215529

FINAL
SITE INSPECTION PRIORITIZATION
FRANKLIN PLASTIC
KEARNY, HUDSON COUNTY, NEW JERSEY

PREPARED UNDER

REPORT NO.: 8003-447
WORK ASSIGNMENT NO. 038-2JZZ
CONTRACT NO. 68-W9-0051

September 20, 1995
Updated: September 29, 1995
REV. NO. 1

VOLUME 2 OF 3

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP55

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345132

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045132A19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

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

FORM I VOA 1/87 Rev.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP55

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345132

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045132A19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP56

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345139

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045139B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	13	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	3	J
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	UJ
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

FORM I VOA 1/87 Rev.

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP56

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345139

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045139B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I VOA-TIC 1/87 Rev.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP57

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345146

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045146A12

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

% Moisture: not dec. 33 Date Analyzed: 06/12/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15	U
74-83-9	Bromomethane	15	U
75-01-4	Vinyl Chloride	15	U
75-00-3	Chloroethane	15	U
75-09-2	Methylene Chloride	37	~~B~~ UJ
67-64-1	Acetone	~~500~~	~~BB~~ U
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7 ~~2~~	~~J~~ U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	29	J
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	15	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	30	
591-78-6	2-Hexanone	15	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7 ~~2~~	~~J~~ U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total Xylenes	7	U

FORM I VOA 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP62

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GH045160C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

Number TICs found: 17

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	12.95	26000	JN
2.	UNKNOWN	15.49	30000	J
3. 54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	15.94	30000	J
4. 1575-95-7	BENZAMIDE, N-ACETYL-	17.44	28000	J
5. 10546-70-0	BENZAMIDE, N-PROPYL-	17.49	24000	J
6.	UNKNOWN	17.97	26000	J
7. 523-31-9	DIBENZYL PHTHALATE	19.04	240000	J
8.	UNKNOWN	19.14	4300	J
9.	UNKNOWN	19.22	11000	J
10.	UNKNOWN	19.45	17000	J
11.	UNKNOWN	19.57	11000	J
12.	UNKNOWN	19.75	28000	J
13.	UNKNOWN	19.97	8700	J
14.	UNKNOWN	20.05	8700	J
15.	UNKNOWN	20.45	15000	J
16.	UNKNOWN	21.54	37000	J
17.	UNKNOWN	22.35	20000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP62DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GJD45160A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/15/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	860000	U
111-44-4	bis(2-Chloroethyl)Ether	860000	U
95-57-8	2-Chlorophenol	860000	U
541-73-1	1,3-Dichlorobenzene	860000	U
106-46-7	1,4-Dichlorobenzene	860000	U
100-51-6	Benzyl Alcohol	860000	U
95-50-1	1,2-Dichlorobenzene	860000	U
95-48-7	2-Methylphenol	860000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	860000	U
106-44-5	4-Methylphenol	860000	U
621-64-7	N-Nitroso-Di-n-Propylamine	860000	U
67-72-1	Hexachloroethane	860000	U
98-95-3	Nitrobenzene	860000	U
78-59-1	Isophorone	860000	U
88-75-5	2-Nitrophenol	860000	U
105-67-9	2,4-Dimethylphenol	860000	U
65-85-0	Benzoic Acid	4200000	U
111-91-1	bis(2-Chloroethoxy)Methane	860000	U
120-83-2	2,4-Dichlorophenol	860000	U
120-82-1	1,2,4-Trichlorobenzene	860000	U
91-20-3	Naphthalene	860000	U
106-47-8	4-Chloroaniline	860000	U
87-68-3	Hexachlorobutadiene	860000	U
59-50-7	4-Chloro-3-Methylphenol	860000	U
91-57-6	2-Methylnaphthalene	860000	U
77-47-4	Hexachlorocyclopentadiene	860000	U
88-06-2	2,4,6-Trichlorophenol	860000	U
95-95-4	2,4,5-Trichlorophenol	4200000	U
91-58-7	2-Chloronaphthalene	860000	U
88-74-4	2-Nitroaniline	4200000	U
131-11-3	Dimethyl Phthalate	860000	U
208-96-8	Acenaphthylene	860000	U
606-20-2	2,6-Dinitrotoluene	860000	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP62DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GJD45160A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/15/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 40

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	4200000	U
83-32-9	Acenaphthene	860000	U
51-28-5	2,4-Dinitrophenol	4200000	U
100-02-7	4-Nitrophenol	4200000	U
132-64-9	Dibenzofuran	860000	U
121-14-2	2,4-Dinitrotoluene	860000	U
84-66-2	Diethylphthalate	860000	U
7005-72-3	4-Chlorophenyl-phenylether	860000	U
86-73-7	Fluorene	860000	U
100-01-6	4-Nitroaniline	4200000	U
534-52-1	4,6-Dinitro-2-Methylphenol	4200000	U
86-30-6	N-Nitrosodiphenylamine (1)	860000	U
101-55-3	4-Bromophenyl-phenylether	860000	U
118-74-1	Hexachlorobenzene	860000	U
87-86-5	Pentachlorophenol	4200000	U
85-01-8	Phenanthrene	860000	U
120-12-7	Anthracene	860000	U
84-74-2	Di-n-Butylphthalate	860000	U
206-44-0	Fluoranthene	860000	U
129-00-0	Pyrene	860000	U
85-68-7	Butylbenzylphthalate	11000000	D
91-94-1	3,3'-Dichlorobenzidine	1700000	U
56-55-3	Benzo(a)Anthracene	860000	U
218-01-9	Chrysene	860000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	97000	DJ
117-84-0	Di-n-Octyl Phthalate	860000	U
205-99-2	Benzo(b)Fluoranthene	860000	U
207-08-9	Benzo(k)Fluoranthene	860000	U
50-32-8	Benzo(a)Pyrene	860000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	860000	U
53-70-3	Dibenzo(a,h)Anthracene	860000	U
191-24-2	Benzo(g,h,i)Perylene	860000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP62DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GJD45160A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/15/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 40

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP63

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345161

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GH045161C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 27 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	27000	U
111-44-4	bis(2-Chloroethyl)Ether	27000	U
95-57-8	2-Chlorophenol	27000	U
541-73-1	1,3-Dichlorobenzene	27000	U
106-46-7	1,4-Dichlorobenzene	27000	U
100-51-6	Benzyl Alcohol	27000	U
95-50-1	1,2-Dichlorobenzene	27000	U
95-48-7	2-Methylphenol	27000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	27000	U
106-44-5	4-Methylphenol	27000	U
621-64-7	N-Nitroso-Di-n-Propylamine	27000	U
67-72-1	Hexachloroethane	27000	U
98-95-3	Nitrobenzene	27000	U
78-59-1	Isophorone	27000	U
88-75-5	2-Nitrophenol	27000	U
105-67-9	2,4-Dimethylphenol	27000	U
65-85-0	Benzoic Acid	130000	~~U~~ R
111-91-1	bis(2-Chloroethoxy)Methane	27000	U
120-83-2	2,4-Dichlorophenol	27000	U
120-82-1	1,2,4-Trichlorobenzene	27000	U
91-20-3	Naphthalene	27000	U
106-47-8	4-Chloroaniline	27000	U
87-68-3	Hexachlorobutadiene	27000	U
59-50-7	4-Chloro-3-Methylphenol	27000	U
91-57-6	2-Methylnaphthalene	27000	U
77-47-4	Hexachlorocyclopentadiene	27000	UJ
88-06-2	2,4,6-Trichlorophenol	27000	U
95-95-4	2,4,5-Trichlorophenol	130000	U
91-58-7	2-Chloronaphthalene	27000	U
88-74-4	2-Nitroaniline	130000	U
131-11-3	Dimethyl Phthalate	27000	U
208-96-8	Acenaphthylene	27000	U
606-20-2	2,6-Dinitrotoluene	27000	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP63

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345161

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GH045161C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 27 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	130000	U
83-32-9	Acenaphthene	27000	U
51-28-5	2,4-Dinitrophenol	130000	U
100-02-7	4-Nitrophenol	130000	U
132-64-9	Dibenzofuran	27000	U
121-14-2	2,4-Dinitrotoluene	27000	U
84-66-2	Diethylphthalate	27000	U
7005-72-3	4-Chlorophenyl-phenylether	27000	U
86-73-7	Fluorene	27000	U
100-01-6	4-Nitroaniline	130000	U
534-52-1	4,6-Dinitro-2-Methylphenol	130000	U
86-30-6	N-Nitrosodiphenylamine (1)	27000	U
101-55-3	4-Bromophenyl-phenylether	27000	U
118-74-1	Hexachlorobenzene	27000	U
87-86-5	Pentachlorophenol	130000	U
85-01-8	Phenanthrene	27000	U
120-12-7	Anthracene	27000	U
84-74-2	Di-n-Butylphthalate	12000	J
206-44-0	Fluoranthene	27000	U
129-00-0	Pyrene	27000	U
85-68-7	Butylbenzylphthalate	410000	
91-94-1	3,3'-Dichlorobenzidine	54000	U
56-55-3	Benzo(a)Anthracene	27000	U
218-01-9	Chrysene	27000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	17000	J
117-84-0	Di-n-Octyl Phthalate	27000	U
205-99-2	Benzo(b)Fluoranthene	27000	U
207-08-9	Benzo(k)Fluoranthene	27000	U
50-32-8	Benzo(a)Pyrene	27000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	27000	U
53-70-3	Dibenzo(a,h)Anthracene	27000	U
191-24-2	Benzo(g,h,i)Perylene	27000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP63

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345161

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GH045161C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 27 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 630-02-4	OCTACOSANE	15.94	19000	J
2.	PROPYLBENZAMIDE	17.45	850000	J
3.	PROPYLBENZAMIDE	17.50	710000	J
4.	PROPYLBENZAMIDE	17.62	170000	J
5.	UNKNOWN	18.30	33000	J
6. 523-31-9	DIBENZYL PHTHALATE	19.04	30000	J
7. 7098-22-8	TETRATETRACONTANE	19.69	16000	J
8.	DIMETHYLUNDECANE	21.37	38000	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP64

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GD045162A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	210000	U
111-44-4	bis(2-Chloroethyl)Ether	210000	U
95-57-8	2-Chlorophenol	210000	U
541-73-1	1,3-Dichlorobenzene	210000	U
106-46-7	1,4-Dichlorobenzene	210000	U
100-51-6	Benzyl Alcohol	210000	U
95-50-1	1,2-Dichlorobenzene	210000	U
95-48-7	2-Methylphenol	210000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	210000	U
106-44-5	4-Methylphenol	210000	U
621-64-7	N-Nitroso-Di-n-Propylamine	210000	U
67-72-1	Hexachloroethane	210000	U
98-95-3	Nitrobenzene	210000	U
78-59-1	Isophorone	210000	U
88-75-5	2-Nitrophenol	210000	U
105-67-9	2,4-Dimethylphenol	210000	U
65-85-0	Benzoic Acid	1000000	U
111-91-1	bis(2-Chloroethoxy)Methane	210000	U
120-83-2	2,4-Dichlorophenol	210000	U
120-82-1	1,2,4-Trichlorobenzene	210000	U
91-20-3	Naphthalene	210000	U
106-47-8	4-Chloroaniline	210000	U
87-68-3	Hexachlorobutadiene	210000	U
59-50-7	4-Chloro-3-Methylphenol	210000	U
91-57-6	2-Methylnaphthalene	210000	U
77-47-4	Hexachlorocyclopentadiene	210000	U
88-06-2	2,4,6-Trichlorophenol	210000	U
95-95-4	2,4,5-Trichlorophenol	1000000	U
91-58-7	2-Chloronaphthalene	210000	U
88-74-4	2-Nitroaniline	1000000	U
131-11-3	Dimethyl Phthalate	210000	U
208-96-8	Acenaphthylene	210000	U
606-20-2	2,6-Dinitrotoluene	210000	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP64

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GD045162A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1000000	U
83-32-9	Acenaphthene	210000	U
51-28-5	2,4-Dinitrophenol	1000000	U
100-02-7	4-Nitrophenol	1000000	U
132-64-9	Dibenzofuran	210000	U
121-14-2	2,4-Dinitrotoluene	210000	U
84-66-2	Diethylphthalate	210000	U
7005-72-3	4-Chlorophenyl-phenylether	210000	U
86-73-7	Fluorene	210000	U
100-01-6	4-Nitroaniline	1000000	U
534-52-1	4,6-Dinitro-2-Methylphenol	1000000	U
86-30-6	N-Nitrosodiphenylamine (1)	210000	U
101-55-3	4-Bromophenyl-phenylether	210000	U
118-74-1	Hexachlorobenzene	210000	U
87-86-5	Pentachlorophenol	1000000	U
85-01-8	Phenanthrene	210000	U
120-12-7	Anthracene	210000	U
84-74-2	Di-n-Butylphthalate	34000	J
206-44-0	Fluoranthene	210000	U
129-00-0	Pyrene	210000	U
85-68-7	Butylbenzylphthalate	14000000	~~B~~ U*
91-94-1	3,3'-Dichlorobenzidine	430000	U
56-55-3	Benzo(a)Anthracene	210000	U
218-01-9	Chrysene	210000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	140000	J
117-84-0	Di-n-Octyl Phthalate	210000	U
205-99-2	Benzo(b)Fluoranthene	210000	U
207-08-9	Benzo(k)Fluoranthene	210000	U
50-32-8	Benzo(a)Pyrene	210000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	210000	U
53-70-3	Dibenzo(a,h)Anthracene	210000	U
191-24-2	Benzo(g,h,i)Perylene	210000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP64

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GD045162A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 10

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 523-31-9	DIBENZYL PHTHALATE	19.59	150000	JN

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP64DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G3D45162A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/15/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1100000	U
111-44-4	bis(2-Chloroethyl)Ether	1100000	U
95-57-8	2-Chlorophenol	1100000	U
541-73-1	1,3-Dichlorobenzene	1100000	U
106-46-7	1,4-Dichlorobenzene	1100000	U
100-51-6	Benzyl Alcohol	1100000	U
95-50-1	1,2-Dichlorobenzene	1100000	U
95-48-7	2-Methylphenol	1100000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1100000	U
106-44-5	4-Methylphenol	1100000	U
621-64-7	N-Nitroso-Di-n-Propylamine	1100000	U
67-72-1	Hexachloroethane	1100000	U
98-95-3	Nitrobenzene	1100000	U
78-59-1	Isophorone	1100000	U
88-75-5	2-Nitrophenol	1100000	U
105-67-9	2,4-Dimethylphenol	1100000	U
65-85-0	Benzoic Acid	1100000	U
111-91-1	bis(2-Chloroethoxy)Methane	5200000	U
120-83-2	2,4-Dichlorophenol	1100000	U
120-82-1	1,2,4-Trichlorobenzene	1100000	U
91-20-3	Naphthalene	1100000	U
106-47-8	4-Chloroaniline	1100000	U
87-68-3	Hexachlorobutadiene	1100000	U
59-50-7	4-Chloro-3-Methylphenol	1100000	U
91-57-6	2-Methylnaphthalene	1100000	U
77-47-4	Hexachlorocyclopentadiene	1100000	U
88-06-2	2,4,6-Trichlorophenol	1100000	U
95-95-4	2,4,5-Trichlorophenol	1100000	U
91-58-7	2-Chloronaphthalene	5200000	U
88-74-4	2-Nitroaniline	1100000	U
131-11-3	Dimethyl Phthalate	5200000	U
208-96-8	Acenaphthylene	1100000	U
606-20-2	2,6-Dinitrotoluene	1100000	U
		1100000	U

FORM I SV-1 1/87 Rev.

DO NOT

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP64DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G3D45162A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/15/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	5200000	U
83-32-9	Acenaphthene	1100000	U
51-28-5	2,4-Dinitrophenol	5200000	U
100-02-7	4-Nitrophenol	5200000	U
132-64-9	Dibenzofuran	1100000	U
121-14-2	2,4-Dinitrotoluene	1100000	U
84-66-2	Diethylphthalate	1100000	U
7005-72-3	4-Chlorophenyl-phenylether	1100000	U
86-73-7	Fluorene	1100000	U
100-01-6	4-Nitroaniline	5200000	U
534-52-1	4,6-Dinitro-2-Methylphenol	5200000	U
86-30-6	N-Nitrosodiphenylamine (1)	1100000	U
101-55-3	4-Bromophenyl-phenylether	1100000	U
118-74-1	Hexachlorobenzene	1100000	U
87-86-5	Pentachlorophenol	5200000	U
85-01-8	Phenanthrene	1100000	U
120-12-7	Anthracene	1100000	U
84-74-2	Di-n-Butylphthalate	1100000	U
206-44-0	Fluoranthene	1100000	U
129-00-0	Pyrene	1100000	U
85-68-7	Butylbenzylphthalate	16000000	D
91-94-1	3,3'-Dichlorobenzidine	2100000	U
56-55-3	Benzo(a)Anthracene	1100000	U
218-01-9	Chrysene	1100000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	130000	DJ
117-84-0	Di-n-Octyl Phthalate	1100000	U
205-99-2	Benzo(b)Fluoranthene	1100000	U
207-08-9	Benzo(k)Fluoranthene	1100000	U
50-32-8	Benzo(a)Pyrene	1100000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1100000	U
53-70-3	Dibenzo(a,h)Anthracene	1100000	U
191-24-2	Benzo(g,h,i)Perylene	1100000	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP64DL

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G3D45162A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/15/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 50

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP65

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345163

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G2D45163A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	210000	U
111-44-4	bis(2-Chloroethyl)Ether	210000	U
95-57-8	2-Chlorophenol	210000	U
541-73-1	1,3-Dichlorobenzene	210000	U
106-46-7	1,4-Dichlorobenzene	210000	U
100-51-6	Benzyl Alcohol	210000	U
95-50-1	1,2-Dichlorobenzene	210000	U
95-48-7	2-Methylphenol	210000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	210000	U
106-44-5	4-Methylphenol	210000	U
621-64-7	N-Nitroso-Di-n-Propylamine	210000	U
67-72-1	Hexachloroethane	210000	U
98-95-3	Nitrobenzene	210000	U
78-59-1	Isophorone	210000	U
88-75-5	2-Nitrophenol	210000	U
105-67-9	2,4-Dimethylphenol	210000	U
65-85-0	Benzoic Acid	1000000	U
111-91-1	bis(2-Chloroethoxy)Methane	210000	U
120-83-2	2,4-Dichlorophenol	210000	U
120-82-1	1,2,4-Trichlorobenzene	210000	U
91-20-3	Naphthalene	210000	U
106-47-8	4-Chloroaniline	210000	U
87-68-3	Hexachlorobutadiene	210000	U
59-50-7	4-Chloro-3-Methylphenol	210000	U
91-57-6	2-Methylnaphthalene	210000	U
77-47-4	Hexachlorocyclopentadiene	210000	U
88-06-2	2,4,6-Trichlorophenol	210000	U
95-95-4	2,4,5-Trichlorophenol	1000000	U
91-58-7	2-Chloronaphthalene	210000	U
88-74-4	2-Nitroaniline	1000000	U
131-11-3	Dimethyl Phthalate	210000	U
208-96-8	Acenaphthylene	210000	U
606-20-2	2,6-Dinitrotoluene	210000	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP65

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345163

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G2D45163A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 10

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1000000	U
83-32-9	Acenaphthene	210000	U
51-28-5	2,4-Dinitrophenol	1000000	U
100-02-7	4-Nitrophenol	1000000	U
132-64-9	Dibenzofuran	210000	U
121-14-2	2,4-Dinitrotoluene	210000	U
84-66-2	Diethylphthalate	210000	U
7005-72-3	4-Chlorophenyl-phenylether	210000	U
86-73-7	Fluorene	210000	U
100-01-6	4-Nitroaniline	1000000	U
534-52-1	4,6-Dinitro-2-Methylphenol	1000000	U
86-30-6	N-Nitrosodiphenylamine (1)	210000	U
101-55-3	4-Bromophenyl-phenylether	210000	U
118-74-1	Hexachlorobenzene	210000	U
87-86-5	Pentachlorophenol	1000000	U
85-01-8	Phenanthrene	210000	U
120-12-7	Anthracene	210000	U
84-74-2	Di-n-Butylphthalate	210000	U
206-44-0	Fluoranthene	210000	U
129-00-0	Pyrene	210000	U
85-68-7	Butylbenzylphthalate	160000	J
91-94-1	3,3'-Dichlorobenzidine	430000	U
56-55-3	Benzo(a)Anthracene	210000	U
218-01-9	Chrysene	210000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	75000	J
117-84-0	Di-n-Octyl Phthalate	210000	U
205-99-2	Benzo(b)Fluoranthene	210000	U
207-08-9	Benzo(k)Fluoranthene	210000	U
50-32-8	Benzo(a)Pyrene	210000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	210000	U
53-70-3	Dibenzo(a,h)Anthracene	210000	U
191-24-2	Benzo(g,h,i)Perylene	210000	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP65

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345163

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G2D45163A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 10

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	14.64	1000000	J
2.	UNKNOWN	14.77	1500000	J
3.	UNKNOWN	15.19	560000	J
4.	UNKNOWN	15.25	1400000	J
5.	UNKNOWN	15.37	2000000	J
6.	UNKNOWN	15.84	3400000	J
7.	UNKNOWN	15.92	3900000	J
8.	UNKNOWN	16.00	1600000	J
9.	UNKNOWN PHTHALATE	16.05	3900000	J
10.	UNKNOWN PHTHALATE	16.19	1800000	J
11.	UNKNOWN	16.64	5200000	J
12.	UNKNOWN	16.72	5200000	J
13.	UNKNOWN	17.27	2800000	J
14.	UNKNOWN	17.34	1500000	J
15.	UNKNOWN	18.24	1600000	J
16.	UNKNOWN	18.34	800000	J
17.	UNKNOWN	18.40	1500000	J
18.	UNKNOWN	18.57	580000	J
19.	UNKNOWN	19.20	860000	J
20.	UNKNOWN	19.32	560000	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP66

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045164B02

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

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3200	U
111-44-4	bis(2-Chloroethyl)Ether	3200	U
95-57-8	2-Chlorophenol	3200	U
541-73-1	1,3-Dichlorobenzene	3200	U
106-46-7	1,4-Dichlorobenzene	3200	U
100-51-6	Benzyl Alcohol	3200	U
95-50-1	1,2-Dichlorobenzene	3200	U
95-48-7	2-Methylphenol	3200	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3200	U
106-44-5	4-Methylphenol	3200	U
621-64-7	N-Nitroso-Di-n-Propylamine	3200	U
67-72-1	Hexachloroethane	3200	U
98-95-3	Nitrobenzene	3200	U
78-59-1	Isophorone	3200	U
88-75-5	2-Nitrophenol	3200	U
105-67-9	2,4-Dimethylphenol	3200	U
65-85-0	Benzoic Acid	16000	UJ
111-91-1	bis(2-Chloroethoxy)Methane	3200	U
120-83-2	2,4-Dichlorophenol	3200	U
120-82-1	1,2,4-Trichlorobenzene	3200	U
91-20-3	Naphthalene	420	J
106-47-8	4-Chloroaniline	3200	U
87-68-3	Hexachlorobutadiene	3200	U
59-50-7	4-Chloro-3-Methylphenol	3200	U
91-57-6	2-Methylnaphthalene	3200	U
77-47-4	Hexachlorocyclopentadiene	3200	U
88-06-2	2,4,6-Trichlorophenol	3200	U
95-95-4	2,4,5-Trichlorophenol	16000	U
91-58-7	2-Chloronaphthalene	3200	U
88-74-4	2-Nitroaniline	16000	U
131-11-3	Dimethyl Phthalate	3200	U
208-96-8	Acenaphthylene	3200	U
606-20-2	2,6-Dinitrotoluene	3200	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP66

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045164B02

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

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 7.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	16000	U
83-32-9	Acenaphthene	670	J
51-28-5	2,4-Dinitrophenol	16000	U
100-02-7	4-Nitrophenol	16000	U
132-64-9	Dibenzofuran	340	J
121-14-2	2,4-Dinitrotoluene	3200	U
84-66-2	Diethylphthalate	3200	U
7005-72-3	4-Chlorophenyl-phenylether	3200	U
86-73-7	Fluorene	470	J
100-01-6	4-Nitroaniline	16000	U
534-52-1	4,6-Dinitro-2-Methylphenol	16000	U
86-30-6	N-Nitrosodiphenylamine (1)	3200	U
101-55-3	4-Bromophenyl-phenylether	3200	U
118-74-1	Hexachlorobenzene	3200	U
87-86-5	Pentachlorophenol	16000	U
85-01-8	Phenanthrene	5000	
120-12-7	Anthracene	1000	J
84-74-2	Di-n-Butylphthalate	2800	J
206-44-0	Fluoranthene	6000	
129-00-0	Pyrene	4700	
85-68-7	Butylbenzylphthalate	~~360000~~	~~E~~ D*
91-94-1	3,3'-Dichlorobenzidine	6400	U
56-55-3	Benzo(a)Anthracene	2700	J
218-01-9	Chrysene	3000	J
117-81-7	bis(2-Ethylhexyl)Phthalate	240 000 ~~310000~~	~~E~~
117-84-0	Di-n-Octyl Phthalate	7[illegible] ~~80000~~	~~E~~
205-99-2	Benzo(b)Fluoranthene	5100	~~X~~ EN
207-08-9	Benzo(k)Fluoranthene	5100	~~X~~ EN
50-32-8	Benzo(a)Pyrene	2600	J
193-39-5	Indeno(1,2,3-cd)Pyrene	1100	J
53-70-3	Dibenzo(a,h)Anthracene	460	J
191-24-2	Benzo(g,h,i)Perylene	1100	J

(1) - Cannot be separated from Diphenylamine

only one

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP66

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045164B02

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

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 7.8

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN PHTHALATE	16.24	12000	J
2.		UNKNOWN PHTHALATE	16.42	15000	J
3.		UNKNOWN PHTHALATE	16.57	13000	J
4.		UNKNOWN PHTHALATE	16.77	8400	J
5.	10546-70-0	BENZAMIDE, N-PROPYL-	17.47	31000	J
6.		N-ACETYLBENZAMIDE	17.54	20000	J
7.		UNKNOWN	18.15	11000	J
8.		UNKNOWN PHTHALATE	18.39	31000	J
9.		UNKNOWN PHTHALATE	18.64	8400	J
10.		UNKNOWN PHTHALATE	18.92	30000	J
11.		UNKNOWN PHTHALATE	19.05	39000	J
12.		UNKNOWN PHTHALATE	19.17	12000	J
13.		UNKNOWN PHTHALATE	19.34	23000	J
14.		UNKNOWN PHTHALATE	19.44	30000	J
15.		UNKNOWN PHTHALATE	19.64	36000	J
16.		UNKNOWN PHTHALATE	19.79	74000	J
17.		UNKNOWN PHTHALATE	20.14	9100	J
18.		UNKNOWN PHTHALATE	20.50	14000	J
19.		UNKNOWN PHTHALATE	21.10	25000	J
20.		UNKNOWN PHTHALATE	22.97	7800	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP66DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2D45164C02

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

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 150

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	64000	U
111-44-4	bis(2-Chloroethyl)Ether	64000	U
95-57-8	2-Chlorophenol	64000	U
541-73-1	1,3-Dichlorobenzene	64000	U
106-46-7	1,4-Dichlorobenzene	64000	U
100-51-6	Benzyl Alcohol	64000	U
95-50-1	1,2-Dichlorobenzene	64000	U
95-48-7	2-Methylphenol	64000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	64000	U
106-44-5	4-Methylphenol	64000	U
621-64-7	N-Nitroso-Di-n-Propylamine	64000	U
67-72-1	Hexachloroethane	64000	U
98-95-3	Nitrobenzene	64000	U
78-59-1	Isophorone	64000	U
88-75-5	2-Nitrophenol	64000	U
105-67-9	2,4-Dimethylphenol	64000	U
65-85-0	Benzoic Acid	64000	U
111-91-1	bis(2-Chloroethoxy)Methane	310000	U
120-83-2	2,4-Dichlorophenol	64000	U
120-82-1	1,2,4-Trichlorobenzene	64000	U
91-20-3	Naphthalene	64000	U
106-47-8	4-Chloroaniline	64000	U
87-68-3	Hexachlorobutadiene	64000	U
59-50-7	4-Chloro-3-Methylphenol	64000	U
91-57-6	2-Methylnaphthalene	64000	U
77-47-4	Hexachlorocyclopentadiene	64000	U
88-06-2	2,4,6-Trichlorophenol	64000	U
95-95-4	2,4,5-Trichlorophenol	64000	U
91-58-7	2-Chloronaphthalene	310000	U
88-74-4	2-Nitroaniline	64000	U
131-11-3	Dimethyl Phthalate	310000	U
208-96-8	Acenaphthylene	64000	U
606-20-2	2,6-Dinitrotoluene	64000	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP66DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2D45164C02

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

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 150

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	310000	U
83-32-9	Acenaphthene	64000	U
51-28-5	2,4-Dinitrophenol	310000	U
100-02-7	4-Nitrophenol	310000	U
132-64-9	Dibenzofuran	64000	U
121-14-2	2,4-Dinitrotoluene	64000	U
84-66-2	Diethylphthalate	64000	U
7005-72-3	4-Chlorophenyl-phenylether	64000	U
86-73-7	Fluorene	64000	U
100-01-6	4-Nitroaniline	310000	U
534-52-1	4,6-Dinitro-2-Methylphenol	310000	U
86-30-6	N-Nitrosodiphenylamine (1)	64000	U
101-55-3	4-Bromophenyl-phenylether	64000	U
118-74-1	Hexachlorobenzene	64000	U
87-86-5	Pentachlorophenol	310000	U
85-01-8	Phenanthrene	64000	U
120-12-7	Anthracene	64000	U
84-74-2	Di-n-Butylphthalate	64000	U
206-44-0	Fluoranthene	64000	U
129-00-0	Pyrene	64000	U
85-68-7	Butylbenzylphthalate	690000	D
91-94-1	3,3'-Dichlorobenzidine	130000	U
56-55-3	Benzo(a)Anthracene	64000	U
218-01-9	Chrysene	64000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	840000	D
117-84-0	Di-n-Octyl Phthalate	78000	D
205-99-2	Benzo(b)Fluoranthene	64000	U
207-08-9	Benzo(k)Fluoranthene	64000	U
50-32-8	Benzo(a)Pyrene	64000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	64000	U
53-70-3	Dibenzo(a,h)Anthracene	64000	U
191-24-2	Benzo(g,h,i)Perylene	64000	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP66DL

Lab Name: COMPUCHEM RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2D45164C02

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

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 150

Number TICs found: 14

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.87	39000	J
2.	10546-70-0	BENZAMIDE, N-PROPYL-	17.44	52000	J
3.	10546-70-0	BENZAMIDE, N-PROPYL-	17.50	39000	J
4.		UNKNOWN	18.12	26000	J
5.		UNKNOWN PHTHALATE	18.34	65000	J
6.		UNKNOWN PHTHALATE	18.85	52000	J
7.		UNKNOWN PHTHALATE	18.99	65000	J
8.		UNKNOWN PHTHALATE	19.14	45000	J
9.		UNKNOWN PHTHALATE	19.29	39000	J
10.		UNKNOWN PHTHALATE	19.37	65000	J
11.		UNKNOWN PHTHALATE	19.55	100000	J
12.		UNKNOWN PHTHALATE	19.72	120000	J
13.		UNKNOWN PHTHALATE	20.07	45000	J
14.		UNKNOWN PHTHALATE	21.04	32000	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP67

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GD045166C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 3.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	74000	U
111-44-4	bis(2-Chloroethyl)Ether	74000	U
95-57-8	2-Chlorophenol	74000	U
541-73-1	1,3-Dichlorobenzene	74000	U
106-46-7	1,4-Dichlorobenzene	74000	U
100-51-6	Benzyl Alcohol	74000	U
95-50-1	1,2-Dichlorobenzene	74000	U
95-48-7	2-Methylphenol	74000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	74000	U
106-44-5	4-Methylphenol	74000	U
621-64-7	N-Nitroso-Di-n-Propylamine	74000	U
67-72-1	Hexachloroethane	74000	U
98-95-3	Nitrobenzene	74000	U
78-59-1	Isophorone	74000	U
88-75-5	2-Nitrophenol	74000	U
105-67-9	2,4-Dimethylphenol	74000	U
65-85-0	Benzoic Acid	74000	U
111-91-1	bis(2-Chloroethoxy)Methane	360000	U
120-83-2	2,4-Dichlorophenol	74000	U
120-82-1	1,2,4-Trichlorobenzene	74000	U
91-20-3	Naphthalene	74000	U
106-47-8	4-Chloroaniline	74000	U
87-68-3	Hexachlorobutadiene	74000	U
59-50-7	4-Chloro-3-Methylphenol	74000	U
91-57-6	2-Methylnaphthalene	74000	U
77-47-4	Hexachlorocyclopentadiene	74000	U
88-06-2	2,4,6-Trichlorophenol	74000	U
95-95-4	2,4,5-Trichlorophenol	74000	U
91-58-7	2-Chloronaphthalene	360000	U
88-74-4	2-Nitroaniline	74000	U
131-11-3	Dimethyl Phthalate	360000	U
208-96-8	Acenaphthylene	74000	U
606-20-2	2,6-Dinitrotoluene	74000	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP67

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GD045166C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 3.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	360000	U
83-32-9	Acenaphthene	74000	U
51-28-5	2,4-Dinitrophenol	360000	U
100-02-7	4-Nitrophenol	360000	U
132-64-9	Dibenzofuran	74000	U
121-14-2	2,4-Dinitrotoluene	74000	U
84-66-2	Diethylphthalate	74000	U
7005-72-3	4-Chlorophenyl-phenylether	74000	U
86-73-7	Fluorene	74000	U
100-01-6	4-Nitroaniline	360000	U
534-52-1	4,6-Dinitro-2-Methylphenol	360000	U
86-30-6	N-Nitrosodiphenylamine (1)	74000	U
101-55-3	4-Bromophenyl-phenylether	74000	U
118-74-1	Hexachlorobenzene	74000	U
87-86-5	Pentachlorophenol	360000	U
85-01-8	Phenanthrene	74000	U
120-12-7	Anthracene	74000	U
84-74-2	Di-n-Butylphthalate	74000	U
206-44-0	Fluoranthene	12000	J
129-00-0	Pyrene	13000	J
85-68-7	Butylbenzylphthalate	170000	
91-94-1	3,3'-Dichlorobenzidine	150000	U
56-55-3	Benzo(a)Anthracene	74000	U
218-01-9	Chrysene	9600	J
117-81-7	bis(2-Ethylhexyl)Phthalate	1600000	~~B~~ D*
117-84-0	Di-n-Octyl Phthalate	53000	J
205-99-2	Benzo(b)Fluoranthene	16000	J~~*~~ N
207-08-9	Benzo(k)Fluoranthene	16000	J~~*~~ N
50-32-8	Benzo(a)Pyrene	74000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	74000	U
53-70-3	Dibenzo(a,h)Anthracene	74000	U
191-24-2	Benzo(g,h,i)Perylene	74000	U

only one

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP67

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GD045166C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 3.0

Number TICs found: 17

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN CARBOXYLIC ACID	14.35	60000	J
2.		UNKNOWN PHTHALATE	16.37	30000	J
3.		UNKNOWN PHTHALATE	16.67	45000	J
4.		UNKNOWN PHTHALATE	16.75	30000	J
5.		UNKNOWN PHTHALATE	16.85	30000	J
6.		UNKNOWN PHTHALATE	16.90	52000	J
7.		UNKNOWN PHTHALATE	16.97	75000	J
8.		UNKNOWN PHTHALATE	17.04	140000	J
9.		UNKNOWN PHTHALATE	17.09	120000	J
10.		PROPYL BENZAMIDE	17.19	640000	J
11.		PROPYL BENZAMIDE	17.25	580000	J
12.		UNKNOWN PHTHALATE	18.17	98000	J
13.		UNKNOWN	18.57	130000	J
14.		UNKNOWN PHTHALATE	18.72	60000	J
15.		UNKNOWN PHTHALATE	18.94	160000	J
16.		UNKNOWN PHTHALATE	19.19	45000	J
17.		UNKNOWN PHTHALATE	19.45	60000	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP67DL

