Client: U.S. ARMY CORPS OF ENG.
Sample: LABORATORY CONTROL SPIKE
Lab ID: BS04JI
Method: SW 846-8240 by CLP SOW 3/90

Date Extracted: NA
Date Analyzed: 04/22/93
Date Sampled: NA
Data File ID: RE112I

GC/MS
VOLATILE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS
LABORATORY CONTROL SAMPLE

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
1,1-Dichloroethene	10.36	84% MS Recovery	5.
Trichloroethene	18.72	106% MS Recovery	5.
Benzene	17.43	97% MS Recovery	5.
Toluene	21.18	95% MS Recovery	5.
Chlorobenzene	23.80	99% MS Recovery	5.

SURROGATE RECOVERY	(%)	QC Range
1,2-Dichloroethane-d4	86	70-121
Toluene-d8	102	84-138
4-Bromofluorobenzene	101	59-113

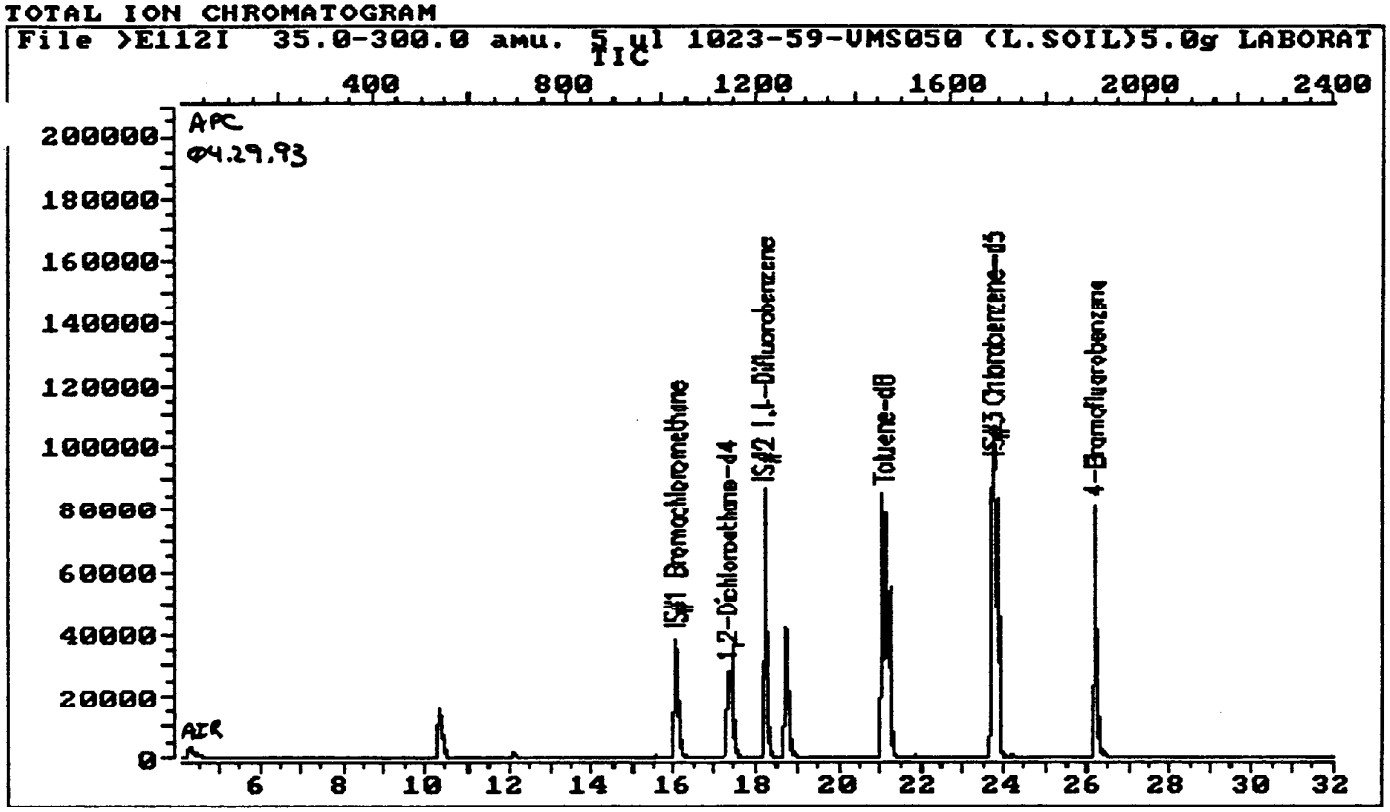
Surrogate Spike Level: 50 ug/kg
Associated Blank: VOA RE1121

B : Detected in blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: 50 ug/kg

VOA MS QC RANGES
(EPA CLP SOW 3/90 Advisory Ranges)

1,1-Dichloroethene	:59-172
Trichloroethene	:62-137
Benzene	:66-142
Toluene	:59-172
Chlorobenzene	:60-133

TOTAL ION CHROMATOGRAM



Data File: >E112I::D3 Quant Output File: ^E112I::QT
Name: 5 ul 1023-59-VMS050
Misc: (L.SOIL)5.0g LABORATORY CONTROL SAMPLE(HEATED PURGE) INST E

Id File: ID_EV::DB
Title: VOLATILES BY SW846-8240/EPA 624 (CC# 2603392) INST E
Last Calibration: 930422 09:14

Operator ID: ARCHIE
Quant Time: 930422 14:17
Injected at: 930422 13:34

Client: U.S. ARMY CORPS OF ENG.
Sample: VOA LAB BLANK RE1121
Lab ID: W304JI
Method: SW 846-8240 by CLP SOW 3/90

Date Extracted: NA
Date Analyzed: 04/22/93
Date Sampled: NA
Data File ID: RE1121

GC/MS

VOLATILE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Acrolein		BQL	50.
Acrylonitrile		BQL	50.
Chloromethane		BQL	10.
Bromomethane		BQL	10.
Vinyl Chloride		BQL	10.
Chloroethane		BQL	10.
Methylene Chloride	12.08	28.	5.
1,1-Dichloroethene		BQL	5.
1,1-Dichloroethane		BQL	5.
1,2-Dichloroethene (total)		BQL	5.
Trichlorofluoromethane		BQL	5.
Chloroform		BQL	5.
1,2-Dichloroethane		BQL	5.
1,1,1-Trichloroethane		BQL	5.
Carbon Tetrachloride		BQL	5.
Bromodichloromethane		BQL	5.
1,2-Dichloropropane		BQL	5.
trans-1,3-Dichloropropene		BQL	5.
Trichloroethene		BQL	5.
Dibromochloromethane		BQL	5.
1,1,2-Trichloroethane		BQL	5.
Benzene		BQL	5.
cis-1,3-Dichloropropene		BQL	5.
Bromoform		BQL	5.
Tetrachloroethene		BQL	5.
1,1,2,2-Tetrachloroethane		BQL	5.
Toluene		BQL	5.
Chlorobenzene		BQL	5.
Ethylbenzene		BQL	5.
2-Chloroethylvinyl ether (1)		BQL	10.
1,2-Dichlorobenzene		BQL	5.
1,3-Dichlorobenzene		BQL	5.
1,4-Dichlorobenzene		BQL	5.

