	1.98	UG/L	95
)	Bromofluorobenzene	17.44	1553	79784	50.37	UG/L	100

Compound is ISTD

QUANT REPORT

perator ID: JEFF Quant Rev: 6 Quant Time: 930430 15:16
Output File: MA1364::QT Injected at: 930427 15:46
ata File: >A1364::D3 Dilution Factor: 1.00000
ame: A1636
Misc: MW2-2926926 BLDG 2567 5mL

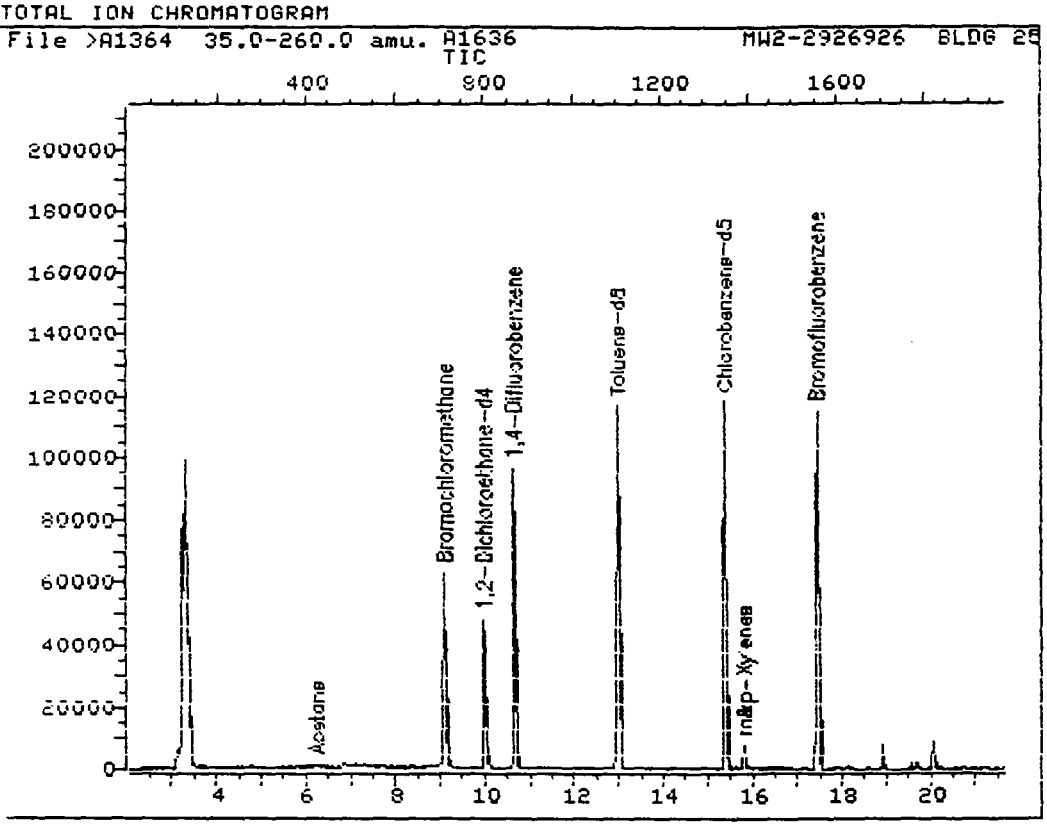
D File: IDAUXA::M1
itle: INST A AUX. COMPOUNDS
Last Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.10	711	33303	50.00	ug/L	100

* Compound is ISTD

00041

TOTAL ION CHROMATOGRAM



Data File: >A1364::D3 Quant Output File: ^A1364::QT
Name: A1636
Misc: MW2-2926926 BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 16:16
Injected at: 930427 15:46

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1637	DILUTION FACTOR	1.00
CLIENT ID	MW3-2926947 BLDG 2567	COMMENTS	HNU ND
DATA FILE	>A1365	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	15	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	7.7 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	71	5
2-Butanone	ND	10	o-Xylene	3.2 J	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	180	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	27	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.1	76 - 114	OK
Toluene-d8	98.1	88 - 110	OK
Bromofluorobenzene	102	86 - 115	OK

(J) Indicates detected below MDL .
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW3-2926947

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: A1637

Sample wt/vol: 5 (g/mL) mL

Lab File ID: >A1365

Level: MED

Date Received: 04/21/93

% Moisture: 100

Date Analyzed 04/27/93

Column: CAP

Dilution Factor: 1

Number TICs Found 18

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	78784	Butane, 2-methyl- (8CI9CI)	5.09	9
2	109660	Pentane (ACN)(DOT)(8CI9CI)	5.52	15
3	513359	2-Butene, 2-methyl- (8CI9CI)	6.00	21
4	287923	Cyclopentane (DOT)(8CI9CI)	7.02	44
5		UNKNOWN	7.32	31
6	563791	2-Butene, 2,3-dimethyl- (8CI9CI)	8.02	9
7	616126	2-Pentene, 3-methyl-, (E)- (8CI9CI)	8.38	9
8	96377	Cyclopentane, methyl- (8CI9CI)	8.62	62
9	693890	Cyclopentene, 1-methyl- (8CI9CI)	9.35	19
0	110827	Cyclohexane(DOT (8CI9CI)	9.63	18
1	19037720	Cyclopentene, 4,4-dimethyl- (8CI9CI)	11.11	4
2	3744023	4-Penten-2-one, 4-methyl- (8CI9CI)	11.40	8
3	16491159	Cyclopentene, 1,5-dimethyl- (8CI9CI)	12.24	10
4	2384943	2,4-Heptadiene, (E,E)- (9CI)	12.79	4
5	611143	Benzene, 1-ethyl-2-methyl- (9CI)	18.12	14
6	620144	Benzene, 1-ethyl-3-methyl- (9CI)	19.69	7
7	496117	1H-Indene, 2,3-dihydro- (9CI)	20.07	14
8	767588	1H-Indene, 2,3-dihydro-1-methyl- (9CI)	21.14	7

QUANT REPORT

Operator ID: JEFF Quant Rev: 6 Quant Time: 930427 16:51
Output File: ^A1365::QT Injected at: 930427 16:21
Data File: >A1365::D3 Dilution Factor: 1.00000
Name: A1637
Misc: MW3-2926947 BLDG 2567 5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.11	706	34814	50.00	UG/L	100
9)	Acetone	6.26	419	4931	7.69	UG/L	83
21)	1,2-Dichloroethane-d4	9.99	795	70003	49.56	UG/L	100
22)	*1,4-Difluorobenzene	10.65	862	162314	50.00	UG/L	100
24)	Benzene	10.09	805	587811	176.11	UG/L	100
31)	Toluene-d8	12.99	1098	165855	49.04	UG/L	100
32)	Toluene	13.09	1108	65777	15.41	UG/L	98
33)	*Chlorobenzene-d5	15.40	1341	138991	50.00	UG/L	100
41)	m&p-Xylenes	15.84	1385	337025	70.94	UG/L	94
42)	o-Xylene	16.53	1455	14694	3.15	UG/L	92
46)	Bromofluorobenzene	17.45	1548	87633	51.13	UG/L	100

* Compound is ISTD

QUANT REPORT

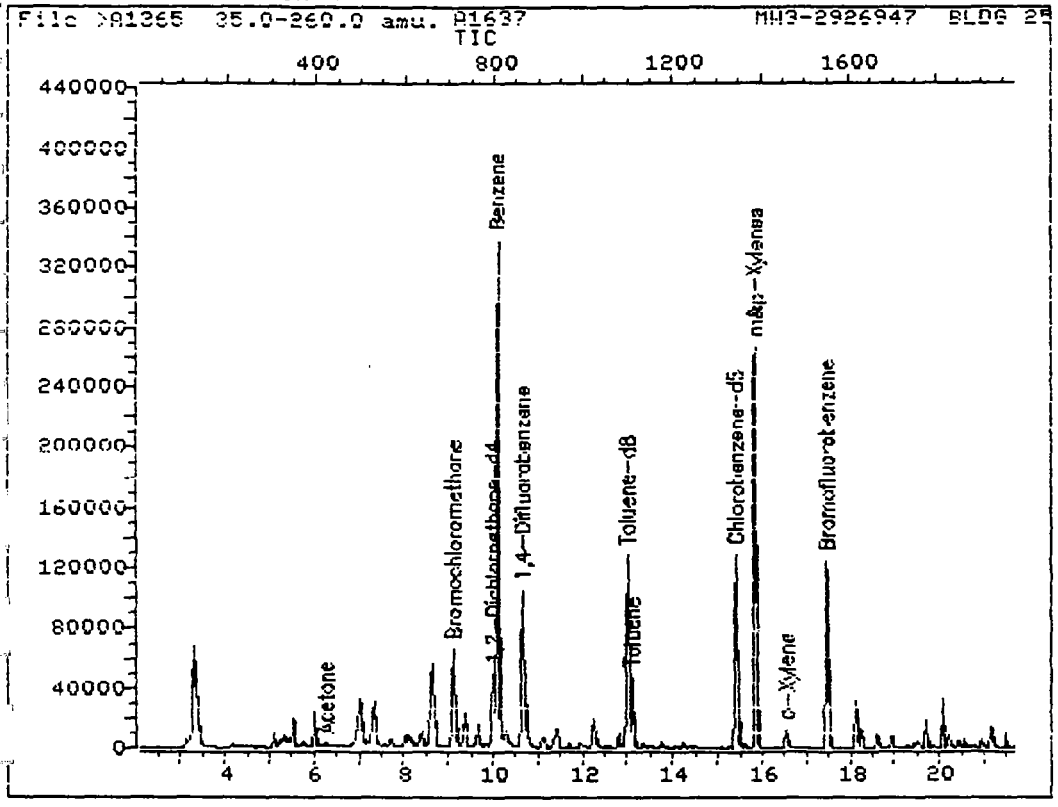
perator ID: JEFF Quant Rev: 6 Quant Time: 930430 15:17
utput File: MA1365::QT Injected at: 930427 16:21
ata File: >A1365::D3 Dilution Factor: 1.00000
ame: A1637
isc: MW3-2926947 BLDG 2567 5mL

) File: IDAUXA::M1
itle: INST A AUX. COMPOUNDS
ast Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.11	706	34814	50.00	ug/L	100
2)	Methyl Tertiary Butyl Ether	7.32	526	43077	26.90	ug/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1365::D3 Quant Output File: ^A1365::QT
Name: A1637
Misc: MW3-2926947 BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 16:51
Injected at: 930427 16:21

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1638	DILUTION FACTOR	1.00
CLIENT ID	FIELD BLANK BLDG 2567	COMMENTS	HNU ND
DATA FILE	>A1366	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	2.5 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	3.8 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	96.6	76 - 114	OK
Toluene-d8	96.7	88 - 110	OK
Bromofluorobenzene	99.8	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FIELD BLANK

b Name:21st Century Environmental

ient Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

trix: (soil/water) WATER Lab Sample ID: A1638

mple wt/vol: 5 (g/mL) mL Lab File ID: >A1366

vel: (low/med) LOW Date Received: 04/21/93

Moisture: NA Date Analyzed: 04/27/93

lumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

00049

QUANT REPORT

Operator ID: JEFF Quant Rev: 6 Quant Time: 930427 17:27
Output File: ^A1366::QT Injected at: 930427 16:56
Data File: >A1366::D3 Dilution Factor: 1.00000
Name: A1638
Misc: FIELD BLANK BLDG 2567 5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.13	702	34924	50.00	UG/L	100
9)	Acetone	6.29	415	1623	2.52	UG/L	83
1[illegible])	Methylene Chloride	6.92	478	6288	3.80	UG/L	77
21)	1,2-Dichloroethane-d4	10.02	791	68466	48.32	UG/L	100
22)	*1,4-Difluorobenzene	10.68	858	159479	50.00	UG/L	100
3[illegible])	Toluene-d8	13.03	1095	160624	48.33	UG/L	100
3[illegible])	*Chlorobenzene-d5	15.43	1338	132393	50.00	UG/L	100
46)	Bromofluorobenzene	17.49	1546	81475	49.91	UG/L	100

* Compound is ISTD

00050

QUANT REPORT

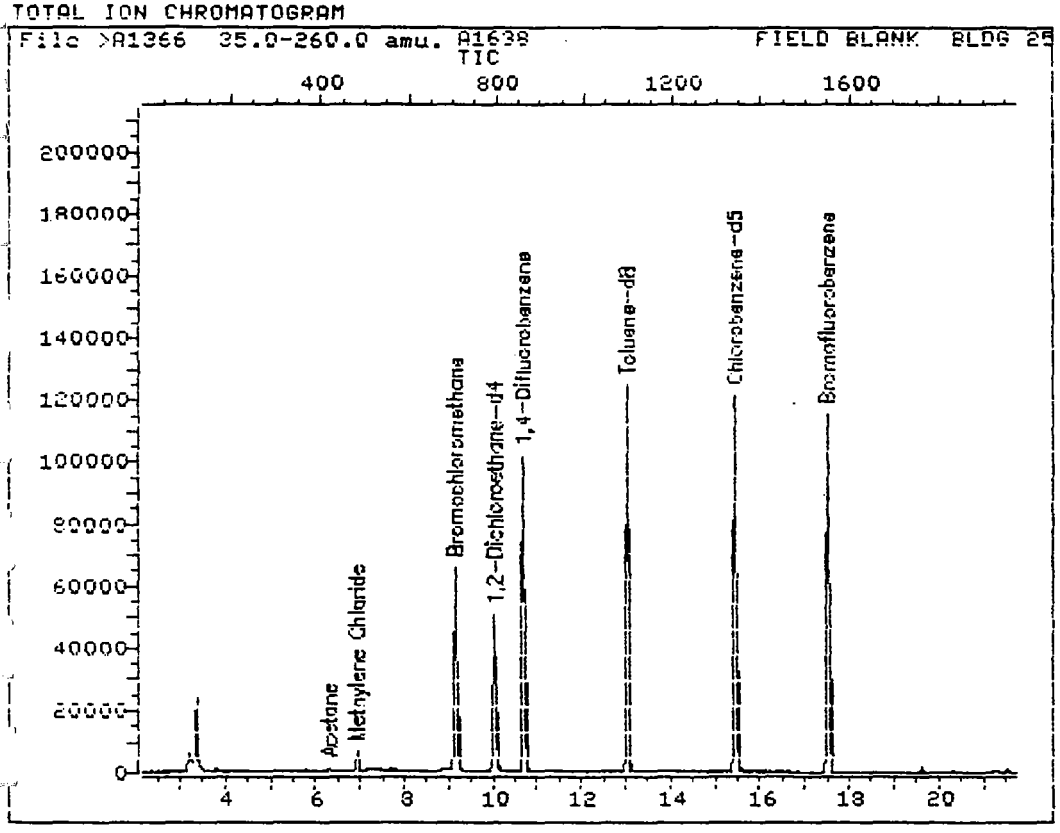
erator ID: JEFF Quant Rev: 6 Quant Time: 930430 15:17
tput File: MA1366::QT Injected at: 930427 16:56
ta File: >A1366::D3 Dilution Factor: 1.00000
me: A1638
sc: FIELD BLANK BLDG 2567 5mL

File: IDAUXA::M1
tle: INST A AUX. COMPOUNDS
st Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.13	702	34924	50.00	ug/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1366::D3 Quant Output File: ^A1366::QT
Name: A1638
Misc: FIELD BLANK BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 17:27
Injected at: 930427 16:56

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	A1639	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 2567	COMMENTS	HNU ND
DATA FILE	>A1367	DATE ANALYZED	04/27/93

COMPOUND	UG/L		MDL	COMPOUND	UG/L	MDL
Acrolein	ND		50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND		50	2-Hexanone	ND	10
Chloromethane	ND		10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND		10	Toluene	ND	5
Vinyl Chloride	ND		10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND		10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	B	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND		5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND		10	Tetrachloroethene	ND	5
Methylene Chloride	4.8	J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND		5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND		5	Ethylbenzene	ND	5
Vinyl Acetate	ND		5	m&p-Xylenes	ND	5
2-Butanone	ND		10	o-Xylene	ND	5
Chloroform	ND		5	Styrene	ND	5
1,1,1-Trichloroethane	ND		5	Bromoform	ND	5
Carbon Tetrachloride	ND		5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND		5	p-Dichlorobenzene	ND	5
Benzene	ND		5	o-Dichlorobenzene	ND	5
Trichloroethene	ND		5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND		5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND		5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	95.9	76 - 114	OK
Toluene-d8	96.9	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: 21st Century Environmental

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: A1639

Sample wt/vol: 5 (g/mL) mL

Lab File ID: >A1367

Level: (low/med) LOW

Date Received: 04/21/93

% Moisture: NA

Date Analyzed: 04/27/93

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC

1/87 Rev.

00051

QUANT REPORT

erator ID: JEFF Quant Rev: 6 Quant Time: 930427 18:03
tput File: ^A1367::QT Injected at: 930427 17:32
ta File: >A1367::D3 Dilution Factor: 1.00000
me: A1639
sc: TRIP BLANK BLDG 2567 5mL

File: ID0127::M1
tle: USEPA 624 VOLATILES
st Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	9.08	706	32114	50.00	UG/L	100
)	Methylene Chloride	6.86	481	7371	4.84	UG/L	76
)	1,2-Dichloroethane-d4	9.98	796	62488	47.96	UG/L	100
)	*1,4-Difluorobenzene	10.64	863	153678	50.00	UG/L	100
)	Toluene-d8	12.98	1099	155209	48.47	UG/L	100
)	*Chlorobenzene-d5	15.37	1341	126750	50.00	UG/L	100
)	Bromofluorobenzene	17.44	1550	78811	50.42	UG/L	100

Compound is ISTD

QUANT REPORT

Operator ID: JEFF
Output File: MA1367::QT
Data File: >A1367::D3
Name: A1639
Misc: TRIP BLANK BLDG 2567

Quant Rev: 6 Quant Time: 930430 15:17
Injected at: 930427 17:32
Dilution Factor: 1.00000

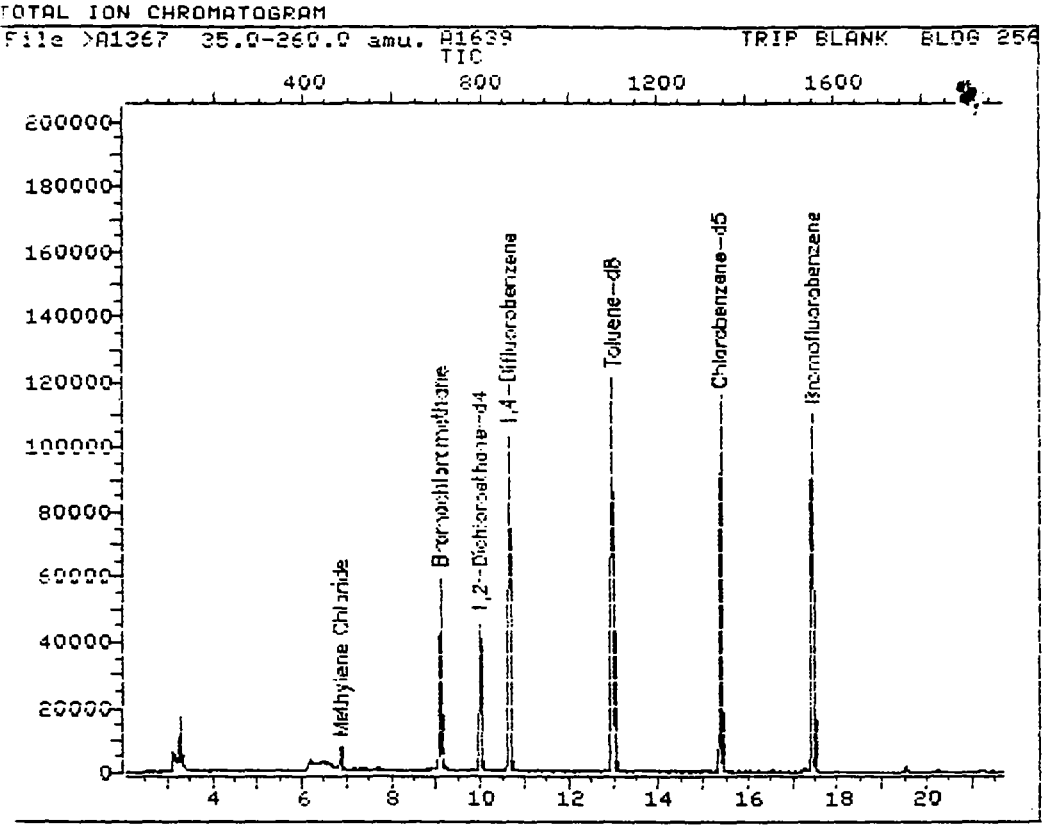
5mL

ID File: IDAUXA::M1
Title: INST A AUX. COMPOUNDS
Last Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.08	706	32114	50.00	ug/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1367::D3 Quant Output File: ^A1367::QT
Name: A1639
Misc: TRIP BLANK BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 18:03
Injected at: 930427 17:32

Q C RESULTS

QUALITY CONTROL DATA

BATCH NO: M 043

MATRIX: Aqueous

METAL	METHOD BLANK (mg/L)	AMOUNT OF SPIKE (ug/L)	% SPIKE RECOVERY
LEAD	N.D.	137	124

00059

QUALITY CONTROL DATA

ANALYSIS NO: A 1633

BATCH NO: M 043

MATRIX: Aqueous

METAL	AMOUNT OF SPIKE (ug/L)	% SPIKE RECOVERY	% SPIKE RECOVERY DUP
LEAD	500	108	75

21st Century Environmental Inc
WATER VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	96	97	97	0
A1633	97	98	100	0
A1636	96	98	101	0
A1637	99	98	102	0
A1638	97	97	100	0
A1639	96	97	101	0
A1634	106	98	102	0
A1635	114	98	103	0
A1582MS	101	99	99	0
A1582MSD	101	99	100	0

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

00061

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 21ST CENTURY ENVIRONMENTAL Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix Spike - EPA Sample No.: A1582

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	ND	50.5	101	61-145
Trichloroethene	50.00	ND	51.5	103	71-120
Benzene	50.00	ND	56.7	113	76-127
Toluene	50.00	ND	53.9	108	76-125
Chlorobenzene	50.00	ND	51.4	103	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	46.9	94	7	14	61-145
Trichloroethene	50.00	47.8	96	7	14	71-120
Benzene	50.00	52.2	104	8	17	76-127
Toluene	50.00	49.7	99	9	12	76-125
Chlorobenzene	50.00	48.7	97	6	13	75-130

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

* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

QUANT REPORT

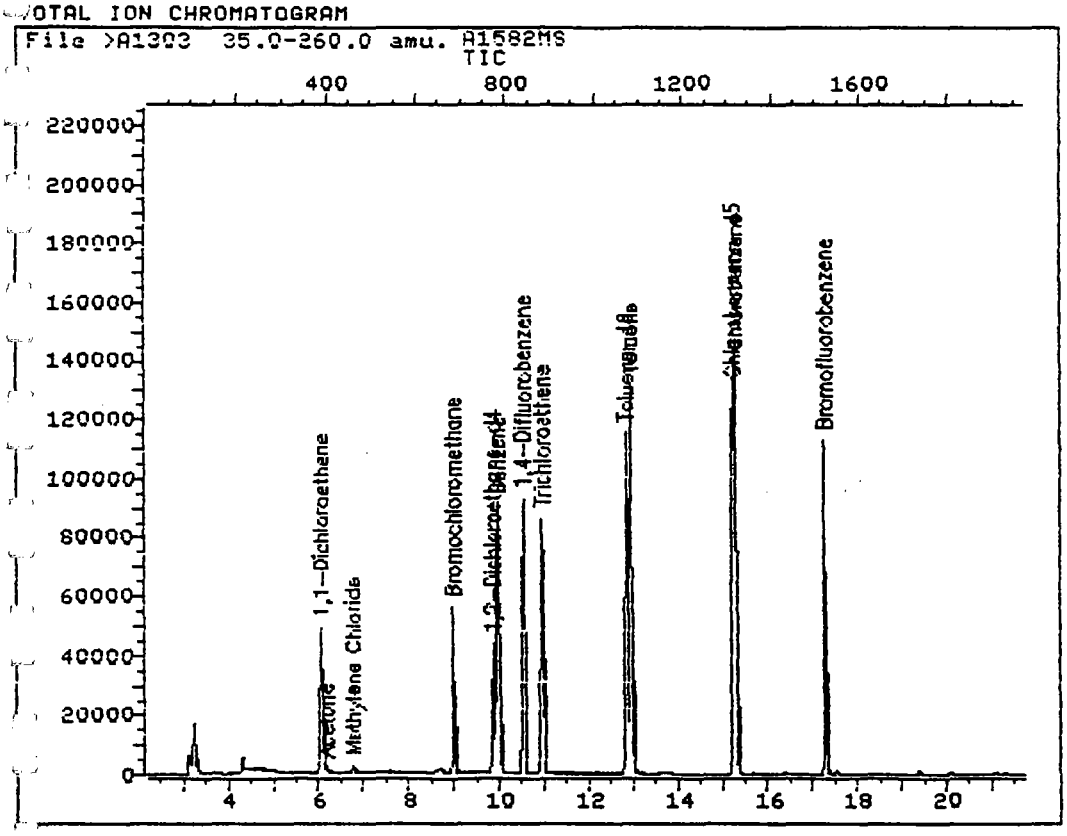
ator ID: JEFF Quant Rev: 6 Quant Time: 930422 21:11
ut File: ^A1303::QT Injected at: 930422 20:41
File: >A1303::D2 Dilution Factor: 1.00000
: A1582MS
: 5.0mL

ile: ID0127::M1
e: USEPA 624 VOLATILES
Calibration: 930422 16:06

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	8.99	682	29725	50.00	UG/L	100
Acetone	6.17	397	2832	6.11	UG/L	81
1,1-Dichloroethene	6.07	387	65102	50.48	UG/L	100
Methylene Chloride	6.78	459	2018	1.63	UG/L	83
1,2-Dichloroethane-d4	9.86	770	61899	50.27	UG/L	100
*1,4-Difluorobenzene	10.54	838	143184	50.00	UG/L	100
Benzene	9.97	781	151941	56.65	UG/L	100
Trichloroethene	10.96	880	55193	51.48	UG/L	80
Toluene-d8	12.85	1071	148619	49.64	UG/L	100
Toluene	12.96	1082	186788	53.91	UG/L	97
*Chlorobenzene-d5	15.25	1313	127484	50.00	UG/L	100
Chlorobenzene	15.29	1318	141007	51.43	UG/L	94
Bromofluorobenzene	17.29	1519	77753	49.73	UG/L	100

ompound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1303::D2 Quant Output File: ^A1303::QT
Name: A1582MS
Misc: 5.0mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930422 16:06

Operator ID: JEFF
Quant Time: 930422 21:11
Injected at: 930422 20:41

QUANT REPORT

rator ID: JEFF
out File: ^A1304::QT
a File: >A1304::D2
e: A1582MSD
c:

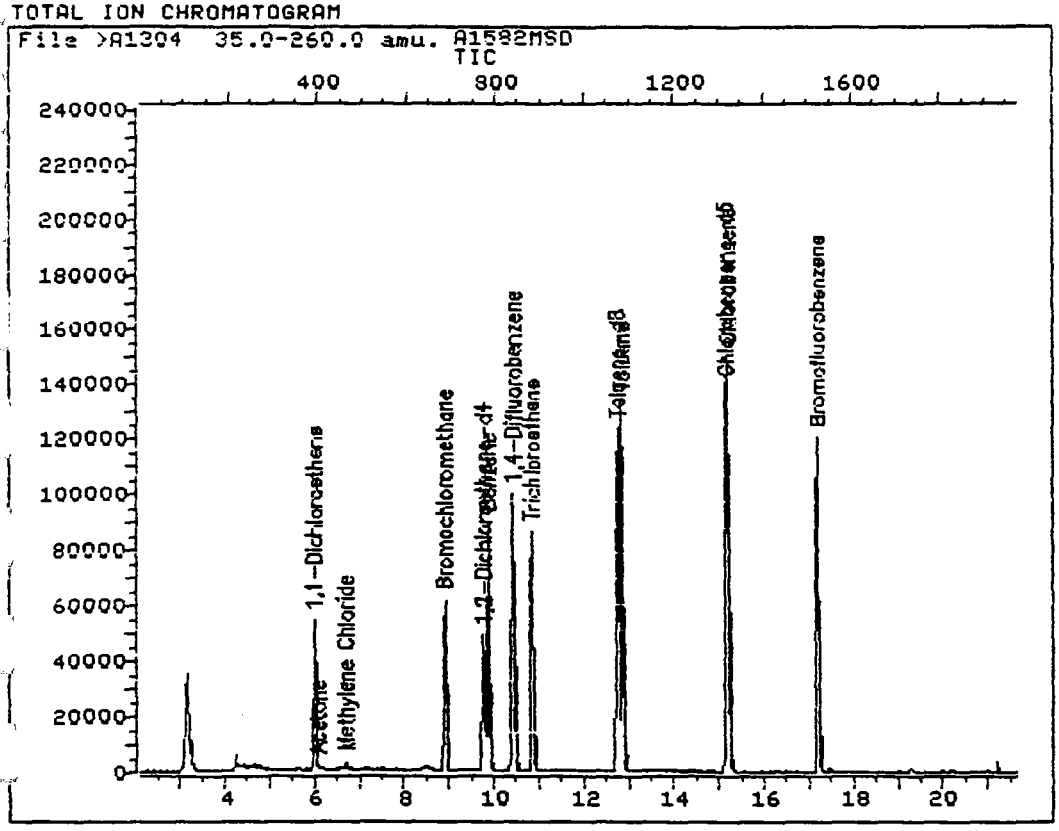
Quant Rev: 6 Quant Time: 930422 21:46
Injected at: 930422 21:16
Dilution Factor: 1.00000
5.0mL

File: ID0127::M1
le: USEPA 624 VOLATILES
t Calibration: 930422 16:06

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	8.90	685	31771	50.00	UG/L	100
Acetone	6.06	398	3385	6.83	UG/L	79
1,1-Dichloroethene	5.99	391	64586	46.85	UG/L	100
Methylene Chloride	6.68	461	2426	1.83	UG/L	77
1,2-Dichloroethane-d4	9.76	772	66293	50.37	UG/L	100
*1,4-Difluorobenzene	10.43	839	155797	50.00	UG/L	100
Benzene	9.87	783	152393	52.21	UG/L	100
Trichloroethene	10.84	881	55705	47.75	UG/L	80
Toluene-d8	12.75	1073	160835	49.37	UG/L	100
Toluene	12.85	1084	187453	49.72	UG/L	97
*Chlorobenzene-d5	15.14	1315	136330	50.00	UG/L	100
Chlorobenzene	15.18	1319	142906	48.74	UG/L	93
Bromofluorobenzene	17.18	1521	83629	50.02	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A1304::D2 Quant Output File: ^A1304::QT
Name: A1582MSD
Misc: 5.0mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930422 16:06

Operator ID: JEFF
Quant Time: 930422 21:46
Injected at: 930422 21:16

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

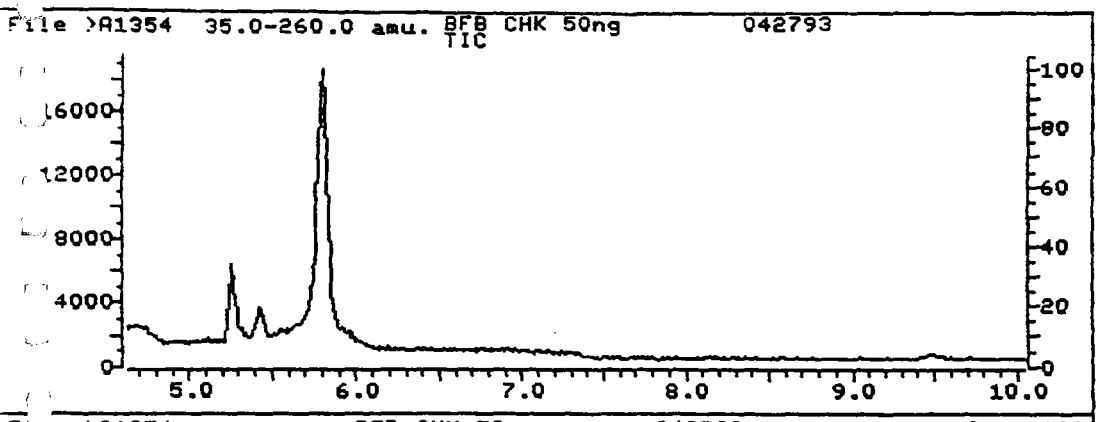
DATE AND TIME OF INJECTION: 4/27/93 9:24
INSTRUMENT ID: 5995

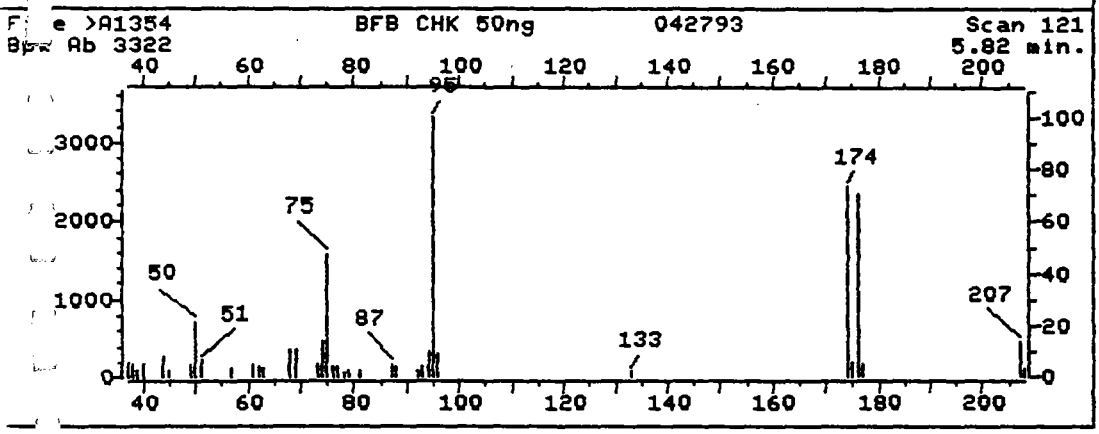
DATA RELEASE AUTHORIZED BY Richard W Lynch.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.76	21.76	Ok
75	30-60% of mass 95	47.59	47.59	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.94	8.94	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	73.21	73.21	Ok
175	5-9% of mass 174	5.63	7.69	Ok
176	95-101% of mass 174	70.50	96.30	Ok
177	5-9% of mass 176	4.88	6.92	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A1354::D2		BFB CHK 50ng		4/27/93	9:24
>A1355::D2		HSL CAL CHK 50ppb		4/27/93	9:54
>A1356::D2		BLANK		4/27/93	10:47
>A1357::D2		A1577		4/27/93	11:22
>A1358::D2		A1578		4/27/93	11:57
>A1359::D2		A1579		4/27/93	12:32
>A1360::D2		A1580		4/27/93	13:24
>A1361::D2		A1633		4/27/93	13:59
>A1364::D3		A1636		4/27/93	15:46
>A1365::D3		A1637		4/27/93	16:21
>A1366::D3		A1638		4/27/93	16:56
>A1367::D3		A1639		4/27/93	17:32
>A1368::D3		A1634		4/27/93	18:07
>A1370::D3		A1635		4/27/93	19:18
>A1371::D3		A1632		4/27/93	19:53





>A1354 BFB CHK 50ng 042793
121 NRM

File: >A1354 Scan #: 121 Retn. time: 5.82

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.05	6.020	51.05	6.653	74.00	14.148	87.00	5.057	132.95	2.438
[illegible]1.05	5.238	57.05	3.191	75.10	47.592	88.00	4.004	174.00	73.209
[illegible]1.05	2.950	61.10	4.756	76.10	3.974	92.00	2.589	175.00	5.629
39.95	5.238	62.10	4.365	77.00	3.883	93.00	3.913	176.00	70.500
[illegible]3.95	8.158	63.10	3.311	78.00	1.836	94.00	10.385	176.90	4.877
[illegible]1.95	2.529	68.00	11.168	78.90	2.378	95.00	100.000	207.05	13.907
48.95	4.816	69.10	10.807	80.90	2.318	96.00	8.940	208.05	2.980
50.05	21.764	73.10	4.726						

Continuing Calibration Check
HSL Compounds

No: | Calibration Date: 04/27/93

actor: 21ST Century Env | Time: 09:54

act No: | Laboratory ID: >A1355

ument ID: Volatile Inst A | Initial Calibration Date: 03/24/93

Minimum $\overline{RF}$ for SPCC is .300 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
romethane	1.03473	1.12058	8.30		**	
omethane	1.26554	1.22855	2.92			
l Chloride	1.41813	1.38061	2.65	*		
roethane	1.05023	1.10558	5.27			
lein	.06145	.06823	11.03			(Conc=80.00)
2-Trichlorotrifluoroethane	2.38138	2.45249	2.99			
lorofluromethane	2.52769	2.40880	4.70			
ne	.85018	.92093	8.32			
)ichloroethene	2.40162	2.41218	.44	*		
n Disulfide	4.17327	3.21366	22.99			
onitrile	.48876	.50406	3.13			
lene Chloride	2.13050	2.37163	11.32			
)ichloroethene(trans)	2.22898	2.41104	8.17			
)ichloroethane	2.76398	3.03088	9.66		**	
Acetate	.57008	.44033	22.76			
anone	.89931	.93891	4.40			
oform	3.29374	3.64004	10.51	*		
-Trichloroethane	2.27756	2.47355	8.61			
n Tetrachloride	2.12666	2.25185	5.89			
ichloroethane-d4	2.00430	2.02850	1.21			(Conc=50.00)
ichloroethane	.49364	.52152	5.65			
ne	.91704	1.02819	12.12			
loroethene	.38331	.40187	4.84			
ichloropropane	.34745	.38636	11.20	*		
dichloromethane	.59055	.61883	4.79			
oroethylvinylether	.22522	.19751	12.30			
anone	.30995	.29213	5.75			
-1,3-Dichloropropene	.55403	.59228	6.90			
ne-d8	1.05498	1.04192	1.24			
ne	1.19164	1.31467	10.32	*		
,3-Dichloropropene	.53672	.56484	5.24			
,2-Tetrachloroethane	.59844	.65930	10.17		**	

- Response Factor from daily standard file at 50.00 UG/L

- Average Response Factor from Initial Calibration Form VI

- % Difference from original average or curve

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/27/93

Contractor: 21ST Century Env Time: 09:54

Contract No: Laboratory ID: >A1355

Instrument ID: Volatile Inst A Initial Calibration Date: 03/24/93

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
1,1,2-Trichloroethane	.40220	.43240	7.51		
4-Methyl-2-pentanone	.36993	.35583	3.81		
Tetrachloroethene	.47449	.54856	15.61		
Dibromochloromethane	.56824	.58911	3.67		
Chlorobenzene	1.05927	1.20038	13.32		**
Ethylbenzene	1.86486	2.09041	12.09	*	
m&p-Xylenes	1.56761	1.70907	9.02		
o-Xylene	1.46424	1.67644	14.49		
Styrene	1.13446	1.25893	10.97		
Bromoform	.39367	.40826	3.71		**
Bromofluorobenzene	.64682	.61657	4.68		
m-Dichlorobenzene	.88479	.83621	5.49		
p-Dichlorobenzene	.90033	.85023	5.57		
o-Dichlorobenzene	.81882	.76695	6.34		

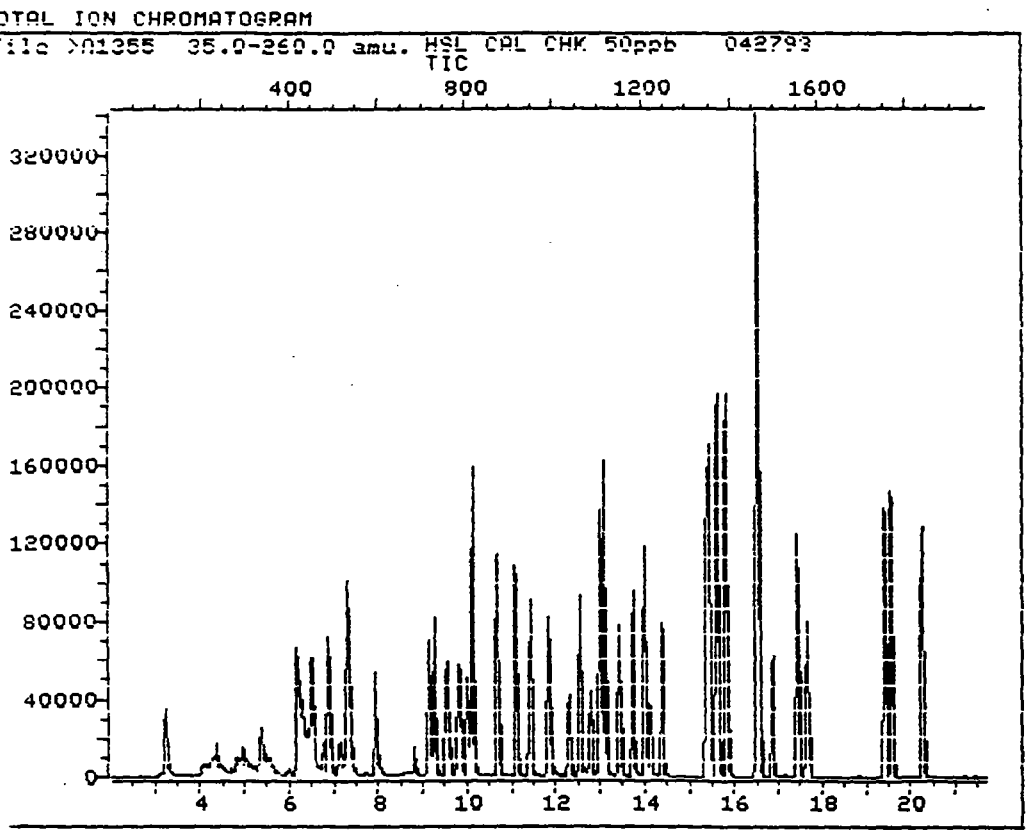
RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Di - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00079



Data File: >A1355::D2 Quant Output File: ^A1355::QT
Name: HSL CAL CHK 50ppb
Misc: 042793

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930424 11:02

Operator ID: JEFF
Quant Time: 930427 10:25
Injected at: 930427 09:54

QUANT REPORT

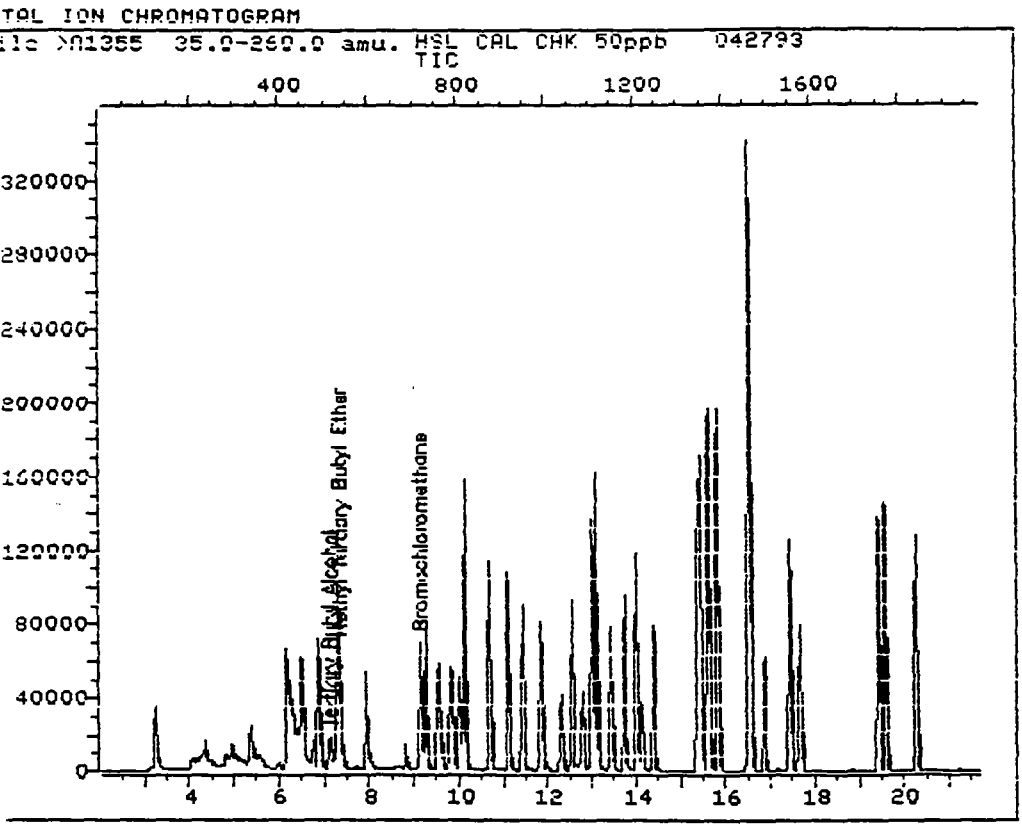
Operator ID: JEFF
Output File: MA1355::QT
Data File: >A1355::D2
Name: HSL CAL CHK 50ppb
Misc: 042793

Quant Rev: 6 Quant Time: 930430 15:14
Injected at: 930427 09:54
Dilution Factor: 1.00000

ID File: IDAUXA::M1
Title: INST A AUX. COMPOUNDS
Last Calibration: 930430 15:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.14	715	35196	50.00	ug/L	100
2	Methyl Tertiary Butyl Ether	7.34	534	80956	50.00	ug/L	100
3	Tertiary Butyl Alcohol	7.13	513	38658	100.00	ug/L	100

* Compound is ISTD



Data File: >A1355::D2 Quant Output File: MA1355::QT
Name: HSL CAL CHK 50ppb
Misc: 042793

Id File: IDAUXA::M1
Title: INST A AUX. COMPOUNDS
Last Calibration: 930430 15:14

Operator ID: JEFF
Quant Time: 930430 15:14
Injected at: 930427 09:54

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

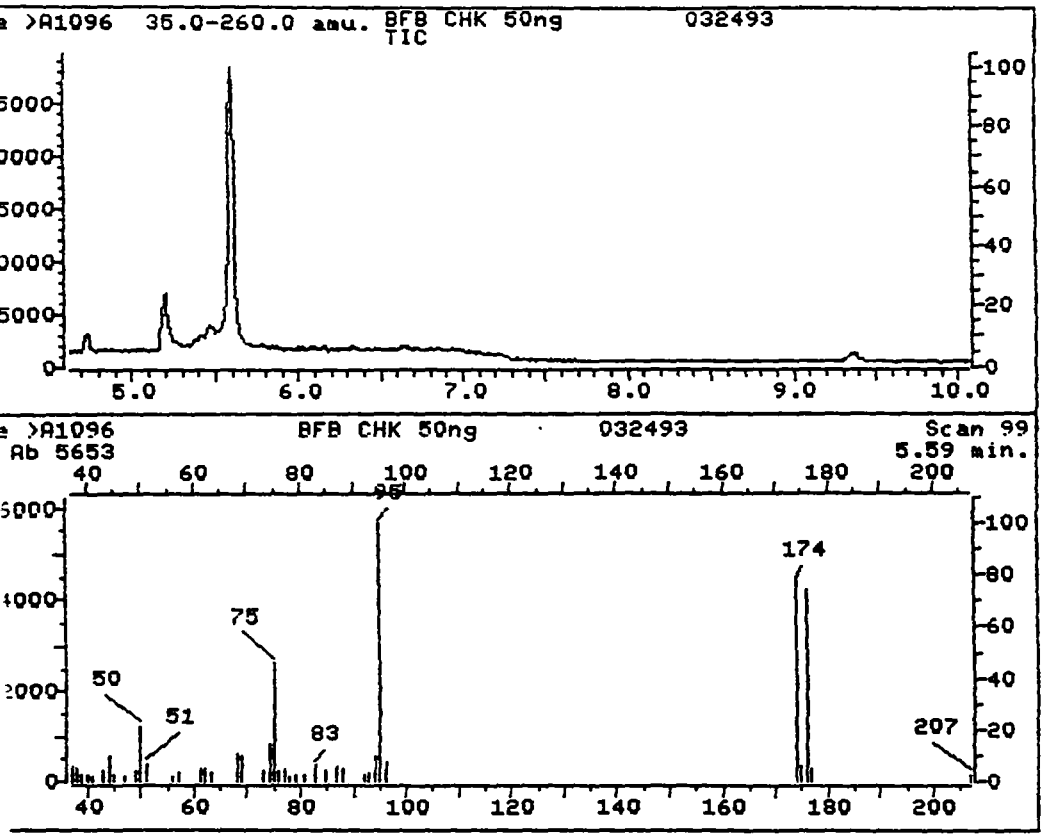
DATE AND TIME OF INJECTION: 3/24/93 9:18
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY Richard W Ryan.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.71	21.71	Ok
75	30-60% of mass 95	46.26	46.26	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.75	7.75	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	77.66	77.66	Ok
175	5-9% of mass 174	5.61	7.22	Ok
176	95-101% of mass 174	74.65	96.13	Ok
177	5-9% of mass 176	5.11	6.85	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>A1096::D2		BFB CHK 50ng		3/24/93	9:18
>A1097::D2		HSL CAL CHK 20ppb		3/24/93	10:32
>A1098::D2		HSL CAL CHK 50ppb		3/24/93	11:28
>A1099::D2		HSL CAL CHK 100ppb		3/24/93	12:05
>A1100::D2		HSL CAL CHK 150ppb		3/24/93	12:44
>A1101::D2		HSL CAL CHK 200ppb		3/24/93	13:30
>A1103::D2		BLANK		3/24/93	16:25
>A1106::D2		A1290		3/24/93	18:11
>A1107::D2		A1259		3/24/93	18:46
>A1108::D2		A1261		3/24/93	19:22
>A1109::D2		A1262		3/24/93	19:57
>A1110::D2		A1263		3/24/93	20:32
>A1111::D2		A1264		3/24/93	21:07



.096 BFB CHK 50ng 032493
99 NRM

e: >A1096 Scan #: 99 Retn. time: 5.59

/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
.05	5.696	49.05	4.405	68.10	10.525	79.00	2.600	94.10	10.366
.05	5.272	50.05	21.705	69.10	9.995	81.00	2.406	95.10	100.000
.05	2.919	51.05	7.111	73.00	4.192	83.00	6.651	96.10	7.748
.95	2.530	56.05	1.999	74.10	14.647	85.00	4.139	174.00	77.658
.05	1.734	57.05	3.485	75.10	46.259	87.00	5.891	175.00	5.608
.05	4.139	61.10	5.236	76.10	3.927	88.00	4.953	176.00	74.651
.05	10.402	62.10	4.635	77.00	5.378	92.10	2.653	177.00	5.112
.05	2.370	63.10	3.113	78.10	1.857	93.00	3.573	207.05	2.936
.05	1.716								

Initial Calibration Data
HSL Compounds

ase No: Instrument ID: Volatile Inst A

Contractor: 21ST Century Env Calibration Date: 03/24/93

Contract No:

Minimum $\overline{RF}$ for SPCC is .300 Maximum % RSD for CCC is 30%

Laboratory ID:	>A1097	>A1098	>A1099	>A1100	>A1101					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
loromethane	1.35641	1.02647	.99132	1.00656	.79290	.439	1.03473	19.611		**
romomethane	1.53893	1.18324	1.22783	1.23235	1.14535	.530	1.26554	12.399		
Vinyl Chloride	1.69065	1.27790	1.32297	1.42634	1.37279	.460	1.41813	11.431	*	
loroethane	1.25383	.96691	1.00450	1.02802	.99791	.562	1.05023	11.034		
rolein	.07284	.05831	.05634	.05809	.06165	.655	.06145	10.828		(Conc=32.0,80.0,160.0,240
1,1,2-Trichlorotrifluoroethane	2.79762	2.05080	2.20935	2.44935	2.39979	.677	2.38138	11.823		
ichlorofluromethane	2.94647	2.23903	2.41221	2.57143	2.46930	.581	2.52769	10.418		
etone	1.19655	.91273	.72838	.74235	.67086	.682	.85018	25.125		
1,1-Dichloroethene	2.77074	2.14633	2.24866	2.44820	2.39418	.672	2.40162	9.920	*	
Carbon Disulfide	4.70214	4.28100	3.78327	4.08900	4.01093	.707	4.17327	8.274		
ylonitrile	.58073	.44181	.44332	.47234	.50558	.793	.48876	11.789		
hylene Chloride	2.56565	1.91910	1.96311	2.08059	2.12403	.753	2.13050	12.072		
1,2-Dichloroethene(trans)	2.59852	2.00267	2.10307	2.23882	2.20183	.800	2.22898	10.143		
-Dichloroethane	3.16728	2.49425	2.64260	2.77051	2.74526	.867	2.76398	9.054		**
yl Acetate	.62580	.58165	.52548	.54531	.57219	.877	.57008	6.706		
2-Butanone	1.13019	.93348	.79389	.84031	.79870	.966	.89931	15.646		
loroform	3.81613	3.00062	3.13032	3.27937	3.24226	1.014	3.29374	9.460	*	
,1-Trichloroethane	2.60873	2.02050	2.15933	2.32474	2.27450	1.047	2.27756	9.618		
Carbon Tetrachloride	2.40404	1.87172	2.01083	2.16063	2.18610	1.075	2.12666	9.405		
1,2-Dichloroethane-d4	1.96966	1.99820	2.01788	2.03973	1.99601	1.097	2.00430	1.307		(Conc=50.0,50.0,50.0,50.0
-Dichloroethane	.55674	.46309	.47720	.47702	.49416	.948	.49364	7.485		
zene	1.07172	.86687	.87716	.88076	.88871	.947	.91704	9.468		
Trichloroethene	.43157	.35587	.36700	.38023	.38186	1.039	.38331	7.560		
-Dichloropropane	.39841	.32398	.33250	.33671	.34562	1.071	.34745	8.501	*	
modichloromethane	.65609	.54780	.56796	.57977	.60112	1.109	.59055	7.013		
2-Chloroethylvinylether	.22925	.23836	.21184	.21542	.23121	1.152	.22522	4.963		
2-Hexanone	.33218	.32479	.28299	.29694	.31286	1.325	.30995	6.490		
ns-1,3-Dichloropropene	.61433	.51333	.53416	.54410	.56423	1.175	.55403	6.927		
Toluene-d8	1.04685	1.05249	1.05889	1.05531	1.06138	1.217	1.05498	.538		(Conc=50.0,50.0,50.0,50.0
Toluene	1.37169	1.11385	1.13926	1.15843	1.17496	1.228	1.19164	8.660	*	

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00076

Initial Calibration Data
HSL Compounds

e No: Instrument ID: Volatile Inst A

tractor: 21ST Century Env Calibration Date: 03/24/93

tract No:

Minimum $\overline{RF}$ for SPCC is .300 Maximum % RSD for CCC is 30%

Laboratory ID:	>A1097	>A1098	>A1099	>A1100	>A1101					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
-1,3-Dichloropropene	.58028	.48807	.51944	.53450	.56130	.873	.53672	6.699		
,2,2-Tetrachloroethane	.68341	.54869	.56307	.57027	.62677	1.148	.59844	9.356		**
,2-Trichloroethane	.46290	.36970	.38302	.39007	.40534	.892	.40220	9.020		
ethyl-2-pentanone	.39820	.38393	.33724	.35585	.37442	.919	.36993	6.457		
rachloroethene	.53330	.42499	.44805	.47652	.48959	.911	.47449	8.715		
romochloromethane	.61558	.51378	.55189	.56677	.59321	.936	.56824	6.872		
orobenzene	1.24468	.98595	1.01228	1.02172	1.03170	1.004	1.05927	9.916		**
ylbenzene	2.12287	1.72576	1.78883	1.83556	1.85128	1.015	1.86486	8.165	*	
-Xylenes	1.72806	1.57055	1.49484	1.52103	1.52359	1.029	1.56761	5.980		
ylene	1.76309	1.41090	1.41985	1.38215	1.34521	1.074	1.46424	11.582		
ene	1.29078	1.27673	1.08619	1.02272	.99591	1.075	1.13446	12.363		
oform	.41687	.35189	.37861	.39693	.42406	1.095	.39367	7.455		**
ofluorobenzene	.62496	.64453	.65270	.65049	.66144	1.133	.64682	2.110		(Conc=50.0,50.0,50.0,50.0
ichlorobenzene	1.13317	.81784	.80482	.82427	.84387	1.262	.88479	15.773		
chlorobenzene	1.15681	.83823	.81672	.83688	.85303	1.272	.90033	15.989		
chlorobenzene	1.04705	.75882	.74440	.76017	.78366	1.316	.81882	15.676		

- Response Factor (Subscript is amount in UG/L)