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G2D45166A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	120000	U
111-44-4	bis(2-Chloroethyl)Ether	120000	U
95-57-8	2-Chlorophenol	120000	U
541-73-1	1,3-Dichlorobenzene	120000	U
106-46-7	1,4-Dichlorobenzene	120000	U
100-51-6	Benzyl Alcohol	120000	U
95-50-1	1,2-Dichlorobenzene	120000	U
95-48-7	2-Methylphenol	120000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	120000	U
106-44-5	4-Methylphenol	120000	U
621-64-7	N-Nitroso-Di-n-Propylamine	120000	U
67-72-1	Hexachloroethane	120000	U
98-95-3	Nitrobenzene	120000	U
78-59-1	Isophorone	120000	U
88-75-5	2-Nitrophenol	120000	U
105-67-9	2,4-Dimethylphenol	120000	U
65-85-0	Benzoic Acid	120000	U
111-91-1	bis(2-Chloroethoxy)Methane	600000	U
120-83-2	2,4-Dichlorophenol	120000	U
120-82-1	1,2,4-Trichlorobenzene	120000	U
91-20-3	Naphthalene	120000	U
106-47-8	4-Chloroaniline	120000	U
87-68-3	Hexachlorobutadiene	120000	U
59-50-7	4-Chloro-3-Methylphenol	120000	U
91-57-6	2-Methylnaphthalene	120000	U
77-47-4	Hexachlorocyclopentadiene	120000	U
88-06-2	2,4,6-Trichlorophenol	120000	U
95-95-4	2,4,5-Trichlorophenol	120000	U
91-58-7	2-Chloronaphthalene	600000	U
88-74-4	2-Nitroaniline	120000	U
131-11-3	Dimethyl Phthalate	600000	U
208-96-8	Acenaphthylene	120000	U
606-20-2	2,6-Dinitrotoluene	120000	U

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DO

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP67DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G2D45166A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	600000	U
83-32-9	Acenaphthene	120000	U
51-28-5	2,4-Dinitrophenol	600000	U
100-02-7	4-Nitrophenol	600000	U
132-64-9	Dibenzofuran	120000	U
121-14-2	2,4-Dinitrotoluene	120000	U
84-66-2	Diethylphthalate	120000	U
7005-72-3	4-Chlorophenyl-phenylether	120000	U
86-73-7	Fluorene	120000	U
100-01-6	4-Nitroaniline	600000	U
534-52-1	4,6-Dinitro-2-Methylphenol	600000	U
86-30-6	N-Nitrosodiphenylamine (1)	120000	U
101-55-3	4-Bromophenyl-phenylether	120000	U
118-74-1	Hexachlorobenzene	120000	U
87-86-5	Pentachlorophenol	600000	U
85-01-8	Phenanthrene	120000	U
120-12-7	Anthracene	120000	U
84-74-2	Di-n-Butylphthalate	120000	U
206-44-0	Fluoranthene	120000	U
129-00-0	Pyrene	120000	U
85-68-7	Butylbenzylphthalate	120000	DJ
91-94-1	3,3'-Dichlorobenzidine	250000	U
56-55-3	Benzo(a)Anthracene	120000	U
218-01-9	Chrysene	120000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1600000	D
117-84-0	Di-n-Octyl Phthalate	48000	DJ
205-99-2	Benzo(b)Fluoranthene	13000	DJX
207-08-9	Benzo(k)Fluoranthene	13000	DJX
50-32-8	Benzo(a)Pyrene	120000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	120000	U
53-70-3	Dibenzo(a,h)Anthracene	120000	U
191-24-2	Benzo(g,h,i)Perylene	120000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP67DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID: G2D45166A15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.0

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN PHTHALATE	16.89	50000	J
2.	UNKNOWN PHTHALATE	16.94	190000	J
3.	UNKNOWN PHTHALATE	17.05	100000	J
4.	PROPYL BENZAMIDE	17.15	610000	J
5.	PROPYL BENZAMIDE	17.22	580000	J
6.	UNKNOWN	18.52	100000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP68

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045167C02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	bis(2-Chloroisopropyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	1800	U
111-91-1	bis(2-Chloroethoxy)Methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	560	
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	170	J
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	53	J
606-20-2	2,6-Dinitrotoluene	360	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BDP68

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045167C02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	520	
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	430	
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	530	
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	4600	
120-12-7	Anthracene	810	
84-74-2	Di-n-Butylphthalate	120	J
206-44-0	Fluoranthene	4900	
129-00-0	Pyrene	3500	
85-68-7	Butylbenzylphthalate	~~14000~~	~~E~~
91-94-1	3,3'-Dichlorobenzidine	730	UJ
56-55-3	Benzo(a)Anthracene	2000	
218-01-9	Chrysene	2600	
117-81-7	bis(2-Ethylhexyl)Phthalate	~~55000~~	~~E~~
117-84-0	Di-n-Octyl Phthalate	3600	
205-99-2	Benzo(b)Fluoranthene	3600	JN only
207-08-9	Benzo(k)Fluoranthene	3600	JN
50-32-8	Benzo(a)Pyrene	1500	
193-39-5	Indeno(1,2,3-cd)Pyrene	960	
53-70-3	Dibenzo(a,h)Anthracene	440	
191-24-2	Benzo(g,h,i)Perylene	870	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP68

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045167C02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN SUBSTITUTED HYDROCAR	13.87	1100	J
2.		UNKNOWN PAH	14.34	1700	J
3.		UNKNOWN	14.47	4400	J
4.		UNKNOWN HYDROCARBON	15.32	1000	J
5.		UNKNOWN	15.74	1300	J
6.		UNKNOWN PAH	16.42	1300	J
7.		UNKNOWN	17.15	4400	J
8.	3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.24	1800	J
9.		UNKNOWN	17.42	3000	J
10.		UNKNOWN	17.52	11000	J
11.		UNKNOWN	17.64	18000	J
12.		UNKNOWN	18.27	2200	J
13.		UNKNOWN	18.50	5100	J
14.		UNKNOWN	18.75	1400	J
15.		UNKNOWN	18.87	1500	J
16.		UNKNOWN	19.14	5100	J
17.		UNKNOWN PHTHALATE	19.29	6200	J
18.		BENZOFLUORANTHENE	19.69	800	J
19.		UNKNOWN	19.85	700	J
20.		BENZO PYRENE	19.97	2200	J

FORM I SV-TIC 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP59

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID: GH045157A02

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

% Moisture: not dec. 19 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 7.2

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	13.92	14000	J
2.		UNKNOWN	14.49	32000	J
3.		UNKNOWN	14.99	4600	J
4.		UNKNOWN	17.17	23000	J
5.	3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.25	7000	J
6.	3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.42	9300	J
7.		UNKNOWN PHTHALATE	17.52	35000	J
8.		UNKNOWN PHTHALATE	17.64	41000	J
9.		UNKNOWN PHTHALATE	17.70	20000	J
10.		UNKNOWN PHTHALATE	17.79	7500	J
11.		UNKNOWN PHTHALATE	18.19	6100	J
12.		UNKNOWN PHTHALATE	18.27	17000	J
13.		UNKNOWN PHTHALATE	18.52	29000	J
14.		UNKNOWN PHTHALATE	18.87	6700	J
15.	28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	19.14	24000	J
16.		UNKNOWN PHTHALATE	19.30	27000	J
17.	28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	19.49	3200	J
18.		UNKNOWN PHTHALATE	19.79	5200	J
19.		UNKNOWN PHTHALATE	19.85	10000	J
20.		UNKNOWN PHTHALATE	20.02	32000	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP59DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID: G2D45157C02

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

% Moisture: not dec. 19 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 360

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	140000	U
111-44-4	bis(2-Chloroethyl)Ether	140000	U
95-57-8	2-Chlorophenol	140000	U
541-73-1	1,3-Dichlorobenzene	140000	U
106-46-7	1,4-Dichlorobenzene	140000	U
100-51-6	Benzyl Alcohol	140000	U
95-50-1	1,2-Dichlorobenzene	140000	U
95-48-7	2-Methylphenol	140000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	140000	U
106-44-5	4-Methylphenol	140000	U
621-64-7	N-Nitroso-Di-n-Propylamine	140000	U
67-72-1	Hexachloroethane	140000	U
98-95-3	Nitrobenzene	140000	U
78-59-1	Isophorone	140000	U
88-75-5	2-Nitrophenol	140000	U
105-67-9	2,4-Dimethylphenol	140000	U
65-85-0	Benzoic Acid	690000	U
111-91-1	bis(2-Chloroethoxy)Methane	140000	U
120-83-2	2,4-Dichlorophenol	140000	U
120-82-1	1,2,4-Trichlorobenzene	140000	U
91-20-3	Naphthalene	140000	U
106-47-8	4-Chloroaniline	140000	U
87-68-3	Hexachlorobutadiene	140000	U
59-50-7	4-Chloro-3-Methylphenol	140000	U
91-57-6	2-Methylnaphthalene	140000	U
77-47-4	Hexachlorocyclopentadiene	140000	U
88-06-2	2,4,6-Trichlorophenol	140000	U
95-95-4	2,4,5-Trichlorophenol	690000	U
91-58-7	2-Chloronaphthalene	140000	U
88-74-4	2-Nitroaniline	690000	U
131-11-3	Dimethyl Phthalate	140000	U
208-96-8	Acenaphthylene	140000	U
606-20-2	2,6-Dinitrotoluene	140000	U

FORM I SV-1 1/87 Rev.

Do not

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP59DL

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID: G2D45157C02

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

% Moisture: not dec. 19 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 360

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	690000	U
83-32-9	Acenaphthene	140000	U
51-28-5	2,4-Dinitrophenol	690000	U
100-02-7	4-Nitrophenol	690000	U
132-64-9	Dibenzofuran	140000	U
121-14-2	2,4-Dinitrotoluene	140000	U
84-66-2	Diethylphthalate	140000	U
7005-72-3	4-Chlorophenyl-phenylether	140000	U
86-73-7	Fluorene	140000	U
100-01-6	4-Nitroaniline	690000	U
534-52-1	4,6-Dinitro-2-Methylphenol	690000	U
86-30-6	N-Nitrosodiphenylamine (1)	140000	U
101-55-3	4-Bromophenyl-phenylether	140000	U
118-74-1	Hexachlorobenzene	140000	U
87-86-5	Pentachlorophenol	690000	U
85-01-8	Phenanthrene	17000	DJ
120-12-7	Anthracene	140000	U
84-74-2	Di-n-Butylphthalate	140000	U
206-44-0	Fluoranthene	20000	DJ
129-00-0	Pyrene	19000	DJ
85-68-7	Butylbenzylphthalate	370000	D
91-94-1	3,3'-Dichlorobenzidine	290000	U
56-55-3	Benzo(a)Anthracene	140000	U
218-01-9	Chrysene	140000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1500000	D
117-84-0	Di-n-Octyl Phthalate	37000	DJ
205-99-2	Benzo(b)Fluoranthene	15000	DJX
207-08-9	Benzo(k)Fluoranthene	15000	DJX
50-32-8	Benzo(a)Pyrene	140000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	140000	U
53-70-3	Dibenzo(a,h)Anthracene	140000	U
191-24-2	Benzo(g,h,i)Perylene	140000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP59DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID: G2D45157C02

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

% Moisture: not dec. 19 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 360

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	16.77	82000	J

FORM I SV-TIC 1/87 Rev.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH045158C02

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

% Moisture: not dec. 28 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	3300	U
111-44-4	bis(2-Chloroethyl)Ether	3300	U
95-57-8	2-Chlorophenol	3300	U
541-73-1	1,3-Dichlorobenzene	3300	U
106-46-7	1,4-Dichlorobenzene	3300	U
100-51-6	Benzyl Alcohol	3300	U
95-50-1	1,2-Dichlorobenzene	3300	U
95-48-7	2-Methylphenol	3300	U
39638-32-9	bis(2-Chloroisopropyl)Ether	3300	U
106-44-5	4-Methylphenol	3300	U
621-64-7	N-Nitroso-Di-n-Propylamine	3300	U
67-72-1	Hexachloroethane	3300	U
98-95-3	Nitrobenzene	3300	U
78-59-1	Isophorone	3300	U
88-75-5	2-Nitrophenol	3300	U
105-67-9	2,4-Dimethylphenol	3300	U
65-85-0	Benzoic Acid	16000	U
111-91-1	bis(2-Chloroethoxy)Methane	3300	U
120-83-2	2,4-Dichlorophenol	3300	U
120-82-1	1,2,4-Trichlorobenzene	3300	U
91-20-3	Naphthalene	380	J
106-47-8	4-Chloroaniline	3300	U
87-68-3	Hexachlorobutadiene	3300	U
59-50-7	4-Chloro-3-Methylphenol	3300	U
91-57-6	2-Methylnaphthalene	330	J
77-47-4	Hexachlorocyclopentadiene	3300	U
88-06-2	2,4,6-Trichlorophenol	3300	U
95-95-4	2,4,5-Trichlorophenol	16000	U
91-58-7	2-Chloronaphthalene	3300	U
88-74-4	2-Nitroaniline	16000	U
131-11-3	Dimethyl Phthalate	3300	U
208-96-8	Acenaphthylene	3300	U
606-20-2	2,6-Dinitrotoluene	3300	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH045158C02

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

% Moisture: not dec. 28 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	16000	U
83-32-9	Acenaphthene	360	J
51-28-5	2,4-Dinitrophenol	16000	U
100-02-7	4-Nitrophenol	16000	U
132-64-9	Dibenzofuran	3300	U
121-14-2	2,4-Dinitrotoluene	3300	U
84-66-2	Diethylphthalate	3300	U
7005-72-3	4-Chlorophenyl-phenylether	3300	U
86-73-7	Fluorene	390	J
100-01-6	4-Nitroaniline	16000	U
534-52-1	4,6-Dinitro-2-Methylphenol	16000	U
86-30-6	N-Nitrosodiphenylamine (1)	3300	U
101-55-3	4-Bromophenyl-phenylether	3300	U
118-74-1	Hexachlorobenzene	3300	U
87-86-5	Pentachlorophenol	16000	U
85-01-8	Phenanthrene	4400	
120-12-7	Anthracene	760	J
84-74-2	Di-n-Butylphthalate	2000	J
206-44-0	Fluoranthene	5600	
129-00-0	Pyrene	7000	
85-68-7	Butylbenzylphthalate	430000	E
91-94-1	3,3'-Dichlorobenzidine	6600	U
56-55-3	Benzo(a)Anthracene	2800	J
218-01-9	Chrysene	3500	
117-81-7	bis(2-Ethylhexyl)Phthalate	~~410000~~	~~E~~
117-84-0	Di-n-Octyl Phthalate	48000	
205-99-2	Benzo(b)Fluoranthene	4000	X
207-08-9	Benzo(k)Fluoranthene	4000	X
50-32-8	Benzo(a)Pyrene	2200	J
193-39-5	Indeno(1,2,3-cd)Pyrene	1100	J
53-70-3	Dibenzo(a,h)Anthracene	480	J
191-24-2	Benzo(g,h,i)Perylene	1300	J

only one

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH045158C02

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

% Moisture: not dec. 28 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 7.2

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	14.29	120000	J
2.		UNKNOWN	15.39	26000	J
3.		UNKNOWN	15.50	25000	J
4.		UNKNOWN	16.89	20000	J
5.		UNKNOWN	17.25	35000	J
6.	3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.34	48000	J
7.		UNKNOWN PHTHALATE	17.42	26000	J
8.		UNKNOWN PHTHALATE	17.90	20000	J
9.	27554-26-3	1,2-BENZENEDICARBOXYLIC ACID	17.97	64000	J
10.		UNKNOWN PHTHALATE	18.19	38000	J
11.		UNKNOWN PHTHALATE	18.29	73000	J
12.		UNKNOWN	18.54	15000	J
13.		UNKNOWN	18.69	83000	J
14.	28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.85	35000	J
15.		UNKNOWN	18.97	83000	J
16.		UNKNOWN	19.17	42000	J
17.		UNKNOWN	19.35	3500	J
18.		UNKNOWN PHTHALATE	19.44	17000	J
19.		UNKNOWN	19.64	25000	J
20.		UNKNOWN	23.74	38000	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60DL

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID: G2D45158C02

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

% Moisture: not dec. 28 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 380

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	170000	U
111-44-4	bis(2-Chloroethyl)Ether	170000	U
95-57-8	2-Chlorophenol	170000	U
541-73-1	1,3-Dichlorobenzene	170000	U
106-46-7	1,4-Dichlorobenzene	170000	U
100-51-6	Benzyl Alcohol	170000	U
95-50-1	1,2-Dichlorobenzene	170000	U
95-48-7	2-Methylphenol	170000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	170000	U
106-44-5	4-Methylphenol	170000	U
621-64-7	N-Nitroso-Di-n-Propylamine	170000	U
67-72-1	Hexachloroethane	170000	U
98-95-3	Nitrobenzene	170000	U
78-59-1	Isophorone	170000	U
88-75-5	2-Nitrophenol	170000	U
105-67-9	2,4-Dimethylphenol	170000	U
65-85-0	Benzoic Acid	170000	U
111-91-1	bis(2-Chloroethoxy)Methane	840000	U
120-83-2	2,4-Dichlorophenol	170000	U
120-82-1	1,2,4-Trichlorobenzene	170000	U
91-20-3	Naphthalene	170000	U
106-47-8	4-Chloroaniline	170000	U
87-68-3	Hexachlorobutadiene	170000	U
59-50-7	4-Chloro-3-Methylphenol	170000	U
91-57-6	2-Methylnaphthalene	170000	U
77-47-4	Hexachlorocyclopentadiene	170000	U
88-06-2	2,4,6-Trichlorophenol	170000	U
95-95-4	2,4,5-Trichlorophenol	170000	U
91-58-7	2-Chloronaphthalene	840000	U
88-74-4	2-Nitroaniline	170000	U
131-11-3	Dimethyl Phthalate	840000	U
208-96-8	Acenaphthylene	170000	U
606-20-2	2,6-Dinitrotoluene	170000	U
		170000	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID: G2D45158C02

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

% Moisture: not dec. 28 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 380

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	840000	U
83-32-9	Acenaphthene	170000	U
51-28-5	2,4-Dinitrophenol	840000	U
100-02-7	4-Nitrophenol	840000	U
132-64-9	Dibenzofuran	170000	U
121-14-2	2,4-Dinitrotoluene	170000	U
84-66-2	Diethylphthalate	170000	U
7005-72-3	4-Chlorophenyl-phenylether	170000	U
86-73-7	Fluorene	170000	U
100-01-6	4-Nitroaniline	840000	U
534-52-1	4,6-Dinitro-2-Methylphenol	840000	U
86-30-6	N-Nitrosodiphenylamine (1)	170000	U
101-55-3	4-Bromophenyl-phenylether	170000	U
118-74-1	Hexachlorobenzene	170000	U
87-86-5	Pentachlorophenol	840000	U
85-01-8	Phenanthrene	170000	U
120-12-7	Anthracene	170000	U
84-74-2	Di-n-Butylphthalate	170000	U
206-44-0	Fluoranthene	170000	U
129-00-0	Pyrene	170000	U
85-68-7	Butylbenzylphthalate	710000	D
91-94-1	3,3'-Dichlorobenzidine	350000	U
56-55-3	Benzo(a)Anthracene	170000	U
218-01-9	Chrysene	170000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	1000000	D
117-84-0	Di-n-Octyl Phthalate	64000	DJ
205-99-2	Benzo(b)Fluoranthene	170000	U
207-08-9	Benzo(k)Fluoranthene	170000	U
50-32-8	Benzo(a)Pyrene	170000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	170000	U
53-70-3	Dibenzo(a,h)Anthracene	170000	U
191-24-2	Benzo(g,h,i)Perylene	170000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP60DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID: G2D45158C02

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

% Moisture: not dec. 28 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 380

Number TICs found: 6

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	17.32	130000	J
2.		UNKNOWN PHTHALATE	17.95	230000	J
3.		UNKNOWN PHTHALATE	18.15	130000	J
4.		UNKNOWN PHTHALATE	18.25	250000	J
5.	28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.67	150000	J
6.	28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.95	150000	J

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP61

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045159A02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	360	U
111-44-4	bis(2-Chloroethyl)Ether	360	U
95-57-8	2-Chlorophenol	360	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
100-51-6	Benzyl Alcohol	360	U
95-50-1	1,2-Dichlorobenzene	360	U
95-48-7	2-Methylphenol	360	U
39638-32-9	bis(2-Chloroisopropyl)Ether	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-Di-n-Propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
65-85-0	Benzoic Acid	360	U
111-91-1	bis(2-Chloroethoxy)Methane	1800	UJ
120-83-2	2,4-Dichlorophenol	360	U
120-82-1	1,2,4-Trichlorobenzene	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
59-50-7	4-Chloro-3-Methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	1800	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethyl Phthalate	360	U
208-96-8	Acenaphthylene	360	U
606-20-2	2,6-Dinitrotoluene	360	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP61

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045159A02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	360	U
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
86-73-7	Fluorene	360	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-Methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	210	J
120-12-7	Anthracene	46	J
84-74-2	Di-n-Butylphthalate	500	
206-44-0	Fluoranthene	350	J
129-00-0	Pyrene	320	J
85-68-7	Butylbenzylphthalate	~~20000~~	~~E~~
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)Anthracene	170	J
218-01-9	Chrysene	250	J
117-81-7	bis(2-Ethylhexyl)Phthalate	1700	
117-84-0	Di-n-Octyl Phthalate	44	J
205-99-2	Benzo(b)Fluoranthene	340	J*
207-08-9	Benzo(k)Fluoranthene	340	J*
50-32-8	Benzo(a)Pyrene	170	J
193-39-5	Indeno(1,2,3-cd)Pyrene	70	J
53-70-3	Dibenzo(a,h)Anthracene	360	U
191-24-2	Benzo(g,h,i)Perylene	79	J

(1) - Cannot be separated from Diphenylamine

only one

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14204 BDP57 SAMPLES DATA PACKAGE

1628

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP61

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GH045159A02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 1.00

Number TICs found: 21

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL	5.50	660	AJN
2.	UNKNOWN	6.32	220	J
3.	UNKNOWN	14.47	1700	J
4.	UNKNOWN	15.59	1500	J
5. 10546-70-0	BENZAMIDE, N-PROPYL-	17.69	23000	J
6. 10546-70-0	BENZAMIDE, N-PROPYL-	17.77	21000	J
7.	UNKNOWN	18.29	800	J
8.	UNKNOWN	18.37	400	J
9.	UNKNOWN	18.50	510	J
10.	UNKNOWN	18.60	550	J
11.	UNKNOWN HYDROCARBON	18.69	800	J
12.	UNKNOWN	19.20	620	J
13. 523-31-9	DIBENZYL PHTHALATE	19.30	990	J
14.	UNKNOWN	19.40	880	J
15.	UNKNOWN HYDROCARBON	19.67	950	J
16.	BENZO FLUORANTHENE	19.97	290	J
17.	UNKNOWN	20.59	290	J
18.	UNKNOWN HYDROCARBON	20.92	2700	J
19.	UNKNOWN	21.20	400	J
20.	UNKNOWN	22.90	480	J
21.	UNKNOWN	23.50	770	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP61DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD045159B02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1800	U
111-44-4	bis(2-Chloroethyl)Ether	1800	U
95-57-8	2-Chlorophenol	1800	U
541-73-1	1,3-Dichlorobenzene	1800	U
106-46-7	1,4-Dichlorobenzene	1800	U
100-51-6	Benzyl Alcohol	1800	U
95-50-1	1,2-Dichlorobenzene	1800	U
95-48-7	2-Methylphenol	1800	U
39638-32-9	bis(2-Chloroisopropyl)Ether	1800	U
106-44-5	4-Methylphenol	1800	U
621-64-7	N-Nitroso-Di-n-Propylamine	1800	U
67-72-1	Hexachloroethane	1800	U
98-95-3	Nitrobenzene	1800	U
78-59-1	Isophorone	1800	U
88-75-5	2-Nitrophenol	1800	U
105-67-9	2,4-Dimethylphenol	1800	U
65-85-0	Benzoic Acid	8800	U
111-91-1	bis(2-Chloroethoxy)Methane	1800	U
120-83-2	2,4-Dichlorophenol	1800	U
120-82-1	1,2,4-Trichlorobenzene	1800	U
91-20-3	Naphthalene	1800	U
106-47-8	4-Chloroaniline	1800	U
87-68-3	Hexachlorobutadiene	1800	U
59-50-7	4-Chloro-3-Methylphenol	1800	U
91-57-6	2-Methylnaphthalene	1800	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	1800	U
95-95-4	2,4,5-Trichlorophenol	8800	U
91-58-7	2-Chloronaphthalene	1800	U
88-74-4	2-Nitroaniline	8800	U
131-11-3	Dimethyl Phthalate	1800	U
208-96-8	Acenaphthylene	1800	U
606-20-2	2,6-Dinitrotoluene	1800	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP61DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD045159B02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	8800	U
83-32-9	Acenaphthene	1800	U
51-28-5	2,4-Dinitrophenol	8800	U
100-02-7	4-Nitrophenol	8800	U
132-64-9	Dibenzofuran	1800	U
121-14-2	2,4-Dinitrotoluene	1800	U
84-66-2	Diethylphthalate	1800	U
7005-72-3	4-Chlorophenyl-phenylether	1800	U
86-73-7	Fluorene	1800	U
100-01-6	4-Nitroaniline	8800	U
534-52-1	4,6-Dinitro-2-Methylphenol	8800	U
86-30-6	N-Nitrosodiphenylamine (1)	1800	U
101-55-3	4-Bromophenyl-phenylether	1800	U
118-74-1	Hexachlorobenzene	1800	U
87-86-5	Pentachlorophenol	8800	U
85-01-8	Phenanthrene	260	DJ
120-12-7	Anthracene	1800	U
84-74-2	Di-n-Butylphthalate	620	DJ
206-44-0	Fluoranthene	400	DJ
129-00-0	Pyrene	480	DJ
85-68-7	Butylbenzylphthalate	28000	D
91-94-1	3,3'-Dichlorobenzidine	3600	U
56-55-3	Benzo(a)Anthracene	290	DJ
218-01-9	Chrysene	330	DJ
117-81-7	bis(2-Ethylhexyl)Phthalate	2200	D
117-84-0	Di-n-Octyl Phthalate	1800	U
205-99-2	Benzo(b)Fluoranthene	440	DJX
207-08-9	Benzo(k)Fluoranthene	440	DJX
50-32-8	Benzo(a)Pyrene	240	DJ
193-39-5	Indeno(1,2,3-cd)Pyrene	1800	U
53-70-3	Dibenzo(a,h)Anthracene	1800	U
191-24-2	Benzo(g,h,i)Perylene	1800	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP61DL

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD045159B02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.0

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	14.15	1300	J
2. 10546-70-0	BENZAMIDE, N-PROPYL-	17.32	24000	J
3. 10546-70-0	BENZAMIDE, N-PROPYL-	17.39	24000	J
4.	UNKNOWN PHTHALATE	18.94	920	J
5.	UNKNOWN HYDROCARBON	19.30	2200	J
6.	UNKNOWN HYDROCARBON	20.37	2900	J

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP62

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GH045160C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	22000	U
111-44-4	bis(2-Chloroethyl)Ether	22000	U
95-57-8	2-Chlorophenol	22000	U
541-73-1	1,3-Dichlorobenzene	22000	U
106-46-7	1,4-Dichlorobenzene	22000	U
100-51-6	Benzyl Alcohol	22000	U
95-50-1	1,2-Dichlorobenzene	22000	U
95-48-7	2-Methylphenol	22000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	22000	U
106-44-5	4-Methylphenol	22000	U
621-64-7	N-Nitroso-Di-n-Propylamine	22000	U
67-72-1	Hexachloroethane	22000	U
98-95-3	Nitrobenzene	22000	U
78-59-1	Isophorone	22000	U
88-75-5	2-Nitrophenol	22000	U
105-67-9	2,4-Dimethylphenol	22000	U
65-85-0	Benzoic Acid	100000	U
111-91-1	bis(2-Chloroethoxy)Methane	22000	U
120-83-2	2,4-Dichlorophenol	22000	U
120-82-1	1,2,4-Trichlorobenzene	22000	U
91-20-3	Naphthalene	22000	U
106-47-8	4-Chloroaniline	22000	U
87-68-3	Hexachlorobutadiene	22000	U
59-50-7	4-Chloro-3-Methylphenol	22000	U
91-57-6	2-Methylnaphthalene	22000	U
77-47-4	Hexachlorocyclopentadiene	22000	UJ
88-06-2	2,4,6-Trichlorophenol	22000	U
95-95-4	2,4,5-Trichlorophenol	100000	U
91-58-7	2-Chloronaphthalene	22000	U
88-74-4	2-Nitroaniline	100000	U
131-11-3	Dimethyl Phthalate	22000	U
208-96-8	Acenaphthylene	22000	U
606-20-2	2,6-Dinitrotoluene	22000	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP62

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID: GH045160C15

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. ____ Date Extracted: 06/11/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	100000	U
83-32-9	Acenaphthene	22000	U
51-28-5	2,4-Dinitrophenol	100000	U
100-02-7	4-Nitrophenol	100000	U
132-64-9	Dibenzofuran	22000	U
121-14-2	2,4-Dinitrotoluene	22000	U
84-66-2	Diethylphthalate	22000	U
7005-72-3	4-Chlorophenyl-phenylether	22000	U
86-73-7	Fluorene	22000	U
100-01-6	4-Nitroaniline	100000	U
534-52-1	4,6-Dinitro-2-Methylphenol	100000	U
86-30-6	N-Nitrosodiphenylamine (1)	22000	U
101-55-3	4-Bromophenyl-phenylether	22000	U
118-74-1	Hexachlorobenzene	22000	U
87-86-5	Pentachlorophenol	100000	U
85-01-8	Phenanthrene	22000	U
120-12-7	Anthracene	22000	U
84-74-2	Di-n-Butylphthalate	31000	
206-44-0	Fluoranthene	22000	U
129-00-0	Pyrene	22000	U
85-68-7	Butylbenzylphthalate	2400000	~~E~~
91-94-1	3,3'-Dichlorobenzidine	43000	U
56-55-3	Benzo(a)Anthracene	22000	U
218-01-9	Chrysene	22000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	110000	
117-84-0	Di-n-Octyl Phthalate	22000	U
205-99-2	Benzo(b)Fluoranthene	22000	U
207-08-9	Benzo(k)Fluoranthene	22000	U
50-32-8	Benzo(a)Pyrene	22000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	22000	U
53-70-3	Dibenzo(a,h)Anthracene	22000	U
191-24-2	Benzo(g,h,i)Perylene	22000	U

(1) - Cannot be separated from Diphenylamine

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP57

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345146

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045146A12

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

% Moisture: not dec. 33 Date Analyzed: 06/12/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP58

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045147C12

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

% Moisture: not dec. 58 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	24	U
74-83-9	Bromomethane	24	U
75-01-4	Vinyl Chloride	24	U
75-00-3	Chloroethane	24	U
75-09-2	Methylene Chloride	70	~~B~~ U
67-64-1	Acetone	130	~~B~~ U
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	5 ~~2~~	~~BJ~~ U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	46	~~B~~ U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
108-05-4	Vinyl Acetate	24	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	Trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	26	~~B~~ U
591-78-6	2-Hexanone	10 7	~~BJ~~ U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12 ~~5~~	~~J~~ U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	8	J
100-42-5	Styrene	12	U
1330-20-7	Total Xylenes	36	

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1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN90

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): SOIL Lab Sample ID: VALI 90

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 94.7

Concentration Units (ug/L or mg/kg dry weight): MG/KG

18

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6280.00			P
7440-36-0	Antimony	6.30	U	~~N~~ J	P
7440-38-2	Arsenic	12.00			F
7440-39-3	Barium	116.00			P
7440-41-7	Beryllium	0.63	U		P
7440-43-9	Cadmium	1.10			P
7440-70-2	Calcium	3830.00			P
7440-47-3	Chromium	14.50			P
7440-48-4	Cobalt	6.30	B		P
7440-50-8	Copper	54.40			P
7439-89-6	Iron	10800.00			P
7439-92-1	Lead	90.80			F
7439-95-4	Magnesium	2250.00			P
7439-96-5	Manganese	340.00			P
7439-97-6	Mercury	0.11			CV
7440-02-0	Nickel	12.00		J	P
7440-09-7	Potassium	863.00	B		P
7482-49-2	Selenium	0.23	U		F
7440-22-4	Silver	0.84	U		P
7440-23-5	~~Sodium~~	~~132.00~~	~~B~~		P
7440-28-0	Thallium	0.46	U		F
7440-62-2	Vanadium	21.30		J	P
7440-66-6	Zinc	301.00			P
---------	Cyanide				NR

Color Before: RED Clarity Before: Texture: MEDIUM

Color After: COLORLESS Clarity After: Artifacts:

Comments :

201

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

MBCN91

Lab Name: VEGAS ANALYTICAL LABS INC Contract: 68-W8-0081

Lab Code: VEGAS Case No.: 14204 SAS No.: SDG No.: MBCN75

Matrix (Soil/Water): WATER Lab Sample ID: VALI 91

Level (Low/Med): LOW Date Received: 06/06/90

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

19

CAS NO.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	28.00	U		P
7440-36-0	Antimony	30.00	U		P
7440-38-2	Arsenic	2.20	U		F
7440-39-3	Barium	14.00	U		P
7440-41-7	Beryllium	3.00	U		P
7440-43-9	Cadmium	4.00	U		P
7440-70-2	Calcium	40.10	B		P
7440-47-3	Chromium	6.00	U		P
7440-48-4	Cobalt	7.00	U		P
7440-50-8	Copper	3.00	U		P
7439-89-6	Iron	12.00	U		P
7439-92-1	Lead	1.10	U		F
7439-95-4	Magnesium	40.00	U		P
7439-96-5	Manganese	4.00	U		P
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel	28.00	U		P
7440-09-7	Potassium	396.00	U		P
7482-49-2	Selenium	1.10	U		F
7440-22-4	Silver	4.00	U		P
7440-23-5	Sodium	148.00	B		P
7440-28-0	Thallium	2.20	U		F
7440-62-2	Vanadium	10.00	U		P
7440-66-6	Zinc	6.20	B		P
---------	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments :

ATTACHMENT 1
SOP NO. HW-6

PAGE __OF__

TOTAL REVIEW

CLP DATA ASSESSMENT

Functional Guidelines for Evaluating Organics Analysis

Case No. 14204 SDG No. 3DP54 3DP57 LABORATORY Compuchem SITE Franklin Plastics Corp.

DATA ASSESSMENT:

The current functional guidelines (1988) for evaluating organic data have been applied.