(1) Known to Hydrolyze in Presence of Dilute Acid

- Continued -

Client: U.S. ARMY CORPS OF ENG.
Sample: VOA LAB BLANK RE1121

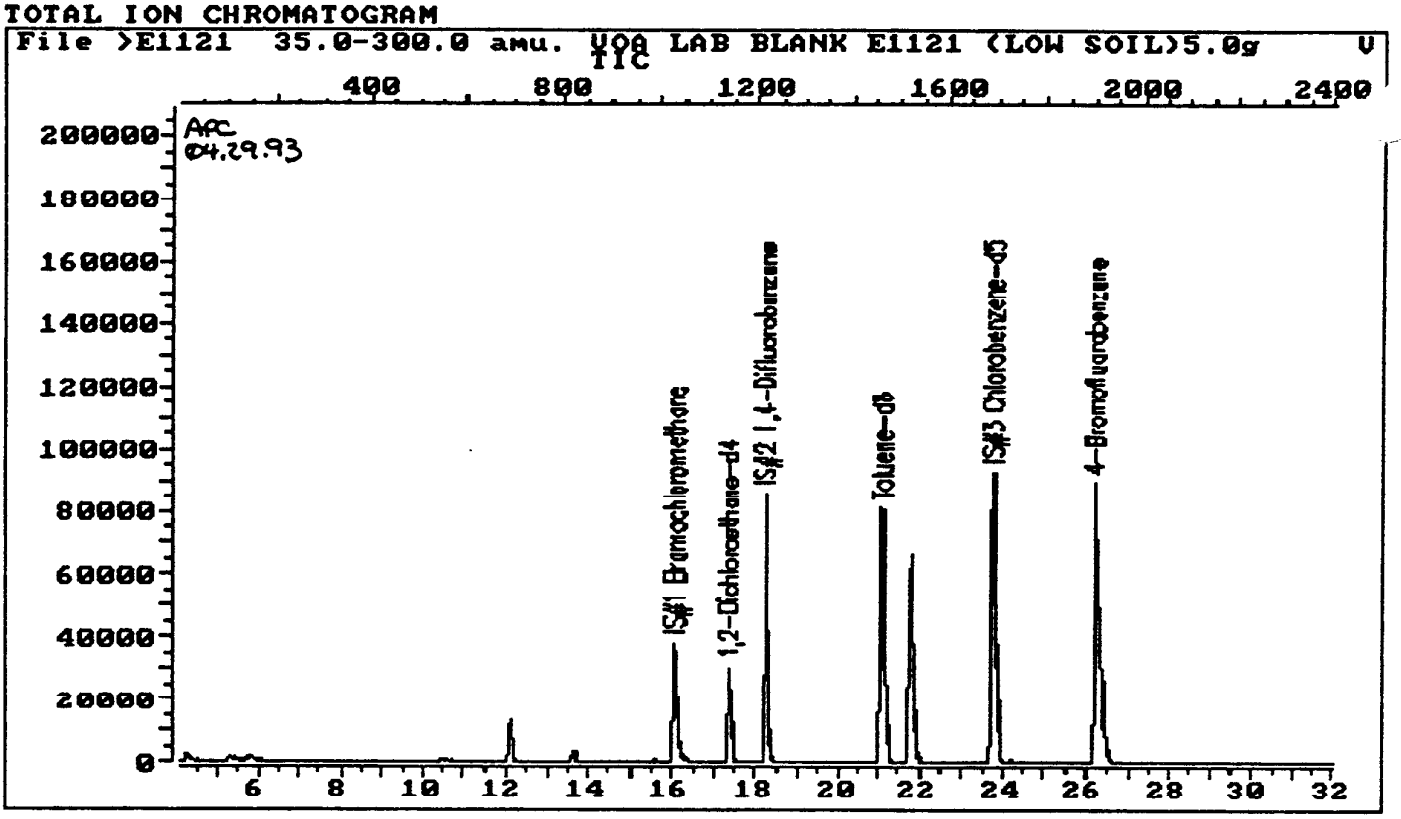
Acetone	BQL	10.
Carbon Disulfide	BQL	5.
2-Butanone	BQL	10.
Vinyl Acetate	BQL	10.
2-Hexanone	BQL	10.
4-Methyl-2-Pentanone	BQL	10.
Styrene	BQL	5.
Xylene (total)	BQL	5.

SURROGATE RECOVERY	(%)	QC Range
1,2-Dichloroethane-d4	90	70-121
Toluene-d8	88	84-138
4-Bromofluorobenzene	98	59-113

Surrogate Spike Level: 50 ug/kg
Associated Blank: NA

B : Detected in blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

TOTAL ION CHROMATOGRAM



Data File: >E1121::D3 Quant Output File: ^E1121::QT
Name: VOA LAB BLANK E1121
Misc: (LOW SOIL)5.0g VOA LAB BLANK INST

Id File: ID_EV::DB
Title: VOLATILES BY SW846-8240/EPA 624 (CC# 2603392) INST E
Last Calibration: 930422 09:14

Operator ID: ARCHIE
Quant Time: 930422 15:09
Injected at: 930422 14:23

Client: U.S. ARMY CORPS OF ENG.
Sample: LABORATORY CONTROL SPIKE
Lab ID: BS04JI
Method: SW 846-8240 by CLP SOW 3/90

Date Extracted: NA
Date Analyzed: 04/28/93
Date Sampled: NA
Data File ID: RE118J

GC/MS
VOLATILE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS
LABORATORY CONTROL SAMPLE

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
1,1-Dichloroethene	10.56	71% MS Recovery	5.
Trichloroethene	18.90	93% MS Recovery	5.
Benzene	17.61	89% MS Recovery	5.
Toluene	21.35	86% MS Recovery	5.
Chlorobenzene	23.96	89% MS Recovery	5.

SURROGATE RECOVERY	(%)	QC Range
1,2-Dichloroethane-d4	89	70-121
Toluene-d8	104	84-138
4-Bromofluorobenzene	99	59-113

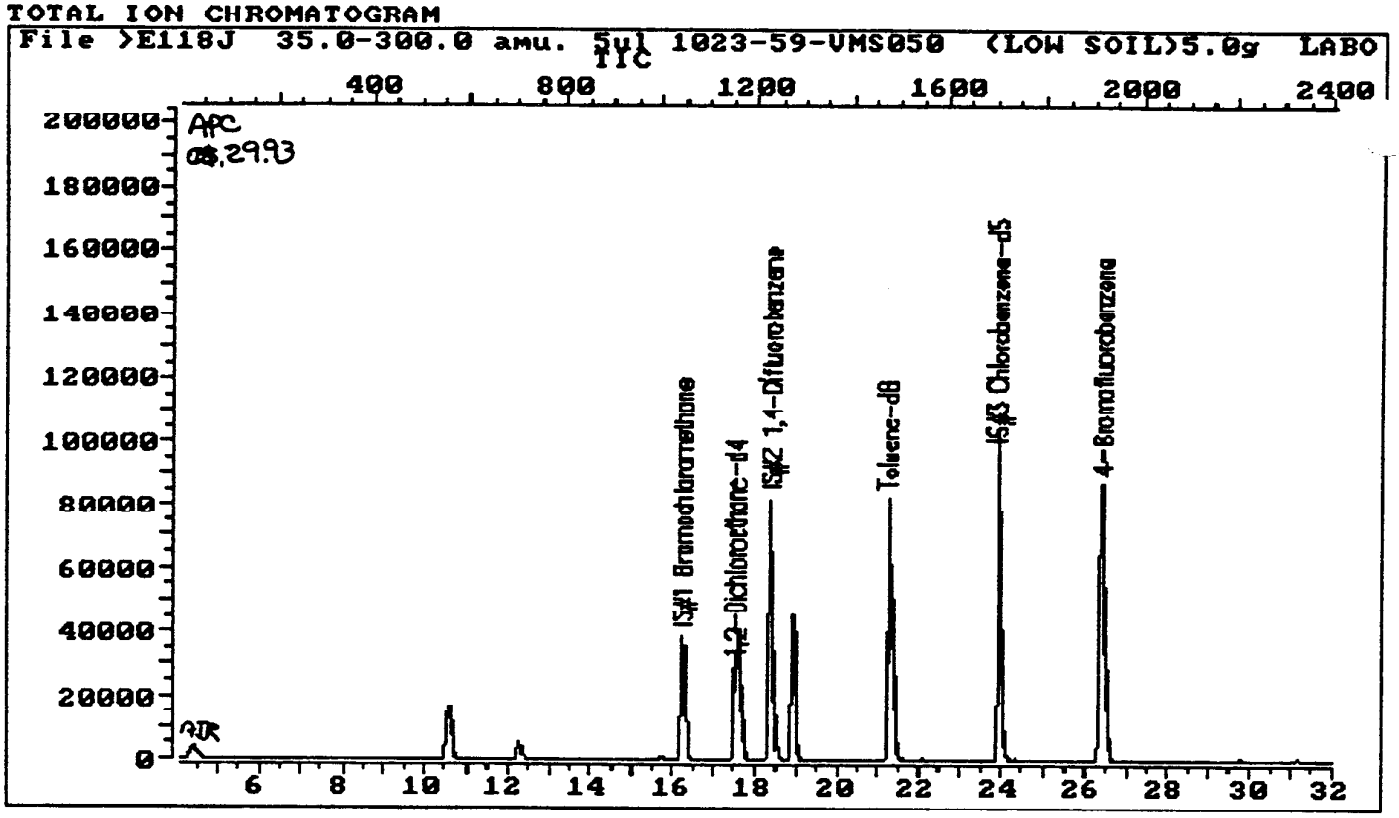
Surrogate Spike Level: 50 ug/kg
Associated Blank: VOA RE1181

B : Detected in blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: 50 ug/kg

VOA MS QC RANGES
(EPA CLP SOW 3/90 Advisory Ranges)

1,1-Dichloroethene	:59-172
Trichloroethene	:62-137
Benzene	:66-142
Toluene	:59-172
Chlorobenzene	:60-133

TOTAL ION CHROMATOGRAM



Data File: >E118J::D3 Quant Output File: ^E118J::QT
Name: 5ul 1023-59-VMS050
Misc: (LOW SOIL)5.0g LABORATORY CONTROL SAMPLE(H. PURGE) INST E

Id File: ID_EV::DB
Title: VOLATILES BY SW846-8240/EPA 624 (CC# 2603392) INST E
Last Calibration: 930428 10:51

Operator ID: ARCHIE
Quant Time: 930428 15:00
Injected at: 930428 14:18

Client: U.S. ARMY CORPS OF ENG.
Sample: VOA LAB BLANK RE1181
Lab ID: W304JI
Method: SW 846-8240 by CLP SOW 3/90