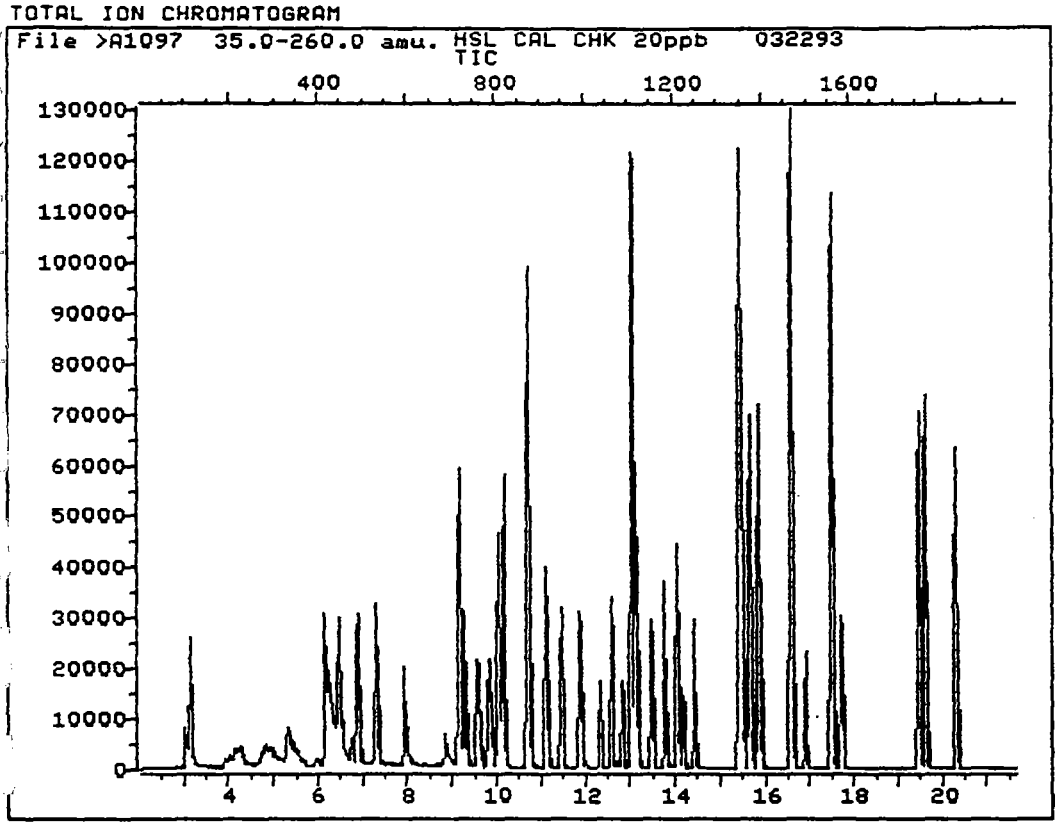
- Average Relative Retention Time (RT Std/RT Istd)

- Average Response Factor

- Percent Relative Standard Deviation

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

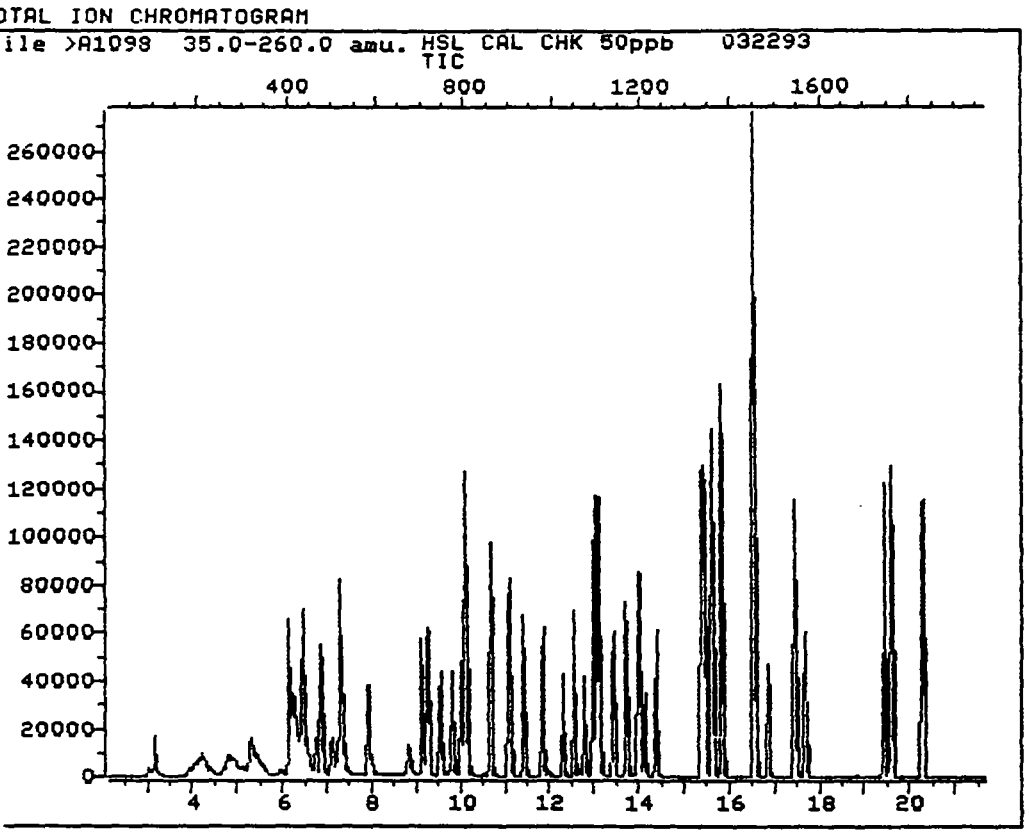
TOTAL ION CHROMATOGRAM



Data File: >A1097::D2 Quant Output File: ^A1097::QT
Name: HSL CAL CHK 20ppb
Misc: 032293

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 09:40

Operator ID: JEFF
Quant Time: 930324 11:03
Injected at: 930324 10:32

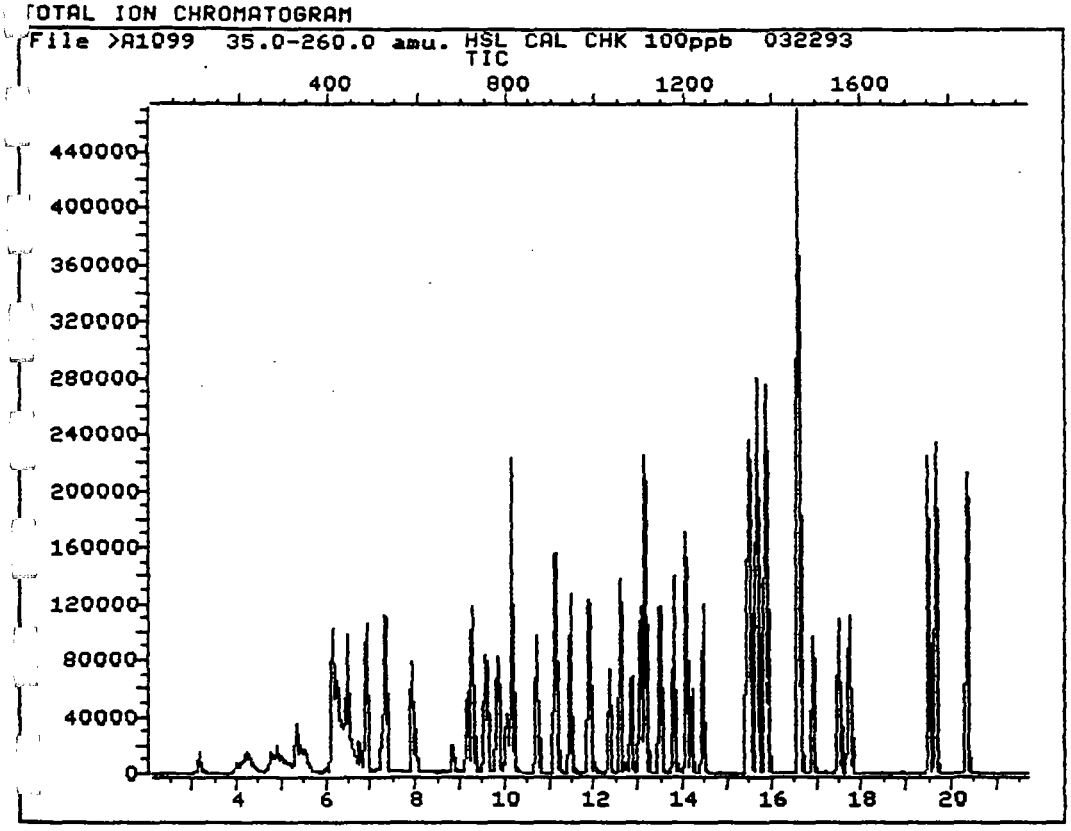


Data File: >A1098::D2 Quant Output File: ^A1098::QT
Name: HSL CAL CHK 50ppb
Misc: 032293

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 09:40

Operator ID: JEFF
Quant Time: 930324 11:59
Injected at: 930324 11:28

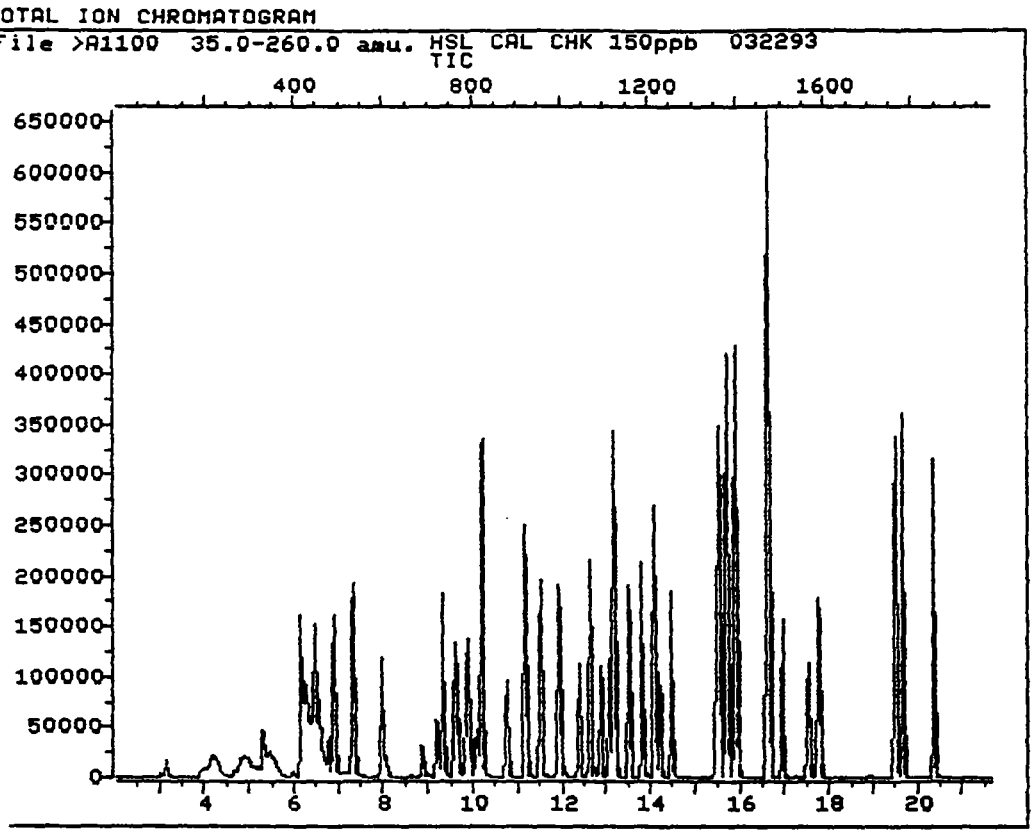
TOTAL ION CHROMATOGRAM



Data File: >A1099::D2 Quant Output File: ^A1099::QT
Name: HSL CAL CHK 100ppb
Misc: 032293

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 09:40

Operator ID: JEFF
Quant Time: 930324 12:35
Injected at: 930324 12:05

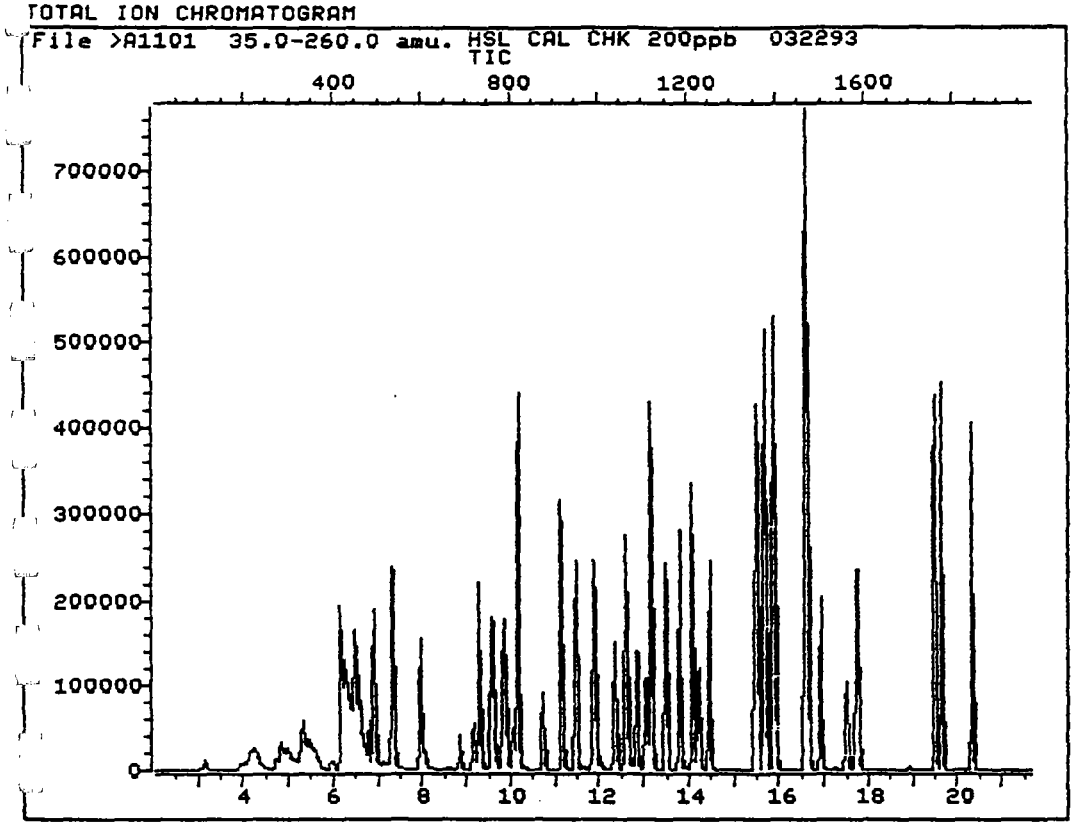


Data File: >A1100::D2 Quant Output File: ^A1100::QT
Name: HSL CAL CHK 150ppb
Misc: 032293

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 09:40

Operator ID: JEFF
Quant Time: 930324 13:14
Injected at: 930324 12:44

TOTAL ION CHROMATOGRAM



Data File: >A1101::D2 Quant Output File: ^A1101::QT
Name: HSL CAL CHK 200ppb
Misc: 032293

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930324 09:40

Operator ID: JEFF
Quant Time: 930324 14:01
Injected at: 930324 13:30

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A1356 DATE ANALYZED: 04/27/93

INSTRUMENT ID: A TIME ANALYZED: 10:47

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	A1633	>A1361	04/27/93	13:59
2	A1636	>A1364	04/27/93	15:46
3	A1637	>A1365	04/27/93	16:21
4	A1638	>A1366	04/27/93	16:56
5	A1639	>A1367	04/27/93	17:32
6	A1634	>A1368	04/27/93	18:07
7	A1635	>A1370	04/27/93	19:18
8	A1632	>A1371	04/27/93	19:53
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

IMENTS: _____

_____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	042793 METHOD BLANK	QA BATCH	
DATA FILE	>A1356	DATE ANALYZED	04/27/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	4.8 J	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	95.8	76 - 114	OK
Toluene-d8	97.2	88 - 110	OK
Bromofluorobenzene	96.6	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BLANK

Name:21st Century Environmental Contract:N/A

Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

rix: (soil/water) WATER Lab Sample ID: BLANK

ple wt/vol: 5 (g/mL) mL Lab File ID: >A1356

el: (low/med) LOW Date Received: NA

oisture: NA Date Analyzed: 04/27/93

umn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

Operator ID: JEFF
Output File: ^A1356::QT
Data File: >A1356::D2
Name: BLANK
Misc: 042793 METHOD BLANK

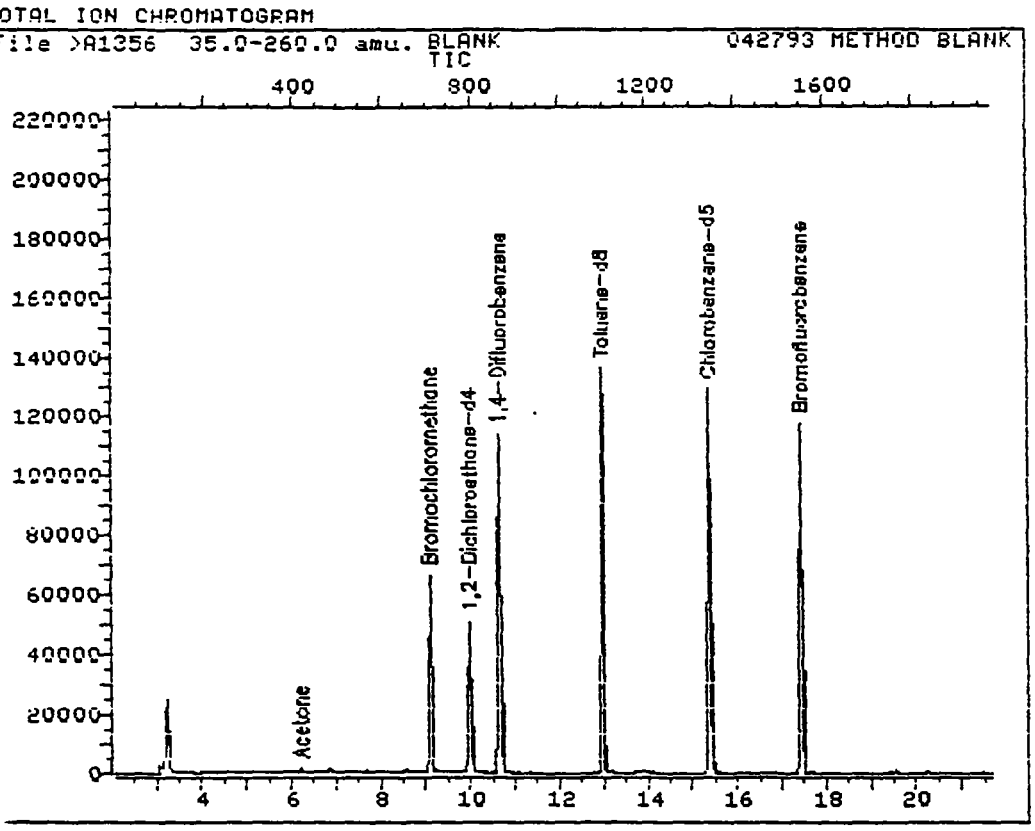
Quant Rev: 6 Quant Time: 930427 11:49
Injected at: 930427 10:47
Dilution Factor: 1.00000

5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.09	706	35637	50.00	UG/L	100
9)	Acetone	6.20	414	3144	4.79	UG/L	80
21	1,2-Dichloroethane-d4	9.97	795	69254	47.90	UG/L	100
22)	*1,4-Difluorobenzene	10.63	862	172551	50.00	UG/L	100
31)	Toluene-d8	12.95	1096	174786	48.61	UG/L	100
33	*Chlorobenzene-d5	15.36	1339	141820	50.00	UG/L	100
46	Bromofluorobenzene	17.42	1547	84465	48.30	UG/L	100

* Compound is ISTD



Data File: >A1356::D2 Quant Output File: ^A1356::QT
Name: BLANK
Misc: 042793 METHOD BLANK 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 930427 11:07

Operator ID: JEFF
Quant Time: 930427 11:49
Injected at: 930427 10:47

618 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489 • 609-467-9521

E-SYSTEMS

PROJECT: U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

ANALYSIS NO:	CLIENT ID:
A 1745	MW-1-2926925
A 1746	MW-3-2926947
A 1747	MW-2-2926926
A 1748	MW-4-2926948
A 1749	Field Blank

DATE RECEIVED: APRIL 28, 1993

TWENTY FIRST CENTURY
ENVIRONMENTAL, INC.

Richard W Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

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NARRATIVE

There were no problems encountered during the analysis of this batch of samples (A1745 to A1749). All extractions and analysis were completed within proper hold times. Please note that volatile organics and lead analysis for these locations were sampled on April 21, 1993 and are reported in package # A1633 to A1639.

CHAIN OF CUSTODY

21ST CENTURY ENVIRONMENTAL
619 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489
609.467.9521 • 609.467.4523 FAX

CUSTOMER: FT MONMOUTH
ADDRESS:
TELEPHONE:
PROJECT: BLD 2567
PROJECT MANAGER:
PROJECT LOCATION: STATE:
PO NUMBER: 91-8-27-1414

TURNAROUND (INDICATE CALENDAR DAYS, CONFIRM WITH LAB): 2 5 7 14 21 OTHER:
DELIVERABLES (PLEASE CIRCLE): TIER 1 TIER II ECRA
CLP RESULTS ONLY OTHER: BIAS CORRECTION
FAX RESULTS TO:

ADDITIONAL INFORMATION / SPECIAL INSTRUCTIONS

MW1 Temp 14.8
Cond 298
PH 6.91

MW2 Temp 14.9
Cond 240
PH 6.89

MW3 Temp 15.6
Cond 210
PH 6.83

MW4 Temp 15.3
Cond 123
PH 6.87

A1745-A1749

SAMPLE NUMBER	SAMPLE DESCRIPTION	MATRIX	DATE	TIME	COMP	GRAB	NUMBER OF CONTAINERS
HNU - 1.0	MW1-2926925	WATER	4/28/93	11:05		✓	2
HNU - 24.0	MW3-2926947	WATER	4/28/93	11:10		✓	2
HNU - 0.0	MW2-2926926	WATER	4/28/93	11:45		✓	2
HNU - 0.4	MW4-2926948	WATER	4/28/93	12:00		✓	2
	FIELD BLANK	WATER	4/28/93	12:10		✓	1

ANALYSIS / METHOD

ANALYSIS	METHOD
VOLATILE ORGANICS	625+15
SEMI VOA'S (BNA'S)	
PESTICIDES / PCB'S	
PCB'S	
BTEX	
TPH-PETROLEUM HYDROCARBONS	
CORROSIVITY	
IGNITABILITY	
FLASHPOINT	
REACTIVITY	
TOC	
TCLP METALS	
TCLP VOLATILE ORGANICS	
TCLP SEMI VOA'S (BNA'S)	
TCLP PEST / HERB	
PRIORITY POLLUTANT METALS	
HSL METALS (23)	

ADDITIONAL ANALYSIS

COOC

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]			Lynda Caulin	4/28/93	1800

WHITE LAB COPY
YELLOW CUSTOMER COPY

Acid Extractables
Base Neutrals

U.S.E.P.A. Method 625 - This method covers the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. This is a gas chromatography/mass spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

A HP5970 was used with a DB-5 FSCC.

Method detection limits are as stated.

Soil samples were prepared for analysis as prescribed in Method 3550 and analyzed as prescribed in Method 8270 from SW846.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 4/28/93

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals 5/5/93
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons/Oil & Grease NA

ANALYSIS

1. Volatiles NA
2. Acids NA
3. Base/Neutrals 5/12/93-5/13/93
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons/Oil & Grease NA
6. Total Organic Carbon NA

Section Supervisor
Review & Approval Jeffrey D Martin

INORGANICS

1. Metals NA
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

Section Supervisor
Review & Approval NA

Quality Control Supervisor
Review & Approval

Laboratory Director
Review & Approval Richard W Lynch

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

RESULT SUMMARY

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1745	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567, MW1-2926925	COMMENTS	HNU: 1.0,
DATA FILE	>C1229	DATE ANALYZED	05/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	12	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1 EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-1
2926925

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 1.0

Matrix: (soil/water) WATER

Lab Sample ID: A1745

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1229

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/12/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	108883	Benzene, methyl- (9CI)	3.79	4
2		UNKNOWN	4.61	5
3		Dimethyl benzene isomer	6.42	9
4		Dimethyl benzene isomer	6.99	4
5	98828	Benzene, (1-methylethyl)- (9CI)	7.75	5
6	103651	Benzene, propyl- (8CI9CI)	8.42	8
7	622968	Benzene, 1-ethyl-4-methyl- (9CI)	9.86	9
8		Dihydro-methyl-1H-Indene Isomer	10.12	34
9	135013	Benzene, 1,2-diethyl- (9CI)	10.40	6
10		UNKNOWN	10.53	6
11		UNKNOWN	10.66	5
12	1074175	Benzene, 1-methyl-2-propyl- (9CI)	10.74	7
13		UNKNOWN	11.46	14
14		UNKNOWN	11.51	5
15	488233	Benzene, 1,2,3,4-tetramethyl- (8CI9CI)	11.64	7
16		Dihydro-methyl-1H-Indene Isomer	12.04	5
17		Dihydro-methyl-1H-Indene Isomer	12.24	10
18		UNKNOWN	14.93	4
19		UNKNOWN	15.28	5
20		UNKNOWN	16.57	3

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1746	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567 MW3-2926947	COMMENTS	HNU: 24.0
DATA FILE	>C1237	DATE ANALYZED	05/13/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	12	10
Naphthalene	1.2 J	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	2.8 J	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-3
2926947

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 24.0

Matrix: (soil/water) WATER

Lab Sample ID: A1746

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1237

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/13/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	108883	Benzene, methyl- (9CI)	3.79	29
2	100414	Benzene, ethyl- (8CI9CI)	6.20	30
3		Dimethyl benzene Isomer	6.42	65
4		Dimethyl benzene Isomer	6.97	6
5		Ethyl-methyl-benzene Isomer	8.61	14
6	526738	Benzene, 1,2,3-trimethyl- (8CI9CI)	9.26	22
7		Ethyl-methyl-benzene Isomer	9.85	17
8	496117	1H-Indene, 2,3-dihydro- (9CI)	10.11	20
9		UNKNOWN	10.52	8
10		UNKNOWN	11.41	7
11	934805	Benzene, 4-ethyl-1,2-dimethyl- (9CI)	11.45	11
12	874351	1H-Indene, 2,3-dihydro-5-methyl- (9CI)	12.22	18
13	6072577	1H-Inden-1-one, 2,3-dihydro-3-methyl- (9CI)	14.91	11
14		UNKNOWN	15.34	16
15		UNKNOWN	15.99	9
16		UNKNOWN	16.63	7
17		UNKNOWN	16.99	6
18		UNKNOWN	17.34	7
19		UNKNOWN	18.62	9
20		UNKNOWN	19.82	5

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1747	DILUTION FACTOR	1.00
CLIENT ID	BLDDG 2567, MW2-2926926	COMMENTS	NHU: 0.0
DATA FILE	>C1231	DATE ANALYZED	05/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	18	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-2
2926926

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 0.0

Matrix: (soil/water) WATER

Lab Sample ID: A1747

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1231

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/12/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1		UNKNOWN	10.68	15
2		UNKNOWN	11.42	14
3		UNKNOWN	11.47	6

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1749	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567, FIELD BLANK	COMMENTS	NONE
DATA FILE	>C1238	DATE ANALYZED	05/13/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	ND	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
FIELD BLK

Client: US ARMY, FT. MONMOUTH, NJ

Comments: NONE

Matrix: (soil/water) WATER

Lab Sample ID: A1749

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1238

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/13/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	NO UNKNOWN COMPOUNDS IDENTIFIED		

DATA PACKAGE

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1745	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567, MW1-2926925	COMMENTS	HNU: 1.0,
DATA FILE	>C1229	DATE ANALYZED	05/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	12	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-1
2926925

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 1.0

Matrix: (soil/water) WATER

Lab Sample ID: A1745

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1229

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/12/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	108883	Benzene, methyl- (9CI)	3.79	4
2		UNKNOWN	4.61	5
3		Dimethyl benzene isomer	6.42	9
4		Dimethyl benzene isomer	6.99	4
5	98828	Benzene, (1-methylethyl)- (9CI)	7.75	5
6	103651	Benzene, propyl- (8CI9CI)	8.42	8
7	622968	Benzene, 1-ethyl-4-methyl- (9CI)	9.86	9
8		Dihydro-methyl-1H-Indene Isomer	10.12	34
9	135013	Benzene, 1,2-diethyl- (9CI)	10.40	6
10		UNKNOWN	10.53	6
11		UNKNOWN	10.66	5
12	1074175	Benzene, 1-methyl-2-propyl- (9CI)	10.74	7
13		UNKNOWN	11.46	14
14		UNKNOWN	11.51	5
15	488233	Benzene, 1,2,3,4-tetramethyl- (8CI9CI)	11.64	7
16		Dihydro-methyl-1H-Indene Isomer	12.04	5
17		Dihydro-methyl-1H-Indene Isomer	12.24	10
18		UNKNOWN	14.93	4
19		UNKNOWN	15.28	5
20		UNKNOWN	16.57	3

QUANT REPORT

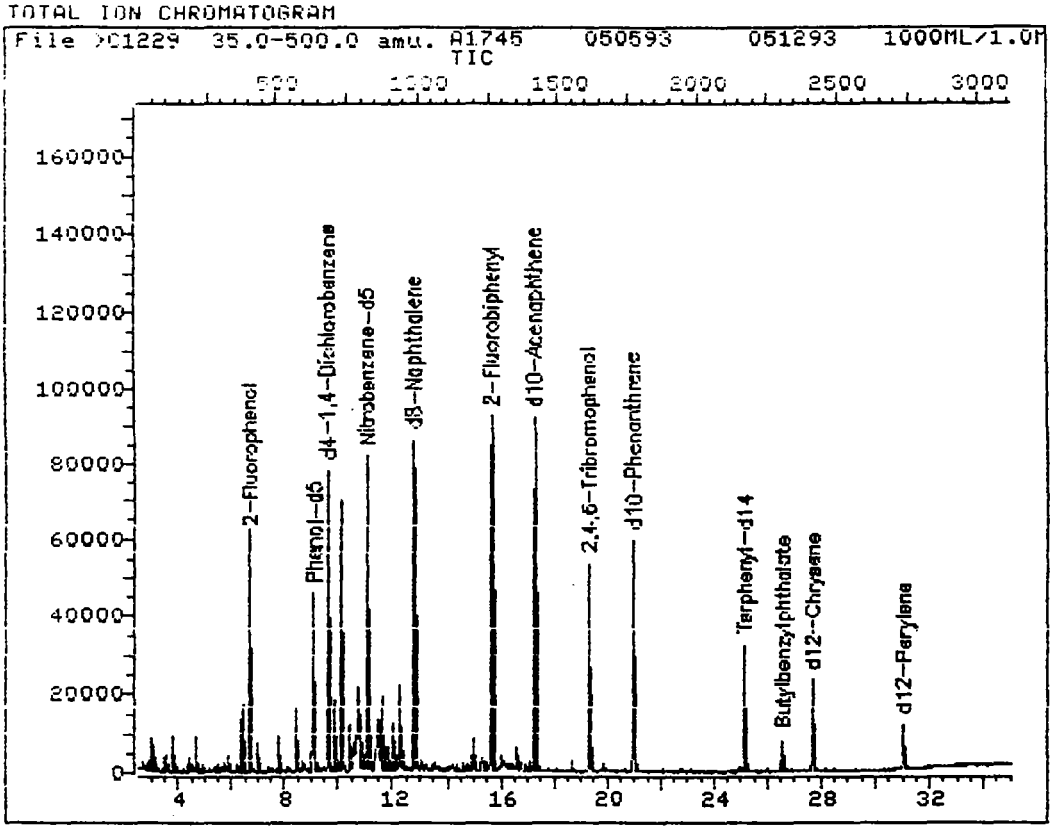
Operator ID: JEFF Quant Rev: 6 Quant Time: 930512 15:12
Output File: ^C1229::ED Injected at: 930512 14:34
Data File: >C1229::D4 Dilution Factor: 1.00000
Name: A1745 050593
Misc: 051293 1000ML/1.0ML BTL# 7

ID File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.61	677	37230	40.00	UG/L	97
4)	2-Fluorophenol	6.68	396	30753	55.14	UG/L	93
5)	Phenol-d5	9.09	627	30835	40.27	UG/L	84
18)	*d8-Naphthalene	12.78	980	77288	40.00	UG/L	87
19)	Nitrobenzene-d5	11.07	817	35301	40.00	UG/L	87
33)	*d10-Acenaphthene	17.25	1408	43253	40.00	UG/L	91
34)	2-Fluorobiphenyl	15.64	1254	61688	40.18	UG/L	92
54)	*d10-Phenanthrene	20.94	1761	53000	40.00	UG/L	99
56)	2,4,6-Tribromophenol	19.28	1602	13924	86.34	UG/L	93
64)	*d12-Chrysene	27.66	2405	20775	40.00	UG/L	96
65)	Terphenyl-d14	25.11	2161	26905	35.64	UG/L	91
68)	Butylbenzylphthalate	26.54	2298	4275	11.90	UG/L	99
73)	*d12-Perylene	31.02	2727	11983	40.00	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1229::D4 Quant Output File: ^C1229::ED
Name: A1745 050593
Misc: 051293 1000ML/1.0ML BTL# 7

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

Operator ID: JEFF
Quant Time: 930512 15:12
Injected at: 930512 14:34

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1746	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567 MW3-2926947	COMMENTS	HNU: 24.0
DATA FILE	>C1237	DATE ANALYZED	05/13/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	12	10
Naphthalene	1.2 J	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	2.8 J	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-3
2926947

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 24.0

Matrix: (soil/water) WATER

Lab Sample ID: A1746

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1237

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/13/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	108883	Benzene, methyl- (9CI)	3.79	29
2	100414	Benzene, ethyl- (8CI9CI)	6.20	30
3		Dimethyl benzene Isomer	6.42	65
4		Dimethyl benzene Isomer	6.97	6
5		Ethyl-methyl-benzene Isomer	8.61	14
6	526738	Benzene, 1,2,3-trimethyl- (8CI9CI)	9.26	22
7		Ethyl-methyl-benzene Isomer	9.85	17
8	496117	1H-Indene, 2,3-dihydro- (9CI)	10.11	20
9		UNKNOWN	10.52	8
10		UNKNOWN	11.41	7
11	934805	Benzene, 4-ethyl-1,2-dimethyl- (9CI)	11.45	11
12	874351	1H-Indene, 2,3-dihydro-5-methyl- (9CI)	12.22	18
13	6072577	1H-Inden-1-one, 2,3-dihydro-3-methyl- (9CI)	14.91	11
14		UNKNOWN	15.34	16
15		UNKNOWN	15.99	9
16		UNKNOWN	16.63	7
17		UNKNOWN	16.99	6
18		UNKNOWN	17.34	7
19		UNKNOWN	18.62	9
20		UNKNOWN	19.82	5

QUANT REPORT

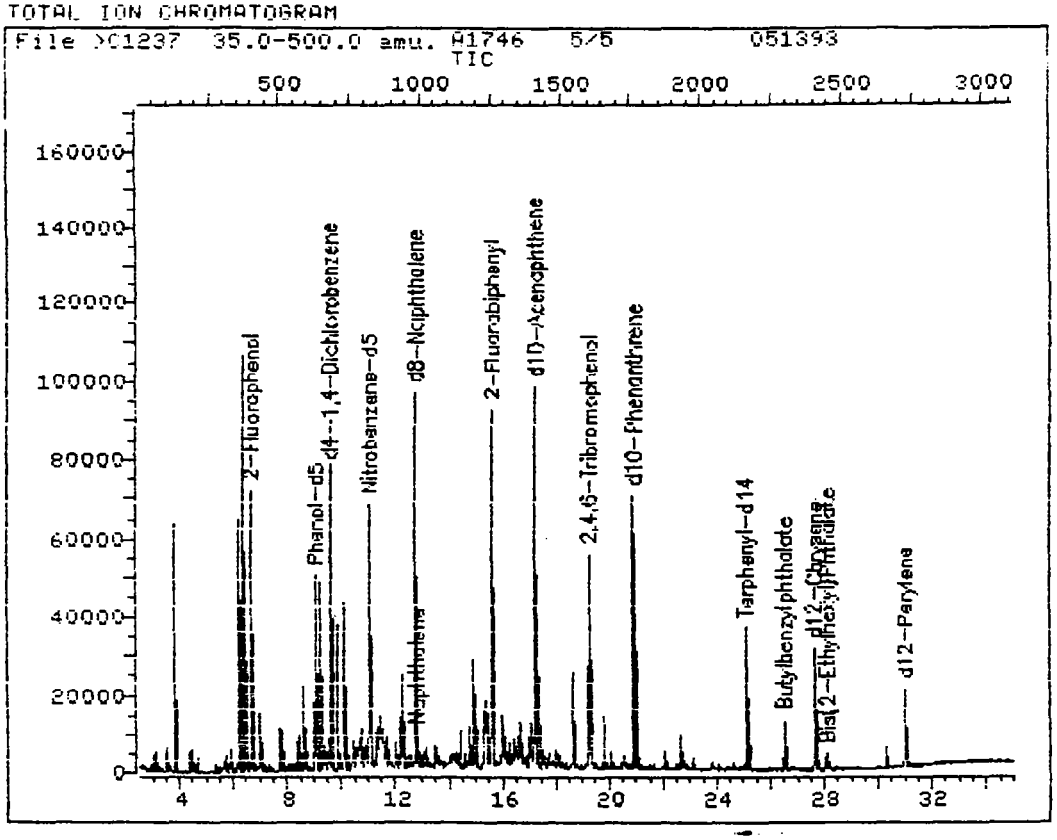
Operator ID: JEFF Quant Rev: [illegible] Quant Time: 930513 13:01
Output File: ^C1237::DA Injected at: 930513 12:22
Data File: >C1237::D4 Dilution Factor: 1.00000
Name: A1746 5/5
Misc: 051393 BTL# 2

ID File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930513 11:38

	Compound	R.T.	Scan#	Area	Conc	Units	q
[illegible])	*d4-1,4-Dichlorobenzene	9.59	674	35979	40.00	UG/L	92
4)	2-Fluorophenol	6.67	395	33496	52.88	UG/L	97
[illegible])	Phenol-d5	9.07	625	33704	37.59	UG/L	84
1[illegible])	*d8-Naphthalene	12.77	978	81800	40.00	UG/L	88
19)	Nitrobenzene-d5	11.06	815	34741	35.89	UG/L	91
20)	Naphthalene	12.81	982	2692	1.16	UG/L	98
3[illegible])	*d10-Acenaphthene	17.24	1405	45423	40.00	UG/L	95
38)	2-Fluorobiphenyl	15.63	1251	57398	36.05	UG/L	94
53)	*d10-Phenanthrene	20.92	1757	59221	40.00	UG/L	99
5[illegible])	2,4,6-Tribromophenol	19.26	1598	13082	83.94	UG/L	94
6[illegible])	*d12-Chrysene	27.64	2399	25795	40.00	UG/L	96
67)	Terphenyl-d14	25.10	2155	27183	30.21	UG/L	89
6[illegible])	Butylbenzylphthalate	26.52	2291	6476	11.74	UG/L	96
7[illegible])	Bis(2-Ethylhexyl)Phthalate	28.11	2444	1932	2.85	UG/L	85
73)	*d12-Perylene	31.01	2721	18590	40.00	UG/L	95

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1237::D4 Quant Output File: ^C1237::DA
Name: A1746 5/5
Misc: 051393 BTL# 2

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930513 11:38

Operator ID: JEFF
Quant Time: 930513 13:01
Injected at: 930513 12:22

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1747	DILUTION FACTOR	1.00
CLIENT ID	BLDDG 2567, MW2-2926926	COMMENTS	NHU: 0.0
DATA FILE	>C1231	DATE ANALYZED	05/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	18	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-2
2926926

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 0.0

Matrix: (soil/water) WATER

Lab Sample ID: A1747

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1231

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/12/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 3

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1		UNKNOWN	10.68	15
2		UNKNOWN	11.42	14
3		UNKNOWN	11.47	6

QUANT REPORT

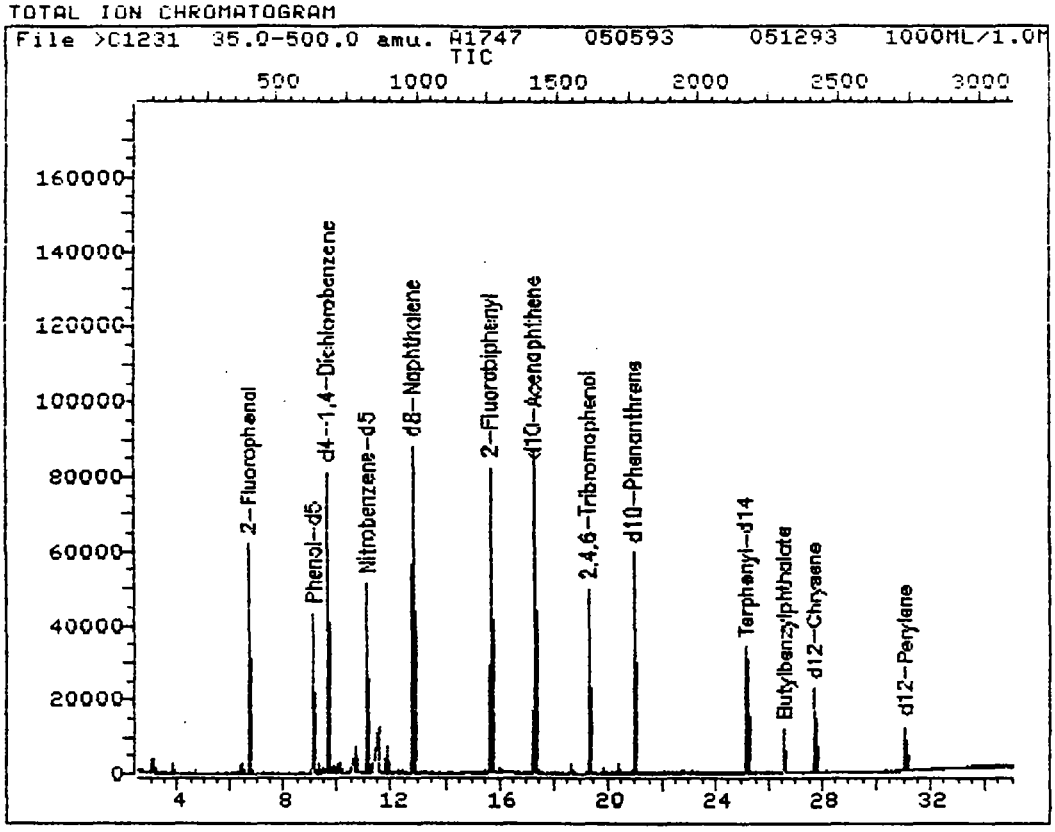
Operator ID: JEFF Quant Rev: 6 Quant Time: 930512 16:48
Output File: ^C1231::ED Injected at: 930512 16:10
Data File: >C1231::D4 Dilution Factor: 1.00000
Name: A1747 050593
Misc: 051293 1000ML/1.0ML BTL# 9

ID File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*d4-1,4-Dichlorobenzene	9.61	677	36770	40.00	UG/L	97
4)	2-Fluorophenol	6.68	397	27248	49.46	UG/L	98
5)	Phenol-d5	9.08	627	26962	35.65	UG/L	84
1)	*d8-Naphthalene	12.78	981	78537	40.00	UG/L	87
1?)	Nitrobenzene-d5	11.08	818	30318	33.81	UG/L	90
33)	*d10-Acenaphthene	17.25	1409	41896	40.00	UG/L	92
3)	2-Fluorobiphenyl	15.64	1255	52624	35.38	UG/L	93
5)	*d10-Phenanthrene	20.94	1763	50992	40.00	UG/L	98
56)	2,4,6-Tribromophenol	19.27	1603	11759	75.79	UG/L	93
6)	*d12-Chrysene	27.66	2407	20896	40.00	UG/L	96
6)	Terphenyl-d14	25.11	2163	27783	36.59	UG/L	90
68)	Butylbenzylphthalate	26.54	2300	6443	17.83	UG/L	96
73)	*d12-Perylene	31.02	2729	12238	40.00	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1231::D4 Quant Output File: ^C1231::ED
Name: A1747 050593
Misc: 051293 1000ML/1.0ML BTL# 9

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

Operator ID: JEFF
Quant Time: 930512 16:48
Injected at: 930512 16:10

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1748	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567, MW4-2926948	COMMENTS	HNU: 0.4
DATA FILE	>C1232	DATE ANALYZED	05/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	10	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
MW-4
2926948

Client: US ARMY, FT. MONMOUTH, NJ

Comments: HNU: 0.4

Matrix: (soil/water) WATER

Lab Sample ID: A1748

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1232

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/12/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	NO UNKNOWN COMPOUNDS IDENTIFIED		

QUANT REPORT

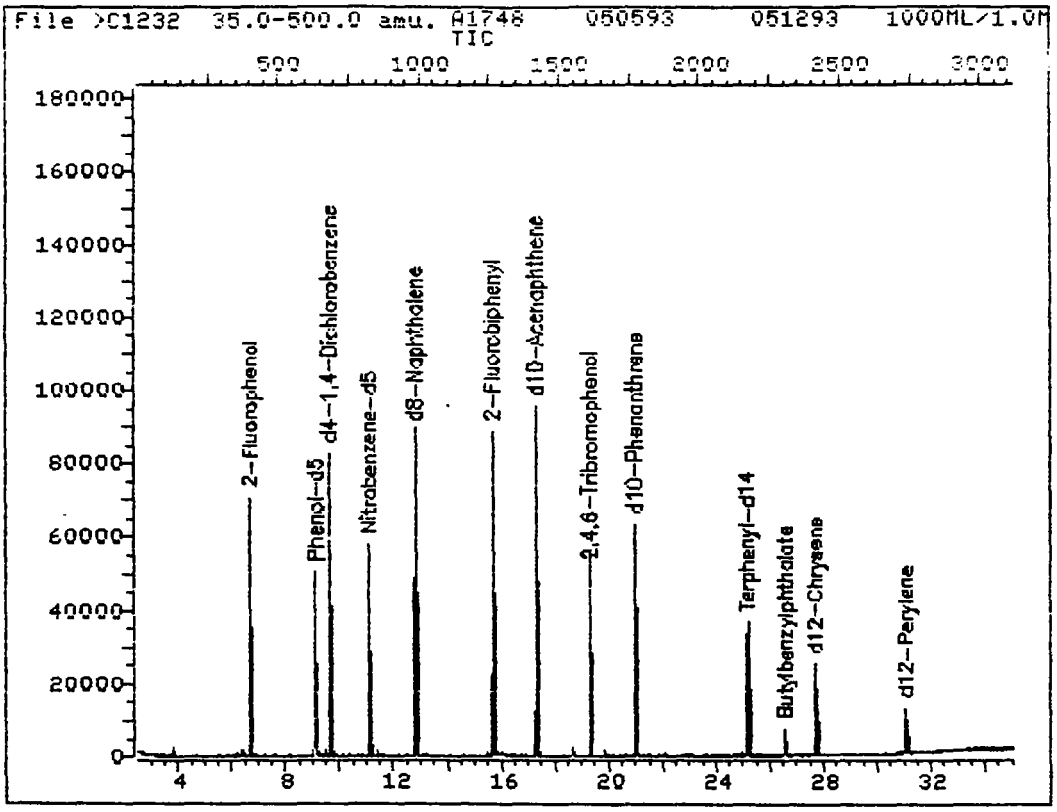
Operator ID: JEFF Quant Rev: 6 Quant Time: 930512 17:36
Output File: ^C1232::ED Injected at: 930512 16:58
Data File: >C1232::D4 Dilution Factor: 1.00000
Name: A1748 050593
Misc: 051293 1000ML/1.0ML BTL#10

ID File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*d4-1,4-Dichlorobenzene	9.61	677	38890	40.00	UG/L	96
4)	2-Fluorophenol	6.68	397	31595	54.23	UG/L	98
F)	Phenol-d5	9.08	627	31077	38.85	UG/L	84
1[ )	*d8-Naphthalene	12.78	981	83153	40.00	UG/L	87
19)	Nitrobenzene-d5	11.08	818	33889	35.69	UG/L	91
33)	*d10-Acenaphthene	17.25	1410	44550	40.00	UG/L	95
3[ )	2-Fluorobiphenyl	15.64	1255	56745	35.88	UG/L	95
5[ )	*d10-Phenanthrene	20.95	1764	54237	40.00	UG/L	98
56)	2,4,6-Tribromophenol	19.27	1603	12959	78.52	UG/L	92
6[ )	*d12-Chrysene	27.67	2408	22301	40.00	UG/L	96
6[ )	Terphenyl-d14	25.12	2164	30502	37.64	UG/L	91
68)	Butylbenzylphthalate	26.54	2300	3940	10.22	UG/L	97
73)	*d12-Perylene	31.03	2730	12476	40.00	UG/L	94

*Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1232::D4 Quant Output File: ^C1232::ED
Name: A1748 050593
Misc: 051293 1000ML/1.0ML BTL#10

Id File: IDHSLC::D3
Title: HSL BNA STD
Last Calibration: 930512 10:19

Operator ID: JEFF
Quant Time: 930512 17:36
Injected at: 930512 16:58

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	A1749	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567, FIELD BLANK	COMMENTS	NONE
DATA FILE	>C1238	DATE ANALYZED	05/13/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	ND	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
FIELD BLK

Client: US ARMY, FT. MONMOUTH, NJ

Comments: NONE

Matrix: (soil/water) WATER

Lab Sample ID: A1749

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1238

Level: LOW

Date Received: 04/28/93

% Moisture: 100

Date Analyzed 05/13/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	NO UNKNOWN COMPOUNDS IDENTIFIED		

QUANT REPORT

Operator ID: JEFF
Output File: ^C1238::DA
Data File: >C1238::D4
Name: A1749 5/5
Misc: 051393

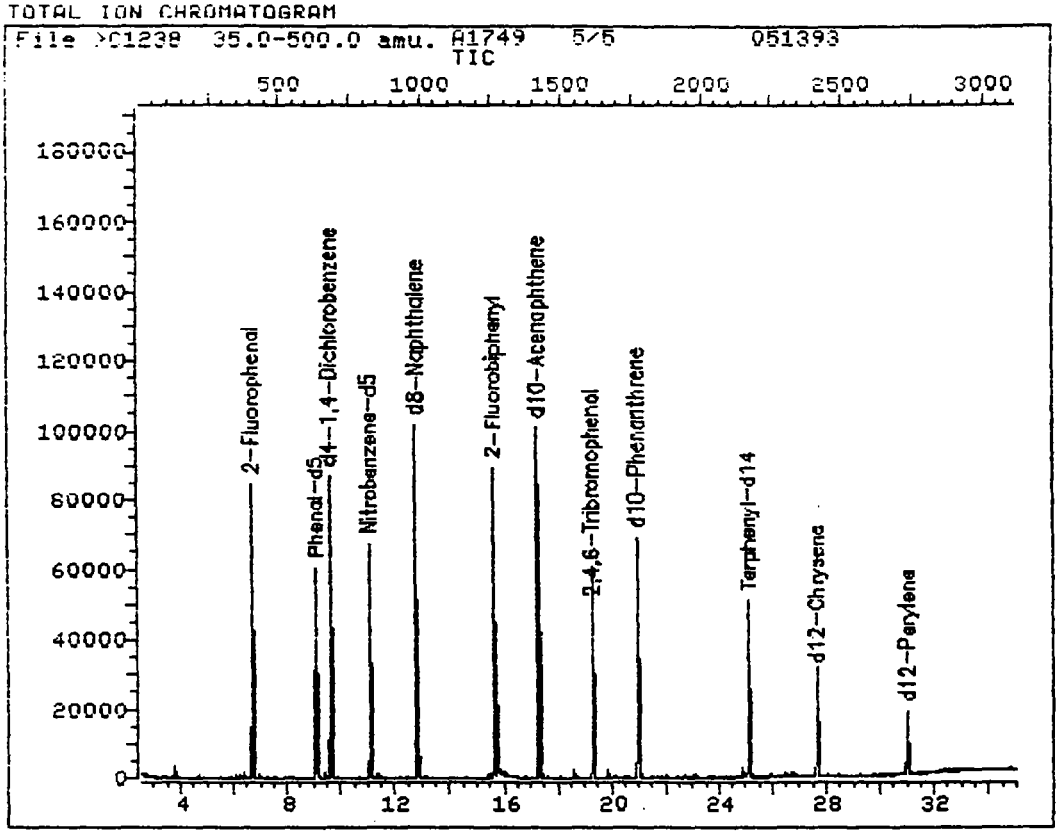
Quant Rev: 6 Quant Time: 930513 13:47
Injected at: 930513 13:08
Dilution Factor: 1.00000
BTL# 3

ID File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930513 11:38

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*d4-1,4-Dichlorobenzene	9.59	674	38297	40.00	UG/L	93
4)	2-Fluorophenol	6.67	394	40592	60.20	UG/L	96
5)	Phenol-d5	9.08	625	40357	42.28	UG/L	85
1( )	*d8-Naphthalene	12.77	979	87914	40.00	UG/L	88
19)	Nitrobenzene-d5	11.06	815	40196	38.64	UG/L	89
33)	*d10-Acenaphthene	17.23	1407	47485	40.00	UG/L	96
3(	2-Fluorobiphenyl	15.63	1253	58934	35.41	UG/L	93
5)	*d10-Phenanthrene	20.93	1761	57083	40.00	UG/L	99
56)	2,4,6-Tribromophenol	19.25	1600	12864	85.63	UG/L	98
6( )	*d12-Chrysene	27.64	2404	26185	40.00	UG/L	98
6)	Terphenyl-d14	25.10	2161	39307	43.04	UG/L	91
73)	*d12-Perylene	31.00	2726	17386	40.00	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1238::D4 Quant Output File: ^C1238::DA
Name: A1749 5/5
Misc: 051393 BTL# 3

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930513 11:38

Operator ID: JEFF
Quant Time: 930513 13:47
Injected at: 930513 13:08

Q C RESULTS

21ST CENTURY ENVIRONMENTAL INC.
WATER semi-VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (FPH)#	S6 (TBP)#	TOT OUT
AQ BLK	69	69	83	-	-	-	0
A1745	80	80	71	-	-	-	0
A1746	72	72	60	-	-	-	0
A1747	68	71	73	-	-	-	0
A1748	71	72	75	-	-	-	0
A1749	77	71	86	-	-	-	0
A1412MS	83	92	110	-	-	-	0
A1412MSD	65	74	91	-	-	-	0

* Values out due to matrix interference

	QC LIMITS
S1 (NBZ) = Nitrobenzene-d5	(35-114)
S2 (FBP) = 2-Fluorobiphenyl	(43-116)
S3 (TPH) = Terphenyl-d14	(33-141)
S4 (PHL) = Phenol-d5	(10-94)
S5 (FPH) = 2-Fluorophenol	(21-100)
S6 (TBP) = 2,4,6-Tribromophenol	(10-123)

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 21st Century Environmental Contract No.:
Lab Code: Case No: SAS No.: SDG No.:
MATRIX SPIKE- EPA SAMPLE NO.: A1412

COMPOUND NAME	SPIKE ADDED UG/L	MS CONC UG/L	SAMP CONC UG/L	MS % REC#	QC LIMITS RECOVERY
Phenol	100	59.5	ND	60	12-89
2-Cholrophenol	100	78.6	ND	79	27-123
1,-4-Dichlorobenzene	50	42.3	ND	85	36-97
N-Nitroso-di-n-prop. (1)	50	47.1	ND	94	41-116
1,2,4-Trichlorobenzene	50	39.7	ND	79	39-98
4-Chloro-3-methylphenol	100	82.9	ND	83	23-97
Acenapthene	50	44.6	ND	89	46-118
4-Nitrophenol	100	23.8	ND	24	10-80
2,4-Dinitrotoluene	50	37.7	ND	75	24-96
Pentachlorophenol	100	55.2	ND	65	9-103
Pyrene	50	55.2	ND	55	26-127

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 21st Century Environmental Contract No.:
Lab Code: Case No: SAS No.: SDG No.:
MATRIX SPIKE- EPA SAMPLE NO.:A1412

COMPOUND NAME	SPIKE ADDED UG/L	MSD CONC UG/L	MSD % REC.	% RPD	QC LIMITS RPD	QC LIMITS RECOV
Phenol	100	45.1	45	27	42	21-89
2-Cholrophenol	100	60.5	60	26	40	27-123
1,-4-Dichlorobenzene	50	32.9	66	25	28	36-197
n-Nitroso-di-n-prop.	50	36.0	72	27	38	41-116
1,2,4-Trichlorobenzene	50	30.2	60	27	28	39-98
4-Chloro-3-Methylphenol	100	64.8	65	25	42	23-97
Acenaphthene	50	35.6	71	22	31	46-118
4-Nitrophenol	100	22.8	23	4	50	10-80
2,4-Dinitrotoluene	50	33.1	66	13	38	24-96
Pentachlorophenol	100	51.6	52	22	50	9-103
Pyrene	50	38.2	76	36	51	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values
* Values outside of qc limits