All data are valid and acceptable except those analytes which have been qualified with a "J" (estimated), "U" (non-detects), "R" (unusable),or "JN" (presumptive evidence for the presence of the material at an estimated value). All action is detailed on the attached sheets.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant QC problems the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Reviewer's Signature: Susan Lincoln Date: 08/07/1990

Verified By: Pamela D. Gentner Date: 8/8/1990

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP58

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045147C12

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

% Moisture: not dec. 58 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN OXYGENATED ALKANE	14.84	43	JN
2.	UNKNOWN	15.05	19	JN

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14204 BDP57 SAMPLES DATA PACKAGE

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP59

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045157C12

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

% Moisture: not dec. 19 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	23	~~B~~
67-64-1	Acetone	24	~~B~~
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	~~2~~	~~BJ~~
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	~~1~~	~~BJ~~
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP59

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045157C12

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

% Moisture: not dec. 19 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045158C12

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

% Moisture: not dec. 28 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	14	U
67-64-1	Acetone	21	U
75-15-0	Carbon Disulfide	15	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	7	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	7	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	7	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total Xylenes	7	U

FORM I VOA 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045158C12

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

% Moisture: not dec. 28 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	21	U
67-64-1	Acetone	15	U
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	7	U
78-93-3	2-Butanone	14	U
71-55-6	1,1,1-Trichloroethane	7	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	14	U
75-27-4	Bromodichloromethane	7	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	14	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	7	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total Xylenes	7	U

FORM I VOA 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045158C12

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

% Moisture: not dec. 28 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP61

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045159C12

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

% Moisture: not dec. 9 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	13	~~B~~ U
75-15-0	Carbon Disulfide	13	~~B~~ U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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14204 BDP57 SAMPLES DATA PACKAGE

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP61

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045159C12

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

% Moisture: not dec. 9 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP62

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045160C12

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

% Moisture: not dec. 8 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	11	~~B~~
75-15-0	Carbon Disulfide	10 ~~9~~	~~B~~ U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U
		5	U

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14204 BDP57 SAMPLES DATA PACKAGE

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP62

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045160C12

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

% Moisture: not dec. 8 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BDP63

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345161

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045161C12

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

% Moisture: not dec. 27 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	14	U
74-83-9	Bromomethane	14	U
75-01-4	Vinyl Chloride	14	U
75-00-3	Chloroethane	14	U
75-09-2	Methylene Chloride	11	~~B~~ U
67-64-1	Acetone	16	~~B~~ U
75-15-0	Carbon Disulfide	7	U
75-35-4	1,1-Dichloroethene	7	U
75-34-3	1,1-Dichloroethane	7	U
540-59-0	1,2-Dichloroethene (total)	7	U
67-66-3	Chloroform	7	U
107-06-2	1,2-Dichloroethane	~~7 3~~	~~BJ~~ 1.1
78-93-3	2-Butanone	7	U
71-55-6	1,1,1-Trichloroethane	14	U
56-23-5	Carbon Tetrachloride	7	U
108-05-4	Vinyl Acetate	7	U
75-27-4	Bromodichloromethane	14	U
78-87-5	1,2-Dichloropropane	7	U
10061-01-5	cis-1,3-Dichloropropene	7	U
79-01-6	Trichloroethene	7	U
124-48-1	Dibromochloromethane	7	U
79-00-5	1,1,2-Trichloroethane	7	U
71-43-2	Benzene	7	U
10061-02-6	Trans-1,3-Dichloropropene	7	U
75-25-2	Bromoform	7	U
108-10-1	4-Methyl-2-Pentanone	7	U
591-78-6	2-Hexanone	14	U
127-18-4	Tetrachloroethene	14	U
79-34-5	1,1,2,2-Tetrachloroethane	7	U
108-88-3	Toluene	7	U
108-90-7	Chlorobenzene	7	U
100-41-4	Ethylbenzene	7	U
100-42-5	Styrene	7	U
1330-20-7	Total Xylenes	7	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP63

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345161

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045161C12

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

% Moisture: not dec. 27 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP64

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045162C12

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

% Moisture: not dec. 7 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	9	~~B~~
75-15-0	Carbon Disulfide	~~10~~	~~BJ~~
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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14204 BDP57 SAMPLES DATA PACKAGE

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP64

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045162C12

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

% Moisture: not dec. 7 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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EPA SAMPLE NO.

BDP65

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345163

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045163C12

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

% Moisture: not dec. 7 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11	U
67-64-1	Acetone	39	~~B~~ U
75-15-0	Carbon Disulfide	12	~~B~~ U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	1	~~BJ~~ U
78-93-3	2-Butanone	5	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	5	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U
		5	U

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14204 BDP57 SAMPLES DATA PACKAGE

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP65

Lab Name: COMPUCHEM RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345163

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045163C12

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

% Moisture: not dec. 7 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP66

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR045164C12

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

% Moisture: not dec. 20 Date Analyzed: 06/14/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	50	~~B~~ U
75-15-0	Carbon Disulfide	12	J
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U
		6	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP66

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GR045164C12

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

% Moisture: not dec. 20 Date Analyzed: 06/14/90

Column (pack/cap) CAP Dilution Factor: 1.0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP67

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045166C12

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

% Moisture: not dec. 20 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	U
67-64-1	Acetone	18	~~B~~
75-15-0	Carbon Disulfide	~~10~~ 12	~~BJ~~ J
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	6	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	6	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	Trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	6	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP67

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045166C12

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

% Moisture: not dec. 20 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP68

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045167C12

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

% Moisture: not dec. 9 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	12	~~B~~ U
67-64-1	Acetone	11 9	~~BJ~~ J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP68

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045167C12

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

% Moisture: not dec. 9 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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EPA SAMPLE NO.

BDP69

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045168C12

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

% Moisture: not dec. 6 Date Analyzed: 06/13/90

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	10	~~B~~ U
67-64-1	Acetone	~~9~~	~~BJ~~
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	11	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	Trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP69

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 5.0 (g/mL) G Lab File ID: GH045168C12

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

% Moisture: not dec. 6 Date Analyzed: 06/13/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP70

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345140

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045140B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP70

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345140

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045140B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP71

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345141

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045141B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP71

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345141

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045141B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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EPA SAMPLE NO.

BDP72

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345142

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045142B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP72

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345142

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045142B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO

BDP73

Lab Name: COMPUCHEM.RTP

Contract: 68-D9-0032

Lab Code: COMPU

Case No.: 14204

SAS No.: 5169HO

SDG No.: BDP54

Matrix: (soil/water) WATER

Lab Sample ID: 345144

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: CN045144B19

Level: (low/med) LOW

Date Received: 06/06/90

% Moisture: not dec. ____

Date Analyzed: 06/11/90

Column: (pack/cap) CAP

Dilution Factor: 1.0

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP73

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345144

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045144B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP75

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345284

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045284B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP75

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345284

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045284B19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP74

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345145

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045145A19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column: (pack/cap) CAP Dilution Factor: 1.0

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

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP74

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345145

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: CN045145A19

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

% Moisture: not dec. ____ Date Analyzed: 06/11/90

Column (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP54

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345127

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045127A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP54

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345127

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045127A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	~~3~~ 10	~~BJ~~ U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP54

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345127

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045127A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP55

Lab Name: COMPUCHEM.RTP

Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER

Sample wt/vol: 1000 (g/mL) ML

Lab Sample ID: 345132

Level: (low/med) LOW

Lab File ID: GH045132A05

% Moisture: not dec. ____ dec. ____

Date Received: 06/06/90

Extraction: (SepF/Cont/Sonc) SEPF

Date Extracted: 06/07/90

GPC Cleanup: (Y/N) N pH: ____

Date Analyzed: 06/11/90

Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	50	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	50	U
606-20-2	2,6-Dinitrotoluene	10	U
		10	U
		10	U

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1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP55

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345132

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045132A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	10	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	50	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	10	U
85-01-8	Phenanthrene	50	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	20	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	22	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP55

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345132

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045132A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP56

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345139

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045139A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
		10	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP56

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345139

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045139A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	13	~~B~~ JB
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP56

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345139

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045139A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP57

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345146

Sample wt/vol: 1.2 (g/mL) G Lab File ID: GH045146C02

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	25000	U
111-44-4	bis(2-Chloroethyl)Ether	25000	U
95-57-8	2-Chlorophenol	25000	U
541-73-1	1,3-Dichlorobenzene	25000	U
106-46-7	1,4-Dichlorobenzene	25000	U
100-51-6	Benzyl Alcohol	25000	U
95-50-1	1,2-Dichlorobenzene	25000	U
95-48-7	2-Methylphenol	25000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	25000	U
106-44-5	4-Methylphenol	25000	U
621-64-7	N-Nitroso-Di-n-Propylamine	25000	U
67-72-1	Hexachloroethane	25000	U
98-95-3	Nitrobenzene	25000	U
78-59-1	Isophorone	25000	U
88-75-5	2-Nitrophenol	25000	U
105-67-9	2,4-Dimethylphenol	25000	U
65-85-0	Benzoic Acid	25000	U
111-91-1	bis(2-Chloroethoxy)Methane	120000	U
120-83-2	2,4-Dichlorophenol	25000	U
120-82-1	1,2,4-Trichlorobenzene	25000	U
91-20-3	Naphthalene	25000	U
106-47-8	4-Chloroaniline	25000	U
87-68-3	Hexachlorobutadiene	25000	U
59-50-7	4-Chloro-3-Methylphenol	25000	U
91-57-6	2-Methylnaphthalene	25000	U
77-47-4	Hexachlorocyclopentadiene	25000	U
88-06-2	2,4,6-Trichlorophenol	25000	U
95-95-4	2,4,5-Trichlorophenol	25000	U
91-58-7	2-Chloronaphthalene	120000	U
88-74-4	2-Nitroaniline	25000	U
131-11-3	Dimethyl Phthalate	120000	U
208-96-8	Acenaphthylene	25000	U
606-20-2	2,6-Dinitrotoluene	25000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP57

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345146

Sample wt/vol: 1.2 (g/mL) G Lab File ID: GH045146C02

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	120000	U
83-32-9	Acenaphthene	25000	U
51-28-5	2,4-Dinitrophenol	120000	U
100-02-7	4-Nitrophenol	120000	U
132-64-9	Dibenzofuran	25000	U
121-14-2	2,4-Dinitrotoluene	25000	U
84-66-2	Diethylphthalate	25000	U
7005-72-3	4-Chlorophenyl-phenylether	25000	U
86-73-7	Fluorene	25000	U
100-01-6	4-Nitroaniline	25000	U
534-52-1	4,6-Dinitro-2-Methylphenol	120000	U
86-30-6	N-Nitrosodiphenylamine (1)	120000	U
101-55-3	4-Bromophenyl-phenylether	25000	U
118-74-1	Hexachlorobenzene	25000	U
87-86-5	Pentachlorophenol	25000	U
85-01-8	Phenanthrene	120000	U
120-12-7	Anthracene	5300	J
84-74-2	Di-n-Butylphthalate	25000	U
206-44-0	Fluoranthene	25000	U
129-00-0	Pyrene	9400	J
85-68-7	Butylbenzylphthalate	8900	J
91-94-1	3,3'-Dichlorobenzidine	38000	
56-55-3	Benzo(a)Anthracene	49000	U
218-01-9	Chrysene	4200	J
117-81-7	bis(2-Ethylhexyl)Phthalate	4500	J
117-84-0	Di-n-Octyl Phthalate	190000	
205-99-2	Benzo(b)Fluoranthene	8400	J
207-08-9	Benzo(k)Fluoranthene	9300	J*N
50-32-8	Benzo(a)Pyrene	9300	J*N
193-39-5	Indeno(1,2,3-cd)Pyrene	4200	J
53-70-3	Dibenzo(a,h)Anthracene	2500	J
191-24-2	Benzo(g,h,i)Perylene	25000	U
		2700	J

only one

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP57

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345146

Sample wt/vol: 1.2 (g/mL) G Lab File ID: GH045146C02

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 33 dec. ____ Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN PHTHALATE	16.94	65000	J
2.		UNKNOWN PHTHALATE	17.10	150000	J
3.		UNKNOWN PHTHALATE	17.22	75000	J
4.		UNKNOWN PHTHALATE	17.30	170000	J
5.		UNKNOWN PHTHALATE	17.47	220000	J
6.		UNKNOWN PHTHALATE	17.64	130000	J
7.		UNKNOWN	18.42	42000	J
8.		UNKNOWN PHTHALATE	19.05	57000	J
9.		UNKNOWN HYDROCARBON	19.32	27000	J
10.		UNKNOWN PHTHALATE	19.39	45000	J
11.		UNKNOWN	19.57	50000	J
12.		UNKNOWN	19.79	30000	J
13.		UNKNOWN	20.42	52000	J
14.		UNKNOWN	20.80	42000	J
15.		UNKNOWN HYDROCARBON	21.02	85000	J
16.		UNKNOWN	21.32	42000	J
17.		UNKNOWN	21.45	35000	J
18.		UNKNOWN	21.89	62000	J
19.		UNKNOWN	22.47	37000	J
20.		UNKNOWN	24.19	50000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP58

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD045147C02

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

% Moisture: not dec. 58 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	10000	U
111-44-4	bis(2-Chloroethyl)Ether	10000	U
95-57-8	2-Chlorophenol	10000	U
541-73-1	1,3-Dichlorobenzene	10000	U
106-46-7	1,4-Dichlorobenzene	10000	U
100-51-6	Benzyl Alcohol	10000	U
95-50-1	1,2-Dichlorobenzene	10000	U
95-48-7	2-Methylphenol	10000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10000	U
106-44-5	4-Methylphenol	10000	U
621-64-7	N-Nitroso-Di-n-Propylamine	10000	U
67-72-1	Hexachloroethane	10000	U
98-95-3	Nitrobenzene	10000	U
78-59-1	Isophorone	10000	U
88-75-5	2-Nitrophenol	10000	U
105-67-9	2,4-Dimethylphenol	10000	U
65-85-0	Benzoic Acid	10000	U
111-91-1	bis(2-Chloroethoxy)Methane	51000	U
120-83-2	2,4-Dichlorophenol	10000	U
120-82-1	1,2,4-Trichlorobenzene	10000	U
91-20-3	Naphthalene	10000	U
106-47-8	4-Chloroaniline	10000	U
87-68-3	Hexachlorobutadiene	10000	U
59-50-7	4-Chloro-3-Methylphenol	10000	U
91-57-6	2-Methylnaphthalene	10000	U
77-47-4	Hexachlorocyclopentadiene	10000	U
88-06-2	2,4,6-Trichlorophenol	10000	U
95-95-4	2,4,5-Trichlorophenol	10000	U
91-58-7	2-Chloronaphthalene	51000	U
88-74-4	2-Nitroaniline	10000	U
131-11-3	Dimethyl Phthalate	51000	U
208-96-8	Acenaphthylene	10000	U
606-20-2	2,6-Dinitrotoluene	10000	U
		10000	U

FORM I SV-1 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP58

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD045147C02

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

% Moisture: not dec. 58 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 13

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	51000	U
83-32-9	Acenaphthene	10000	U
51-28-5	2,4-Dinitrophenol	51000	U
100-02-7	4-Nitrophenol	51000	U
132-64-9	Dibenzofuran	10000	U
121-14-2	2,4-Dinitrotoluene	10000	U
84-66-2	Diethylphthalate	10000	U
7005-72-3	4-Chlorophenyl-phenylether	10000	U
86-73-7	Fluorene	10000	U
100-01-6	4-Nitroaniline	1400	J
534-52-1	4,6-Dinitro-2-Methylphenol	51000	U
86-30-6	N-Nitrosodiphenylamine (1)	51000	U
101-55-3	4-Bromophenyl-phenylether	10000	U
118-74-1	Hexachlorobenzene	10000	U
87-86-5	Pentachlorophenol	10000	U
85-01-8	Phenanthrene	51000	U
120-12-7	Anthracene	9300	J
84-74-2	Di-n-Butylphthalate	1400	J
206-44-0	Fluoranthene	9800	J
129-00-0	Pyrene	27000	
85-68-7	Butylbenzylphthalate	25000	
91-94-1	3,3'-Dichlorobenzidine	470000 ~~420000~~	~~E~~ DJ
56-55-3	Benzo(a)Anthracene	21000	UJ
218-01-9	Chrysene	4700	J
117-81-7	bis(2-Ethylhexyl)Phthalate	17000	
117-84-0	Di-n-Octyl Phthalate	13,000,000 ~~3000000~~	~~E~~ D
205-99-2	Benzo(b)Fluoranthene	800,000 ~~410000~~	~~E~~ D
207-08-9	Benzo(k)Fluoranthene	16000	* JN
50-32-8	Benzo(a)Pyrene	16000	* JN
193-39-5	Indeno(1,2,3-cd)Pyrene	4300	J
53-70-3	Dibenzo(a,h)Anthracene	7700	J
191-24-2	Benzo(g,h,i)Perylene	2800	J
		6000	J

only one

(1) - Cannot be separated from Diphenylamine

* Values transferred from BDP58DL

FORM I SV-2 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP58

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID: GD045147C02

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

% Moisture: not dec. 58 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 13

Number TICs found: 20

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	12.42	130000	J
2.		UNKNOWN HYDROCARBON	13.77	130000	J
3.		UNKNOWN	15.50	140000	J
4.	146-50-9	1,2-BENZENEDICARBOXYLIC ACID	16.67	110000	J
5.	4337-65-9	HEXANEDIOIC ACID, MONO(2-ETH	16.94	660000	J
6.		UNKNOWN	17.37	1800000	J
7.		UNKNOWN PHTHALATE	17.54	470000	J
8.	603-11-2	1,2-BENZENEDICARBOXYLIC ACID	18.04	230000	J
9.		UNKNOWN	18.29	790000	J
10.		UNKNOWN	18.75	740000	J
11.		UNKNOWN	18.90	530000	J
12.		UNKNOWN	19.00	570000	J
13.		UNKNOWN	19.10	130000	J
14.		UNKNOWN	19.24	900000	J
15.	28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	19.47	100000	J
16.		UNKNOWN	19.55	81000	J
17.		UNKNOWN	19.70	630000	J
18.	26761-40-0	1,2-BENZENEDICARBOXYLIC ACID	20.00	140000	J
19.		UNKNOWN	20.84	230000	J
20.		UNKNOWN	23.80	250000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP58DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G3D45147C02

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

% Moisture: not dec. 58 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1000

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	790000	U
111-44-4	bis(2-Chloroethyl)Ether	790000	U
95-57-8	2-Chlorophenol	790000	U
541-73-1	1,3-Dichlorobenzene	790000	U
106-46-7	1,4-Dichlorobenzene	790000	U
100-51-6	Benzyl Alcohol	790000	U
95-50-1	1,2-Dichlorobenzene	790000	U
95-48-7	2-Methylphenol	790000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	790000	U
106-44-5	4-Methylphenol	790000	U
621-64-7	N-Nitroso-Di-n-Propylamine	790000	U
67-72-1	Hexachloroethane	790000	U
98-95-3	Nitrobenzene	790000	U
78-59-1	Isophorone	790000	U
88-75-5	2-Nitrophenol	790000	U
105-67-9	2,4-Dimethylphenol	790000	U
65-85-0	Benzoic Acid	3800000	U
111-91-1	bis(2-Chloroethoxy)Methane	790000	U
120-83-2	2,4-Dichlorophenol	790000	U
120-82-1	1,2,4-Trichlorobenzene	790000	U
91-20-3	Naphthalene	790000	U
106-47-8	4-Chloroaniline	790000	U
87-68-3	Hexachlorobutadiene	790000	U
59-50-7	4-Chloro-3-Methylphenol	790000	U
91-57-6	2-Methylnaphthalene	790000	U
77-47-4	Hexachlorocyclopentadiene	790000	U
88-06-2	2,4,6-Trichlorophenol	790000	U
95-95-4	2,4,5-Trichlorophenol	790000	U
91-58-7	2-Chloronaphthalene	3800000	U
88-74-4	2-Nitroaniline	790000	U
131-11-3	Dimethyl Phthalate	3800000	U
208-96-8	Acenaphthylene	790000	U
606-20-2	2,6-Dinitrotoluene	790000	U

FORM I SV-1 1/87 Rev.

DO NOT USE

14204 BDP57 SAMPLES DATA PACKAGE

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP58DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G3D45147C02

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

% Moisture: not dec. 58 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1000

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	3800000	U
83-32-9	Acenaphthene	790000	U
51-28-5	2,4-Dinitrophenol	3800000	U
100-02-7	4-Nitrophenol	3800000	U
132-64-9	Dibenzofuran	790000	U
121-14-2	2,4-Dinitrotoluene	790000	U
84-66-2	Diethylphthalate	790000	U
7005-72-3	4-Chlorophenyl-phenylether	790000	U
86-73-7	Fluorene	790000	U
100-01-6	4-Nitroaniline	3800000	U
534-52-1	4,6-Dinitro-2-Methylphenol	3800000	U
86-30-6	N-Nitrosodiphenylamine (1)	790000	U
101-55-3	4-Bromophenyl-phenylether	790000	U
118-74-1	Hexachlorobenzene	790000	U
87-86-5	Pentachlorophenol	3800000	U
85-01-8	Phenanthrene	790000	U
120-12-7	Anthracene	790000	U
84-74-2	Di-n-Butylphthalate	790000	U
206-44-0	Fluoranthene	790000	U
129-00-0	Pyrene	790000	U
85-68-7	Butylbenzylphthalate	470000	DJ
91-94-1	3,3'-Dichlorobenzidine	1600000	U
56-55-3	Benzo(a)Anthracene	790000	U
218-01-9	Chrysene	790000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	13000000	D
117-84-0	Di-n-Octyl Phthalate	800000	D
205-99-2	Benzo(b)Fluoranthene	790000	U
207-08-9	Benzo(k)Fluoranthene	790000	U
50-32-8	Benzo(a)Pyrene	790000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	790000	U
53-70-3	Dibenzo(a,h)Anthracene	790000	U
191-24-2	Benzo(g,h,i)Perylene	790000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP58DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G3D45147C02

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

% Moisture: not dec. 58 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1000

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	16.79	1200000	J
2. 3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	16.85	310000	J
3. 3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.14	2200000	J
4.	UNKNOWN PHTHALATE	17.24	2400000	J
5.	UNKNOWN	17.30	1200000	J
6.	UNKNOWN	18.12	1600000	J
7. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.74	790000	J
8. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.85	940000	J
9. 26761-40-0	1,2-BENZENEDICARBOXYLIC ACID	19.09	1100000	J
10.	UNKNOWN	19.54	1000000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP59

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID: GH045157A02

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

% Moisture: not dec. 19 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2900	U
111-44-4	bis(2-Chloroethyl)Ether	2900	U
95-57-8	2-Chlorophenol	2900	U
541-73-1	1,3-Dichlorobenzene	2900	U
106-46-7	1,4-Dichlorobenzene	2900	U
100-51-6	Benzyl Alcohol	2900	U
95-50-1	1,2-Dichlorobenzene	2900	U
95-48-7	2-Methylphenol	2900	U
39638-32-9	bis(2-Chloroisopropyl)Ether	2900	U
106-44-5	4-Methylphenol	2900	U
621-64-7	N-Nitroso-Di-n-Propylamine	2900	U
67-72-1	Hexachloroethane	2900	U
98-95-3	Nitrobenzene	2900	U
78-59-1	Isophorone	2900	U
88-75-5	2-Nitrophenol	2900	U
105-67-9	2,4-Dimethylphenol	2900	U
65-85-0	Benzoic Acid	14000	UJ
111-91-1	bis(2-Chloroethoxy)Methane	2900	U
120-83-2	2,4-Dichlorophenol	2900	U
120-82-1	1,2,4-Trichlorobenzene	2900	U
91-20-3	Naphthalene	1300	J
106-47-8	4-Chloroaniline	2900	U
87-68-3	Hexachlorobutadiene	2900	U
59-50-7	4-Chloro-3-Methylphenol	2900	U
91-57-6	2-Methylnaphthalene	350	J
77-47-4	Hexachlorocyclopentadiene	2900	U
88-06-2	2,4,6-Trichlorophenol	2900	U
95-95-4	2,4,5-Trichlorophenol	14000	U
91-58-7	2-Chloronaphthalene	2900	U
88-74-4	2-Nitroaniline	14000	U
131-11-3	Dimethyl Phthalate	300	J
208-96-8	Acenaphthylene	2900	U
606-20-2	2,6-Dinitrotoluene	2900	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP59

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID: GH045157A02

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

% Moisture: not dec. 19 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	14000	U
83-32-9	Acenaphthene	1600	J
51-28-5	2,4-Dinitrophenol	14000	U
100-02-7	4-Nitrophenol	14000	U
132-64-9	Dibenzofuran	1100	J
121-14-2	2,4-Dinitrotoluene	2900	U
84-66-2	Diethylphthalate	2900	U
7005-72-3	4-Chlorophenyl-phenylether	2900	U
86-73-7	Fluorene	1400	J
100-01-6	4-Nitroaniline	14000	U
534-52-1	4,6-Dinitro-2-Methylphenol	14000	U
86-30-6	N-Nitrosodiphenylamine (1)	2900	U
101-55-3	4-Bromophenyl-phenylether	2900	U
118-74-1	Hexachlorobenzene	2900	U
87-86-5	Pentachlorophenol	14000	U
85-01-8	Phenanthrene	15000	
120-12-7	Anthracene	2900	
84-74-2	Di-n-Butylphthalate	1000	J
206-44-0	Fluoranthene	19000	
129-00-0	Pyrene	18000	
85-68-7	Butylbenzylphthalate	~~270000~~	~~E~~
91-94-1	3,3'-Dichlorobenzidine	5700	UJ
56-55-3	Benzo(a)Anthracene	8000	
218-01-9	Chrysene	13000	
117-81-7	bis(2-Ethylhexyl)Phthalate	~~510000~~	~~E~~
117-84-0	Di-n-Octyl Phthalate	37000	
205-99-2	Benzo(b)Fluoranthene	9500	
207-08-9	Benzo(k)Fluoranthene	8300	J
50-32-8	Benzo(a)Pyrene	7500	
193-39-5	Indeno(1,2,3-cd)Pyrene	4000	
53-70-3	Dibenzo(a,h)Anthracene	1700	J
191-24-2	Benzo(g,h,i)Perylene	3600	

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP68DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2D45167C02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	18000	U
111-44-4	bis(2-Chloroethyl)Ether	18000	U
95-57-8	2-Chlorophenol	18000	U
541-73-1	1,3-Dichlorobenzene	18000	U
106-46-7	1,4-Dichlorobenzene	18000	U
100-51-6	Benzyl Alcohol	18000	U
95-50-1	1,2-Dichlorobenzene	18000	U
95-48-7	2-Methylphenol	18000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	18000	U
106-44-5	4-Methylphenol	18000	U
621-64-7	N-Nitroso-Di-n-Propylamine	18000	U
67-72-1	Hexachloroethane	18000	U
98-95-3	Nitrobenzene	18000	U
78-59-1	Isophorone	18000	U
88-75-5	2-Nitrophenol	18000	U
105-67-9	2,4-Dimethylphenol	18000	U
65-85-0	Benzoic Acid	88000	U
111-91-1	bis(2-Chloroethoxy)Methane	18000	U
120-83-2	2,4-Dichlorophenol	18000	U
120-82-1	1,2,4-Trichlorobenzene	18000	U
91-20-3	Naphthalene	18000	U
106-47-8	4-Chloroaniline	18000	U
87-68-3	Hexachlorobutadiene	18000	U
59-50-7	4-Chloro-3-Methylphenol	18000	U
91-57-6	2-Methylnaphthalene	18000	U
77-47-4	Hexachlorocyclopentadiene	18000	U
88-06-2	2,4,6-Trichlorophenol	18000	U
95-95-4	2,4,5-Trichlorophenol	88000	U
91-58-7	2-Chloronaphthalene	18000	U
88-74-4	2-Nitroaniline	88000	U
131-11-3	Dimethyl Phthalate	18000	U
208-96-8	Acenaphthylene	18000	U
606-20-2	2,6-Dinitrotoluene	18000	U

FORM I SV-1 1/87 Rev.

DO NOT USE

14204 BDP57 SAMPLES DATA PACKAGE

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP68DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2D45167C02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	88000	U
83-32-9	Acenaphthene	18000	U
51-28-5	2,4-Dinitrophenol	88000	U
100-02-7	4-Nitrophenol	88000	U
132-64-9	Dibenzofuran	18000	U
121-14-2	2,4-Dinitrotoluene	18000	U
84-66-2	Diethylphthalate	18000	U
7005-72-3	4-Chlorophenyl-phenylether	18000	U
86-73-7	Fluorene	18000	U
100-01-6	4-Nitroaniline	88000	U
534-52-1	4,6-Dinitro-2-Methylphenol	88000	U
86-30-6	N-Nitrosodiphenylamine (1)	18000	U
101-55-3	4-Bromophenyl-phenylether	18000	U
118-74-1	Hexachlorobenzene	18000	U
87-86-5	Pentachlorophenol	88000	U
85-01-8	Phenanthrene	6200	DJ
120-12-7	Anthracene	18000	U
84-74-2	Di-n-Butylphthalate	18000	U
206-44-0	Fluoranthene	6900	DJ
129-00-0	Pyrene	6700	DJ
85-68-7	Butylbenzylphthalate	19000	D
91-94-1	3,3'-Dichlorobenzidine	36000	U
56-55-3	Benzo(a)Anthracene	2800	DJ
218-01-9	Chrysene	3300	DJ
117-81-7	bis(2-Ethylhexyl)Phthalate	240000	D
117-84-0	Di-n-Octyl Phthalate	6200	DJ
205-99-2	Benzo(b)Fluoranthene	4500	DJX
207-08-9	Benzo(k)Fluoranthene	4500	DJX
50-32-8	Benzo(a)Pyrene	2100	DJ
193-39-5	Indeno(1,2,3-cd)Pyrene	18000	U
53-70-3	Dibenzo(a,h)Anthracene	18000	U
191-24-2	Benzo(g,h,i)Perylene	18000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP68DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID: G2D45167C02

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

% Moisture: not dec. 9 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/12/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 50

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	16.87	9200	J
2.	UNKNOWN	17.22	18000	J
3. 3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.32	31000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP69

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH045168C02

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

% Moisture: not dec. 6 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	350	U
111-44-4	bis(2-Chloroethyl)Ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
100-51-6	Benzyl Alcohol	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
39638-32-9	bis(2-Chloroisopropyl)Ether	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-Di-n-Propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
65-85-0	Benzoic Acid	1700	U
111-91-1	bis(2-Chloroethoxy)Methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	68	J
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	1700	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethyl Phthalate	350	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP69

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH045168C02

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

% Moisture: not dec. 6 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	140	J
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	94	J
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
86-73-7	Fluorene	140	J
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-Methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	1300	
120-12-7	Anthracene	220	J
84-74-2	Di-n-Butylphthalate	110	J
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	~~11000~~	~~E~~
91-94-1	3,3'-Dichlorobenzidine	700	UJ
56-55-3	Benzo(a)Anthracene	830	
218-01-9	Chrysene	1200	
117-81-7	bis(2-Ethylhexyl)Phthalate	~~49000~~	~~E~~
117-84-0	Di-n-Octyl Phthalate	4100	
205-99-2	Benzo(b)Fluoranthene	1600	X
207-08-9	Benzo(k)Fluoranthene	1600	X
50-32-8	Benzo(a)Pyrene	610	
193-39-5	Indeno(1,2,3-cd)Pyrene	450	
53-70-3	Dibenzo(a,h)Anthracene	180	J
191-24-2	Benzo(g,h,i)Perylene	380	

only on

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP69

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID: GH045168C02

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

% Moisture: not dec. 6 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.0

Number TICs found: 20

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	12.84	1200	JN
2.	UNKNOWN	14.32	19000	J
3.	UNKNOWN	15.44	9600	J
4.	UNKNOWN	16.49	1600	J
5.	UNKNOWN	16.89	2700	J
6.	UNKNOWN PHTHALATE	17.14	1300	J
7.	UNKNOWN	17.25	6000	J
8.	UNKNOWN	17.35	7100	J
9.	UNKNOWN	17.44	1900	J
10. 603-11-2	1,2-BENZENEDICARBOXYLIC ACID	17.50	3200	J
11.	UNKNOWN PHTHALATE	17.99	1800	J
12. 1330-96-7	1,2-BENZENEDICARBOXYLIC ACID	18.24	3900	J
13.	UNKNOWN	18.47	1500	J
14. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.57	2300	J
15. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.70	11000	J
16. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.85	7800	J
17. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	18.97	11000	J
18. 28553-12-0	1,2-BENZENEDICARBOXYLIC ACID	19.17	6700	J
19.	UNKNOWN PHTHALATE	19.44	1300	J
20.	UNKNOWN PHTHALATE	19.64	3200	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP69DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID: G2D45168C02

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

% Moisture: not dec. 6 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	17000	U
111-44-4	bis(2-Chloroethyl)Ether	17000	U
95-57-8	2-Chlorophenol	17000	U
541-73-1	1,3-Dichlorobenzene	17000	U
106-46-7	1,4-Dichlorobenzene	17000	U
100-51-6	Benzyl Alcohol	17000	U
95-50-1	1,2-Dichlorobenzene	17000	U
95-48-7	2-Methylphenol	17000	U
39638-32-9	bis(2-Chloroisopropyl)Ether	17000	U
106-44-5	4-Methylphenol	17000	U
621-64-7	N-Nitroso-Di-n-Propylamine	17000	U
67-72-1	Hexachloroethane	17000	U
98-95-3	Nitrobenzene	17000	U
78-59-1	Isophorone	17000	U
88-75-5	2-Nitrophenol	17000	U
105-67-9	2,4-Dimethylphenol	17000	U
65-85-0	Benzoic Acid	17000	U
111-91-1	bis(2-Chloroethoxy)Methane	85000	U
120-83-2	2,4-Dichlorophenol	17000	U
120-82-1	1,2,4-Trichlorobenzene	17000	U
91-20-3	Naphthalene	17000	U
106-47-8	4-Chloroaniline	17000	U
87-68-3	Hexachlorobutadiene	17000	U
59-50-7	4-Chloro-3-Methylphenol	17000	U
91-57-6	2-Methylnaphthalene	17000	U
77-47-4	Hexachlorocyclopentadiene	17000	U
88-06-2	2,4,6-Trichlorophenol	17000	U
95-95-4	2,4,5-Trichlorophenol	17000	U
91-58-7	2-Chloronaphthalene	85000	U
88-74-4	2-Nitroaniline	17000	U
131-11-3	Dimethyl Phthalate	85000	U
208-96-8	Acenaphthylene	17000	U
606-20-2	2,6-Dinitrotoluene	17000	U
		17000	U

FORM I SV-1 1/87 Rev.

DO NOT

14204 BDP57 SAMPLES DATA PACKAGE

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP69DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID: G2D45168C02

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

% Moisture: not dec. 6 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 50

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	85000	U
83-32-9	Acenaphthene	17000	U
51-28-5	2,4-Dinitrophenol	85000	U
100-02-7	4-Nitrophenol	85000	U
132-64-9	Dibenzofuran	17000	U
121-14-2	2,4-Dinitrotoluene	17000	U
84-66-2	Diethylphthalate	17000	U
7005-72-3	4-Chlorophenyl-phenylether	17000	U
86-73-7	Fluorene	17000	U
100-01-6	4-Nitroaniline	85000	U
534-52-1	4,6-Dinitro-2-Methylphenol	85000	U
86-30-6	N-Nitrosodiphenylamine (1)	17000	U
101-55-3	4-Bromophenyl-phenylether	17000	U
118-74-1	Hexachlorobenzene	17000	U
87-86-5	Pentachlorophenol	85000	U
85-01-8	Phenanthrene	17000	U
120-12-7	Anthracene	17000	U
84-74-2	Di-n-Butylphthalate	17000	U
206-44-0	Fluoranthene	17000	U
129-00-0	Pyrene	1800	DJ
85-68-7	Butylbenzylphthalate	14000	DJ
91-94-1	3,3'-Dichlorobenzidine	35000	U
56-55-3	Benzo(a)Anthracene	17000	U
218-01-9	Chrysene	17000	U
117-81-7	bis(2-Ethylhexyl)Phthalate	190000	D
117-84-0	Di-n-Octyl Phthalate	4100	DJ
205-99-2	Benzo(b)Fluoranthene	17000	U
207-08-9	Benzo(k)Fluoranthene	17000	U
50-32-8	Benzo(a)Pyrene	17000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	17000	U
53-70-3	Dibenzo(a,h)Anthracene	17000	U
191-24-2	Benzo(g,h,i)Perylene	17000	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

14204 BDP57 SAMPLES DATA PACKAGE

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP69DL

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID: G2D45168C02

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

% Moisture: not dec. 6 dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 50

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	5.68	5300	J
2.	UNKNOWN	14.25	11000	J
3.	UNKNOWN PHTHALATE	17.27	18000	J
4. 3648-21-3	1,2-BENZENEDICARBOXYLIC ACID	17.37	28000	J

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP70

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345140

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045140A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP70

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345140

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045140A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP70

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345140

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045140A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP71

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345141

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045141A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
		10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP71

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345141

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045141A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP71

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345141

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045141A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP72

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345142

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045142A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	50	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

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1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP72

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345142

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045142A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP72

Lab Name: COMPUCHEM,RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345142

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045142A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SOLVENT CONTAMINANT	6.10	14	BJN

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP73

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345144

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045144A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
		10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP73

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345144

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045144A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 1/87 Rev.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP73

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345144

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045144A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SOLVENT CONTAMINANT	6.12	16	BJ

FORM I SV-TIC 1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP75

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345284

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045284A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic Acid	10	U
111-91-1	bis(2-Chloroethoxy)Methane	50	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	50	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethyl Phthalate	50	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
		10	U

FORM I SV-1 1/87 Rev.