Date Extracted: NA
Date Analyzed: 04/28/93
Date Sampled: NA
Data File ID: RE1181

GC/MS

VOLATILE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET _X_ WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Acrolein		BQL	50.
Acrylonitrile		BQL	50.
Chloromethane		BQL	10.
Bromomethane		BQL	10.
Vinyl Chloride		BQL	10.
Chloroethane		BQL	10.
Methylene Chloride	12.28	9.	5.
1,1-Dichloroethene		BQL	5.
1,1-Dichloroethane		BQL	5.
1,2-Dichloroethene (total)		BQL	5.
Trichlorofluoromethane		BQL	5.
Chloroform		BQL	5.
1,2-Dichloroethane		BQL	5.
1,1,1-Trichloroethane		BQL	5.
Carbon Tetrachloride		BQL	5.
Bromodichloromethane		BQL	5.
1,2-Dichloropropane		BQL	5.
trans-1,3-Dichloropropene		BQL	5.
Trichloroethene		BQL	5.
Dibromochloromethane		BQL	5.
1,1,2-Trichloroethane		BQL	5.
Benzene		BQL	5.
cis-1,3-Dichloropropene		BQL	5.
Bromoform		BQL	5.
Tetrachloroethene		BQL	5.
1,1,2,2-Tetrachloroethane		BQL	5.
Toluene		BQL	5.
Chlorobenzene		BQL	5.
Ethylbenzene		BQL	5.
2-Chloroethylvinyl ether (1)		BQL	10.
1,2-Dichlorobenzene		BQL	5.
1,3-Dichlorobenzene		BQL	5.
1,4-Dichlorobenzene		BQL	5.

(1) Known to Hydrolyze in Presence of Dilute Acid

- Continued -

Client: U.S. ARMY CORPS OF ENG.
Sample: VOA LAB BLANK RE1181

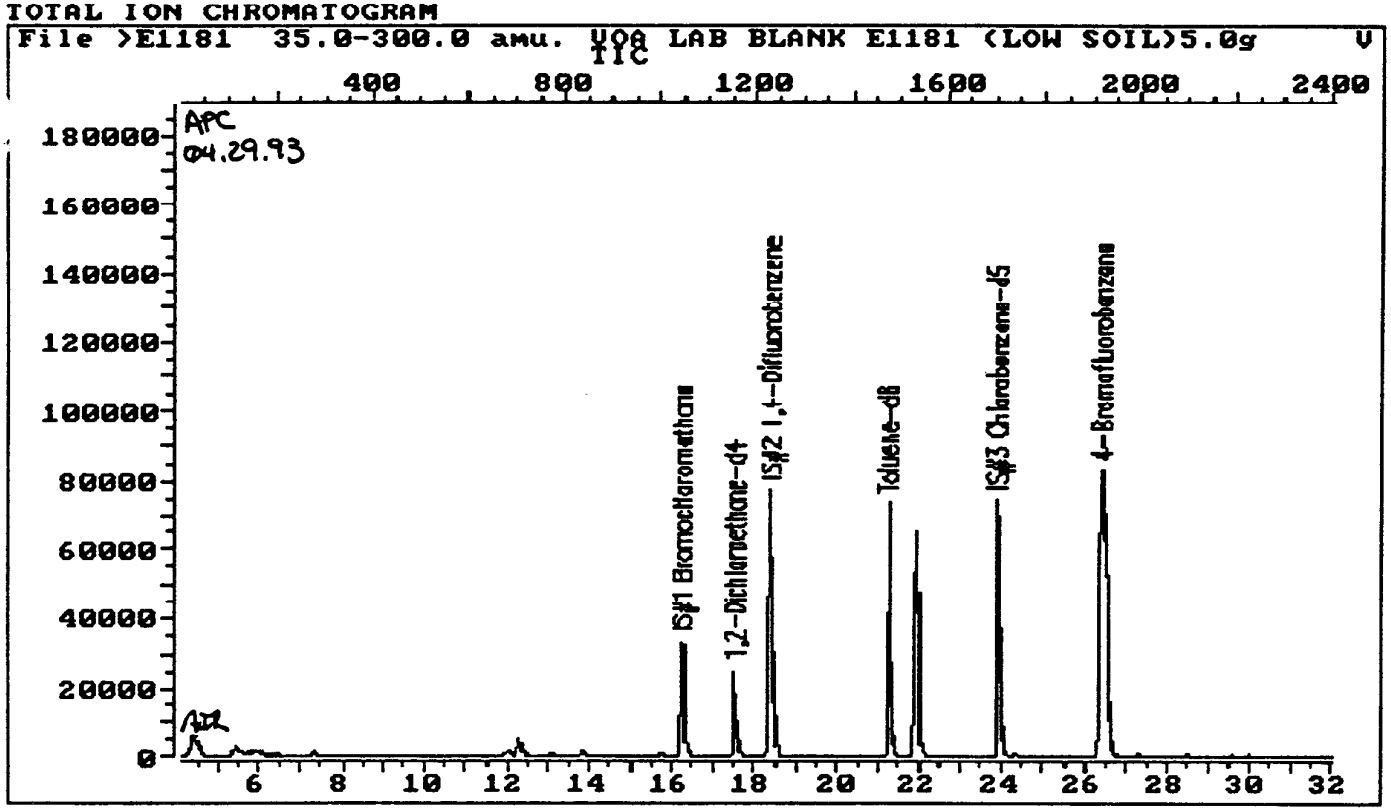
Acetone	BQL	10.
Carbon Disulfide	BQL	5.
2-Butanone	BQL	10.
Vinyl Acetate	BQL	10.
2-Hexanone	BQL	10.
4-Methyl-2-Pentanone	BQL	10.
Styrene	BQL	5.
Xylene (total)	BQL	5.

SURROGATE RECOVERY	(%)	QC Range
1,2-Dichloroethane-d4	90	70-121
Toluene-d8	103	84-138
4-Bromofluorobenzene	95	59-113

Surrogate Spike Level: 50 ug/kg
Associated Blank: NA

B : Detected in blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

TOTAL ION CHROMATOGRAM



Data File: >E1181::D1 Quant Output File: ^E1181::QT
Name: VOA LAB BLANK E1181
Misc: (LOW SOIL)5.0g VOA LAB BLANK INST E

Id File: ID_EV::DB
Title: VOLATILES BY SW846-8240/EPA 624 (CC# 2603392) INST E
Last Calibration: 930428 10:51

Operator ID: ARCHIE
Quant Time: 930428 15:53
Injected at: 930428 15:04

Client: U.S. ARMY CORPS OF ENG.
Sample: IC-BS-6
Lab ID: W304JI04 (TCLP)
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/21/93
Date Analyzed: 04/27/93
Date Sampled: 04/16/93
Data File ID: RP116V

GC/MS
TCLP EXTRACTABLES

Compound	Chromatographic Retention Time (min.)	Leachate Concentration (ug/l)	PQL (ug/l)	RTL (ug/l)
Pyridine		BQL	50.	5000.
1,4-Dichlorobenzene		BQL	50.	7500.
Hexachloroethane		BQL	50.	3000.
Nitrobenzene		BQL	50.	2000.
Hexachloro-1,3-butadiene		BQL	50.	500.
2,4-Dinitrotoluene		BQL	50.	130.
Hexachlorobenzene		BQL	50.	130.
Cresols (total)		BQL	50.	200000.
2,4,6-Trichlorophenol		BQL	50.	2000.
2,4,5-Trichlorophenol		BQL	250.	400000.
Pentachlorophenol		BQL	250.	100000.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	78	35-114
2-Fluorobiphenyl	83	43-116
Terphenyl-d14	82	33-141
Phenol-d5	68	10-110
2-Fluorophenol	72	21-110
2,4,6-Tribromophenol	79	10-123