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS:

QUANT REPORT

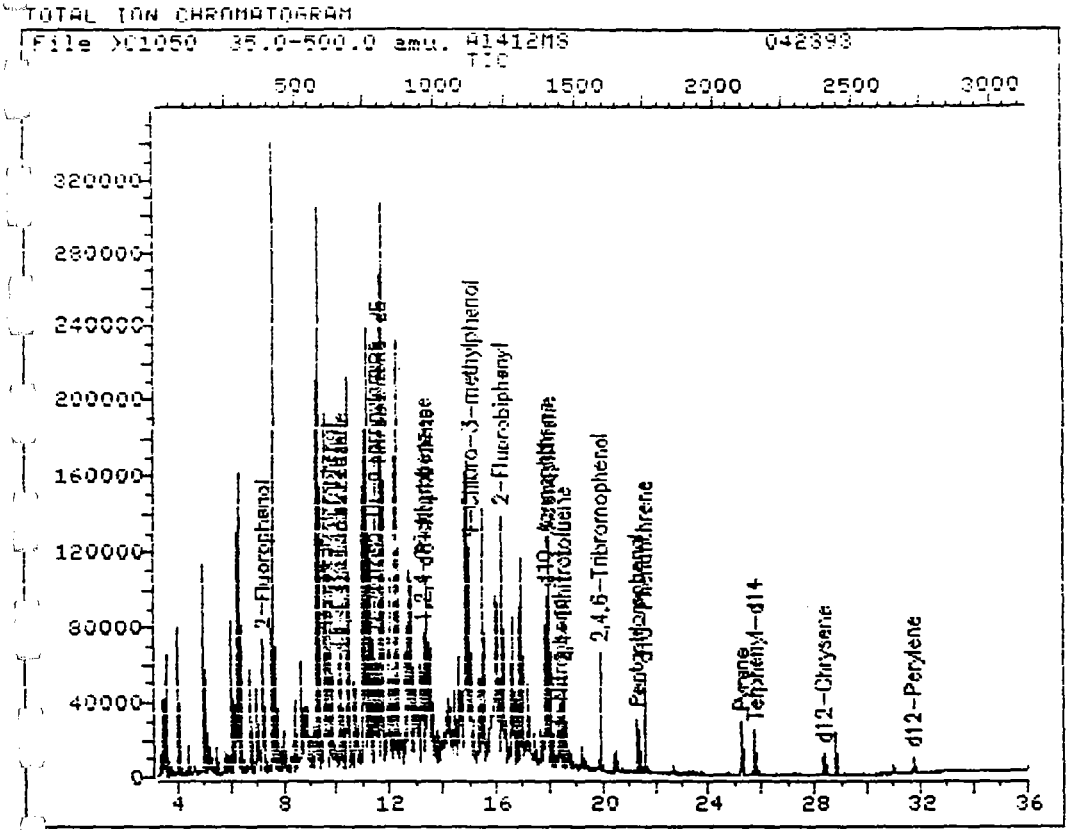
Operator ID: JEFF Quant Rev: 6 Quant Time: 930423 14:06
Output File: ^C1050::ED Injected at: 930423 13:26
Data File: >C1050::D2 Dilution Factor: 1.00000
Name: A1412MS
Misc: 042393 BTL# 1

ID File: ID0423::D3
Title: HSL BNA STD
Last Calibration: 930423 13:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.16	657	29184	40.00	UG/L	98
4)	2-Fluorophenol	7.22	376	38152	69.93	UG/L	96
5)	Phenol-d5	9.60	604	41325	54.35	UG/L	82
6)	Phenol	9.63	607	50147	59.53	UG/L	65
8)	2-Chlorophenol	9.74	617	48868	78.57	UG/L	99
10)	1,4-Dichlorobenzene	10.20	661	29129	42.27	UG/L	97
16)	N-Nitroso-Di-n-propylamine	11.42	777	26240	47.11	UG/L	97
18)	*d8-Naphthalene	13.35	961	69918	40.00	UG/L	88
19)	Nitrobenzene-d5	11.63	797	33588	41.43	UG/L	85
27)	1,2,4-Trichlorobenzene	13.28	954	27412	39.68	UG/L	89
31)	4-Chloro-3-methylphenol	15.03	1119	58872	82.92	UG/L	96
33)	*d10-Acenaphthene	17.86	1387	48105	40.00	UG/L	93
38)	2-Fluorobiphenyl	16.21	1231	80168	46.22	UG/L	94
43)	Acenaphthene	17.94	1395	65337	44.58	UG/L	93
45)	4-Nitrophenol	18.39	1438	6078	23.81	UG/L	77
47)	2,4-Dinitrotoluene	18.52	1450	20223	37.72	UG/L	92
53)	*d10-Phenanthrene	21.58	1741	46629	40.00	UG/L	97
56)	2,4,6-Tribromophenol	19.89	1580	13350	112.55	UG/L	90
59)	Pentachlorophenol	21.30	1715	8167	64.82	UG/L	97
64)	*d12-Chrysene	28.34	2388	10685	40.00	UG/L	96
65)	Pyrene	25.22	2089	31167	47.43	UG/L	96
67)	Terphenyl-d14	25.75	2140	20578	55.22	UG/L	91
73)	*d12-Perylene	31.72	2712	8172	40.00	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1050::D2 Quant Output File: ^C1050::ED
Name: A1412MS
Misc: 042393 BTL# 1

Id File: ID0423::D3
Title: hSL BNA STD
Last Calibration: 930423 13:14

Operator ID: JEFF
Quant Time: 930423 14:06
Injected at: 930423 13:26

QUANT REPORT

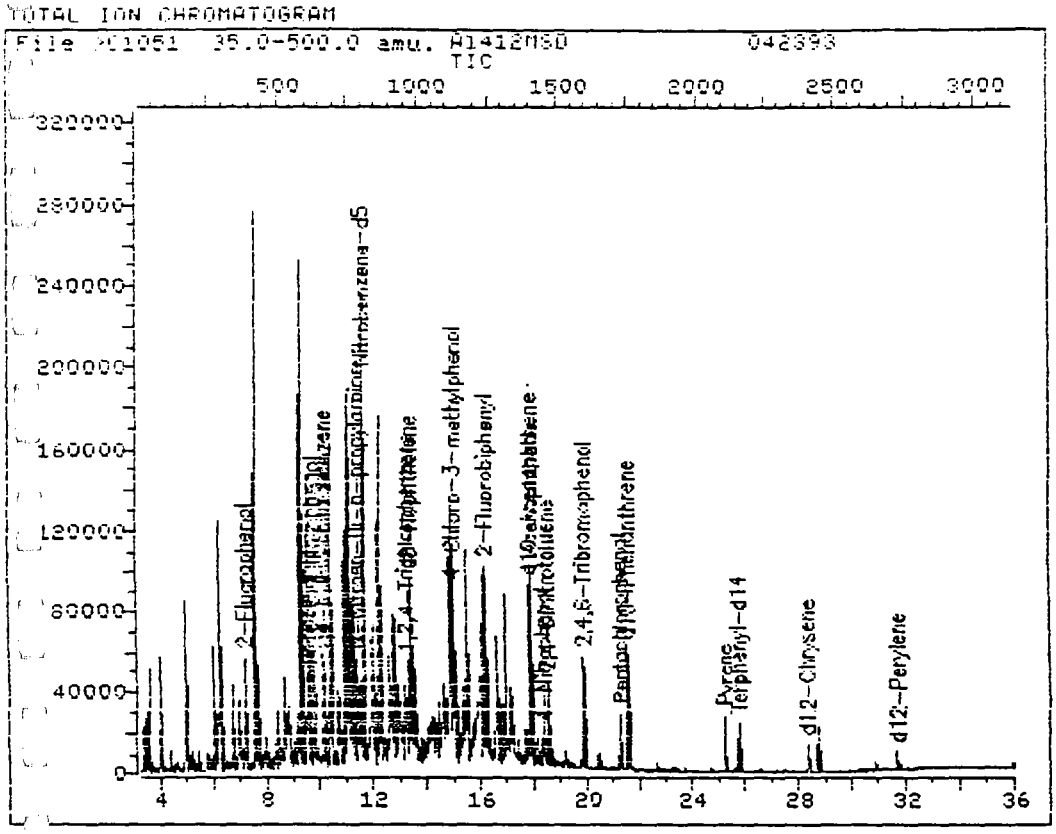
Operator ID: JEFF Quant Rev: 6 Quant Time: 930423 15:23
Output File: ^C1051::EX Injected at: 930423 14:12
Data File: >C1051::D2 Dilution Factor: 1.00000
Name: A1412MSD
Misc: 042393 BTL# 2

ID File: ID0423::D3
Title: hSL BNA STD
Last Calibration: 930423 13:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	10.15	656	28057	40.00	UG/L	98
4)	2-Fluorophenol	7.20	375	28158	53.68	UG/L	96
5)	Phenol-d5	9.58	602	30732	42.04	UG/L	84
6)	Phenol	9.61	605	36551	45.14	UG/L	64
8)	2-Chlorophenol	9.73	616	36156	60.47	UG/L	97
10)	1,4-Dichlorobenzene	10.19	660	21794	32.90	UG/L	97
16)	N-Nitroso-Di-n-propylamine	11.40	776	19260	35.97	UG/L	98
18)	*d8-Naphthalene	13.35	961	68057	40.00	UG/L	88
19)	Nitrobenzene-d5	11.62	797	25837	32.74	UG/L	89
27)	1,2,4-Trichlorobenzene	13.26	953	20311	30.20	UG/L	94
31)	4-Chloro-3-methylphenol	15.01	1119	44811	64.84	UG/L	99
33)	*d10-Acenaphthene	17.85	1389	44399	40.00	UG/L	95
38)	2-Fluorobiphenyl	16.21	1233	59154	36.95	UG/L	93
43)	Acenaphthene	17.92	1396	48142	35.59	UG/L	92
45)	4-Nitrophenol	18.38	1439	5373	22.80	UG/L	82
47)	2,4-Dinitrotoluene	18.51	1452	16392	33.13	UG/L	83
53)	*d10-Phenanthrene	21.57	1743	53624	40.00	UG/L	99
56)	2,4,6-Tribromophenol	19.88	1582	11374	83.38	UG/L	98
59)	Pentachlorophenol	21.29	1717	7479	51.62	UG/L	97
64)	*d12-Chrysene	28.33	2391	12407	40.00	UG/L	97
65)	Pyrene	25.21	2092	29131	38.18	UG/L	95
67)	Terphenyl-d14	25.75	2143	19747	45.63	UG/L	89
73)	*d12-Perylene	31.71	2714	9349	40.00	UG/L	94

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1051::D2 Quant Output File: ^C1051::EX
Name: A1412MSD
Misc: 042393 BTL# 2

Id File: ID0423::D3
Title: hSL BNA STD
Last Calibration: 930423 13:14

Operator ID: JEFF
Quant Time: 930423 15:23
Injected at: 930423 14:12

21ST CENTURY ENVIRONMENTAL INC.

GC/MS STANDARD DECAFLUOROTRIPHENYLPHOSPHINE(DFTPP) TUNE
CRITERIA FOR SEMIVOLATILES 50ng

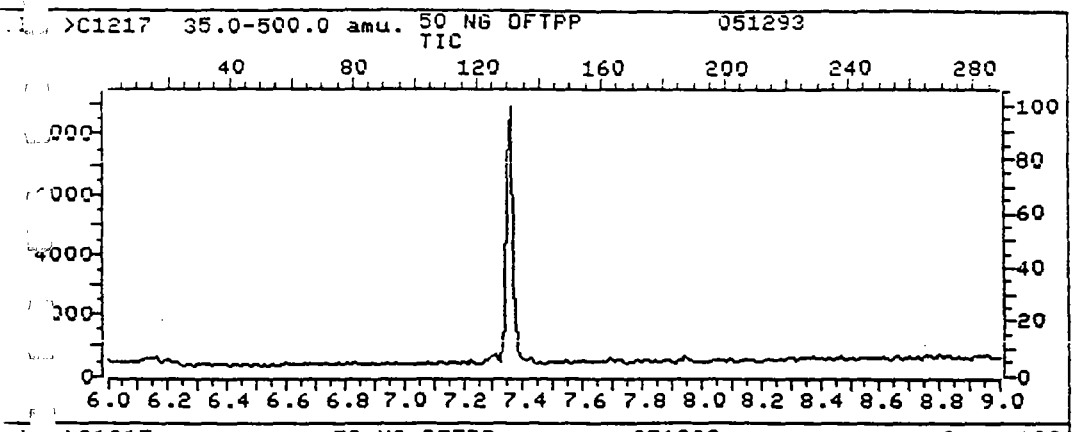
DATE AND TIME OF INJECTION: 5/12/93 5:21
INSTRUMENT ID: 5970

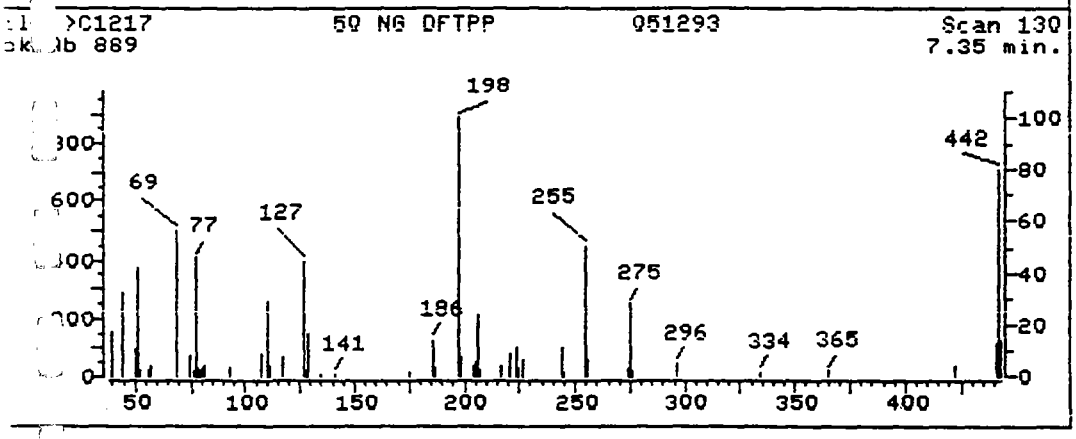
DATA RELEASE AUTHORIZED BY Richard W Lynch.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
51	30-60% of mass 198	42.07	42.07	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	56.47	56.47	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	44.77	44.77	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	7.31	7.31	Ok
275	10-30% of mass 198	28.12	28.12	Ok
365	Greater than 1% of mass 198	2.25	2.25	Ok
441	0-100% of mass 443	13.27	92.19	Ok
442	Greater than 40% of mass 198	80.43	80.43	Ok
443	17-23% of mass 442	14.40	17.90	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
>C1217::E4		50 NG DFTPP		5/12/93	5:21
>C1218::D4		20 PPM BNA STD		5/12/93	5:54
>C1219::D4		50 PPM BNA STD		5/12/93	6:40
>C1220::D4		80 PPM BNA STD		5/12/93	7:27
>C1221::D4		120PPM BNA STD		5/12/93	8:13
>C1222::D4		160PPM BNA STD		5/12/93	9:00
>C1223::D3		AQ BLANK 050593		5/12/93	9:50
>C1224::D3		A1739 050593		5/12/93	10:37
>C1225::D3		A1740 050593		5/12/93	11:25
>C1226::D3		A1741 050593		5/12/93	12:12
>C1227::D3		A1743 050593		5/12/93	12:59
>C1228::D4		A1744 050593		5/12/93	13:47
>C1229::D4		A1745 050593		5/12/93	14:34
>C1231::D4		A1747 050593		5/12/93	16:10
>C1232::D4		A1748 050593		5/12/93	16:58





>C1217 50 NG DFTPP 051293
130 NRM

File: >C1217 Scan #: 130 Retn. time: 7.35

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
37.10	6.074	77.00	46.344	128.00	2.362	205.95	24.184	273.85	3.487
40.00	17.210	78.00	3.712	129.00	16.873	206.95	2.250	274.95	28.121
4 .05	32.171	78.90	2.362	134.85	1.125	216.80	4.162	275.75	2.362
5 .05	10.461	80.00	3.037	140.85	1.237	220.90	8.886	275.95	2.362
51.05	42.070	81.10	4.162	174.90	1.575	223.95	11.249	295.95	5.174
5 .00	2.362	93.05	3.600	185.95	14.398	224.85	3.037	333.80	1.800
5 .00	2.475	107.00	9.449	186.95	3.150	226.85	6.974	364.95	2.250
57.10	4.049	109.95	28.909	197.90	100.000	243.90	11.699	422.80	3.937
68.95	56.468	111.05	3.937	198.90	7.312	244.80	1.350	440.90	13.273
7 .90	8.549	116.85	7.199	204.05	3.825	254.95	50.619	441.90	80.427
7 .10	2.700	126.90	44.769	204.85	5.737	255.85	6.412	442.90	14.398

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 5970C

Contractor: 21st Century Envir Calibration Date: 05/12/93

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for CCC is 30%

Laboratory ID:	>C1218	>C1219	>C1220	>C1221	>C1222					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine	.95064	.64838	.70685	.78983	.75089	.342	.76932	14.845		
n-Nitrosodimethylamine	.64720	.53782	.55720	.57105	.55986	.347	.57463	7.361		
2-Fluorophenol	.69645	.60468	.64230	.65136	.40149	.696	.59926	19.236		(Conc=100.0,100.0,100.0,1
Phenol-d5	.95712	.83604	.88140	.88802	.55128	.950	.82277	19.181		(Conc=100.0,100.0,100.0,1
Phenol	1.25440	1.07821	1.07148	1.15453	.99780	.953	1.11128	8.760	*	
bis(-2-Chloroethyl)Ether	1.05172	.85004	.80922	.82288	.77128	.956	.86103	12.812		
2-Chlorophenol	.95296	.80247	.78941	.82251	.74567	.959	.82260	9.498		
1,3-Dichlorobenzene	1.05358	.86950	.85676	.86740	.80672	.989	.89079	10.609		
1,4-Dichlorobenzene	1.04250	.87268	.84508	.87121	.79637	1.005	.88557	10.502	*	
Benzyl Alcohol	.15170	.36992	.39274	.43214	.49305	1.058	.36791	35.218		
1,2-Dichlorobenzene	1.01448	.83237	.82426	.82355	.75497	1.050	.84993	11.431		
2-Methylphenol	.88422	.74231	.72403	.73933	.68989	1.098	.75596	9.876		
bis(2-Chloroisopropyl)ether	1.27189	1.08396	1.07318	1.14459	1.16993	1.096	1.14871	6.956		
4-Methylphenol	1.78301	1.51777	1.51128	1.52526	1.46997	1.142	1.56146	8.049		
N-Nitroso-Di-n-propylamine	.79836	.69877	.66109	.45215	.75319	1.139	.67271	19.906		**
Hexachloroethane	.48302	.39985	.38312	.39036	.36161	1.128	.40359	11.541		
Nitrobenzene-d5	.45791	.44555	.42627	.48353	.47059	.867	.45677	4.852		(Conc=50.0,50.0,50.0,50.0
Nitrobenzene	.50725	.49686	.50103	.51495	.49128	.871	.50227	1.828		
Isophorone	1.02080	1.01423	1.02846	1.10308	1.07161	.921	1.04763	3.651		
2-Nitrophenol	.23300	.23257	.24024	.26324	.25018	.933	.24385	5.323	*	
2,4-Dimethylphenol	.34230	.34661	.32576	.35279	.34755	.956	.34300	3.013		
Benzoic Acid	.07821	.17978	.21739	.27461	.29808	1.000	.20961	41.500		
bis(-2-Chloroethoxy)Methane	.53276	.50569	.50931	.52201	.50957	.972	.51587	2.188		
2,4-Dichlorophenol	.36342	.36204	.36989	.38667	.36376	.983	.36916	2.776	*	
1,2,4-Trichlorobenzene	.45944	.42179	.41886	.41765	.40494	.994	.42454	4.841		
Naphthalene	1.22342	1.11079	1.10839	1.06455	1.02356	1.004	1.10614	6.755		
4-Chloroaniline	.50900	.50055	.52164	.53671	.51323	1.026	.51623	2.663		
Hexachlorobutadiene	.24041	.22212	.21724	.21325	.20534	1.045	.21967	5.974	*	
4-Chloro-3-methylphenol	.35981	.36608	.38623	.42233	.38444	1.131	.38378	6.357	*	
2-Methylnaphthalene	.81450	.74449	.72472	.74706	.70497	1.141	.74715	5.529		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 5970C

Contractor: 21st Century Envir Calibration Date: 05/12/93

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for CCC is 30%

Laboratory ID:	>C1218	>C1219	>C1220	>C1221	>C1222					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Hexachlorocyclopentadiene	.39151	.46414	.46717	.47970	.47671	.881	.45584	8.016		**
2,4,6-Trichlorophenol	.45778	.43602	.44216	.47732	.46175	.895	.45501	3.606	*	
2,4,5-Trichlorophenol	.43766	.50018	.47899	.52676	.50488	.901	.48969	6.877		
2-Chloronaphthalene	1.57233	1.45204	1.38261	1.35533	1.31578	.917	1.41562	7.115		
2-Fluorobiphenyl	1.43156	1.41266	1.31394	1.48063	1.46113	.907	1.41999	4.564		(Conc=50.0,50.0,50.0,50.0
2-Nitroaniline	.43962	.45588	.45948	.48248	.46497	.941	.46049	3.367		
Dimethyl Phthalate	1.59252	1.44168	1.30964	1.23267	1.15254	.978	1.34581	12.951		
Acenaphthylene	2.18694	1.91433	1.83733	1.76173	1.67194	.977	1.87445	10.479		
3-Nitroaniline	.26515	.27190	.27689	.25678	.22680	1.003	.25950	7.621		
Acenaphthene	1.42432	1.27791	1.22020	1.20542	1.13348	1.005	1.25226	8.710	*	
2,4-Dinitrophenol	.04246	.08148	.10744	.14462	.14209	1.017	.10362	41.527		**
4-Nitrophenol	.14275	.18091	.17304	.23121	.20200	1.036	.18598	17.761		**
Dibenzofuran	1.92072	1.80092	1.73711	1.68665	1.63372	1.029	1.75582	6.321		
2,6-Dinitrotoluene	.45816	.47103	.45064	.44085	.38019	1.041	.44018	8.019		
2,4-Dinitrotoluene	.39819	.39693	.39057	.38295	.36646	.985	.38702	3.356		
Diethylphthalate	1.53120	1.39461	1.25962	1.10875	.98386	1.082	1.25561	17.390		
4-Chlorophenyl-phenylether	.74259	.68675	.64004	.60854	.56027	1.084	.64764	10.854		
Fluorene	1.47918	1.35617	1.30624	1.25808	1.14990	1.079	1.30991	9.279		
4-Nitroaniline	.21378	.23351	.24516	.23006	.20243	1.094	.22499	7.504		
4,6-Dinitro-2-methylphenol	.07311	.12130	.14410	.16115	.15761	.906	.13145	27.514		
N-Nitrosodiphenylamine	.61799	.57889	.55821	.57360	.57124	.910	.57999	3.891	*	
2,4,6-Tribromophenol	.11455	.10954	.12007	.12575	.13866	.921	.12171	9.238		(Conc=100.0,100.0,100.0,1
4-Bromophenyl-phenylether	.29735	.28966	.27853	.29815	.30277	.951	.29329	3.240		
Hexachlorobenzene	.19803	.19372	.18762	.19920	.19722	.965	.19516	2.399	*	
Pentachlorophenol	.08627	.12133	.13879	.16337	.15611	.988	.13318	23.172		**
Phenanthrene	1.27230	1.21065	1.16084	1.17708	1.15328	1.003	1.19483	4.068		
Anthracene	1.21853	1.19975	1.16166	1.16080	1.12871	1.009	1.17389	3.019		
Di-n-Butylphthalate	1.27637	1.29383	1.16188	1.03367	1.01134	1.089	1.15542	11.401		
Fluoranthene	.93188	.85140	.79458	.71195	.66155	1.147	.79027	13.645	*	
Pyrene	2.23787	2.50106	2.42593	2.33823	2.08397	.888	2.31741	7.050		

RF - Response Factor (Subscript is amount in ug/l)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00047

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: 5970C

Contractor: 21st Century Envir Calibration Date: 05/12/93

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for CCC is 30%

Laboratory ID:	>C1218	>C1219	>C1220	>C1221	>C1222					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Benzidine	.32552	.44636	.49666	.46554	.45305	.884	.43743	14.968		
Terphenyl-d14	1.40928	1.58928	1.42238	1.46922	1.37659	.908	1.45335	5.707		(Conc=50.0,50.0,50.0,50.0
Butylbenzylphthalate	.56136	.67529	.69935	.73915	.78391	.960	.69181	12.109		
3,3'-Dichlorobenzidine	.23063	.24408	.29161	.32646	.32851	1.001	.28426	16.009		
Benzo(a)Anthracene	1.19345	1.24549	1.25713	1.32636	1.32029	.999	1.26855	4.375		
Bis(2-Ethylhexyl)Phthalate	.56060	.65444	.80334	.93352	1.00645	1.017	.79167	23.514		
Chrysene	1.09561	1.10941	1.11609	1.14030	1.15241	1.002	1.12276	2.063		
Di-n-octyl phthalate	1.18596	1.45226	1.64562	1.83291	1.99110	.954	1.62157	19.507	*	
Benzo(b)fluoranthene	1.46036	1.47967	1.33243	1.51522	1.37028	.974	1.43159	5.380		
Benzo(k)Fluoranthene	1.27093	1.22087	1.21697	1.23475	1.32065	.976	1.25284	3.470		
Benzo(a)Pyrene	1.16047	1.15470	1.17595	1.23068	1.25596	.996	1.19555	3.779	*	
Indeno(1,2,3-cd)Pyrene	.88489	.92959	1.12204	1.30463	1.26135	1.071	1.10050	17.223		
Dibenzo(a,h)Anthracene	.66566	.73840	.90541	1.05994	1.04766	1.073	.88342	20.175		
Benzo(g,h,i)Perylene	.77940	.78175	.91787	1.06478	1.05852	1.089	.92046	15.271		

RF - Response Factor (Subscript is amount in ug/l)

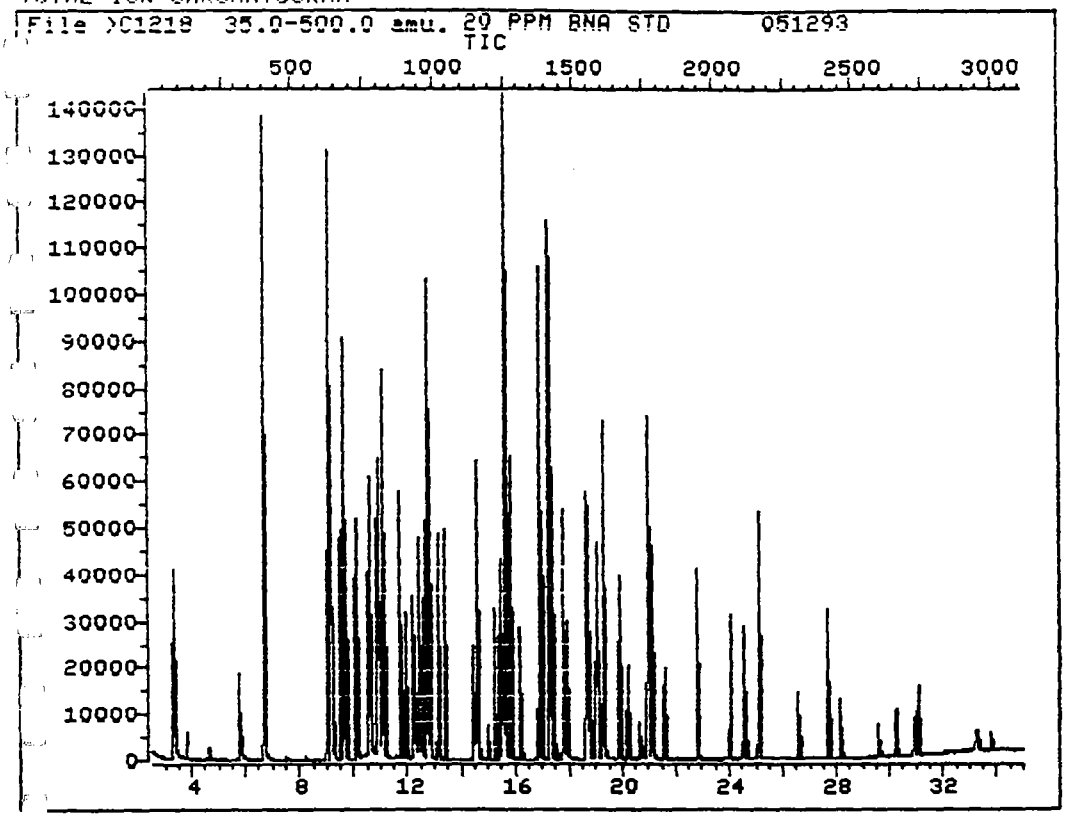
$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

TOTAL ION CHROMATOGRAM

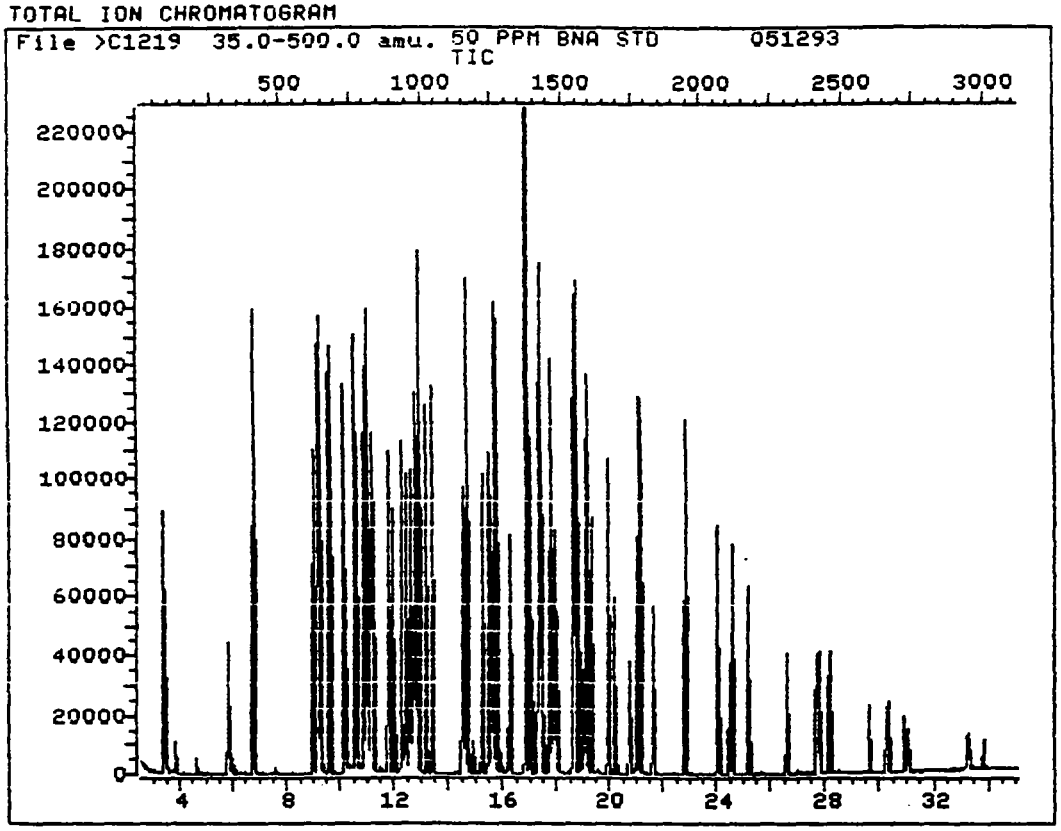


Data File: >C1218::D4 Quant Output File: ^C1218::ED
Name: 20 PPM BNA STD
Misc: 051293 BTL# 1

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930511 10:26

Operator ID: JEFF
Quant Time: 930512 06:37
Injected at: 930512 05:54

TOTAL ION CHROMATOGRAM

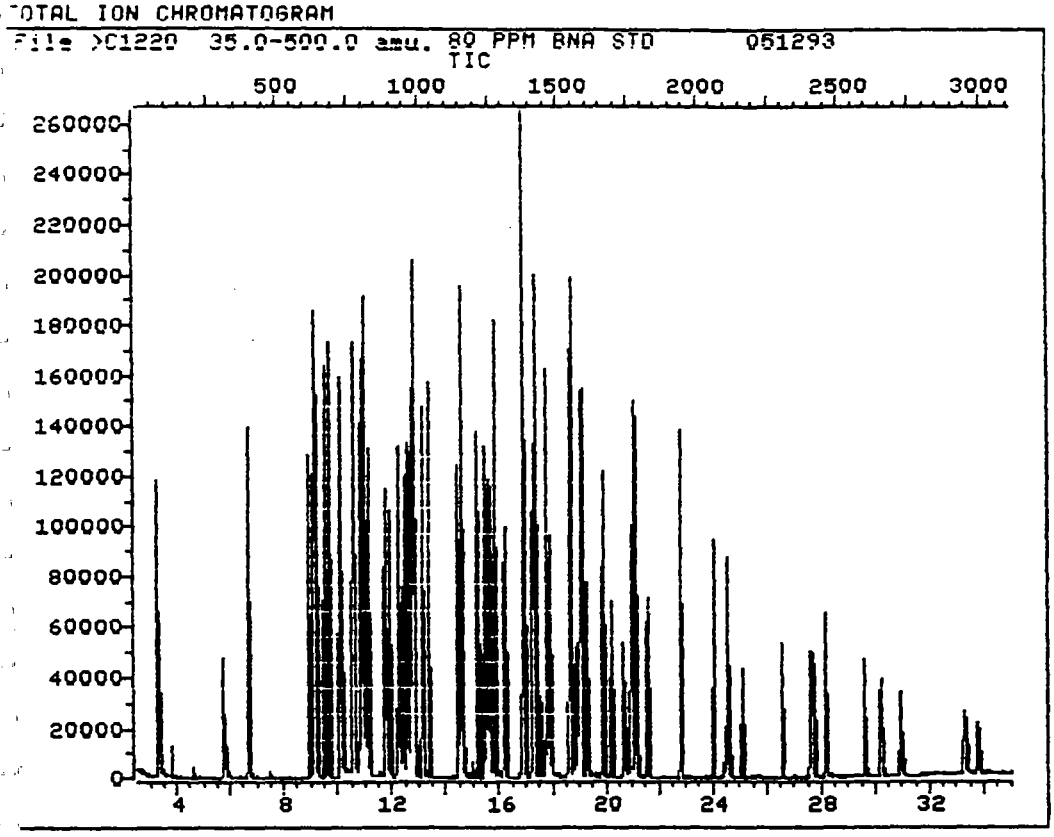


Data File: >C1219::D4 Quant Output File: ^C1219::ED
Name: 50 PPM BNA STD
Misc: 051293 BTL# 2

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930511 10:26

Operator ID: JEFF
Quant Time: 930512 07:18
Injected at: 930512 06:40

TOTAL ION CHROMATOGRAM

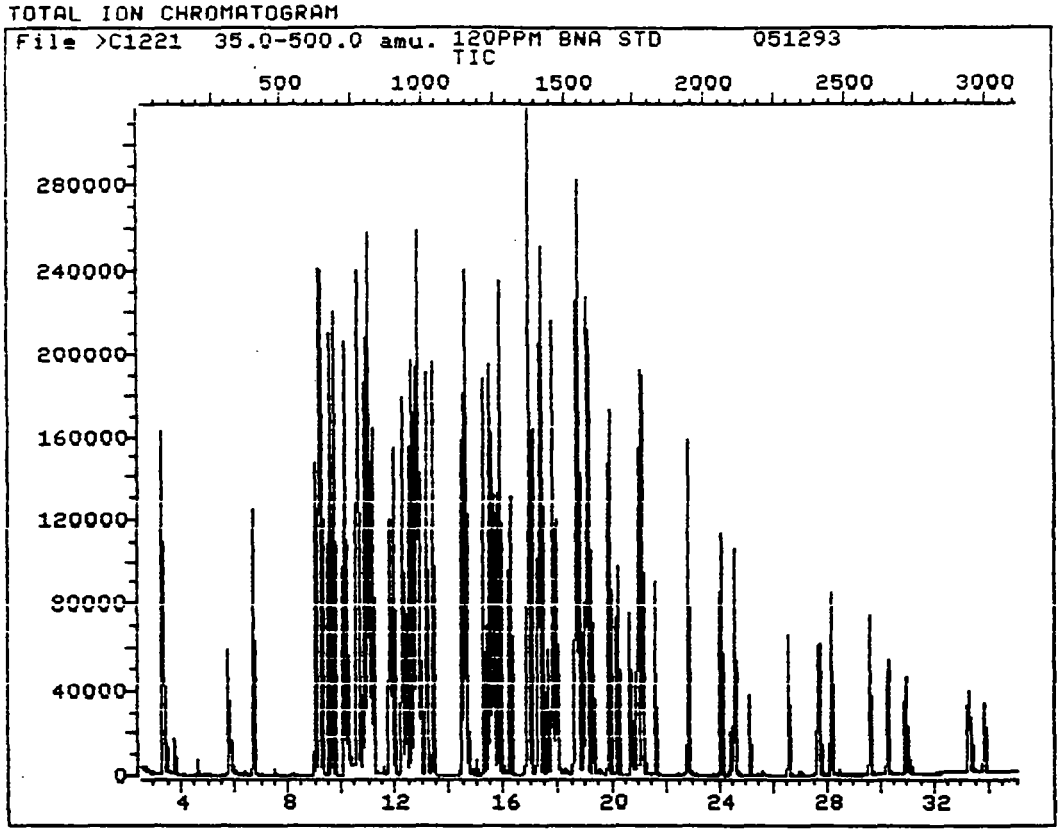


Data File: >C1220::D4 Quant Output File: ^C1220::QT
Name: 80 PPM BNA STD
Misc: 051293 BTL# 3

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930511 10:26

Operator ID: JEFF
Quant Time: 930512 08:06
Injected at: 930512 07:27

TOTAL ION CHROMATOGRAM

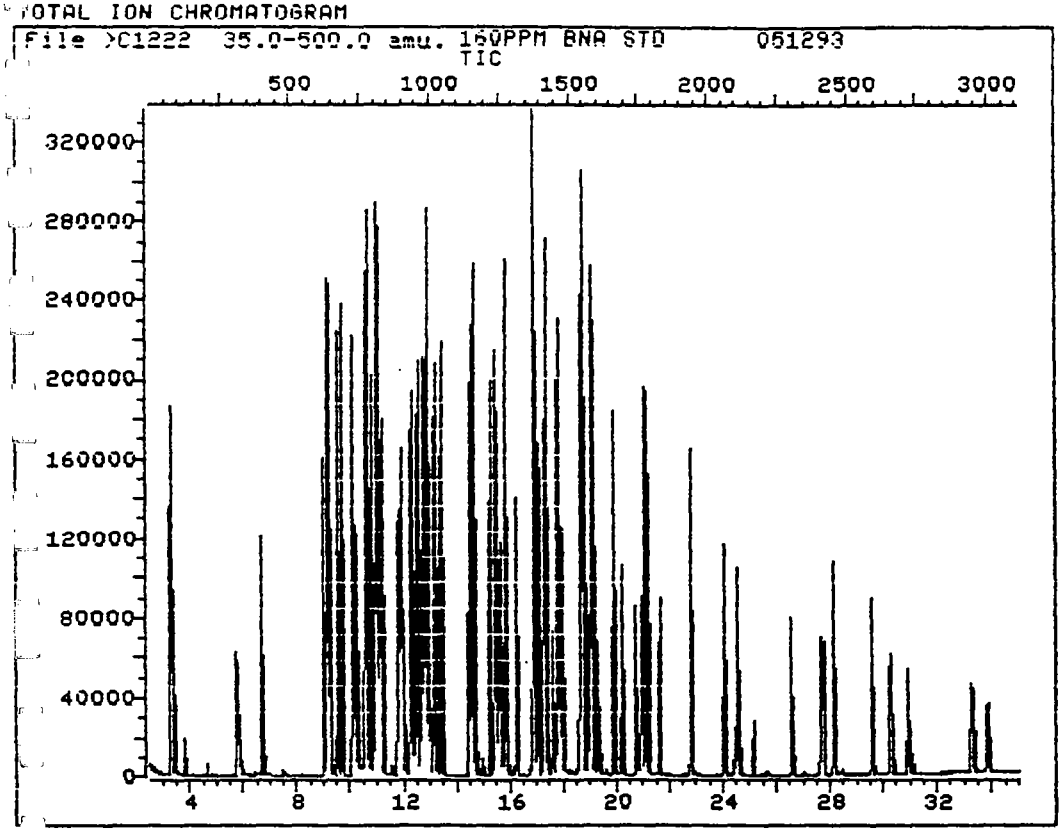


Data File: >C1221::D4 Quant Output File: ^C1221::ED
Name: 120PPM BNA STD
Misc: 051293 BTL# 4

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930511 10:26

Operator ID: JEFF
Quant Time: 930512 08:51
Injected at: 930512 08:13

TOTAL ION CHROMATOGRAM



Data File: >C1222::D4 Quant Output File: ^C1222::ED
Name: 160PPM BNA STD
Misc: 051293 BTL# 5

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930511 10:26

Operator ID: JEFF
Quant Time: 930512 09:38
Injected at: 930512 09:00

21ST CENTURY ENVIRONMENTAL INC.

GC/MS STANDARD DECAFLUOROTRIPHENYLPHOSPHINE(DFTPP) TUNE
CRITERIA FOR SEMIVOLATILES 50ng

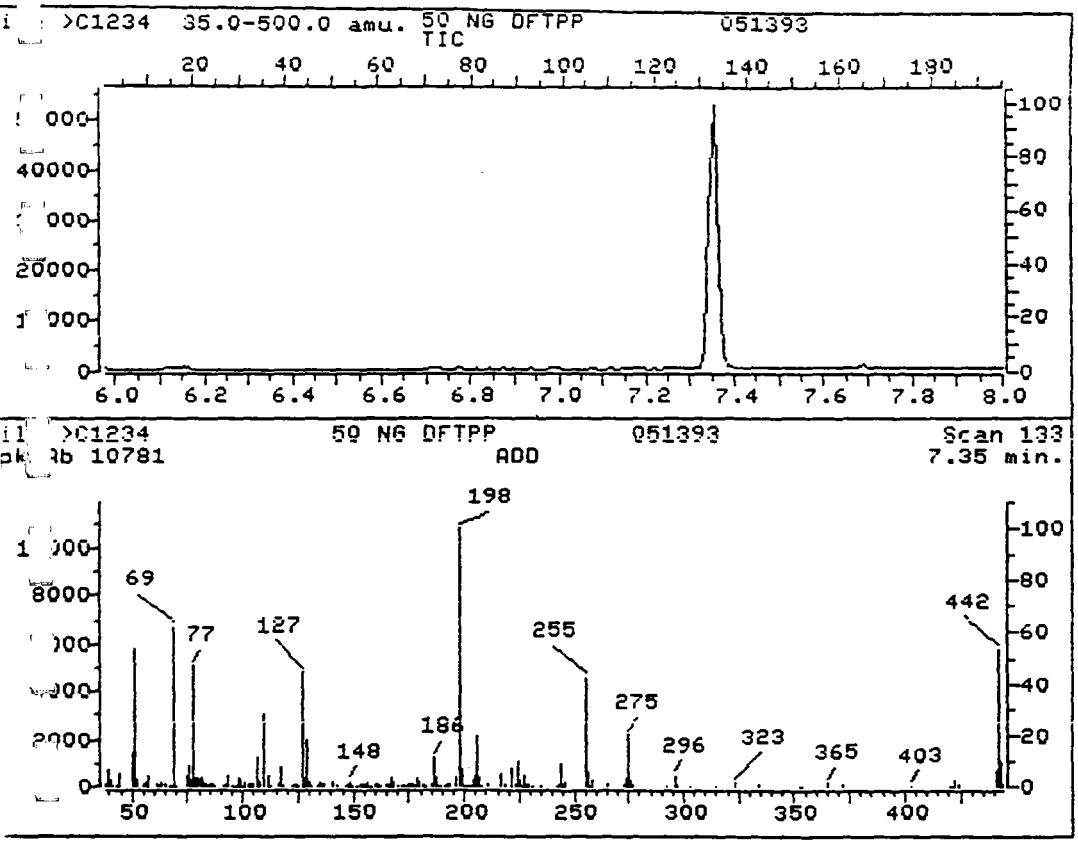
DATE AND TIME OF INJECTION: 5/13/93 9:45
INSTRUMENT ID: 5970

DATA RELEASE AUTHORIZED BY Richard W Lynch.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	53.37	53.37	Ok
68	Less than 2% of mass 69	.24	.39	Ok
69	(reference only)	62.32	62.32	Ok
70	Less than 2% of mass 69	.24	.39	Ok
127	40-60% of mass 198	44.58	44.58	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.69	6.69	Ok
275	10-30% of mass 198	20.52	20.52	Ok
365	Greater than 1% of mass 198	1.68	1.68	Ok
441	0-100% of mass 443	6.93	66.52	Ok
442	Greater than 40% of mass 198	53.48	53.48	Ok
443	17-23% of mass 442	10.42	19.48	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE TIME
>C1234::E4		50 NG DFTPP		5/13/93 9:45
>C1235::E4		50 PPM BNA STD		5/13/93 10:34
>C1236::E4		TCLP BLNK		5/13/93 11:36
>C1237::D4		A1746 5/5		5/13/93 12:22
>C1238::D4		A1749 5/5		5/13/93 13:08
>C1239::D4		AQ BLNK 04/24		5/13/93 13:55
>C1240::D4		A1627 04/24		5/13/93 14:41
>C1241::D4		A1628 04/24		5/13/93 15:27
>C1242::D4		A1629 04/24		5/13/93 16:13
>C1243::D4		A1630 04/24		5/13/93 17:00



>C1234 50 NG DFTPP 051393
133 ADD NRM

File: >C1234 Scan #: 133 Retn. time: 7.35

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
3_.10	.965	93.00	4.350	146.00	.121	186.00	11.325	243.10	.659
39.10	6.280	95.10	.121	146.95	.928	187.00	3.441	244.00	9.368
4_.10	2.235	96.05	.232	147.95	2.031	188.00	.158	245.10	1.159
4_.10	.427	97.15	.176	148.95	.213	188.90	.213	246.00	1.354
45.20	.288	98.05	3.135	151.05	.148	191.20	.195	254.95	42.389
44.10	5.250	99.05	2.718	151.45	.186	192.00	.918	255.95	6.150
5_.05	13.422	100.05	.213	151.65	.186	193.00	.853	257.05	.417
5_.15	53.372	101.05	1.920	152.95	.659	196.00	3.395	258.05	2.226
52.15	2.588	103.05	.631	154.05	.547	197.95	100.000	264.90	.900
5_.15	.816	103.95	1.030	155.05	1.095	198.95	6.688	272.95	1.243
5_.15	1.725	105.05	1.076	156.05	1.595	200.05	.473	273.95	2.977
57.05	4.174	107.05	11.845	157.05	.250	201.15	.436	274.95	20.518
6_.10	.566	108.05	1.790	157.95	.297	201.45	.269	276.05	2.245
6_.20	.501	110.00	28.457	160.00	.603	202.95	.306	276.95	1.150
6_.10	1.976	111.00	3.979	161.00	.918	204.05	2.848	292.70	.139
65.10	.890	112.10	.306	161.80	.158	205.05	4.629	296.00	4.582
6_.00	.093	116.00	.529	165.10	.733	206.05	19.980	297.00	.594
6_.90	.241	117.00	7.198	165.10	.232	207.05	3.117	302.95	.473
69.00	62.323	119.00	.399	166.00	.547	208.05	.638	316.00	.444

75.05	8.051	124.05	.519	170.00	.093	216.00	.250	352.05	.455
76.15	2.319	125.05	.288	172.05	.139	216.90	5.222	353.05	.130
77.15	47.083	127.05	44.578	172.95	.427	218.00	.677	353.85	.195
78.05	3.089	127.95	3.515	173.95	.492	221.00	7.374	364.90	1.679
79.05	3.098	129.05	18.598	175.05	1.326	222.95	1.234	372.00	.714
80.05	2.653	130.05	1.642	175.95	.529	223.95	10.083	403.05	.223
81.05	3.747	130.95	.167	176.15	.121	224.95	2.560	421.00	.204
81.95	.649	134.10	.288	176.95	.835	225.95	.297	422.00	.167
83.00	.992	135.00	1.577	177.95	.102	226.95	4.424	423.00	2.838
84.00	.111	135.90	.529	178.95	3.015	227.95	.529	424.10	.529
85.00	.538	137.10	.631	179.95	1.966	228.95	.844	441.00	6.929
86.00	.816	141.00	1.772	181.05	1.002	230.95	.399	442.00	53.483
87.00	.223	142.10	.464	181.95	.130	234.90	.167	443.00	10.416
91.00	.501	143.00	.492	185.00	1.289	241.90	.288	444.00	.788
92.00	.686								

Continuing Calibration Check
HSL Compounds

ase No: Calibration Date: 05/13/93

Contractor: 21st Century Envir Time: 10:34

ontract No: Laboratory ID: >C1235

Instrument ID: 5970C Initial Calibration Date: 05/12/93

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
yridine	.76932	.84355	9.65			
Nitrosodimethylamine	.57463	.65232	13.52			
-Fluorophenol	.59926	.70422	17.52			(Conc=100.00)
Phenol-d5	.82277	.99686	21.16			(Conc=100.00)
enol	1.11128	1.27586	14.81	*		
s(-2-Chloroethyl)Ether	.86103	1.01898	18.35			
2-Chlorophenol	.82260	.93069	13.14			
3-Dichlorobenzene	.89079	.99434	11.62			
4-Dichlorobenzene	.88557	.99130	11.94	*		
Benzyl Alcohol	.36791	.38135	3.65			
1 2-Dichlorobenzene	.84993	.96468	13.50			
Methylphenol	.75596	.88366	16.89			
s(2-Chloroisopropyl)ether	1.14871	1.31478	14.46			
4-Methylphenol	1.56146	1.80364	15.51			
Nitroso-Di-n-propylamine	.67271	.82192	22.18		**	
achloroethane	.40359	.46297	14.71			
Nitrobenzene-d5	.45677	.47336	3.63			(Conc=50.00)
Nitrobenzene	.50227	.51847	3.22			
phorone	1.04763	1.04774	.01			
2-Nitrophenol	.24385	.24678	1.20	*		
2 4-Dimethylphenol	.34300	.36345	5.96			
Benzoic Acid	.20961	.24268	15.77			
s(-2-Chloroethoxy)Methane	.51587	.53840	4.37			
2,4-Dichlorophenol	.36916	.37062	.40	*		
,4-Trichlorobenzene	.42454	.42451	.01			
Naphthalene	1.10614	1.13209	2.35			
4-Chloroaniline	.51623	.50946	1.31			
Hexachlorobutadiene	.21967	.21294	3.07	*		
4 hloro-3-methylphenol	.38378	.39644	3.30	*		
2-Methylnaphthalene	.74715	.75112	.53			
Hexachlorocyclopentadiene	.45584	.47717	4.68		**	
2 ,6-Trichlorophenol	.45501	.44982	1.14	*		

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%D f - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00057

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 05/13/93

Contractor: 21st Century Envir Time: 10:34

Contract No: Laboratory ID: >C1235

Instrument ID: 5970C Initial Calibration Date: 05/12/93

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
2,4,5-Trichlorophenol	.48969	.50949	4.04			
2-Chloronaphthalene	1.41562	1.44658	2.19			
2-Fluorobiphenyl	1.41999	1.40210	1.26			(Conc=50.00)
2-Nitroaniline	.46049	.48241	4.76			
Dimethyl Phthalate	1.34581	1.42361	5.78			
Acenaphthylene	1.87445	1.83518	2.10			
3-Nitroaniline	.25950	.27736	6.88			
Acenaphthene	1.25226	1.29791	3.65	*		
2,4-Dinitrophenol	.10362	.12204	17.78		**	
4-Nitrophenol	.18598	.22477	20.85		**	
Dibenzofuran	1.75582	1.79998	2.51			
2,4-Dinitrotoluene	.44018	.48377	9.90			
2,6-Dinitrotoluene	.38702	.39857	2.99			
Diethylphthalate	1.25561	1.38871	10.60			
4-Chlorophenyl-phenylether	.64764	.65910	1.77			
Fluorene	1.30991	1.36696	4.35			
4-Nitroaniline	.22499	.28140	25.08			
4,6-Dinitro-2-methylphenol	.13145	.15445	17.50			
N-Nitrosodiphenylamine	.57999	.57970	.05	*		
2,4,6-Tribromophenol	.12171	.10527	13.51			(Conc=100.00)
4-Bromophenyl-phenylether	.29329	.26911	8.25			
Hexachlorobenzene	.19516	.16871	13.55	*		
Pentachlorophenol	.13318	.13111	1.55		**	
Phenanthrene	1.19483	1.19939	.38			
Anthracene	1.17389	1.17442	.04			
Di-n-Butylphthalate	1.15542	1.37927	19.37			
Fluoranthene	.79027	.88017	11.38	*		
Pyrene	2.31741	2.32807	.46			
Benzidine	.43743	.58314	33.31			
Terphenyl-d14	1.45335	1.39517	4.00			(Conc=50.00)
Butylbenzylphthalate	.69181	.85573	23.69			
3,3'-Dichlorobenzidine	.28426	.27915	1.80			

RF - Response Factor from daily standard file at 50.00 ug/l

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00058

Continuing Calibration Check
HSL Compounds

se No: Calibration Date: 05/13/93

Contractor: 21st Century Envir Time: 10:34

ntract No: Laboratory ID: >C1235

Instrument ID: 5970C Initial Calibration Date: 05/12/93

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Benzo(a)Anthracene	1.26855	1.26395	.36		
bis(2-Ethylhexyl)Phthalate	.79167	1.05031	32.67		
Chrysene	1.12276	1.11575	.62		
Di-n-octyl phthalate	1.62157	2.01687	24.38	*	
Benzo(b)fluoranthene	1.43159	1.33320	6.87		
Benzo(k)Fluoranthene	1.25284	1.24353	.74		
Benzo(a)Pyrene	1.19555	1.16855	2.26	*	
Indeno(1,2,3-cd)Pyrene	1.10050	1.06357	3.36		
Dibenzo(a,h)Anthracene	.88342	.86756	1.80		
Benzo(g,h,i)Perylene	.92046	.87722	4.70		

RF - Response Factor from daily standard file at 50.00 ug/l

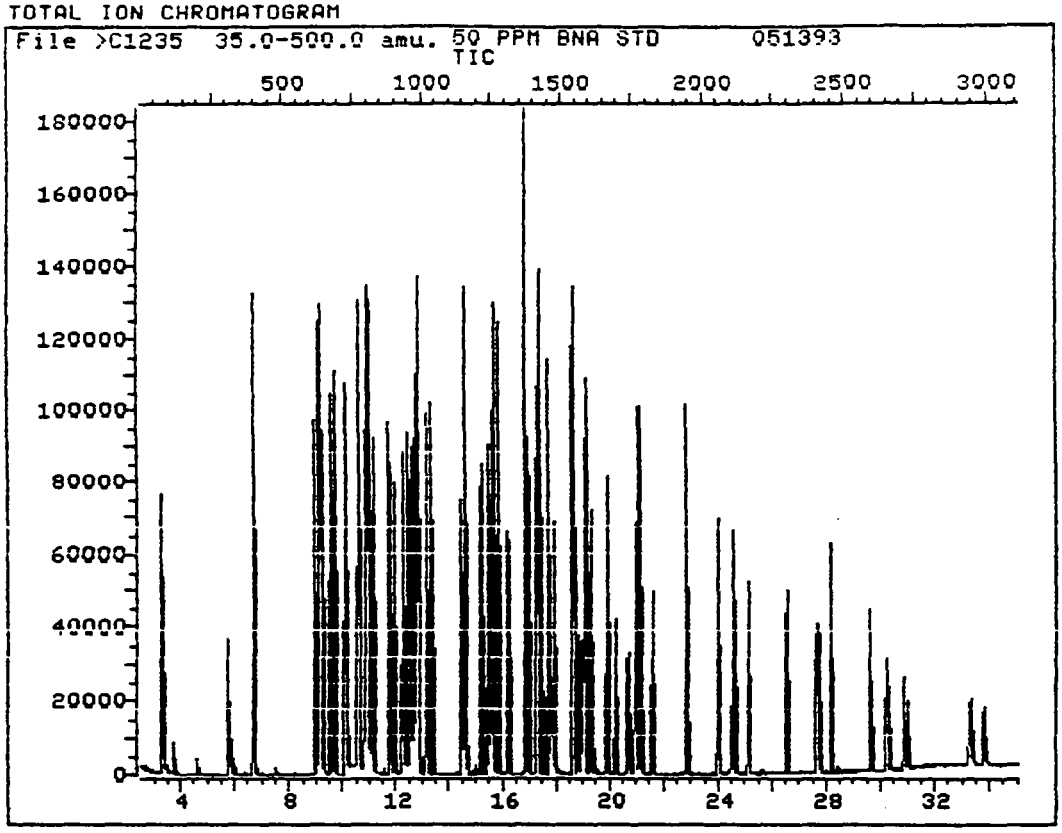
$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00059