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP75

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345284

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045284A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

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1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

BDP75

Lab Name: COMPUCHEM.RTP Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345284

Sample wt/vol: 1000 (g/mL) ML Lab File ID: GH045284A05

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/11/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SOLVENT CONTAMINANT	6.12	14	BJN

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP54

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345127

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U
		1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP55

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345132

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U
		1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP56

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345139

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP57

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345146

Sample wt/vol: 1.0 (g/mL) G Lab File ID:

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 33 dec. Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	180	U
319-85-7	beta-BHC	180	U
319-86-8	delta-BHC	180	U
58-89-9	gamma-BHC (Lindane)	180	U
76-44-8	Heptachlor	180	U
309-00-2	Aldrin	180	U
1024-57-3	Heptachlor epoxide	180	U
959-98-8	Endosulfan I	180	U
60-57-1	Dieldrin	180	U
72-55-9	4,4'-DDE	360	U
72-20-8	Endrin	360	U
33213-65-9	Endosulfan II	360	U
72-54-8	4,4'-DDD	360	U
1031-07-8	Endosulfan sulfate	360	U
50-29-3	4,4'-DDT	360	U
72-43-5	Methoxychlor	360	U
53494-70-5	Endrin ketone	1800	U
5103-71-9	alpha-Chlordane	360	U
5103-74-2	gamma-Chlordane	1800	U
8001-35-2	Toxaphene	1800	U
12674-11-2	Aroclor-1016	3600	U
11104-28-2	Aroclor-1221	1800	U
11141-16-5	Aroclor-1232	1800	U
53469-21-9	Aroclor-1242	1800	U
12672-29-6	Aroclor-1248	1800	U
11097-69-1	Aroclor-1254	1800	U
11096-82-5	Aroclor-1260	3600	U
		3600	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP58

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345147

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

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

% Moisture: not dec. 58 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 20.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	380	U
319-85-7	beta-BHC	380	U
319-86-8	delta-BHC	380	U
58-89-9	gamma-BHC (Lindane)	380	U
76-44-8	Heptachlor	380	U
309-00-2	Aldrin	380	U
1024-57-3	Heptachlor epoxide	380	U
959-98-8	Endosulfan I	380	U
60-57-1	Dieldrin	760	U
72-55-9	4,4'-DDE	760	U
72-20-8	Endrin	760	U
33213-65-9	Endosulfan II	760	U
72-54-8	4,4'-DDD	760	U
1031-07-8	Endosulfan sulfate	760	U
50-29-3	4,4'-DDT	760	U
72-43-5	Methoxychlor	3800	U
53494-70-5	Endrin ketone	760	U
5103-71-9	alpha-Chlordane	3800	U
5103-74-2	gamma-Chlordane	3800	U
8001-35-2	Toxaphene	7600	U
12674-11-2	Aroclor-1016	3800	U
11104-28-2	Aroclor-1221	3800	U
11141-16-5	Aroclor-1232	3800	U
53469-21-9	Aroclor-1242	3800	U
12672-29-6	Aroclor-1248	3800	U
11097-69-1	Aroclor-1254	7600	U
11096-82-5	Aroclor-1260	7600	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP59

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345157

Sample wt/vol: 30.7 (g/mL) G Lab File ID:

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

% Moisture: not dec. 19 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 50.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	480	U
319-85-7	beta-BHC	480	U
319-86-8	delta-BHC	480	U
58-89-9	gamma-BHC (Lindane)	480	U
76-44-8	Heptachlor	480	U
309-00-2	Aldrin	480	U
1024-57-3	Heptachlor epoxide	480	U
959-98-8	Endosulfan I	480	U
60-57-1	Dieldrin	960	U
72-55-9	4,4'-DDE	960	U
72-20-8	Endrin	960	U
33213-65-9	Endosulfan II	960	U
72-54-8	4,4'-DDD	960	U
1031-07-8	Endosulfan sulfate	960	U
50-29-3	4,4'-DDT	960	U
72-43-5	Methoxychlor	4800	U
53494-70-5	Endrin ketone	960	U
5103-71-9	alpha-Chlordane	4800	U
5103-74-2	gamma-Chlordane	4800	U
8001-35-2	Toxaphene	9600	U
12674-11-2	Aroclor-1016	4800	U
11104-28-2	Aroclor-1221	4800	U
11141-16-5	Aroclor-1232	4800	U
53469-21-9	Aroclor-1242	4800	U
12672-29-6	Aroclor-1248	4800	U
11097-69-1	Aroclor-1254	9600	U
11096-82-5	Aroclor-1260	9600	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP60

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345158

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

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

% Moisture: not dec. 28 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 100.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1100	U
319-85-7	beta-BHC	1100	U
319-86-8	delta-BHC	1100	U
58-89-9	gamma-BHC (Lindane)	1100	U
76-44-8	Heptachlor	1100	U
309-00-2	Aldrin	1100	U
1024-57-3	Heptachlor epoxide	1100	U
959-98-8	Endosulfan I	1100	U
60-57-1	Dieldrin	1100	U
72-55-9	4,4'-DDE	2200	U
72-20-8	Endrin	2200	U
33213-65-9	Endosulfan II	2200	U
72-54-8	4,4'-DDD	2200	U
1031-07-8	Endosulfan sulfate	2200	U
50-29-3	4,4'-DDT	2200	U
72-43-5	Methoxychlor	2200	U
53494-70-5	Endrin ketone	11000	U
5103-71-9	alpha-Chlordane	2200	U
5103-74-2	gamma-Chlordane	11000	U
8001-35-2	Toxaphene	11000	U
12674-11-2	Aroclor-1016	22000	U
11104-28-2	Aroclor-1221	11000	U
11141-16-5	Aroclor-1232	11000	U
53469-21-9	Aroclor-1242	11000	U
12672-29-6	Aroclor-1248	11000	U
11097-69-1	Aroclor-1254	11000	U
11096-82-5	Aroclor-1260	22000	U
		22000	U

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14204 BDP57 SAMPLES DATA PACKAGE

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP61

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345159

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

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

% Moisture: not dec. 9 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	44.	U
319-85-7	beta-BHC	44.	U
319-86-8	delta-BHC	44.	U
58-89-9	gamma-BHC (Lindane)	44.	U
76-44-8	Heptachlor	44.	U
309-00-2	Aldrin	44.	U
1024-57-3	Heptachlor epoxide	44.	U
959-98-8	Endosulfan I	44.	U
60-57-1	Dieldrin	44.	U
72-55-9	4,4'-DDE	88.	U
72-20-8	Endrin	88.	U
33213-65-9	Endosulfan II	88.	U
72-54-8	4,4'-DDD	88.	U
1031-07-8	Endosulfan sulfate	88.	U
50-29-3	4,4'-DDT	88.	U
72-43-5	Methoxychlor	88.	U
53494-70-5	Endrin ketone	440	U
5103-71-9	alpha-Chlordane	88.	U
5103-74-2	gamma-Chlordane	440	U
8001-35-2	Toxaphene	440	U
12674-11-2	Aroclor-1016	880	U
11104-28-2	Aroclor-1221	440	U
11141-16-5	Aroclor-1232	440	U
53469-21-9	Aroclor-1242	440	U
12672-29-6	Aroclor-1248	440	U
11097-69-1	Aroclor-1254	440	U
11096-82-5	Aroclor-1260	880	U
		880	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP62

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345160

Sample wt/vol: 1.0 (g/mL) G Lab File ID:

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 8 dec. Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 7.3 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	130	U
319-85-7	beta-BHC	130	U
319-86-8	delta-BHC	130	U
58-89-9	gamma-BHC (Lindane)	130	U
76-44-8	Heptachlor	130	U
309-00-2	Aldrin	130	U
1024-57-3	Heptachlor epoxide	130	U
959-98-8	Endosulfan I	130	U
60-57-1	Dieldrin	130	U
72-55-9	4,4'-DDE	260	U
72-20-8	Endrin	260	U
33213-65-9	Endosulfan II	260	U
72-54-8	4,4'-DDD	260	U
1031-07-8	Endosulfan sulfate	260	U
50-29-3	4,4'-DDT	260	U
72-43-5	Methoxychlor	260	U
53494-70-5	Endrin ketone	1300	U
5103-71-9	alpha-Chlordane	260	U
5103-74-2	gamma-Chlordane	1300	U
8001-35-2	Toxaphene	1300	U
12674-11-2	Aroclor-1016	2600	U
11104-28-2	Aroclor-1221	1300	U
11141-16-5	Aroclor-1232	1300	U
53469-21-9	Aroclor-1242	1300	U
12672-29-6	Aroclor-1248	1300	U
11097-69-1	Aroclor-1254	1300	U
11096-82-5	Aroclor-1260	2600	U
		2600	U

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EPA SAMPLE NO.

BDP63

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345161

Sample wt/vol: 1.0 (g/mL) G Lab File ID:

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 27 dec. Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	160	U
319-85-7	beta-BHC	160	U
319-86-8	delta-BHC	160	U
58-89-9	gamma-BHC (Lindane)	160	U
76-44-8	Heptachlor	160	U
309-00-2	Aldrin	160	U
1024-57-3	Heptachlor epoxide	160	U
959-98-8	Endosulfan I	160	U
60-57-1	Dieldrin	160	U
72-55-9	4,4'-DDE	330	U
72-20-8	Endrin	330	U
33213-65-9	Endosulfan II	330	U
72-54-8	4,4'-DDD	330	U
1031-07-8	Endosulfan sulfate	330	U
50-29-3	4,4'-DDT	330	U
72-43-5	Methoxychlor	330	U
53494-70-5	Endrin ketone	1600	U
5103-71-9	alpha-Chlordane	330	U
5103-74-2	gamma-Chlordane	1600	U
8001-35-2	Toxaphene	1600	U
12674-11-2	Aroclor-1016	3300	U
11104-28-2	Aroclor-1221	1600	U
11141-16-5	Aroclor-1232	1600	U
53469-21-9	Aroclor-1242	1600	U
12672-29-6	Aroclor-1248	1600	U
11097-69-1	Aroclor-1254	1600	U
11096-82-5	Aroclor-1260	3300	U
		3300	U

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EPA SAMPLE NO.

BDP64

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345162

Sample wt/vol: 1.0 (g/mL) G Lab File ID:

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 7.2 Dilution Factor: 50.00

CONCENTRATION UNITS:

319-84-6--------alpha-BHC	6400	U
319-85-7--------beta-BHC	6400	U
319-86-8--------delta-BHC	6400	U
58-89-9---------gamma-BHC (Lindane)	6400	U
76-44-8---------Heptachlor	6400	U
309-00-2--------Aldrin	6400	U
1024-57-3-------Heptachlor epoxide	6400	U
959-98-8--------Endosulfan I	6400	U
60-57-1---------Dieldrin	13000	U
72-55-9---------4,4'-DDE	13000	U
72-20-8---------Endrin	13000	U
33213-65-9------Endosulfan II	13000	U
72-54-8---------4,4'-DDD	13000	U
1031-07-8-------Endosulfan sulfate	13000	U
50-29-3---------4,4'-DDT	13000	U
72-43-5---------Methoxychlor	64000	U
53494-70-5------Endrin ketone	13000	U
5103-71-9-------alpha-Chlordane	64000	U
5103-74-2-------gamma-Chlordane	64000	U
8001-35-2-------Toxaphene	130000	U
12674-11-2------Aroclor-1016	64000	U
11104-28-2------Aroclor-1221	64000	U
11141-16-5------Aroclor-1232	64000	U
53469-21-9------Aroclor-1242	64000	U
12672-29-6------Aroclor-1248	64000	U
11097-69-1------Aroclor-1254	130000	U
11096-82-5------Aroclor-1260	130000	U

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EPA SAMPLE NO.

BDP65

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345163

Sample wt/vol: 1.0 (g/mL) G Lab File ID:

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 7 dec. Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/14/90

GPC Cleanup: (Y/N) N pH: 6.6 Dilution Factor: 100.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	13000	U
319-85-7	beta-BHC	13000	U
319-86-8	delta-BHC	13000	U
58-89-9	gamma-BHC (Lindane)	13000	U
76-44-8	Heptachlor	13000	U
309-00-2	Aldrin	13000	U
1024-57-3	Heptachlor epoxide	13000	U
959-98-8	Endosulfan I	13000	U
60-57-1	Dieldrin	26000	U
72-55-9	4,4'-DDE	26000	U
72-20-8	Endrin	26000	U
33213-65-9	Endosulfan II	26000	U
72-54-8	4,4'-DDD	26000	U
1031-07-8	Endosulfan sulfate	26000	U
50-29-3	4,4'-DDT	26000	U
72-43-5	Methoxychlor	130000	U
53494-70-5	Endrin ketone	26000	U
5103-71-9	alpha-Chlordane	130000	U
5103-74-2	gamma-Chlordane	130000	U
8001-35-2	Toxaphene	260000	U
12674-11-2	Aroclor-1016	130000	U
11104-28-2	Aroclor-1221	130000	U
11141-16-5	Aroclor-1232	130000	U
53469-21-9	Aroclor-1242	130000	U
12672-29-6	Aroclor-1248	130000	U
11097-69-1	Aroclor-1254	260000	U
11096-82-5	Aroclor-1260	260000	U

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EPA SAMPLE NO.

BDP66

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345164

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

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

% Moisture: not dec. 20 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/13/90

GPC Cleanup: (Y/N) N pH: 6.9 Dilution Factor: 200.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2000	U
319-85-7	beta-BHC	2000	U
319-86-8	delta-BHC	2000	U
58-89-9	gamma-BHC (Lindane)	2000	U
76-44-8	Heptachlor	2000	U
309-00-2	Aldrin	2000	U
1024-57-3	Heptachlor epoxide	2000	U
959-98-8	Endosulfan I	2000	U
60-57-1	Dieldrin	4000	U
72-55-9	4,4'-DDE	4000	U
72-20-8	Endrin	4000	U
33213-65-9	Endosulfan II	4000	U
72-54-8	4,4'-DDD	4000	U
1031-07-8	Endosulfan sulfate	4000	U
50-29-3	4,4'-DDT	4000	U
72-43-5	Methoxychlor	20000	U
53494-70-5	Endrin ketone	4000	U
5103-71-9	alpha-Chlordane	20000	U
5103-74-2	gamma-Chlordane	20000	U
8001-35-2	Toxaphene	40000	U
12674-11-2	Aroclor-1016	20000	U
11104-28-2	Aroclor-1221	20000	U
11141-16-5	Aroclor-1232	20000	U
53469-21-9	Aroclor-1242	20000	U
12672-29-6	Aroclor-1248	20000	U
11097-69-1	Aroclor-1254	40000	U
11096-82-5	Aroclor-1260	40000	U

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EPA SAMPLE NO.

BDP67

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: F169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345166

Sample wt/vol: 1.0 (g/mL) G Lab File ID:

Level: (low/med) MED Date Received: 06/06/90

% Moisture: not dec. 20 dec. Date Extracted: 06/12/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: 6.8 Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	150	U
319-85-7	beta-BHC	150	U
319-86-8	delta-BHC	150	U
58-89-9	gamma-BHC (Lindane)	150	U
76-44-8	Heptachlor	150	U
309-00-2	Aldrin	150	U
1024-57-3	Heptachlor epoxide	150	U
959-98-8	Endosulfan I	150	U
60-57-1	Dieldrin	300	U
72-55-9	4,4'-DDE	300	U
72-20-8	Endrin	300	U
33213-65-9	Endosulfan II	300	U
72-54-8	4,4'-DDD	300	U
1031-07-8	Endosulfan sulfate	300	U
50-29-3	4,4'-DDT	300	U
72-43-5	Methoxychlor	1500	U
53494-70-5	Endrin ketone	300	U
5103-71-9	alpha-Chlordane	1500	U
5103-74-2	gamma-Chlordane	1500	U
8001-35-2	Toxaphene	3000	U
12674-11-2	Aroclor-1016	1500	U
11104-28-2	Aroclor-1221	1500	U
11141-16-5	Aroclor-1232	1500	U
53469-21-9	Aroclor-1242	1500	U
12672-29-6	Aroclor-1248	1500	U
11097-69-1	Aroclor-1254	3000	U
11096-82-5	Aroclor-1260	3000	U

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EPA SAMPLE NO.

BDP68

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345167

Sample wt/vol: 30.0 (g/mL) G Lab File ID:

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

% Moisture: not dec. 9 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	44.	U
319-85-7	beta-BHC	44.	U
319-86-8	delta-BHC	44.	U
58-89-9	gamma-BHC (Lindane)	44.	U
76-44-8	Heptachlor	44.	U
309-00-2	Aldrin	44.	U
1024-57-3	Heptachlor epoxide	44.	U
959-98-8	Endosulfan I	44.	U
60-57-1	Dieldrin	88.	U
72-55-9	4,4'-DDE	88.	U
72-20-8	Endrin	88.	U
33213-65-9	Endosulfan II	88.	U
72-54-8	4,4'-DDD	88.	U
1031-07-8	Endosulfan sulfate	88.	U
50-29-3	4,4'-DDT	88.	U
72-43-5	Methoxychlor	440	U
53494-70-5	Endrin ketone	88.	U
5103-71-9	alpha-Chlordane	440	U
5103-74-2	gamma-Chlordane	440	U
8001-35-2	Toxaphene	880	U
12674-11-2	Aroclor-1016	440	U
11104-28-2	Aroclor-1221	440	U
11141-16-5	Aroclor-1232	440	U
53469-21-9	Aroclor-1242	440	U
12672-29-6	Aroclor-1248	440	U
11097-69-1	Aroclor-1254	880	U
11096-82-5	Aroclor-1260	880	U

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EPA SAMPLE NO.

BDP69

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP57

Matrix: (soil/water) SOIL Lab Sample ID: 345168

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

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

% Moisture: not dec. 6 dec. Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 06/20/90

GPC Cleanup: (Y/N) N pH: 6.4 Dilution Factor: 5.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	42.	U
319-85-7	beta-BHC	42.	U
319-86-8	delta-BHC	42.	U
58-89-9	gamma-BHC (Lindane)	42.	U
76-44-8	Heptachlor	42.	U
309-00-2	Aldrin	42.	U
1024-57-3	Heptachlor epoxide	42.	U
959-98-8	Endosulfan I	42.	U
60-57-1	Dieldrin	42.	U
72-55-9	4,4'-DDE	85.	U
72-20-8	Endrin	85.	U
33213-65-9	Endosulfan II	85.	U
72-54-8	4,4'-DDD	85.	U
1031-07-8	Endosulfan sulfate	85.	U
50-29-3	4,4'-DDT	85.	U
72-43-5	Methoxychlor	85.	U
53494-70-5	Endrin ketone	420	U
5103-71-9	alpha-Chlordane	85.	U
5103-74-2	gamma-Chlordane	420	U
8001-35-2	Toxaphene	420	U
12674-11-2	Aroclor-1016	850	U
11104-28-2	Aroclor-1221	420	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	420	U
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	850	U
		850	U

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EPA SAMPLE NO.

BDP70

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345140

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

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

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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EPA SAMPLE NO.

BDP71

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HQ SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345141

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U
		1.0	U

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EPA SAMPLE NO.

BDP72

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345142

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

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

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.050	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.50	U
5103-71-9	alpha-Chlordane	0.10	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	0.50	U
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	0.50	U
11096-82-5	Aroclor-1260	1.0	U
		1.0	U

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EPA SAMPLE NO.

BDP73

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345144

Sample wt/vol: 1000 (g/mL) ML Lab File ID:

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM I PEST 1/87 Rev.

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BDP75

Lab Name: COMPUCHEM LABORATORIES Contract: 68-D9-0032

Lab Code: COMPU Case No.: 14204 SAS No.: 5169HO SDG No.: BDP54

Matrix: (soil/water) WATER Lab Sample ID: 345284

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

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

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/07/90

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 06/16/90

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U
76-44-8	Heptachlor	0.050	U
309-00-2	Aldrin	0.050	U
1024-57-3	Heptachlor epoxide	0.050	U
959-98-8	Endosulfan I	0.050	U
60-57-1	Dieldrin	0.10	U
72-55-9	4,4'-DDE	0.10	U
72-20-8	Endrin	0.10	U
33213-65-9	Endosulfan II	0.10	U
72-54-8	4,4'-DDD	0.10	U
1031-07-8	Endosulfan sulfate	0.10	U
50-29-3	4,4'-DDT	0.10	U
72-43-5	Methoxychlor	0.50	U
53494-70-5	Endrin ketone	0.10	U
5103-71-9	alpha-Chlordane	0.50	U
5103-74-2	gamma-Chlordane	0.50	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.50	U
11104-28-2	Aroclor-1221	0.50	U
11141-16-5	Aroclor-1232	0.50	U
53469-21-9	Aroclor-1242	0.50	U
12672-29-6	Aroclor-1248	0.50	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

FORM I PEST 1/87 Rev.

REFERENCE NO. 4

DIVISION OF WASTE MANAGEMENT
BUREAU OF FIELD OPERATIONS

HW/EF # 09-07-5

INVESTIGATIVE REPORT

Inspector: B. CZACHOR Date: 12/20/84 Time In: 0945 DWM Incident Report #: 84-07-24-0

Time Out: 1125

Company Name: FRANKLIN PLASTICS CORP. Telephone: (201) 998-8002

EPA ID # none Property Owner:

Street: 113 PASSAIC AVE Address:

Town: KEARNY, N.J. 07032

County: HUDSON

Lot: 12 Block: 1

Type Ownership:

Complaint: ECRA case # 84-157

Origin of Complaint: case # 84-07-24-01N

Samples taken? ☐ YES ☒ NO

Photos taken? ☐ YES ☒ NO

Findings:

On Tursday Dec. 20, 84, I conducted a follow up inspection at the Franklin Plastics Corp. facility located ~~at~~ in Kearny, N.J. The previous inspection on this case was done on 08/01/84, since that time the company status and manufacturing operations remainds the same.

During this visit I made a following observation

1) The company permisess were clean and in good order, except for minor spills of ~~[illegible]~~ a white powdered material alongside the R.R. trucks and minor spills of oils on the truck unloading area. MR. J. RONZO informed me that white material are a resins used in the manufacturing process. Both

Pg. ___ of ___

808

Incident Report #: 84-[redacted]-24-01N
Subject: FRANKLIYN PLASTICS CORP.

HW/EF # 09-07-50
Date: 12/20/84

Findings and Summary:

types of spills are occuring during normal manufacturing operations and are cleaned up each working day.

2). The empty 35 GAL drums which were accummulated and stored on site, as noted on 08/01/84, were disposed off, record. to MR. J. RONZO, drums were ~~they~~ crushed and sold to the scrap metal dealer.

3) The transformers standing area was observed free of any leaks or spillages, it appeared like new crushed stones were placed on it.

4) On eastern side of the building I observed same oily spills as they were noted during my last visit of 08/01/84. The spills are caused by ~~steam~~ the releasing ~~[illegible]~~ of the steam which is probably contaminated with oils and greases. I recommended to MR. J. RONZO to clean up those areas within the completion time. MR. J. RONZO agreed on that and told me, he will start cleaning of that spills today. A field NOV was issued for that problem.

5) The company is a not RCRA notifier, as they do not generate a haz. waste. Theirs operations and housekeeping appear to be usual for this type of industry. However they may have a ground water contamination problem, but at this point it is not determined and I did not make any recommendations on this matter.

REFERENCE NO. 5

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
1259 ROUTE 46
PARSIPPANY, N.J. 07054

NOTICE OF VIOLATION

ID NO. NONE DATE 12/20/84

NAME OF FACILITY FRANKLYIN PLASTICS

LOCATION OF FACILITY 113 PASSAIC AVE, KEARNY, N.J. 07032

NAME OF OPERATOR JOSEPH RONZO - PLANT ENGINEER,

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION N.J.SA 58:10-23.11c — discharge of hazardous substance (oily contaminated water) on the area in front of the manufacturing building.

Remedial action to correct these violations must be initiated immediately and be completed by Jan 08, 84. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Robert Checker
Investigator, Division of Waste Management
Department of Environmental Protection

REFERENCE NO. 6

09-07-50

FRANKLIN

Franklin Plastics Corporation 113 Passaic Avenue, Kearny, New Jersey 07032 telephone (201) 998-8002 telex 139-41

January 5, 1985

Mr. Boleslaw Czachor
N.J. Department of Environmental Protection
Division of Waste Management
1259 Route 46
Parsippany,N.J. 07054

Dear Mr. Czachor:

In reference to your Notice of Violation we are notifying you that we cleaned up this area which amounted to 25 to 45 lbs. of material and that we put it in plastic bags and disposed of it in the garbage per our discussion of today.

Sincerely,

FRANKLIN PLASTICS CORP.

Joseph Ronzo

Joseph Ronzo
Plant Engineer

JR:rm
Enc.

REFERENCE NO. 7

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: II

SITE NUMBER (to be assigned by HQ): NJ000010042

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: FRANKLIN PLASTICS CO

B. STREET (or other identifier): 113 PASSAIC AVE

C. CITY: KEARNY

D. STATE: N.J.

E. ZIP CODE:

F. COUNTY NAME: HUDSON

G. OWNER/OPERATOR (if known)

1. NAME: FRANKLIN PLASTICS CO.

2. TELEPHONE NUMBER: 201-998-8002

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

MANUFACTURE OF PLASTIC RESIN

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)

NJDEP SITE VISIT

K. DATE IDENTIFIED (mo., day, & yr.): 1-7-80

L. PRINCIPAL STATE CONTACT

1. NAME: Thomas Brady

2. TELEPHONE NUMBER: (609)-292-9120

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED (no hazard)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: RICHARD RAMON

2. TELEPHONE NUMBER: (212)-264-1573

3. DATE (mo., day, & yr.): 6-16-80

III. SITE INFORMATION

A. SITE STATUS

☒ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include situations like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☒ 2. YES (specify generator four-digit SIC Code):

C. AREA OF SITE (in acres): 4

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.):

2. LONGITUDE (deg.-min.-sec.):

E. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☒ 2. YES (specify):

T2070-2 (10-79)

Continue On Back

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
X	1. RAIL	X	1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE	X	3. DRUMS		3. VOLUME REDUCTION	X	3. OPEN DUMP
X	4. TRUCK	X	4. TANK ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK BELOW GROUND		5. CHEMICAL/PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

[ ] 1 UNKNOWN [ ] 2 LIQUID [X] 3. SOLID [ ] 4 SLUDGE [ ] 5. GAS

B. WASTE CHARACTERISTICS

[ ] 1 UNKNOWN [ ] 2. CORROSIVE [ ] 3. IGNITABLE [ ] 4 RADIOACTIVE [ ] 5 HIGHLY VOLATILE
[ ] 6 TOXIC [ ] 7 REACTIVE [X] 8 INERT [ ] 9 FLAMMABLE

[ ] 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category, mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X 1. HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLY ASH	X 1. LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify)	2. NON-HALOGNTD SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		3. OTHER (specify)	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

 Continue On Page 3

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Continued From Page 2

WASTE RELATED INFORMATION (continue

3. LIST SUBSTANCES OF GREATEST CO[illegible]RN WHICH MAY BE ON THE SITE (place in desc[illegible] order of hazard).

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL	X			SOME OVERTURNED DRUMS are present on SITE
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS	X			MANY 55 gallon drums, both waiting for removal & STORED FOR USE, ARE LEAKING and/or OVERFLOWING
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify) _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify): _____

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

☐ 4. WITH RESPECT TO (list regulation name & number) _____

VIII. PAST REGULATORY ACTIONS

☐ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☐ A. NONE ☒ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
SITE VISIT	1-7-80	STATE	

X. REMEDIAL ACTIVITY (past or on-going)

☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

HAZARDOUS WASTE SITE STATUS

Name & Address

FRANKLIN PLASTICS CO.
113 PASSAIC AVE.
KEARNY, NEW JERSEY

Site Number

NJ 000010042

Staff Responsible

RICHARD RAMON

County

HUDSON

Agency Responsible

____ EPA ____ State ____ None

Preliminary Assessment Rating

LOW

Date of Assessment

[illegible]-16-80

Tentative Disposition

NO ACTION NEEDED

Date of Disposition

8-6-80

Site Inspection Requested | **Date of Request** | **Date of Inspection** | **Date of Report**

____ Yes ____ No

Site Inspection Rating

JRB Rating

Sampling Requested | **Date of Request** | **Date of Sampling** | **Date of Report**

____ Yes ____ No

Final Strategy Determination -
(based on sampling results)

Date of Determination

Enforcement by EPA

____ Yes ____ No

Date of Case Development Plan

Enforcement Team Leader

Technical Staff -

Legal Staff -

S&A Field Staff -

FIT Staff -

Enforcement Case Filed Date

Administrative Order Issued Date

Current Location of File	File Holder
✓ Assessment Staff	RICH RAMON
____ Case Development Staff	
____ Enforcement Division	
____ Other	

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
II	NJ0000100042

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Franklin Plastics	113 Passaic Ave	
C. CITY	D. STATE	E. ZIP CODE
Kearny	New Jersey	

II. TENTATIVE DISPOSITION

Indicate the recommended action(s) and agency(ies) that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD	X				
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*					
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Richard RAKIN	(212)-264-1973	8-6-80

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo, day, & yr.)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION				
(1)				
(2)				
(3)				
b. TYPE OF MONITORING				
(1)				
(2)				
c. TYPE OF SAMPLING				
(1)				
(2)				

Continue On Reverse

EPA

POTENTIAL HAZARDOUS WASTE SITE LOG

SITE NUMBER: NJ000010092

NOTE: The initial identification of a potential site or incident should not be interpreted as a finding of illegal activity or confirmation that an actual health or environmental threat exists. All identified sites will be assessed under the EPA's Hazardous Waste Site Enforcement and Response System to determine if a hazardous waste problem actually exists.

SITE NAME: FRANKLIN PLASTICS

CITY: KEARNY

STATE: New Jersey

ZIP CODE:

SUMMARY OF POTENTIAL OR KNOWN PROBLEM

ITEM	DATE OF DETERMINATION OR COMPLETION	RESPONSIBLE ORGANIZATION OR INDIVIDUAL (EPA, State, Contractor, Other)	PERSON MAKING ENTRY TO LOG FORM	DATE ENTERED ON LOG (mo, day, yr)
1. IDENTIFICATION OF POTENTIAL PROBLEM	6-16-80	EPA	R. RAMON	6-17-80
2. PRELIMINARY ASSESSMENT	6-16-80	EPA	R. RAMON	6-17-80
APPARENT SERIOUSNESS OF PROBLEM:	☐ HIGH	☐ MEDIUM ☒ LOW	☐ NONE	☐ UNKNOWN
3. SITE INSPECTION				
4. EPA TENTATIVE DISPOSITION (check appropriate item(s) below)				
☐ a. NO ACTION NEEDED				
☐ b. INVESTIGATIVE ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED				
☐ d. ENFORCEMENT ACTION NEEDED				
5. EPA FINAL STRATEGY DETERMINATION (check appropriate item(s) below)				
☐ a. NO ACTION NEEDED				
☐ b. REMEDIAL ACTION NEEDED				
☐ c. REMEDIAL ACTION NEEDED BUT, NO RESOURCES AVAILABLE				
☐ d. ENFORCEMENT ACTION NEEDED				
☐ (1) CASE DEVELOPMENT PLAN PREPARED				
☐ (2) ENFORCEMENT CASE FILED OR ADMINISTRATIVE ORDER ISSUED				
6. STRATEGY COMPLETED				

EPA Form T2070-1 (10-79)

REFERENCE NO. 8

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-9002-24	02/20/90	13:10

DISTRIBUTION: Franklin Plastics Corp.

BETWEEN:	OF:	PHONE:
Sharon	Kearny Tax Assessors Office	(201) 991-2700

AND: K. Campbell

DISCUSSION:

Sharon said the current owner of [Block: 1 Lot: 12] in Kearny is Franklin Plastics Corp. at 127 Passaic Avenue, Kearny, New Jersey. Total acreage: 7.70 acres

Directions from Central Avenue in East Newark: Just over Passaic River. One block, make left onto Passaic Ave. Pass Johnston Ave on right. Next street is Belgrove Drive (on right) (Sharp Furniture building) Two gas stations on corners. Franklin Plastics will be across the street on left-hand side.

ACTION ITEMS:

K. Campbell 02/20/90

NUS 067 REVISED 0685

REFERENCE NO. 9

State of New Jersey

DEPARTMENT OF CONSERVATION

AND ECONOMIC DEVELOPMENT

Division of Water Policy and Supply

SPECIAL REPORT 10

PRELIMINARY REPORT ON THE GEOLOGY AND GROUND-WATER SUPPLY OF THE NEWARK, NEW JERSEY, AREA

1951

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STATE OF NEW JERSEY

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

CHARLES R. ERDMAN, JR., COMMISSIONER

DIVISION OF WATER POLICY AND SUPPLY

HOWARD T. CRITCHLOW, DIRECTOR AND CHIEF ENGINEER

SPECIAL REPORT 10

PRELIMINARY REPORT ON THE GEOLOGY AND GROUND-WATER SUPPLY OF THE NEWARK, NEW JERSEY, AREA

By

Henry Herpers

and

Henry C. Barksdale

1951

Prepared in cooperation with the
United States Department of the Interior
Geological Survey

LETTER OF TRANSMITTAL

Honorable Charles R. Erdman, Jr., Commissioner
Dept. of Conservation & Economic Development

Dear Sir:

I am transmitting herewith a report on the ground-water supplies of the Newark, New Jersey, area prepared by Henry Herpers of the State Geologic & Topographic Survey, and Henry C. Barksdale, District Engineer of the United States Geological Survey. This report has been prepared in cooperation with the United States Geological Survey as a part of the cooperative investigation of the ground water resources of the State.

The report describes the geology and ground-water conditions in the City of Newark and its vicinity. It defines the limits of a gravel-filled preglacial channel, the existence of which has only been inferred heretofore. It describes the critical lowering of the water levels in the eastern part of Newark, and the rather general intrusion of salt water into the water-bearing formations in that area. The report points out that the safe yield of the water-bearing formations in parts of the area may have been exceeded, and that further large developments in other parts of the area should be made with great caution, if at all.

I, therefore, recommend that this report be published as a Special Report of the Division of Water Policy & Supply, in order that the information contained therein may be made available to the people of the State.

Respectfully submitted,

H. T. CRITCHLOW
Director & Chief Engineer

Encl.
October 22, 1951

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT
DIVISION OF WATER POLICY AND SUPPLY
520 EAST STATE STREET, TRENTON 9, N. J.

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John Wyack, *Secretary*

Howard T. Critchlow, *Director and Chief Engineer*

Charles R. Erdman, Jr., *Commissioner of Conservation and Economic Development*

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PRELIMINARY REPORT ON THE GEOLOGY AND GROUND-WATER SUPPLY OF THE NEWARK, NEW JERSEY, AREA

By Henry Herpers and Henry C. Barksdale

ABSTRACT

In the Newark area, ground water is used chiefly for industrial cooling, air-conditioning, general processing, and for sanitary purposes. A small amount is used in the manufacture of beverages. Total ground-water pumpage in Newark is estimated at not less than 20,000,000 gallons daily.

The Newark area is underlain by formations of Recent, Pleistocene and Triassic age, and the geology and hydrologic properties of these formations are discussed. Attention is called to the important influence of a buried valley in the rock floor beneath the Newark area on the yield of wells located within it. Data on the fluctuation of the water levels and the variation in pumpage are presented, and their significance discussed. The results of a pumping test made during the investigation were inconclusive. The beneficial results of artificially recharging the aquifers in one part of the area are described.

The intrusion of salt water into certain parts of the ground-water body is described and graphically portrayed by a map showing the chloride concentration of the ground water in various parts of the City. Insofar as available data permit, the chemical quality of the ground water is discussed and records are given of the ground-water temperatures in various parts of the City.