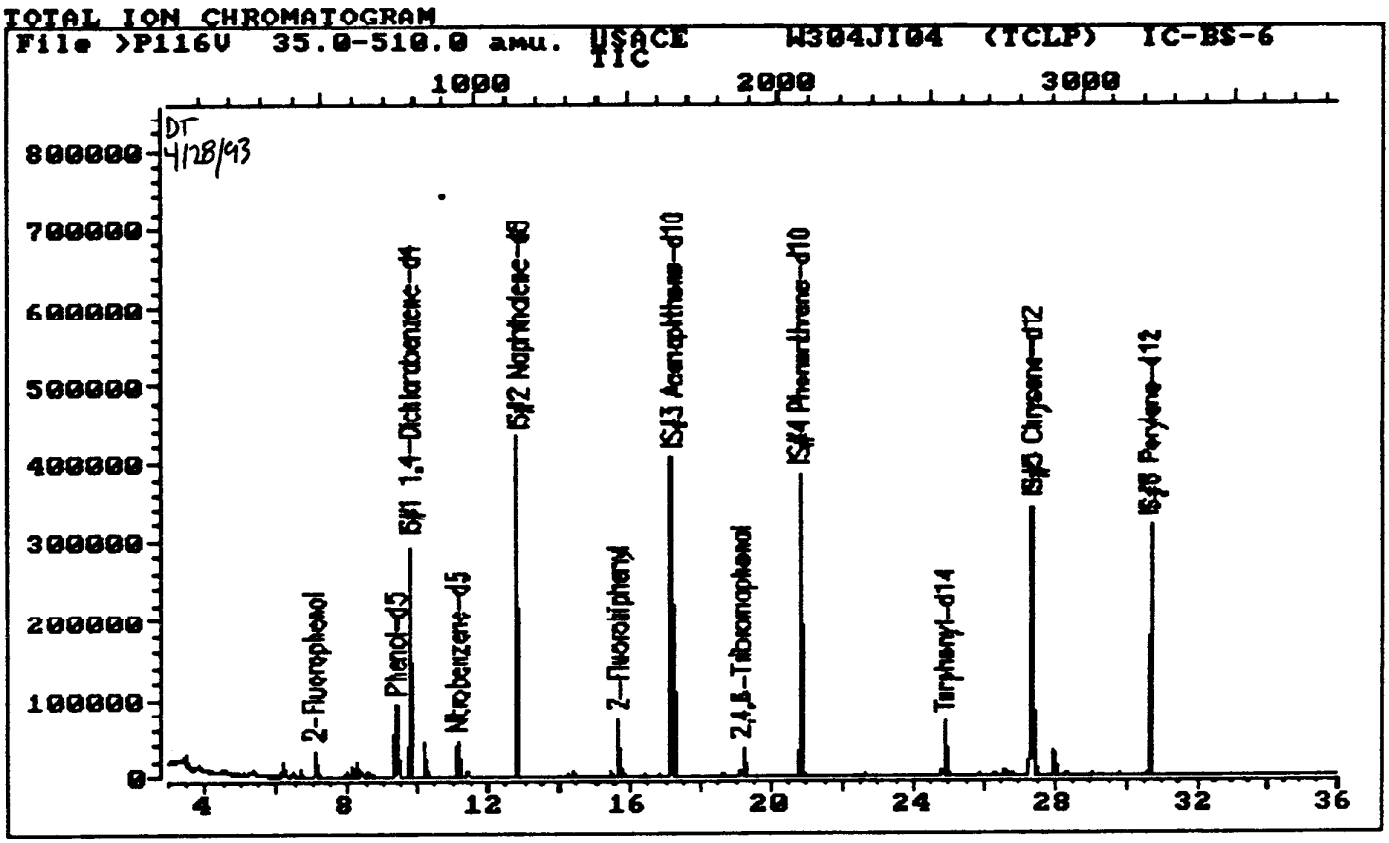
SURROGATE SPIKE LEVEL
Base/Neutral : 100 ug/l
Acid : 150 ug/l

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
RTL: Regulatory Threshold Limits
Associated Blank: BNA RP116N
MS : Matrix Spike Compound Level: NA

TCLP MS QC RANGES
(* QC ranges not available in published EPA methodology)
(+ EPA CLP SOW 3/90 Advisory Ranges)
(# SW 846-8270 Revision 1 November 1990)

Pyridine	: *
Hexachloroethane	:40-113#
Nitrobenzene	:35-180#
1,4-Dichlorobenzene	:36-97+
2,4-Dinitrotoluene	:24-96
Hexachloro-1,3-butadiene	:24-116#
Hexachlorobenzene	: 0-152#
Pentachlorophenol	: 9-103+
Cresols (total);	: *
2,4,6-Trichlorophenol	:37-144#
2,4,5-Trichlorophenol	: *

TOTAL ION CHROMATOGRAM



Data File: >P116V::D8 Quant Output File: ^P116V::BQ
Name: USACE W304JI04
Misc: (TCLP) IC-BS-6 INST P BTL#23

Id File: ID_TP1::DB
Title: TCLP SEMIVOLATILE ANALYSIS BY SW846-8270 (CC#2639247) MAR93
Last Calibration: 930427 11:10

Operator ID: BRUCE
Quant Time: 930427 11:44
Injected at: 930427 06:21

Client: U.S. ARMY CORPS OF ENG.
Sample: IC-BS-2
Lab ID: W304JI07 (TCLP)
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/21/93
Date Analyzed: 04/27/93
Date Sampled: 04/17/93
Data File ID: RP116W

GC/MS
TCLP EXTRACTABLES

Compound	Chromatographic Retention Time (min.)	Leachate Concentration (ug/l)	PQL (ug/l)	RTL (ug/l)
Pyridine		BQL	50.	5000.
1,4-Dichlorobenzene		BQL	50.	7500.
Hexachloroethane		BQL	50.	3000.
Nitrobenzene		BQL	50.	2000.
Hexachloro-1,3-butadiene		BQL	50.	500.
2,4-Dinitrotoluene		BQL	50.	130.
Hexachlorobenzene		BQL	50.	130.
Cresols (total)		BQL	50.	200000.
2,4,6-Trichlorophenol		BQL	50.	2000.
2,4,5-Trichlorophenol		BQL	250.	400000.
Pentachlorophenol		BQL	250.	100000.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	76	35-114
2-Fluorobiphenyl	76	43-116
Terphenyl-d14	82	33-141
Phenol-d5	30	10-110
2-Fluorophenol	33	21-110
2,4,6-Tribromophenol	41	10-123

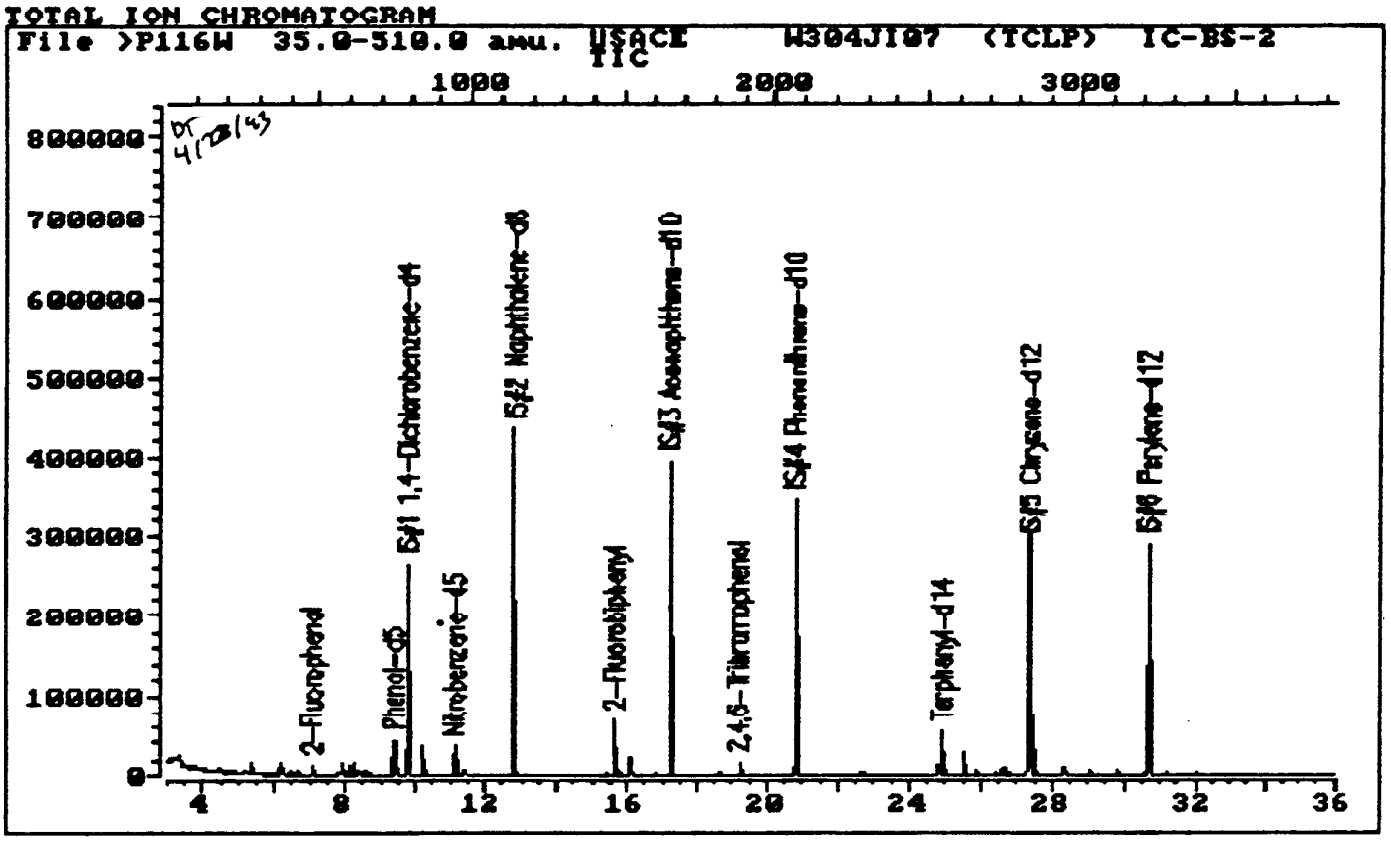
SURROGATE SPIKE LEVEL
Base/Neutral : 100 ug/l
Acid : 150 ug/l