TOTAL ION CHROMATOGRAM



Data File: >C1235::E4 Quant Output File: ^C1235::D4
Name: 50 PPM BNA STD
Misc: 051393 BTL# 2

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

Operator ID: JEFF
Quant Time: 930513 11:12
Injected at: 930513 10:34

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Contract No.:

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

LAB ID FILE (BLANK): >C1223 DATE ANALYZED: 05/12/93

INSTRUMENT ID: C TIME ANALYZED: 09:50

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

Date Extracted: 05/05/93 Extraction:(Sepf/Cont/Sonc) SEPF

Sample ID: AQ BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	A1745	>C1229	05/12/93	14:34
2	A1746	>C1237	05/13/93	12:22
3	A1747	>C1231	05/12/93	16:10
4	A1748	>C1232	05/12/93	16:58
5	A1749	>C1238	05/13/93	13:08
6				
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00061

COMMENTS: _____

21ST CENTURY Environmental
SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Water
SAMPLE NUMBER	AQ BLANK 05/05/93	DILUTION FACTOR	1.00
CLIENT ID	BLDG 2567	QA BATCH	
DATA FILE	>C1223	DATE ANALYZED	05/12/93

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
N-Nitrosodimethylamine	ND	10	2,6-Dinitrotoluene	ND	10
bis(-2-Chloroethyl)Ether	ND	10	Diethylphthalate	ND	10
1,3-Dichlorobenzene	ND	10	4-Chlorophenyl-phenlyether	ND	10
1,4-Dichlorobenzene	ND	10	Fluorene	ND	10
Benzyl Alcohol	ND	10	4-Nitroaniline	ND	50
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
bis(2-chloroisopropyl)Ether	ND	10	4-Bromophenyl-phenylether	ND	10
N-Nitroso-Di-n-Propylamine	ND	10	Hexachlorobenzene	ND	10
Hexachloroethane	ND	10	Phenanthrene	ND	10
Nitrobenzene	ND	10	Anthracene	ND	10
Isophorone	ND	10	Di-n-Butylphthalate	ND	10
Benzoic Acid	ND	50	Fluoranthene	ND	10
bis(-2-Chloroethoxy)Methane	ND	10	Pyrene	ND	10
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthalate	ND	10
Naphthalene	ND	10	3,3'-Dichlorobenzidine	ND	20
4-Chloroaniline	ND	10	Benzo(a)Anthracene	ND	10
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)Phthalate	ND	10
2-Methylnaphthalene	ND	10	Chrysene	ND	10
Hexachlorocyclopentadiene	ND	10	Di-n-Octyl Phthalate	ND	10
2-Chloronaphthalene	ND	10	Benzo(b)fluoranthene	ND	10
2-Nitroaniline	ND	50	Benzo(k)Fluoranthene	ND	10
Dimethyl Phthalate	ND	10	Benzo(a)Pyrene	ND	10
Acenaphthylene	ND	10	Indeno(1,2,3-cd)Pyrene	ND	10
3-Nitroaniline	ND	50	Dibenzo(a,h)Anthracene	ND	10
Acenaphthene	ND	10	Benzo(g,h,i)Perylene	ND	10
Dibenzofuran	ND	10	Benzidine	ND	20
2,4-Dinitrotoluene	ND	10			

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLDG 2567
AQ BLNK

Client: US Army, Ft. Monmouth, NJ

Matrix: (soil/water) WATER

Lab Sample ID: AQ BLNK

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: >C1223

Level: LOW

Date Received: 05/05/93

% Moisture: 100

Date Analyzed 05/12/93

Extraction: (Sepf/Cont/Sonc) SEPF

Date Extracted 05/05/93

GPC (Y or N): N

Column: DB-5

Dilution Factor: 1

Number TICs Found 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	NO UNKNOWN COMPOUNDS IDENTIFIED		

QUANT REPORT

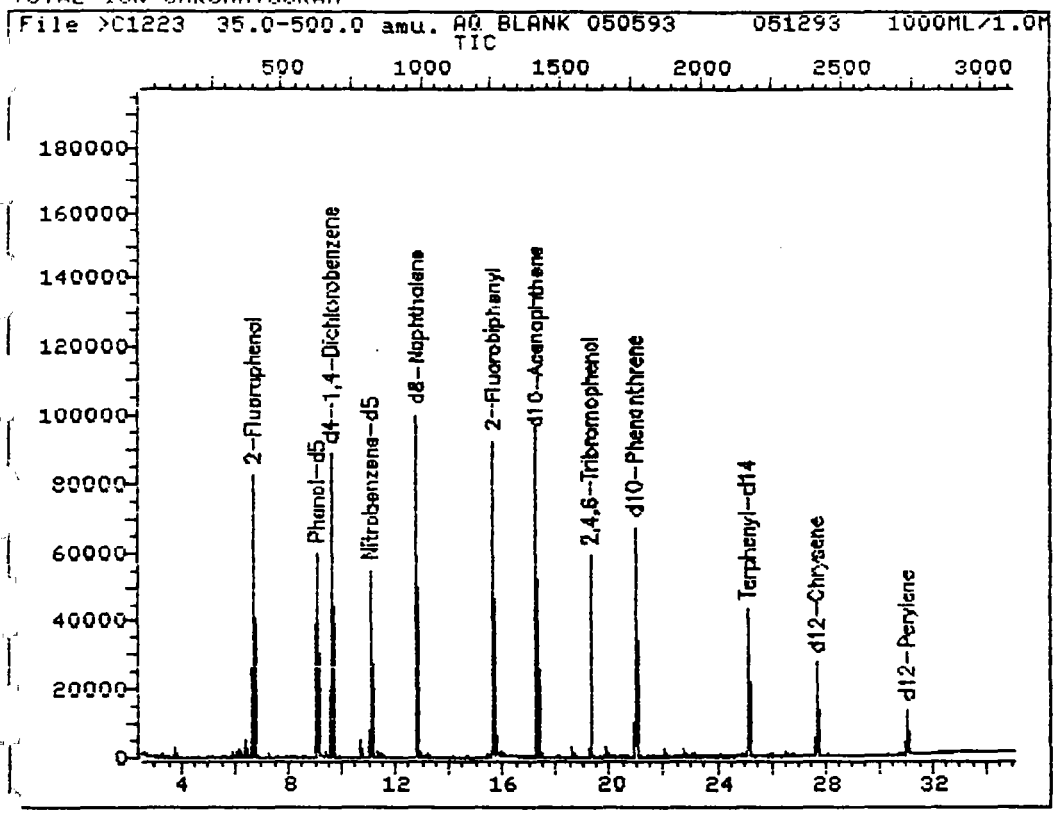
Operator ID: JEFF Quant Rev: 6 Quant Time: 930512 10:28
Output File: ^C1223::ED Injected at: 930512 09:50
Data File: >C1223::D3 Dilution Factor: 1.00000
Name: AQ BLANK 050593
Misc: 051293 1000ML/1.0ML BTL# 1

ID File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*d4-1,4-Dichlorobenzene	9.60	674	40638	40.00	UG/L	95
4)	2-Fluorophenol	6.68	394	37573	61.71	UG/L	98
5)	Phenol-d5	9.08	624	43485	52.02	UG/L	82
18)	*d8-Naphthalene	12.77	978	87554	40.00	UG/L	87
19)	Nitrobenzene-d5	11.07	815	34564	34.57	UG/L	92
33)	*d10-Acenaphthene	17.24	1406	48672	40.00	UG/L	94
38)	2-Fluorobiphenyl	15.63	1252	59974	34.71	UG/L	93
53)	*d10-Phenanthrene	20.93	1760	57561	40.00	UG/L	98
56)	2,4,6-Tribromophenol	19.26	1600	14583	83.26	UG/L	98
64)	*d12-Chrysene	27.65	2404	23200	40.00	UG/L	98
67)	Terphenyl-d14	25.11	2160	34940	41.45	UG/L	89
73)	*d12-Perylene	31.01	2726	13364	40.00	UG/L	92

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >C1223::D3 Quant Output File: ^C1223::ED
Name: AQ BLANK 050593
Misc: 051293 1000ML/1.0ML BTL# 1

Id File: IDHSLC::D3
Title: hSL BNA STD
Last Calibration: 930512 10:19

Operator ID: JEFF
Quant Time: 930512 10:28
Injected at: 930512 09:50

IJO
94-0191

UST ANALYSIS RESULT CHECKLIST

(one form for each site report)

Building No. 2557 Laboratory(SAI/Cont.) ID#s 13773 13.6 (1991)

IJO No. 93-0116 Date Sampled: 2-3-94

Date Analysis Submitted: 3-8-94 Date Reviewed: 3-8-94

ITEM	ITEM OF WORK	ITEM COMPLETE (YES/NO)	COMMENTS
A	Labor and Equip. Supplied	Yes	
B	Work done by Cert. Lab	Yes	
C	Trip and Field Blanks, ect. Supplied by Contractor	Yes	
D	Contractor picked up samples at Bldg. 490	No	- Sampled By Contractor
G	Aqueous samples analyzed for Xylene, MTBE, TBA	Yes	
H	Chain of Custody correct (Hnu, Site Names, SAI #'s)	No	See Field Notes for LNO
H	MW sampling field data (DTW, Hnu/OVA, ect.,)	Yes	
H	Laboratory Decon. Narrative	Yes	
J	Samples were not distributed to another Laboratory	Yes	
K	Appropriate NJDEPE checklists are completed	Yes	
J	Result headers are correct	Yes	
J	QA/QC data	Yes	
J	Non-TIC results reported within 48 hrs.	—	
J	Final Report complete within 3-Weeks (3 copies)	—	
J	Final Report complete within 4- weeks (3 copies) PP+40	—	
J	List Approved Contract Deviations	NA	

ANALYSIS / SERVICE	COST	QUANTITY	SUB-TOTAL
SOIL- B/N+15	$190.00		
SOIL- VOA+15	140.00		
SOIL- VOA+15, XYLENE,Pb	150.00		
SOIL- B/N+15, VOA+15, XYLENE, Pb	340.00	N/A	
SOIL- PP+40	825.00		
AQUEOUS- 624(XYLENE,TBA,MTBE) 625, Pb	340.00		
MONITORING WELL SAMPLING	65.00		
		TOTAL	$

REVIEWERS NAME B. McKee

618 HERON DRIVE P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489 • 609-467-9521

E-SYSTEMS, INC.

PROJECT: U.S. ARMY FORT MONMOUTH, NJ BLDG 2567

ANALYSIS NO:	CLIENT ID:
B 0241	TRIP BLANK
B 0242	MW 4
B 0243	MW 2
B 0244	MW 1
B 0245	MW 3
B 0246	FIELD BLANK

DATE RECEIVED: FEBRUARY 3, 1994

TWENTY FIRST CENTURY
ENVIRONMENTAL, INC.

Richard W. Lynch

RICHARD W. LYNCH
LABORATORY MANAGER

List of samples B02401 to B02416

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)	___	✓
2.	GC/MS Tune Specifications		
	a. BFB Meet Criteria	___	✓
	b. DFTPP Meet Criteria	___	N/A
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.	___	✓
4.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	___	✓
5.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds	___	✓
	b. System Performance Check Compounds	___	✓

6. Blank Contamination - If yes, list compounds and concentrations in each blank:

   a. VOA Fraction Acetone = 4.3 ppb MeCl = 2.2 (Both Below MDL)
   b. B/N Fraction _____
   c. Acid Fraction _____

7.	Surrogate Recoveries Meet Criteria	___	✓

If not met, list those compounds and their recoveries which fall outside the acceptable range:

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

	If not met, were the calculations checked and the results qualified as "estimated"?	___	N/A
8.	Matrix Spike/ Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	___	✓

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

9.	Internal Standard Area/Retention Time Shift Meet Criteria	___	✓

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (CONTINUED)

	No	Yes
10. Extraction Holding Time Met.	___	✓
If not met, list number of days exceeded for each sample: ___		
11. Analysis Holding Time Met	___	✓
If not met, list number of days exceeded for each sample: ___		

Additional Comments: This form completed by prime contract lab

Laboratory Manager: B. Mk Date: 3-8-94

METAL ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Calibration Summary Meet Criteria	___	✓
2.	ICP Interference Check Sample Results Summary Submitted (if applicable) / Meet Criteria.	___	N/A
3.	Serial Dilution Summary Submitted (if applicable) / Meet Criteria.	___	N/A
4.	Laboratory Control Sample Summary Submitted (if applicable) / Meet Criteria.	___	N/A
5.	Blank Contamination - If yes, list compounds and concentrations in each blank: None		
6.	Matrix Spike/ Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	___	✓
7.	Extraction Holding Time Met	___	✓
	If not met, list number of days exceeded for each sample: ___		
8.	Analysis Holding Time Met	___	✓
	If not met, list number of days exceeded for each sample: ___		

Additional Comments: This form completed By Prime Contractor

Laboratory Manager: B MK Date: 3-8-94

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NARRATIVE

There were no problems encountered during the analysis of this batch of samples (B0241 to B0246). All extractions and analysis were completed within proper hold times.

Purgeables

U.S.E.P.A. Method 624 - This is a purge and trap Gas Chromatograph/ Mass Spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

An HP5996 GC/MS was used with a capillary column.

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8240/8260 from SW-846.

Metals

Soil samples for metal analysis were run in accordance with the methods prescribed in SW-846. This includes a nitric acid digestion followed by either Furnace, Flame Atomic Absorption, Flameless Atomic Absorption, or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600-4-79-020 March 1983.

Aqueous/Soil samples for mercury analysis were run in accordance with SW-846 methods 7470/7471. These are cold-vapor atomic absorption methods.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 2/3/94

ORGANICS
EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons/Oil & Grease NA

ANALYSIS

1. Volatiles 2/7/94-2/8/94
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons/Oil & Grease NA
6. Total Organic Carbon NA

Section Supervisor
Review & Approval Jeffrey L Martin

INORGANICS

1. Metals 2/7/94-2/10/94
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

Section Supervisor
Review & Approval

Quality Control Supervisor
Review & Approval

Laboratory Director
Review & Approval Richard W Rund

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

RESULT SUMMARY

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
B 0242	MW 4	0.003	N.D.
B 0243	MW 2	0.003	0.26
B 0244	MW 1	0.003	N.D.
B 0245	MW 3	0.003	0.041
B 0246	FIELD BLANK	0.003	N.D.

BATCH 94-19

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	30241	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4955	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	5.2	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	96.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: 80241

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4955

Level: (low/med) LOW

Date Received: NA

% Moisture: NA

Date Analyzed: 02/07/94

Column: DB-624

Dilution Factor: 5

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80242	DILUTION FACTOR	1.00
CLIENT ID	MW-4 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4961	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	56	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	5.0	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	8.9	5
Vinyl Acetate	1.3 J	5	m&p-Xylenes	42	5
2-Butanone	ND	10	o-Xylene	18	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	14	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	98.7	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	102	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-4

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: B0242

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4961

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/07/94

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1		UNKNOWN	4.55	14
2		UNKNOWN	5.45	5
3	620144	Benzene, ethylmethyl- Isomer (9CI)	19.55	7
4	620144	Benzene, ethylmethyl- Isomer (9CI)	20.42	12

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	90243	DILUTION FACTOR	1.00
CLIENT ID	MW-2 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4962	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	55	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	3.1 J	10	Tetrachloroethene	ND	5
Methylene Chloride	4.0 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	7.4	5
Vinyl Acetate	ND	5	m&p-Xylenes	32	5
2-Butanone	ND	10	o-Xylene	11	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	19	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	7.0 J	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-2

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: 80243

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4962

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/07/94

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	611143	Benzene, 1-ethyl-2-methyl- (9CI)	19.50	4
2	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	20.32	12
3	496117	1H-Indene, 2,3-dihydro- (9CI)	21.52	8
4	767588	1H-Indene, 2,3-dihydro-1-methyl- (9CI)	22.58	3

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80244	DILUTION FACTOR	10.00
CLIENT ID	MW-1 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>82431	DATE ANALYZED	02/08/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	500	2-Chloroethylvinylether	ND	100
Acrylonitrile	ND	500	2-Hexanone	ND	100
Chloromethane	ND	100	trans-1,3-Dichloropropene	ND	50
Bromomethane	ND	100	Toluene	66	50
Vinyl Chloride	ND	100	cis-1,3-Dichloropropene	ND	50
Chloroethane	ND	100	1,1,2,2-Tetrachloroethane	ND	50
Acetone	54 JB	100	1,1,2-Trichloroethane	ND	50
1,1-Dichloroethene	ND	50	4-Methyl-2-pentanone	ND	100
Carbon Disulfide	ND	100	Tetrachloroethene	ND	50
Methylene Chloride	26 JB	50	Dibromochloromethane	ND	50
1,2-Dichloroethene(trans)	ND	50	Chlorobenzene	ND	50
1,1-Dichloroethane	ND	50	Ethylbenzene	16 J	50
Vinyl Acetate	ND	50	m&p-Xylenes	24 J	50
2-Butanone	ND	100	o-Xylene	17 J	50
Chloroform	ND	50	Styrene	ND	50
1,1,1-Trichloroethane	ND	50	Bromoform	ND	50
Carbon Tetrachloride	ND	50	m-Dichlorobenzene	ND	50
1,2-Dichloroethane	ND	50	p-Dichlorobenzene	ND	50
Benzene	21 J	50	o-Dichlorobenzene	ND	50
Trichloroethene	ND	50	Methyl Tertiary Butyl Ether	650	100
1,2-Dichloropropane	ND	50	Tertiary Butyl Alcohol	28 J	500
Bromodichloromethane	ND	50			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	98.6	76 - 114	OK
Toluene-d8	105	88 - 110	OK
Bromofluorobenzene	95.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-1

Matrix: (soil/water) WATER

Lab Sample ID: 80244

Sample wt/vol: 0.5 (g/mL) ml

Lab File ID: >82431

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/08/94

Column: CAP

Dilution Factor: 10

Number TICs Found 1

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	UNKNOWN	18.46	59

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	90245	DILUTION FACTOR	1.00
CLIENT ID	MW-3 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4963	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	43	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	4.4 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	7.0	5
Vinyl Acetate	ND	5	m&p-Xylenes	45	5
2-Butanone	ND	10	o-Xylene	20	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	19	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	9.1 J	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.4	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-3

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: 80245

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4963

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/07/94

Column: CAP

Dilution Factor: 1

Number TICs Found 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	611143	Benzene, ethylmethyl- Isomer (9CI)	19.58	6
2	108678	Benzene, trimethyl- Isomer (9CI)	20.44	11
3	620144	Benzene, ethylmethyl- Isomer (9CI)	21.23	3
4	496117	1H-Indene, 2,3-dihydro- (9CI)	21.63	14
5	812157	Disilane, pentamethyl- (8CI9CI)	22.69	3

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80246	DILUTION FACTOR	1.00
CLIENT ID	FIELD BLANK BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4956	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	12	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	7.3	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.3	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	97.9	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD BLANK

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: 80246

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4956

Level: (low/med) LOW

Date Received: NA

% Moisture: NA

Date Analyzed: 02/07/94

Column: DB-624

Dilution Factor: 5

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

DATA PACKAGE

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
B 0242	MW 4	0.003	N.D.
B 0243	MW 2	0.003	0.26
B 0244	MW 1	0.003	N.D.
B 0245	MW 3	0.003	0.041
B 0246	FIELD BLANK	0.003	N.D.

BATCH 94-19

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	30241	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4955	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	5.2	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	96.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: 80241

Sample wt/vol: 5 (g/mL) ml Lab File ID: >A4955

Level: (low/med) LOW Date Received: NA

% Moisture: NA Date Analyzed: 02/07/94

Column: DB-624 Dilution Factor: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

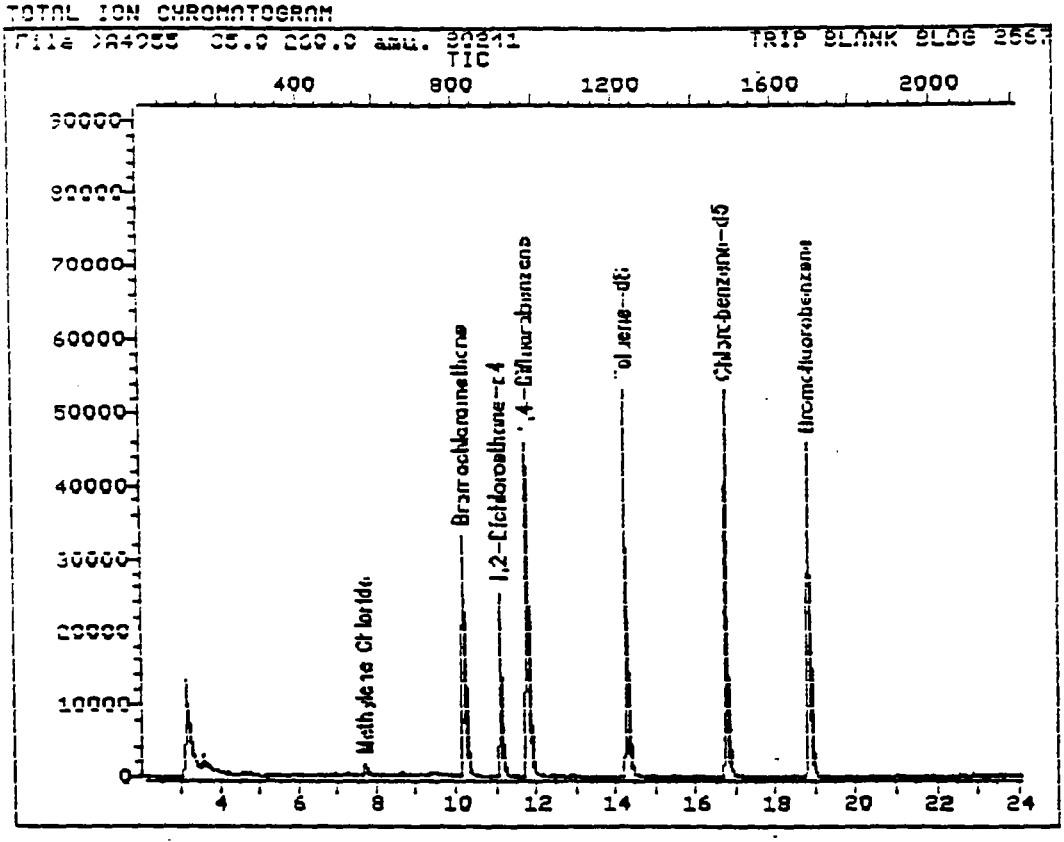
Operator ID: JEFF Quant Rev: 6 Quant Time: 940207 16:56
Output File: ^A4955::QT Injected at: 940207 16:26
Data File: >A4955::D2 Dilution Factor: 1.00000
Name: B0241
Misc: TRIP BLANK BLDG 2567 5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.19	813	23787	50.00	UG/L	100
1)	Methylene Chloride	7.70	562	3683	5.20	UG/L	65
2)	1,2-Dichloroethane-d4	11.11	905	43612	50.53	UG/L	100
24)	*1,4-Difluorobenzene	11.80	975	105528	50.00	UG/L	100
3)	Toluene-d8	14.26	1222	104884	51.03	UG/L	100
3)	*Chlorobenzene-d5	16.74	1472	86467	50.00	UG/L	100
48)	Bromofluorobenzene	18.83	1683	42802	48.26	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A4955::D2 Quant Output File: ^A4955::QT
Name: B0241
Misc: TRIP BLANK BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

Operator ID: JEFF
Quant Time: 940207 16:56
Injected at: 940207 16:26

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80242	DILUTION FACTOR	1.00
CLIENT ID	MW-4 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4961	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	56	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	5.0	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	8.9	5
Vinyl Acetate	1.3 J	5	m&p-Xylenes	42	5
2-Butanone	ND	10	o-Xylene	18	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	14	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	98.7	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	102	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-4

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: B0242

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4961

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/07/94

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1		UNKNOWN	4.55	14
2		UNKNOWN	5.45	5
3	620144	Benzene, ethylmethyl- Isomer (9CI)	19.55	7
4	620144	Benzene, ethylmethyl- Isomer (9CI)	20.42	12

QUANT REPORT

Operator ID: JEFF
Output File: ^A4961::QT
Data File: >A4961::D2
Name: B0242
Misc: MW-4 BLDG 2567

Quant Rev: 6 Quant Time: 940207 20:02
Injected at: 940207 19:34
Dilution Factor: 1.00000

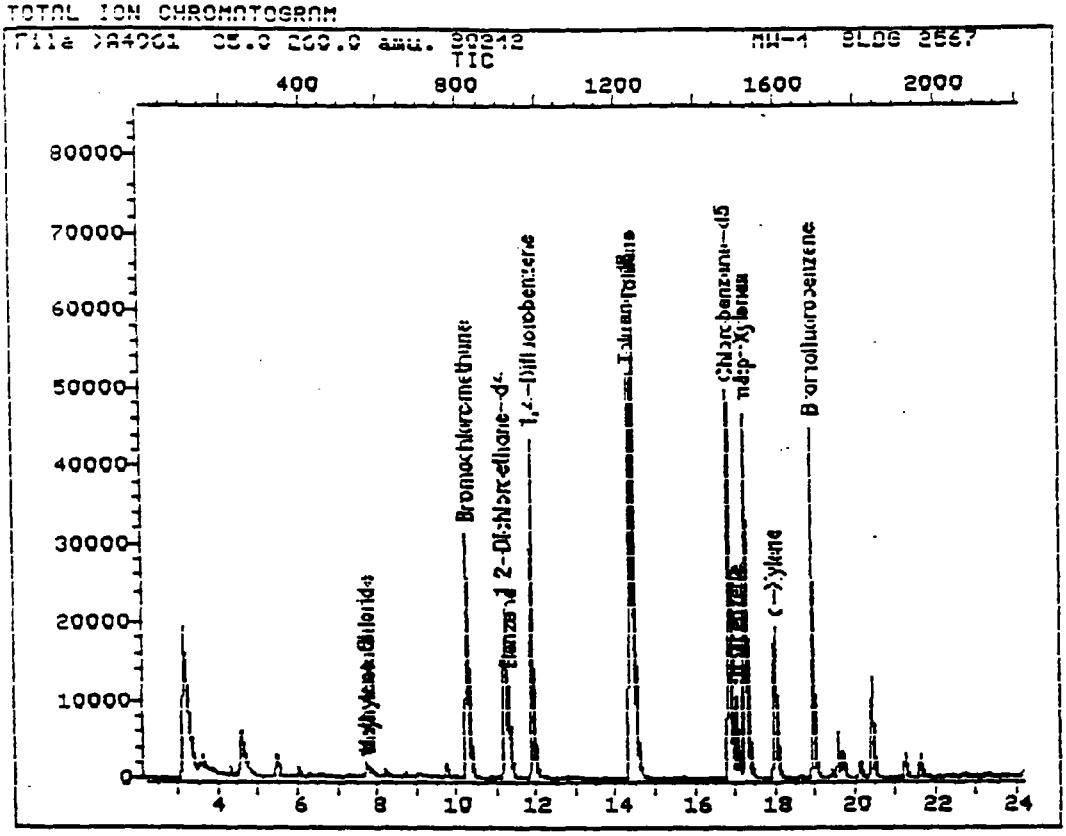
5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.25	809	21660	50.00	UG/L	100
5)	Methylene Chloride	7.73	555	3260	5.06	UG/L	66
18)	Vinyl Acetate	7.77	559	1583	1.33	UG/L	11
23)	1,2-Dichloroethane-d4	11.18	902	38777	49.34	UG/L	100
24)	*1,4-Difluorobenzene	11.88	973	98748	50.00	UG/L	100
28)	Benzene	11.31	915	27863	14.33	UG/L	100
33)	Toluene-d8	14.34	1220	97773	50.83	UG/L	100
34)	Toluene	14.45	1231	113730	56.14	UG/L	96
39)	*Chlorobenzene-d5	16.82	1470	81552	50.00	UG/L	100
43)	Ethylbenzene	17.05	1493	22067	8.90	UG/L	84
44)	m&p-Xylenes	17.25	1513	80308	42.49	UG/L	93
46)	o-Xylene	17.98	1586	34430	18.29	UG/L	95
48)	Bromofluorobenzene	18.93	1682	42787	51.15	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A4961::D2 Quant Output File: ^A4961::QT
Name: B0242
Misc: MW-4 BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

Operator ID: JEFF
Quant Time: 940207 20:02
Injected at: 940207 19:34

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80243	DILUTION FACTOR	1.00
CLIENT ID	MW-2 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4962	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	55	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	3.1 J	10	Tetrachloroethene	ND	5
Methylene Chloride	4.0 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	7.4	5
Vinyl Acetate	ND	5	m&p-Xylenes	32	5
2-Butanone	ND	10	o-Xylene	11	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	19	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	7.0 J	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	101	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-2

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: B0243

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >A4962

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/07/94

Column: CAP

Dilution Factor: 1

Number TICs Found 4

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	611143	Benzene, 1-ethyl-2-methyl- (9CI)	19.50	4
2	95636	Benzene, 1,2,4-trimethyl- (8CI9CI)	20.32	12
3	496117	1H-Indene, 2,3-dihydro- (9CI)	21.52	8
4	767588	1H-Indene, 2,3-dihydro-1-methyl- (9CI)	22.58	3

QUANT REPORT

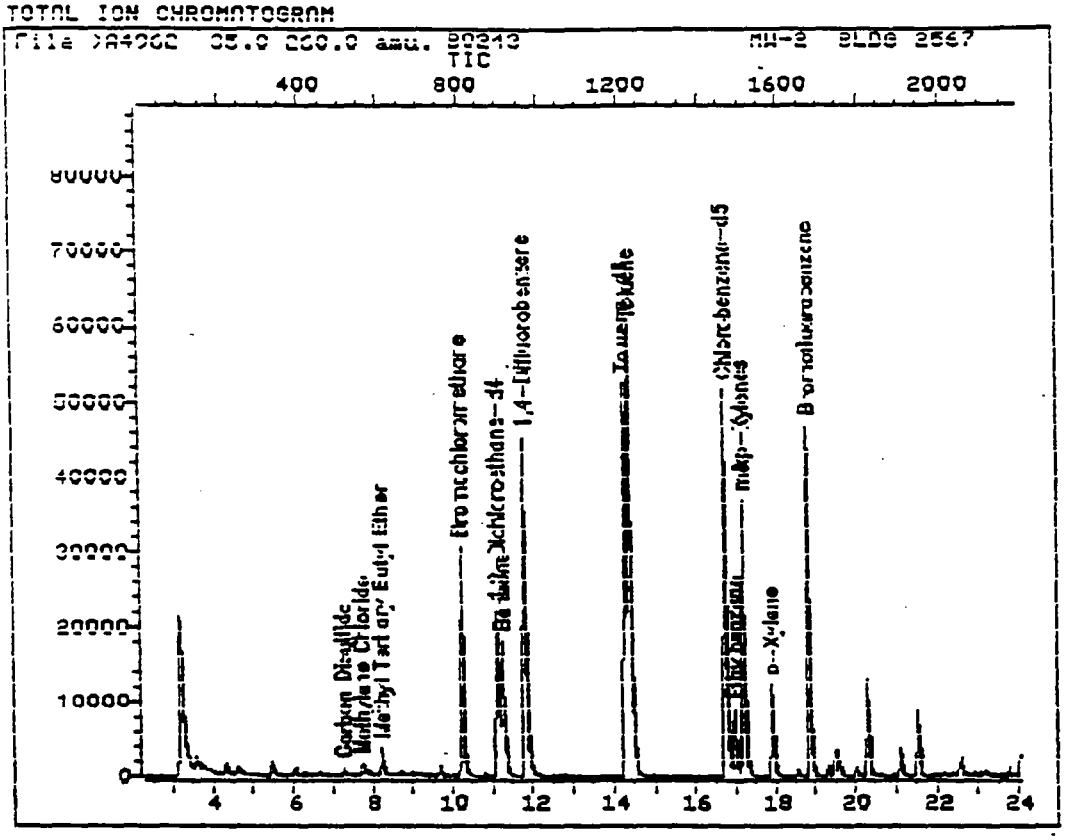
Operator ID: JEFF Quant Rev: 6 Quant Time: 940207 20:34
Output File: ^A4962::QT Injected at: 940207 20:05
Data File: >A4962::D2 Dilution Factor: 1.00000
Name: 80243
Misc: MW-2 BLDG 2567 5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

	Compound	R.T.	Scan#	Area	Conc	Units	q
1	*Bromochloromethane	10.22	797	22036	50.00	UG/L	100
11)	Carbon Disulfide	7.25	498	3271	3.06	UG/L	100
13)	Methylene Chloride	7.73	547	2617	3.99	UG/L	68
16	Methyl Tertiary Butyl Ether	8.22	596	10318	6.96	UG/L	100
23	1,2-Dichloroethane-d4	11.14	890	40439	50.58	UG/L	100
24)	*1,4-Difluorobenzene	11.83	959	101936	50.00	UG/L	100
26	Benzene	11.26	902	38828	19.34	UG/L	100
33	Toluene-d8	14.27	1205	101285	51.01	UG/L	100
34)	Toluene	14.38	1216	115016	54.99	UG/L	94
45)	*Chlorobenzene-d5	16.75	1454	84488	50.00	UG/L	100
43	Ethylbenzene	16.97	1477	19000	7.40	UG/L	87
44)	m&p-Xylenes	17.17	1497	62270	31.80	UG/L	99
45)	o-Xylene	17.90	1570	21363	10.95	UG/L	96
58	Bromofluorobenzene	18.84	1665	43940	50.71	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A4962::D2 Quant Output File: ^A4962::QT
Name: 80243
Misc: MW-2 BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

Operator ID: JEFF
Quant Time: 940207 20:34
Injected at: 940207 20:05

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80244	DILUTION FACTOR	10.00
CLIENT ID	MW-1 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>82431	DATE ANALYZED	02/08/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	500	2-Chloroethylvinylether	ND	100
Acrylonitrile	ND	500	2-Hexanone	ND	100
Chloromethane	ND	100	trans-1,3-Dichloropropene	ND	50
Bromomethane	ND	100	Toluene	66	50
Vinyl Chloride	ND	100	cis-1,3-Dichloropropene	ND	50
Chloroethane	ND	100	1,1,2,2-Tetrachloroethane	ND	50
Acetone	54 JB	100	1,1,2-Trichloroethane	ND	50
1,1-Dichloroethene	ND	50	4-Methyl-2-pentanone	ND	100
Carbon Disulfide	ND	100	Tetrachloroethene	ND	50
Methylene Chloride	26 JB	50	Dibromochloromethane	ND	50
1,2-Dichloroethene(trans)	ND	50	Chlorobenzene	ND	50
1,1-Dichloroethane	ND	50	Ethylbenzene	16 J	50
Vinyl Acetate	ND	50	m&p-Xylenes	24 J	50
2-Butanone	ND	100	o-Xylene	17 J	50
Chloroform	ND	50	Styrene	ND	50
1,1,1-Trichloroethane	ND	50	Bromoform	ND	50
Carbon Tetrachloride	ND	50	m-Dichlorobenzene	ND	50
1,2-Dichloroethane	ND	50	p-Dichlorobenzene	ND	50
Benzene	21 J	50	o-Dichlorobenzene	ND	50
Trichloroethene	ND	50	Methyl Tertiary Butyl Ether	650	100
1,2-Dichloropropane	ND	50	Tertiary Butyl Alcohol	28 J	500
Bromodichloromethane	ND	50			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	98.6	76 - 114	OK
Toluene-d8	105	88 - 110	OK
Bromofluorobenzene	95.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-1

Matrix: (soil/water) WATER

Lab Sample ID: 80244

Sample wt/vol: 0.5 (g/mL) ml

Lab File ID: >82431

Level: LOW

Date Received: 02/03/94

% Moisture: 100

Date Analyzed 02/08/94

Column: CAP

Dilution Factor: 10

Number TICs Found 1

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	UNKNOWN	18.46	59

QUANT REPORT

Operator ID: JEFF
Output File: ^B2431::QT
Data File: >B2431::D3
Name: B0244
Misc: MW-1 BLDG 2567

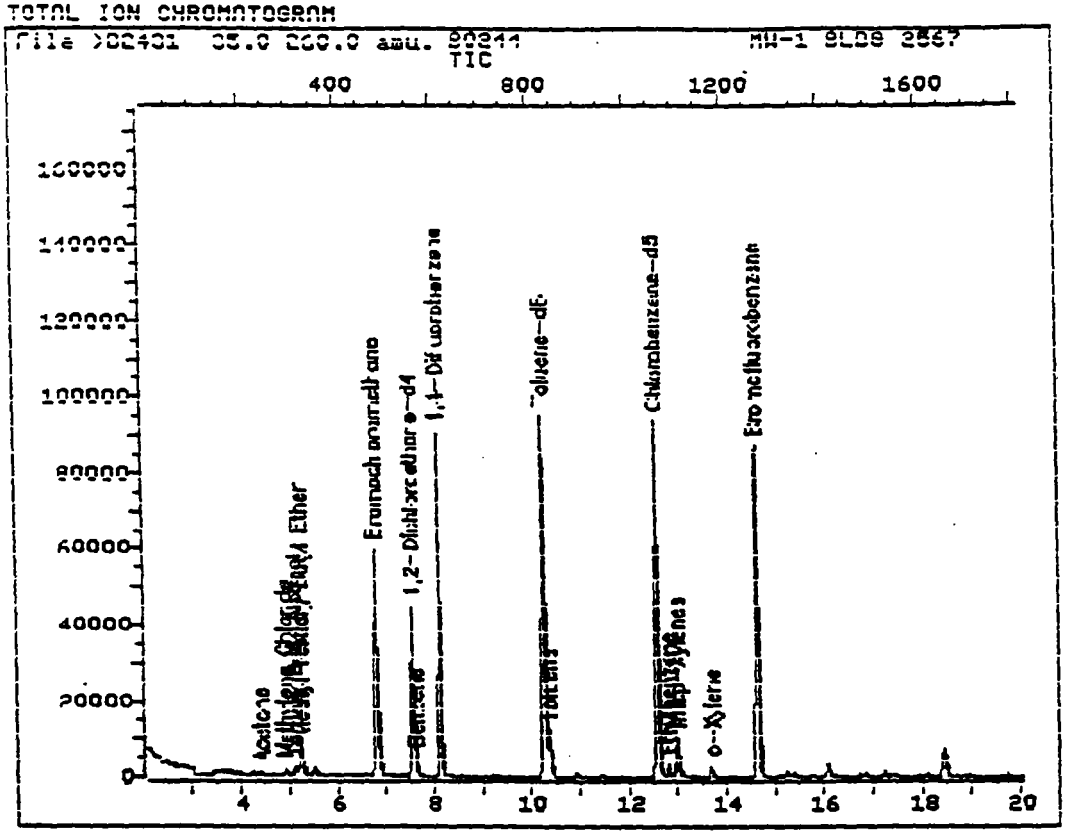
Quant Rev: 6 Quant Time: 940208 16:34
Injected at: 940208 16:08
Dilution Factor: 1.00000
.5mL

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940208 11:29

	Compound	R.T.	Scan#	Area	Conc	Units	q
	*Bromochloromethane	6.79	474	35780	50.00	UG/L	100
	Acetone	4.40	233	1562	5.39	UG/L	88
12)	Methyl Tertiary Butyl Ether	5.23	317	16843	65.46	UG/L	100
17)	Tertiary Butyl Alcohol	5.13	307	6467	2.79	UG/L	100
19)	Methylene Chloride	4.90	283	2370	2.56	UG/L	90
23)	1,2-Dichloroethane-d4	7.55	551	54529	49.30	UG/L	100
24)	*1,4-Difluorobenzene	8.12	608	154949	50.00	UG/L	100
26)	Benzene	7.61	557	5943	2.15	UG/L	100
33)	Toluene-d8	10.26	824	137187	52.66	UG/L	100
34)	Toluene	10.36	834	18288	6.66	UG/L	98
39)	*Chlorobenzene-d5	12.59	1059	121443	50.00	UG/L	100
43)	Ethylbenzene	12.82	1082	5766	1.64	UG/L	85
44)	m&p-Xylenes	13.00	1101	13163	2.42	UG/L	99
45)	o-Xylene	13.70	1171	4577	1.67	UG/L	90
48)	Bromofluorobenzene	14.63	1265	62657	47.73	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2431::D3 Quant Output File: ^B2431::QT
Name: B0244
Misc: MW-1 BLDG 2567 .5mL

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940208 11:29

Operator ID: JEFF
Quant Time: 940208 16:34
Injected at: 940208 16:08

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80245	DILUTION FACTOR	1.00
CLIENT ID	MW-3 BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4963	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	43	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	4.4 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	7.0	5
Vinyl Acetate	ND	5	m&p-Xylenes	45	5
2-Butanone	ND	10	o-Xylene	20	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	19	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	9.1 J	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.4	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	101	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-3

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: B0245

Sample w : 5 (g/mL) ml

Lab File ID: >A4963

Level: LOW

Date Received: 02/03/94

% Moisture: 1...

Date Analyzed 02/07/94

Column: CAP

Dilution Factor: 1

Number TICs Found 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	611143	Benzene, ethylmethyl- Isomer (9CI)	19.58	6
2	108678	Benzene, trimethyl- Isomer (9CI)	20.44	11
3	620144	Benzene, ethylmethyl- Isomer (9CI)	21.23	3
4	496117	1H-Indene, 2,3-dihydro- (9CI)	21.63	14
5	812157	Disilane, pentamethyl- (8CI9CI)	22.69	3

QUANT REPORT

Operator ID: JEFF
Output File: ^A4963::QT
Data File: >A4963::D2
Name: B0245
Misc: MW-3 BLDG 2567

Quant Rev: 6 Quant Time: 940207 21:05
Injected at: 940207 20:36
Dilution Factor: 1.00000

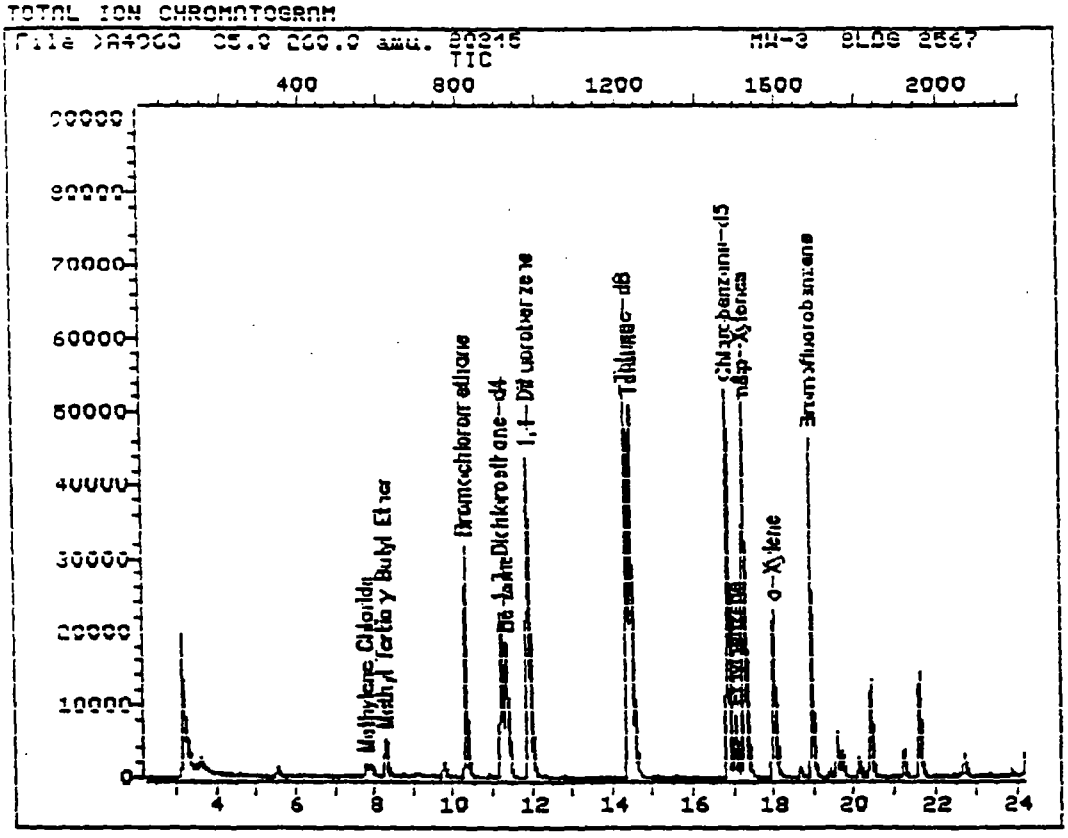
5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	10.31	807	22293	50.00	UG/L	100
1)	Methylene Chloride	7.80	555	2948	4.44	UG/L	73
16)	Methyl Tertiary Butyl Ether	8.29	604	13611	9.07	UG/L	100
2)	1,2-Dichloroethane-d4	11.23	900	40192	49.69	UG/L	100
2)	*1,4-Difluorobenzene	11.92	969	103848	50.00	UG/L	100
26)	Benzene	11.35	912	39450	19.29	UG/L	100
33)	Toluene-d8	14.36	1215	102638	50.74	UG/L	100
3)	Toluene	14.47	1226	91685	43.03	UG/L	99
3)	*Chlorobenzene-d5	16.85	1465	85691	50.00	UG/L	100
43)	Ethylbenzene	17.06	1487	18119	6.96	UG/L	83
4)	m&p-Xylenes	17.26	1507	89745	45.19	UG/L	93
4)	o-Xylene	18.00	1581	40037	20.24	UG/L	94
48)	Bromofluorobenzene	18.94	1676	44477	50.61	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A4963::D2 Quant Output File: ^A4963::QT
Name: 80245
Misc: MW-3 BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

Operator ID: JEFF
Quant Time: 940207 21:05
Injected at: 940207 20:36

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80246	DILUTION FACTOR	1.00
CLIENT ID	FIELD BLANK BLDG 2567	COMMENTS	HNU NA
DATA FILE	>A4956	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	12	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	7.3	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.3	76 - 114	OK
Toluene-d8	102	88 - 110	OK
Bromofluorobenzene	97.9	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD BLANK

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: 80246

Sample wt/vol: 5 (g/mL) ml Lab File ID: >A4956

Level: (low/med) LOW Date Received: NA

% Moisture: NA Date Analyzed: 02/07/94

Column: DB-624 Dilution Factor: 5

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

Operator ID: JEFF
Output File: ^A4956::QT
Data File: >A4956::D2
Name: B0246
Misc: FIELD BLANK BLDG 2567

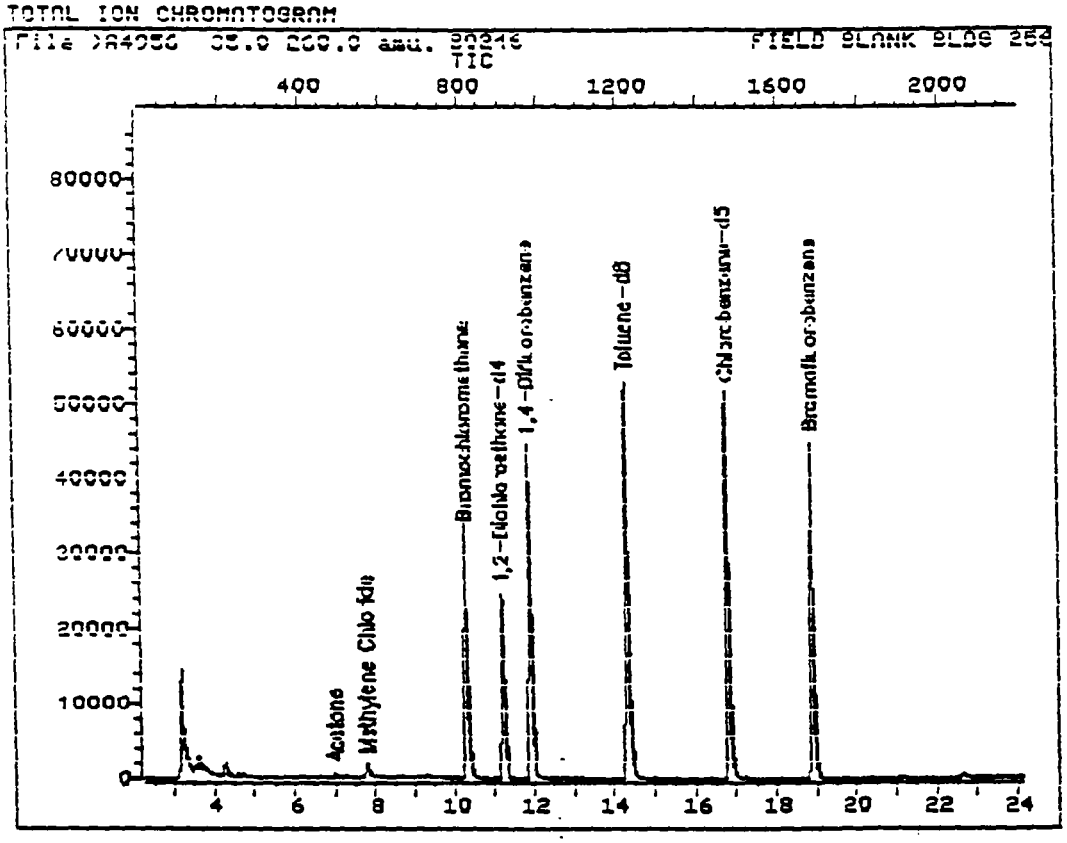
Quant Rev: 6 Quant Time: 940207 17:26
Injected at: 940207 16:58
Dilution Factor: 1.00000
5mL

ID File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.28	804	23953	50.00	UG/L	100
)	Acetone	6.98	472	3251	11.56	UG/L	82
13)	Methylene Chloride	7.76	551	5193	7.29	UG/L	68
23)	1,2-Dichloroethane-d4	11.18	895	43143	49.64	UG/L	100
2)	*1,4-Difluorobenzene	11.88	965	103052	50.00	UG/L	100
3)	Toluene-d8	14.32	1211	101926	50.78	UG/L	100
35)	*Chlorobenzene-d5	16.81	1461	84588	50.00	UG/L	100
4)	Bromofluorobenzene	18.90	1672	42456	48.94	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A4956::D2 Quant Output File: ^A4956::QT
Name: 80246
Misc: FIELD BLANK BLDG 2567 5mL

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

Operator ID: JEFF
Quant Time: 940207 17:26
Injected at: 940207 16:58

Q C RESULTS

ICP Batch # _____

GFAA Batch # 94-19

Hg Batch # _____

21st Century Environmental

Aqueous [X]

Solid [ ]

QUALITY CONTROL DATA

ELEMENT	MDL (ppm)	PREP BLK	LCS (% rec)	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKE AMT. (ppm)	SPIKE (% rec)
Aluminum								
Antimony								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Magnesium								
Manganese								
Nickel								
Silver								
Sodium								
Vanadium								
Zinc								
Arsenic								
Lead	.003	N.D.	105	.002	.005	86	.020	100
Selenium								
Thallium								
Mercury								
Potassium								

Comments: _____

REDUCED DELIVERABLES FORM
INITIAL AND CONTINUING CALIBRATION STDS

DATE: 2-7-94

METALS	TRUE CONC. (mg/L)	ICV FOUND (mg/L)	%R	TRUE (mg/L)	CCV FOUND (mg/L)	%R	FOUND (mg/L)	%R
ARSENIC	0.020	_____	____	0.020	_____	____	_____	____
LEAD	0.020	.021	105%	0.020	.021	105%	.021	105%
SELENIUM	0.020	_____	____	0.020	_____	____	_____	____
THALLIUM	0.020	_____	____	0.020	_____	____	_____	____

NOTE: ALL CHECK STDS MUST BE WITHIN 10% OF TRUE CONCENTION.
MERCURY MUST BE WITHIN 20% OF TRUE CONCENTION.

REDUCED DELIVERABLES FORM
INITIAL AND CONTINUING CALIBRATION STDS

DATE: 2-7-94

METALS	TRUE CONC. (mg/L)	ICV FOUND (mg/L)	%R	TRUE (mg/L)	CCV FOUND (mg/L)	%R	FOUND (mg/L)	%R
ARSENIC	0.02	_____	____	0.020	_____	____	_____	____
LEAD	0.02	_____	____	0.020	.022	110%	.022	110%
SELENIUM	0.02	_____	____	0.020	_____	____	_____	____
THALLIUM	0.02	_____	____	0.020	_____	____	_____	____

NOTE: ALL CHECK STDS MUST BE WITHIN 10% OF TRUE CONCENTION.
MERCURY MUST BE WITHIN 20% OF TRUE CONCENTION.

REDUCED DELIVERABLES FORM
INITIAL AND CONTINUING CALIBRATION STDS

DATE: 2-7-94

METALS	TRUE CONC. (mg/L)	ICV FOUND (mg/L)	%R	TRUE (mg/L)	CCV FOUND (mg/L)	%R	FOUND (mg/L)	%R
ARSENIC	0.02			0.020				
LEAD	0.02			0.020	.022	110%		
SELENIUM	0.02			0.020				
THALLIUM	0.02			0.020				

NOTE: ALL CHECK STDS MUST BE WITHIN 10% OF TRUE CONCENTION.
MERCURY MUST BE WITHIN 20% OF TRUE CONCENTION.

21st Century Environmental

REDUCED DELIVERABLES

METALS
(BLANKS)

DATE: 2-7-94 INSTRUMENT ID: PE5100Z

ELEMENT	MDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5
ARSENIC	0.005						
SELENIUM	0.005						
THALLIUM	0.01						
LEAD	0.003	ND	ND	ND	ND	ND	ND
MERCURY	.0002						
POTASSIUM	0.50						

REDUCED DELIVERABLES FORM
INITIAL AND CONTINUING CALIBRATION STDS

DATE: 2-10-94

METALS	TRUE CONC. (mg/L)	ICV FOUND (mg/L)	%R	TRUE (mg/L)	CCV FOUND (mg/L)	%R	FOUND (mg/L)	%R
ARSENIC	0.020	_____	____	0.020	_____	____	_____	____
LEAD	0.020	.020	100%	0.020	.022	110%	_____	____
SELENIUM	0.020	_____	____	0.020	_____	____	_____	____
THALLIUM	0.020	_____	____	0.020	_____	____	_____	____

NOTE: ALL CHECK STDS MUST BE WITHIN 10% OF TRUE CONCENTION.
MERCURY MUST BE WITHIN 20% OF TRUE CONCENTION.