There has been marked lowering of the water table in the eastern part of the area, accompanied by salt water intrusion, indicating that the safe yield of the formations in this part of Newark has probably been exceeded. It is recommended that the study of the ground-water resources of this area be continued, and that artificial recharging of the aquifers be increased over as wide an area as possible.

INTRODUCTION

Purpose and scope of investigation

In the Newark area, the chief uses of ground water are for cooling by industries, for air-conditioning, and for general processing and sanitary purposes. Several beverage manufacturers use ground water as an ingredient in their products, and the water from a few wells is used for drinking. As one result of a recently completed survey of all known wells, it is estimated that not less than 20 million gallons of ground water is used in this area per day. In summer an estimated one to one and a half million gallons of ground water is used for air-conditioning alone.

Records kept by various well owners and by State and Federal agencies have shown a marked lowering of the water level in many Newark wells, as well as a diminution in the yield of some. They have also shown that the ground water in certain parts of the area has become brackish because of heavy pumpage and the infiltration of salt water from surface sources. These conditions are particularly severe in the eastern part of Newark, in what is known locally as the "Ironbound District." In order to give some conception of the seriousness of these conditions, it may be mentioned that in the year 1879 the water level in wells in eastern Newark ranged from a few feet above to 25 feet below the surface of the ground, and several 8-inch wells yielded as much as 500 gallons per minute when pumped by direct suction. Analyses of the water from these wells showed that it contained only 10 to 25 parts per million of chloride.[1]

1/Annual report of the State Geologist, p. 126 ff., 1879.

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Analyses made by the City Chemist of Newark showed chloride contents ranging from 250 to 2,500 parts per million in water taken from wells in 1942, in this same area. Moreover, in 1947 the general water level ranged from 125 to 200 feet beneath the land surface, and pumping levels in wells ranged from 135 to 290 feet, depending upon the amount of water pumped and the season of the year. In view of these facts, it was decided to make an intensive study of the geology and ground water of the Newark area, and to publish a report on the findings, in order to summarize and make generally available our knowledge of the quantity and quality of ground-water resources of the area, and to facilitate the planning of ground-water pumpage in the future.

The area included in the present study and referred to herein as the Newark area is shown on figure 1. It lies principally in Essex County, but includes small parts of Hudson and Union Counties. It includes all of the city of Newark, except the extreme western part; the greater part of Harrison; and parts of Kearny, Irvington, East Orange, Bloomfield, and Elizabeth.

The Newark area lies wholly within the physiographic province known as the Piedmont Plain. The southeastern part of the area is a lowland with considerable tidal marsh, and the balance of the area is characterized chiefly by low ridges trending in a northeasterly direction. The average annual rainfall at Newark is approximately 47 inches, and the mean annual temperature is about 53°F.

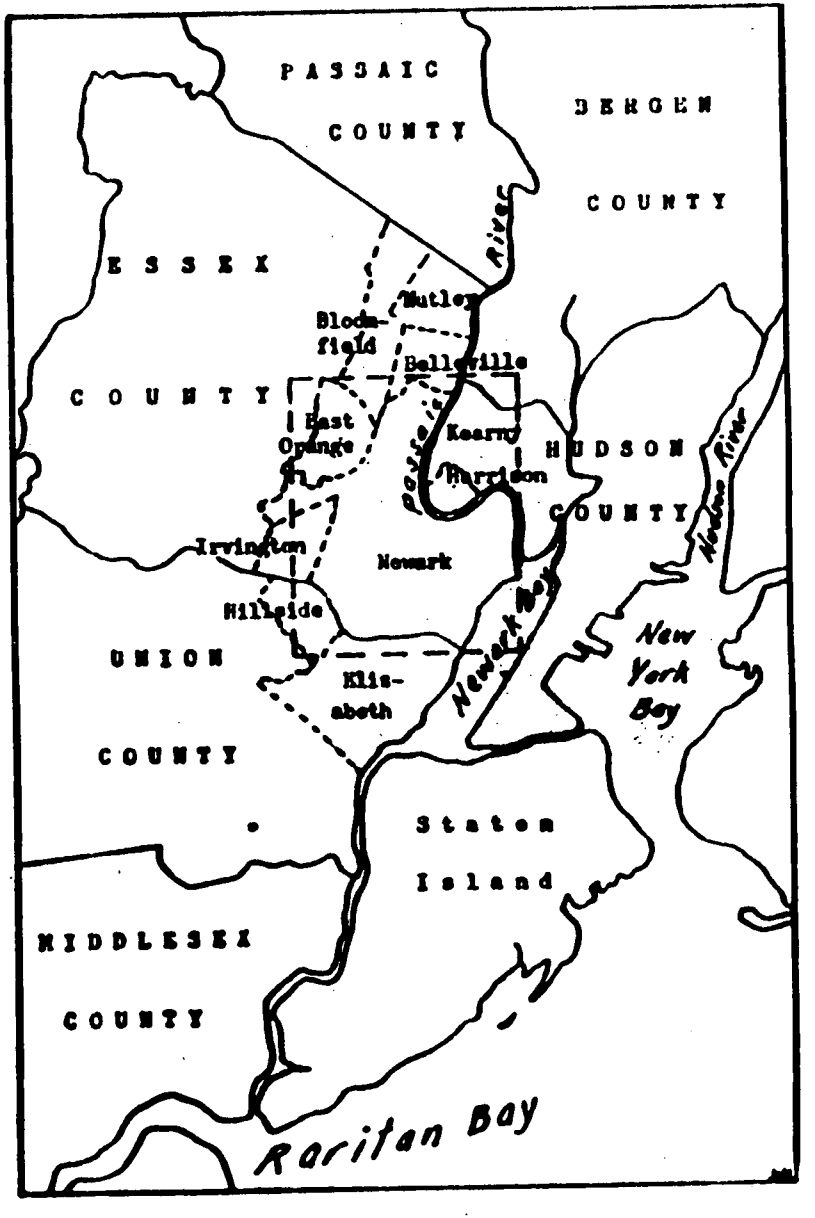

Figure 1.-Map of northeastern New Jersey, showing location of the Newark area.

Acknowledgments

This report is the result of cooperative work by the Geologic and Topographic Survey and the Division of Water Policy and Supply, both of the New Jersey Department of Conservation and Economic Development, and by the United States Geological Survey. M. E. Johnson, State Geologist, H. T. Critchlow, Director of the Division of Water Policy and Supply, and A. N. Sayre, Geologist in Charge, Ground Water Branch, U. S. Geological Survey, have exercised general supervision over the work since its beginning. Mr. Johnson and Henry C. Barksdale, District Engineer of the Ground Water Branch, U. S. Geological Survey, have shared local responsibility for the progress and details of the work. The gathering of the data necessary for the preparation of this report has been largely in the hands of Henry Herpers of the Geologic and Topographic Survey and Jerome M. Ludlow of the U. S. Geological Survey. The greater part of this report was written by Mr. Herpers. The sections on the hydrology of the various formations were written by Mr. Barksdale.

Needing the help of the citizens and industries of Newark, and believing that they would gladly cooperate if they knew the facts, the Newark Chamber of Commerce was advised of the proposed survey and report, and a story giving the reasons for the work and indicating its importance was given the press early 1947. It is now the authors' pleasure to express their sincere appreciation of the help given the project by almost everyone approached. The work of gathering data was materially facilitated by the assistance of the following well contractors: Artesian Well and Equipment Co., C. W. Lauman & Co., Layne-New York Co., Parkhurst Well and Pump Co., Rinbrand Well Drilling Co., Samuel Stothoff Co., and William Stothoff Co. Especially valuable data on the operating characteristics of their wells, and other aid, were freely given by Mr. B. H. Bishop and other engineering personnel of P. Ballantine & Sons and by Mr. Wm. E. Helmstaedter, Mechanical Engineer, and others of the Celanese Corporation of America. Particular acknowledgment is made of the assistance

rendered by P. Ballantine & Sons in making their well field available for pumping tests and altering their plant routine to meet the requirements of the test. The Division of Water and the Department of Health of the City of Newark have assisted materially in locating wells and in furnishing records of analyses of well water.

OUTLINE OF GEOLOGY

The Newark area lies wholly within the section of New Jersey underlain by the Newark group of rocks of Triassic age. These rocks form a belt extending from the Hudson River across central New Jersey, Pennsylvania, and Maryland, and into Virginia. They consist of shale, sandstone, argillite, and conglomerate with included sheets, sills, and dikes of trap rock (basalt and diabase).

In New Jersey, the sedimentary rocks of the Newark group have been divided on the basis of their lithology into three units. The lowest is chiefly red, buff, or gray arkosic sandstone and is called the Stockton formation; the middle unit, called the Lockatong formation, is composed largely of gray, purplish-gray, or dull-red argillite; and the uppermost unit, the Brunswick formation; consists chiefly of soft red shale and red sandstone. The Brunswick formation is the bedrock throughout the Newark area. In general, the strata have been tilted northwestward and locally they have been warped into gentle flexures with occasional faulting. The harder beds form ridges, most of which trend northeastward.

The northern part of the belt of Triassic rocks was glaciated in late geologic time, so that much of the surface is covered with a mantle of glacial drift, which in many places is thick enough to conceal the bedrock surface. Although the bedrock crops out in only a few places, it accounts for the relief in the western part of the Newark area. There the covering of glacial drift is thin. In the eastern section the bedrock is concealed by thick deposits of silt and clay with

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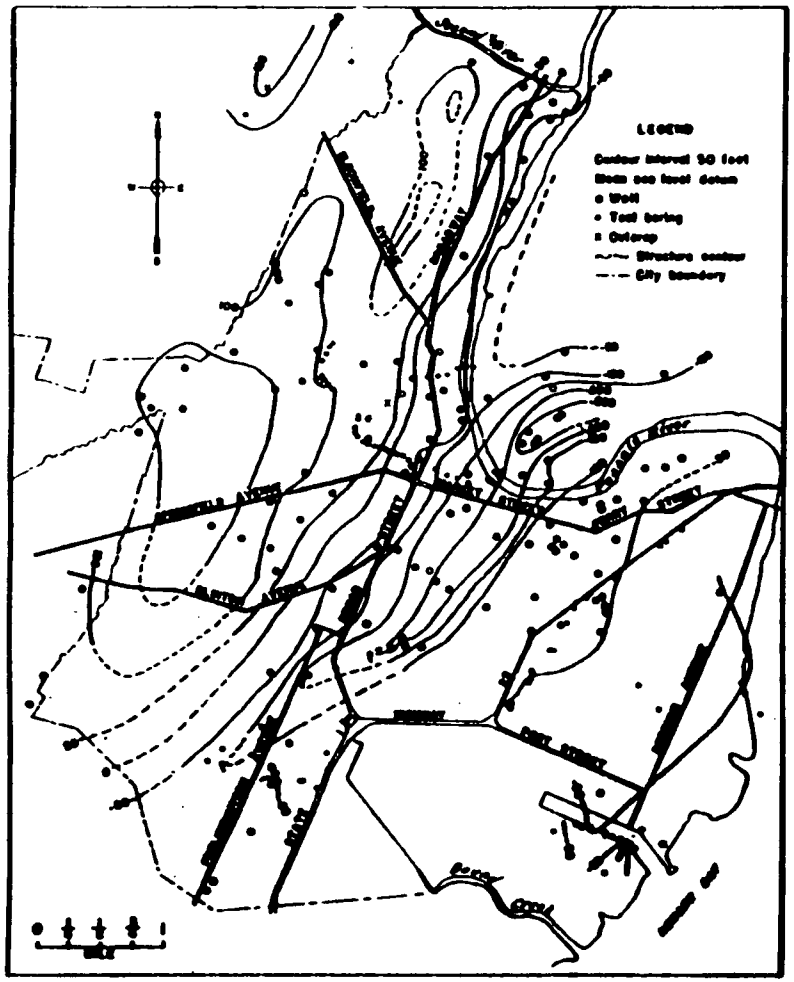

Figure 2.-Map showing elevation and configuration of bedrock beneath Newark, N. J., and vicinity.

thinner beds of sand and gravel, and, although topographically this region is a plain, borings have shown that the surface of the underlying bedrock does not conform with the ground surface. (See figure 2). The valleys of many of the streams in the glaciated area contain terraces of sand and gravel of glacial origin.

The geologic history of the area since the beginning of Triassic time is relatively simple. During Triassic time, sands and muds were deposited in an arid basin. Near the end of Triassic time the beds were faulted and tilted toward the northwest. Later erosion reduced the surface to a plain, over which the sea then advanced an indeterminate distance to the northwest. Sands and clays, such as those found in the coastal plain, were deposited in this sea. Still later, the sea withdrew and the forces of erosion removed the sediments of the coastal plain and then etched out the larger topographic features that we see today. During the Pleistocene epoch the details of the topography were altered by the ice. Hills were smoothed somewhat and much drift was deposited. The drift in some places filled valleys existing prior to glaciation and effected important changes in drainage. A general rise of sea level at the close of the Pleistocene epoch flooded low areas adjacent to the coast, forming Newark Bay at the junction of the Hackensack and Passaic Rivers. Since then the meadows have been formed by stream deposits, and very, very recently -- in terms of the geologic calendar -- much meadowland has been reclaimed by suitable drainage and by filling. A typical example of such "made" land is the area upon which Newark Airport has been built.

The succession of formations in the Newark area, arranged in normal sequence (i.e., youngest formation at top) is shown in the following table:

Table 1.--Stratigraphic table in the Newark area

Cenozoic era
- Quaternary system
  - Recent series
    - Alluvium and meadow muck
  - Pleistocene series
    - Glacial till and stratified deposits of glacial origin

UNCONFORMITY

Mesozoic era
- Triassic system
  - Newark group
    - Brunswick formation

UNCONFORMITY

Older rocks[2]

2/The deepest well drilled in Newark failed to pass through the red shale and sandstone at 2,538 feet. It cannot, therefore, be stated with certainty what sort of rock lies below the city at great depths. From the general geology of the Triassic rocks, presumably the Palisade diabase would be found at great depth, and more rocks of the Newark group below the diabase. Below the Triassic rocks lie crystalline rocks of very great age which extend to an undetermined depth.

HYDROLOGY AND GEOLOGY OF THE ROCK FORMATIONS

Recent deposits

Recent deposits are found mainly in the eastern part of the Newark area where they occur in the tidal marshes or meadow lands along Passaic River and bordering Newark Bay. They consist largely of unconsolidated mud and silt with inclusions of peat and other organic materials and occasional lenses of sand and gravel. They have been deposited on top of the Pleistocene sediments, or perhaps in places directly on the Triassic rocks, by the Passaic and Hackensack Rivers and by smaller streams flowing across the area and discharging into those rivers, or into Newark Bay. The Recent deposits range in thickness from a feather edge to 35 feet.

Hydrologically, the Recent deposits are of relatively little importance except as they may transmit water to the underlying rocks or exclude it from them. Their permeability is relatively low and they occur in the parts of the area that are exposed to salt water. Therefore their action as a barrier in retarding the percolation of salt water into the underlying rocks is perhaps their most important function. In this respect they perform imperfectly because there probably are breaks in the cover that they provide at critical points, such as the ship channels in the river and in the bay.

Pleistocene deposits

The Pleistocene deposits in the Newark area are all of glacial origin. They consist of till--an unconsolidated, unstratified, heterogeneous mixture of clay, boulders, and sand--and stratified glacial drift, which is composed of sand and gravel that have been more or less sorted and stratified by the action of glacial waters. The deposits of glacial origin overlie the bedrock throughout practically all the Newark area, the bedrock cropping out only in a few more or less isolated spots. The thickness of the Pleistocene deposits varies greatly. In the western part of the area they are only a few feet thick, forming a thin veneer over the underlying bedrock, but in the eastern part of the area they

are so thick that they mask entirely the topography of the underlying rock. The map of the elevation and configuration of the bedrock beneath Newark, N. J., and vicinity (figure 2) shows that, in the area east of Broad Street, there is a large deep valley cut in the bedrock, which is entirely covered by glacial drift. At the surface this area presents the aspect of a plain. The depth to rock in the buried valley ranges from 125 feet to more than 190 feet in Newark, and to as much as 300 feet in Harrison. Farther east in the Newark area, bedrock lies at lesser depths. The buried valley extends northeastward across the city from its southwestern boundary, crossing Frelinghuysen Avenue near its northern end, and then extends east of and roughly parallel to Broad Street, finally crossing over into Harrison, where it bends eastward. It has not yet become possible to show the extension of the valley to the southwest or to the east because of the lack of sufficient reliable boring data, but its course and shape across the city of Newark is fairly accurately known. From its shape as shown on plate 1, it is apparent that the valley slopes toward the northeast, and this direction is therefore the probable direction of flow of the river that cut the valley prior to the Pleistocene epoch.

The character of the Pleistocene deposits varies throughout the Newark area. In general, these deposits consist chiefly of till in that part of the area lying west of Broad Street, whereas the cuttings taken from many test borings and wells in the eastern part of the area show that the Pleistocene deposits there consist largely of stratified materials with interbedded lenses of till. (See logs 1 to 4 in appendix.)

The Pleistocene deposits in the bottom of the buried valley are worthy of special attention. In the southwestern part of the Newark area they consist for the most part of fine sand and clayey sand, but in the northeastern part the bottom of the valley contains deposits of coarse sand and gravel which in many places contain much water. (See logs 1 and 2 in appendix.) In fact, some of the best wells in the Newark area pump from these deposits.

Other coarse deposits of glacial origin are found in the valley of the Passaic River north of the point where

the river makes its great eastward bend.

The Pleistocene deposits are one of the two major aquifers in the area. Their hydrologic function is twofold. In the first place, under favorable circumstances they yield water in substantial quantities directly to wells. In the second place, they absorb and store water from precipitation and from surface sources and transmit it to the underlying rocks.

Where the deposits contain beds of sand and gravel that are thick enough and extensive enough, they yield large quantities of water to wells finished in them. Insofar as is known, these conditions are limited almost entirely to the buried valley, where several wells yielding from 175 to more than 600 gallons per minute have been developed. For example, a well drilled for the Driver Harris Co. in Harrison near the locality where the buried valley crosses the Passaic River yielded 600 g.p.m. with a draw down of approximately 60 feet.

Detailed and extended records of water levels in and of pumpage from wells in this aquifer are not available. It is therefore impossible to say at this time whether water is being withdrawn from this aquifer at a rate less than, equal to, or greater than the rate at which recharge is available. The fact that two or three million gallons of water have been withdrawn daily for a number of years from the sand and gravel in the buried valley suggests that a large quantity of recharge occurs. On the other hand, the fact that the static water levels in some wells tapping this aquifer are now substantially below sea level suggests caution before further developments are made.

A more definite and immediate threat to the safe yield of the gravels of Pleistocene age is the apparent intrusion of salt water from surface sources. Wells near the point where the buried valley crosses the Passaic River are yielding water that contains 200 to 500 parts per million of chloride and is already unsuitable for some uses. Inasmuch as there is hydraulic continuity between the gravels and the underlying rocks, the problem of salt-water intrusion will be discussed in more detail in a section of this report that deals primarily with the water supply from the rocks.

The second function of the Pleistocene deposits, that of absorbing, storing, and transmitting water to the underlying rocks, is, in the aggregate, more important than their yielding water directly to wells. As already indicated, they overlie the rocks to varying thicknesses throughout most of the area. In general, there appears to be some correlation between the thickness and nature of the Pleistocene deposits and the yield of wells tapping the underlying rocks. This is to be expected because the storage capacity of the rocks is relatively low and sustained large yields can be obtained from them only if some adequate source of recharge is available. Where the overlying deposits are thick and moderately porous and permeable, they supply the necessary recharge. On the other hand, where they are thin or relatively impermeable, they may fail to supply recharge to the rocks or may even retard the movement of water into them.

Newark group

Brunswick formation

Geology

As mentioned previously in the outline of the geology of the Newark area, the sedimentary rocks of the Newark group of Triassic age in New Jersey have been divided upon the basis of their lithology into three units--the lower, or Stockton formation, the middle, or Lockatong formation, and the upper, or Brunswick formation. It should now be pointed out that whereas these lithologic distinctions can be made in central New Jersey, they are not apparent in the northern part of the belt of Triassic rocks. The Lockatong formation does not continue farther northeastward than Franklin Park, Middlesex County, and the distinction between the Stockton and Brunswick formations is no longer obvious, as it is farther southwestward, because the whole Newark group becomes, in general, coarser-grained. In the northern part of the State, particularly in Bergen County, these sediments become predominantly sandy and even conglomeratic. In the Newark area, the tendency of the rocks to increase in coarseness toward the northeast is shown by the fact that wells drilled in the southern part,

near the Elizabeth line, have penetrated rock that is chiefly soft red shale, whereas in north Newark, especially near the Belleville line, the rocks are principally sandstone with interbedded shale. In fact, during the latter part of the last century several sandstone quarries were operated in north Newark, especially along Bloomfield Avenue and in the southern part of Branch Brook Park. The change from soft shale to hard sandstone is reflected in the change in topography from a rather flat, low-lying plain with few rock hills in southern Newark to hills with rather pronounced relief in the northern part of the city. In the Newark area, therefore, the bedrock is all designated as Brunswick formation. A representative section showing the variations in the rock under Newark is shown in log 3. (See appendix 1.)

The bedrock originated as sand, silt, and mud which were derived from the erosion of older rocks northwest and southeast of the great basin in which the sediments were laid down during the Triassic period. Three times during the period of deposition great sheets of basaltic lava were poured out on the surface and were then buried by sediments later in the Triassic. The remnants of the flows now form the Watchung Mountains, but it is impossible to state whether or not the flows ever extended as far east as the Newark area, for there are no igneous rocks of this type in that area, so far as is known. Toward the end of the Triassic period, the sediments were intruded by similar magma which apparently did not have enough force to push through to the surface but spread out beneath the surface in a great sill some 900 feet or more thick, usually following the bedding planes of the sediments but frequently cutting across them. Because of erosion, the sill is exposed today in the Palisades in eastern Hudson and Bergen Counties and also in certain mountains in central New Jersey. At the close of Triassic time, the entire Newark group of rocks were tilted toward the northwest, which is their attitude today and in the process they were faulted and greatly fractured.

The total thickness of the rocks of Triassic age in the Newark area is unknown but is estimated at about 6,000 to 7,000 feet.

The deepest well drilled in Newark reached a depth of 2,538 feet and failed to pass through the normal red shales and sandstones. It is therefore impossible to state with accuracy what lies below that depth, but presumably a well drilled to great depth in Newark would eventually strike the Palisade diabase, and below that would strike more sedimentary rocks of Triassic age before entering the crystalline basement rocks upon which the Triassic sediments were deposited.

Hydrology

GENERAL. --

The Brunswick formation yields water primarily and almost exclusively from the cracks in the rocks of which it is composed. The primary pore spaces in the rocks are generally so small that water moves through them very slowly, if at all, under the hydraulic gradients that are established by pumping. Were it not for the fact that the formation has been extensively cracked and fractured, and has thus acquired a kind of secondary permeability, it would yield very little water.

There is in the Brunswick formation a kind of modified water-table condition wherein the water is generally free to move in any direction and seek the level determined by the factors affecting recharge and discharge. The various systems of cracks intersect so that water can move more or less freely in all directions. However, the cracks are not of uniform size and capacity in all directions, and water is likely to move more freely in some directions than in others. For the area as a whole, there may be no one direction that is generally more favorable to flow than others. It probably differs from place to place.

The capacity of the formation to store and transmit water decreases with depth. As greater depths are reached, the weight of the overlying materials increases and tends to close the cracks. Thus less and less space is available to store water and the resistance to its movement is increased. It is probable that the cracks that are horizontal, or nearly so, are first affected

and most affected in this way. The horizontal cracks tend to distribute water uniformly in all directions, so that the tendency of the water to flow in the direction of the prevailing vertical cracks is probably accentuated with depth. The cracks along the bedding planes, which appear to be very numerous near the surface and are more nearly horizontal than vertical, probably are less and less important with depth.

There is, therefore, little foundation for the common belief that water is transmitted for long distances underground through the Brunswick formation, particularly along the bedding planes of the rocks. It is unlikely that the bedding planes, or rather the horizontal cracks along them, provide the path of least resistance to the flow of water. Actually, water probably flows through the formation most readily in vertical or nearly vertical cracks. Except along major faults, individual vertical cracks are not likely to extend very far without interruption, and are not likely to transmit water for distances greater than 2 or 3 miles. Furthermore, as the vertical cracks necessarily intersect the rock surface locally, they will receive recharge or discharge water locally depending upon the hydraulic gradient.

Certain characteristics of individual wells in the area may be better understood in the light of the foregoing general description of the rocks from which they draw their water. The yield of a well tapping the Brunswick formation depends primarily upon the number and size of the cracks that it encounters below the water table, or more specifically upon their capacity to transmit water. Thus, two adjacent wells may pass through almost identical layers of rock, and one may yield a substantial quantity of water whereas the other may yield very little, depending upon the character of the cracks encountered in each. It is therefore impossible to predict the yield of a proposed well except in general terms based upon the average yield of other wells in the vicinity. Furthermore, all predictions of yield of wells in the Brunswick formation should be qualified by a statement that the final proof must be the actual yield of the finished well, because the number and capacity of the cracks encountered cannot be determined in advance.

There is usually little or nothing to be gained by deepening an unsuccessful well below the average depth of the productive wells in the area, because the cracks become smaller and probably less numerous with increased depth. It is almost always wiser to move to another site, even if only a short distance away, and to drill another well, rather than to double the depth of a poor well in the hope of improving its yield. It is obviously impossible to determine the nature and pattern of the deeply buried cracks at any site from observations at the surface. There are, of course, rare exceptions to this general rule, but it holds well enough to make its observance sound economic policy. For example, it has already been mentioned that one well in Newark was drilled to a depth of more then 2,500 feet. That well, though very expensive, was unproductive.

As a general rule, in the Brunswick formation most of the productive cracks occur within the first 200 or 300 feet of the rock. In some parts of the Newark area, however, most of the productive wells penetrate the rock 400 or even 500 feet. Sufficient data are not available to indicate whether the rock there is unusually productive at great depths or whether many of these wells are unnecessarily deep, because most of them were not tested before they had been drilled to their full depth. It is possible that the bottom parts of many of these holes are not very productive.

An interesting though probably extreme example of a well that was unproductive at depth is one about 800 feet deep that was observed in the course of the studies preceding this report. When the regional water level declined, the yield of this well dropped sharply. With the thought that some of the productive cracks might have been clogged either in the drilling or suosequently, the owner employed a driller to clean out and redevelop the well. A thorough job was done and it is unlikely that there remained any cracks that were sealed with mud or otherwise clogged. Nevertheless, the yield of the well did not improve substantially. It was therefore abandoned and made available as an observation well. During the spring and early summer of 1947 the water level in the well declined normally to a level of 161 feet below mean sea level, where it stopped abruptly. While the water levels in other observation wells in the vicinity continued to decline to about 230 feet below mean sea level and the pumping levels in some adjacent wells were still lower, the water level in this well remained at 161 feet. In the late fall and winter, after the regional water level had recovered to 161 feet, this well again became responsive to variation in pumpage and fluctuated normally. The same performance was repeated in the summer of 1948 and again took place in 1949. Apparently the only explanation for the peculiar behavior of the water level is that no cracks were encountered below 161 feet and that therefore the well is water-tight at greater depths. This is, no doubt, an unusual case, but it does serve to emphasize the dependence of the yield of rock wells upon cracks, as well as the relative unimportance of horizontal cracks at depth and the decreased chance of hitting good cracks at increased depth.

The character of the Brunswick formation as an aquifer also explains another peculiarity of the wells that tap it. Ordinarily, in a relatively uniform aquifer, the interference between two or more wells is dependent mainly upon the distance between them. In the Brunswick formation, as in similar aquifers, a pumping well often affects the water level in a second well substantially more than that in a third well at the same distance but in a different direction. The explanation of this peculiarity, of course, lies in the fact that the different systems of cracks differ in their capacity to transmit water.

The Brunswick formation does not yield water as freely as some of the other important water-bearing formations in the State, especially those that yield water from the pore spaces in well-sorted medium-to coarse-grained sand and gravel. This is due primarily to the fact that its capacity to store and transmit water is smaller. The deficiency is most marked in regard to its capacity to store water. The specific yield (the storage capacity expressed as a percentage of the volume of the aquifer) of a coarse, well-sorted sand is frequently as much as 25 percent. The specific yield of the upper 300 feet of the Brunswick formation, based upon the volume of cracks, is probably more nearly in the order of 1 or 2 percent. Therefore, it is easy to understand the hy-

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drologic importance of sources of ready recharge such as bodies of surface water or of relatively permeable sand and gravel in areas where large quantities of ground water are withdrawn from the formation. The capacity of individual cracks to transmit water is probably larger than that of a comparable volume of pore spaces in a sand. It is not surprising, therefore, to find that the capacity of the Brunswick formation to transmit water is about one-fourth of that of some of our important sand aquifers in spite of the relatively limited volume of cracks.

Pumping Tests – In January 1949, through the cooperation of the officials of P. Ballantine & Sons, two pumping tests were run on wells tapping the Brunswick formation. For several days all the company's wells were operated to suit the requirements of the test. At each of their two plants two wells were run continuously until conditions approaching equilibrium were established. This involved wasting water at some times of the day in order to have an adequate supply available at others, but it seemed to be the only practical way of reaching an approximate state of equilibrium. After about 24 hours, the effects of changing the rates of pumping at the plant appeared to have been eliminated, and, with one exception which will be discussed later, the effects of pumping at other plants in the area seemed to be of little importance.

The wells pumped during the two tests are shown on figure 3. They were selected to provide the best possible spread of observation wells in as many directions as possible. The first test was made by pumping well 1 at plant 1. This well is centrally located, and water levels were observed in seven other wells at various distances and directions from it. In the second test, well 9 at plant 2 was pumped and water levels were observed in the same group of observation wells. In this test, however, the pumping well was in one corner of the well field so that the distances to the observation wells were greater and their directions were less varied.

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During the pumping tests, water-stage recorders were maintained on well 5 at plant 1 and on wells 8 and 10 at plant 2. The water levels in well 7 at plant 1 were measured by air pressure, using an 8-inch pressure gage on which it was possible to note changes of water level of one- or two-tenths of a foot. The water levels in the other wells were measured by air pressure, using ordinary pressure gages that would probably not indicate changes of water level of less than one foot. There were only four wells, therefore, in which water levels could be observed accurately; of these wells 5 and 7 at plant 1 appear to have been drawn down below the most productive cracks encountered in them. The best observations were therefore obtained in wells 8 and 10 at plant 2. Two of the wells observed, wells 4 and 8 at plant 1, were operated continuously during both tests to supply water for manufacturing purposes.

During the first test a prompt and distinct effect was observed in well 8, plant 2, when well 1, plant 1, was started and again when it was shut down. This seemed to indicate that these two wells tapped the same system of cracks. No distinct effect was observed in any of the other wells during this first test, even though it was continued for several hours. Well 7 at plant 1 is almost in a straight line with well 8, plant 2, and well 1, plant 1. It is in the opposite direction from well 1 and only about half as far away, yet no effect was observed in it. No definite effects of pumping or shut-down were observed in any of the other wells.

During the second test, when well 9, plant 2, was pumped a prompt and distinct effect was observed in well 10, plant 2, both at the beginning and at the end of pumping. None of the other wells being observed showed any distinct effect. It is interesting to note, however, that the recorder on well 10 showed a small but definite effect whenever well 27 at the plant of the Celanese Corporation of America was started or stopped. This well is approximately southwest of well 10 and about 2,400 feet from it, a distance substantially greater than that between any of the wells at the Ballantine plants.

It is believed to be significant that all the wells that were observed to affect one another during the

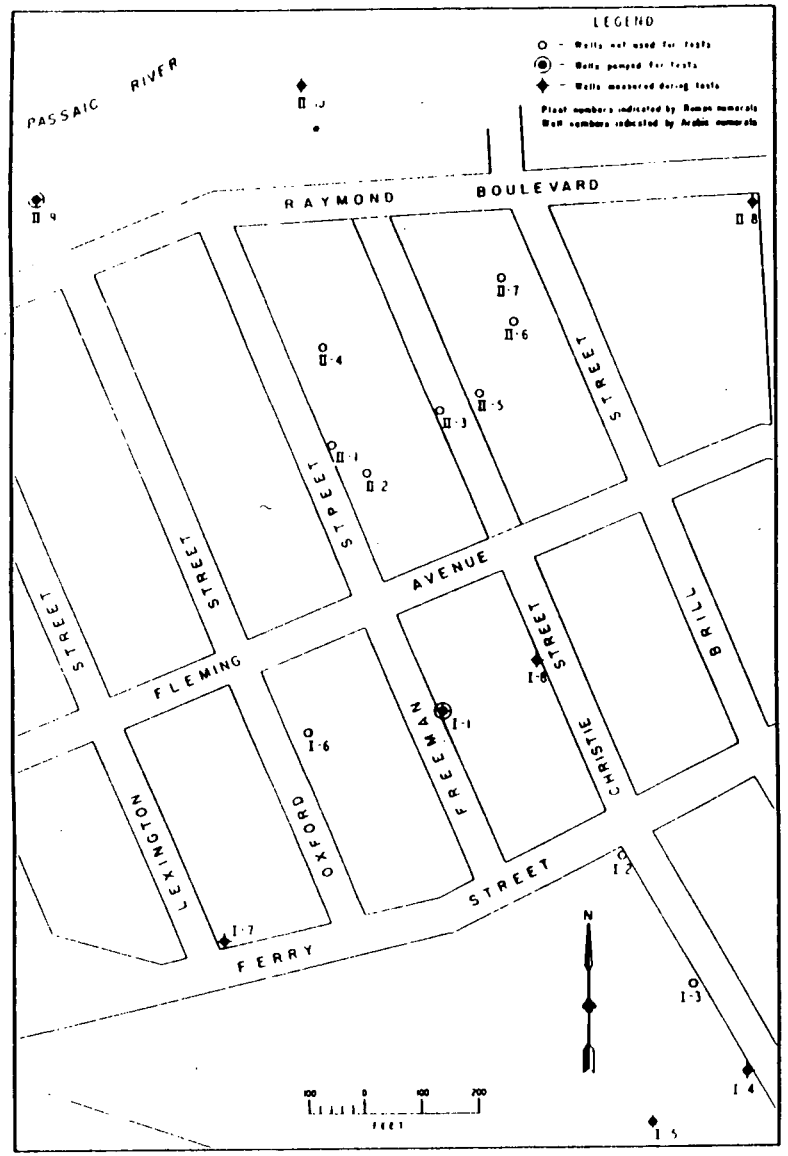

Figure 3.-Map of a part of Newark, N. J., showing the location of wells at the plants of F. Ballantine & Sons and indicating the wells used for pumping tests in January 1949.

two tests at the Ballantine plants lay along lines trending in a general northeasterly direction. This seems to indicate that in the vicinity of the Ballantine and Celanese plants there is a dominant system of cracks in that direction. No doubt there are cracks in transverse directions, but their capacity to transmit water appears to be much smaller. Consequently, water moves through the cracks that trend northeast much more easily than it does in other directions and the primary interference between wells is to the northeast or southwest.

One result of this distribution of cracks is that the formulae used to compute coefficients of transmissibility and storage are not applicable to this area. These formulae are based upon the assumption, among others, that water can move freely through the aquifer in all directions. In some other localities where the distribution and character of the cracks are more nearly equal in transverse directions, it is believed that these formulae can be applied significantly to wells in the Brunswick formation. In this part of Newark, however, they do not apply.

The tests were not without significant results, however, merely because it was impossible to compute the usual coefficients from them. For example, in planning the locations of future wells, it should be useful to know the direction in which they will interfere most with each other or with existing wells. Similarly, it might be possible to plan an operating schedule that would minimize interference between wells and thus decrease somewhat the pumping lift. Artificial recharge will be most effective if it is distributed in a direction transverse to the major cracks, thus supplying more of them without depending upon the poorer cracks to distribute the water. The movement of contaminating materials such as salt water from the river or bay is probably most easily accomplished in a northeasterly or southwesterly direction after it reaches the rock. The structure of the rock does not, of course, affect appreciably the movement of such contaminants through the materials above the rock.