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
RTL: Regulatory Threshold Limits
Associated Blank: BNA RP116N
MS : Matrix Spike Compound Level: NA

TCLP MS QC RANGES
(* QC ranges not available in published EPA methodology)
(+ EPA CLP SOW 3/90 Advisory Ranges)
(# SW 846-8270 Revision 1 November 1990)

Pyridine	: *
Hexachloroethane	:40-113#
Nitrobenzene	:35-180#
1,4-Dichlorobenzene	:36-97+
2,4-Dinitrotoluene	:24-96
Hexachloro-1,3-butadiene	:24-116#
Hexachlorobenzene	: 0-152#
Pentachlorophenol	: 9-103+
Cresols (total);	: *
2,4,6-Trichlorophenol	:37-144#
2,4,5-Trichlorophenol	: *

TOTAL ION CHROMATOGRAM



Data File: >P116W::D8 Quant Output File: ^P116W::BQ
Name: USACE W304JI07
Misc: (TCLP) IC-BS-2 INST P BTL#24

Id File: ID_TP1::DB
Title: TCLP SEMIVOLATILE ANALYSIS BY SW846-8270 (CC#2639247) MAR93
Last Calibration: 930427 11:10

Operator ID: BRUCE
Quant Time: 930427 11:45
Injected at: 930427 07:08

Client: U.S. ARMY CORPS OF ENG.
Sample: IC-BS-7
Lab ID: W304JI11 (TCLP)
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/21/93
Date Analyzed: 04/27/93
Date Sampled: 04/18/93
Data File ID: RP116X

GC/MS
TCLP EXTRACTABLES

Compound	Chromatographic Retention Time (min.)	Leachate Concentration (ug/l)	PQL (ug/l)	RTL (ug/l)
Pyridine		BQL	50.	5000.
1,4-Dichlorobenzene		BQL	50.	7500.
Hexachloroethane		BQL	50.	3000.
Nitrobenzene		BQL	50.	2000.
Hexachloro-1,3-butadiene		BQL	50.	500.
2,4-Dinitrotoluene		BQL	50.	130.
Hexachlorobenzene		BQL	50.	130.
Cresols (total)		BQL	50.	200000.
2,4,6-Trichlorophenol		BQL	50.	2000.
2,4,5-Trichlorophenol		BQL	250.	400000.
Pentachlorophenol		BQL	250.	100000.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	73	35-114
2-Fluorobiphenyl	74	43-116
Terphenyl-d14	81	33-141
Phenol-d5	67	10-110
2-Fluorophenol	68	21-110
2,4,6-Tribromophenol	81	10-123

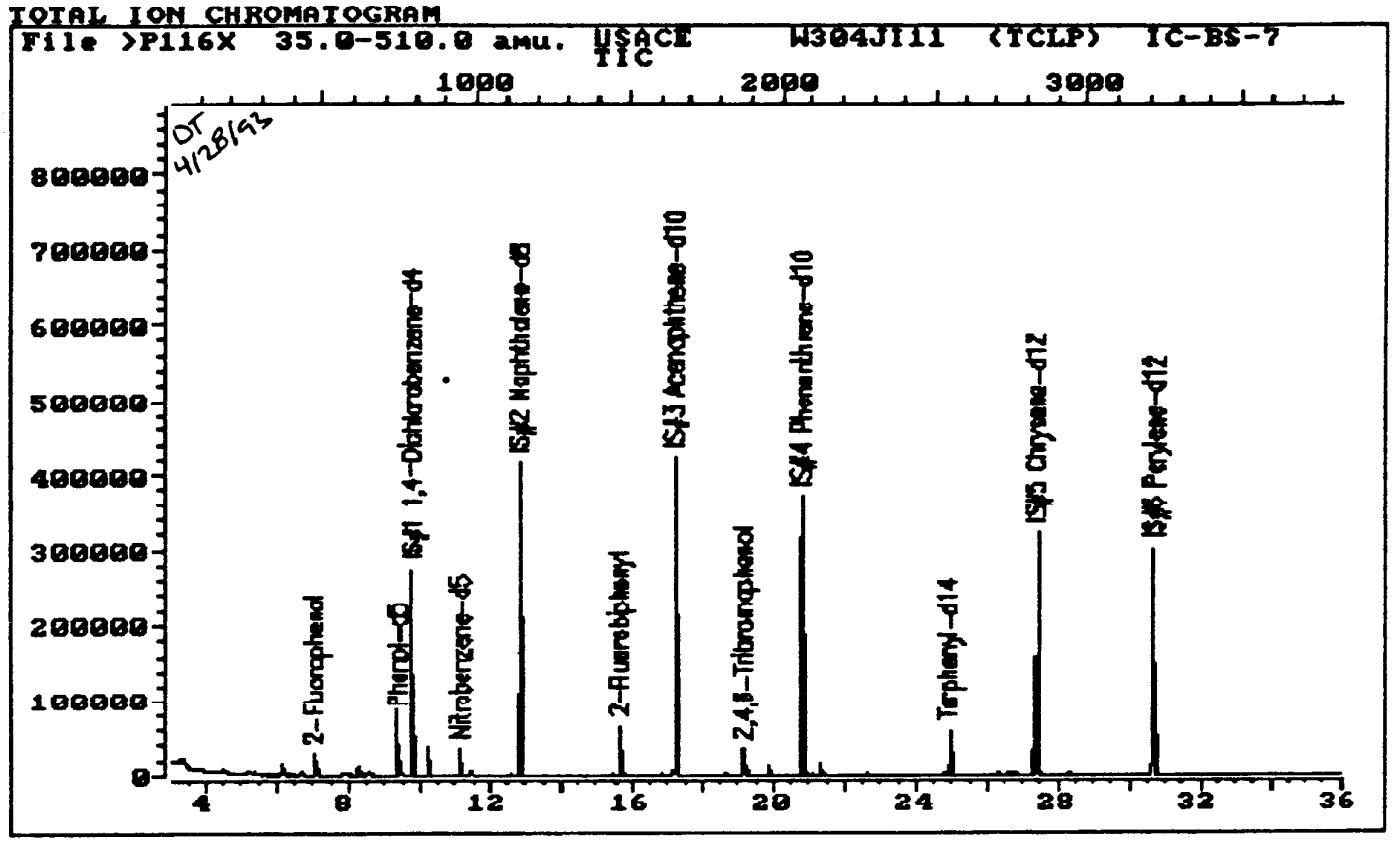
SURROGATE SPIKE LEVEL
Base/Neutral : 100 ug/l
Acid : 150 ug/l

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
RTL: Regulatory Threshold Limits
Associated Blank: BNA RP116N
MS : Matrix Spike Compound Level: NA

TCLP MS QC RANGES
(* QC ranges not available in published EPA methodology)
(+ EPA CLP SOW 3/90 Advisory Ranges)
(# SW 846-8270 Revision 1 November 1990)

Pyridine	: *
Hexachloroethane	:40-113#
Nitrobenzene	:35-180#
1,4-Dichlorobenzene	:36-97+
2,4-Dinitrotoluene	:24-96
Hexachloro-1,3-butadiene	:24-116#
Hexachlorobenzene	: 0-152#
Pentachlorophenol	: 9-103+
Cresols (total);	: *
2,4,6-Trichlorophenol	:37-144#
2,4,5-Trichlorophenol	: *

TOTAL ION CHROMATOGRAM



Data File: >P116X::D8 Quant Output File: ^P116X::BQ
Name: USACE W304JI11
Misc: (TCLP) IC-BS-7 INST P BTL#25

Id File: ID_TP1::DB
Title: TCLP SEMIVOLATILE ANALYSIS BY SW846-8270 (CC#2639247) MAR93
Last Calibration: 930427 11:10

Operator ID: BRUCE
Quant Time: 930427 11:47
Injected at: 930427 07:56

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-6
Lab ID: W304JI04
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/16/93
Data File ID: RH1170

GC/MS
BASE/NEUTRAL PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Benzidine		BQL	830.
bis(2-Chloroethyl)ether		BQL	170.
1,3-Dichlorobenzene		BQL	170.
1,4-Dichlorobenzene		BQL	170.
1,2-Dichlorobenzene		BQL	170.
bis(2-Chloroisopropyl)ether		BQL	170.
N-Nitroso-di-n-propylamine		BQL	170.
Hexachloroethane		BQL	170.
Nitrobenzene		BQL	170.
Isophorone		BQL	170.
bis(2-Chloroethoxy)methane		BQL	170.
1,2,4-Trichlorobenzene		BQL	170.
Naphthalene		BQL	170.
Hexachlorobutadiene		BQL	170.
Hexachlorocyclopentadiene		BQL	170.
2-Chloronaphthalene		BQL	170.
Dimethylphthalate		BQL	170.
2,6-Dinitrotoluene		BQL	170.
Acenaphthylene		BQL	170.
Acenaphthene		BQL	170.
2,4-Dinitrotoluene		BQL	170.
Diethylphthalate		BQL	170.
4-Chlorophenyl-phenylether		BQL	170.
Fluorene		BQL	170.
N-Nitrosodiphenylamine (1)		BQL	170.
4-Bromophenyl-phenylether		BQL	170.
Hexachlorobenzene		BQL	170.
Phenanthrene	21.50	270.	170.
Anthracene		BQL	170.
Pyrene		BQL	170.
Di-n-butylphthalate		BQL	170.
Fluoranthene		BQL	170.
Butylbenzylphthalate		BQL	170.
3,3'-Dichlorobenzidine		BQL	330.
Benzo(a)anthracene		BQL	170.
bis(2-Ethylhexyl)phthalate	28.63	220.	170.
Chrysene		BQL	170.
Di-n-octylphthalate		BQL	170.
Benzo(b)fluoranthene		BQL	170.
N-Nitrosodimethylamine		BQL	170.
1,2-Diphenylhydrazine (2)		BQL	170.