21st Century Environmental

REDUCED DELIVERABLES

METALS
(BLANKS)

DATE: 2-10-94 INSTRUMENT ID: PE5100Z

ELEMENT	MDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5
ARSENIC	0.005						
SELENIUM	0.005						
THALLIUM	0.01						
LEAD	0.003	ND	ND				
MERCURY	.0002						
POTASSIUM	0.50						

21st Century Environmental Inc
WATER VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	96	101	96	0
B0241	101	102	97	0
B0246	99	102	98	0
B0242	99	102	102	0
B0243	101	102	101	0
B0245	99	101	101	0
BLANK	98	101	97	0
B0244	99	105	95	0
B0279MS	102	102	95	0
B0279MSD	98	103	96	0
B0220MS	106	101	100	0
B0220MSD	107	100	98	0

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

Column used to flag surrogate recovery values

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name:21ST CENTURY ENVIRONMENTAL Contract:N/A

Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

rix Spike - EPA Sample No.: 80220

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
.1-Dichloroethene	50.00	ND	35.6	71	61-145
richloroethene	50.00	ND	45.9	92	71-120
enzene	50.00	ND	47.2	94	76-127
oluene	50.00	ND	47.5	95	76-125
hlorobenzene	50.00	ND	51.1	102	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
,1-Dichloroethene	50.00	35.1	70	1	14	61-145
richloroethene	50.00	45.1	90	2	14	71-120
enzene	50.00	46.0	92	2	17	76-127
oluene	50.00	47.1	94	<1	12	76-125
hlorobenzene	50.00	51.6	103	<1	13	75-130

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

alues outside of qc limits

0 out of 5 outside limits
e Recovery: 0 out of 10 outside limits

ENTS: _____

_____

QUANT REPORT

Operator ID: MANAGER
Output File: ^A4905::QT
Data File: >A4905::D5
Name: B0220MS
Misc: MW-8

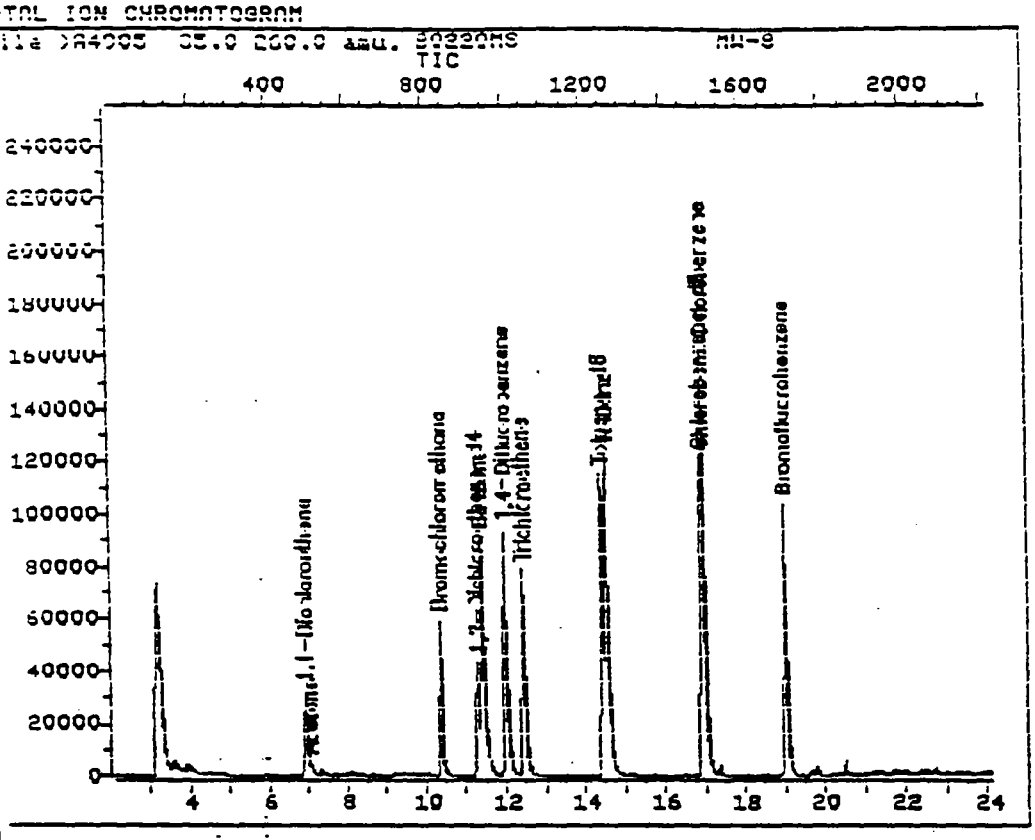
Quant Rev: 6 Quant Time: 940203 20:42
Injected at: 940203 20:13
Dilution Factor: 1.00000
5ml

) File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940203 13:20

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	10.35	829	41595	50.00	UG/L	100
)	Acetone	7.02	494	7121	16.90	UG/L	89
10)	1,1-Dichloroethene	6.90	482	63338	35.60	UG/L	100
)	1,2-Dichloroethane-d4	11.29	923	77026	53.13	UG/L	100
)	*1,4-Difluorobenzene	11.98	993	215681	50.00	UG/L	100
26)	Benzene	11.39	934	214811	47.22	UG/L	100
27)	Trichloroethene	12.45	1040	73660	45.91	UG/L	88
3)	Toluene-d8	14.44	1240	217131	50.46	UG/L	100
34)	Toluene	14.56	1252	231983	47.55	UG/L	97
35)	*Chlorobenzene-d5	16.91	1489	185962	50.00	UG/L	100
4)	Chlorobenzene	16.96	1494	183798	51.14	UG/L	96
4)	Bromofluorobenzene	19.00	1699	102826	49.78	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >A4905::D5 Quant Output File: ^A4905::QT
Name: 80220MS
Misc: MW-8 5ml

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940203 13:20

Operator ID: MANAGER
Quant Time: 940203 20:42
Injected at: 940203 20:13

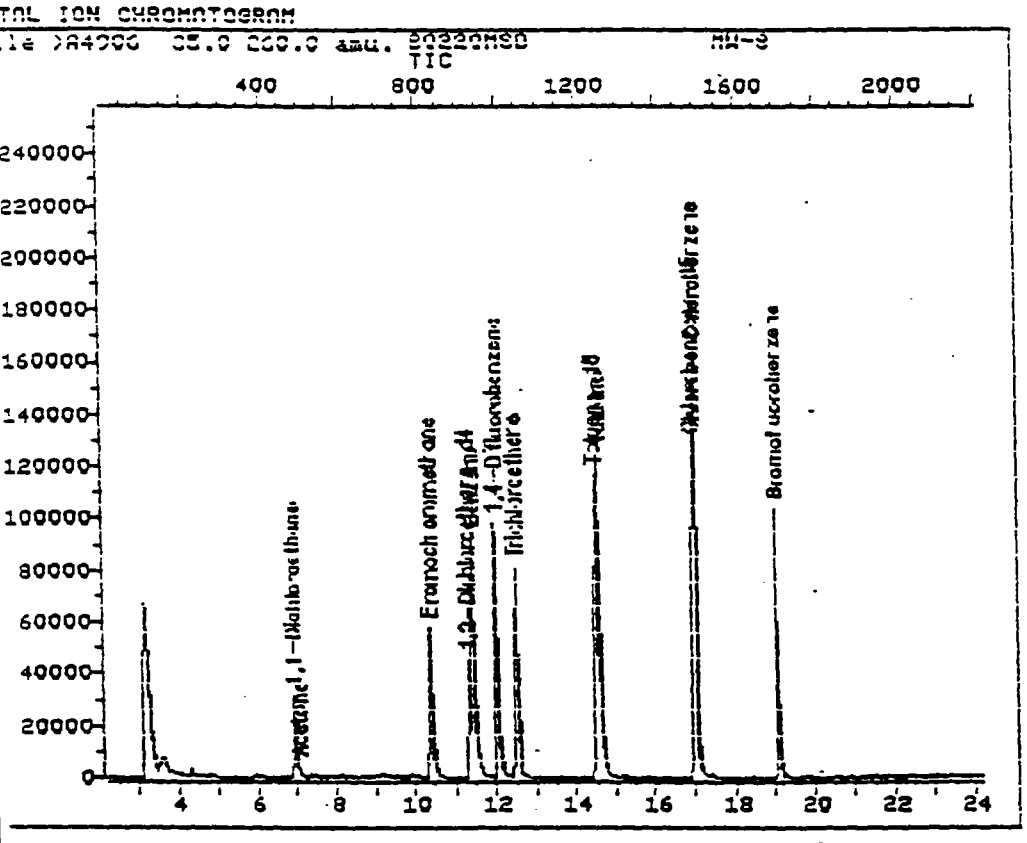
QUANT REPORT

erator ID: MANAGER Quant Rev: 6 Quant Time: 940203 21:13
Output File: ^A4906::QT Injected at: 940203 20:45
ta File: >A4906::05 Dilution Factor: 1.00000
ne: 80220MSD
isc: MW-8 5ml

File: ID0127::M1
tle: USEPA 624 VOLATILES
Last Calibration: 940203 13:20

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	10.38	821	41204	50.00	UG/L	100
9)	Acetone	7.04	484	7634	18.29	UG/L	85
10)	1,1-Dichloroethene	6.91	471	61780	35.06	UG/L	100
23)	1,2-Dichloroethane-d4	11.31	914	77118	53.69	UG/L	100
24	*1,4-Difluorobenzene	12.01	985	223102	50.00	UG/L	100
26)	Benzene	11.44	927	216437	46.00	UG/L	100
27)	Trichloroethene	12.48	1032	74791	45.07	UG/L	84
33)	Toluene-d8	14.47	1232	223408	50.19	UG/L	100
34	Toluene	14.59	1244	237647	47.09	UG/L	98
35)	*Chlorobenzene-d5	16.95	1482	189720	50.00	UG/L	100
42)	Chlorobenzene	17.00	1487	189348	51.64	UG/L	96
46	Bromofluorobenzene	19.04	1692	103514	49.12	UG/L	100

* Compound is ISTD



Data File: >A4906::05 Quant Output File: ^A4906::QT
Name: 80220MSD
Misc: MW-8 5ml

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940203 13:20

Operator ID: MANAGER
Quant Time: 940203 21:13
Injected at: 940203 20:45

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Name: 21ST CENTURY ENVIRONMENTAL Contract: N/A

Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix Spike - EPA Sample No.: 80279

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50.00	ND	31.2	62	61-145
Trichloroethene	50.00	ND	36.7	73	71-120
Benzene	50.00	ND	39.6	79	76-127
Toluene	50.00	ND	43.9	88	76-125
Chlorobenzene	50.00	ND	46.6	93	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	30.4	61	2	14	61-145
Trichloroethene	50.00	37.9	76	4	14	71-120
Benzene	50.00	43.1	86	6	17	76-127
Toluene	50.00	47.9	96	9	12	76-125
Chlorobenzene	50.00	50.9	102	9	13	75-130

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

Values outside of qc limits

RPD: 0 out of 5 outside limits
Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

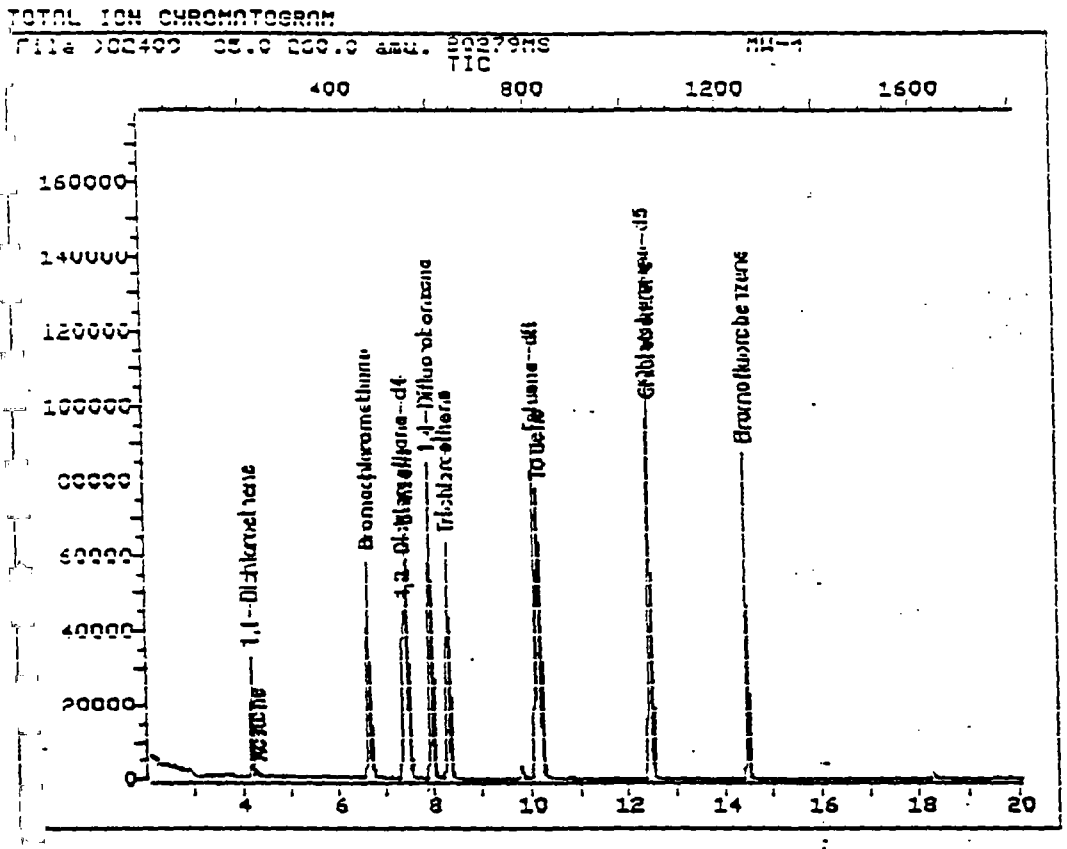
QUANT REPORT

etor ID: MANAGER Quant Rev: 6 Quant Time: 940207 19:21
ut File: ^82409::QT Injected at: 940207 18:55
File: >82409::03 Dilution Factor: 1.00000
: 80279MS
: MW-4 5ml

ile: ID0401::SC
e: USEPA 624 VOLATILES
Calibration: 940207 16:03

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	6.64	458	32719M	50.00	UG/L	100
Acetone	4.28	219	3571	10.12	UG/L	92
1,1-Dichloroethene	4.16	207	35367	31.23	UG/L	100
1,2-Dichloroethane-d4	7.40	534	53338	50.92	UG/L	100
*1,4-Difluorobenzene	7.95	590	140851	50.00	UG/L	100
Benzene	7.46	540	107167	39.62	UG/L	100
Trichloroethene	8.32	627	41268	36.73	UG/L	83
Toluene-d8	10.08	805	131163	50.81	UG/L	100
Toluene	10.18	815	122000	43.89	UG/L	96
*Chlorobenzene-d5	12.42	1041	114759	50.00	UG/L	100
Chlorobenzene	12.47	1046	103722	46.61	UG/L	94
Bromofluorobenzene	14.46	1246	61529	47.75	UG/L	100

ompound is ISTD



Data File: >82409::03 Quant Output File: ^82409::QT
Name: 80279MS
Misc: MW-4 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940207 16:03

Operator ID: MANAGER
Quant Time: 940207 19:21
Injected at: 940207 18:55

QUANT REPORT

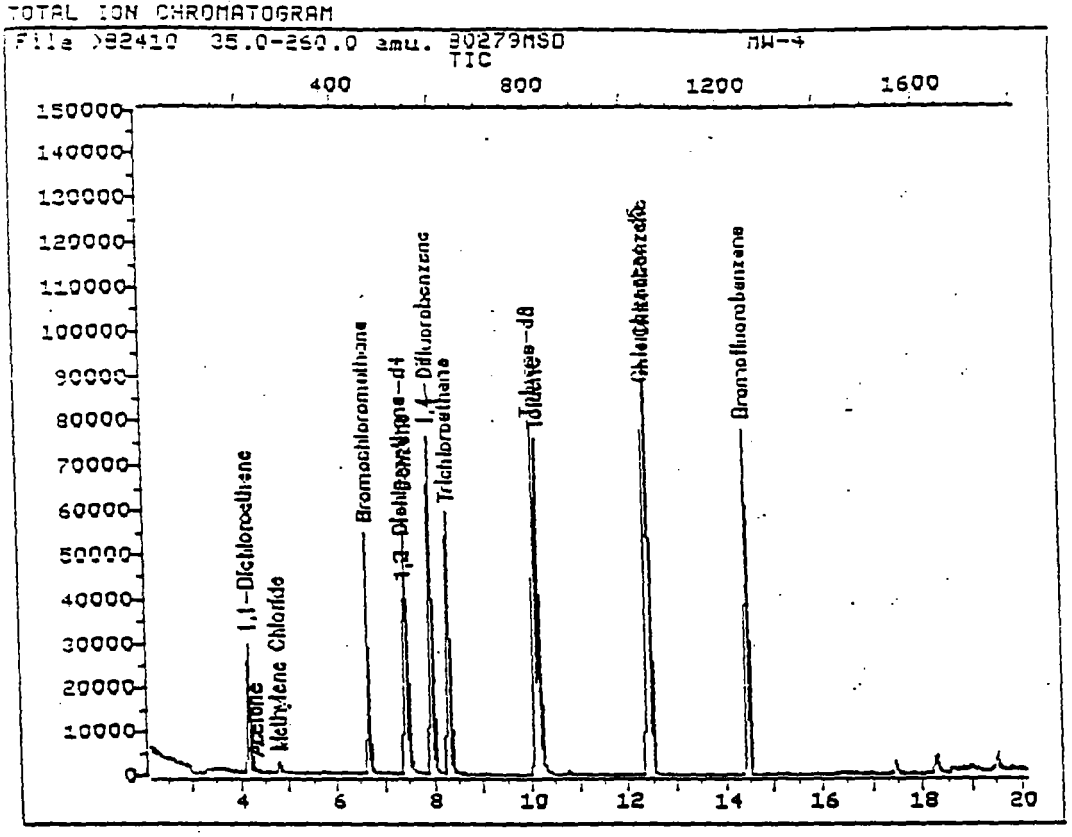
erator ID: MANAGER Quant Rev: 6 Quant Time: 940207 19:51
tput File: ^82410::QT Injected at: 940207 19:26
ta File: >82410::03 Dilution Factor: 1.00000
me: 80279MSD
sc: MW-4 5ml

File: ID0401::SC
tle: USEPA 624 VOLATILES
est Calibration: 940207 16:03

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.64	453	30491	50.00	UG/L	100
2)	Acetone	4.29	215	2896	8.81	UG/L	97
3)	1,1-Dichloroethene	4.15	201	32089	30.40	UG/L	100
5)	Methylene Chloride	4.77	264	4075	5.25	UG/L	76
5)	1,2-Dichloroethane-d4	7.40	529	47898	49.07	UG/L	100
4)	*1,4-Difluorobenzene	7.95	585	127224	50.00	UG/L	100
6)	Benzene	7.46	535	105199	43.06	UG/L	100
7)	Trichloroethene	8.32	622	38507	37.94	UG/L	77
5)	Toluene-d8	10.07	799	119904	51.43	UG/L	100
4)	Toluene	10.18	810	120357	47.94	UG/L	95
5)	*Chlorobenzene-d5	12.39	1033	103928	50.00	UG/L	100
2)	Chlorobenzene	12.44	1038	102605	50.91	UG/L	93
3)	Bromofluorobenzene	14.44	1239	55845	47.85	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >82410::D3 Quant Output File: ^82410::QT
Name: 80279MSD.
Misc: MW-4 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940207 16:03

Operator ID: MANAGER
Quant Time: 940207 19:51
Injected at: 940207 19:26

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

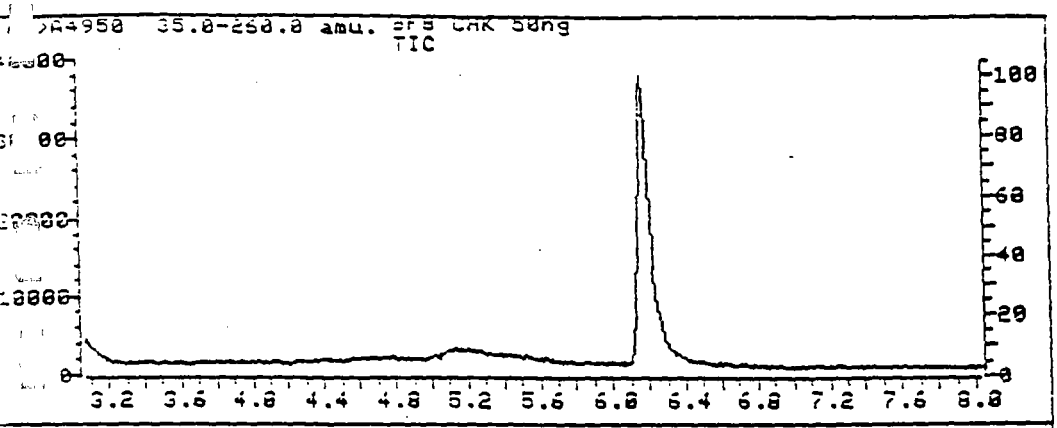
DATE AND TIME OF INJECTION: 2/07/94 12:50
INSTRUMENT ID: 5995

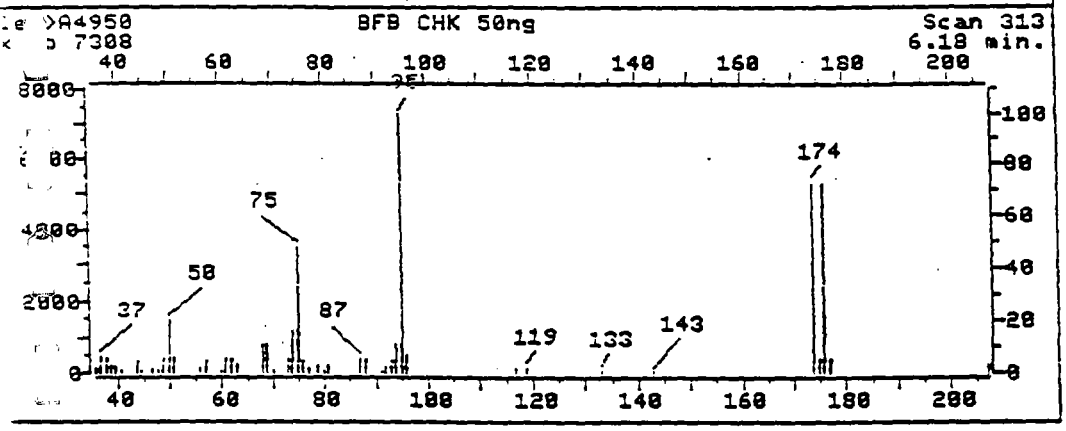
DATA RELEASE AUTHORIZED BY _____.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	19.95	19.95	Ok
75	30-60% of mass 95	47.55	47.55	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.34	6.34	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	72.97	72.97	Ok
175	5-9% of mass 174	4.93	6.75	Ok
176	95-101% of mass 174	72.92	99.92	Ok
177	5-9% of mass 176	5.17	7.09	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID	LAB ID		DATE TIME
>A4950::021	BFB CHK 50ng		2/07/94 12:50
>A4951::021	HSL CAL CHK 50ppb		2/07/94 13:32
>A4952::021	BLANK		2/07/94 14:50
>A4953::021	B0234		2/07/94 15:24
>A4954::021	B0235		2/07/94 15:55
>A4955::021	B0241		2/07/94 16:26
>A4956::021	B0246		2/07/94 16:58
>A4957::021	B0225		2/07/94 17:29
>A4958::021	B0226		2/07/94 18:01
>A4959::021	B0231		2/07/94 18:31
>A4960::021	B0232		2/07/94 19:03
>A4961::021	B0242		2/07/94 19:34
>A4962::021	B0243		2/07/94 20:05
>A4963::021	B0245		2/07/94 20:36
>A4964::021	B0227		2/07/94 21:07
>A4965::021	B0228		2/07/94 21:39
>A4966::021	B0233		2/07/94 22:09
>A4968::021	B0224		2/07/94 23:12
>A4969::021	B0229		2/07/94 23:43
>A4970::021	B0230		2/08/94 0:14





>A4950 BFB CHK 50ng
13 NRM

File: >A4950 Scan #: 313 Retn. time: 6.18

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.85	1.450	48.85	4.885	68.90	11.111	80.80	3.640	116.85	1.628
36.85	5.884	49.85	19.951	69.90	1.149	86.90	5.118	118.95	1.916
37.85	5.159	50.95	5.610	72.90	4.912	87.90	4.817	132.95	1.177
38.85	2.997	55.85	1.861	73.90	16.024	90.90	1.314	142.80	.657
39.85	2.285	56.85	3.872	74.90	47.551	91.90	2.833	173.85	72.979
40.85	.958	59.80	1.040	75.90	3.886	92.90	4.338	174.85	4.926
43.85	4.584	60.80	5.131	76.90	1.669	93.90	11.043	175.85	72.920
44.85	1.286	61.90	4.981	78.80	3.079	94.90	100.000	176.85	5.172
46.85	1.519	62.90	3.654	79.70	.999	95.90	6.336	206.95	3.544
47.85	.753	67.90	11.125						

RT: FF

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

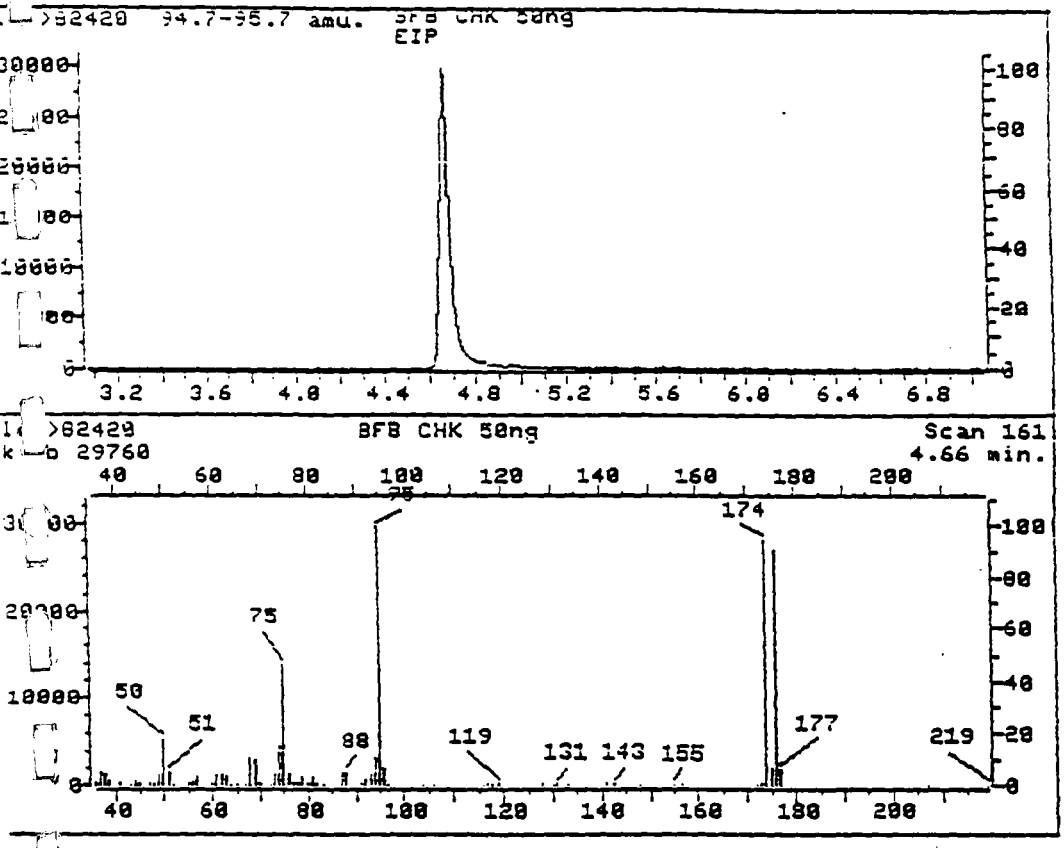
DATE AND TIME OF INJECTION: 2/08/94 10:05
INSTRUMENT ID: 5995

DATA RELEASE AUTHORIZED BY James Dobrowolski.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	17.53	17.53	Ok
75	30-60% of mass 95	46.60	46.60	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.60	6.60	Ok
173	Less than 2% of mass 174	.72	.76	Ok
174	Greater than 50% of mass 95	94.54	94.54	Ok
175	5-9% of mass 174	6.91	7.31	Ok
176	95-101% of mass 174	91.29	96.56	Ok
177	5-9% of mass 176	5.91	6.47	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

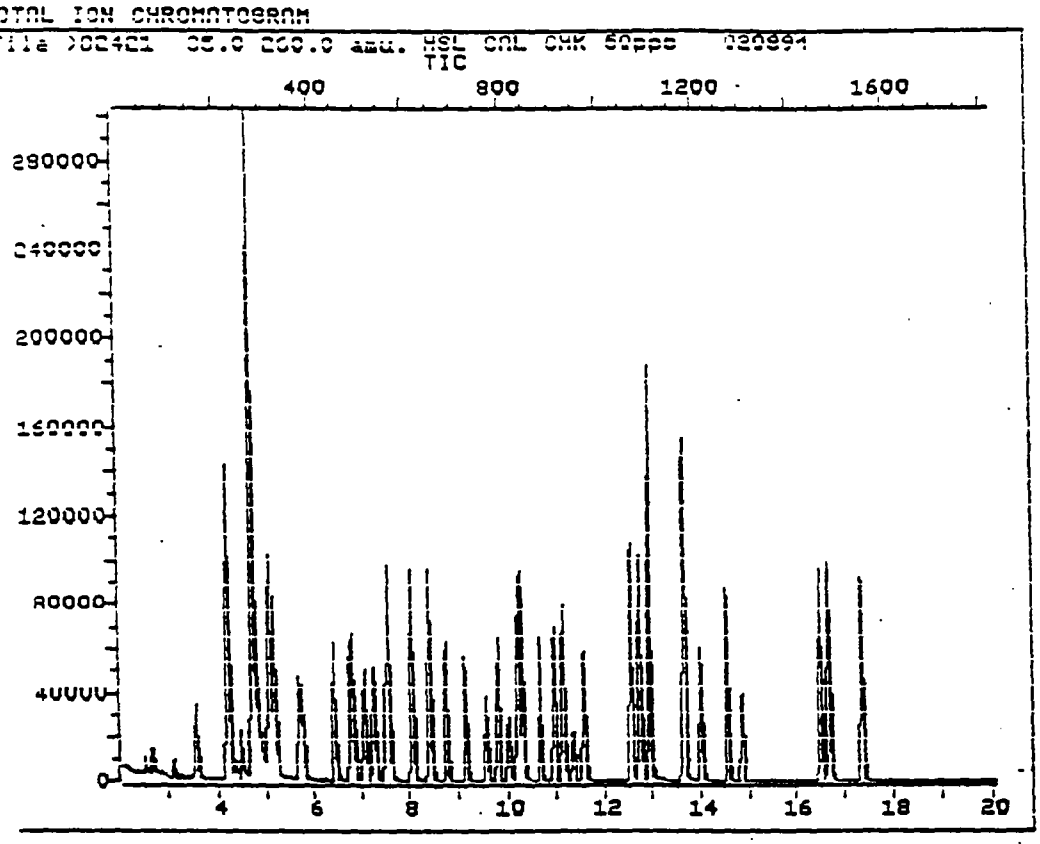
SAMPLE ID		LAB ID		DATE TIME
I>82420::03I		BFB CHK 50ng		2/08/94 10:05
I>82421::03I		HSL CAL CHK 50ppb		2/08/94 10:45
I>82422::03I		BLANK		2/08/94 11:30
I>82423::03I		80285		2/08/94 12:06
I>82424::03I		80286		2/08/94 12:36
I>82425::03I		80278		2/08/94 13:07
I>82426::03I		80279		2/08/94 13:37
I>82427::03I		80276		2/08/94 14:07
I>82428::03I		80275		2/08/94 14:37
I>82430::03I		80284		2/08/94 15:38
I>82431::03I		80244		2/08/94 16:08
I>82432::03I		80270		2/08/94 16:38
I>82433::03I		80268		2/08/94 17:09
I>82434::03I		80269		2/08/94 17:39
I>82436::03I		80267		2/08/94 18:39
I>82437::03I		80223		2/08/94 19:09
I>82438::03I		80247		2/08/94 19:39



>B2420 BFB CHK 50ng
161 NRM

File: >B2420 Scan #: 161 Retn. time: 4.66

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.005	56.00	1.452	74.00	14.748	93.00	3.814	133.15	.316
38.95	4.761	57.00	3.306	75.00	46.603	94.00	10.917	140.95	.645
39.05	3.945	59.90	.931	76.00	4.143	95.00	100.000	142.85	.685
38.95	1.794	61.00	4.412	77.00	1.122	96.00	6.603	147.95	.249
41.05	.548	62.10	3.921	78.00	.675	96.90	.269	154.95	.333
41.10	.370	63.00	3.078	78.90	3.367	103.90	.390	156.85	.178
44.00	1.835	64.00	.339	79.90	.927	105.90	.460	171.95	.383
45.00	1.310	65.00	.262	80.90	3.394	115.90	.397	173.05	.719
47.10	1.223	67.00	.366	81.90	.719	116.90	.699	173.95	94.543
48.00	.558	68.00	10.601	83.00	.155	117.90	.306	174.95	6.912
49.10	3.972	69.00	10.356	87.00	4.936	118.90	.786	175.95	91.290
50.00	17.527	70.00	.911	88.00	5.276	127.95	.531	176.95	5.911
51.10	5.316	72.00	.457	91.00	.521	129.95	.380	206.95	.397
52.00	.228	73.00	4.311	92.00	2.527	130.95	.625	219.00	.420
55.00	.565								



Data File: >B2421::D3 Quant Output File: ^B2421::QT
Name: HSL CAL CHK 50ppb
Misc: 020894

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940207 16:03

Operator ID: JEFF
Quant Time: 940208 11:14
Injected at: 940208 10:45

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

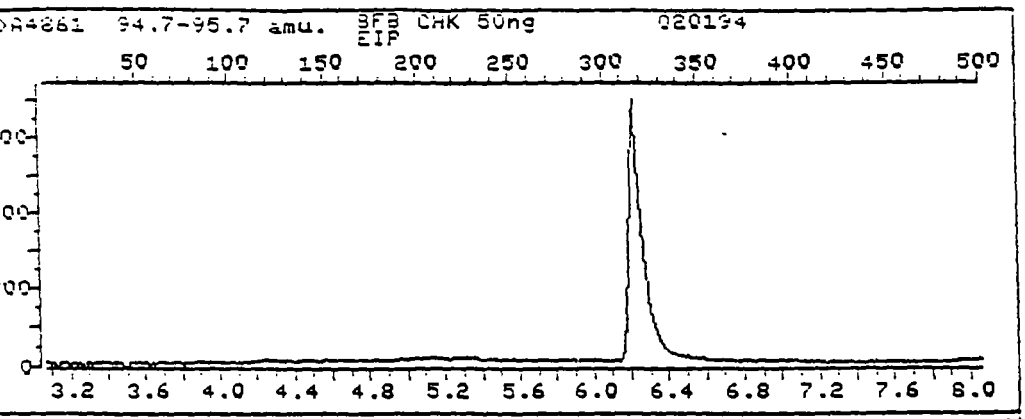
DATE AND TIME OF INJECTION: 2/01/94 10:27
INSTRUMENT ID: 5995

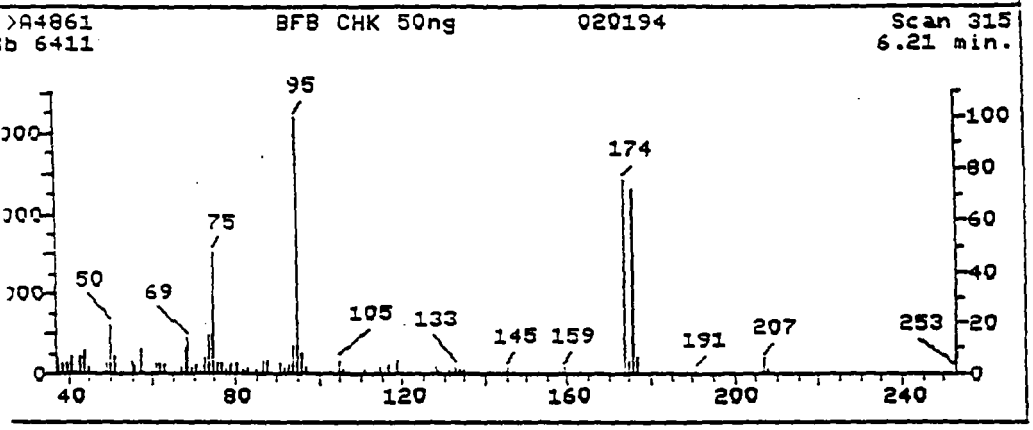
DATA RELEASE AUTHORIZED BY _____.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	19.12	19.12	Ok
75	30-60% of mass 95	47.22	47.22	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.66	7.66	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	75.28	75.28	Ok
175	5-9% of mass 174	5.41	7.19	Ok
176	95-101% of mass 174	71.56	95.07	Ok
177	5-9% of mass 176	5.55	7.76	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE	TIME
I>A4861::05I		BFB CHK 50ng		2/01/94	10:27I
I>A4862::05I		HSL CAL CHK 50ppb		2/01/94	12:12I
I>A4863::05I		HSL CAL CHK 20ppb		2/01/94	13:20I
I>A4864::05I		HSL CAL CHK 100ppb		2/01/94	15:10I
I>A4865::05I		HSL CAL CHK 150ppb		2/01/94	16:34I
I>A4866::05I		HSL CAL STD 200ppb		2/01/94	17:15I
I>A4867::02I		BLANK		2/01/94	19:06I
I>A4868::02I		B0192		2/01/94	19:48I
I>A4869::02I		B0193		2/01/94	20:19I
I>A4870::02I		B0194		2/01/94	20:50I
I>A4871::02I		B0195		2/01/94	21:21I





361 BFB CHK 50ng 020194
315 NRM

:: >A4861 Scan #: 315 Retn. time: 6.21

'z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
85	5.350	57.05	9.219	75.90	3.931	96.00	7.659	140.90	1.217
85	5.584	57.90	.858	76.90	4.430	96.95	2.184	143.00	1.217
85	4.118	59.80	1.279	77.90	1.809	102.85	.936	145.00	2.465
85	4.399	60.80	4.523	78.90	3.135	104.95	5.241	146.90	1.295
95	7.113	61.80	4.243	80.80	3.962	105.95	1.513	159.10	2.465
85	1.326	62.90	3.806	81.90	1.341	110.95	1.341	173.85	75.277
95	6.395	67.00	2.215	83.00	2.808	114.95	2.449	174.85	5.413
85	9.312	67.90	10.186	85.00	2.012	116.95	3.026	175.85	71.564
85	2.496	68.90	13.882	86.90	5.335	118.95	4.742	176.85	5.553
85	3.822	69.90	2.948	87.90	4.991	127.95	2.371	190.95	.936
85	19.123	70.90	3.588	90.90	4.430	128.95	1.045	207.05	5.647
95	6.801	71.90	.983	91.90	2.480	131.05	2.106	207.95	1.373
85	1.248	72.90	5.771	92.90	3.744	132.95	2.698	208.95	.905
95	5.350	73.90	14.756	93.90	10.420	133.95	1.638	252.95	1.139
95	3.244	74.90	47.216	94.90	100.000	134.90	1.685		

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 02/07/94

Contractor: 21st Century Env. Time: 13:32

Contract No: Laboratory ID: >A4951

Instrument ID: Volatile Inst A Initial Calibration Date: 02/01/94

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

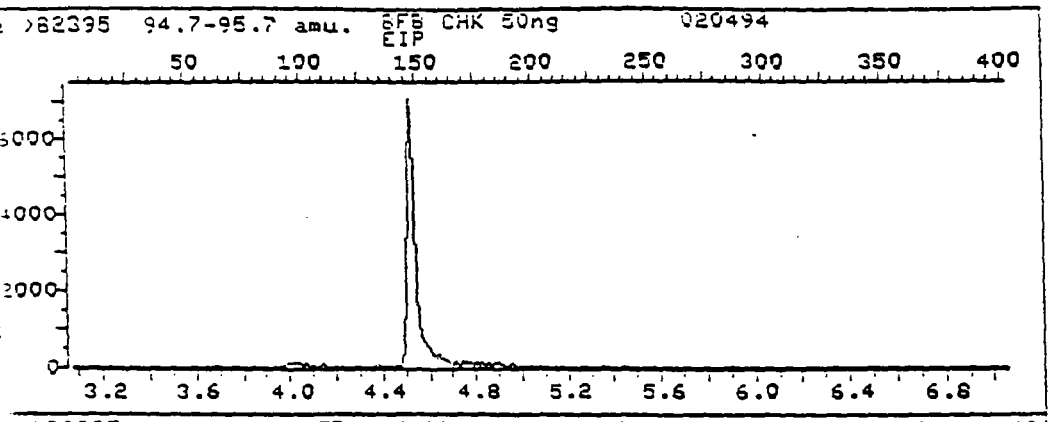
Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Chloromethane	.81965	.66335	19.07		**	
Bromomethane	.61599	.44116	28.38			
Vinyl Chloride	.99297	.78118	21.33	*		
Chloroethane	.53549	.38155	28.75			
Acrolein	.03871	.02308	40.39			(Conc=100.00)
1,1,2-Trichlorotrifluoroethane	2.45351	2.18215	11.06			
Trichlorofluoromethane	3.57228	2.98294	16.50			
Acetone	.68251	.58726	13.95			
1,1-Dichloroethene	2.18091	2.01905	7.42	*		
Carbon Disulfide	3.92194	2.42504	38.17			
Acrylonitrile	.52030	.44419	14.63			
Methylene Chloride	1.57168	1.48778	5.34			
1,2-Dichloroethene(trans)	2.03277	1.67549	17.58			
Tertiary Butyl Alcohol	1.35172	.16398	87.87			(Conc=100.00)
Methyl Tertiary Butyl Ether	3.27339	3.36456	2.79			
1,1-Dichloroethane	2.97706	2.11668	28.90		**	
Vinyl Acetate	4.39178	2.74241	37.56			
2-Butanone	1.09640	.90608	17.36			
Chloroform	3.07278	2.76509	10.01	*		
1,1,1-Trichloroethane	2.31509	2.15288	7.01			
Carbon Tetrachloride	1.93404	1.87742	2.93			
1,2-Dichloroethane-d4	1.89420	1.81418	4.22			(Conc=50.00)
1,2-Dichloroethane	.40158	.43457	8.22			
Benzene	1.01655	.98481	3.12			
Trichloroethene	.35103	.36450	3.84			
1,2-Dichloropropane	.36687	.35108	4.30	*		
Bromodichloromethane	.43934	.46425	5.67			
2-Chloroethylvinylether	.27500	.23818	13.39			
2-Hexanone	.29841	.25102	15.88			
trans-1,3-Dichloropropene	.56365	.54174	3.89			
Toluene-d8	1.02733	.97391	5.20			
Toluene	1.08628	1.02584	5.56	*		

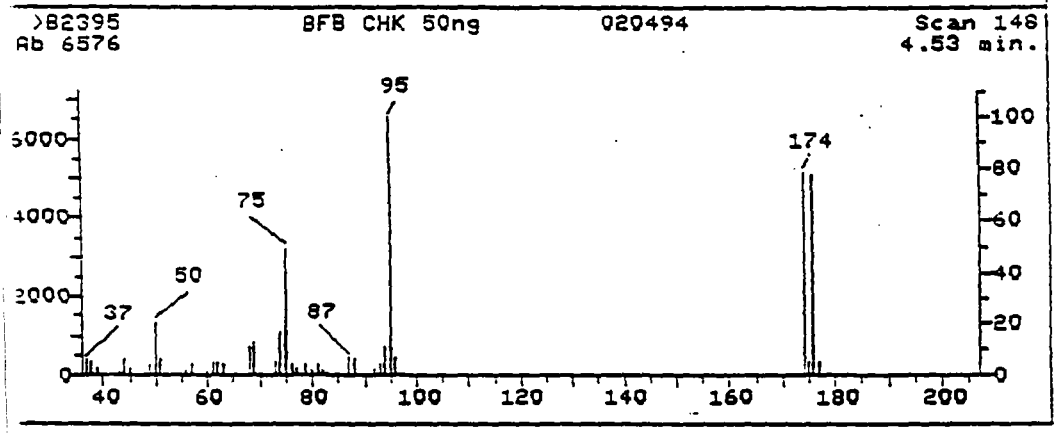
RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)





395 BFB CHK 50ng 020494
148 NRM

e: >82395 Scan #: 148 Retn. time: 4.53

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
.95	1.369	50.00	20.316	69.00	12.257	81.00	3.999	95.00	100.000
.05	5.794	51.00	5.900	70.00	1.171	81.90	1.369	96.00	6.904
.95	4.699	56.00	2.114	73.00	5.201	82.90	1.064	172.95	.745
.05	2.737	57.10	3.863	74.00	16.727	84.90	.943	173.95	78.863
.00	1.353	60.00	1.612	75.00	49.240	86.90	6.448	174.95	5.444
.00	5.642	61.00	5.292	76.10	4.060	88.00	5.505	175.95	77.646
.00	2.540	62.00	4.988	77.00	2.828	92.00	2.935	176.95	4.973
.10	1.186	63.00	3.939	78.90	3.999	93.00	3.969	206.95	2.053
.00	4.425	68.10	11.192	80.00	1.399	94.00	10.782		

Initial Calibration Data
HSL Compounds

se No: Instrument ID: Volatile Inst B

Contractor: 21ST Century Env Calibration Date: 02/06/94

ntract No:

Minimum $\overline{RF}$ for SPCC is .300 Maximum % RSD for CCC is 30%

Laboratory ID:	>82397	>82396	>82398	>82399	>82400					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Chloromethane	.43049	.56434	.57646	.73611	.62011	.372	.58550	18.795		**
Bromomethane	.21813	.27760	.29822	.41682	.30540	.460	.30323	23.798		
Vinyl Chloride	.64630	.84273	.79894	1.00659	.84961	.397	.82883	15.549	*	
Chloroethane	.17317	.24934	.32016	.38231	.28367	.479	.28173	27.740		
Acrolein	.02905	.03655	.03256	.03496	.03663	.617	.03395	9.429		(Conc=50.0,100.0,200.0,30
1,1,2-Trichlorotrifluoroethane	2.38018	2.59895	2.26632	3.05549	2.42100	.626	2.54439	12.173		
Trichlorofluromethane	3.19294	3.55136	3.09761	4.18557	2.47745	.607	3.30098	19.018		
Acetone	.69285	.59150	.47379	.52617	.57175	.648	.57121	14.310		
1,1-Dichloroethene	1.70130	2.02310	1.62857	1.98072	1.59504	.627	1.78575	11.289	*	
Carbon Disulfide	2.67884	1.92849	3.08227	4.27680	3.55527	.667	3.10434	28.551		
Methyl Tertiary Butyl Ether	-	.23489	.23551	.32996	-	.771	.26679	20.507		
Tertiary Butyl Alcohol	-	1.44129	1.54738	1.75261	-	.754	1.58043	10.014		(Conc=50.0,100.0,200.0,30
Acrylonitrile	.18032	.26053	.21725	.25924	.26881	.770	.23723	15.861		(Conc=50.0,100.0,200.0,30
Methylene Chloride	1.31857	1.48972	1.03005	1.30465	1.19899	.720	1.26840	13.335		
1,2-Dichloroethene(trans)	1.44798	1.80603	1.47505	1.91809	1.59718	.766	1.64886	12.518		
1,1-Dichloroethane	1.96971	2.31135	1.87882	2.55563	2.06952	.845	2.15701	12.756		**
Vinyl Acetate	2.24025	2.79845	2.36624	3.45697	2.63967	.855	2.70032	17.655		
2-Butanone	.93072	.81639	.78021	.97308	.90527	.962	.88113	9.127		
Chloroform	2.78116	3.18746	2.56276	2.90432	2.67415	1.015	2.82197	8.517	*	
1,1,1-Trichloroethane	2.10200	2.53522	1.46054	2.64526	2.23510	1.049	2.19562	21.218		
Carbon Tetrachloride	2.00266	2.36685	1.65877	2.71049	2.16978	1.080	2.18171	18.039		
1,2-Dichloroethane-d4	1.77429	1.91346	1.59443	2.12681	1.70789	1.115	1.82338	11.251		(Conc=50.0,50.0,50.0,50.0
1,2-Dichloroethane	.41410	.45376	.36869	.37089	.37705	.941	.39690	9.254		
Benzene	.85130	.94938	.76073	.80974	.77859	.935	.82995	9.048		
Trichloroethene	.32285	.35029	.31349	.33456	.35084	1.046	.33440	4.944		
1,2-Dichloropropane	.29107	.32440	.28357	.29343	.29415	1.089	.29733	5.283	*	
Bromodichloromethane	.39920	.49055	.42750	.43652	.45831	1.139	.44242	7.743		
2-Chloroethylvinylether	.21802	.25258	.22125	.22141	.22763	1.194	.22818	6.170		
2-Hexanone	.32003	.33174	.27909	.25671	.28901	1.418	.29532	10.342		
trans-1,3-Dichloropropene	.44759	.52922	.46011	.47625	.47564	1.222	.47776	6.516		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Initial Calibration Data
HSL Compounds

e No: _____ Instrument ID: Volatile Inst B

ractor: 21ST Century Env Calibration Date: 02/06/94

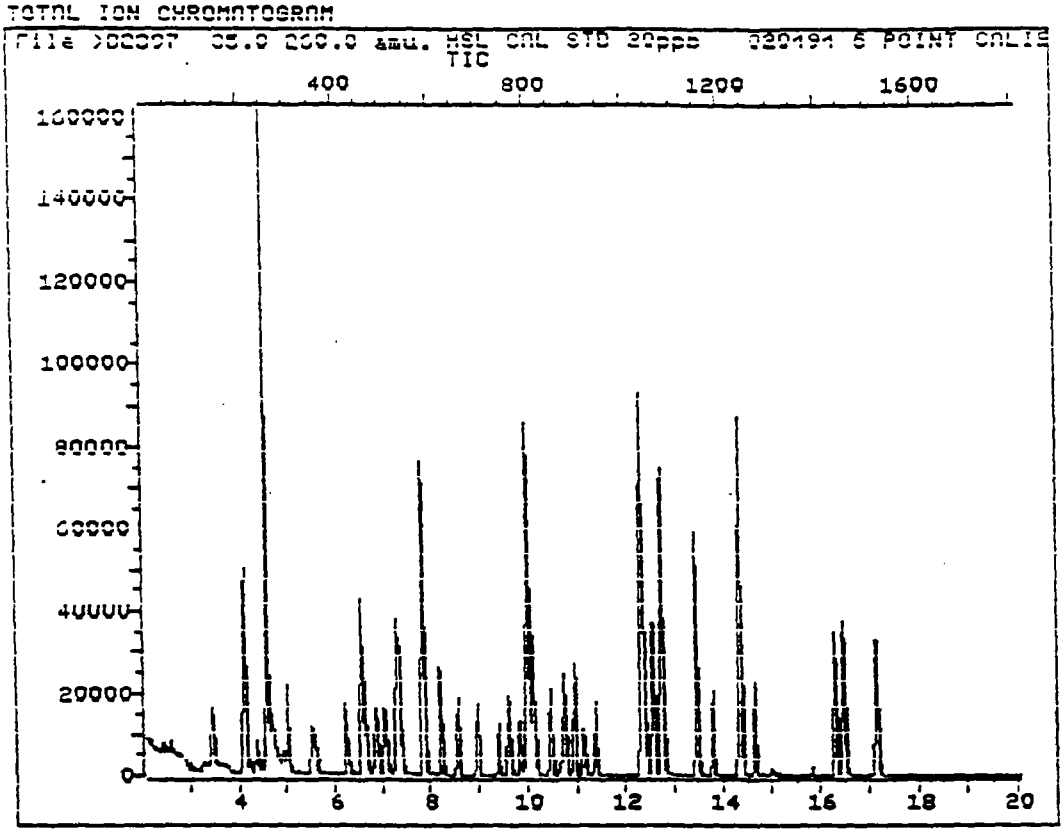
ract No: _____

Minimum $\overline{RF}$ for SPCC is .300 Maximum % RSD for CCC is 30%

Laboratory ID:	>82397	>82396	>82398	>82399	>82400					
	RF	RF	RF	RF	RF					
Compound	20.00	50.00	100.00	150.00	200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
uene-d8	.96797	.98481	.97099	.94537	.93106	1.272	.96004	2.241			(Conc=50.0,50.0,50.0,50.0
uene	.98384	1.08457	.88619	.92314	.87669	1.285	.95089	9.019	*		
-1,3-Dichloropropene	.51131	.55773	.49383	.54312	.56379	.848	.53396	5.667			
,2,2-Tetrachloroethane	.62137	.61665	.53563	.53018	.46935	1.186	.55464	11.591		**	
,2-Trichloroethane	.35157	.36713	.31737	.34939	.36227	.872	.34955	5.560			
ethyl-2-pentanone	.37674	.37279	.32219	.30906	.36018	.905	.34818	8.816			
rachloroethene	.41947	.44936	.38784	.42802	.42519	.888	.42198	5.257			
romochloromethane	.42356	.50542	.46354	.48779	.51465	.923	.47899	7.641			
robenzene	.89192	.92294	.77779	.85170	.83424	1.004	.85572	6.501		**	
ylbenzene	1.41693	1.47586	1.24202	1.33118	1.29901	1.018	1.35300	6.903	*		
-Xylenes	.89513	1.12942	.94820	.95805	.95610	1.034	.97738	9.088			(Conc=50.0,100.0,200.0,30
ylene	1.13157	1.14962	.96073	.98108	.99573	1.089	1.04375	8.576			
ene	.90887	.93506	.79361	.82172	.81394	1.092	.85464	7.371			
oform	.44564	.46168	.41525	.44556	.46960	1.118	.44755	4.656		**	
ofluorobenzene	.56159	.55700	.55928	.56112	.57900	1.164	.56360	1.561			(Conc=50.0,50.0,50.0,50.0
ichlorobenzene	.75153	.83497	.75646	.72045	.78757	1.324	.77020	5.625			
ichlorobenzene	.76424	.85972	.75646	.74592	.79665	1.335	.78460	5.872			
ichlorobenzene	.71144	.79113	.69527	.68460	.73010	1.389	.72251	5.818			

- Response Factor (Subscript is amount in UG/L)
- Average Relative Retention Time (RT Std/RT Istd)
- Average Response Factor
- Percent Relative Standard Deviation
- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

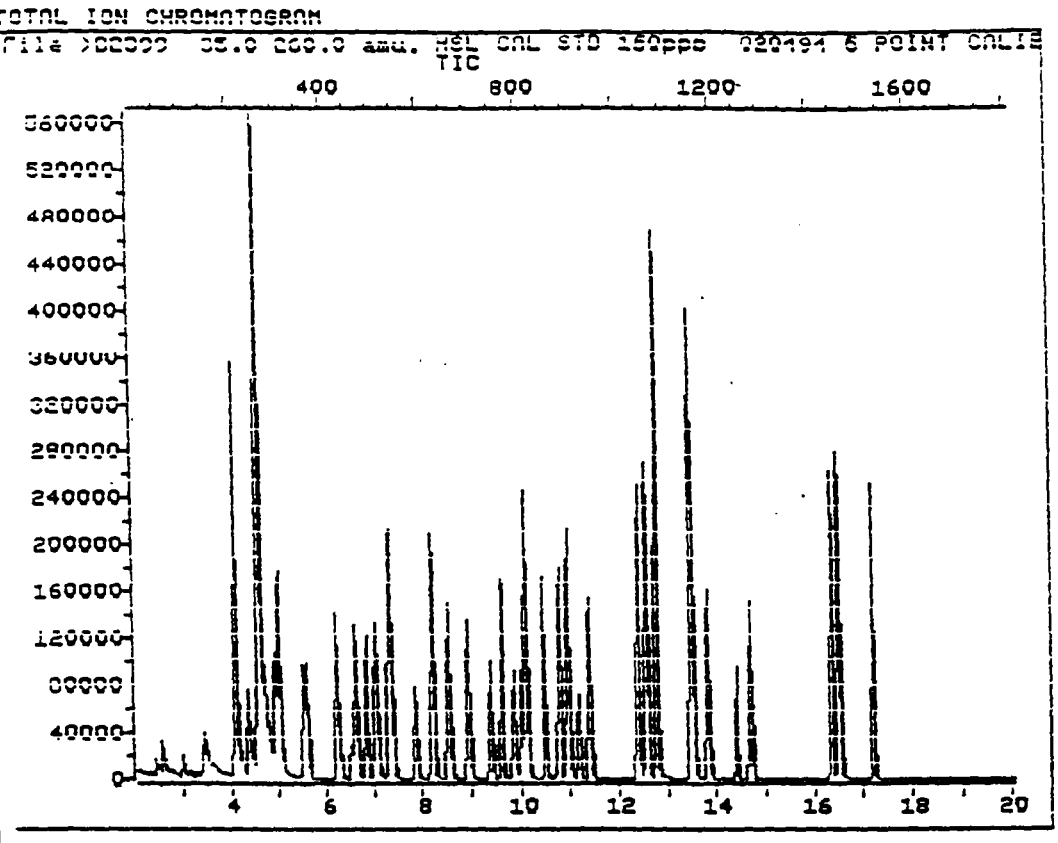
TOTAL ION CHROMATOGRAM



Data File: >B2397::D2 Quant Output File: ^B2397::QT
Name: HSL CAL STD 20ppb
Misc: 020494 5 POINT CALIBRATION CURVE