Long-term fluctuations of water levels and pumpage - In the investigation that preceded this report, it was found that relatively few well owners had kept accurate and continuous records of pumpage and that still fewer

had more than an occasional record of the water levels in their wells. Fortunately, important exceptions to this general rule were some of the larger users of ground water. In only one part of the area, however - the so-called "Ironbound District" in eastern Newark - was it possible to obtain sufficient data to justify a long-time estimate of pumpage rates and to compare it with similar records of water levels. In this area the two largest users of ground water are P. Ballantine & Sons and the Celanese Corporation of America. These companies are keeping excellent records of pumpage and water levels and have done so for some time.

When the records that these two companies furnished were combined with other data available in the area, it was possible to prepare a diagram (figure 4) that shows some significiant trends of water levels and pumpage.

Probably the most striking features of figure 4 are the long-term trends toward greater pumpage and lower water levels. These two trends go together, of course, and from the studies made thus far it is not possible to say whether the lowering of water levels indicates a pumping rate in excess of natural recharge or merely the lowering necessary to induce flow into the area at the increasing rates. The apparent reversal of the downward trend of water levels in 1948 and 1949 is due to unusually good natural recharge coupled with artificial recharge that will be discussed later.

Almost equally striking are the seasonal fluctuations of water level and pumpage, which are related to each other and are due primarily to seasonal demands for water. Much of the water taken from the ground in the area is used for cooling and the demand is naturally greater in the summer. Furthermore, there is a seasonal demand, which is greatest in summer, for the products of some of the users of ground waters. This tends to accentuate the seasonal use of water. There is, of course, a greater recharge from precipitation during the winter when the demands of vegetation are at a minimum, but this probably accounts for only a few feet of the total fluctuation of water levels.

There is a notable similarity between the fluctuations of water level in the different wells shown in the diagram. This indicates that there is an over-all

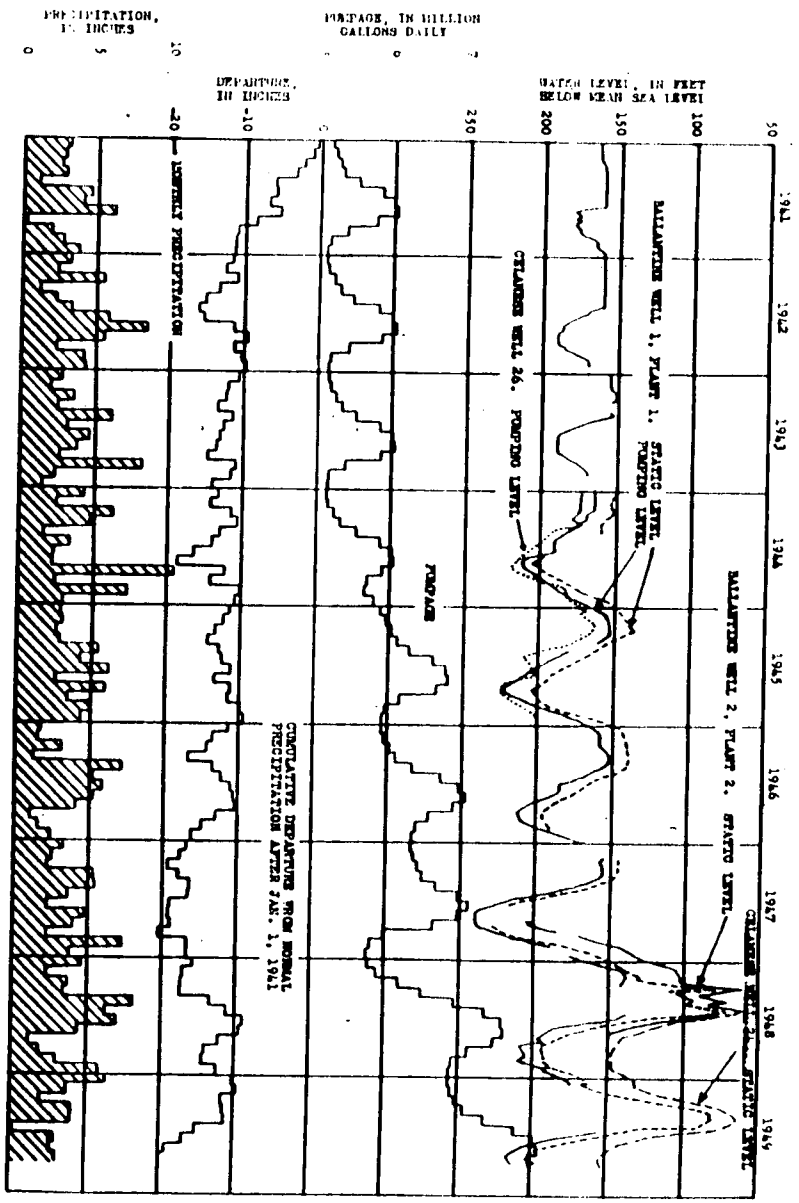

Figure 4.-Diagram showing fluctuations of pumpage and water levels in the eastern part of Newark, the monthly precipitation, and the cumulative departure from normal precipitation, 1941 to 1949.

connection between the various wells in the area and that the regional pumpage is of primary significance in determining the major fluctuations of water level. Minor differences are due, of course, to local conditions.

The wide range of seasonal fluctuations of water levels and the great depths to which they have been drawn are noteworthy. During recent years a change of one million gallons daily in the rate of pumping in this area has resulted in water-level fluctuations in the order of 60 to 75 feet. Furthermore, with a total pumpage of about seven million gallons daily the water levels have been lowered to 200 feet or more below mean sea level. In view of the fact that an early well in this vicinity flowed at an altitude of perhaps 10 feet above sea level, the current water levels represent actual drawdowns of more than 210 feet. The rate of lowering per million gallons pumped seems to be increasing and, indeed, this would be expected because of the decreasing capacity of the cracks with increasing depth. The figures strongly suggest that the rate of pumping in this vicinity cannot safely be increased very much more without serious consequences, unless the increase is accompanied by some measure of conservation such as artificial recharge.

The precipitation at Newark varies considerably from month to month, as indicated at the bottom of the diagram. The trend of the accumulated departure from normal precipitation is perhaps more useful in the study of ground-water trends because it indicates periods when increasing or decreasing amounts of water are available for underground storage or withdrawal. After the very dry period of 1941, the accumulated departure shows an essentially horizontal trend. This indicates that the long-term downward trend of water levels is not due to changes in precipitation. Some of the shorter trends may, however, have had some influence on the water levels. For example, the less severe drawdown in the summer of 1946 than in 1945 is probably due to the above-normal precipitation during the summer of 1946, as indicated by the rising trend of the departure line. Similarly, the sharp decline in the summer of 1947 is probably related to the declining trend of precipitation during that summer. It is obvious from a study of the diagram, however, that the fluctuations of pumpage rather than those of precipitation are the principal causes of the water-level fluctuations.

Artificial recharge.- The graphs of water levels in figure 3 show a sharp and abrupt rise in March 1948 and again in February 1949, both without any corresponding decrease in pumpage. These apparent anomalies are caused by artificial recharging through wells, conducted experimentally by P. Ballantine & Sons with the cooperation of the Newark Water Department. On occasions during the winter when the temperature of the city water was as low as or lower than that of the ground water and when the city's reservoirs were overflowing, conditions were ideal for recharging. Water that would otherwise have gone to waste was stored underground and conserved for future use. Recharge was accomplished through several wells. In 1948 about 168 million gallons was stored in the ground in this way and in 1949 about 236 million gallons.

It had been hoped that the results of the pumping tests discussed earlier in this report would furnish accurate data for evaluating the effects of recharging. Unfortunately, it developed that conditions in this vicinity were unsuited to analysis in this way. However, the evaluation of the artificial recharge is not wholly dependent upon pumping tests.

As a result of the recharging, the water levels in the area as a whole were higher at the beginning of the season of heavy demand than they would otherwise have been. The greatest benefit occurred in the immediate area of the recharging, that is, in the Ballantine well field, but there were substantial gains at considerable distances. For example, during the recharging in 1949 a recorder was maintained on a well of the Celanese Corporation of America approximately half a mile from the center of recharging and water levels there rose sharply and promptly when the recharging was begun.

The water used for recharging probably did not drift very far away from the area in which it was introduced into the aquifer. Previous pumping had established a deep depression in the water table there and the effect of the recharging was to fill the depression partly. The improved water levels observed elsewhere occurred before water could possibly have moved through the aquifer from the point of recharge to the point of

observation. They represented a backing up of water that had previously been flowing into the Ballantine well field and that became available for withdrawal elsewhere when recharging began. The effect outside the Ballantine well field was exactly the same as if the rate of pumping at Ballantine's had been decreased by the amount that was recharged. And indeed the demand upon natural recharge was decreased by exactly that much. Much of the recharge water probably circulated directly to other wells in the Ballantine well field during the recharging. The remainder was almost certainly drawn into them soon after recharging ceased. Whatever benefits were derived from the higher quality and lower temperature of the recharge water were probably restricted entirely to the Ballantine well field. The gain in head and therefore in water stored in the ground extended to other nearby parts of the area.

Observations made during the recharging experiments indicated that the water levels in parts of the Ballantine well field may have risen above the top of the rock. This is not surprising in view of the limited capacity of the cracks in the rock. As soon as the water levels rose into the overlying glacial material the storage capacity was much greater. At no time did the head rise far enough to cause any loss of recharge water out of the system of aquifers. The highest water levels during the recharging were still more than 50 feet below mean sea level.

Chemical quality of the ground water

The chemical quality of the ground water from rock wells in the Newark area is shown by the analyses in table 1, on page 49. Analyses A and B are of water taken from wells in the western part of the area farthest removed from the Passaic River and Newark Bay. The water is hard, principally because of its calcium and magnesium content. It is too hard for boiler use, but is suitable for most other uses, particularly for cooling. Several tanneries using ground water in their operations report that the quality of the water has a "favorable" effect on their processes. One producer of carbonated water reported that the ground water

imparted a pleasing taste to his product. Where not contaminated by bacterial or other harmful impurities, the water is potable.

The general quality of water pumped from wells in the areas nearer the river and bay is shown in analyses C and D. This water is generally reported to be far more corrosive than the ground water in the areas farther from the river and bay, and where the chloride content is high the necessity of frequent replacement of ordinary bronze impellers on pumps has been reported. One user has apparently solved this problem by the use of impellers and pump bowls constructed of a high-nickel-content alloy. The highly mineralized water, of course, is generally not potable.

The high sulfate content of waters from some rock wells may be a function of the depth of the well. This may be explained by the fact that gypsum (calcium sulfate) has been observed in the cuttings taken from very deep wells. (See log of well 3, in appendix.) Gypsum has also been observed by the senior author in the cuttings from another deep well in Newark, and Meredith E. Johnson, New Jersey State Geologist, has observed gypsum in cuttings taken at 580 feet from a well drilled in the Brunswick formation near Westfield, New Jersey. In the cuttings from the bottom of the Celanese Corporation well, the gypsum occurred as large plates (1 1/2 by 1/2 by 1/8 inches) which had every appearance of having been the fillings of cracks. Presumably, therefore, gypsum, originally deposited in the cracks in the rock, has remained in the deeper cracks because it was not exposed to the circulation of meteoric waters.

Occasionally, wells drilled into the rocks of the Brunswick formation have yielded water of high mineral content upon completion. In such wells, it has sometimes been possible to lower the mineral content of the water by pumping the well heavily for a prolonged period. High mineral concentrations of this sort are probably caused by the ground water having been more or less stationary long enough to dissolve the mineral matter from the rock. Heavy pumping permits circulation of ground water and may induce a flow of water of lower mineral content toward the well. So far as is known, no instances of this sort have been reported in the Newark area.

Table 2.--Analyses of water from rock wells in the Newark area
(Results in parts per million)

Well	A	B	C	D	E	F
Color	0	0	0	0		
Total hardness as $CaCO_3$	300	282	380	2,870		
Dissolved solids	431	378	749	4,780		
Specific conductance, micromhos at 25^0 C.	669	614	1,220	6,960		
pH	7.2	7.6	7.5	7.3		
Silica (SiO_2)	22	20	18	31	34	
Iron (Fe)	.17	.13	1.1	.15		
Calcium (Ca)	105	67	111	865	340	426
Magnesium (Mg)	9.3	28	25	173	60	51
Sodium (Na)	19	16	87	447	18	48
Potassium (K)	1.8	2.7	2.8	7.0		
Carbonate (CO_3)	0	0	0	0		
Bicarbonate (HCO_3)	202	213	150	210	76	19
Sulfate (SO_4)	88	66	91	911	993	1,380
Chloride (Cl)	25	28	230	1,900	6.2	26
Fluoride (F)	.1	.1	.1	.0		
Nitrate (NO_3)	45	29	31	6.2		

Table 2.--Analyses of water from rock wells in the Newark area (continued)

A) From 310-foot well, Frick Bros. Creamery, Irvington, N. J.
Analysis by U.S.G.S., January 1948.

B) From 300-foot well, Hooton Chocolate Co., Newark, N. J.
Analysis by U.S.G.S., January 1948.

C) From 550-foot well, Kresge Dept. Store, Newark, N. J.
Analysis by U.S.G.S., January 1948.

D) From 805-foot well, P. Ballantine & Sons, well 1, plant 1, Newark, N. J.
Analysis by the U.S.G.S., January 1948.

E*) From 250-foot well, Celluloid Works, Newark, N. J. Analysis by P. Ballantine & Sons, 1879. (See Ann. Rept. New Jersey State Geologist for 1879, p. 127.)

F*) From 615-foot well, Lister Bros., Newark, N. J. Analysis by P. Ballantine & Sons, 1879. (See Ann. Rept. New Jersey State Geologist for 1879, p. 127.)

* Recalculated to p.p.m. by H. Herpers.

Reliable and detailed analyses of waters from wells pumping from the sand and gravel in the buried valley are not available at the present writing.

Salt-water intrusion

The infiltration of salt water into the body of fresh ground water is referred to as salt-water intrusion. In the Newark area it is believed to be caused principally by heavy pumping in areas adjacent to Newark Bay and the Passaic River. Heavy pumping lowers the general ground-water levels, creating a difference in head between the ground-water body and the nearby bay and river, inducing a flow of salt water into the water-bearing formations. Another factor that probably contributes to salt-water intrusion is the dredging of ship channels in the Passaic River and Newark Bay. As mentioned previously in the discussion of the hydrology of the Recent deposits, those deposits act as an imperfect barrier to the infiltration of salt water into the underlying materials. It is not improbable, therefore, that the deepening of ship channels in the river and bay has contributed to the breaking of the imperfect seal formed by the Recent (and, in some places, Pleistocene) deposits. In the areas of salt-water intrusion, the water in both the unconsolidated materials and the rocks is affected.

The attached map (figure 5) shows the distribution of the chloride content of the ground water in the area. Most of the data upon which the map was based were provided by the Newark City Chemist, through the courtesy of Dr. Charles V. Craster, Health Officer of the City of Newark. As almost all the analyses were made in 1942, when the City of Newark made a survey of certain qualities of the waters from wells in the city, the map presents a picture of the chloride content of the ground water at that time. Recent check analyses made in the investigation preceding this report, confirm generally the distribution of chloride shown. The curved lines represent points of equal chloride concentration.

Several areas of ground water with high chloride concentrations are shown, and all are in areas of relatively heavy pumpage. The first of these is along the Passaic River near the northern boundary of Newark, where there are several industries that use well-water in processing. The pumpage here is not as heavy as in the other areas, and great amounts of river water have not been drawn into the ground-water body. Mention might here be made of the single well near the bank of the Passaic River, just south of the area, marked A on figure 5, the water from which contained 1,710 parts of chloride per million. This well pumps from a gravel bed about 45 feet below the surface which is probably in direct hydraulic connection with the river.

The second area of high chloride concentration is near the intersection of Harrison Avenue and McCarter Highway. Here, fairly heavy pumpage has induced an inflow of water from the river.

The third area, near the intersection of Raymond Boulevard and Broad Street, contains several wells that pump large amounts of water, principally for air-conditioning.

The fourth and largest area with high concentrations of chloride in well waters is in the eastern part of the Newark area and is bounded roughly by Harrison Avenue on the north; by Fourth Street, extended to Port Street on the west; by Port Street on the south; and by the Passaic River and Newark Bay on the east. The area contains many industries that require large amounts of ground water for cooling and processing. Heavy pumping, continued over a period of many years, has caused the depression of the upper surface of the ground-water body, which has, in turn, led to river-water intrusion on a large scale. That the present character of the water in this area is materially different from its original character can be seen by comparison of analyses D, E, and F (See table 2 on p. 38) Analysis D was made of water taken from a well of P. Ballantine & Sons in January 1948, whereas analyses E and F, made in 1879, are of water taken from wells not far from the Ballantine plant. Analyses E and F show that the ground water in this section originally had a chloride content comparable to that of water taken from wells in areas away from the river and bay.

About 4,000 feet northeast of the intersection of State Highway 25 and Port Street a great concentration of chloride was found in three wells belonging to a single company. Some of the differences in chloride content in this area may be due to differences in depth. The

highest concentration (2,700 p.p.m.) was encountered in a well 535 feet deep, whereas lower concentrations were found in nearby shallower wells. At the time the deep well was drilled, it was thought that the highly saline water might be caused by a pocket of stationary ground water, which had acquired its high salt content from the formation because of a lack of normal ground-water movement in the vicinity. On the basis of this assumption, the well was pumped steadily at a high rate of discharge for a few weeks with the idea of pumping out the pocket of highly mineralized water and inducing a flow of fresh water into the well. The results were inconclusive and the well was finally abandoned because of the unsatisfactory quality of the water.

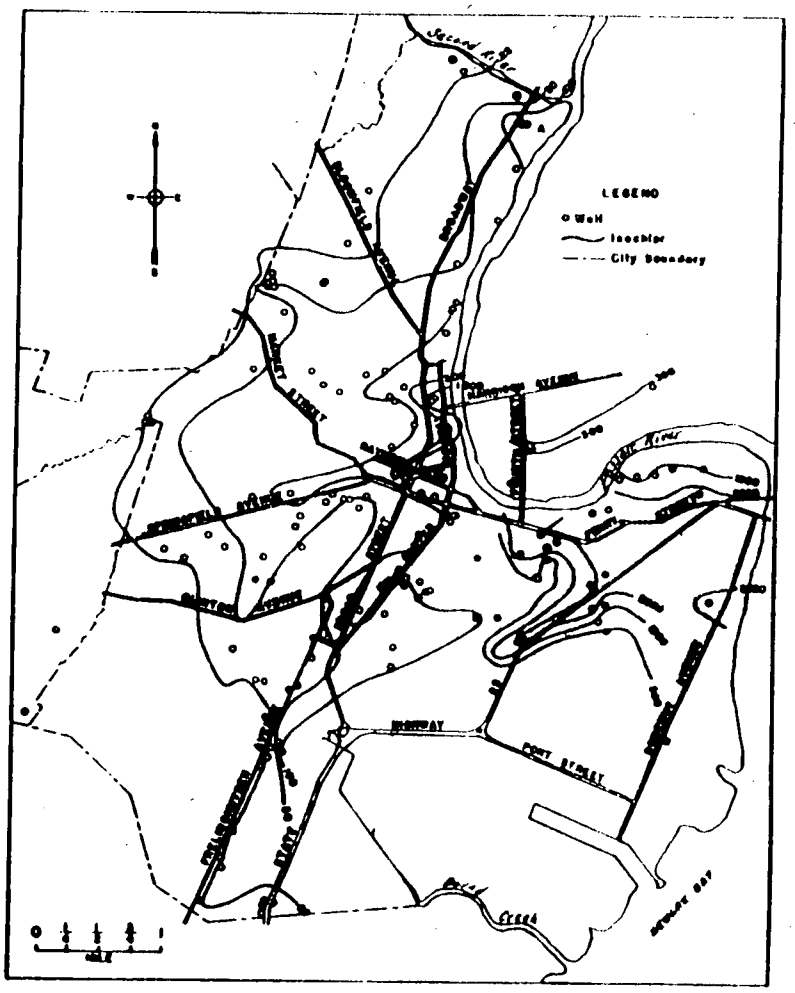

Figure 5.-Map showing chloride content of the ground water beneath Newark, N. J., and vicinity.

Temperature of the ground water

The average temperature of the ground water in the Newark area is approximately 55° F. The temperature of ground water, except as explained below, is largely a function of the depth of the aquifer from which it is drawn, and of the mean annual temperature of the air, which at Newark is 52.3° F. Water from very shallow wells will usually vary in temperature over the year. Water from somewhat deeper wells, however, has a temperature that, for all practical purposes, is equal to the mean annual temperature. The effect of the mean annual temperature on the temperature of ground water does not extend to great depths. It is known from numerous deep wells, mines, and test borings that the temperature of the earth's crust increases with depth. The rate at which the ground temperature increases with depth, known as the geothermal gradient, varies, depending upon many conditions, but generally an increase of 50 to 150 feet in depth will raise the temperature 1° F. Of course, in regions of active volcanism this rate of increase does not apply. In the Newark area the normal geothermal gradient is not known as all temperature measurements have been made at the point of discharge of the pumps. Each measurement, therefore, represents merely the temperature of the water issuing from the well, which is probably an average of the temperatures of water at all producing levels.

CONCLUSIONS

The studies that preceded this report were not detailed or prolonged enough to arrive at definite answers to important questions that arise with regard to the safe yield of the aquifers in the Newark area. Only very tentative conclusions can be made at this time. Observations and studies should be continued over a period of years in order that the safe yield may be defined.

Continuing observations should be made of the pumping rates in every well in the area and of the water levels in an adequate number of observation wells so that the rate and direction of flow in the aquifers and the amount of recharge to them may be defined. Periodic analyses of the water from representative wells throughout the area should be made in order to detect changes in its quality and especially to define the intrusion of salt water. Geologic information should be sought to extend our knowledge of the buried channel that passes through the area and of the materials that fill it. Whenever wells or other deep excavations are made, particular attention should be given to the nature of the material overlying the rock in order to establish its geologic and hydrologic characteristics more fully, and ultimately to define the best areas of recharge.

In many parts of the area conclusive data are not available, but it seems probable that there are localities where additional quantities of ground water may be obtained. It also seems probable that in some heavily pumped parts of the area the safe yield is being approached or has already been exceeded. For example, in the area around the plants of P. Ballantine & Sons and the Celanese Corporation of America, the water levels have been lowered to such an extent that it seems unlikely that any substantial additional quantity of water can be withdrawn from the ground safely or economically. The quality of the ground water in this area is already unfit for some uses.

The experiments with artificial recharge at the Ballantine plant during the last two years offer promise of great improvement in the ground-water conditions in some parts of the area if water is available for continuing such recharge. This is certainly sound conservation practice and should be expanded as much as possible. Whenever recharging is undertaken in the future, careful observations should be made of water levels and of the quality and quantity of water recharged and withdrawn, in order to evaluate the effects more closely and to trace the movement of the water.

2. Log of well 2 drilled for John Nieder, 247 Emmet Street, Newark, N. J., by Layne-New York Co. Log furnished by Mr. W. A. North of Layne-New York Co.

Depth	Thickness	Description	Correlation
0' - 3'	3'	Concrete	Recent
3' - 5'	2'	Cinders	Fill
5' - 15'	10'	Yellow clay	Recent ?
15' - 27'	12'	Fine red sand	Glacial drift
27' - 55'	28'	Red quicksand	"
55' - 80'	25'	Tough red clay	"
80' - 125'	45'	Soft red clay	"
125' - 190'	65'	Red sandy clay	"
190' - 210'	20'	Soft red clay	"
210' - 215'	5'	Hardpan	"
215' - 225'	10'	Sand and clay	"
225' - 408'	183'	Red rock	Triassic

APPENDIX I - SELECTED WELL LOGS

1. Log of well 2, drilled for Driver Harris Co., Harrison, N. J., by C. W. Lauman & Co. Log furnished by C. W. Lauman & Co.

Depth	Thickness	Description	Correlation
0' - 21'6"	21'6"	Fill	Fill
21'6" - 30'10"	9'4"	Sand and gravel	Glacial drift
30'10" - 39'0"	8'2"	Coarse sand and gravel	"
39'0" - 41'10"	2'10"	Streaks of hard red clay and gravel	"
41'10" - 58'2"	16'4"	Red clay, fine sand and gravel	"
58'2" - 62'2"	4'0"	Clay and gravel	"
62'2" - 71'9"	9'7"	Hard red clay and broken rock	"
71'9" - 82'0"	10'3"	Red clay and fine sand	"
82'0" - 112'11"	30'11"	Red clay and rock	"
112'11" - 135'0"	22'1"	Red clay	"
135'0" - 141'0"	6'0"	Hard packed sand	"
141'0" - 155'0"	14'0"	Red clay	"
155'0" - 166'0"	11'0"	Clay, sand, and gravel	"
166'0" - 173'3"	7'3"	Hardpan	"
173'3" - 176'3"	3'0"	Clay, fine sand, and gravel	"
176'3" - 187'3"	11'0"	Cemented sand and gravel	"
187'3" - 192'3"	5'0"	Fine brown sand and clay	"
192'3" - 212'10"	20'7"	Red clay	"
212'10" - 222'6"	9'8"	Sand, gravel, and red clay	"
222'6" - 225'6"	3'0"	Coarse sand and gravel	"
225'6" - 231'6"	6'0"	Clay and gravel	"
231'6" - 234'6"	3'0"	Coarse sand and small gravel	"
234'6" - 240'0"	5'6"	Clay and sand	"
240'0" - 243'0"	3'0"	Coarse brown sand, gravel, and some clay	"
243'0" - 253'0"	10'0"	Medium coarse red sand and grit	"
253'0" - 270'0"	17'0"	Red clay and gravel	"
270'0" - 291'0"	21'0"	Hard clay, sand, and large gravel	"
291'0" - 292'0"	1'0"	Medium coarse sand and large gravel	"
292'0" - 337'0"	45'0"	Red Shale	Triassic

3. Log of well 27 drilled for Celanese Corporation of America by Layne-New York Co. Compiled by H. Herpers from samples furnished by Wm. E. Helmstaedter, Mechanical Engineer, Celanese Corporation of America.

Depth	Thickness	Description	Correlation
2' - 27'	25'	Fine-grained red-brown sand	Glacial drift
27' - 32'	5'	Coarse gravel composed of red shale (to 1/2 in.)	"
32' - 71'	39'	Fine-grained red sandy clay	"
71' - 354'	283'	Red shale	Triass
354' - 365'	11'	Red shale (softer than last)	"
365' - 377'	12'	Soft red shale (similar to last)	"
377' - 419'	42'	Fine-grained red sandstone	"
419' - 537'	118'	Red shale	"
537' - 580'	43'	Red shale (softer than last)	"
580' - 650'	70'	Very soft red shale	"
650' - 695'	45'	Soft red shale with some gypsum grains	"
695' - 725'	30'	Red shale. A few gypsum grains	"
725' - 730'	5'	Fine-grained red sandstone	"
730' - 787'	57'	Red shale with some gypsum grains	"
787' - 796'	9'	Fine-grained red shaly sandstone with gypsum grains	"
796' - 840'	44'	Red shale	"
840' - 856'	16'	Red sandy shale with large (1-1/2 in. x 1 in. x 1/8 in.) plates of gypsum, which appear to have been deposited in fractures in rock	"

4. Log of test boring No. 19, made at crossing of Route 25 addition and Lehigh Valley R. R. yards by Giles Drilling Co. for State Highway Department. Compiled by H. Herpers from inspection of samples.

Depth	Description	Correlation
0' - 3'	Cinders	Fill
4' - 5'	Cinders and meadow muck	Fill and Recent
10' - 11'	Cinders, gray clay, and meadow muck	"
16' - 17'	Gray, slightly sandy clay	Recent
20' - 21'	Red and gray clay and medium sand	Recent (reworked glacial drift)
30' - 31'	Fine red silty sand	Glacial drift
40' - 41'	Red clay	"
50' - 51'	Red sandy clay	"
60' - 61'	Red sandy clay and red shale (top of rock)	Triassic
61' - 71'	Red shale (core)	"

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SUBJECT: Sole Source Aquifers in Region II - Franklin Plastics Corp. (TDD No. 02-9002-2

REFERENCE: After a review of background information regarding sole source aquifers (SSA's) in Region II, it has been determined that no SSA's exist within 3 miles of Franklin Plastics Corp. in Kearny, Hudson County, New Jersey. The nearest SSA is the Buried Valley Aquifer System, which is greater than 3 miles from the site.

(Attached: Map & Federal Register, Vol. 45, No. 91, May 6, 1980 for Buried Valley Aquifer System)

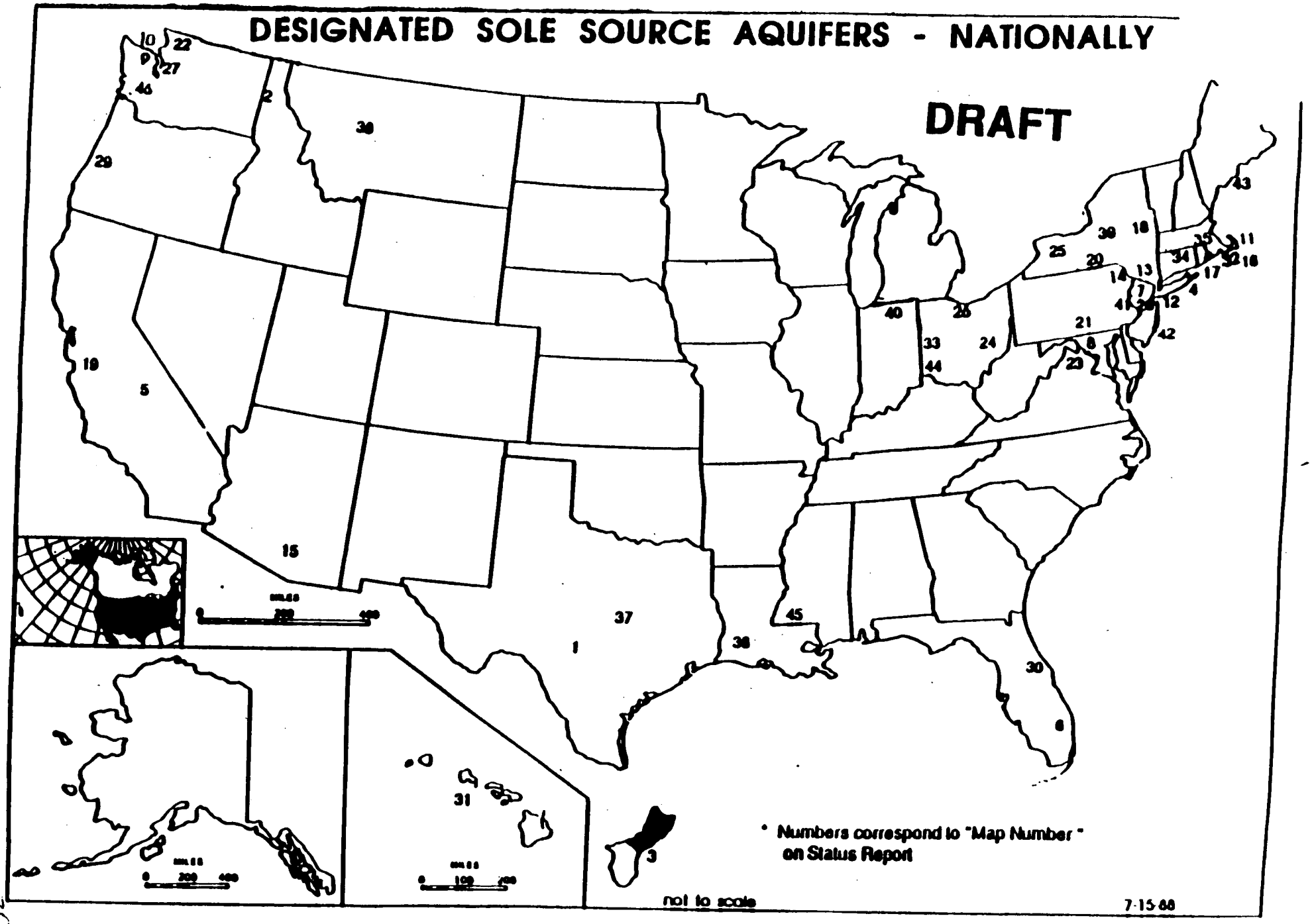
K. Campbell 07/11/90

NUS 443A 58 1182

SOLE SOURCE AQUIFERS IN REGION II

Name	State	Citation	Publication Date
Nassau/Suffolk	NY	43 FR 26611	06/21/78
Buried Valley Aquifer System (AS)	NJ	45 FR 30357	05/08/80
Ridgewood Area	NJ	49 FR 2943	01/24/84
Upper Rockaway River Basin	NJ	49 FR 2946	01/24/84
Brooklyn/Queens	NY	49 FR 2950	01/24/84
Schenectady/Niskayuna	NY	50 FR 2022	01/14/85
Clinton Street-Ballpark AS	NY	50 FR 2025	01/14/85
Cattaraugus Creek AS	NY	52 FR 36100	09/25/87
Highlands AS	NJ/NY	52 FR 37213	10/05/87
Cortland-Homer-Preble AS	NY	53 FR 22045	06/13/88
Northwest New Jersey Fifteen Basin AS	NJ/NY	53 FR 23685	06/23/88
New Jersey Coastal Plain AS	NJ	53 FR 23791	06/24/88

DESIGNATED SOLE SOURCE AQUIFERS - NATIONALLY



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STATUS AS OF 7/15/88

DESIGNATED SOLE SOURCE AQUIFERS - NATIONALLY

Region	Map Number	Aquifer and/or Location	State	Date Filed	Federal Register Notice Citation	Federal Register Notice Publication Date
VI	1.	Edwards Aquifer	TX	1/03/75	40 FR 58344	12/16/75
X	2.	Spokane-Valley Rathdrum Prairie Aquifer	WA-ID	fall of '76	43 FR 5566	02/09/78
IX	3.	Northern Guam	Guam	11/20/75	43 FR 17868	04/26/78
II	4.	Nassau/Suffolk Counties Long Island	NY	1/21/75	43 FR 26611	06/21/78
IX	5.	Fresno County	CA	8/09/76	44 FR 52751	09/10/79
IV	6.	Biscayne Aquifer	FL	5/08/78	44 FR 58797	10/11/79
II	7.	Buried Valley Aquifer System	NJ	1/15/79	45 FR 30537	05/08/80
III	8.	Maryland Piedmont Aquifer Montgomery, Frederick, Howard, Carroll Counties	MD	09/12/75	45 FR 57165	08/27/80
X	9.	Camano Island Aquifer	WA	4/13/81	47 FR 14779	04/06/82
X	10.	Whidbey Island Aquifer	WA	4/13/81	47 FR 14779	04/06/82
I	11.	Cape Code Aquifer	MA	3/04/81	47 FR 30282	07/13/82
II	12.	Kings/Queens Counties	NY	6/18/79	49 FR 2950	01/24/84
II	13.	Ridgewood Area	NY/NJ	7/04/79	49 FR 2943	01/24/84
II	14.	Upper Rockaway River Basin Area	NJ	11/30/79	49 FR 2946	01/24/84
IX	15.	Upper Santa Cruz & Avra Altar Basin Aquifers	AZ	6/29/81	49 FR 2948	01/24/84

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STATUS AS OF 7/15/88

DESIGNATED SOLE SOURCE AQUIFERS - NATIONALLY

Region	Map Number	Aquifer and/or Location	State	Date Filed	Federal Register Notice Citation	Federal Register Notice Publication Date
I	16.	Nantucket Island Aquifer	MA	12/02/82	49 FR 2952	01/24/84
I	17.	Block Island Aquifer	RI	3/18/83	49 FR 2952	01/24/84
II	18.	Schenectady/Niskayuna Schenectady, Saratoga and Albany Counties	NY	8/20/82	50 FR 2022	01/14/85
IX	19.	Santa Margarita Aquifer Scotts Valley, Santa Cruz County	CA	9/07/77	50 FR 2023	01/14/85
II	20.	Clinton Street-Ballpark Valley, Aquifer System, Broome and Tioga Counties	NY	2/26/81	50 FR2025	01/14/85
III	21.	Seven Valleys Aquifer York County	PA	9/24/81	50 FR 9126	03/06/85
X	22.	Cross Valley Aquifer	WA	7/29/83	52 FR 18606	05/18/87
III	23.	Prospect Hill Aquifer Clark County	VA	6/27/85	52 FR 21733	06/09/87
V	24.	Pleasant City Aquifer	OH	8/27/84	52 FR 32342	08/27/87
II	25.	Cattaraugus Creek-Sardinia	NY	2/28/85	52 FR 36100	09/25/87
V	26.	Bass Island Aquifer Catawba Island	OH	3/17/86	52 FR 37009	10/02/87
X	27.	Newberg Area Aquifer	WA	1/16/84	52 FR 37215	10/05/87

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STATUS AS OF 7/15/88

DESIGNATED SOLE SOURCE AQUIFERS - NATIONALLY

Region	Map Number	Aquifer and/or Location	State	Date Filed	Federal Register Notice Citation	Federal Register Notice Publication Date
II	28.	Highlands Aquifer System	NY/NJ	3/14/85	52 FR 37213	10/05/87
X	29.	North Florance-Dunal Aquifer	OR	6/02/85	52 FR 37519	10/07/87
IV	30.	Volusia-Floridan Aquifer	FL	6/18/82	52 FR 44221	11/18/87
IX	31.	Southern Oahu Basal Aquifer	HI	5/16/84	52 FR 45496	11/30/87
I	32.	Martha's Vineyard Regional Aquifer	MA	6/16/87	53 FR 3451	02/05/88
V	33.	Buried Valley Aquifer System (BVAS)	OH	3/04/87	53 FR 15876	05/04/88
I	34.	Pawcatuck Basin Aquifer System	RI/CT	12/22/87	53 FR 17108	05/13/88
I	35.	Hunt-Annaquatucket-Pettaquamscutt Aquifer System	RI	12/30/87	53 FR 19026	05/26/88
VI	36.	Chicot Aquifer	LA	12/15/86	53 FR 20893	06/09/88
VI	37.	Edwards Aquifer Austin Area	TX	11/25/86	53 FR 20897	06/07/88
VIII	38.	Missoula Valley Aquifer	MT	11/30/87	53 FR 20895	06/07/88
II	39.	Cortland- Homer-Preble Aquifer System	NY	9/21/87	53 FR 22045	06/13/88
V	40.	St. Joseph Aquifer System (Elkart Co)	IN	12/16/87	53 FR 23682	06/23/88

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STATUS AS OF 7/15/88

DESIGNATED SOLE SOURCE AQUIFERS - NATIONALLY

Region	Map Number	Aquifer and/or Location	State	Date Filed	Federal Register Notice Citation	Federal Register Notice Publication Date
II	42.	N.J. Coastal Plain Aquifer	NJ	12/04/78	53 FR 23791	06/24/88
I	43.	Monhegan Island	ME	5/16/88	53 FR 24496	06/29/88
V	44.	OKI - Miami Buried Valley Aquifer	OH	03/10/88	53 FR 25670	07/08/88
VI	45.	Southern Hills Aquifer System	LA/MS	5/19/80	53 FR 25538	07/07/88
X	46.	Cedar Valley, Renton Aquifer	WA	1/88		

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ENVIRONMENTAL PROTECTION AGENCY

[FR 1417-6]

Aquifers Underlying Western Essex and Southeastern Morris Counties, N.J.; Determination

Notice is hereby given that pursuant to Section 1424(e) of the Safe Drinking Water Act (42 U.S.C. 300f, 300h-3(e); 88 Stat. 1660 et seq., P.L. 93-523) the Administrator of the Environmental Protection Agency has determined that the buried valley and bedrock aquifer system underlying the Central Basin of the Passaic River in western Essex and southeastern Morris Counties, New Jersey, is the principal source of drinking water for these counties and that, if the aquifer system were contaminated, it would create a significant hazard to public health.