(1) Cannot be Distinguished from Diphenylamine
(2) Cannot be Distinguished from Azobenzene

- Continued -

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-6

Benzo(k)fluoranthene	BQL	170.
Benzo(a)pyrene	BQL	170.
Indeno(1,2,3-cd)pyrene	BQL	170.
Dibenz(a,h)anthracene	BQL	170.
Benzo(g,h,i)perylene	BQL	170.
Benzyl alcohol	BQL	170.
4-Chloroaniline	BQL	170.
Dibenzofuran	BQL	170.
2-Methylnaphthalene	BQL	170.
2-Nitroaniline	BQL	830.
3-Nitroaniline	BQL	830.
4-Nitroaniline	BQL	830.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	70	23-120
2-Fluorobiphenyl	80	30-115
Terphenyl-d14	84	18-137

Surrogate Spike Level: 1700 ug/kg
Associated Blank: BNA RH117E

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-6
Lab ID: W304JI04
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/16/93
Data File ID: RH1170

GC/MS

ACID EXTRACTABLE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Phenol		BQL	170.
2-Chlorophenol		BQL	170.
2-Nitrophenol		BQL	170.
2,4-Dimethylphenol		BQL	170.
2,4-Dichlorophenol		BQL	170.
4-Chloro-3-methylphenol		BQL	170.
2,4,6-Trichlorophenol		BQL	170.
2,4-Dinitrophenol		BQL	830.
4-Nitrophenol		BQL	830.
4,6-Dinitro-2-methylphenol		BQL	830.
Pentachlorophenol		BQL	830.
2-Methylphenol		BQL	170.
4-Methylphenol		BQL	170.
Benzoic acid		BQL	830.
2,4,5-Trichlorophenol		BQL	830.

SURROGATE RECOVERY	(%)	QC Range
Phenol-d5	69	24-113
2-Fluorophenol	68	25-121
2,4,6-Tribromophenol	78	19-122

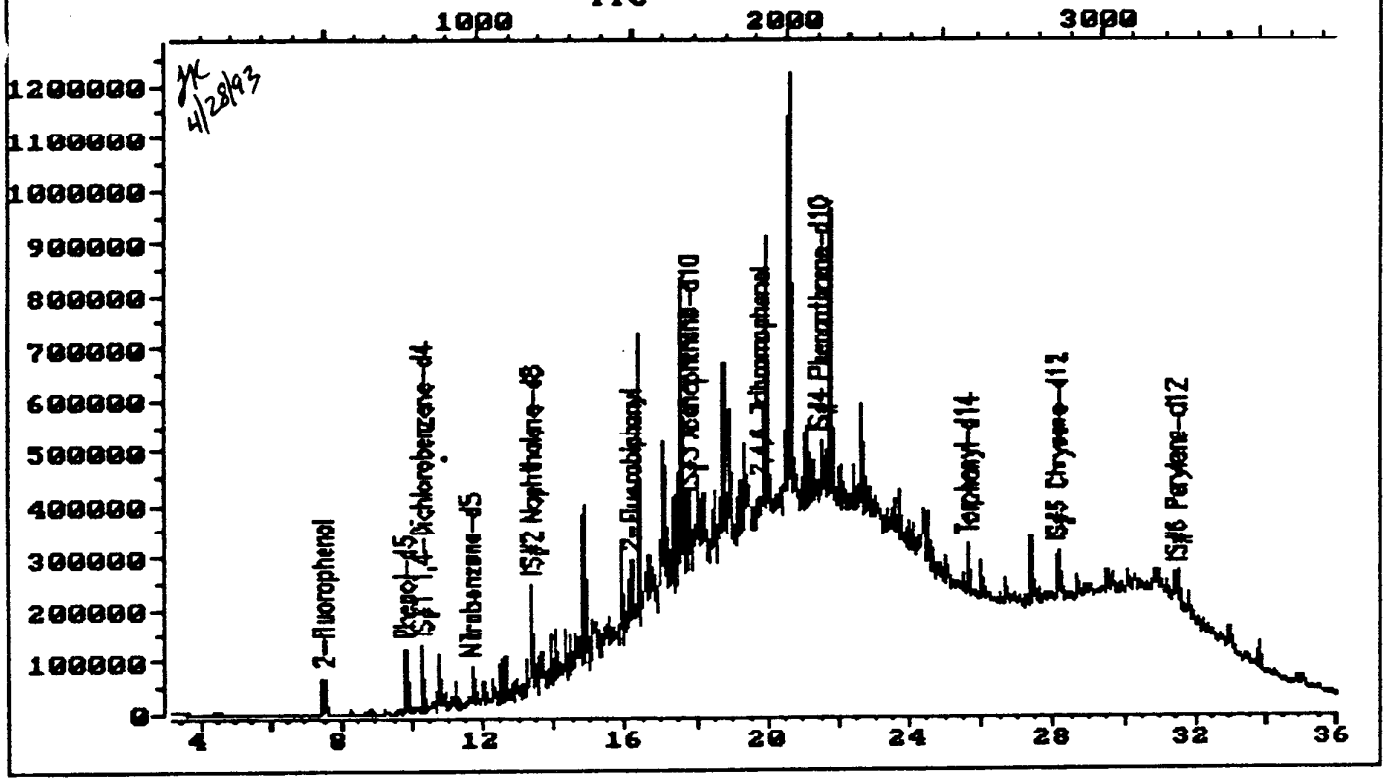
Surrogate Spike Level: 3300 ug/kg
Associated Blank: BNA RH117E

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

TOTAL ION CHROMATOGRAM

File >H1170 35.0-510.0 amu. USACE W304JI04 (LOW SOIL) IC-BS-6

TIC



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Name: USACE W304JI04
Misc: (LOW SOIL) IC-BS-6 INST H BTL#24

Id File: ID SV::DB
Title: SEMIVOLATILES BY SW846-8270/EPA 625 (CC#3796931) APR93
Last Calibration: 930428 09:30

Operator ID: LYNN
Quant Time: 930428 11:31
Injected at: 930428 10:49

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-2
Lab ID: W304JI07
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/17/93
Data File ID: RH117Z

GC/MS
BASE/NEUTRAL PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	POL (ug/kg)
Benzidine		BQL	830.
bis(2-Chloroethyl)ether		BQL	170.
1,3-Dichlorobenzene		BQL	170.
1,4-Dichlorobenzene		BQL	170.
1,2-Dichlorobenzene		BQL	170.
bis(2-Chloroisopropyl)ether		BQL	170.
N-Nitroso-di-n-propylamine		BQL	170.
Hexachloroethane		BQL	170.
Nitrobenzene		BQL	170.
Isophorone		BQL	170.
bis(2-Chloroethoxy)methane		BQL	170.
1,2,4-Trichlorobenzene		BQL	170.
Naphthalene		BQL	170.
Hexachlorobutadiene		BQL	170.
Hexachlorocyclopentadiene		BQL	170.
2-Chloronaphthalene		BQL	170.
Dimethylphthalate		BQL	170.
2,6-Dinitrotoluene		BQL	170.
Acenaphthylene		BQL	170.
Acenaphthene		BQL	170.
2,4-Dinitrotoluene		BQL	170.
Diethylphthalate		BQL	170.
4-Chlorophenyl-phenylether		BQL	170.
Fluorene		BQL	170.
N-Nitrosodiphenylamine (1)		BQL	170.
4-Bromophenyl-phenylether		BQL	170.
Hexachlorobenzene		BQL	170.
Phenanthrene		BQL	170.
Anthracene		BQL	170.
Pyrene		BQL	170.
Di-n-butylphthalate		BQL	170.
Fluoranthene		BQL	170.
Butylbenzylphthalate		BQL	170.
3,3'-Dichlorobenzidine		BQL	330.
Benzo(a)anthracene		BQL	170.
bis(2-Ethylhexyl)phthalate		BQL	170.
Chrysene		BQL	170.
Di-n-octylphthalate		BQL	170.
Benzo(b)fluoranthene		BQL	170.
N-Nitrosodimethylamine		BQL	170.
1,2-Diphenylhydrazine (2)		BQL	170.