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940204 13:09

Operator ID: MANAGER
Quant Time: 940204 13:09
Injected at: 940204 11:53

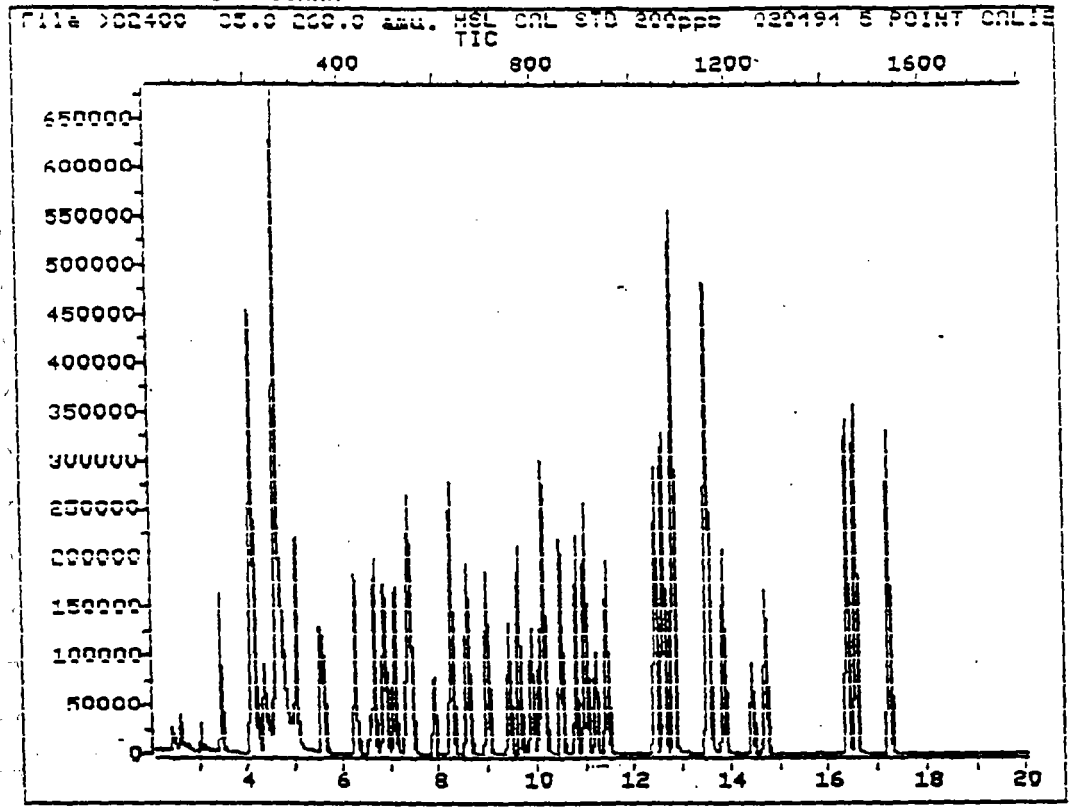


Data File: >B2399::D2 Quant Output File: ^B2399::QT
Name: HSL CAL STD 150ppb
Misc: 020494 5 POINT CALIBRATION CURVE

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940204 13:09

Operator ID: MANAGER
Quant Time: 940204 15:51
Injected at: 940204 15:18

TOTAL ION CHROMATOGRAM



Data File: >B2400::D2 Quant Output File: ^B2400::QT
Name: HSL CAL STD 200ppb
Misc: 020494 5 POINT CALIBRATION CURVE

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940204 13:09

Operator ID: MANAGER
Quant Time: 940204 16:24
Injected at: 940204 15:55

21st Century Environmental Inc.
VOLATILE INTERNAL STANDARD AREA SUMMARY

LAB ID FILE (STANDARD): >A4951 DATE ANALYZED: 02/07/94

INSTRUMENT ID: 5970 TIME ANALYZED: 13:32

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

	IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
12 HOUR STD	29663		10.15	132561		11.77	106447		16.71
UPPER LIMIT	59326			265122			212894		
LOWER LIMIT	14832			66280			53224		
	LAB SAMPLE No.								
1	BLANK		28465	10.07		129830	11.71	103512	16.68
2	80234		26523	10.16		116122	11.79	93495	16.73
3	80235		24439	10.17		111546	11.79	91274	16.74
4	80241		23787	10.19		105528	11.80	86467	16.74
5	80246		23953	10.28		103052	11.88	84588	16.81
6	80225		23360	10.28		100738	11.89	84279	16.81
7	80226		21823	10.26		100067	11.88	82936	16.82
8	80231		20705	10.20		95144	11.81	77805	16.74
9	80232		21458	10.24		98978	11.83	81414	16.75
10	80242		21660	10.25		98748	11.88	81552	16.82
11	80243		22036	10.22		101936	11.83	84488	16.75
12	80245		22293	10.31		103848	11.92	85691	16.85
13	80227		20227	10.21		92854	11.82	80474	16.76
14	80228		21697	10.20		103806	11.83	86337	16.77
15	80233		22452	10.21		104318	11.80	88191	16.73
16	80244		23053	10.19		106643	11.81	90508	16.75
17	80224		22775	10.23		112954	11.84	94305	16.77
18	80229		23062	10.18		109344	11.78	89378	16.69
19	80230		23915	10.16		115746	11.76	94959	16.69
20									
21									
22									
23									
24									
25									

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

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

Column used to flag internal standard area values with an asterisk

21st Century Environmental Inc.
VOLATILE INTERNAL STANDARD AREA SUMMARY

LAB ID FILE (STANDARD):. >B2421 DATE ANALYZED: 02/08/94

INSTRUMENT ID: 5970 TIME ANALYZED: 10:45

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

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	37078	6.74	159300	8.06	114456	12.52
UPPER LIMIT	74156		318600		228912	
LOWER LIMIT	18539		79650		57228	
LAB SAMPLE No.						
1 BLANK	36597	6.795	157029	8.12	116446	12.58
2 B0285	38151	6.755	160202	8.07	125961	12.52
3 B0286	35920	6.695	148663	8.02	113021	12.48
4 B0278	35960	6.688	153808	8.01	116968	12.45
5 B0279	34911	6.753	148860	8.08	112231	12.55
6 B0276	33452	6.704	141333	8.02	110526	12.49
7 B0275	32813	6.755	132405	8.06	101120	12.51
8 B0284	37069	6.794	163455	8.11	124385	12.57
9 B0244	35780	6.789	154949	8.12	121443	12.59
10 B0270	35981	6.779	150500	8.11	105760	12.57
11 B0268	36010	6.800	156749	8.13	119597	12.58
12 B0269	30748	6.799	149091	8.12	115561	12.58
13 B0267	34152	6.825	175423	8.14	126250	12.61
14 B0223	35665	6.823	171651	8.15	121502	12.61
15 B0247	33025	6.808	152220	8.14	117481	12.62
16						
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24						
25						

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

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

Column used to flag internal standard area values with an asterisk
* Outside volatile area limits

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >A4952 DATE ANALYZED: 02/07/94

INSTRUMENT ID: A TIME ANALYZED: 14:50

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	80234	>A4953	02/07/94	15:24
2	80235	>A4954	02/07/94	15:55
3	80241	>A4955	02/07/94	16:26
4	80246	>A4956	02/07/94	16:58
5	80225	>A4957	02/07/94	17:29
6	80226	>A4958	02/07/94	18:01
7	80231	>A4959	02/07/94	18:31
8	80232	>A4960	02/07/94	19:03
9	80242	>A4961	02/07/94	19:34
10	80243	>A4962	02/07/94	20:05
11	80245	>A4963	02/07/94	20:36
12	80227	>A4964	02/07/94	21:07
13	80228	>A4965	02/07/94	21:39
14	80233	>A4966	02/07/94	22:09
15	80224	>A4968	02/07/94	23:12
16	80229	>A4969	02/07/94	23:43
17	80230	>A4970	02/08/94	00:14
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24				
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COMMENTS: _____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	020794 METHOD BLANK	QA BATCH	
DATA FILE	>A4952	DATE ANALYZED	02/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	96.1	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	96.1	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLANK

Name:21st Century Environmental Contract:N/A

Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

trix: (soil/water) WATER Lab Sample ID: BLANK

mple wt/vol: 5 (g/mL) ml Lab File ID: >A4952

vel: (low/med) LOW Date Received:

Moisture: NA Date Analyzed: 02/07/94

lumn: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

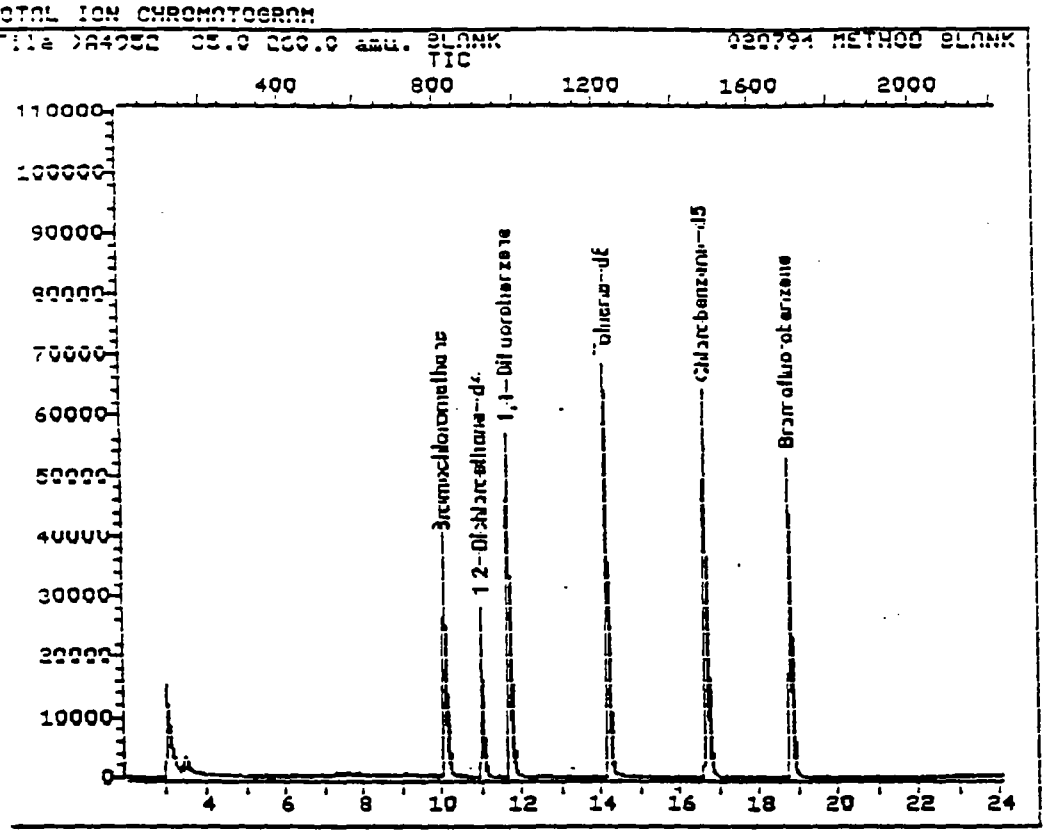
QUANT REPORT

Operator ID: JEFF Quant Rev: 6 Quant Time: 940207 15:21
Output File: ^A4952::QT Injected at: 940207 14:50
Data File: >A4952::D2 Dilution Factor: 1.00000
Name: BLANK
Misc: 020794 METHOD BLANK

) File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

	Compound	R.T.	Scan#	Area	Conc	Units	q
)	*Bromochloromethane	10.07	807	28465	50.00	UG/L	100
)	1,2-Dichloroethane-d4	11.01	901	49609	48.03	UG/L	100
24)	*1,4-Difluorobenzene	11.71	972	129830	50.00	UG/L	100
)	Toluene-d8	14.17	1220	127532	50.43	UG/L	100
)	*Chlorobenzene-d5	16.68	1472	103512	50.00	UG/L	100
48)	Bromofluorobenzene	18.78	1684	51022	48.06	UG/L	100

* Compound is ISTD



Data File: >A4952::D2 Quant Output File: ^A4952::QT
Name: BLANK
Misc: 020794 METHOD BLANK

Id File: ID0127::M1
Title: USEPA 624 VOLATILES
Last Calibration: 940207 14:47

Operator ID: JEFF
Quant Time: 940207 15:21
Injected at: 940207 14:50

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >B2422 DATE ANALYZED: 02/08/94

INSTRUMENT ID: 8 TIME ANALYZED: 11:30

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	B0285	>B2423	02/08/94	12:06
2	B0286	>B2424	02/08/94	12:36
3	B0278	>B2425	02/08/94	13:07
4	B0279	>B2426	02/08/94	13:37
5	B0276	>B2427	02/08/94	14:07
6	B0275	>B2428	02/08/94	14:37
7	B0284	>B2430	02/08/94	15:38
8	B0244	>B2431	02/08/94	16:08
9	B0247	>B2438	02/08/94	19:39
10				
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COMMENTS: _____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	020893 METHOD BLANK	QA BATCH	
DATA FILE	>82422	DATE ANALYZED	02/08/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	4.3 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	2.2 JB	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	98.2	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	97.0	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLANK

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

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

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2422

Level: (low/med) LOW Date Received:

% Moisture: NA Date Analyzed: 02/08/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	No Unknowns			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

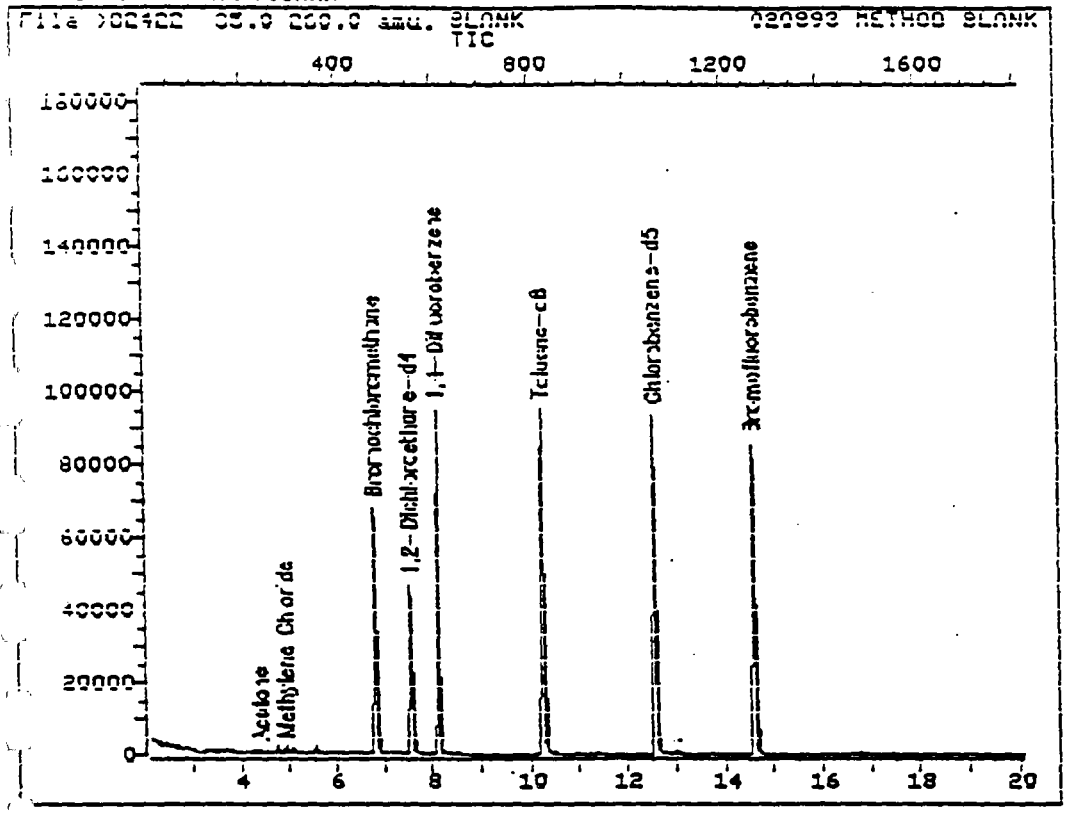
rator ID: JEFF Quant Rev: 6 Quant Time: 940208 12:02
put File: ^82422::QT Injected at: 940208 11:30
a File: >82422::03 Dilution Factor: 1.00000
e: BLANK
c: 020893 METHOD BLANK

File: ID0401::SC
le: USEPA 624 VOLATILES
t Calibration: 940208 11:29

Compound	R.T.	Scan#	Area	Conc	Units	q
*Bromochloromethane	6.79	472	36597	50.00	UG/L	100
Acetone	4.38	228	1265	4.27	UG/L	99
Methylene Chloride	4.91	282	2068	2.19	UG/L	90
1,2-Dichloroethane-d4	7.55	548	55532	49.08	UG/L	100
*1,4-Difluorobenzene	8.12	606	157029	50.00	UG/L	100
Toluene-d8	10.25	821	133685	50.64	UG/L	100
*Chlorobenzene-d5	12.58	1056	116446	50.00	UG/L	100
Bromofluorobenzene	14.60	1260	61032	48.49	UG/L	100

Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2422::D3 Quant Output File: ^B2422::QT
Name: BLANK
Misc: 020893 METHOD BLANK

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940208 11:29

Operator ID: JEFF
Quant Time: 940208 12:02
Injected at: 940208 11:30

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM SAMPLE NO.: B0242
CLIENT: FT MONMOUTH DATE: 2-3-94
PROJECT: BLDG # 2588 SAMPLER: DOUG TURNER JR
SITE: SIGNATURE: Doug Turner

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - (2) - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW4
TIME COLLECTED: 13:00
SAMPLE DEPTH: _____ FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.: 4-29 26948

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - REB - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER: _____
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS _____ IN-CM
DESCRIPTION _____

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	2.30	3.40
TEMPERATURE		15.1
SP. COND.		140
pH		6.92
Eh		
DO		
PID	0	0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - (PRESERVED) - OTHER
DESCRIBE: METALS HNO3

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE: _____
SAMPLING METHOD:
GROUNDWATER BLO - BLC - (PSB) PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER: _____
SAMPLER DECONTAMINATION: DED (LAB) FLD - OTH
DESCRIBE OTHER: _____
PROCEDURE: (DET) - STM - (ACE) - HEX - MET - NON - (OTH)
DESCRIBE OTHER: DI H2O 10% HNO3
QA SAMPLES:
CO-LOCATED SAMPLE ID: _____
SPLIT SAMPLE ID: _____
RINSE BLANK ID: B0246
TRIP BLANK ID: B0241
LAB CONTROL SAMPLE ID: _____

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) RAD - OTH	21ST CENTURY		
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - CWN - OVR - OTH: _____ SPLIT SAMPLE ID NO.: _____
ORGANIZATION NAME: _____ PARAMETERS: SAME OTHER: _____
REPRESENTATIVES NAME: _____ QA/QC SAMPLES: CCL - SPL - RNS - TRP - LCS

COMMENTS: _____

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED: YES NO	APPROVED WITH / WITHOUT REVISIONS	APPROVED WITH / WITHOUT REVISIONS

G0812S1T

00104

GeoLog Well Purging Form

COMPANY: E-SQUARE — SAMPLE NO.: B0242
CLIENT: FT MCCOY VFH — DATE: 2-3-94
PROJECT: BLDG # 2587 — SAMPLER: Doug Turner JR
SITE: — SIGNATURE: Doug Turner JR

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE — LOCKED: (YES) - NO — KEY NO: ____

WELL DIAMETER: 2" (4") - 6" - 8" - OTHER: ____ — STICKUP HEIGHT: ____ FT-M

MEASURING POINT: TIC - TCC - LND - OTH: ____ — TOC - TIC DIFFERENCE: ____ IN-CM

VAPOR READINGS: PID - FID — DEVICE: HNU model 101 10.2 eV LAMP

BACKGROUND: 0 ppm — INSIDE WELL CASING: 0 ppm

NAPL LAYER OBSERVED: FLT - SNK - NON — SAMPLED: YES - NO — THICKNESS: ____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 11.80 (FT-M) — MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 2.30 (FT-M) — TIME MEASURED ____

(C) WATER COLUMN HEIGHT (A - B): 9.50 FT-M

(D) WELL DIAMETER FACTOR: 0.65 (GPF) LPM — Well Factor = 0.041 (Well Diameter in inches)²
(2" = 0.16; 4" = 0.65; 5" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 5" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 6.175 (GAL-L)

(F) VOLUMES TO BE PURGED: 3

(G) TOTAL VOLUME TO BE PURGED (E x F): ____ 19 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - (OTHER): ____

DEVICE DESCRIPTION: 1500 PERISTALIC PUMP

PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: ____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBIDITY	FIELD MEASUREMENTS					COMMENTS

FIELD MEASUREMENT CODES

MET - Temperature — MCC - Color — MDO - Dissolved Oxygen — MC1 - DTW in Well
MSC - Specific Conductance — MPS - pH — MC1 - Other — MC2 - DTW in Well
MPC - Photoionizer (e.g. - HNU) — ME - Eh — MC2 - Other — MC3 - DTW in Well
MFC - Flame Ionizer (e.g. - OVA) — MAL - Alkalinity — MC3 - Other — MC4 - DTW in Well

G0712S1T

00105

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2587
SITE:
SAMPLE NO.: B0243
DATE: 2-3-94
SAMPLER: DOUG TURNER JR
SIGNATURE: Doug Turner

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - (2) - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW2
TIME COLLECTED:
SAMPLE DEPTH: 5.0 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.: 2-2926925

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WCS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS: IN-CM
DESCRIPTION:

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	3.20	4.52
TEMPERATURE		14.8
SP. COND.		250
pH		6.86
Eh		
DO	0	0
PID		
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - (PRESERVED) - OTHER
DESCRIBE: METALS HNO3

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - (PSB) PPR - PCN - PBL - NLF - OTH
SURFACE WATER SOT - KEM - SCS - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED (LAB) FLD - OTH
DESCRIBE OTHER:
PROCEDURE: (DET) - STM - (ACE) - HEX - MET - NON - (OTH)
DESCRIBE OTHER: DI H2O 10% HNO3
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: B0246
TRIP BLANK ID: B0241
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) RAD - OTH	21ST Century		
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: CCL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC RESULTS PRINTED: YES NO	APPROVED WITH / WITHOUT REVISIONS	APPROVED WITH / WITHOUT REVISIONS

GO91291T

00106

GEOLOG Well Purging Form

COMPANY: E-SYSTEMS — SAMPLE NO.: B0243
CLIENT: FT MCCLELLAN UTH — DATE: 2-3-94
PROJECT: BLDG ## 2587 — SAMPLER: Doug Turner II
SITE: — SIGNATURE: Doug Turner II

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE — LOCKED: (YES) - NO — KEY NO: ____

WELL DIAMETER: 2" (4") - 6" - 8" - OTHER: ____ — STICKUP HEIGHT: ____ FT-M

MEASURING POINT: TIC - TCC - LND - OTH: ____ — TOC - TIC DIFFERENCE: ____ IN-CM

VAPOR READINGS: PID - FID — DEVICE: HNU model 101 10.2 eV LAMP

BACKGROUND: 0 ppm — INSIDE WELL CASING: 0 ppm

NAPL LAYER OBSERVED: FLT - SNK - NON — SAMPLED: YES - NO — THICKNESS: ____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 12.40 (FT-M) — MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 3.20 (FT-M) — TIME MEASURED ____

(C) WATER COLUMN HEIGHT (A - B): 9.20 (FT-M)

(D) WELL DIAMETER FACTOR: 0.65 (GPF) LPM — Well Factor = 0.041 (Well Diameter in Inches)²; (2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF); (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 5.98 (GAL-L)

(F) VOLUMES TO BE PURGED: 3

(G) TOTAL VOLUME TO BE PURGED (E x F): 18 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - (OTHER) ____

DEVICE DESCRIPTION: ISCO PERISTALIC PUMP

PURGE WATER DISPOSITION: (DISCHARGED ONSITE) — COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

COLLECTED IN: TANKS - DRUMS — NUMBER OF CONTAINERS: ____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBIDITY	FIELD MEASUREMENTS					COMMENTS

FIELD MEASUREMENT CODES

MTP - Temperature — MCL - Color — MDO - Dissolved Oxygen — MC1 - CTW in Well

MSC - Specific Conductance — MFR - Fr — MC1 - Other — MC2 - CTW in Well

MPD - Pharmacological Pump — MEH - Eh — MC2 - Other — MC3 - CTW in Well

MFC - Ferro-ferricyanide Cyanide (CYA) — MAL - Alkalinity — MC3 - Other — MF - CTW in Well

G0712917

00107

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2582
SITE:
SAMPLE NO.: B0214
DATE: 2-3-94
SAMPLER: DOUG TURNER JR
SIGNATURE: Doug Turner

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - (2) - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW 1
TIME COLLECTED: 13:30
SAMPLE DEPTH: 5.0 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.: 1-29 21925

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WCO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	3.60	4.10
TEMPERATURE		14.8
SP. COND.		320
pH		7.10
Eh		
DO		
PID	0	0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - (PRESERVED) - OTHER
DESCRIBE: METALS HNO3

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLD - BLC - (PSB) PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - SCS - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: DED (LAB) FLD - OTH
DESCRIBE OTHER:
PROCEDURE: (CET) - STM - (ACE) - HEX - MET - NON - (OTH)
DESCRIBE OTHER: DI H2O 10% HNO3
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: B0216
TRIP BLANK ID: B0241
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) RAD - OTH	21ST CENTURY	VOA +15 MTBE, TBA Pb	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH / WITHOUT REVISIONS	APPROVED WITH / WITHOUT REVISIONS

GO91291T

GeoLog Well Purging Form

COMPANY: E-SQUARE — SAMPLE NO.: B0244
CLIENT: FT MONMOUTH — DATE: 2-3-94
PROJECT: BLDG # 2587 — SAMPLER: Doug Turner JR
SITE: — SIGNATURE: Doug Turner JR

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE — LOCKED: (YES) - NO — KEY NO: —
WELL DIAMETER: 2" (4") - 6" - 8" - OTHER: — STICKUP HEIGHT: — FT-M
MEASURING POINT: TIC - TOC - LND - OTH: — TOC - TIC DIFFERENCE: — IN-CM
VAPOR READINGS: PID - FID — DEVICE: HNU MODEL: 101 10.2 eV LAMP
BACKGROUND: 0 ppm — INSIDE WELL CASING: 0 ppm
NAPL LAYER OBSERVED: FLT - SNK - NON — SAMPLED: YES - NO — THICKNESS: — IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 13.30 (FT-M) — MEASURED - RECORDED PREVIOUSLY
(B) DEPTH TO WATER: 3.60 (FT-M) — TIME MEASURED —
(C) WATER COLUMN HEIGHT (A - B): 10.30 (FT-M)
(D) WELL DIAMETER FACTOR: 0.65 (GPF-LPM) — Well Factor = 0.041 (Well Diameter in Inches)^2 (2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF) (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)
(E) ONE WELL VOLUME (C x D): 6.695 (GAL-L)
(F) VOLUMES TO BE PURGED: 3
(G) TOTAL VOLUME TO BE PURGED (E x F): → 21 GALL

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - (OTHER) —
DEVICE DESCRIPTION: 1560 PERISTALIC PUMP
PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE
COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: —

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBID -ITY	FIELD MEASUREMENTS					COMMENTS

FIELD MEASUREMENT CODES:
MTP - Temperature — MCL - Color — MDO - Dissolved Oxygen — MO1 - OTW in Well
MSC - Specific Conductance — MPH - pH — MO1 - Other — MO2 - OTW in Well
MPD - Photoionizer (e.g. - PID) — MES - Eh — MO2 - Other — MO3 - OTW in Well
MFI - Flame Ionizer (e.g. - OVA) — MAL - Alkalinity — MO3 - Other — MO4 - OTW in Well

G0712917

00109

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2588
SITE:

SAMPLE NO.: B0245
DATE: 2-3-94
SAMPLER: DOUG TURNER JR
SIGNATURE: Doug Turner

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - (2) - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW3
TIME COLLECTED: 13:45
SAMPLE DEPTH: 5.0 FT-M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

WELL PERMIT No.: 3-2926947

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - REB - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: NO FLT SNK
LAYER SAMPLED: NO YES MIX
THICKNESS: IN-CM
DESCRIPTION:

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	3.30	4.55
TEMPERATURE		15.5
SP. COND.		220
pH		6.95
Eh		
OO		
PID	0	0
FID		
ALKALINITY		
HARDNESS		
TURBIDITY		

SAMPLE TREATMENT: FILTERED - (PRESERVED) - OTHER
DESCRIBE: METALS HNO3

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - (PSB) PPR - PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - SCS - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: CED (LAB) FLD - OTH
DESCRIBE OTHER:
PROCEDURE: (CED) - STM - (ACE) - HEX - MET - NON - (OTH)
DESCRIBE OTHER: DI H2O 10% HNO3
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: B0246
TRIP BLANK ID: B0241
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) RAD - OTH	21ST Century		
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME OTHER:
QA/QC SAMPLES: CCL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH - WITHOUT REVISIONS	APPROVED WITH - WITHOUT REVISIONS

GO91231T

00110

GeoLog Well Purging Form

COMPANY: E-SYSTEM — SAMPLE NO.: B0245
CLIENT: FT MONMOUTH — DATE: 2-3-94
PROJECT: BLDG # 2597 — SAMPLER: Doug Turner JR
SITE: — SIGNATURE: Doug Turner

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) - DAMAGED - NONE — LOCKED: (YES) - NO — KEY NO: ____

WELL DIAMETER: 2" (4") - 6" - 8" - OTHER: ____ — STICKUP HEIGHT: ____ FT-M

MEASURING POINT: TIC - TCC - LND - OTH: ____ — TCC - TIC DIFFERENCE: ____ IN-CM

VAPOR READINGS: PID - FID — DEVICE: HNU MODEL: 101 10.2 eV LAMP

BACKGROUND: 0 ppm — INSIDE WELL CASING: 0 ppm

NAPL LAYER OBSERVED: FLT - SNK - NON — SAMPLED: YES - NO — THICKNESS: ____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 12.70 (FT-M) — MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 3.30 (FT-M) — TIME MEASURED ____

(C) WATER COLUMN HEIGHT (A - B): 9.40 FT-M

(D) WELL DIAMETER FACTOR: 0.65 (GPF) LPM — Well Factor = 0.041 (Well Diameter in inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 6.11 (GAL) L

(F) VOLUMES TO BE PURGED: 3

(G) TOTAL VOLUME TO BE PURGED (E x F): → 19 GAL

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - (OTHER): ____

DEVICE DESCRIPTION: ISCO PERISTALIC PUMP

PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: ____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBIDITY	FIELD MEASUREMENTS					COMMENTS

FIELD MEASUREMENT CODES

MTP - Temperature	MCL - Color	MDO - Dissolved Oxygen	MO1 - O.T.W. in Well
MSC - Specific Conductance	MPH - pH	MO1 - Other	MO2 - O.T.W. in Well
MTD - Photoionizer (e.g. - HNu)	MES - Eh	MO2 - Other	MO3 - O.T.W. in Well
MFD - Flame Ionizer (e.g. - OVA)	MAL - Alkalinity	MO3 - Other	MO4 - O.T.W. in Well

GDF1251T

C0111

SAMPLING NARRATIVE

The sampling event for Building 2567 occurred on February 3, 1994. Use of laboratory decontaminated, field decontaminated and/or dedicated sampling equipment is as stated in NJDEPE Field Sampling Procedures Manual, May 1992. Non-conformances of NJDEPE Field Sampling Procedures include incomplete well information and field parameters only taken after sampling. Hydrological data may be affected by unavailability of pre-purge well data. However, the quality of laboratory analysis data should not be affected. Samples were taken post-purge for which well data is available.

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Field Data 0104

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E-SYSTEMS, INC

PROJECT: U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

ANALYSIS NO:	CLIENT ID:
B 0656	MW 4
B 0657	MW 4D
B 0658	MW 1
B 0659	MW 3
B 0660	MW 2
B 0661	FIELD BLANK
B 0662	TRIP BLANK

DATE RECEIVED: MARCH 31, 1994

TWENTY FIRST CENTURY
ENVIRONMENTAL, INC.

RICHARD W. LYNCH
LABORATORY MANAGER

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (CONTINUED)

	No	Yes
10. Extraction Holding Time Met.	___	✓

If not met, list number of days exceeded for each sample: _____

11. Analysis Holding Time Met	___	✓

If not met, list number of days exceeded for each sample: _____

Additional Comments: This form completed By Prime Contractor

Laboratory Manager: B. MK Date: 5-12-94

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)	___	✓
2.	GC/MS Tune Specifications		
	a. BFB Meet Criteria	___	✓
	b. DFTPP Meet Criteria	___	N/A
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.	___	___
4.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	___	✓
5.	GC/MS Calibration Requirements		
	a. Calibration Check Compounds	___	✓
	b. System Performance Check Compounds	___	✓

6. Blank Contamination - If yes, list compounds and concentrations in each blank:

   a. VOA Fraction Acetone: Below MDL
   b. B/N Fraction _____
   c. Acid Fraction _____

7.	Surrogate Recoveries Meet Criteria	___	✓

If not met, list those compounds and their recoveries which fall outside the acceptable range:

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

	If not met, were the calculations checked and the results qualified as "estimated"?	___	N/A
8.	Matrix Spike/ Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	___	✓

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____

9.	Internal Standard Area/Retention Time Shift Meet Criteria	___	✓

Bldg. 2567 MW's

3-31-94

METAL ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Calibration Summary Meet Criteria (check)	___	✓
2.	ICP Interference Check Sample Results Summary Submitted (if applicable) / Meet Criteria.	___	N/A
3.	Serial Dilution Summary Submitted (if applicable) / Meet Criteria.	___	N/A
4.	Laboratory Control Sample Summary Submitted (if applicable) / Meet Criteria.	___	N/A
5.	Blank Contamination - If yes, list compounds and concentrations in each blank: None		
6.	Matrix Spike/ Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	___	✓
7.	Extraction Holding Time Met	___	✓
	If not met, list number of days exceeded for each sample:		
8.	Analysis Holding Time Met	___	✓
	If not met, list number of days exceeded for each sample:		

Additional Comments: This form completed By Prime Contractor

Laboratory Manager: B. McK Date: 5-12-94

Blog 2567 mw's.

3-31-94

UST ANALYSIS RESULT CHECKLIST

(one form for each site report)

Building No. 2567 Laboratory(~~Salvcont.~~) ID#s B0656 → B0662

94-0191 IJO No. ~~93-0116~~ Date Sampled: 3-31-94

Date Analysis Submitted: 4-20-94 Date Reviewed: 5-12-94

ITEM	ITEM OF WORK	ITEM COMPLETE (YES/NO)	COMMENTS
A	Labor and Equip. Supplied	Y	
B	Work done by Cert. Lab	Y	
C	Trip and Field Blanks, ect. Supplied by Contractor	Y	
D	Contractor picked up samples at Bldg. 490	N	Contractor Sampled
G	Aqueous samples analyzed for Xylene, MTBE, TBA	Y	
H	Chain of Custody correct (Hnu, Site Names, SAI #'s)	Y	
H	MW sampling field data (DTW, Hnu/OVA, ect.,)	Y	
H	Laboratory Decon. Narrative	Y	
J	Samples were not distributed to another Laboratory	Y	
K	Appropriate NJDEPE checklists are completed	Y	
J	Result headers are correct	N	informed 5-24-94
J	QA/QC data	Y	
J	Non-TIC results reported within 48 hrs.	NA	
J	Final Report complete within 3-Weeks (3 copies)	Y	
J	Final Report complete within 4- weeks (3 copies) PP-40	NA	
J	List Approved Contract Deviations	NA	

ANALYSIS / SERVICE	COST	QUANTITY	SUB-TOTAL
SOIL- B/N-15	$190.00		
SOIL- VOA-15	140.00		
SOIL- VOA-15, XYLENE,Pb	150.00		
SOIL- B/N-15, VOA-15, XYLENE, Pb	340.00		
SOIL- PP-40	625.00		
AQUEOUS- 624(XYLENE,TBA,MTBE) 625, Pb	340.00		
MONITORING WELL SAMPLING	65.00		
		TOTAL	$

REVIEWERS NAME B. MK

NARRATIVE

There were no problems encountered during the analysis of this batch of samples (B0656 to B0662). All extractions and analysis were completed within proper hold times.

CHAIN OF CUSTODY

21ST CENTURY ENVIRONMENTAL
618 HERON DRIVE, P.O. BOX 489 • BRIDGEPORT, NJ 08014-0489
609.467.9521 • 609.467.9523 FAX

CUSTOMER: Ft Monmouth
ADDRESS:
TELEPHONE:
PROJECT:
PROJECT MANAGER:
PROJECT LOCATION: BLDG #2567 STATE:
PO NUMBER:

TURNAROUND (INDICATE CALENDAR DAYS, CONFIRM WITH LAB): 2 5 7 14 21 OTHER:
DELIVERABLES (PLEASE CIRCLE): REDUCED / TIER 1 / TIER II / ECRA / CLP / RESULTS ONLY
OTHER:
FAX RESULTS TO:

2002

ADDITIONAL INFORMATION / SPECIAL INSTRUCTIONS

B0656-B0662

SAMPLE NUMBER	SAMPLE DESCRIPTION	MATRIX	DATE	TIME	COMP	GRAB	NUMBER OF CONTAINERS	METHOD / ANALYSIS: VOLATILE ORGANICS	SEMI VOA'S (BNA'S)	PESTICIDES / PCB'S	PCB'S	BTEX	TPH-PETROLEUM HYDROCARBONS	CORROSIVITY	IGNITABILITY	FLASHPOINT	REACTIVITY	TOC	TCLP METALS	TCLP VOLATILE ORGANICS	TCLP SEMI VOA'S (BNA'S)	TCLP PEST / HERB	PRIORITY POLLUTANT METALS (13)	HSL METALS (23)	CYANIDE	OIL AND GREASE	ADDITIONAL ANALYSIS: MTBE, TBA, XYLENES, PID
MW 4		WATER	3/31	14:10				V	V	V																V
MW 4D				14:11				V	V	V																V
MW 1				14:30				V	V	V																V
MW 3				15:00				V	V	V																V
MW 2				15:30				V	V	V																V
FIELD BLK				15:35				V	V	V																V
TRIP BLNK				8:00				V																		V

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	3/31/94	16'30	[signature]	3/31/94	1830

WHITE
LAB COPY

YELLOW

Purgeables

U.S.E.P.A. Method 624 - This is a purge and trap Gas Chromatograph/ Mass Spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

An HP5996 GC/MS was used with a capillary column.

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8240/8260 from SW-846.

Metals

Soil samples for metal analysis were run in accordance with the methods prescribed in SW-846. This includes a nitric acid digestion followed by either Furnace, Flame Atomic Absorption, Flameless Atomic Absorption, or Inductively Coupled Plasma analysis.

Aqueous samples for metals analysis were run in accordance with the methods prescribed in Methods for Chemical Analysis of Water and Wastes, EPA-600-4-79-020 March 1983.

Aqueous/Soil samples for mercury analysis were run in accordance with SW-846 methods 7470/7471. These are cold-vapor atomic absorption methods.

LABORATORY CHRONICLE

RECEIPT/REFRIGERATION 3/31/91

ORGANICS EXTRACTION

1. Acids NA
2. Base/Neutrals NA
3. Pesticides/PCB's/Herbicides NA
4. Petroleum Hydrocarbons/Oil & Grease NA

ANALYSIS

1. Volatiles 4/5/94-4/7/94
2. Acids NA
3. Base/Neutrals NA
4. Pesticides/PCB's/Herbicides NA
5. Petroleum Hydrocarbons/Oil & Grease NA
6. Total Organic Carbon NA

Section Supervisor Review & Approval Jeffrey D Smith

INORGANICS

1. Metals 4/5/94
2. Cyanides NA
3. Phenols NA

OTHER ANALYTES

Section Supervisor Review & Approval

Quality Control Supervisor Review & Approval

Laboratory Director Review & Approval Richard W Lynch

If fractions are re-extracted and re-analyzed because initial endeavors did not meet quality control acceptance criteria, include dates for both.

RESULT SUMMARY

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
B 0656	MW 4	.003	N.D.
B 0657	MW 4D	.003	N.D.
B 0658	MW 1	.003	N.D.
B 0659	MW 3	.003	.025
B 0660	MW 2	.003	N.D.
B 0661	FIELD BLANK	.003	N.D.

BATCH 94-52

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80656	DILUTION FACTOR	1.00
CLIENT ID	MW-4 BLDG 2567	COMMENTS	HNU = 0.0
DATA FILE	>B2674	DATE ANALYZED	04/05/94

COMPOUND	UG/L		MDL	COMPOUND	UG/L	MDL
Acrolein	ND		50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND		50	2-Hexanone	ND	10
Chloromethane	ND		10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND		10	Toluene	ND	5
Vinyl Chloride	ND		10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND		10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	B	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND		5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND		10	Tetrachloroethene	ND	5
Methylene Chloride	2.3	J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND		5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND		5	Ethylbenzene	ND	5
Vinyl Acetate	ND		5	m&p-Xylenes	ND	5
2-Butanone	ND		10	o-Xylene	ND	5
Chloroform	ND		5	Styrene	ND	5
1,1,1-Trichloroethane	ND		5	Bromoform	ND	5
Carbon Tetrachloride	ND		5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND		5	p-Dichlorobenzene	ND	5
Benzene	ND		5	o-Dichlorobenzene	ND	5
Trichloroethene	ND		5	Methyl Tertiary Butyl Ether	1.3	J 10
1,2-Dichloropropane	ND		5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND		5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	104	76 - 114	OK
Toluene-d8	103	88 - 110	OK
Bromofluorobenzene	93.6	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-4

Lab Name:21st Century Environmental Contract:N/A

Client Name: US Army Ft. Monmouth, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: B0656

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >B2674

Level: (low/med) LOW

Date Received: 03/31/94

% Moisture: N/A

Date Analyzed: 04/05/94

Column: DB-624

Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80657	DILUTION FACTOR	1.00
CLIENT ID	MW-4 DUP BLDG 2567	COMMENTS	HNU = 0.0
DATA FILE	>82675	DATE ANALYZED	04/05/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	4.4 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	2.9 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	1.3 J	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	109	76 - 114	OK
Toluene-d8	99.0	88 - 110	OK
Bromofluorobenzene	94.4	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-4 DUP

Client Name: US ARMY FT. MONMOUTH, NJ

Client ID: BLDG 2567

Matrix: (soil/water) WATER

Lab Sample ID: B0657

Sample wt/vol: 5 (g/mL) ml

Lab File ID: >B2675

Level: LOW

Date Received: 03/31/94

% Moisture: 100

Date Analyzed 04/05/94

Column: CAP

Dilution Factor: 1

Number TICs Found 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	593759	Methane, isocyano- (9CI)	4.69	8

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80658	DILUTION FACTOR	1.00
CLIENT ID	MW-1 BLDG 2567	COMMENTS	HNU 0.0
DATA FILE	>82701	DATE ANALYZED	04/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	6.9 J	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	10	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	22 J	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	100	76 - 114	OK
Toluene-d8	94.9	88 - 110	OK
Bromofluorobenzene	93.2	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-1

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0658

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2701

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

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21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80659	DILUTION FACTOR	1.00
CLIENT ID	MW-3 BLDG 2567	COMMENTS	HNU = 0.0
DATA FILE	>82676	DATE ANALYZED	04/05/94

COMPOUND	UG/L		MDL	COMPOUND	UG/L	MDL
Acrolein	ND		50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND		50	2-Hexanone	ND	10
Chloromethane	ND		10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND		10	Toluene	ND	5
Vinyl Chloride	ND		10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND		10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	B	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND		5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND		10	Tetrachloroethene	ND	5
Methylene Chloride	ND		5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND		5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND		5	Ethylbenzene	ND	5
Vinyl Acetate	ND		5	m&p-Xylenes	ND	5
2-Butanone	ND		10	o-Xylene	ND	5
Chloroform	ND		5	Styrene	ND	5
1,1,1-Trichloroethane	ND		5	Bromoform	ND	5
Carbon Tetrachloride	ND		5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND		5	p-Dichlorobenzene	ND	5
Benzene	ND		5	o-Dichlorobenzene	ND	5
Trichloroethene	ND		5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND		5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND		5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	103	76 - 114	OK
Toluene-d8	99.3	88 - 110	OK
Bromofluorobenzene	93.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-3

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0659

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2676

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80660	DILUTION FACTOR	1.00
CLIENT ID	MW-2 BLDG 2567	COMMENTS	HNU 0.0
DATA FILE	>82687	DATE ANALYZED	04/06/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	17	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	2.5 J	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	11	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.0	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	95.0	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-2

Client Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0660

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2687

Level: LOW Date Received: 03/31/94

% Moisture: 100 Date Analyzed 04/06/94

Column: CAP Dilution Factor: 1

Number TICs Found 2 CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	526738	Benzene, trimethyl- Isomer (8CI9CI)	16.03	4
2	496117	1H-Indene, dihydro- Isomer (9CI)	17.16	4

DATA PACKAGE

CERTIFICATE OF ANALYSIS

U.S. ARMY-FORT MONMOUTH, NJ BLDG 2567

LEAD

ANALYSIS NO:	CLIENT ID:	MDL (mg/L)	RESULT (mg/L)
B 0656	MW 4	.003	N.D.
B 0657	MW 4D	.003	N.D.
B 0658	MW 1	.003	N.D.
B 0659	MW 3	.003	.025
B 0660	MW 2	.003	N.D.
B 0661	FIELD BLANK	.003	N.D.

BATCH 94-52

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80656	DILUTION FACTOR	1.00
CLIENT ID	MW-4 BLDG 2567	COMMENTS	HNU = 0.0
DATA FILE	>82674	DATE ANALYZED	04/05/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND B	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	2.3 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	1.3 J	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	104	76 - 114	OK
Toluene-d8	103	88 - 110	OK
Bromofluorobenzene	93.6	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-4

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0656

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2674

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

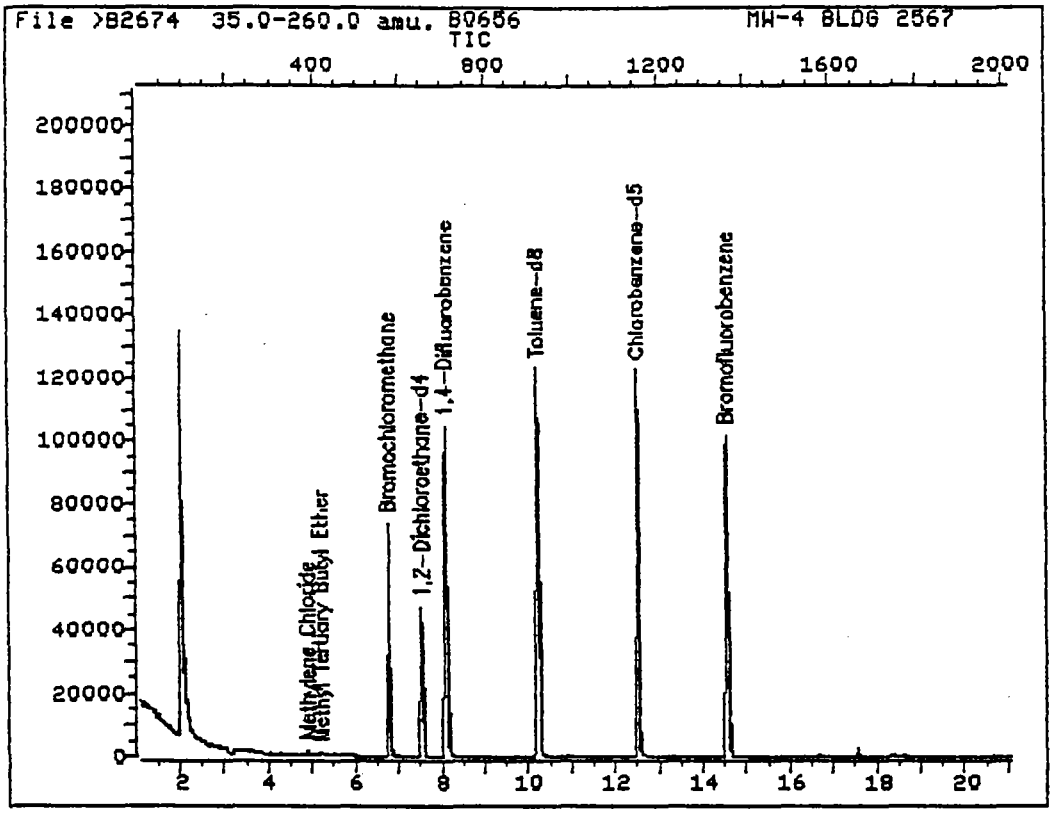
Operator ID: MANAGER Quant Rev: 6 Quant Time: 940405 20:12
Output File: ^B2674::QT Injected at: 940405 19:47
Data File: >B2674::D6 Dilution Factor: 1.00000
Name: B0656
Misc: MW-4 BLDG 2567 5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.77	571	37184	50.00	UG/L	100
12)	Methyl Tertiary Butyl Ether	5.20	413	1880	1.31	UG/L	100
15)	Methylene Chloride	4.88	381	2126	2.26	UG/L	82
23)	1,2-Dichloroethane-d4	7.53	648	54992	52.24	UG/L	100
24)	*1,4-Difluorobenzene	8.09	705	172911	50.00	UG/L	100
33)	Toluene-d8	10.22	920	177060	51.34	UG/L	100
35)	*Chlorobenzene-d5	12.52	1152	149449	50.00	UG/L	100
48)	Bromofluorobenzene	14.55	1357	76772	46.80	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2674::D6 Quant Output File: ^B2674::QT
Name: B0656
Misc: MW-4 BLDG 2567 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

Operator ID: MANAGER
Quant Time: 940405 20:12
Injected at: 940405 19:47

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80658	DILUTION FACTOR	1.00
CLIENT ID	MW-1 BLDG 2567	COMMENTS	HNU 0.0
DATA FILE	>82701	DATE ANALYZED	04/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	6.9 J	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	10	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	22 J	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	100	76 - 114	OK
Toluene-d8	94.9	88 - 110	OK
Bromofluorobenzene	93.2	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-1

Lab Name:21st Century Environmental Contract:N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0658

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2701

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

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QUANT REPORT

Operator ID: MANAGER
Output File: ^B2701::D4
Data File: >B2701::D3
Name: B0658
Misc: MW-1 BLDG 2567

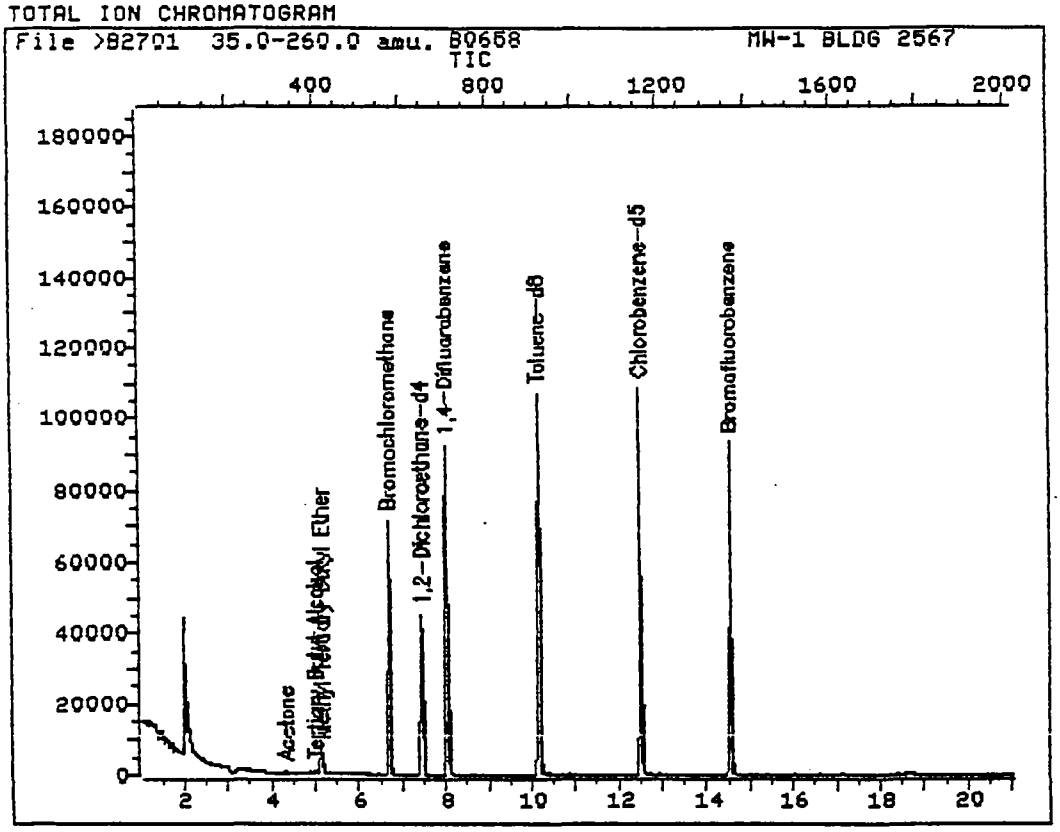
Quant Rev: 6
Quant Time: 940407 13:03
Injected at: 940407 12:39
Dilution Factor: 1.00000
0.5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940407 11:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.69	567	35987	50.00	UG/L	100
9)	Acetone	4.34	329	1597	6.91	UG/L	98
12)	Methyl Tertiary Butyl Ether	5.15	411	14231	10.10	UG/L	100
13)	Tertiary Butyl Alcohol	5.01	397	2502	22.03	UG/L	100
23)	1,2-Dichloroethane-d4	7.46	644	52544	50.23	UG/L	100
24)	*1,4-Difluorobenzene	8.03	702	158561	50.00	UG/L	100
33)	Toluene-d8	10.17	918	152797	47.47	UG/L	100
35)	*Chlorobenzene-d5	12.51	1154	135128	50.00	UG/L	100
48)	Bromofluorobenzene	14.55	1360	69860	46.59	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2701::D3 Quant Output File: ^B2701::D4
Name: B0658
Misc: MW-1 BLDG 2567 0.5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940407 11:58

Operator ID: MANAGER
Quant Time: 940407 13:03
Injected at: 940407 12:39

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80659	DILUTION FACTOR	1.00
CLIENT ID	MW-3 BLDG 2567	COMMENTS	HNU = 0.0
DATA FILE	>82676	DATE ANALYZED	04/05/94

COMPOUND	UG/L		MDL
Acrolein	ND		50
Acrylonitrile	ND		50
Chloromethane	ND		10
Bromomethane	ND		10
Vinyl Chloride	ND		10
Chloroethane	ND		10
Acetone	ND	B	10
1,1-Dichloroethene	ND		5
Carbon Disulfide	ND		10
Methylene Chloride	ND		5
1,2-Dichloroethene(trans)	ND		5
1,1-Dichloroethane	ND		5
Vinyl Acetate	ND		5
2-Butanone	ND		10
Chloroform	ND		5
1,1,1-Trichloroethane	ND		5
Carbon Tetrachloride	ND		5
1,2-Dichloroethane	ND		5
Benzene	ND		5
Trichloroethene	ND		5
1,2-Dichloropropane	ND		5
Bromodichloromethane	ND		5

COMPOUND	UG/L	MDL
2-Chloroethylvinylether	ND	10
2-Hexanone	ND	10
trans-1,3-Dichloropropene	ND	5
Toluene	ND	5
cis-1,3-Dichloropropene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,1,2-Trichloroethane	ND	5
4-Methyl-2-pentanone	ND	10
Tetrachloroethene	ND	5
Dibromochloromethane	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
m&p-Xylenes	ND	5
o-Xylene	ND	5
Styrene	ND	5
Bromoform	ND	5
m-Dichlorobenzene	ND	5
p-Dichlorobenzene	ND	5
o-Dichlorobenzene	ND	5
Methyl Tertiary Butyl Ether	ND	10
Tertiary Butyl Alcohol	ND	50

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	103	76 - 114	OK
Toluene-d8	99.3	88 - 110	OK
Bromofluorobenzene	93.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-3

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0659

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2676

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

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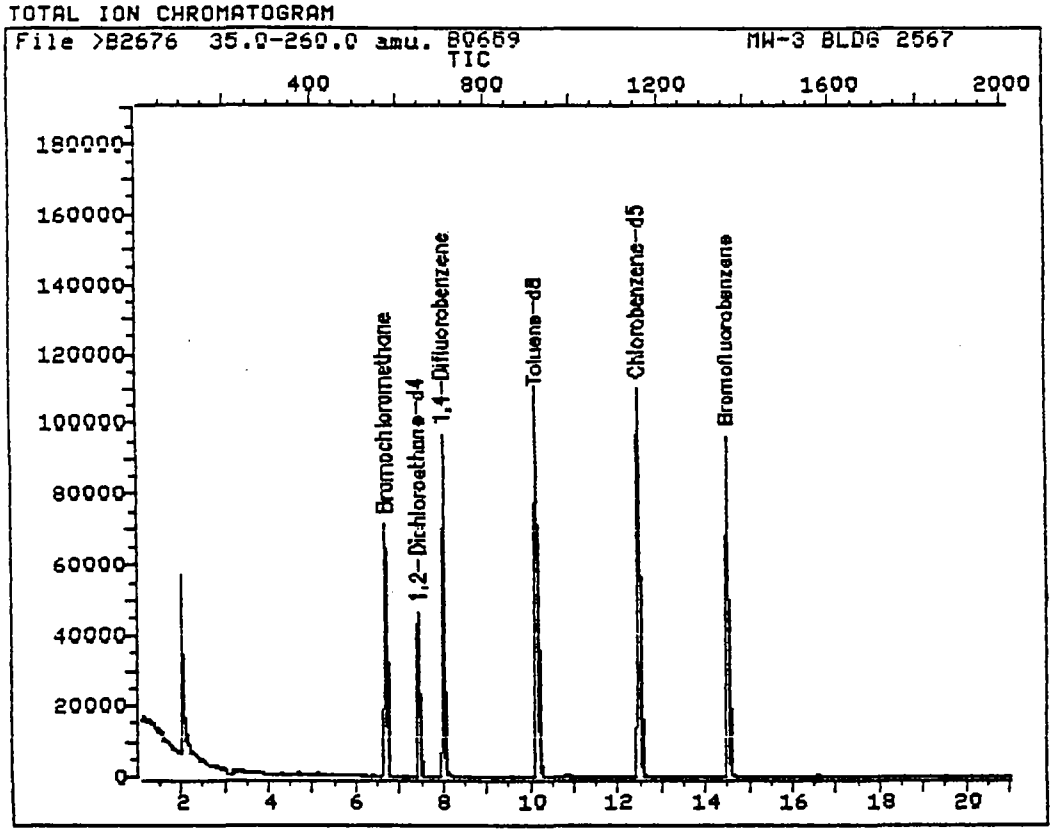
TOTAL ION CHROMATOGRAM