Background

The Safe Drinking Water Act was enacted on December 16, 1974. Section 1424(e) of the Act states:

If the Administrator determines, on his initiative or upon petition, that an area has aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of the determination in the Federal Register. After the publication of any notice no commitment for Federal financial assistance (through a grant, contract, loan guarantee, or otherwise) may be entered into for any project which the Administrator determines may contaminate such aquifer through a recharge zone so as to create a significant hazard to public health but a commitment for Federal financial assistance may, if authorized under another provision of law, be entered into to plan or design the project to assure that it will not so contaminate the aquifer.

On January 15, 1979 the City of East Orange, N.J. and Passaic River Coalition, Basking Ridge, N.J. petitioned and Administrator to designate the aquifer system underlying western Essex and southeastern Morris Counties, New Jersey, as a sole source aquifer under the provisions of the Act. A notice of receipt of this petition, together with a request for comments was published in the Federal Register March 28, 1979, 44 FR 18732. In response to the Notice and request for comments, written comments were received from both the public and private sectors. On May 23, 1979, the Environmental Protection Agency (EPA) held a public hearing in Roseland, N.J. to hear the views of persons interested in the Buried Valley System issue.

On the basis of the information which is available to this Agency the Administrator has made the following findings, which are the basis for the determination noted above:

(1) The Buried Valley Aquifer System is the sole or principal source of drinking water for approximately 600,000 people in western Essex and southeastern Morris Counties, New Jersey. In 1978, the system supplied approximately 42 million Gallons per Day (MGD) water. Current water supply treatment practice for public supplies is generally limited to disinfection for drinking purposes; with some plants capable of manganese removal. There is no alternative source of drinking water supply which could economically replace this aquifer system if it were contaminated.

(2) The Buried Valley Aquifer System is vulnerable to contamination through its recharge zone, particularly from septic tanks and, to a lesser extent, from leaching of discharges to streams and rivers in the recharge and streamflow source zones. Since ground water contamination can be difficult or impossible to reverse, and because this

aquifer is relied upon for drinking purposes by many people. contamination of the aquifer would pose a significant hazard to public health.

Section 1424(e) of the Act requires that a Federal agency may not commit funds to a project which may contaminate the aquifer system through a recharge or streamflow source zone so as to create a significant hazard to public health. The recharge zone is that area through which water enters into the aquifer system.

The area in which projects may be reviewed is the area encompassed by: (1) The boundary of the Buried Valley Aquifer Systems, and (2) its streamflow source zones.

The Buried Valley Aquifer System is the principal source of drinking water in southeastern Morris and western Essex Counties, New Jersey. The surface boundary of the aquifer's recharge zone is identical with the boundary of the aquifer.

The recharge zone is defined by the outside boundary of the following municipalities: On the south—Bernards Township and Warren Township, on the east—Berkeley Heights, New Providence, Summit Millburn, Livingston Township, Roseland, Essex Falls, Caldwell, West Caldwell and North Caldwell, on the north—Fairfield, and Montville, on the west—Parsippany-Troy Hills, Morris Township and Harding Township. Included within these perimeter communities are also the following: Passaic Township, Chatham, Chatham Township, Madison, Florham Park, Morristown, Hanover, East Hanover and Morris Plains.

The stream flow source zone of the aquifer system lies within the boundaries of the Rockaway River Sub-Basin, which, in turn, is part of the Passaic River Basin. This zone includes those portions of the sub-basin which ultimately drain to the recharge zone. This area encompasses all or part of the following municipalities: Bernardsville, Boonton Town, Boonton Township, Denville, Dover, Jefferson, Kinnelon, Lincoln Park, Mendham Borough, Mendham Township, Mine Hill, Mountain Lakes, Mount Arlington, Randolph, Rockaway Borough, Rockaway Township, Roxbury Sparta, Victory Gardens and Wharton.

The information utilized in this determination includes: The petition, written and verbal comments submitted, by the public, a detailed map of the area and independent analyses by EPA. All this information is available to the public and may be inspected during normal business hours at the office of the Environmental Protection Agency, Region II, Water Sepply Branch, 26 Federal Plaza, Room 24–130, New York, N.Y. 10007.

A copy of the above documentation is also available at the U.S. Environmental Protection Agency, Waterside Mall, Public Information and Reference Unit, Room 2922, 401 M Street SW., Washington, D.C. 20460.

EPA proposed national regulations for implementing Section 1424(e) of the Safe Drinking Water Act on September 29, 1977, 42 FR 51574. The proposed regulations contain procedures for review of Federal financially assisted projects which may contaminate aquifer systems designated as "sole or principal source" aquifers through the recharge zone so as to create a significant hazard to public health. Until their final promulgation, these regulations will be used as interim guidance for implementing a sole source program under Section 1424(e). Questions and comments concerning the possible effect of the regulations on federally assisted projects in the Buried Valley Aquifer System area should be directed to Region II, Environmental Protection Agency, Attn: Harry F. Smith, Jr., P.E., Chief, Water Supply Branch, U.S. Environmental Protection Agency, 26 Federal Plaza, New York, N.Y. 10007.

EPA, Region II, is working with the Federal agencies which intend, or may intend to fund projects in the area of concern to develop procedures for notifying EPA projects in the area which might contaminate the aquifer. EPA will evaluate such projects and, where necessary, will conduct an in-depth review, including soliciting public comments where appropriate. More stringent review criteria will be applied to those projects that have a greater potential for contaminating the aquifer, such as those located in the recharge zone.

Although the project review process cannot be delegated, the Regional Administration in Region II will rely to the maximum extent possible upon and existing or future State and local control mechanisms in protecting the southeastern Morris and western Essex Counties, New Jersey. Included in the review of any Federal financially assisted project will be coordination with the State and local agencies. Their determinations will be given full consideration and the Federal review process will function so as to complement and support State and local protection programs.

Dated: May 2, 1980.

Douglas M. Costle,

Administrator.

[FR Doc. 80-14013 Filed 5-7-80; 8:45 am]

BILLING CODE 6560-01-M

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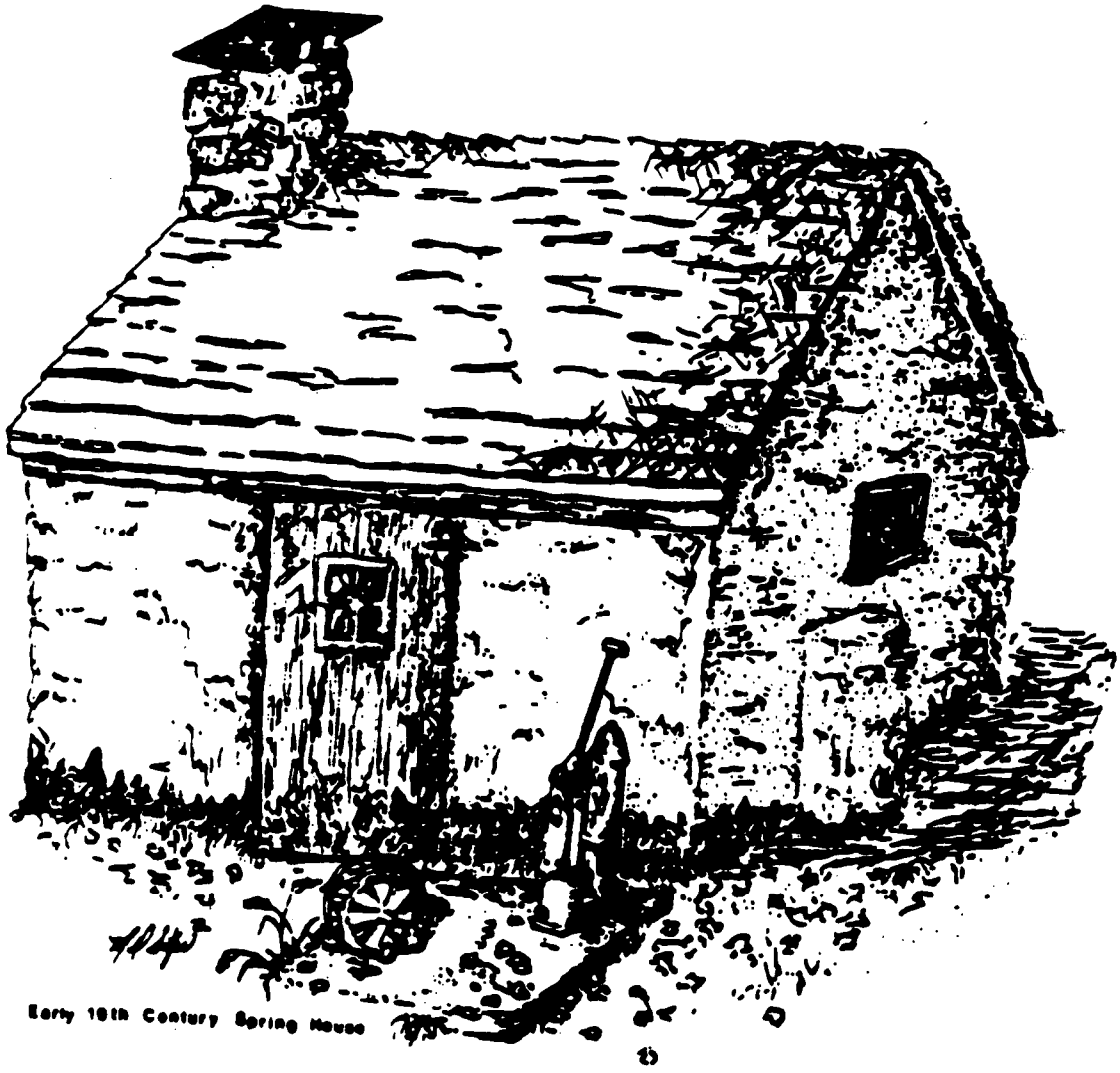
REFERENCE NO. 11

THE BURIED VALLEY AQUIFER SYSTEMS: RESOURCES AND CONTAMINATION



Early 19th Century Spring House

PASSAIC RIVER COALITION

246 Madisonville Road

Basking Ridge, New Jersey 07920

(201) 766-7550

1986

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THE BURIED VALLEY AQUIFER SYSTEMS:

RESOURCES AND CONTAMINATION

Passaic River Coalition

246 Madisonville Road
Basking Ridge, New Jersey 07920
(201) 766-7550

1986

Project Director: Daniel J. Van Abs, Ph.D.

Cover Design: Maureen D. Silfer

Cover Layout: Robert T. Pavlowsky

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From the Chairman

The Passaic River Basin has long been divided according to the surface topography and hydrology. The Upper Basin is located in the Highlands Province and contains the headwaters to most of the major tributaries to the Passaic River. The Central Basin is famous for its floods. It is typified by the flat topography of the wetlands in eastern Morris and western Essex Counties. The tributaries mentioned above all meet in the Central Basin, sometimes with devastating effects on the works that mankind has carelessly placed in the floodplains. The Lower Basin is famous for the Great Falls of the Passaic, in Paterson, and for the water quality problems of the lower River. The restoration of the Lower Basin for recreation and parks is one of the great success stories and challenges of the basin.

However, the surface divisions of the basin ignore an underlying reality. The Passaic River Basin is also divided into two regions based on the sources of potable water. The eastern portion of the basin is primarily supplied by water from reservoirs and rivers in the Central and Upper Basins. The cities of Newark, Jersey City, Paterson, Clifton and many others are entirely dependent upon clean water from the western part of the basin. This was not always true. Few now know that Newark was developing wells in Belleville to augment its water supply when the City decided to purchase the Pequannock Watershed instead. Now, most of the ground water in the urban areas is gone or contaminated.

The people and businesses of the Central and Upper Basins rely almost entirely upon ground water for their drinking water supplies. Most of the surface water has long been allocated to the eastern cities. Ground water, fortunately, has been abundant and clean in the western part of the region. Not forever! This report is the first of its kind in the State of New Jersey, documenting available information on both the ground water resources and contamination of the Buried Valley Aquifer Systems, the most abundant ground water resource in northern New Jersey. The results are sobering — our aquifers do indeed have limits both of quantity and quality. Contamination is too common. Development both increases water demand and reduces recharge to the aquifers.

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TABLE II-1. Geologic Time Scale[a]

Million years ago	Era	Period	Events
1.5	Cenozoic	Quaternary	Ice Age in Pleistocene Epoch
65		Tertiary	
135	Mesozoic	Cretaceous	Deposition of sediments on Inner Coastal Plain
181		Jurassic	Upper Brunswick deposition; extrusion of Watchung basalt
220-230		Triassic	Erosion of Appalachian Mountains. Deposition of Brunswick Formation. Block faulting to form Newark Basin
280	Paleozoic	Permian	Climax of Appalachian Revolution; extensive folding and faulting
310		Pennsylvanian	
345		Mississippian	
405		Devonian	Acadian Orogeny: further uplift of Appalachian geosyncline
425		Silurian	
500		Ordivician	Taconic Orogeny: uplift of Appalachian geosyncline
570-600		Cambrian	Subsidence of Appalachian geosyncline continued
4,500[b]	Precambrian		Formation of Appalachian geosyncline. Ramapo fault originated at this time. Volcanic activity formed Eastern Uplands

[a]Table is not to scale.

[b]Recent estimate of the age of the earth. However, the estimated age has been increasing steadily as older rock formations are discovered.

Source: Keller, 1979; Kelland and Kelland, 1978

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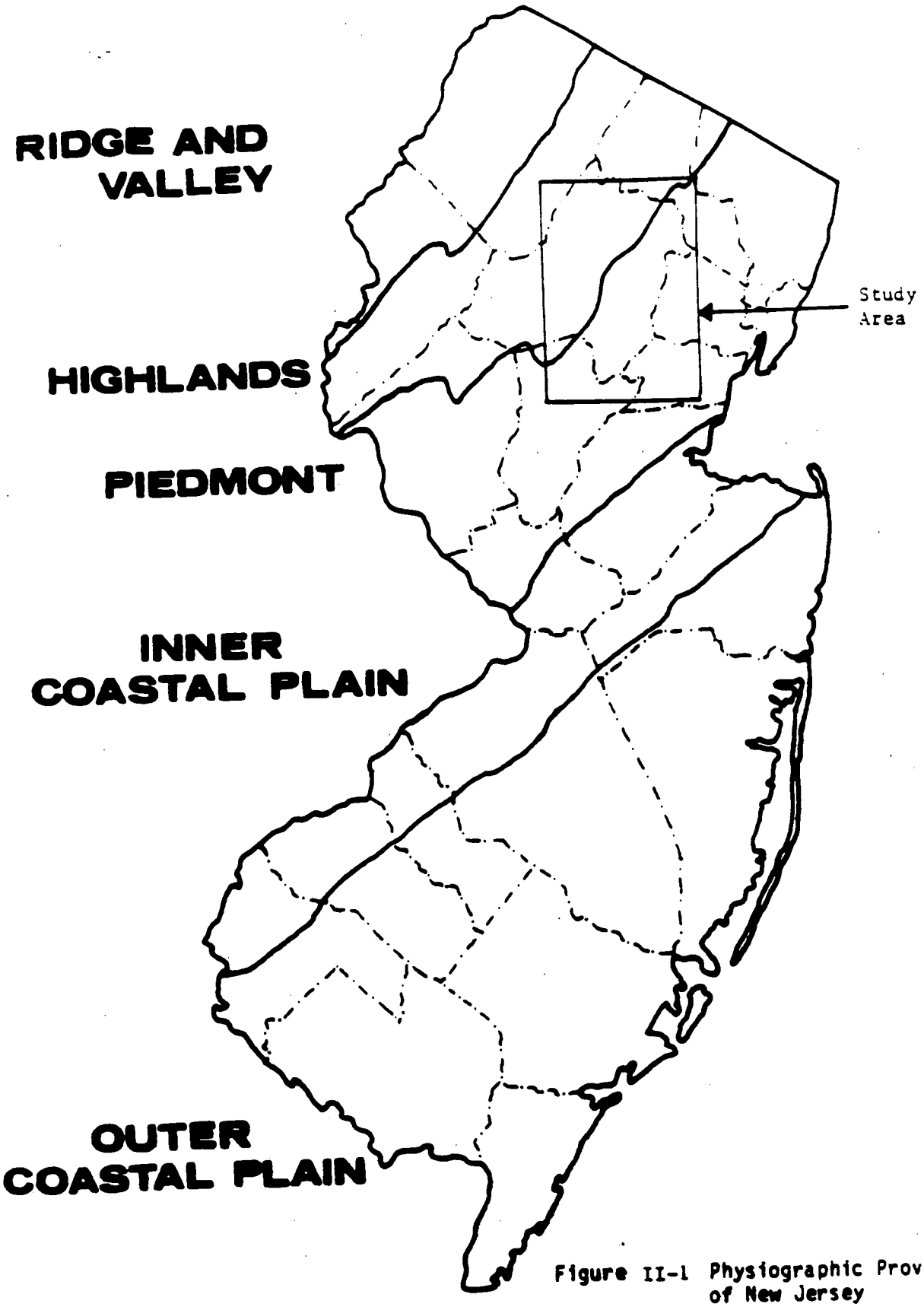

Figure II-1 Physiographic Provinces of New Jersey

Source: Kelland and Kelland, 19

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More recent and widespread use of formation logs from wells drilled deep into the ground has provided more extensive data on an area's lithology. Still, many gaps existed and still exist, as drilling gives point-by-point information without a definitive answer on the stratigraphy of the area between the wells.

This century has seen an increase in the application of physics theory to the study of geology, through a technology called geophysics. Geophysics has been used in the location of mineral fields, petroleum deposits, ground water resources and pollution plumes moving subsurface. Surface geophysical techniques, such as direct current-resistivity, electromagnetic and induced polarization, seismic reflection and refraction, gravimetry and magnetic methods, are often used in conjunction with drilling. Usually fewer observation holes are needed than if drilling was the sole technique used. The observation holes are used to verify or calibrate the data gathered through surface geophysics. Geophysics is a useful technique for geologic investigations as it can provide a more complete picture of the stratigraphy of an area and the potential existence of ground water resources than can drilling alone (Zohdy, et al., 1974).

Key Geologic Events in Northern New Jersey

Northern New Jersey, the location of the Buried Valley Aquifer Systems, has been marked by three major events: the creation and erosion of the Appalachian Mountains; the creation of the Newark Basin in the Piedmont Province; and the effects of several glaciation episodes across much of the study area. Each area's geologic history will be discussed, followed by a brief description of the aquifers.

The Ridge & Valley and Highlands Provinces

The geologic processes which occurred in New Jersey over the hundred of millions of years through the Precambrian and Paleozoic Eras produced a complex series of rock types. Sediments were deposited and compressed into rocks. The rocks were subsequently folded and faulted, intruded with volcanic materials, and metamorphosed by heat and pressure. The following rock types resulted: granite, gneiss, diorite, slate, marble, limestone, dolomite, siltstone, claystone, shale, and sandstone.

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The distribution of Precambrian and Paleozoic rocks is limited to the northwestern section of New Jersey in the Ridge and Valley and the Highlands physiographic provinces (Figure II-1). Fenneman (1938), Kummell and Lewis (1940), and Wolfe (1977) provided detailed information on these areas. The study area includes some Precambrian formations along the western edge of the Upper Passaic and Whippany River watersheds and much of the Rockaway River watershed west of the Ramapo Fault, in the Highlands Province. Precambrian formations are poor aquifers.

The Paleozoic rocks also are generally poor aquifers, with the exception of the Kittatiny Formation (dolomitic limestone). The Kittatiny Limestones are located primarily within the long valley running from Picatinny Arsenal in Rockaway Township, southwest toward Chester Township. A connected valley (Flanders Valley) also contains dolomite which extends southwest parallel to the Upper Lamington valley.

Formation of the Piedmont Province

The Appalachian Mountains were uplifted at the end of the Paleozoic Era when the European and African plates collided with the North American plate.[1] Figure II-2 illustrates the assumed cross-section of New Jersey at that time. As the plates separated, faulting occurred along the eastern edge of the Highlands and the western edge of the Eastern Uplands creating a basin (Figure II-3). Eroded materials from these mountains were deposited into the basin and later became the rocks that occur in the area today.

The basin is called the Newark Basin and the rocks that formed in it are members of the Newark Group. The basin is part of the Piedmont physiographic province which extends in New Jersey from the Delaware River (from Trenton to north of Frenchtown), northeast to the New Jersey-New York line (from Mahwah to the Hudson River). The Piedmont totals approximately 20% of the area of New Jersey (Figure II-1). The Piedmont

[1] The concept of the continents and ocean basins being divided into six major plates and a number of minor ones floating atop the more plastic mantle has revolutionized modern geology. The collisions and breaking away of these plates has shed new light on the processes that form volcanos, earthquakes, faults, and mountains. From the pioneering work of Alfred Wegener (1915), a German meteorologist, a new branch of geology, "Plate Tectonics," has emerged and with it has come an explanation of the major crustal features of the earth.

is characterized by gently rolling plains 200 to 400 feet in elevation underlain by easily eroded rocks, and several ridges underlain by resistant rocks (Wolfe, 1977).

According to Van Houten (1969), deposition in Triassic Period began with the transport of arkosic materials (poorly sorted feldspar and quartz particles) from the Eastern Uplands forming the Stockton Formation (locally called brownstone) to a depth of 6,000 feet. Coarse materials eroded from the Highlands formed the Hammer Creek Formation, a conglomerate rock approximately 1,000 feet thick (Figure II-4). A number of outcrops of the Hammer Creek Formation occur near the western edge of the Newark Basin.

Later in the Triassic Period deposition of these formations ended. A shallow lake formed in the Newark Basin (Figure II-5). An alternating series of sediments with rock fragments derived from existing rocks, and then chemical deposits from dissolved materials in the lake water, formed a clay-like rock approximately 3,700 feet thick called the Lockatong Formation. Outcrops of this formation occur at the eastern and western ends of the basin (Van Houten, 1969).

From late Triassic to early Jurassic time,[2] the Brunswick Formation was deposited in the Newark Basin, to a depth of 6,000 feet in the central portion and 16,000 feet in the northeast. Figure II-6 shows the meandering streams that transported and deposited muddy sediments eroded from the Highlands. The Brunswick is composed mainly of soft red shales, interbedded with sandstone and some conglomerate. The red color of the shale is from iron oxide in the form of the mineral hematite (Wolfe, 1977).

Volcanic activity occurred in the Newark Basin during the early Jurassic Period. Fissures formed in the earth's surface resulting in a flow of basalt. Deposition of the Brunswick Formation continued in the periods between the lava flows. Three separate periods of volcanic activity occurred, each with numerous individual flows. Later faulting caused the flows and Brunswick Formation to be tilted to the northwest (Figure II-7). After an extended period of erosion the basalt flows were exposed forming the Watchung Mountains.

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[2] The Brunswick Formation was thought to be only of Triassic age until several studies had redated the upper 1,500 feet of the formation as well as the Watchung basalt flows and the Palisades sill to early Jurassic. (Cornet, Traverse and McDonald, 1973).

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The bedrock of the study area, therefore, is composed of Precambrian rocks occurring in the Highlands Province, the Hammer Creek Formation cropping out in a few places along the eastern edge of the Highlands, the Watchung Basalt forming three ridges called the Watchung Mountains, and the Brunswick Formation in the remainder of the area. The Stockton and Lockatong Formations are far below the earth's surface in this area and are of little significance to the region's ground water resources.

Glaciation

As important as the bedrock of the study area is to the region's ground water supplies, the results of glaciation in the Pleistocene Epoch (a division of the Quaternary Period, refer to Table II-1) are of greater significance. The latest Pleistocene glaciation began approximately 80,000 years ago. This ice advance, called the Wisconsin Glaciation, reached its maximum extent in New Jersey about 18,000 years ago and receded about 11,000 years ago (Wolfe, 1977). The maximum extent of this glaciation is marked by a terminal moraine, shown in Figure II-8, which extends from Perth Amboy through northern Middlesex County, the Union-Somerset County boundary, and across the center of Morris County, passing through the towns of Chatham, Madison and Morristown, and into the Rockaway River watershed.

The ice acted as a giant bulldozer pushing and carrying great quantities of soil and rock in, under, and on top of the ice. When melting along the front of the glacier halts its forward movement, these materials are deposited in a line at the face of the glacier in a **moraine**. Within a moraine, materials of all sizes are mixed together in deposits called **glacial till**. Moraines in the region consist both of the **terminal moraine** (a long ridge along the farthest advance of the glacier) and **ground moraines** (flat beds of glacial till deposited on the land surface). The melting water then carried some of the glacial materials and deposited the particles in a stratified manner. That is, the clays, silts, sands and gravels are separated in layers and over distance because of the capacity of moving water to carry fine materials farther than coarse ones. Many of the sand and gravel pits now mined for construction materials were created in this manner. In some areas, large amounts of stratified materials were deposited in preglacial channels and valleys. These sands and gravels constitute the buried valley aquifers on which much of the area depends for its water supply.

Aquifers of the Study Area

Aquifers are geologic formations which have capability to store and transmit water which is recoverable in sufficient quantity to be economically usable (U.S. ACE-HEC, 1972). The capacity of an area's geologic formations to serve as aquifers is largely determined by two characteristics. First, the material must have space for water; that is, it must be **porous**. Second, water must be able to move freely through the material; that is, it must be **permeable**.

In consolidated rocks found in the study area - shale, sandstone, and basalt - both porosity and permeability are dependent on secondary fractures, joints, faults, and solution channels, because the rocks are basically not porous in their solid unbroken state. Sandstone usually is more productive as aquifers than other bedrocks because the cementing materials between the same grains may be absent in places or it may have been removed by solution.

Unconsolidated materials such as glacial deposits and alluvial deposits along streams usually make more productive aquifers than crystalline rocks. The best aquifers are composed of sands or gravels which have both high capacity for storing water and high permeability for transmitting it. Some sand and gravel deposits are not well sorted and have much of the space between the large grains filled with silt and clay. In such cases, their porosity and water-transmitting capacity are greatly reduced. Ways in which porosity may exist in rocks and sediments are illustrated in Figure II-9. Figure II-10 illustrates the basic aquifer types of the region.

An analysis of the water-bearing properties of the aquifers in the study area gives an indication of the amount of water a well will produce. A brief description of applicable characteristics of Precambrian rocks, carbonate rocks, Brunswick Formation, Watchung Basalt, and Pleistocene stratified deposits follows. A summary is shown in Table II-2.

Precambrian Rocks

The varied types of rock of Precambrian age serve as aquifers in the Highlands Province portion of Morris County, but none are located in Essex, Somerset or Union Counties. Nearly all ground water supplied from Precambrian rocks occurs in fractures, often close to the rock surface. Therefore, the amount of water available from these rocks depends on the size and number of the intersecting fractures. The yield

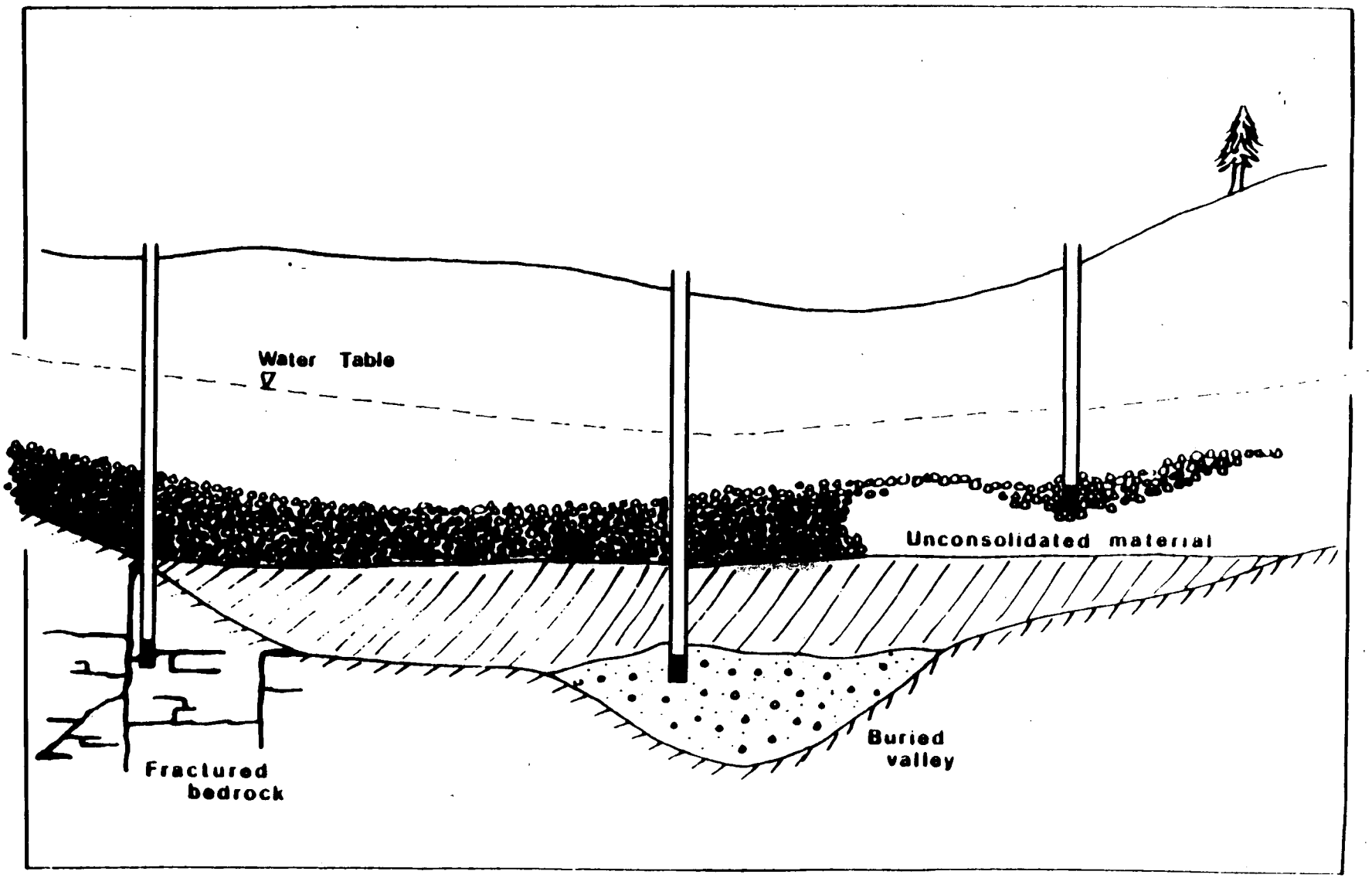

Figure II-10. Basic Types of Aquifers in Study Area

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TABLE II-2

HYDROLOGIC DATA FOR AQUIFERS IN STUDY AREA

	Average	Range
Precamrian Rocks		
Yield of 79 large-diameter wells in Morris County	121 gpm	4 - 400 gpm
Coefficient of transmissivity of wells in Morris County	-	2,000 - 3,000 gpd/ft
Coefficient of storage s of wells in Morris County	-	0.001
Specific Capacity of 56 wells in Morris County	1.77 gpm/ft	0.06 - 15.1 gpm/ft
Watchung Basalt		
Yield of 5 wells in Morris County	-	30 - 53 gpm
Yield of 26 wells in Essex County	116 gpm	7 - 500 gpm
Specific capacity of wells in Morris County	1 gpm/ft	-
Specific capacity of wells	1.74 gpm/ft	0.05 - 5.66 gpm/ft
Brunswick Formation		
Yield of 37 large-diameter wells in Morris County	142 gpm	4 - 660 gpm
Yield of 35 large-diameter wells in Essex County	364 gpm	35 - 820 gpm
Coefficient of transmissivity of 7 wells in Morris County	-	7500 - 30,000 gpd/ft
Coefficient of storage of 7 wells in Morris County	0.00005	-
Specific capacity of 34 wells in Morris County	4.57 gpm/ft	0.03 - 33.33 gpm/ft
Specific capacity of 35 wells in Essex County	11.07 gpm/ft	0.21 - 70 gpm/ft

of such rocks can vary considerably within a short distance, both horizontally and vertically. Because fractures are wider toward the surface due to weathering, a well in Precambrian rock is unlikely to supply much water below 300 feet. The 79 large-diameter public supply, industrial, and commercial wells in Precambrian rock that operated in 1965 throughout Morris County yielded an approximate average of 121 gallons per minute (gpm), and the maximum and minimum yields were 400 and 5 gpm respectively. The larger amounts are usually associated with fault zones (Gill and Vecchioli, 1965).