(1) Cannot be Distinguished from Diphenylamine
(2) Cannot be Distinguished from Azobenzene

- Continued -

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-2

Benzo(k)fluoranthene	BQL	170.
Benzo(a)pyrene	BQL	170.
Indeno(1,2,3-cd)pyrene	BQL	170.
Dibenz(a,h)anthracene	BQL	170.
Benzo(g,h,i)perylene	BQL	170.
Benzyl alcohol	BQL	170.
4-Chloroaniline	BQL	170.
Dibenzofuran	BQL	170.
2-Methylnaphthalene	BQL	170.
2-Nitroaniline	BQL	830.
3-Nitroaniline	BQL	830.
4-Nitroaniline	BQL	830.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	93	23-120
2-Fluorobiphenyl	94	30-115
Terphenyl-d14	91	18-137

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

Surrogate Spike Level: 1700 ug/kg
Associated Blank: BNA RH117E

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-2
Lab ID: W304JI07
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/17/93
Data File ID: RH117Z

GC/MS

ACID EXTRACTABLE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Phenol		BQL	170.
2-Chlorophenol		BQL	170.
2-Nitrophenol		BQL	170.
2,4-Dimethylphenol		BQL	170.
2,4-Dichlorophenol		BQL	170.
4-Chloro-3-methylphenol		BQL	170.
2,4,6-Trichlorophenol		BQL	170.
2,4-Dinitrophenol		BQL	830.
4-Nitrophenol		BQL	830.
4,6-Dinitro-2-methylphenol		BQL	830.
Pentachlorophenol		BQL	830.
2-Methylphenol		BQL	170.
4-Methylphenol		BQL	170.
Benzoic acid		BQL	830.
2,4,5-Trichlorophenol		BQL	830.

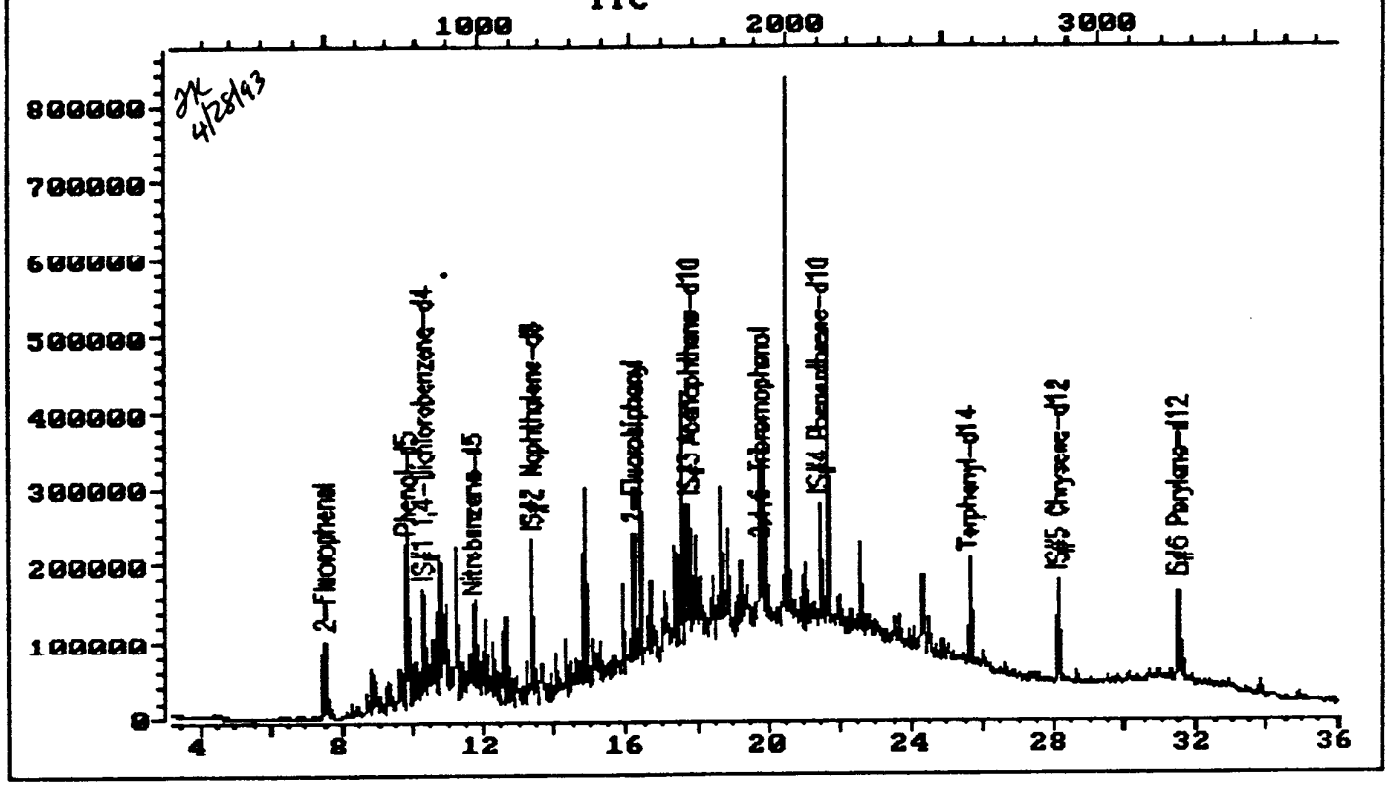
SURROGATE RECOVERY	(%)	QC Range
Phenol-d5	94	24-113
2-Fluorophenol	96	25-121
2,4,6-Tribromophenol	102	19-122

Surrogate Spike Level: 3300 ug/kg
Associated Blank: BNA RH117E

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

TOTAL ION CHROMATOGRAM

File >H117Z 35.0-510.0 amu. USACE TIC W304JI07 (LOW SOIL) IC-BS-2



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Name: USACE W304JI07
Misc: (LOW SOIL) IC-BS-2 INST H BTL#23

Id File: ID_SV::DB
Title: SEMIVOLATILES BY SW846-8270/EPA 625 (CC#3796931) APR93
Last Calibration: 930428 09:30

Operator ID: LYNN
Quant Time: 930428 11:13
Injected at: 930428 09:58

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-9
Lab ID: W304JI09
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/18/93
Data File ID: RH1171

GC/MS

BASE/NEUTRAL PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Benzidine		BQL	4200.
bis(2-Chloroethyl)ether		BQL	830.
1,3-Dichlorobenzene		BQL	830.
1,4-Dichlorobenzene		BQL	830.
1,2-Dichlorobenzene		BQL	830.
bis(2-Chloroisopropyl)ether		BQL	830.
N-Nitroso-di-n-propylamine		BQL	830.
Hexachloroethane		BQL	830.
Nitrobenzene		BQL	830.
Isophorone		BQL	830.
bis(2-Chloroethoxy)methane.		BQL	830.
1,2,4-Trichlorobenzene		BQL	830.
Naphthalene		BQL	830.
Hexachlorobutadiene		BQL	830.
Hexachlorocyclopentadiene		BQL	830.
2-Chloronaphthalene		BQL	830.
Dimethylphthalate		BQL	830.
2,6-Dinitrotoluene		BQL	830.
Acenaphthylene		BQL	830.
Acenaphthene	17.80	2200.	830.
2,4-Dinitrotoluene		BQL	830.
Diethylphthalate		BQL	830.
4-Chlorophenyl-phenylether		BQL	830.
Fluorene	19.07	980.	830.
N-Nitrosodiphenylamine (1)		BQL	830.
4-Bromophenyl-phenylether		BQL	830.
Hexachlorobenzene		BQL	830.
Phenanthrene	21.44	6700.	830.
Anthracene	21.54	1100.	830.
Pyrene	24.98	8400.	830.
Di-n-butylphthalate		BQL	830.
Fluoranthene	24.44	9900.	830.
Butylbenzylphthalate		BQL	830.
3,3'-Dichlorobenzidine		BQL	1700.
Benzo(a)anthracene	28.04	4900.	830.
bis(2-Ethylhexyl)phthalate		BQL	830.
Chrysene	28.15	5900.	830.
Di-n-octylphthalate		BQL	830.
Benzo(b)fluoranthene	30.60	6100.	830.
N-Nitrosodimethylamine		BQL	830.
1,2-Diphenylhydrazine (2)		BQL	830.

(1) Cannot be Distinguished from Diphenylamine
(2) Cannot be Distinguished from Azobenzene

- Continued -

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-9

Benzo(k)fluoranthene	30.65	4200.	830.
Benzo(a)pyrene	31.29	5400.	830.
Indeno(1,2,3-cd)pyrene	34.09	3300.	830.
Dibenz(a,h)anthracene	34.18	940.	830.
Benzo(g,h,i)perylene	34.84	3600.	830.
Benzyl alcohol		BQL	830.
4-Chloroaniline		BQL	830.
Dibenzofuran		BQL	830.
2-Methylnaphthalene		BQL	830.
2-Nitroaniline		BQL	4200.
3-Nitroaniline		BQL	4200.
4-Nitroaniline		BQL	4200.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	66	23-120
2-Fluorobiphenyl	82	30-115
Terphenyl-d14	81	18-137

Surrogate Spike Level: 1700 ug/kg
Associated Blank: BNA RH117E

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-9
Lab ID: W304JI09
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/18/93
Data File ID: RH1171

GC/MS
ACID EXTRACTABLE PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Phenol		BQL	830.
2-Chlorophenol		BQL	830.
2-Nitrophenol		BQL	830.
2,4-Dimethylphenol		BQL	830.
2,4-Dichlorophenol		BQL	830.
4-Chloro-3-methylphenol		BQL	830.
2,4,6-Trichlorophenol		BQL	830.
2,4-Dinitrophenol		BQL	4200.
4-Nitrophenol		BQL	4200.
4,6-Dinitro-2-methylphenol		BQL	4200.
Pentachlorophenol		BQL	4200.
2-Methylphenol		BQL	830.
4-Methylphenol		BQL	830.
Benzoic acid		BQL	4200.
2,4,5-Trichlorophenol		BQL	4200.