Data File: >B2676::D6 Quant Output File: ^B2676::QT
Name: B0659
Misc: MW-3 BLDG 2567 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

Operator ID: MANAGER
Quant Time: 940405 21:07
Injected at: 940405 20:43

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80660	DILUTION FACTOR	1.00
CLIENT ID	MW-2 BLDG 2567	COMMENTS	HNU 0.0
DATA FILE	>82687	DATE ANALYZED	04/06/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	17	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	2.5 J	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	11	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	99.0	76 - 114	OK
Toluene-d8	101	88 - 110	OK
Bromofluorobenzene	95.0	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

E1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NUMBER

MW-2

Client Name: US ARMY FT. MONMOUTH, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: 80660

Sample wt/vol: 5 (g/mL) ml Lab File ID: >82687

Level: LOW Date Received: 03/31/94

% Moisture: 100 Date Analyzed 04/06/94

Column: CAP Dilution Factor: 1

Number TICs Found 2 CONCENTRATION UNITS (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST CONC
1	526738	Benzene, trimethyl- Isomer (8CI9CI)	16.03	4
2	496117	1H-Indene, dihydro- Isomer (9CI)	17.16	4

QUANT REPORT

Operator ID: MANAGER
Output File: ^B2687::QT
Data File: >B2687::D2
Name: B0660
Misc: MW-2 BLDG 2567

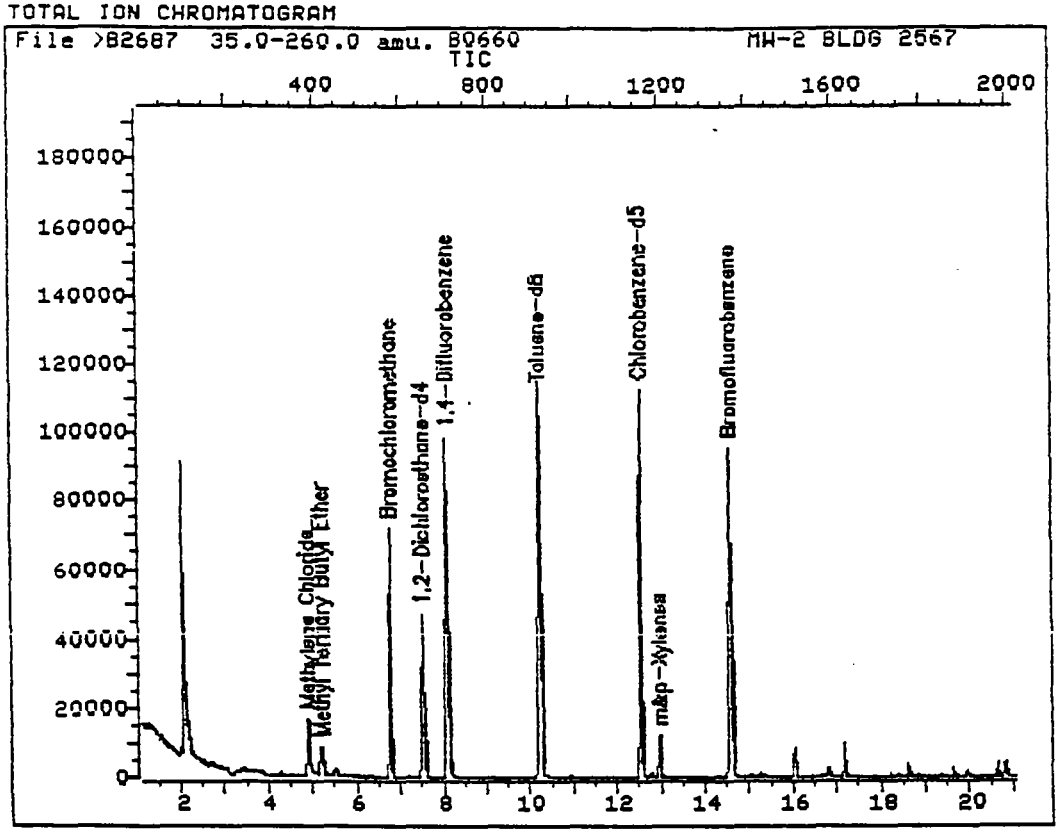
Quant Rev: 6
Quant Time: 940406 16:59
Injected at: 940406 16:35
Dilution Factor: 1.00000
5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940406 14:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.76	570	34824	50.00	UG/L	100
12)	Methyl Tertiary Butyl Ether	5.19	412	17772	11.42	UG/L	100
15)	Methylene Chloride	4.88	380	23725	17.22	UG/L	9(
23)	1,2-Dichloroethane-d4	7.51	646	53971	49.48	UG/L	100
24)	*1,4-Difluorobenzene	8.08	703	163209	50.00	UG/L	100
33)	Toluene-d8	10.22	919	164752	50.53	UG/L	10(
35)	*Chlorobenzene-d5	12.54	1154	138737	50.00	UG/L	100
44)	m&p-Xylenes	12.96	1196	16072	2.50	UG/L	99
48)	Bromofluorobenzene	14.57	1359	70420	47.50	UG/L	10(

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2687::D2 Quant Output File: ^B2687::QT
Name: B0660
Misc: MW-2 BLDG 2567 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940406 14:17

Operator ID: MANAGER
Quant Time: 940406 16:59
Injected at: 940406 16:35

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	80661	DILUTION FACTOR	1.00
CLIENT ID	FIELD BLANK BLDG 2567	COMMENTS	HNU N/A
DATA FILE	>82666	DATE ANALYZED	04/05/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	7.2 JB	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	2.3 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	106	76 - 114	OK
Toluene-d8	99.1	88 - 110	OK
Bromofluorobenzene	94.6	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD BLANK

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: B0661

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2666

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

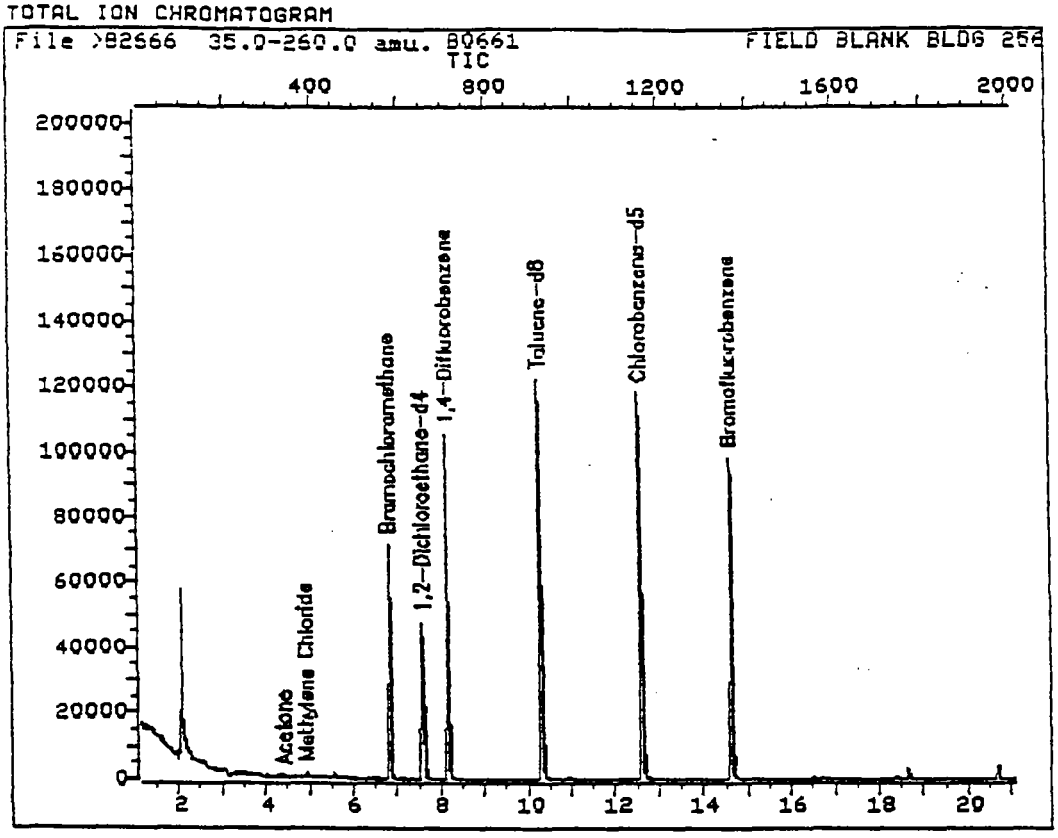
Operator ID: MANAGER Quant Rev: 6 Quant Time: 940405 16:31
Output File: ^B2666::QT Injected at: 940405 16:07
Data File: >B2666::D6 Dilution Factor: 1.00000
Name: B0661
Misc: FIELD BLANK BLDG 2567 5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.82	571	36189	50.00	UG/L	100
9)	Acetone	4.40	328	1633	7.18	UG/L	97
15)	Methylene Chloride	4.91	379	2077	2.27	UG/L	81
23)	1,2-Dichloroethane-d4	7.58	648	54499	53.19	UG/L	100
24)	*1,4-Difluorobenzene	8.15	705	173145	50.00	UG/L	100
33)	Toluene-d8	10.28	920	171085	49.54	UG/L	100
35)	*Chlorobenzene-d5	12.59	1152	143634	50.00	UG/L	100
48)	Bromofluorobenzene	14.61	1356	74589	47.31	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2666::D6 Quant Output File: ^B2666::QT
Name: B0661
Misc: FIELD BLANK BLDG 2567 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

Operator ID: MANAGER
Quant Time: 940405 16:31
Injected at: 940405 16:07

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Water
SAMPLE NUMBER	30662	DILUTION FACTOR	1.00
CLIENT ID	TRIP BLANK BLDG 2567	COMMENTS	HNU = N/A
DATA FILE	>82673	DATE ANALYZED	04/05/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	11 B	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	3.1 J	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	109	76 - 114	OK
Toluene-d8	97.6	88 - 110	OK
Bromofluorobenzene	94.8	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK

Lab Name: 21st Century Environmental Contract: N/A

Client Name: US Army Ft. Monmouth, NJ Client ID: BLDG 2567

Matrix: (soil/water) WATER Lab Sample ID: 80662

Sample wt/vol: 5 (g/mL) ml Lab File ID: >82673

Level: (low/med) LOW Date Received: 03/31/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO UNKNOWNS			

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

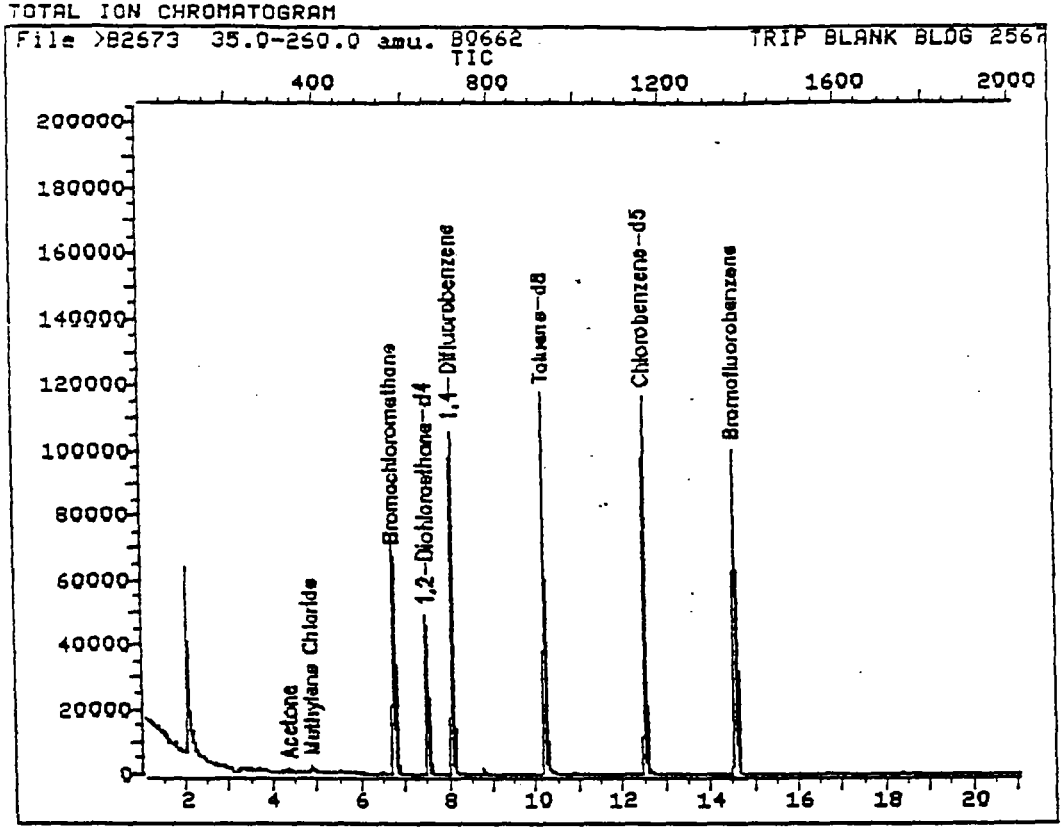
Operator ID: MANAGER Quant Rev: 6 Quant Time: 940405 19:44
Output File: ^82673::QT Injected at: 940405 19:20
Data File: >82673::D6 Dilution Factor: 1.00000
Name: B0662
Misc: TRIP BLANK BLDG 2567 5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.74	567	36547	50.00	UG/L	100
9)	Acetone	4.37	328	2578	11.22	UG/L	93
15)	Methylene Chloride	4.87	379	2839	3.08	UG/L	83
23)	1,2-Dichloroethane-d4	7.50	644	56391	54.50	UG/L	100
24)	*1,4-Difluorobenzene	8.07	701	175128	50.00	UG/L	100
33)	Toluene-d8	10.21	916	170454	48.80	UG/L	100
35)	*Chlorobenzene-d5	12.52	1149	145364	50.00	UG/L	100
48)	Bromofluorobenzene	14.57	1355	75618	47.39	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2673::D6 Quant Output File: ^B2673::QT
Name: B0662
Misc: TRIP BLANK BLDG 2567 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

Operator ID: MANAGER
Quant Time: 940405 19:44
Injected at: 940405 19:20

Q C RESULTS

ICP Batch # _____

GFAA Batch # 94-52

Hg Batch # _____

21st Century Environmental

Aqueous [X]

Solid [ ]

QUALITY CONTROL DATA

ELEMENT	MDL (ppm)	PREP BLK	LCS (% rec)	SAMPLE RESULT	DUPLICATE RESULT	RPD	SPIKE AMT. (ppm)	SPIKE (% rec)
Aluminum								
Antimony								
Barium								
Beryllium								
Cadmium								
Calcium								
Chromium								
Cobalt								
Copper								
Iron								
Magnesium								
Manganese								
Nickel								
Silver								
Sodium								
Vanadium								
Zinc								
Arsenic								
Lead	.003	N.D.	90	N.D.	N.D.	N.C.	.020	120
Selenium								
Thallium								
Mercury								
Potassium								

Comments: LCS WITHIN RANGE

21st Century Environmental

REDUCED DELIVERABLES

METALS
(BLANKS)

DATE: 4-5-94 INSTRUMENT ID: Z 5700

ELEMENT	MDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5
ARSENIC	0.005						
SELENIUM	0.005						
THALLIUM	0.01						
LEAD	0.003	ND	ND	ND	ND		
MERCURY	.0002						
POTASSIUM	0.50						

21st Century Environmental

REDUCED DELIVERABLES

METALS
(CHK STDS)

DATE: 4-5-94 INSTRUMENT ID: 23700

ELEMENT	TRUE ICV	TRUE CCV	%R ICV	%R CCV1	%R CCV2	%R CCV3	%R CCV4
ARSENIC	0.02	0.02					
SELENIUM	0.02	0.02					
THALLIUM	0.02	0.02					
LEAD	0.02	0.02	100	105	105	105	
MERCURY	.0002	.0002					
POTASSIUM	2.00	2.00					

21st Century Environmental Inc
WATER VOLATILE SURROGATE RECOVERY

SAMPLE NO.	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	TOT OUT
BLANK	105	97	95	0
B0637	100	105	99	0
B0638	103	100	97	0
B0640	103	99	95	0
B0643	103	99	96	0
B0645	104	102	99	0
B0644	95	110	104	0
BLANK	110	98	96	0
B0661	106	99	95	0
B0652	105	99	95	0
B0653	98	109	98	0
B0654	103	99	95	0
B0655	105	98	97	0
B0662	109	98	95	0
B0656	104	103	94	0
B0657	109	99	94	0
B0659	103	99	94	0
BLANK	93	96	98	0
B0639	97	99	98	0
B0641	98	95	100	0
B0642	96	93	99	0
B0660	99	101	95	0
BLANK	102	94	92	0
B0658	100	95	93	0
B0599MS	97	110	98	0
B0599MSD	99	104	100	0

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

Column used to flag surrogate recovery values

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: 21ST CENTURY ENVIRONMENTAL Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

Matrix Spike - EPA Sample No.: 80599

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	#	QC LIMITS REC.
1,1-Dichloroethene	50.00	ND	61.6	123		61-145
Trichloroethene	50.00	ND	46.3	93		71-120
Benzene	50.00	ND	50.1	100		76-127
Toluene	50.00	ND	53.4	107		76-125
Chlorobenzene	50.00	ND	53.2	106		75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	#	% RPD	#	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50.00	63.6	127		3		14	61-145
Trichloroethene	50.00	46.4	93		<1		14	71-120
Benzene	50.00	51.6	103		3		17	76-127
Toluene	50.00	50.6	101		6		12	76-125
Chlorobenzene	50.00	54.5	109		3		13	75-130

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

* Values outside of qc limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

_____

QUANT REPORT

Operator ID: MANAGER
Output File: ^B2628::QT
Data File: >B2628::D2
Name: B0599MS
Misc: MW-11

Quant Rev: 6
Quant Time: 940331 14:49
Injected at: 940331 14:24
Dilution Factor: 1.00000

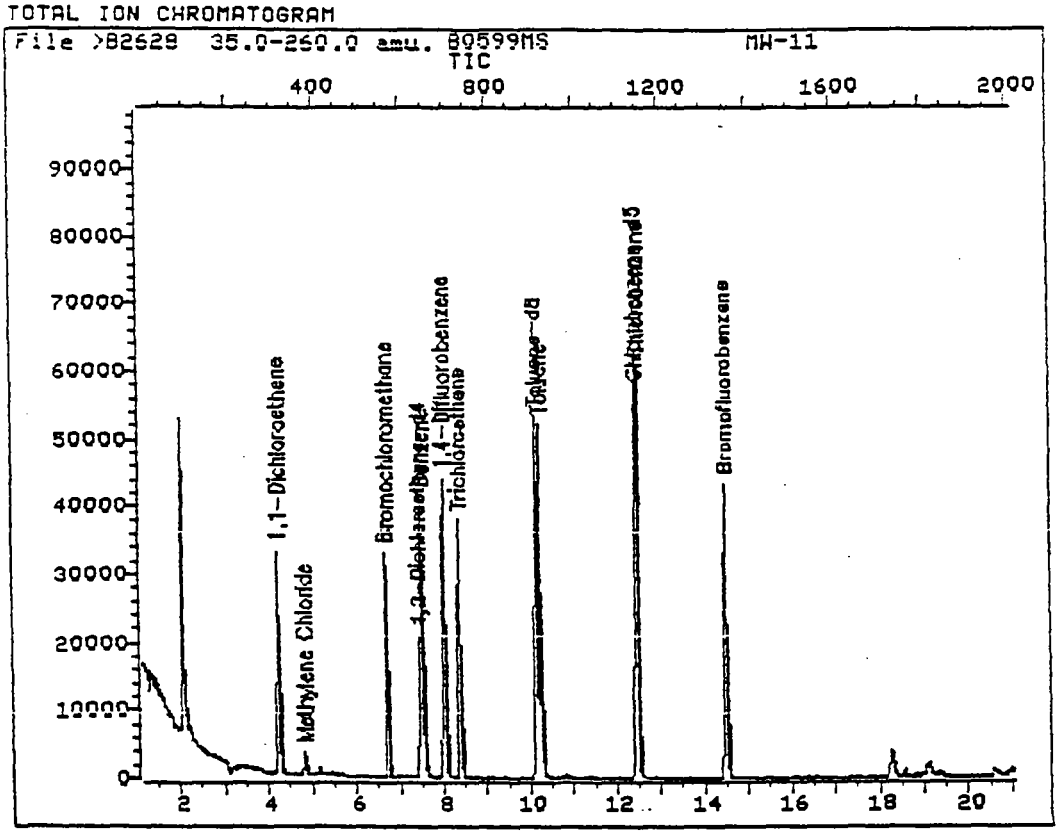
5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940331 12:45

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.70	560	16285	50.00	UG/L	100
10)	1,1-Dichloroethene	4.23	311	34731	61.62	UG/L	100
15)	Methylene Chloride	4.84	372	3373	7.41	UG/L	88
23)	1,2-Dichloroethane-d4	7.45	636	23690	48.51	UG/L	100
24)	*1,4-Difluorobenzene	8.02	693	71002M	50.00	UG/L	100
26)	Benzene	7.52	643	68699	50.09	UG/L	100
27)	Trichloroethene	8.38	730	23993	46.30	UG/L	80
33)	Toluene-d8	10.14	907	73850M	55.04	UG/L	100
34)	Toluene	10.25	918	77804	53.35	UG/L	98
35)	*Chlorobenzene-d5	12.45	1140	63122	50.00	UG/L	100
42)	Chlorobenzene	12.50	1145	63727	53.15	UG/L	99
48)	Bromofluorobenzene	14.49	1346	33231	49.14	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2628::D2
Name: B0599MS
Misc: MW-11

Quant Output File: ^B2628::QT

5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940331 12:45

Operator ID: MANAGER
Quant Time: 940331 14:49
Injected at: 940331 14:24

QUANT REPORT

Operator ID: MANAGER
Output File: ^82629::QT
Data File: >82629::D2
Name: 80599MSD
Misc: MW-11

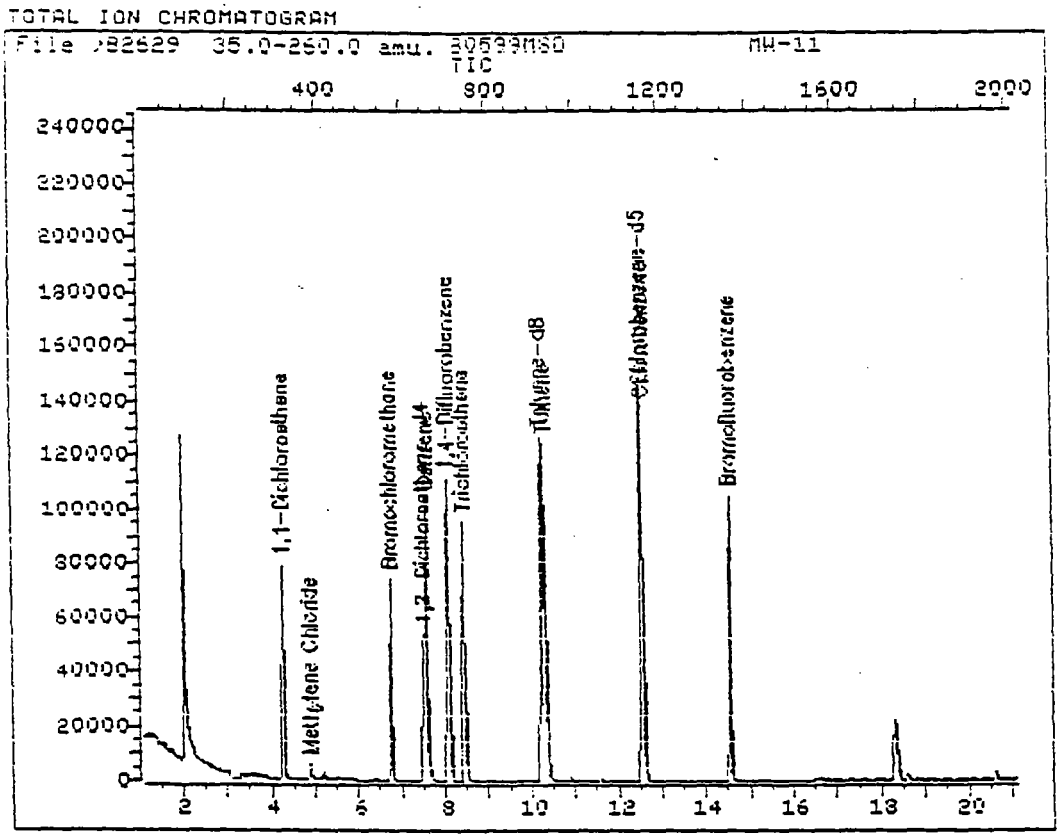
Quant Rev: 6
Quant Time: 940331 15:16
Injected at: 940331 14:52
Dilution Factor: 1.00000
5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940331 12:45

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.73	566	39227	50.00	UG/L	100
10)	1,1-Dichloroethene	4.24	315	86307	63.58	UG/L	100
15)	Methylene Chloride	4.86	377	7121	6.49	UG/L	88
23)	1,2-Dichloroethane-d4	7.50	644	58471	49.71	UG/L	100
24)	*1,4-Difluorobenzene	8.07	701	183448	50.00	UG/L	100
26)	Benzene	7.57	651	182713	51.56	UG/L	100
27)	Trichloroethene	8.43	738	62183	46.44	UG/L	81
33)	Toluene-d8	10.21	917	180183	51.98	UG/L	100
34)	Toluene	10.31	927	190599	50.58	UG/L	98
35)	*Chlorobenzene-d5	12.52	1150	148336	50.00	UG/L	100
42)	Chlorobenzene	12.57	1155	153524	54.49	UG/L	94
48)	Bromofluorobenzene	14.54	1354	79099	49.77	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2629::D2 Quant Output File: ^B2629::QT

Name: B0599MSD

Misc: MW-11 5ml

Id File: ID0401::SC

Title: USEPA 624 VOLATILES

Last Calibration: 940331 12:45

Operator ID: MANAGER

Quant Time: 940331 15:16

Injected at: 940331 14:52

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

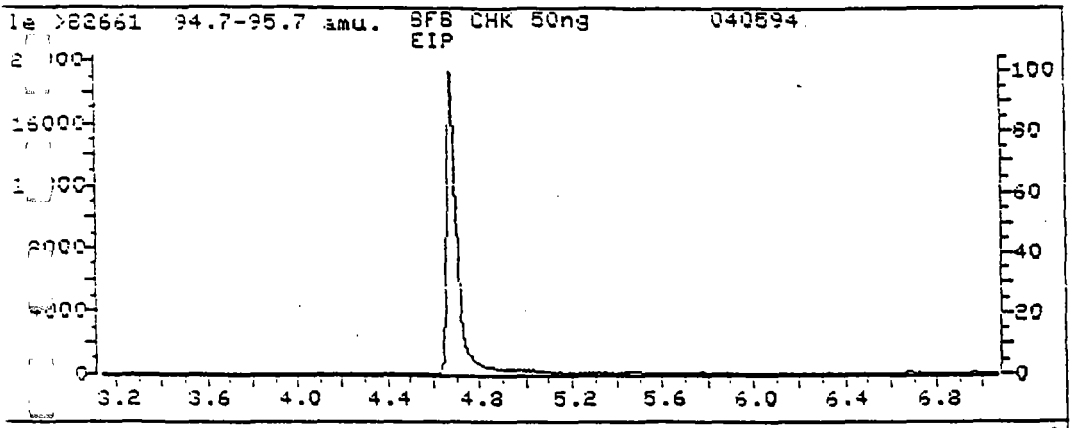
DATE AND TIME OF INJECTION: 4/05/94 12:00
INSTRUMENT ID: 5995

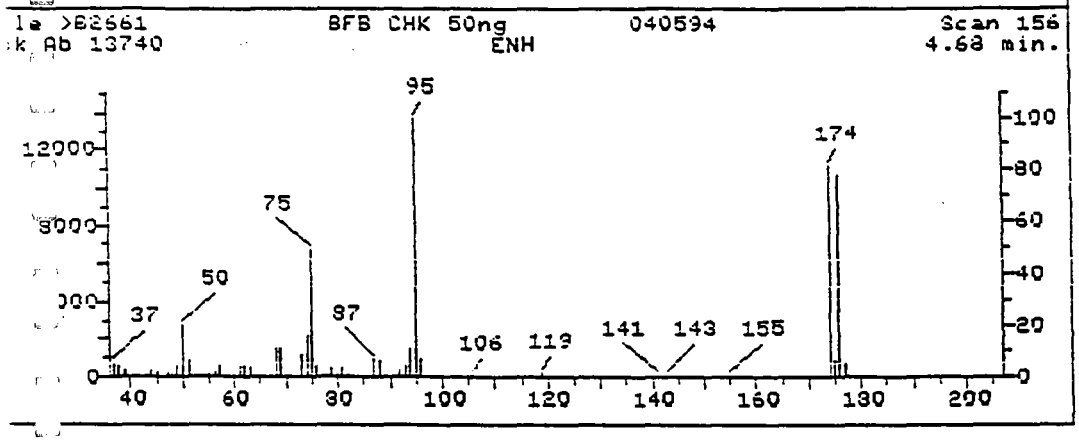
DATA RELEASE AUTHORIZED BY James Dickworth.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	19.60	19.60	Ok
75	30-60% of mass 95	48.83	48.83	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.84	6.84	Ok
173	Less than 2% of mass 174	.30	.37	Ok
174	Greater than 50% of mass 95	81.70	81.70	Ok
175	5-9% of mass 174	5.90	7.22	Ok
176	95-101% of mass 174	77.71	95.11	Ok
177	5-9% of mass 176	4.88	6.28	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID	LAB ID		DATE TIME
>B2661::D3	BFB CHK 50ng		4/05/94 12:00
>B2662::D3	HSL CAL STD 50ppb		4/05/94 12:31
>B2665::D6	BLANK		4/05/94 15:40
>B2666::D6	B0661		4/05/94 16:07
>B2667::D6	B0662		4/05/94 16:35
>B2668::D6	B0690		4/05/94 17:02
>B2669::D6	B0652		4/05/94 17:30
>B2670::D6	B0653		4/05/94 17:57
>B2671::D6	B0654		4/05/94 18:25
>B2672::D6	B0655		4/05/94 18:52
>B2673::D6	B0662		4/05/94 19:20
>B2674::D6	B0656		4/05/94 19:47
>B2675::D6	B0657		4/05/94 20:15
>B2676::D6	B0659		4/05/94 20:43





>B2661 BFB CHK 50ng 040594
156 NRM ENH

File: >B2661 Scan #: 156 Retn. time: 4.68

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	.822	55.10	.699	73.00	8.186	88.00	5.872	119.00	1.738
37.05	5.438	56.10	1.929	74.10	15.679	91.00	.905	129.95	.100
37.95	4.389	57.00	3.866	75.00	48.832	92.00	2.742	133.05	.220
39.05	2.277	60.00	1.035	76.00	4.127	93.00	4.036	134.05	.237
40.95	1.055	61.00	4.542	77.10	1.249	94.00	11.181	140.95	.566
43.10	1.128	62.00	4.243	78.00	.735	95.00	100.000	142.95	.501
44.00	2.435	63.00	3.185	78.90	3.115	96.00	6.836	154.95	.146
45.10	1.678	67.00	.277	79.90	.792	103.90	.443	173.05	.300
47.00	1.533	68.00	10.628	80.90	3.013	105.00	.533	173.95	81.700
48.00	.604	69.00	10.469	81.90	.735	105.90	.534	174.95	5.903
49.00	4.239	70.00	1.070	83.00	.262	115.90	.231	175.95	77.708
50.10	19.599	71.10	.352	85.00	.237	116.90	.984	176.95	4.884
51.10	5.937	72.00	.477	87.00	6.645	117.90	.205	206.95	.718
53.00	.063								

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

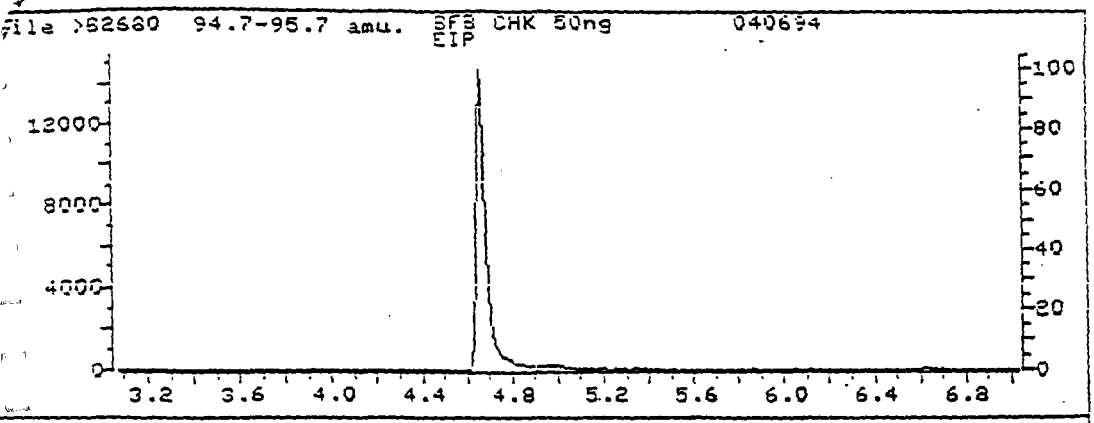
DATE AND TIME OF INJECTION: 4/06/94 12:35
INSTRUMENT ID: 5995

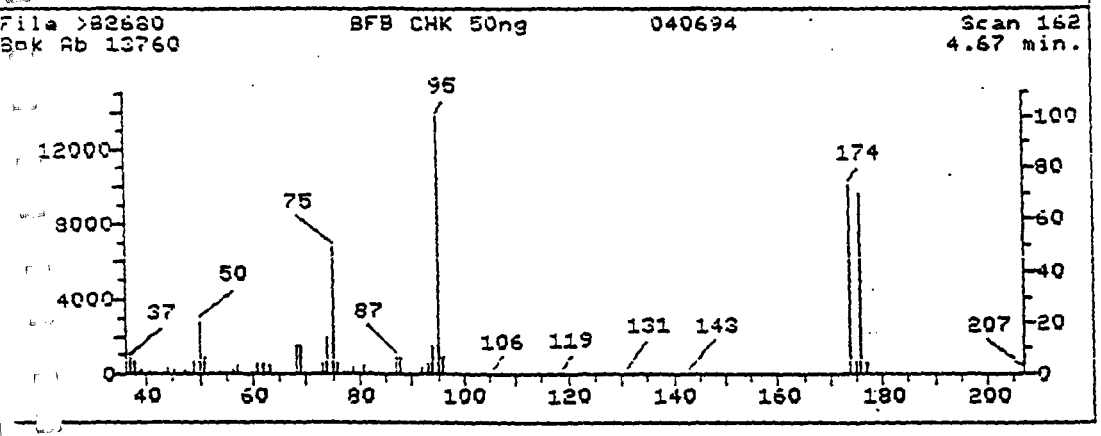
DATA RELEASE AUTHORIZED BY _____.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	20.08	20.08	Ok
75	30-60% of mass 95	48.59	48.59	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.45	6.45	Ok
173	Less than 2% of mass 174	.57	.78	Ok
174	Greater than 50% of mass 95	73.31	73.31	Ok
175	5-9% of mass 174	5.38	7.34	Ok
176	95-101% of mass 174	69.99	95.47	Ok
177	5-9% of mass 176	4.59	6.55	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID	LAB ID		DATE TIME
>82680::D2	BFB CHK 50ng		4/06/94 12:35
>82681::D2	HSL CAL STD 50ppb		4/06/94 13:14
>82682::D2	BLANK		4/06/94 14:09
>82683::D2	B0689		4/06/94 14:45
>82684::D2	B0639		4/06/94 15:12
>82685::D2	B0641		4/06/94 15:40
>82686::D2	B0642		4/06/94 16:07
>82687::D2	B0660		4/06/94 16:35
>82689::D2	B0690		4/06/94 17:30
>82690::D2	B0626		4/06/94 17:57
>82692::D2	B0628		4/06/94 18:52
>82693::D2	B0622		4/06/94 19:20
>82695::D2	B0624		4/06/94 20:15
>82696::D2	B0625		4/06/94 20:43





>82680 BFB CHK 50ng 040694
162 NRM

File: >82680 Scan #: 162 Retn. time: 4.67

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.05	1.003	50.00	20.080	69.00	10.785	81.90	.705	117.90	.501
36.95	5.480	51.10	6.206	70.00	.981	87.00	6.417	119.00	.749
38.05	4.760	54.90	.763	73.00	4.513	88.00	5.865	131.15	.342
41.95	2.064	56.10	1.846	74.00	13.757	90.90	.472	142.95	.727
41.95	.545	57.00	3.394	75.00	48.590	92.00	2.580	173.05	.574
41.95	.349	60.00	1.228	76.00	4.281	93.00	3.917	173.95	73.307
44.00	2.842	61.00	4.440	77.00	1.003	94.00	11.214	174.95	5.378
45.10	1.388	62.00	4.520	78.00	.552	95.00	100.000	175.95	69.985
47.10	1.817	63.10	3.350	78.90	2.798	96.10	6.453	176.95	4.586
48.00	.574	67.10	.414	80.00	.967	105.90	.487	206.95	.741
49.10	4.717	68.00	10.959	80.90	3.074	117.00	.567		

21st Century Environmental Inc.

GC/MS STANDARD p-BROMOFLUOROBENZENE (BFB) TUNE
CRITERIA FOR VOLATILES 50ng

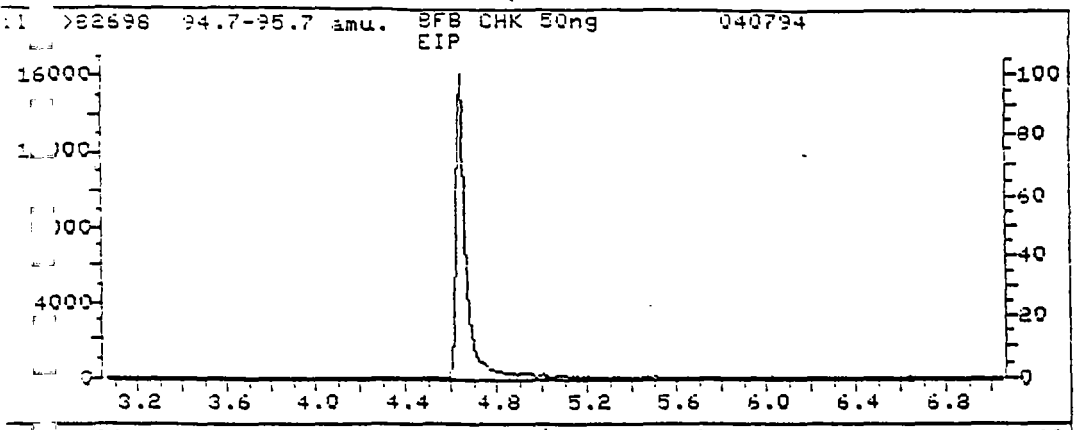
DATE AND TIME OF INJECTION: 4/07/94 10:12
INSTRUMENT ID: 5995

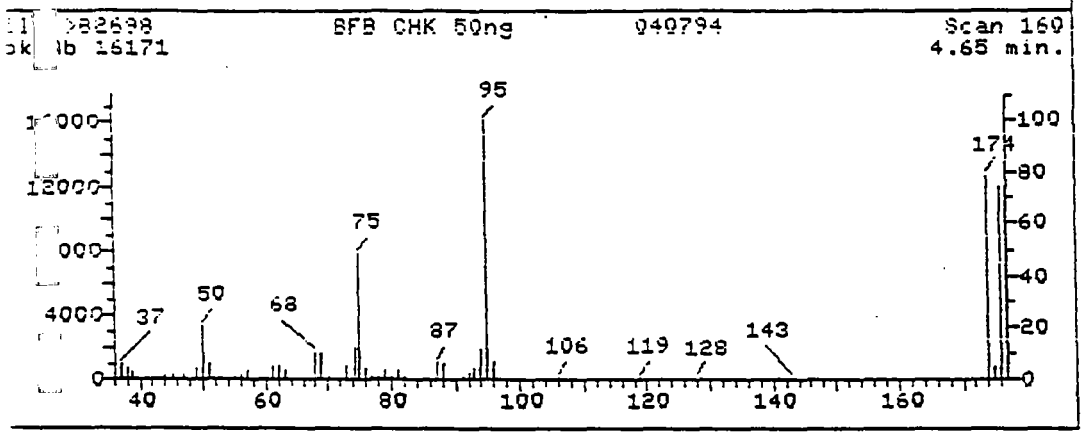
DATA RELEASE AUTHORIZED BY James Dalsworth.

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
50	15-40% of mass 95	19.28	19.28	Ok
75	30-60% of mass 95	47.24	47.24	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.76	6.76	Ok
173	Less than 2% of mass 174	.52	.65	Ok
174	Greater than 50% of mass 95	80.71	80.71	Ok
175	5-9% of mass 174	5.82	7.21	Ok
176	95-101% of mass 174	76.87	95.25	Ok
177	5-9% of mass 176	5.06	6.59	Ok

THIS PERFORMANCE AFFECTS ALL SAMPLES
STANDARDS AND BLANKS LISTED BELOW

SAMPLE ID		LAB ID		DATE TIME
>82698::02		BFB CHK 50ng		4/07/94 10:12
>82699::02		HSL CAL STD 50ppb		4/07/94 10:43
>82700::03		BLANK		4/07/94 12:09
>82701::03		80658		4/07/94 12:39
>82702::03		80623		4/07/94 13:07
>82703::03		80626		4/07/94 13:34
>82704::03		80621		4/07/94 14:02
>82705::03		80646		4/07/94 14:29
>82706::03		80647		4/07/94 14:57
>82707::03		80650		4/07/94 15:24
>82708::03		80669		4/07/94 15:52
>82709::03		80670		4/07/94 16:20
>82710::03		80671		4/07/94 16:47
>82711::03		80672		4/07/94 17:14
>82712::03		80673		4/07/94 17:42
>82713::03		80627		4/07/94 18:10
>82714::03		80694		4/07/94 18:37
>82715::03		80695		4/07/94 19:05
>82716::03		80696		4/07/94 19:33
>82717::03		80697		4/07/94 20:00





> 2698 BFB CHK 50ng 040794
160 NRM ENH

File: >82698 Scan #: 160 Retn. time: 4.65

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
35.95	.876	55.00	.646	72.00	.471	88.00	5.827	118.90	1.001
37.05	5.314	56.00	1.563	73.00	5.174	91.00	.368	127.95	.228
3.05	4.623	57.00	3.622	74.10	14.425	92.00	2.702	129.85	.292
3.95	1.904	60.00	.763	75.00	47.241	93.00	3.892	140.95	.548
41.05	.516	61.00	4.590	76.00	4.036	94.00	11.060	142.95	.598
3.10	.606	62.00	4.501	77.00	1.010	95.00	100.000	171.85	.370
4.00	2.735	63.10	3.197	78.00	.638	96.00	6.764	172.95	.521
45.10	1.063	67.00	.115	78.90	3.070	103.90	.357	173.95	80.711
7.00	1.581	68.00	10.637	79.90	.790	105.90	.262	174.95	5.819
9.00	4.143	69.00	10.125	80.90	3.042	115.90	.288	175.95	76.874
50.00	19.283	70.10	.720	82.00	.551	116.90	.665	176.95	5.064
51.00	5.884	71.00	.222	87.00	6.415				

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/05/94

Contractor: 21ST Century Env Time: 12:31

Contract No: Laboratory ID: >82662

Instrument ID: Volatile Inst B Initial Calibration Date: 03/29/94

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Chloromethane	.52627	.38553	26.74		**	
Bromomethane	.35054	.27390	21.86			
Vinyl Chloride	.77645	.65727	15.35	*		
Chloroethane	.33534	.36220	8.01			
Acrolein	.01313	.01617	23.18			(Conc=100.00)
1,1,2-Trichlorotrifluoroethane	1.71305	1.72978	.98			
Trichlorofluoromethane	2.40429	2.55589	6.31			
Acetone	.31714	.31440	.86			
1,1-Dichloroethene	1.59062	1.61826	1.74	*		
Carbon Disulfide	2.19139	2.27859	3.98			
Methyl Tertiary Butyl Ether	2.40057	1.92602	19.77			
Tertiary Butyl Alcohol	.14636	.15135	3.41			(Conc=100.00)
Acrylonitrile	.12158	.13850	13.92			(Conc=100.00)
Methylene Chloride	1.35719	1.26302	6.94			
1,2-Dichloroethene(trans)	1.40164	1.44997	3.45			
1,1-Dichloroethane	2.15869	1.91142	11.45		**	
Vinyl Acetate	2.60564	1.64296	36.95			
2-Butanone	.59931	.58603	2.22			
Chloroform	2.45926	2.60963	6.11	*		
1,1,1-Trichloroethane	1.86810	1.86187	.33			
Carbon Tetrachloride	1.73316	1.67893	3.13			
1,2-Dichloroethane-d4	1.52274	1.41551	7.04			(Conc=50.00)
1,2-Dichloroethane	.35715	.38608	8.10			
Benzene	.86635	1.01080	16.67			
Trichloroethene	.31244	.38209	22.29			
1,2-Dichloropropane	.30614	.35921	17.33	*		
Bromodichloromethane	.43229	.45931	6.25			
2-Chloroethylvinylether	.21225	.24101	13.55			
2-Hexanone	.20123	.20660	2.67			
trans-1,3-Dichloropropene	.47234	.53438	13.13			
Toluene-d8	.95196	.99723	4.76			
Toluene	.95692	1.10728	15.71	*		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/05/94

Contractor: 21ST Century Env Time: 12:31

Contract No: Laboratory ID: >82662

Instrument ID: Volatile Inst B Initial Calibration Date: 03/29/94

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-Dichloropropene	.53257	.55780	4.74			
1,1,2,2-Tetrachloroethane	.51434	.40422	21.41		**	
1,1,2-Trichloroethane	.33146	.36008	8.64			
4-Methyl-2-pentanone	.36493	.36526	.09			
Tetrachloroethene	.41183	.40249	2.27			
Dibromochloromethane	.45505	.46955	3.19			
Chlorobenzene	.89716	.97031	8.15		**	
Ethylbenzene	1.44444	1.58177	9.51	*		
m&p-Xylenes	1.01574	1.16902	15.09			(Conc=100.00)
o-Xylene	1.08074	1.21304	12.24			
Styrene	.88596	1.01361	14.41			
Bromoform	.36324	.36075	.68		**	
Bromofluorobenzene	.54771	.54887	.21			
m-Dichlorobenzene	.75776	.80184	5.82			
p-Dichlorobenzene	.77133	.80184	3.96			
o-Dichlorobenzene	.71179	.75305	5.80			

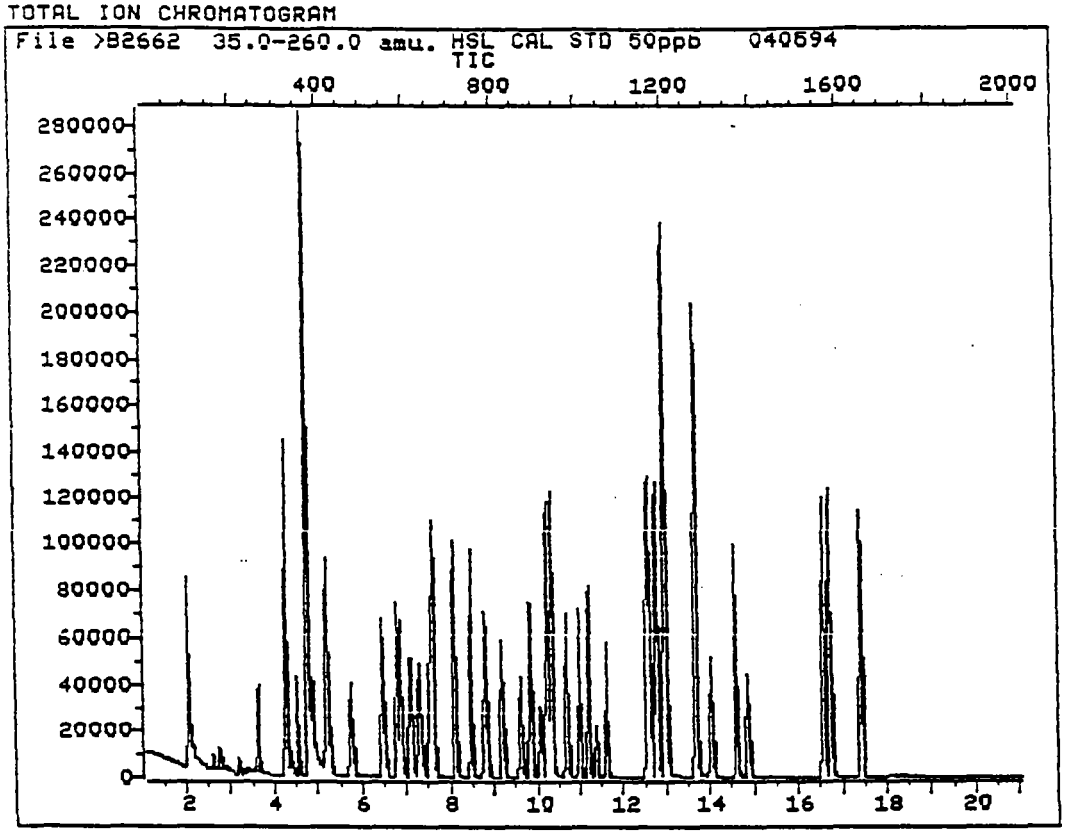
RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

TOTAL ION CHROMATOGRAM



Data File: >B2662::D3 Quant Output File: ^B2662::QT
Name: HSL CAL STD 50ppb
Misc: 040594

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940404 15:56

Operator ID: JEFF
Quant Time: 940405 13:07
Injected at: 940405 12:31

Continuing Calibration Check
HSL Compounds

File No: Calibration Date: 04/06/94

Contractor: 21ST Century Env Time: 13:14

Contract No: Laboratory ID: >82681

Instrument ID: Volatile Inst B Initial Calibration Date: 03/29/94

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
Chloromethane	.52627	.42547	19.15		**	
Bromomethane	.35054	.30365	13.38			
Vinyl Chloride	.77645	.70478	9.23	*		
Chloroethane	.33534	.40594	21.05			
Acrolein	.01313	.01806	37.62			(Conc=100.00)
1,1,2-Trichlorotrifluoroethane	1.71305	1.90520	11.22			
Trichlorofluromethane	2.40429	2.79256	16.15			
Acetone	.31714	.35707	12.59			
1,1-Dichloroethene	1.59062	1.74049	9.42	*		
Carbon Disulfide	2.19139	2.40632	9.81			
Methyl Tertiary Butyl Ether	2.40057	2.23460	6.91			
Tertiary Butyl Alcohol	.14636	.13702	6.38			(Conc=100.00)
Acrylonitrile	.12158	.15508	27.56			(Conc=100.00)
Methylene Chloride	1.35719	1.97846	45.78			
1,2-Dichloroethene(trans)	1.40164	1.60004	14.15			
1,1-Dichloroethane	2.15869	2.29661	6.39		**	
Vinyl Acetate	2.60564	2.60300	.10			
2-Butanone	.59931	.64480	7.59			
Chloroform	2.45926	2.73289	11.13	*		
1,1,1-Trichloroethane	1.86810	2.04349	9.39			
Carbon Tetrachloride	1.73316	1.86843	7.80			
1,2-Dichloroethane-d4	1.52274	1.56614	2.85			(Conc=50.00)
1,2-Dichloroethane	.35715	.36486	2.16			
Benzene	.86635	.98248	13.40			
Trichloroethene	.31244	.37303	19.39			
1,2-Dichloropropane	.30614	.34318	12.10	*		
Bromodichloromethane	.43229	.47553	10.00			
2-Chloroethylvinylether	.21225	.24703	16.39			
2-Hexanone	.20123	.21499	6.84			
trans-1,3-Dichloropropene	.47234	.52964	12.13			
Toluene-d8	.95196	.99894	4.94			
Toluene	.95692	1.10915	15.91	*		

RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

% Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 04/06/94

Contractor: 21ST Century Env Time: 13:14

Contract No: Laboratory ID: >82681

Instrument ID: Volatile Inst 8 Initial Calibration Date: 03/29/94

Minimum $\overline{RF}$ for SPCC is .300 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
cis-1,3-Dichloropropene	.53257	.57753	8.44			
1,1,2,2-Tetrachloroethane	.51434	.45263	12.00		**	
1,1,2-Trichloroethane	.33146	.37113	11.97			
4-Methyl-2-pentanone	.36493	.39815	9.10			
Tetrachloroethene	.41183	.42066	2.14			
Dibromochloromethane	.45505	.48534	6.66			
Chlorobenzene	.89716	.96816	7.91		**	
Ethylbenzene	1.44444	1.56525	8.36	*		
m&p-Xylenes	1.01574	1.15626	13.83			(Conc=100.00)
o-Xylene	1.08074	1.17237	8.48			
Styrene	.88596	.96362	8.77			
Bromoform	.36324	.35416	2.50		**	
Bromofluorobenzene	.54771	.53426	2.45			
m-Dichlorobenzene	.75776	.80013	5.59			
p-Dichlorobenzene	.77133	.80013	3.73			
o-Dichlorobenzene	.71179	.74439	4.58			

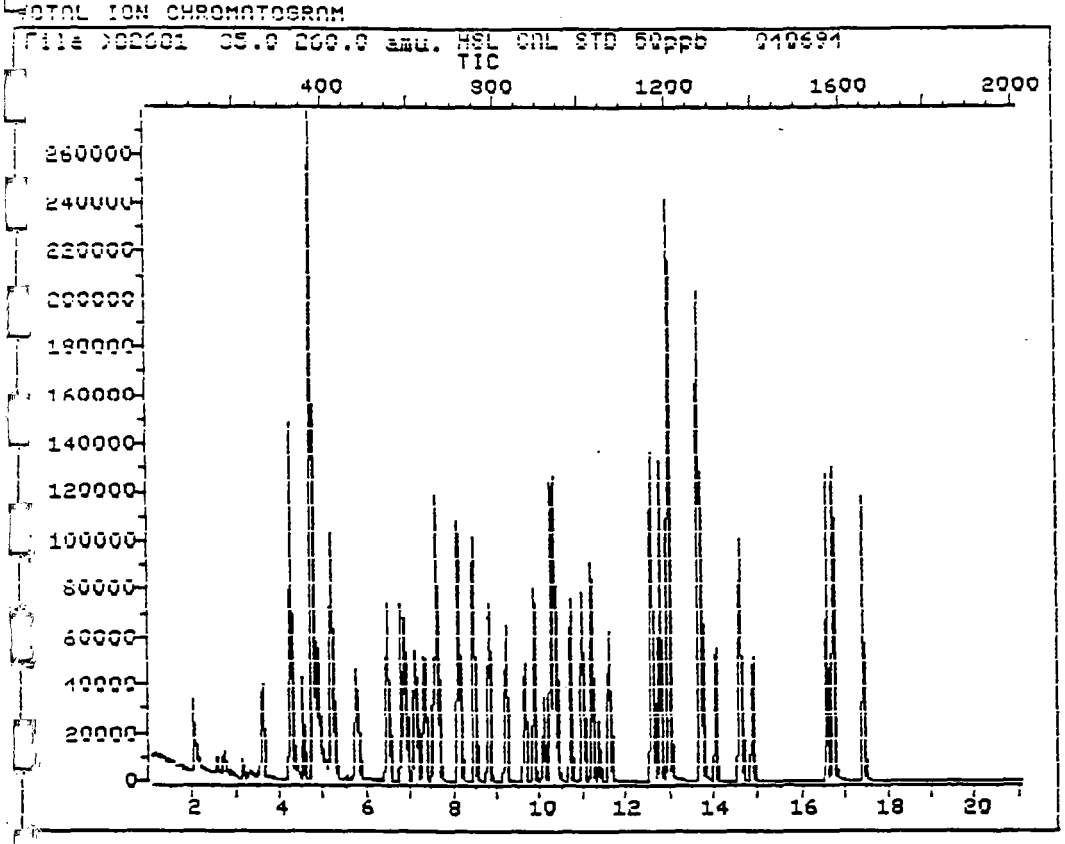
RF - Response Factor from daily standard file at 50.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

TOTAL ION CHROMATOGRAM



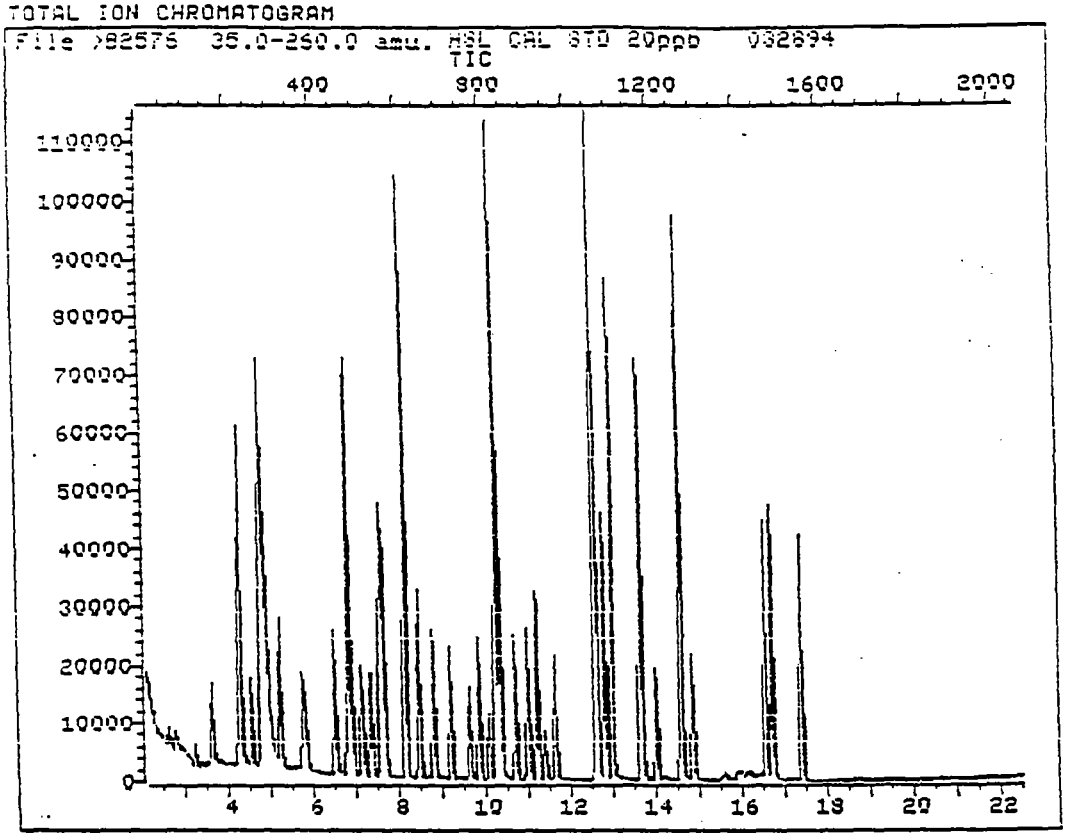
Data File: >B2681::D2
Name: HSL CAL STD 50ppb
Misc: 040694

Quant Output File: ^B2681::QT

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

Operator ID: MANAGER
Quant Time: 940406 13:41
Injected at: 940406 13:14

TOTAL ION CHROMATOGRAM

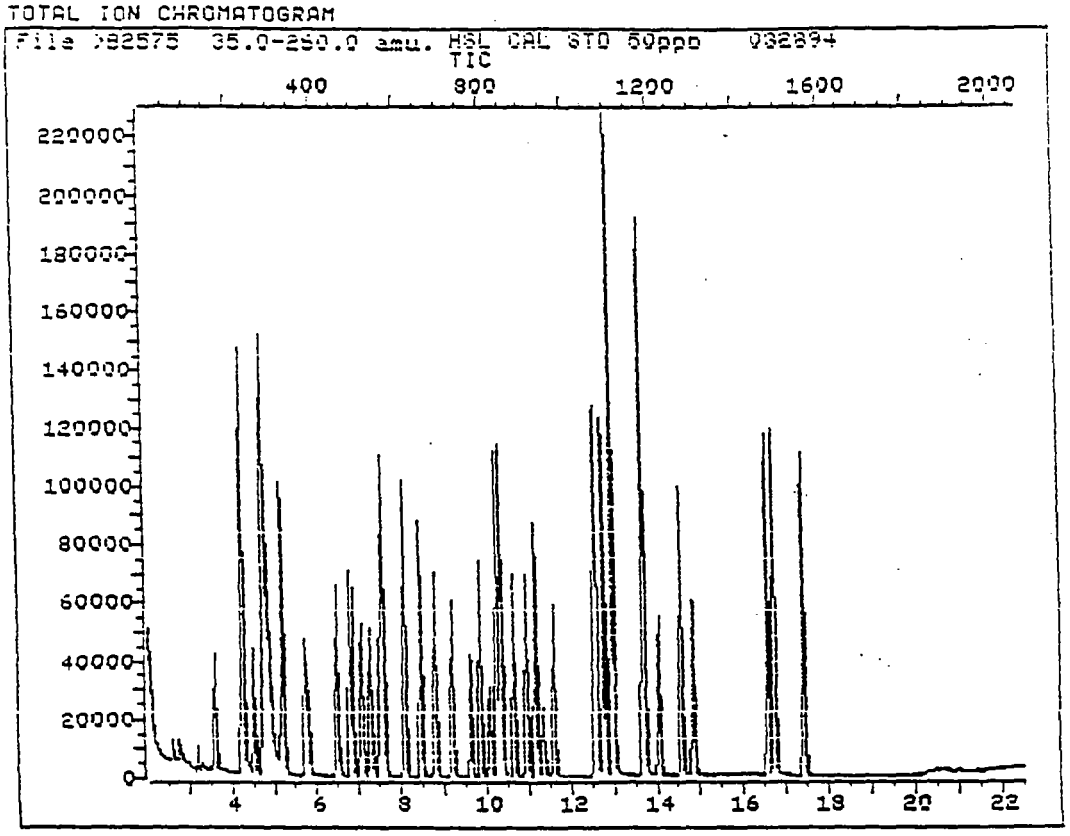


Data File: >82576::D3 Quant Output File: ^82576::QT
Name: HSL CAL STD 20ppb
Misc: 032894

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940329 14:30

Operator ID: MANAGER
Quant Time: 940329 14:32
Injected at: 940328 13:35

TOTAL ION CHROMATOGRAM

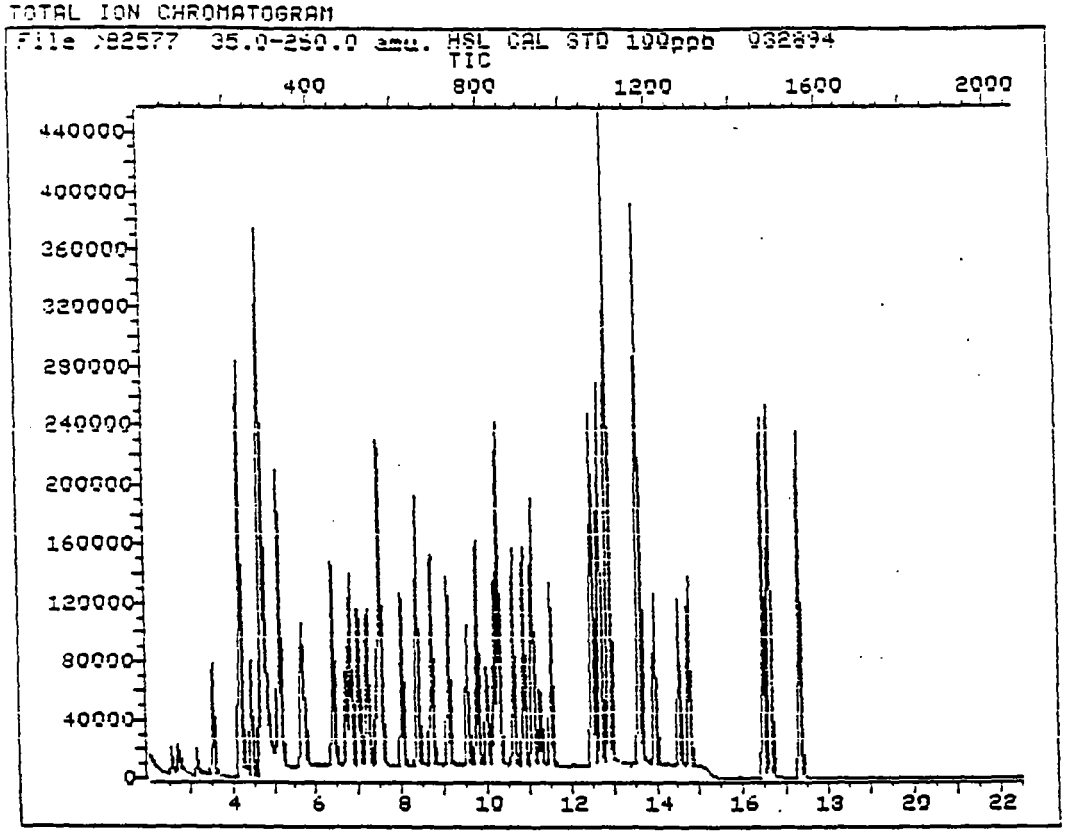


Data File: >82575::D3 Quant Output File: ^82575::QT
Name: HSL CAL STD 50ppb
Misc: 032894

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940329 14:07

Operator ID: MANAGER
Quant Time: 940329 14:07
Injected at: 940328 12:25

TOTAL ION CHROMATOGRAM

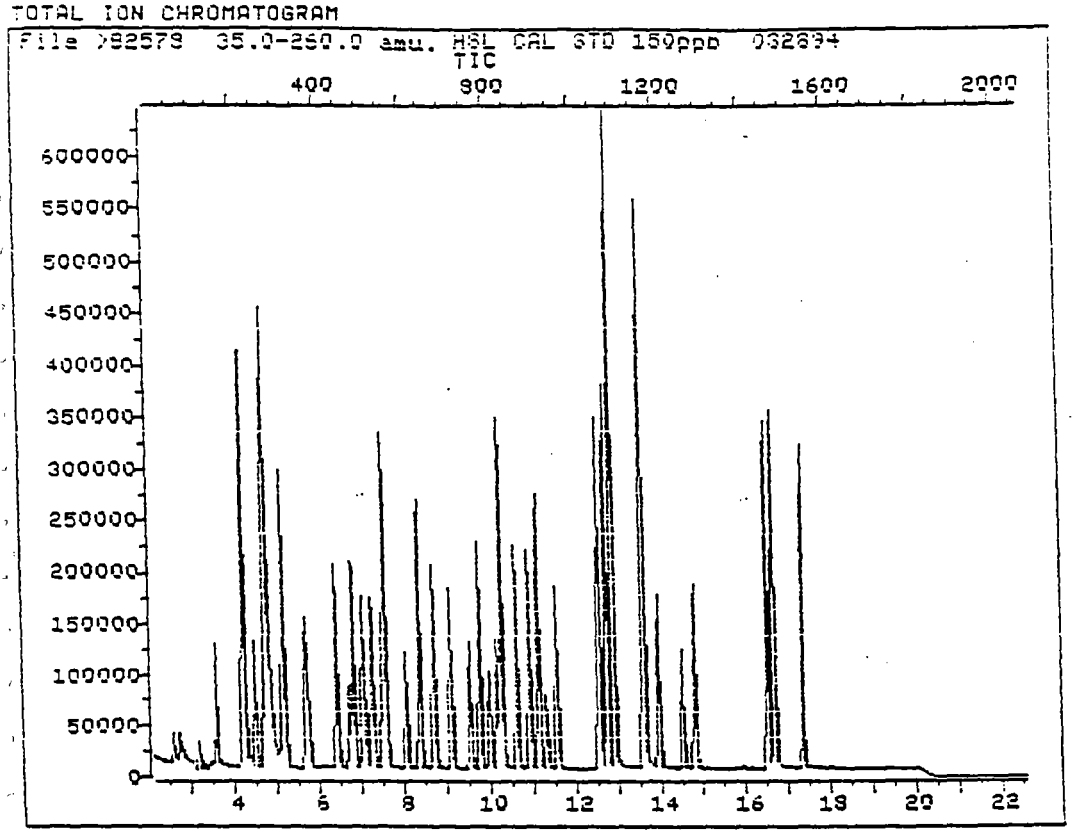


Data File: >82577::03 Quant Output File: ^82577::QT
Name: HSL CAL STD 100ppb
Misc: 032894

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940329 14:30

Operator ID: MANAGER
Quant Time: 940329 14:36
Injected at: 940328 14:55

TOTAL ION CHROMATOGRAM

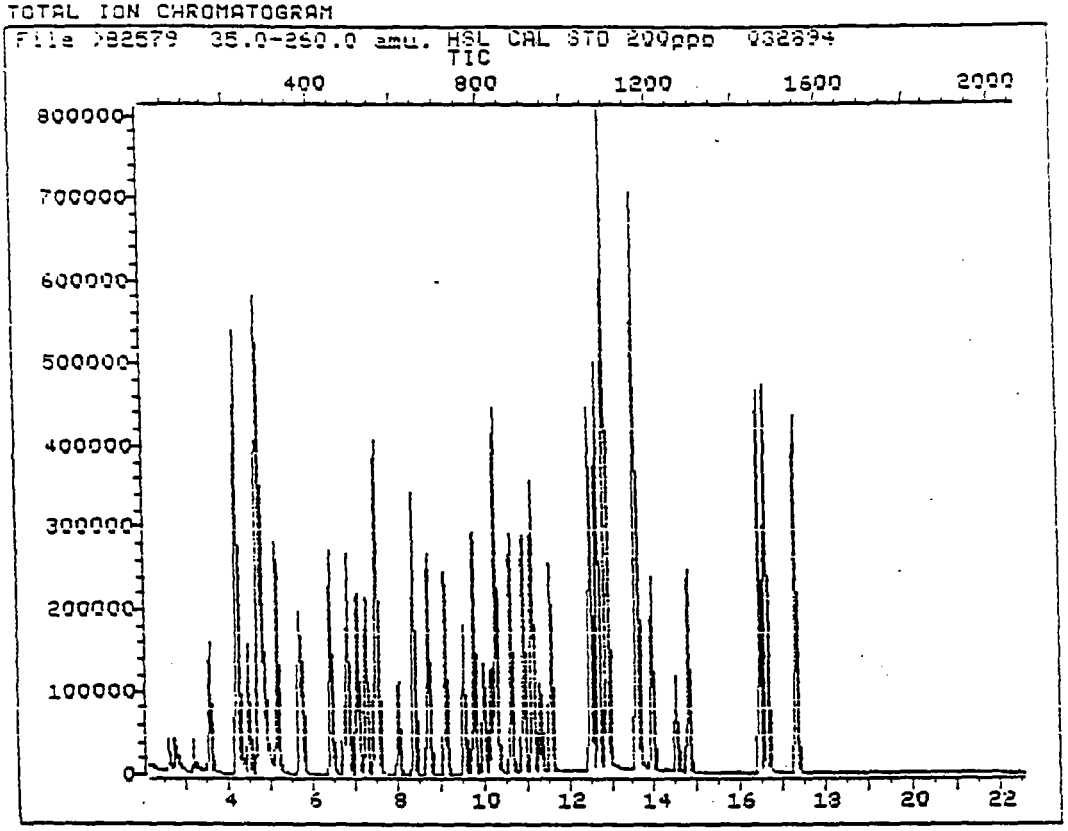


Data File: >82578::03 Quant Output File: ^82578::QT
Name: HSL CAL STD 150ppb
Misc: 032894

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940329 14:30

Operator ID: MANAGER
Quant Time: 940329 14:41
Injected at: 940328 15:23

TOTAL ION CHROMATOGRAM



Data File: >82579::D3 Quant Output File: ^82579::QT
Name: HSL CAL STD 200ppb
Misc: 032894

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940329 14:30

Operator ID: MANAGER
Quant Time: 940329 14:47
Injected at: 940328 15:56

21st Century Environmental Inc.
VOLATILE INTERNAL STANDARD AREA SUMMARY

LAB ID FILE (STANDARD): >82662 DATE ANALYZED: 04/05/94

INSTRUMENT ID: 5970 TIME ANALYZED: 12:31

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

	IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
12 HOUR STD	38225		6.77	164012		8.10	135250		12.56
UPPER LIMIT	76450			328024			270500		
LOWER LIMIT	19113			82006			67625		
LAB SAMPLE No.									
1 BLANK	36183		6.765	177752		8.10	147237		12.56
2 80661	36189		6.816	173145		8.15	143634		12.59
3 80602	35843		6.760	174514		8.09	120950		12.56
4 80690	19018*		6.769	80118*		8.08	65053*		12.53
5 80652	37998		6.780	178137		8.10	148629		12.54
6 80653	27122		6.770	114233		8.10	106258		12.55
7 80654	39166		6.771	181056		8.10	149513		12.56
8 80655	37699		6.714	177440		8.05	147124		12.53
9 80662	36547		6.740	175128		8.07	145364		12.52
10 80656	37184		6.767	172911		8.09	149449		12.52
11 80657	36209		6.719	172857		8.05	143332		12.50
12 80659	36475		6.690	160614		8.02	135778		12.48
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

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

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

Column used to flag internal standard area values with an asterisk
* Outside volatile area limits

21st Century Environmental Inc.
VOLATILE INTERNAL STANDARD AREA SUMMARY

LAB ID FILE (STANDARD): >82681 DATE ANALYZED: 04/06/94

INSTRUMENT ID: 5970 TIME ANALYZED: 13:14

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

	IS1(BCM) AREA	#	RT	IS2(DFB) AREA	#	RT	IS3(CBZ) AREA	#	RT
12 HOUR STD	36816		6.78	177988		8.12	143547		12.58
UPPER LIMIT	73632			355976			287094		
LOWER LIMIT	18408			88994			71773		
	LAB SAMPLE No.								
1	BLANK		38749	16.805	182085		8.14	141048	12.61
2	80689		37543	16.750	177917		8.08	148669	12.55
3	80639		35338	16.759	168970		8.09	141877	12.52
4	80641		34626	16.766	160094		8.09	134965	12.54
5	80642		35967	16.757	168029		8.08	142682	12.54
6	80660		34824	16.758	163209		8.08	138737	12.54
7	80658		37174	16.762	171366		8.09	143895	12.54
8	80690		18491	16.784	76096*		8.11	57222*	12.55
9	80626		36352	16.761	164710		8.09	138210	12.55
10	80628		36864	16.750	167324		8.08	140181	12.53
11	80622		34967	16.761	163220		8.09	138140	12.55
12	80623		36114	16.731	158202		8.07	132761	12.53
13	80624		35693	16.761	166329		8.09	137403	12.54
14	80625		34838	16.720	157716		8.05	134606	12.52
15	80621		36278	16.750	160452		8.08	134984	12.53
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

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

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

Column used to flag internal standard area values with an asterisk
* Outside volatile area limits

21st Century Environmental Inc.
VOLATILE INTERNAL STANDARD AREA SUMMARY

LAB ID FILE (STANDARD): >82699 DATE ANALYZED: 04/07/94

INSTRUMENT ID: 5970 TIME ANALYZED: 10:43

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

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	38120	6.75	167574	8.09	134535	12.53
UPPER LIMIT	76240		335148		269070	
LOWER LIMIT	19060		83787		67268	
LAB SAMPLE No.						
1 BLANK	37807	6.789	177911	8.13	140629	12.57
2 80658	35987	6.694	158561	8.03	135128	12.51
3 80623	36712	6.714	167209	8.05	136725	12.52
4 80626	33529	6.720	146760	8.05	125258	12.49
5 80621	35214	6.685	160728	8.01	136764	12.48
6 80646	28100	6.716	124370	8.05	93500	12.50
7 80647	25368	6.705	104598	8.03	68979	12.49
8 80650	26099	6.742	103544	8.09	101620	12.52
9 80669	36764	6.719	162531	8.07	137669	12.55
10 80670	25150	6.723	103811	8.04	99071	12.47
11 80671	36034	6.723	161639	8.05	136189	12.51
12 80672	36869	6.719	169522	8.06	141980	12.55
13 80673	35350	6.772	158716	8.11	134138	12.55
14 80627	34874	6.704	159825	8.04	134586	12.52
15 80694	35773	6.729	161098	8.06	134040	12.50
16 80695	36548	6.684	157204	8.01	132198	12.50
17 80696	36826	6.675	159714	8.01	132723	12.50
18 80697	36038	6.715	163722	8.05	136935	12.51
19						
20						
21						
22						
23						
24						
25						

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

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

Column used to flag internal standard area values with an asterisk
* Outside volatile area limits

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >B2665 DATE ANALYZED: 04/05/94

INSTRUMENT ID: B TIME ANALYZED: 15:40

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	B0661	>B2666	04/05/94	16:07
2	B0652	>B2669	04/05/94	17:30
3	B0653	>B2670	04/05/94	17:57
4	B0654	>B2671	04/05/94	18:25
5	B0655	>B2672	04/05/94	18:52
6	B0662	>B2673	04/05/94	19:20
7	B0656	>B2674	04/05/94	19:47
8	B0657	>B2675	04/05/94	20:15
9	B0659	>B2676	04/05/94	20:43
10				
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COMMENTS: _____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	040594 METHOD BLANK	QA BATCH	
DATA FILE	>82665	DATE ANALYZED	04/05/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	9.0 J	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	110	76 - 114	OK
Toluene-d8	98.5	88 - 110	OK
Bromofluorobenzene	95.6	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLANK

Lab Name:21st Century Environmental Contract:N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

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

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2665

Level: (low/med) LOW Date Received: 04/05/94

% Moisture: N/A Date Analyzed: 04/05/94

Column: DB-624 Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	No Unknowns		

FORM I VOA-TIC 1/87 Rev.

0000

QUANT REPORT

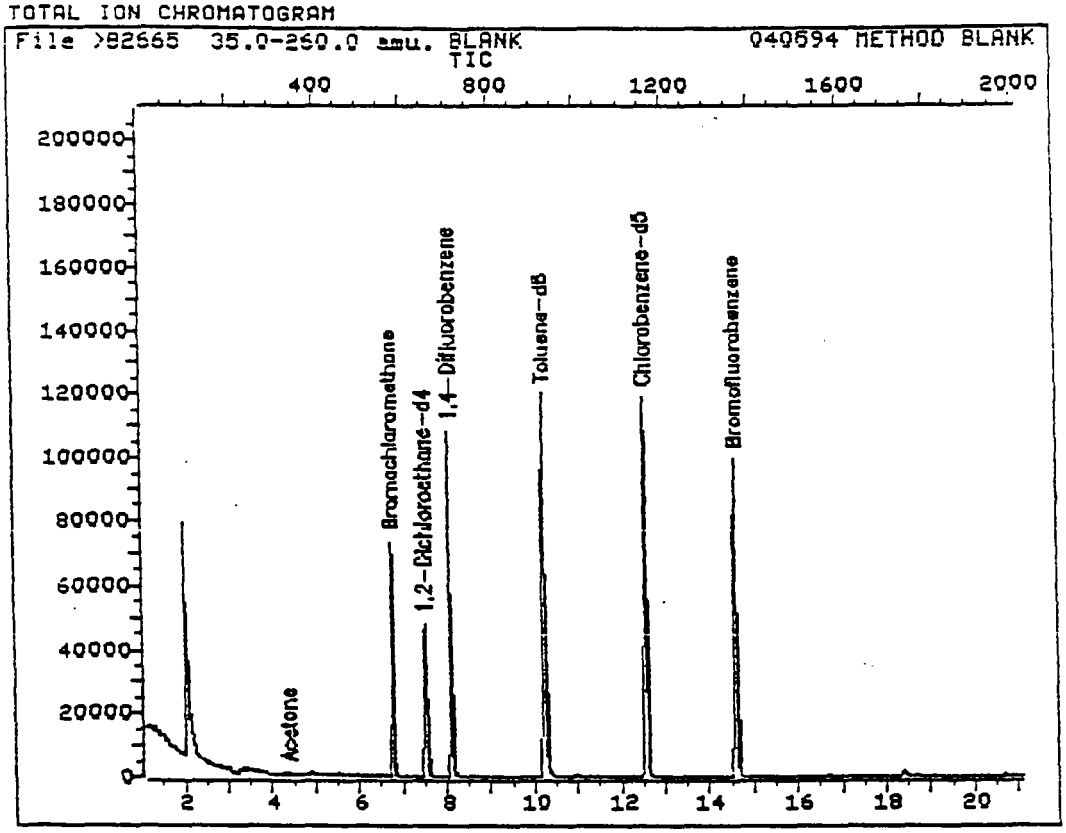
Operator ID: MANAGER Quant Rev: 6 Quant Time: 940405 16:04
Output File: ^B2665::QT Injected at: 940405 15:40
Data File: >B2665::D6 Dilution Factor: 1.00000
Name: BLANK
Misc: 040594 METHOD BLANK 5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.76	568	36183	50.00	UG/L	100
9)	Acetone	4.38	328	2052	9.02	UG/L	89
23)	1,2-Dichloroethane-d4	7.53	645	56212	54.88	UG/L	100
24)	*1,4-Difluorobenzene	8.10	702	177752	50.00	UG/L	100
53)	Toluene-d8	10.24	918	174524	49.23	UG/L	100
55)	*Chlorobenzene-d5	12.56	1152	147237	50.00	UG/L	100
48)	Bromofluorobenzene	14.60	1358	77230	47.78	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >82665::D6 Quant Output File: ^82665::QT
Name: BLANK
Misc: 040594 METHOD BLANK 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940405 13:22

Operator ID: MANAGER
Quant Time: 940405 16:04
Injected at: 940405 15:40

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >82682 DATE ANALYZED: 04/06/94

INSTRUMENT ID: 8 TIME ANALYZED: 14:09

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	80689	>82683	04/06/94	14:45
2	80639	>82684	04/06/94	15:12
3	80641	>82685	04/06/94	15:40
4	80642	>82686	04/06/94	16:07
5	80660	>82687	04/06/94	16:35
6	80628	>82692	04/06/94	18:52
7	80622	>82693	04/06/94	19:20
8	80624	>82695	04/06/94	20:15
9	80625	>82696	04/06/94	20:43
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OMMENTS: _____

_____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	040694 METHOD BLANK	QA BATCH	
DATA FILE	>82682	DATE ANALYZED	04/06/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	93.4	76 - 114	OK
Toluene-d8	96.4	88 - 110	OK
Bromofluorobenzene	97.5	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLANK

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

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

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2682

Level: (low/med) LOW Date Received: 04/06/94

% Moisture: N/A Date Analyzed: 04/06/94

Column: DB-624 Dilution Factor: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	No Unknowns		

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

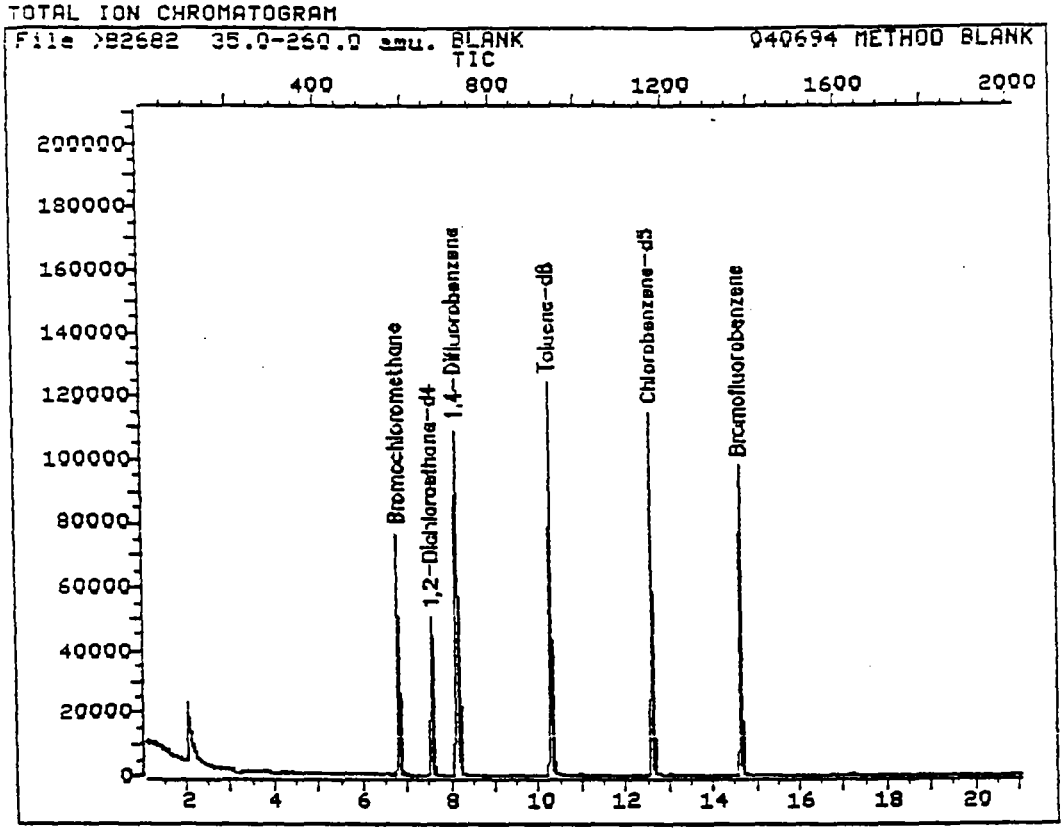
Operator ID: MANAGER Quant Rev: 6 Quant Time: 940406 14:42
Output File: ^B2682::QT Injected at: 940406 14:09
Data File: >B2682::D2 Dilution Factor: 1.00000
Name: BLANK
Misc: 040694 METHOD BLANK 5ml

ID File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940406 14:17

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.81	575	38749	50.00	UG/L	100
23)	1,2-Dichloroethane-d4	7.57	652	56697	46.71	UG/L	100
24)	*1,4-Difluorobenzene	8.14	710	182085	50.00	UG/L	100
33)	Toluene-d8	10.29	927	175271	48.18	UG/L	100
35)	*Chlorobenzene-d5	12.61	1161	141048	50.00	UG/L	100
48)	Bromofluorobenzene	14.63	1365	73475	48.75	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2682::D2 Quant Output File: ^B2682::QT
Name: BLANK
Misc: 040694 METHOD BLANK 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940406 14:17

Operator ID: MANAGER
Quant Time: 940406 14:42
Injected at: 940406 14:09

4A

VOLATILE METHOD BLANK SUMMARY

Lab Name: 21st Century Environmental Inc. Contract No.:

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

LAB ID FILE (BLANK): >82700 DATE ANALYZED: 04/07/94

INSTRUMENT ID: B TIME ANALYZED: 12:09

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

Sample ID: BLANK

THIS BLANK APPLIES TO THE FOLLOWING SAMPLES,MS AND MSD

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	B0658	>82701	04/07/94	12:39
2	B0623	>82702	04/07/94	13:07
3	B0626	>82703	04/07/94	13:34
4	B0621	>82704	04/07/94	14:02
5	B0650	>82707	04/07/94	15:24
6	B0669	>82708	04/07/94	15:52
7	B0670	>82709	04/07/94	16:20
8	B0671	>82710	04/07/94	16:47
9	B0672	>82711	04/07/94	17:14
10	B0673	>82712	04/07/94	17:42
11	B0627	>82713	04/07/94	18:10
12	B0694	>82714	04/07/94	18:37
13	B0695	>82715	04/07/94	19:05
14	B0696	>82716	04/07/94	19:33
15	B0697	>82717	04/07/94	20:00
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

COMMENTS: _____

_____

21st Century Environmental Inc.
VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER		MATRIX	Water
SAMPLE NUMBER	BLANK	DILUTION FACTOR	1.00
CLIENT ID	040794 METHOD BLANK	QA BATCH	
DATA FILE	>82700	DATE ANALYZED	04/07/94

COMPOUND	UG/L	MDL	COMPOUND	UG/L	MDL
Acrolein	ND	50	2-Chloroethylvinylether	ND	10
Acrylonitrile	ND	50	2-Hexanone	ND	10
Chloromethane	ND	10	trans-1,3-Dichloropropene	ND	5
Bromomethane	ND	10	Toluene	ND	5
Vinyl Chloride	ND	10	cis-1,3-Dichloropropene	ND	5
Chloroethane	ND	10	1,1,2,2-Tetrachloroethane	ND	5
Acetone	ND	10	1,1,2-Trichloroethane	ND	5
1,1-Dichloroethene	ND	5	4-Methyl-2-pentanone	ND	10
Carbon Disulfide	ND	10	Tetrachloroethene	ND	5
Methylene Chloride	ND	5	Dibromochloromethane	ND	5
1,2-Dichloroethene(trans)	ND	5	Chlorobenzene	ND	5
1,1-Dichloroethane	ND	5	Ethylbenzene	ND	5
Vinyl Acetate	ND	5	m&p-Xylenes	ND	5
2-Butanone	ND	10	o-Xylene	ND	5
Chloroform	ND	5	Styrene	ND	5
1,1,1-Trichloroethane	ND	5	Bromoform	ND	5
Carbon Tetrachloride	ND	5	m-Dichlorobenzene	ND	5
1,2-Dichloroethane	ND	5	p-Dichlorobenzene	ND	5
Benzene	ND	5	o-Dichlorobenzene	ND	5
Trichloroethene	ND	5	Methyl Tertiary Butyl Ether	ND	10
1,2-Dichloropropane	ND	5	Tertiary Butyl Alcohol	ND	50
Bromodichloromethane	ND	5			

SURROGATE COMPOUNDS	% RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	102	76 - 114	OK
Toluene-d8	94.2	88 - 110	OK
Bromofluorobenzene	91.7	86 - 115	OK

(J) Indicates detected below MDL
(B) Indicates also present in blank
(ND) Indicates compound not detected

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

BLANK

Lab Name: 21st Century Environmental Contract: N/A

Lab Code: Case No.: N/A SAS No.: N/A SDG No.: N/A

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

Sample wt/vol: 5 (g/mL) ml Lab File ID: >B2700

Level: (low/med) LOW Date Received: 04/07/94

% Moisture: N/A Date Analyzed: 04/07/94

Column: DB-624 Dilution Factor: 1

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST CONC
	No Unknowns		

FORM I VOA-TIC 1/87 Rev.

QUANT REPORT

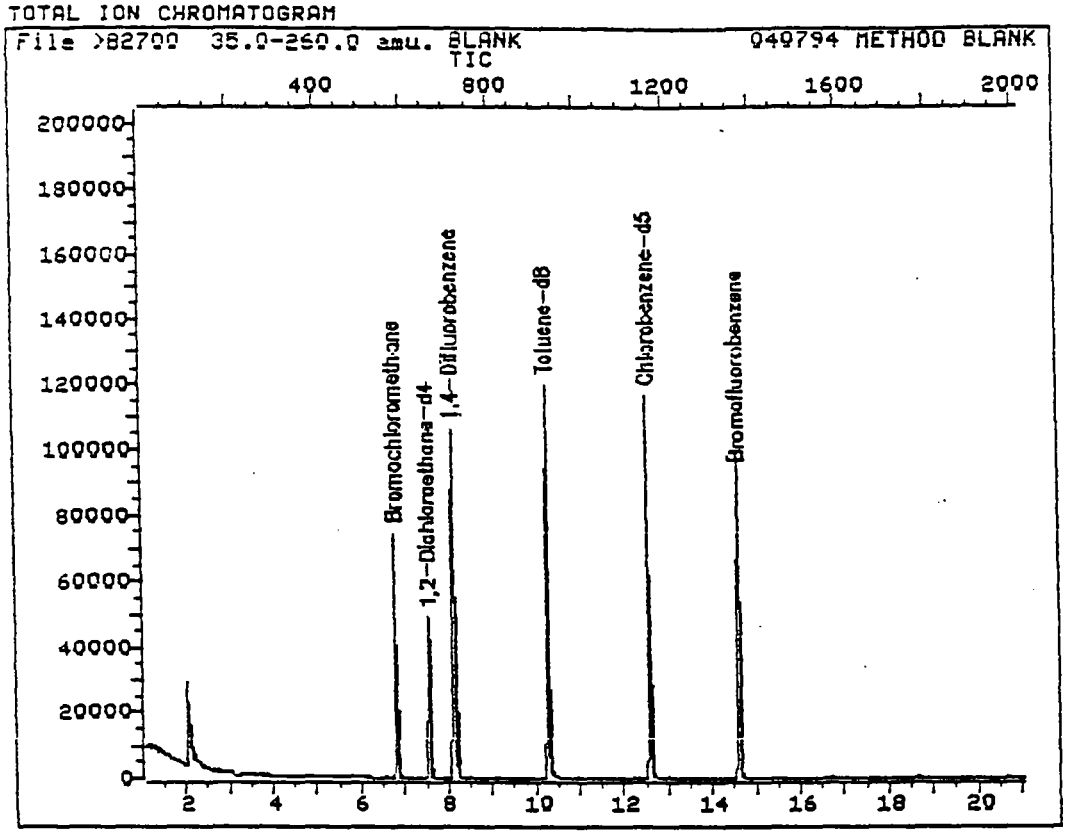
perator ID: MANAGER Quant Rev: 6 Quant Time: 940407 12:36
utput File: ^82700::04 Injected at: 940407 12:09
Data File: >82700::03 Dilution Factor: 1.00000
ame: BLANK
isc: 040794 METHOD BLANK 5ml

D File: ID0401::SC
itle: USEPA 624 VOLATILES
Last Calibration: 940407 11:58

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	6.79	574	37807	50.00	UG/L	100
3)	1,2-Dichloroethane-d4	7.56	652	55843	50.82	UG/L	100
4)	*1,4-Difluorobenzene	8.13	709	177911	50.00	UG/L	100
33)	Toluene-d8	10.28	926	170033	47.08	UG/L	100
35)	*Chlorobenzene-d5	12.57	1158	140629	50.00	UG/L	100
8)	Bromofluorobenzene	14.60	1363	71537	45.84	UG/L	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >B2700::D3 Quant Output File: ^B2700::D4
Name: BLANK
Misc: 040794 METHOD BLANK 5ml

Id File: ID0401::SC
Title: USEPA 624 VOLATILES
Last Calibration: 940407 11:58

Operator ID: MANAGER
Quant Time: 940407 12:36
Injected at: 940407 12:09

SAMPLING NARRATIVE

The sampling event for Building 2567 occurred on March 31, 1994. Use of laboratory decontaminated, field decontaminated and/or dedicated sampling equipment is as stated in NJDEPE Field Sampling Procedures Manual, May 1992. Non-conformances of NJDEPE Field Sampling Procedures include incomplete well information and field parameters only taken after sampling.

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2567
SITE:

SAMPLE NO.: B0656
DATE: 3/31/94
SAMPLER: DOUG TURNER JR
SIGNATURE: Doug Turner

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW4
TIME COLLECTED: 14:10
SAMPLE DEPTH: 3.0 (FROM BTOC)

	ESTIMATED	SURVEYED
SURFACE ELEVATION:	—	—
N. COORDINATE:		
E. COORDINATE:		

WELL [redacted] No.: 4-29 26 948

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: (NO) FLT SNK
LAYER SAMPLED: (NO) YES MIX
THICKNESS: IN-CM
DESCRIPTION:

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	1.90	1.90
TEMPERATURE	50.0	50.01
SP. COND.	220	220
pH	5.61	5.68
Eh	—	—
DO	1.5	2.0
PID	0.0	0.0
FID	—	—
ALKALINITY	—	—
HARDNESS	—	—
TURBIDITY	37.5	46.1

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB (PBR) PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCS - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: (DET) LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - (OTH)
DESCRIBE OTHER: AS PER 1992 ENG GUIDE
QA SAMPLES:
CO-LOCATED SAMPLE ID: B0657
SPLIT SAMPLE ID:
RINSE BLANK ID: B0661
TRIP BLANK ID: B0662
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) - RAD - OTH	21ST CENTURY	624HS, MTBE, TBA, XYLENES, PB	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: COL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH WITHOUT REVISIONS	APPROVED WITH WITHOUT REVISIONS

G091291T

GEOLIS Well Purging Form

COMPANY: E-System SAMPLE NO.: B0656
CLIENT: FT Monmouth DATE: 3/31/94
PROJECT: BLDG # 2567 SAMPLER: D. Turpe JR
SITE: SIGNATURE: D Turpe D

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE LOCKED: (YES) - NO KEY NO: H 1564
WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: _____ FT-M
MEASURING POINT: (TIC) - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM
VAPOR READINGS: (PID) - FID DEVICE: HNU MODEL 101 10.2 eV LAMP
BACKGROUND: 0 ppm INSIDE WELL CASING: 0 ppm
NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - (NO) THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 11.80 (FT-M) MEASURED - RECORDED PREVIOUSLY
(B) DEPTH TO WATER: 1.90 (FT-M) TIME MEASURED _____
(C) WATER COLUMN HEIGHT (A - B): 9.90 (FT-M)
(D) WELL DIAMETER FACTOR: 0.65 (GPF-LPM) Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(E) ONE WELL VOLUME (C x D): 6.435 (GAL-L) (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)
(F) VOLUMES TO BE PURGED: 3
(G) TOTAL VOLUME TO BE PURGED (E x F): → 19.305 GALL

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____
DEVICE DESCRIPTION: ISCO PORTABLE PUMP
PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE
COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: _____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBID -ITY	FIELD MEASUREMENTS MTP	MSC	MPH	MDO	MPD	COMMENTS
13:30	1.90	0.5	158.3	48.4	140	5.87	4.8	0.0	
13:50	1.90	0.5	37.50	50.0	220	5.61	1.5	0.0	
14:10	1.90	0.5	46.10	50.01	220	5.68	2.0	0.0	

FIELD MEASUREMENT CODES

MTP - Temperature MCL - Color MDO - Dissolved Oxygen MD1 - DTW in Well
MSC - Specific Conductance MPH - pH MO1 - Other MD2 - DTW in Well
MPD - Photoionizer (e.g., HNu) MEH - Eh MO2 - Other MD3 - DTW in Well
MFD - Flame Ionizer (e.g., OVA) MAL - Alkalinity MO3 - Other MD4 - DTW in Well

G071291T

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2567
SITE: MW 1

SAMPLE NO.: B0658
DATE: 3/31/94
SAMPLER: DOUG TURNER JR
SIGNATURE: [signature]

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW 1
TIME COLLECTED: 1430
SAMPLE DEPTH: 4.0 FROM BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:	—	—
N. COORDINATE:		
E. COORDINATE:		
WELL [redacted] No.:	1-2926925	

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: (NO) FLT SNK
LAYER SAMPLED: (NO) YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	3.32	3.32
TEMPERATURE	50.7	51.2
SP. COND.	400	380
pH	6.33	6.41
Eh	—	—
DO	1.5	1.5
PID	0.0	0.0
FID	—	—
ALKALINITY	—	—
HARDNESS	—	—
TURBIDITY	39.80	42.30

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB (PPB) PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: (DES) LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - (OTH)
DESCRIBE OTHER: 15 PER 1992 END GUIDE
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: B0661
TRIP BLANK ID: B0662
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) - RAD - OTH	21ST CENTURY	624HS, MTBE, TBA, XYLENE, PB	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: CCL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH / WITHOUT REVISIONS	APPROVED WITH / WITHOUT REVISIONS

G0912S1T

GEOLIS Well Purging Form

COMPANY: E-System | SAMPLE NO.: B0658
CLIENT: FT Monmouth | DATE: 3/31/94
PROJECT: BLDG # 2567 | SAMPLER: D. Turpe JR
SITE: MW1 | SIGNATURE: D. Turpe

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE | LOCKED: (YES) - NO | KEY NO: H 1564
WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ | STICKUP HEIGHT: _____ FT-M
MEASURING POINT: (TIC) - TOC - LND - OTH: _____ | TOC - TIC DIFFERENCE: _____ IN-CM
VAPOR READINGS: (PID) - FID | DEVICE: HNU MODEL 101 10.2 eV LAMP
BACKGROUND: 0 ppm | INSIDE WELL CASING: 0 ppm
NAPL LAYER OBSERVED: FLT - SNK - (NON) | SAMPLED: YES - (NO) | THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 13.32 (FT-M) — MEASURED - RECORDED PREVIOUSLY
(B) DEPTH TO WATER: 3.32 (FT-M) — TIME MEASURED _____
(C) WATER COLUMN HEIGHT (A - B): 10 FT-M
(D) WELL DIAMETER FACTOR: 0.65 (GPF-LPM)
(E) ONE WELL VOLUME (C x D): 6.5 (GAL-L)
(F) VOLUMES TO BE PURGED: 3
(G) TOTAL VOLUME TO BE PURGED (E x F): → 19.5 GAL-L

Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____
DEVICE DESCRIPTION: ISCO PERISTALTIC PUMP
PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE
COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: _____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBIDITY	FIELD MEASUREMENTS					COMMENTS
				MTP	MSC	MPH	MDO	MPD	
13:45	3.32	0.5	175.1	51.5	120	6.65	2.8	0.5	
14:20	3.32	0.5	39.80	50.7	400	6.33	1.5	0.0	
14:30	3.32	0.5	42.30	51.2	380	6.41	1.5	0.0	

FIELD MEASUREMENT CODES

MTP - Temperature | MCL - Color | MDO - Dissolved Oxygen | MD1 - DTW in Well
MSC - Specific Conductance | MPH - pH | MO1 - Other | MD2 - DTW in Well
MPD - Photoionizer (e.g., HNu) | MEH - Eh | MO2 - Other | MD3 - DTW in Well
MFD - Flame Ionizer (e.g., OVA) | MAL - Alkalinity | MO3 - Other | MD4 - DTW in Well

G071291T

GEOLIS Water Sampling Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2567
SITE: MW3

SAMPLE NO.: B0659
DATE: 3/31/94
SAMPLER: DOUG TURNER JR
SIGNATURE: Doug Turner

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW3
TIME COLLECTED: 15:00
SAMPLE DEPTH: 4.0 (FT) M BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:	—	—
N. COORDINATE:		
E. COORDINATE:		

WELL [redacted] No.: 3-29269 47

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: (NO) FLT SNK
LAYER SAMPLED: (NO) YES MIX
THICKNESS IN-CM
DESCRIPTION

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	2.45	2.45
TEMPERATURE	54.7	53.5
SP. COND.	360	400
pH	6.48	6.46
Eh	—	—
DO	1.5	1.5
PID	0.0	0.0
FID	—	—
ALKALINITY	—	—
HARDNESS	—	—
TURBIDITY	85.1	87.3

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB (PBB) PCN - PBL - NLF - OTH
SURFACE WATER BOT - KEM - BCB - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: (DET) LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NCN - (OTH)
DESCRIBE OTHER: AS PER 1992 FSP GWQR
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: B0661
TRIP BLANK ID: B0662
LAB CONTROL SAMPLE ID:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) - RAD - OTH	21ST CENTURY	624+5, MTBE, TBA, XYLENES, EB	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NCN - CWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: CCL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
QC REPORTS PRINTED? YES NO	APPROVED WITH / WITHOUT REVISIONS	APPROVED WITH / WITHOUT REVISIONS

G091291T

GEOLIS Well Purging Form

COMPANY: E-System | SAMPLE NO.: B0 659
CLIENT: FT Monmouth | DATE: 3/31/94
PROJECT: BLDG # 2567 | SAMPLER: D. Turner JR
SITE: MW 3 | SIGNATURE: D Turner

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE | LOCKED: (YES) - NO | KEY NO: H 1564
WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ | STICKUP HEIGHT: _____ FT-M
MEASURING POINT: (TIC) - TOC - LND - OTH: _____ | TOC - TIC DIFFERENCE: _____ IN-CM
VAPOR READINGS: (PID) - FID | DEVICE: HNU Model 101 10.2 eV Lamp
BACKGROUND: 0 ppm | INSIDE WELL CASING: 0 ppm
NAPL LAYER OBSERVED: FLT - SNK - (NON) | SAMPLED: YES - (NO) | THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 12.70 (FT) M — MEASURED - RECORDED PREVIOUSLY
(B) DEPTH TO WATER: 2.45 (FT) M — TIME MEASURED _____
(C) WATER COLUMN HEIGHT (A - B): 10.25 (FT) M
(D) WELL DIAMETER FACTOR: 0.65 (GPF)-LPM — Well Factor = 0.041 (Well Diameter in Inches)^2 (2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF) (2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)
(E) ONE WELL VOLUME (C x D): 6.6625 (GAL)-L
(F) VOLUMES TO BE PURGED: 3
(G) TOTAL VOLUME TO BE PURGED (E x F): → 19.9875 GAL

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____
DEVICE DESCRIPTION: ISCO Portable Pump
PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE
COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: _____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBIDITY	FIELD MEASUREMENTS					COMMENTS
				MPH	MTP	MPD	MSC	MDO	
14:00	2.45	0.5	45.3	6.45	52.3	0.0	500	1.5	Only one Bolt
14:50	2.45	0.5	85.1	6.48	54.7	0.0	360	1.5	Will not Hold
15:00	2.45	0.5	87.3	6.46	53.5	0.0	400	1.5	Cover in
									Place

FIELD MEASUREMENT CODES

MTP - Temperature | MCL - Color | MDO - Dissolved Oxygen | MD1 - DTW in Well
MSC - Specific Conductance | MPH - pH | MO1 - Other | MD2 - DTW in Well
MPD - Photoionizer (e.g., HNu) | MER - Eh | MO2 - Other | MD3 - DTW in Well
MFD - Flame Ionizer (e.g., OVA) | MAL - Alkalinity | MO3 - Other | MD4 - DTW in Well

G0712917

GEOLIS Water Sampling Form

COMPANY: E-System | SAMPLE NO.: 30660
CLIENT: FT Monmouth | DATE: 3/31/94
PROJECT: Block # 2567 | SAMPLER: Dave Turner Jr.
SITE: MW2 | SIGNATURE:

SAMPLE IDENTIFICATION

QUALITY LEVEL: 1 - 2 - 3
UNIT SYSTEM: (ENGLISH) - METRIC
SAMPLE ID: MW2
TIME COLLECTED: 15:30
SAMPLE DEPTH: 5.0 (FROM) BTOC

	ESTIMATED	SURVEYED
SURFACE ELEVATION:	—	—
N. COORDINATE:		
E. COORDINATE:		
WELL [redacted] No.:	2-2926426	

SITE SKETCH

SAMPLE DESCRIPTION

SOURCE:
GROUNDWATER WOS - WOO - WBS - WBO - SUP - RES - SPR - OTH
SURFACE WATER STR - WET - RIV - PND - LAK - LAG - PIP - OTH
DESCRIBE OTHER:
NAPL LAYER PRESENT: (NO) FLT SNK
LAYER SAMPLED: (NO) YES MIX
THICKNESS: IN-CM
DESCRIPTION:

FIELD PARAMETERS:	BEFORE	AFTER
WATER LEVEL	3.45	3.45
TEMPERATURE	52.0	51.9
SP. COND.	300	300
pH	6.26	6.29
Eh	—	—
DO	2.0	2.8
PID	0	0
FID	—	—
ALKALINITY	—	—
HARDNESS	—	—
TURBIDITY	4.91	5.89

SAMPLING INFORMATION

SAMPLE TYPE: (DISCRETE) COMPOSITE - OTHER
DESCRIBE:
SAMPLING METHOD:
GROUNDWATER BLO - BLC - PSB (PSS) PCN - PSL - NLF - OTH
SURFACE WATER BOT - KEM - SCS - SCP - TGS - OTH
OTHER:
SAMPLER DECONTAMINATION: (DET) - LAB - FLD - OTH
DESCRIBE OTHER:
PROCEDURE: DET - STM - ACE - HEX - MET - NON - (OTH)
DESCRIBE OTHER: AS per 1992 ERD Guide
QA SAMPLES:
CO-LOCATED SAMPLE ID:
SPLIT SAMPLE ID:
RINSE BLANK ID: B0661
TRIP BLANK ID: B0662
LAB CONTROL SAMPLE ID:

SAMPLE TREATMENT: FILTERED - PRESERVED - OTHER
DESCRIBE:

LAB TYPE	LAB NAME	ANALYTICAL PARAMETERS	NOTES
(CHM) - RAD - OTH	21st Century	624.1; MTBE, TBA, Xylenes, Eb	
CHM - RAD - OTH			
CHM - RAD - OTH			

SPLIT SAMPLES: NON - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME OTHER:
QA/QC SAMPLES: CCL - SPL - RNS - TRP - LCS

COMMENTS:

DATA ENTRY BY:	QC REVIEW BY:	QA REVIEW BY:
DATE ENTERED:	REVIEW DATE:	REVIEW DATE:
CHECK PLOT PRINTED? YES NO	APPROVED WITH / WITHOUT REVISIONS	APPROVED WITH / WITHOUT REVISIONS

G091291T

GEOLIS Well Purging Form

COMPANY: E-SYSTEM
CLIENT: FT MONMOUTH
PROJECT: BLDG # 2567
SITE: MW 2
SAMPLE NO.: B0662
DATE: 3/31/94
SAMPLER: D. TURNER JR
SIGNATURE: D Turner D

WELL OBSERVATIONS

PROTECTIVE CASING: (INTACT) DAMAGED - NONE LOCKED: (YES) - NO KEY NO: H 1564

WELL DIAMETER: 2" (4") 6" - 8" - OTHER: _____ STICKUP HEIGHT: _____ FT-M

MEASURING POINT: (TIC) - TOC - LND - OTH: _____ TOC - TIC DIFFERENCE: _____ IN-CM

VAPOR READINGS: (PID) - FID DEVICE: HNU MODEL 101 10.2 eV LAMP

BACKGROUND: 0 ppm INSIDE WELL CASING: 0 ppm

NAPL LAYER OBSERVED: FLT - SNK - (NON) SAMPLED: YES - (NO) THICKNESS: _____ IN-CM

PURGING CALCULATIONS

(A) DEPTH TO WELL BOTTOM: 12.40 (FT-M) MEASURED - RECORDED PREVIOUSLY

(B) DEPTH TO WATER: 3.45 (FT-M) TIME MEASURED _____

(C) WATER COLUMN HEIGHT (A - B): 8.95 (FT-M)

(D) WELL DIAMETER FACTOR: 0.65 (GPF-LPM) Well Factor = 0.041 (Well Diameter in Inches)²
(2" = 0.16; 4" = 0.65; 6" = 1.47; 8" = 2.61 GPF)
(2" = 2.0; 4" = 8.1; 6" = 18.2; 8" = 32.4 LPM)

(E) ONE WELL VOLUME (C x D): 5.8175 (GAL-L)

(F) VOLUMES TO BE PURGED: 3

(G) TOTAL VOLUME TO BE PURGED (E x F): → 17.4525 GAL-L

PURGING INFORMATION

WELL PURGING METHOD: BAILER - SUBMERSIBLE PUMP - CENTRIFUGAL PUMP - OTHER: _____

DEVICE DESCRIPTION: ISCO PERISTALTIC PUMP

PURGE WATER DISPOSITION: (DISCHARGED ONSITE) COLLECTED AND: STORED - DISPOSED ONSITE - OFFSITE

COLLECTED IN: TANKS - DRUMS NUMBER OF CONTAINERS: _____

TIME	DEPTH TO WATER (FT-M)	PURGE RATE (GPM-LPM)	TURBIDITY	FIELD MEASUREMENTS MTP	MSC	MPH	MDO	MPD	COMMENTS
14:10	3.45	0.5	108.7	51.2	260	6.34	1.0	0.0	BOLT WILL NOT
15:10	3.45	0.5	4.91	52.0	300	6.26	2.0	0.0	HOLD COVER
15:30	3.45	0.5	5.39	51.9	300	6.29	2.8	0.0	DOWN. ONLY
									ONE BOLT

FIELD MEASUREMENT CODES

MTP - Temperature MCL - Color MDO - Dissolved Oxygen MO1 - DTW in Well
MSC - Specific Conductance MPH - pH MO1 - Other MO2 - DTW in Well
MPD - Photoionizer (e.g., HNu) MEH - Eh MO2 - Other MO3 - DTW in Well
MFD - Flame Ionizer (e.g., OVA) MAL - Alkalinity MO3 - Other MO4 - DTW in Well

G071291T