SURROGATE RECOVERY	(%)	QC Range
Phenol-d5	73	24-113
2-Fluorophenol	74	25-121
2,4,6-Tribromophenol	86	19-122

Surrogate Spike Level: 3300 ug/kg
Associated Blank: BNA RH117E

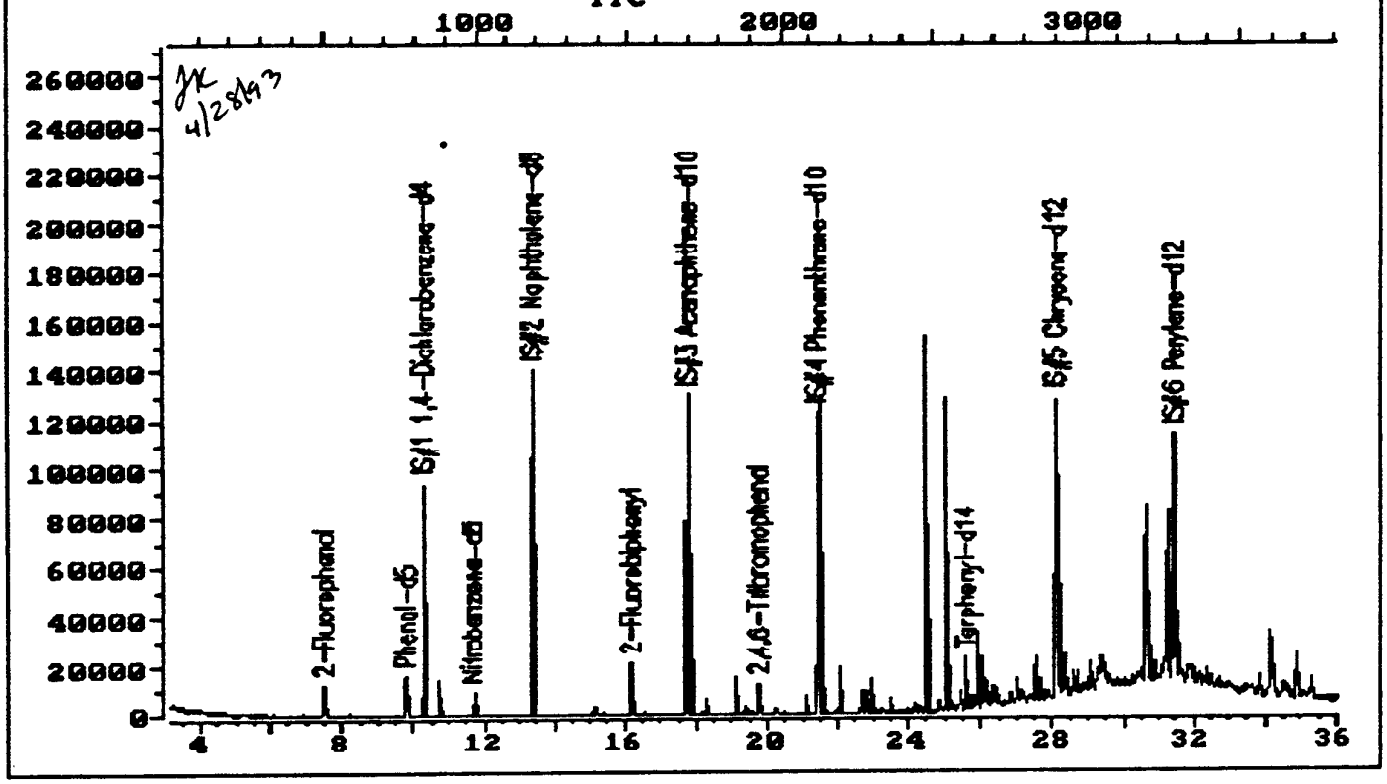
B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA

EIRA ENVIRONMENTAL INDUSTRIAL RESEARCH ASSOCIATES, INC.

TOTAL ION CHROMATOGRAM

File >H1171 35.0-510.0 amu. USACE W304JI09 (LOW SOIL) IC-BS-9

TIC



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Name: USACE W304JI09
Misc: (LOW SOIL) IC-BS-9 (DIL 1:5) INST H BTL#25

Id File: ID SV::DB
Title: SEMIVOLATILES BY SW846-8270/EPA 625 (CC#3796931) APR93
Last Calibration: 930428 09:30

Operator ID: LYNN
Quant Time: 930428 12:15
Injected at: 930428 11:38

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-7
Lab ID: W304JI11
Method: SW 846-8270 by CLP SOW 3/90

Date Extracted: 04/26/93
Date Analyzed: 04/28/93
Date Sampled: 04/18/93
Data File ID: RH1172

GC/MS

BASE/NEUTRAL PRIORITY POLLUTANTS/HAZARDOUS SUBSTANCE LIST COMPOUNDS

DRY ___ WET X WEIGHT

Compound	Chromatographic Retention Time (min.)	Concentration (ug/kg)	PQL (ug/kg)
Benzidine		BQL	4200.
bis(2-Chloroethyl)ether		BQL	830.
1.3-Dichlorobenzene		BQL	830.
1.4-Dichlorobenzene		BQL	830.
1.2-Dichlorobenzene		BQL	830.
bis(2-Chloroisopropyl)ether		BQL	830.
N-Nitroso-di-n-propylamine		BQL	830.
Hexachloroethane		BQL	830.
Nitrobenzene		BQL	830.
Isophorone		BQL	830.
bis(2-Chloroethoxy)methane		BQL	830.
1.2.4-Trichlorobenzene		BQL	830.
Naphthalene		BQL	830.
Hexachlorobutadiene		BQL	830.
Hexachlorocyclopentadiene		BQL	830.
2-Chloronaphthalene		BQL	830.
Dimethylphthalate		BQL	830.
2.6-Dinitrotoluene		BQL	830.
Acenaphthylene		BQL	830.
Acenaphthene		BQL	830.
2.4-Dinitrotoluene		BQL	830.
Diethylphthalate		BQL	830.
4-Chlorophenyl-phenylether		BQL	830.
Fluorene		BQL	830.
N-Nitrosodiphenylamine (1)		BQL	830.
4-Bromophenyl-phenylether		BQL	830.
Hexachlorobenzene		BQL	830.
Phenanthrene		BQL	830.
Anthracene		BQL	830.
Pyrene		BQL	830.
Di-n-butylphthalate		BQL	830.
Fluoranthene		BQL	830.
Butylbenzylphthalate		BQL	830.
3.3'-Dichlorobenzidine		BQL	1700.
Benzo(a)anthracene		BQL	830.
bis(2-Ethylhexyl)phthalate	28.62	1000.	830.
Chrysene		BQL	830.
Di-n-octylphthalate		BQL	830.
Benzo(b)fluoranthene		BQL	830.
N-Nitrosodimethylamine		BQL	830.
1.2-Diphenylhydrazine (2)		BQL	830.

(1) Cannot be Distinguished from Diphenylamine
(2) Cannot be Distinguished from Azobenzene

- Continued -

Client: U.S. ARMY CORPS OF ENGINEERS
Sample: IC-BS-7

Benzo(k)fluoranthene	BQL	830.
Benzo(a)pyrene	BQL	830.
Indeno(1,2,3-cd)pyrene	BQL	830.
Dibenz(a,h)anthracene	BQL	830.
Benzo(g,h,i)perylene	BQL	830.
Benzyl alcohol	BQL	830.
4-Chloroaniline	BQL	830.
Dibenzofuran	BQL	830.
2-Methylnaphthalene	BQL	830.
2-Nitroaniline	BQL	4200.
3-Nitroaniline	BQL	4200.
4-Nitroaniline	BQL	4200.

SURROGATE RECOVERY	(%)	QC Range
Nitrobenzene-d5	65	23-120
2-Fluorobiphenyl	81	30-115
Terphenyl-d14	87	18-137

Surrogate Spike Level: 1700 ug/kg
Associated Blank: BNA RH117E

B : Detected in Blank
D : Quantitated by a Secondary Dilution
J : Detected Below Quantitation Limit
CI : Cannot Calculate Recovery due to Coeluting Interference
DO : Diluted Out
BQL: Below Quantitation Limit
PQL: Practical Quantitation Limit
MS : Matrix Spike Compound Level: NA