Water quality from Precambrian wells is generally good. Hardness ranges from soft (less than 50 ppm) to moderately hard (60-120 ppm); pH ranges from slightly acidic to slightly alkaline; and iron occurs in objectionable quantities in some areas (Gill and Vecchioli, 1965).

Carbonate Rocks

The primary carbonate rock aquifer in the study area is that of the Kittatiny Formation. This is a long, deep, narrow bed of dolomitic limestone from the Paleozoic Era. Gill and Vecchioli (1965) reported that the five major wells developed in the dolomite at the time had yields ranging from 40 to 380 gpm. They suggested that the Kittatiny Formation had the potential for moderate to large ground water supplies. The Alamatong well field has Well 5 with a yield of 500 gpm and the potential for greater yields, in the Lightsville Dolomite. Markewicz (personal communication, 1986) reports that other dolomite wells have yields of up to 3000 gpm in the Pequest Valley (Warren County). He estimates, based on the sketchy data available to date, that 10 to 15 mgd may be available from the various dolomite deposits.

Newark Group: Brunswick Formation

The Brunswick Formation serves as an aquifer in the following communities of the Buried Valley Aquifer Systems: Chatham Borough, East Hanover Township, Florham Park Borough, Hanover Township, Harding Township, Lincoln Park Borough, Montville Township, Morris Township, Town of Morristown, Parsippany-Troy Hills Township, and Passaic Township in Morris County; Caldwell Borough, Fairfield Township, Livingston Township, Millburn Township, North Caldwell Borough, Roseland Borough, West Caldwell Borough, and West Orange Town in Essex County; Bernards Township, Bernardsville Borough and Warren Township in Somerset County;

and Berkeley Heights Township, New Providence Borough, Summit City in Union County (Gill and Vecchioli, 1965; Nichols, 1968a; Nemickas, 1976).

The approximately 6,000 feet-thick Brunswick Formation is composed of shale with local occurrences of sandy and pebbly consolidated beds. The sandstone ranges from a few inches to 20 feet in thickness. The many joints and fractures in the rock allow for retention and transport of a fairly large volume of ground water. Wells yield from 4 to 650 gpm in Morris County, from 35 to 820 gpm in Essex County, and from 12 to 870 gpm in Union County (Gill and Vecchioli, 1965; Nichols, 1968a; Nemikas, 1976). Wells of greatest yield are usually those between 200 and 500 feet deep where several source zones feed the well, and is usually hard.

Newark Group: Watchung Basalt

The Basalt Formation serves as an aquifer in the following communities within the study area: Florham Park Borough, Lincoln Park Borough, and Montville Township in Morris County; Essex Fells Township, Fairfield Township, Livingston Township, Millburn Township, North Caldwell Borough, West Caldwell Borough, and West Orange Town in Essex County; Warren Township in Somerset County; and Berkeley Heights Township, New Providence Borough, and Summit City in Union County (Gill and Vecchioli, 1965; Nichols, 1968a; Nemikas, 1976). The basaltic flows of the Watchung Mountains serve as a small source of ground water in the study area. Water is usually concentrated in gas-created vesicles and fractures in the rock. Wells yield volumes of 30 to 53 gpm from depths of less than 300 feet in Morris County (Gill and Vecchioli, 1965); from 7 to 400 gpm in Essex County (Nichols, 1968a); and from 20 to 164 gpm in Union County (Nemikas, 1976). Water from the Watchung rocks is usually hard, ranging from 60 to more than 180 gpm. Some wells also have high sulfate, iron and manganese levels (Gill and Vecchioli, 1965).

Pleistocene Deposits

The Pleistocene glacial deposits serve as aquifers in the following study area communities: Chatham Borough, Denville Township, Dover Town, East Hanover Township, Florham Park Borough, Hanover Township, Madison Borough, Montville Township, Morris Township, Morris Plains Borough, Mountain Lakes, Parsippany-Troy Hills Township, Rockaway Borough, Rockaway Township, Roxbury Township and Wharton Borough in Morris County; and Essex Fells Borough, Fairfield Borough, Livingston Township, Millburn Township, and West Orange Town in Essex County (NJDEP, 1985).

The stratified deposits produce the largest source of ground water in both Morris and Essex Counties (77 per cent and 81 per cent). Wells yield from 20 to 2,200 gpm and the water is of good quality. This ground water is pumped from the buried valley (valley-fill) aquifers. The valleys existed before the Pleistocene glaciation. In some areas, coarse-grained sands and gravels were washed into the valleys by melting water from the glaciers. Later some of these deposits were overlain by glacial till, by lake sediments or both. Therefore, the location of the buried valleys is difficult to ascertain by direct observation from the surface. Figure II-11 shows the assumed origin of the buried valleys.

The primary ground water resources for the Buried Valley Aquifer Systems are contained in the Brunswick Formation of eastern Morris and Western Essex Counties (shale and sandstone), the carbonate rocks of western Morris County (dolomitic limestone) and the Pleistocene deposits of the entire study area. By far the dominant producers are the buried valley aquifers for which the region is named. Chapter III presents a basic understanding of the field of hydrogeology which serves as a foundation for discussion of the buried valley aquifers in Chapter IV and of the utilization of all aquifers within the region in Chapter V.

REFERENCE NO. 12

Rec'd 1/10/00

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual

(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984

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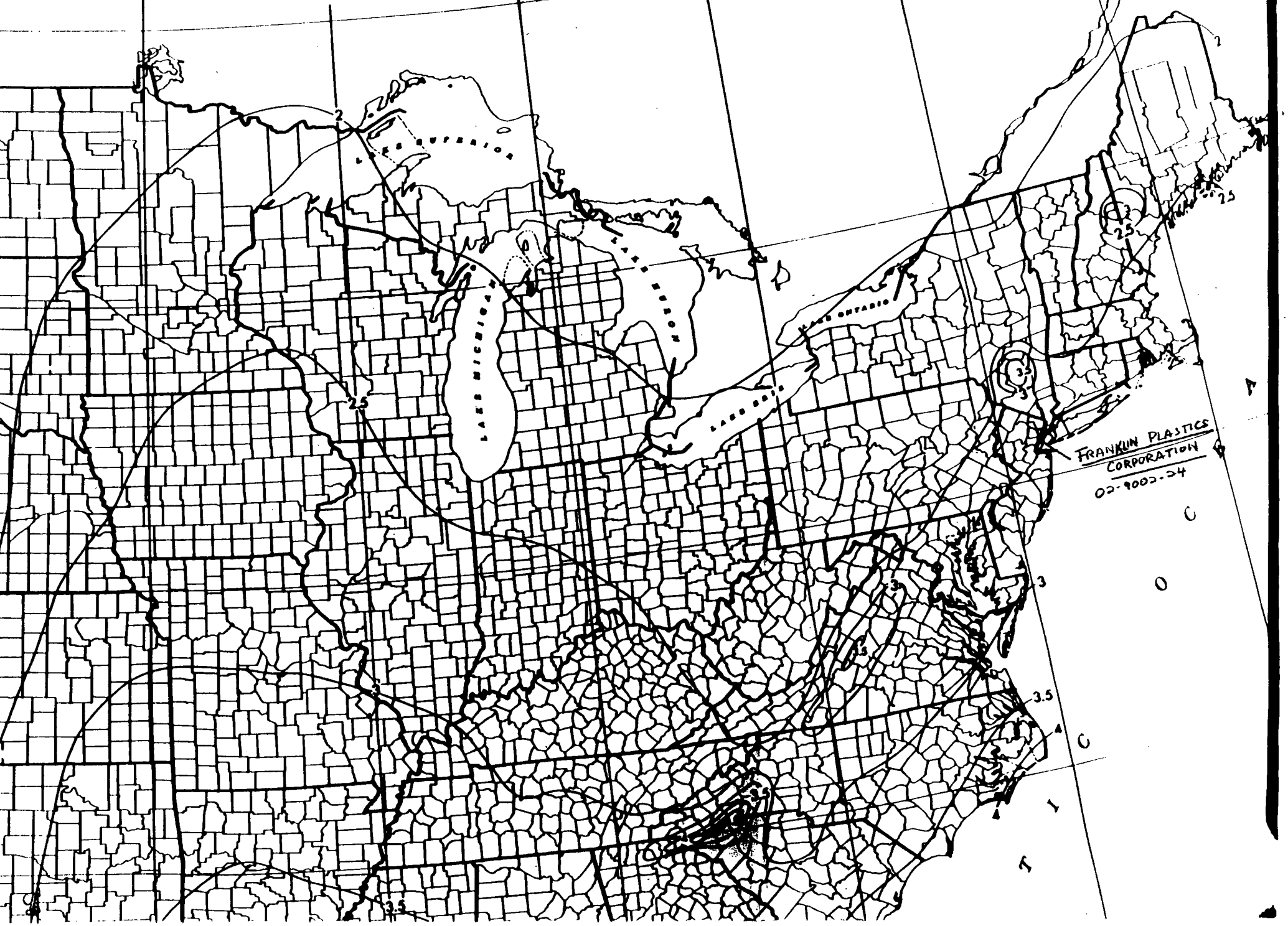
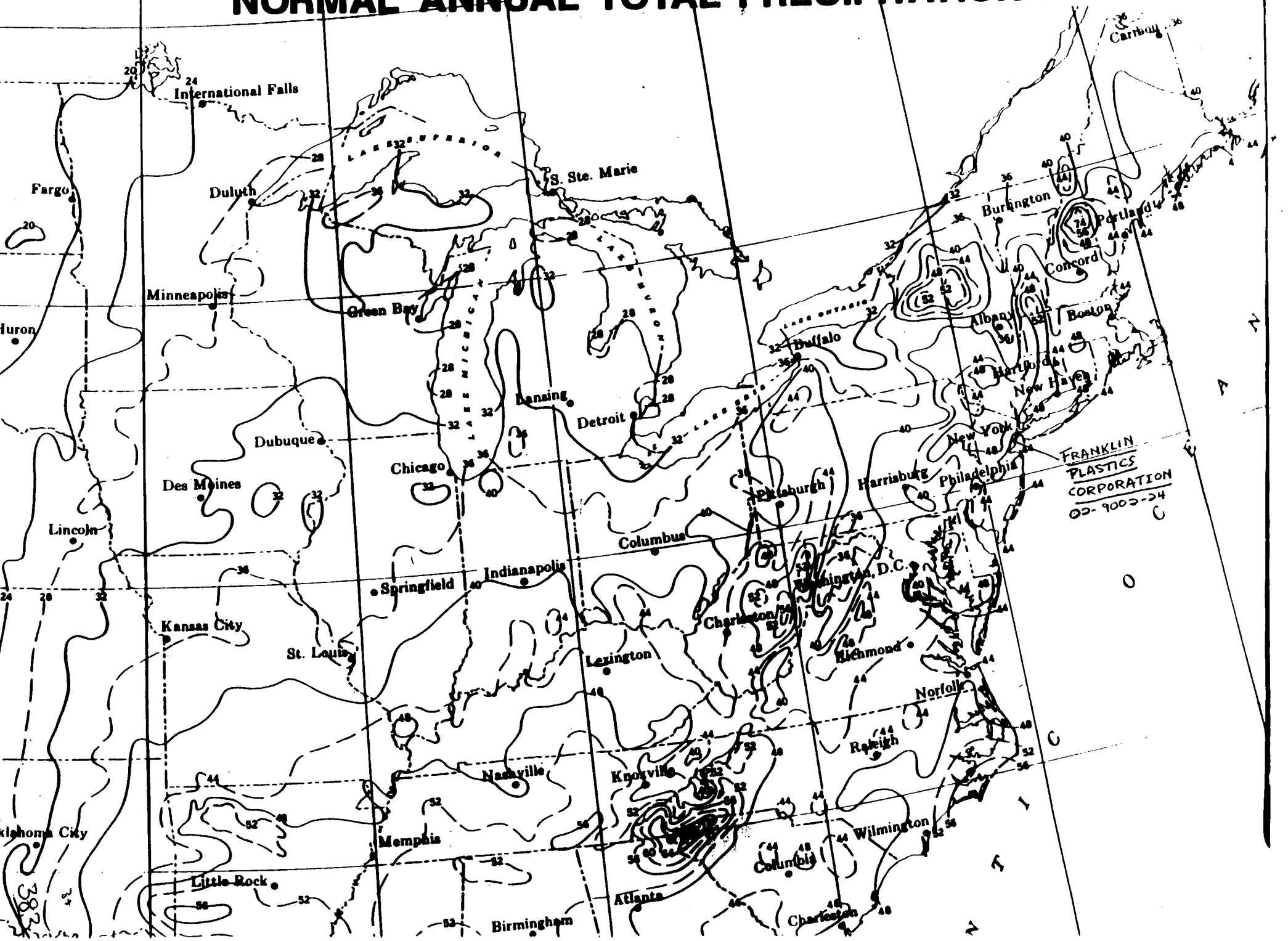
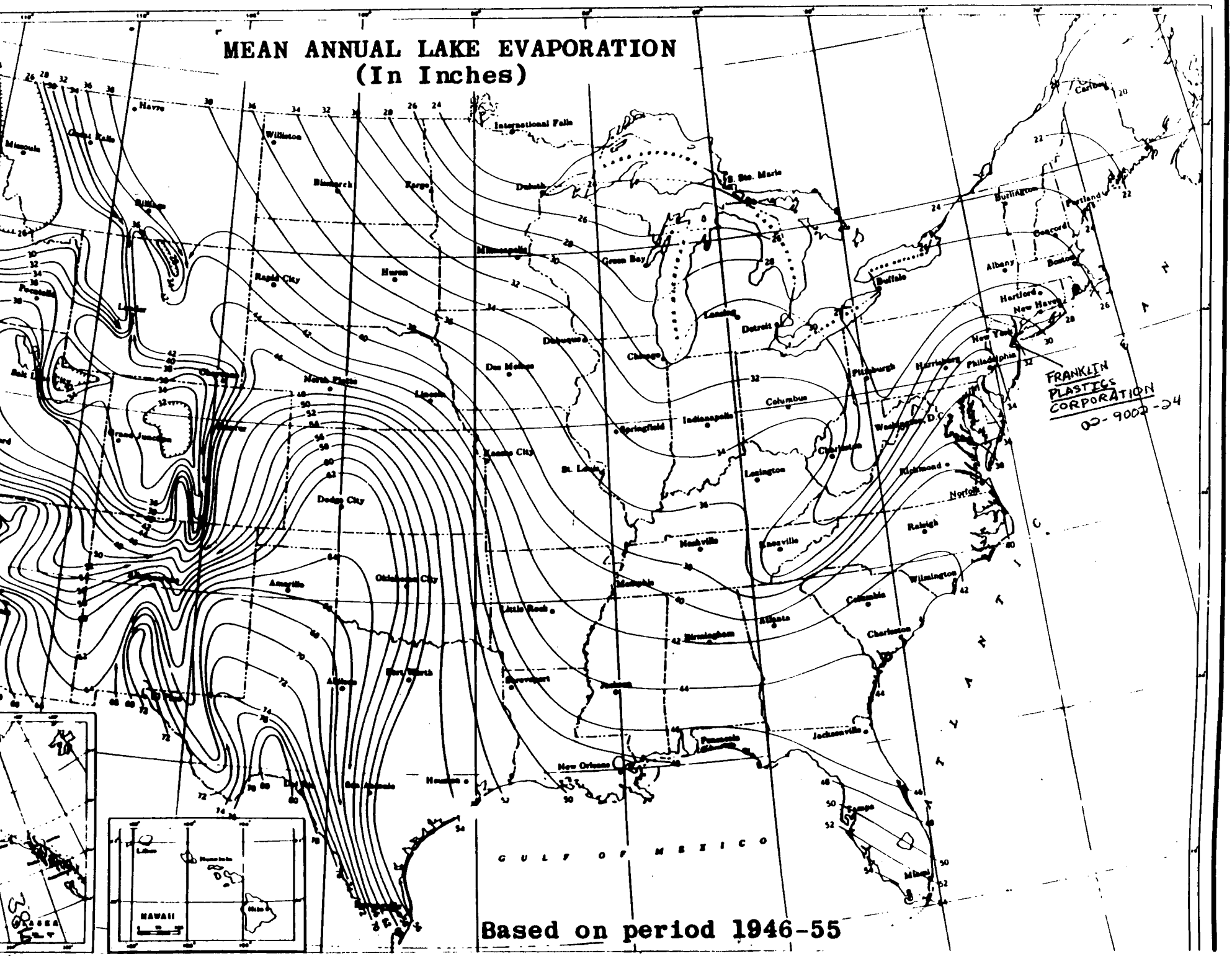
1 YEAR 24-HOUR RAINFALL (inches)



NORMAL ANNUAL TOTAL PRECIPITATION (inches)



MEAN ANNUAL LAKE EVAPORATION
(In Inches)



Based on period 1946-55

Franklin
Plastics
Corp. 02-9002-24

TABLE 2

PERMEABILITY OF GEOLOGIC MATERIALS*

Type of Material	Approximate Range of Hydraulic Conductivity	Assigned Value
Clay, compact till, shale; unfractured metamorphic and igneous rocks	$<10^{-7}$ cm/sec	0
Silt, loess, silty clays, silty loams, clay loams; less permeable limestone, dolomites, and sandstone; moderately permeable till	$10^{-5} - 10^{-7}$ cm/sec	1
Fine sand and silty sand; sandy loams; loamy sands; moderately permeable limestone, dolomites, and sandstone (no karst); moderately fractured igneous and metamorphic rocks, some coarse till	$10^{-3} - 10^{-5}$ cm/sec	2
Gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite	$>10^{-3}$ cm/sec	3

*Derived from:

Davis, S. N., Porosity and Permeability of Natural Materials in Flow-Through Porous Media, R.J.M. DeWiest ed., Academic Press, New York, 1969

Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall, Inc., New York, 1979

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NUS CORPORATION
A Halliburton Company

FIELD INVESTIGATION TEAM ACTIVITIES AT UNCONTROLLED HAZARDOUS SUBSTANCES FACILITIES — ZONE I

NUS CORPORATION
SUPERFUND DIVISION

386

02-9002-24-SI
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
FRANKLIN PLASTICS CORP.
VOLUME 2 OF 2

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-9002-24
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 17, 1990

NUS CORPORATION
SUPERFUND DIVISION

REFERENCE NO. 13

RECON SYSTEMS INC.
ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

SAMPLING AND ANALYSES PLAN RESULTS

for

FRANKLIN PLASTICS CORPORATION
Kearny, New Jersey

ECRA Case No. 86206

RECON Project No. 1126

Prepared by:

William A. Moody
Senior Environmental Specialist
RECON SYSTEMS, INC.
Route 202 North
Three Bridges, New Jersey

October 1, 1987

1126.SR 9.30.87

RECON SYSTEMS, INC.

Route 202 North P.O. Box 460
Three Bridges, N.J. 08887
201-782-9001

New England 617-782-4217 Pennsylvania 215-433-5511

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III NJPDES Sump and Dry Well Inspection Report

IV Hydrogeological Assessment

V Soil Logs

VI Boiler Blowdown Additives

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- VIIIa Organics
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IX Analytical Reports with Laboratory Quality Assurance/Quality Control Data

1126.SR 9.28.87

1.0 INTRODUCTION

Franklin Plastics Corporation is located on approximately 8 acres at 113 Passaic Ave., Kearny , Hudson County. The site is on the former flood plain of the Passaic River which forms the western property boundary. Substantial filling with urban refuse (excluding household waste) has taken place over the years. A substantial amount of urban fill has been placed in increasing depths as the property gradually slopes westward toward the river.

To the east the site is bounded by Passaic Ave. To the north is a Retail/Warehouse complex. Land to the south is in Industrial/Manufacturing use.

On March 25, 1987 New Jersey Department of Environmental Protection, Bureau of Environmental Cleanup and Responsibility Assessment (BEECRA) approved a Sampling and Analysis Plan and Amendments to the Sampling and Analysis Plan submitted on March 18, 1986 and February 12, 1987, respectively.

The Bureau's approval was contingent upon eighteen conditions.

Through April and part of May, RECON Systems, on behalf of Franklin Plastics, discussed aspects of the sampling with members of the NJ DEP involved in review of the sampling plans and approvals. Those persons were Christine Hylemon (BEECRA), Jeff Fehr (Groundwater Management) and Tom Gillespie of the Bureau of Environmental Evaluation and Risk Assessment (BEERA) The result of those conversations was a May 14, 1987 letter from RECON to BEECRA referencing a resolution of outstanding issues agreed to by both RECON and BEECRA. For reference purposes, copies of this correspondence are included in Appendix I.

2.0 PROJECT DESCRIPTION

Areas of environmental concern identified were:

1. A 50,000 gallon above ground fuel storage tank.
2. Two (2) each 275 gallon above ground fuel tanks.
3. A 6,000 gallon underground gasoline tank.
4. Two cement sumps and a dry well.
5. A tank farm for plasticizer oil storage.
6. An expansion chamber and visibly contaminated soils in its vicinity.
7. A plastic resin and plasticizer loading/unloading area.
8. The area adjacent to a dust collector discharge. In this same area, drummed materials had been stored in trailers.
9. Soils receiving boiler blowdown.
10. An area receiving discharge from an employee sink.
11. The transformer substation.
12. The fill in the undeveloped area toward the river.

Sampling locations and depths of sampling were selected to address various site-specific concerns. Analytic parameters were limited in some cases to compounds of obvious concern, (e.g. PCB's and Petroleum Hydrocarbons in the transformer area). For most samples, Full Priority Pollutant analyses were conducted. Sampling locations and parameters were delineated in documents contained in Appendix I. Laboratory and field quality assurance/quality control information was submitted with the original documents. Final sample and monitoring well locations are shown on RECON Drawing No. 1126-004C.

Seven (7) monitoring wells were installed on the site. The wells were located and constructed to provide information on conditions in the perched groundwater (found above a less permeable veneer of clayey alluvium) and to evaluate background water quality. Appendix IV contains a hydrogeological report on groundwater conditions.

Monitoring Well No.1 (MW-1) was intended to provide background or upgradient data. MW-2 was to provide information on groundwater in the area where the underground gasoline tank had been located. MW-3 was placed downgradient of the dust collector. MW-4 and MW-5 were placed in the area estimated to be downgradient of the tank farm and plasticizer loading/unloading area. MW No. 6 was placed near the expansion chamber and MW-7 was placed just downgradient of a dry well which at one time was used to recycle cooling water.

During construction of the monitoring wells, core samples were collected by split spoon to provide accurate geophysical logs and to collect soil samples for chemical analyses. Augers were progressively advanced to clayey less permeable material which underlay the site. Samples were collected at the 6-12 inch depth and also at six (6) inches above groundwater. Priority pollutant analyses and petroleum hydrocarbons were run on all monitoring well core samples. See Appendix II for well specifications and logs.

Sample and monitoring well locations are shown on RECON Drawing No. 1126-004-C.

3.0 RESULT OF SOIL SAMPLING

Area 1 50,000 Gallon Fuel Tank

The property on which this tank sits is not owned by Franklin Plastics. Therefore, no sampling was conducted in this area. The area immediately around the tank has a concrete pad.

Area 2 275 Gallon Aboveground Fuel Tanks (see Table A)

Borings B-23 and B-24 were taken to the east of the boiler room. There are two 275 gallon aboveground tanks at this location which would constitute the "rear" of the boiler room.

Boring B-24, which is down gradient of the tanks, showed levels of petroleum hydrocarbons above ECRA cleanup guidelines of 100 ppm to the 24"-30" depth. At 6"-12", petroleum hydrocarbons were reported to be 10,400 ppm (sample no. 7804). At 24"-30", a level of 451 ppm was reported (sample no. 7805).

In Boring B-23, petroleum hydrocarbons were detected above ECRA cleanup guidelines. At 6"-12", the value was 321 ppm petroleum hydrocarbons. At 5'5"-6'2", a level of 123 ppm was reported (sample nos 7802, 7803).

Priority Pollutant sampling was not conducted on B-23 and B-24 soil samples.

Split spoon samples were also taken in this area during the installation of MW-1 and MW-7. MW-7, the closest to B-23 and B-24, is also close to a dry well which receives steam condensate from the heating system traps and traps from some of the blenders within the plant.

MW-1 was intended to be installed as an upgradient well. However, during construction, visible fuel oil contamination was observed. Analyses of samples confirmed petroleum hydrocarbons at a concentration of 4,800 ppm at 6" above groundwater. Trace levels of base neutrals were detected at the 6"-12" interval (sample no. 7852). Fluoranthene was the most abundant at 2 ppm. In samples collected from the 6"-12" core, base neutral compounds were detected below the method reporting limit of 3.6 ppm. Values for one compound exceeded 2 ppm; the estimated total barely exceed 10 ppm.

Trace concentrations of base neutrals were found at 42"-48". Fluoranthene and pyrene were the most abundant at 1.1 ppm each.

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Trace concentrations of base neutrals were found at 42"-48". Fluoranthene and pyrene were the most abundant at 1.1 ppm each.

TABLE A

Boiler Room Area - Parameters and Sampling Which Exceed Known Guidelines

Results in ppm

	ECRA CLEANUP GUIDELINES*	B23/1	B23/2	B24/1	B24/2	MW1/1	MW1/2	MW7/1	MW7/2
Priority Pollutant Metals									
Antimony	2	NA	NA	NA	NA		40		
Cadmium	3	NA	NA	NA	NA		22.7		43.7
Copper	170	NA	NA	NA	NA		212		210
Lead	100	NA	NA	NA	NA	229	179	239	146
Zinc	350	NA	NA	NA	NA		482	474	1570
Volatile Organic Compounds	1	NA	NA	NA	NA				
Methylene Chloride**						0.720	0.720	4.6	1.3
1,1-Dichloroethene**							0.160		
Tetrachloroethene**							0.140		
Acetone								4.0	
Petroleum Hydrocarbons	100	321	123	10,400	451	761	4800	18100	

*Unpublished
**Four most abundant.
***All below reporting limits.

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Toluene, xylenes, 1,1-dichloroethene and tetrachlorethene were also detected in the core sample retrieved from split spoons advanced through the MW-1 borehole. Various parameters are indicated in the base neutral fraction; all, however, are below the method reporting limit, which for these particular samples is 3.6 ppm (see sample nos 7852 and 7853).
Cores from the installation of MW-7 (sample nos. 7842 and 7843) had levels of lead and zinc above ECRA cleanup guidelines. Other compounds detected were naphthalene (1.7 ppm), 2-methylnaphthalene (5.1 ppm), fluoranthene (1.6 ppm), pyrene (1.7 ppm), benzo fluoranthene (1.8 ppm) and benzo(a)pyrene (0.8 ppm).

Area 3 6,000 Gallon Underground Gasoline Tank

The tank was removed on February 4, 1986. At that time, it was reported that the soil appeared to be somewhat contaminated from leakage of gasoline. In Appendix IV of the Site Evaluation Submission (SES) it was reported that some degree of both soil and groundwater contamination had occurred. Soil borings were analyzed for benzene, toluene, and xylene. No contamination was found in the samples. (See sample nos 7818, 7819, 7820, 7821, 7822 and 7823.)

Monitoring Well No. 2 was placed nearby and downgradient of the gasoline tank location. Soil samples from cores also failed to turn up any significant volatile organic contamination.

In the 6"-12" soil core sample from MW-2, however, numerous base neutral compounds were detected. Bis(2-Ethylhexyl) phthalate (333 ppm), Di-N-octyl phthalate (36 ppm), and butyl benzyl phthalate (12 ppm) were the most abundant (sample no. 7840).

In the 42"-48" interval, butyl benzyl phthalate was detected at 3.7 ppm (sample no. 7841).

Area 4 Discharge Sump Covered by NJPDES and Drywell

SIMILAR TO COMPOUNDS FOUND IN GROUND

A concrete sump to the south of the manufacturing building receives a stream of cooling water from inplant operations and discharges to the Passaic River. The discharge is permitted by the New Jersey Pollution Discharge Elimination System. The amendments to the Sampling Plan proposed that this sump be excavated and cleaned of debris, measured for depth and capacity and visually inspected. A report of that inspection is a memorandum enclosed in Appendix III.

The sludge in the sump was sampled and analyzed for priority pollutants (plus 40) as proposed in the original Sampling and Analysis Plan. In the volatile organic scan, ethyl benzene was

found at 0.16 ppm. Three alkyl substituted benzenes and a C_9H_{10} isomer were detected in the library search. Their values were estimated to be 15 ppm, 15 ppm, 1.3 ppm and 0.56 ppm respectively. In the base neutral fraction, butyl benzyl phthalate (1,600 ppm), bis(2-ethylhexyl) phthalate (1,100 ppm), Di-N-octyl phthalate (51 ppm) and N-nitrosodiphenylamine (10 ppm) were reported (sample no. 8215).

Area 5 Plasticizer Tank Farm (see Table B)

Soil samples throughout the tank farm area within the concrete block containment walls show high levels of phthalates. Compounds detected consistently are: bis (2-ethylhexyl) phthalate, di-N-butyl phthalate, di-N-octyl phthalate, and butyl benzyl phthalate.

Samples taken on February 6, 1987, from 12"-18" depth within the tank farm averaged over 800 ppm bis (2-ethylhexyl) phthalate, over 92 ppm Di-N-octyl phthalate and over 130 ppm Di-N-butyl phthalate. (RECON sample nos. 6882 and 6883). Butyl benzyl phthalate was measured at 1,428 ppm in sample no. 6883.

At 36"-42", bis (2-ethylhexyl) phthalate averaged 237 ppm. The high concentration was 420 ppm. See B7 and B7A, sample nos. 7794 and 7795.

Area 6 Expansion Chamber and Contaminated Soils (see Table C)

Visibly contaminated soils were addressed in Section 4.0 of the Amendments to Sampling Plan (located in Appendix I). Prior to any removal, sampling was necessary to have a determination made as to the waste classification. To that end, a composite of locations B19, B20, B21 and B22 was collected and analyzed for full priority pollutants and RCRA hazardous waste parameters (sample no. 7882). Results of RCRA sampling will be provided under separate cover.

B-5, B-6 and core samples from MW-6 also were collected through visibly contaminated soils. Lead concentrations exceeded ECRA cleanup guidelines in all samples. Cadmium concentrations exceeded ECRA cleanup guidelines in all but the composite sample.

The 6"-12" sample (sample no. 7824) from B-5 had total base neutral concentrations in excess of 10 ppm. The most abundant compounds were fluoranthene (4.7 ppm) pyrene (4.1 ppm), butyl benzyl phthalate (3.9 ppm), benzo fluoranthene (3.8 ppm) and phenanthrene (3.1 ppm). At 34"-40", no base neutrals exceeded 1 ppm (sample no. 7825).

The 6"-12" sample (no. 7878) from B-6 exceeded ECRA cleanup guidelines for cadmium and lead. The two most abundant base neutrals were bis (2-ethylhexyl) phthalate (100 ppm) and butyl benzyl phthalate (19 ppm).

TABLE B

Tank Farm Area - Parameters and Sampling Locations Which Exceed Known Guidelines

	ECRA Cleanup Guidelines*	B-3+	B-2+	B7/1	B7/1 (DUP.)	B-7/A	B-7/2
Priority Pollutant Metals							
Arsenic	20					NA	1300
Cadmium	3	3.27				NA	287
Copper	170					NA	232
Lead	100		185			NA	1040
Mercury	1					NA	1.7
Silver	5					NA	7.3
Zinc	350					NA	3020
Volatile Organic Compounds	1				NA	NA	
Base Neutrals							
Bis (2-Ethylhexyl) Phthalate**		1583++	801++	2300		54	420
Di-N-Butyl Phthalate**		301++	87.1++				
Di-N-Octyl Phthalate**		0.859	108				
Petroleum Hydrocarbons	100		2710	188	NA	NA	

*Unpublished
**Three most abundant.
+Previous sampling event
++Analyte also found in method blank.

NOTES

1. NA = Not Applicable - Not analyzed for this parameters.
2. Blanks indicate that sample was analyzed for this parameter, but level found was below ECRA cleanup guideline.
3. AE = Acid Extractable

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TABLE C

Visibly Contaminated Soil Near Expansion Chamber

Results are in ppm

Parameters	B5/1	B5/2	B6/1	B6/2	MW6/1	MW6/2	ECRA CLEANUP GUIDELINE*
Priority Pollutant Metals							
Antimony				29	25	42	2
Arsenic				20			20
Beryllium				1.3	1.3	1.3	1
Cadmium	38.4		450		480		3
Lead	312	739	160		302	1150	100
Thallium	27	24					5
Zinc	589						350
Volatile Organic Compounds							1
Methylene Chloride**	2.9B						
1,1-Dichloroethene**	0.077						
Tetrachloroethene**	0.230						
Acetone**	0.430						
Petroleum Hydrocarbons	122		305	286	217	301	100

*Unpublished

**Four most abundant.

B Analyte was found in method blank.

Area 7 Loading/Unloading Area (see Table D)

In Boring B-8 (sample nos. 7785 and 7786) cadmium and lead concentrations exceeded ECRA cleanup levels at 6"-12" and 14"-20". Phthalate contamination is also reported. For the deeper sample, values were as follows: butyl benzyl phthalate (72 ppm), bis (2-ethylhexyl) phthalate (3,400 ppm) and D-N-octyl phthalate (470 ppm).

In Boring B-9 at 6"-12" the following compounds were detected: phenanthrene (6.9 ppm), fluoranthene (8.1 ppm), pyrene (6.9 ppm), benzo(a)anthracene (3.0 ppm), chrysene (2.9 ppm), and benzo fluoranthene (4.2 ppm) (sample no. 7787).

At 40"-46" the following compounds were detected: bis (2-ethylhexyl) phthalate (4.5 ppm); also 1,1,1-trichloroethane (0.11 ppm), tetrachloroethene (0.075 ppm), toluene (0.12 ppm) and benzene (0.058 ppm) (sample no. 7788).

In Boring B-10 at 6"-12", butyl benzyl phthalate (8.9 ppm), bis (2-ethylhexyl) phthalate (52 ppm), di-n-octyl phthalate (8.8 ppm) were reported. Also the following base neutral compounds were found above method reporting limits: phenanthrene (19. ppm), anthracene (4.7 ppm), fluoranthene (21 ppm), pyrene (14 ppm), benzo (a) anthracene (7.5 ppm), chrysene (7.9 ppm), benzo fluoranthene (14 ppm), benzo(a)pyrene (7.5 ppm), indeno (1,2,3-c,d) pyrene (2.5 ppm).

At 30"-36", phthalates were detected at a concentration high level, requiring retuning the GC/MS such that polynuclear compounds present below 2500 ppm could not be detected in the base neutral fraction. Bis (2-ethylhexyl) phthalate was measured at 26,000 ppm. Di-N-octyl phthalate was measured at 460 ppm (sample no. 7797).

In the volatile fraction, the reported compounds and reported values were as follows: carbon disulfide (0.41 ppm), Benzene (0.19 ppm), toluene (0.86 ppm), Ethyl Benzene (2.9 ppm) and total xylenes (0.49 ppm).

Lead concentrations in both B-10 soil samples exceeded ECRA cleanup guidelines.

Boring B-1 from February 10, 1987 was collected in the same vicinity as B-10. The report of those analyses indicates that bis (2-ethylhexyl) phthalate, and di-n-butyl phthalate were present at 1582 ppm, and 191 ppm respectively (sample no. 6881).

B-18 was analyzed for petroleum hydrocarbons only. At the 6"-12" and 30"-36" levels the reported values were 6030 ppm and 3590 ppm (sample nos. 7800 and 7801).

1126.SR 9.30.87

TABLE D

Loading Area Parameters and Results Which Exceed ECRA Cleanup Guidelines

Results in ppm

	ECRA CLEANUP GUIDELINES*	B8/1	B8/2	B9/1	B9/2	B10/1	B10/2	B18/1	B18/2	B-1+	MW4/1	MW4/2	MW5/1	MW5/2
Priority Pollutant Metals														
Antimony	2							NA	NA		38	29	20	25
Cadmium	3	185	59.8			10.5		NA	NA		44		85	4
Copper	170					2.91		NA	NA		174			
Lead	100	1740	523		126	283	2150	NA	NA		218	217		
Mercury	1						4.8	NA	NA					
Thallium	5	17	11					NA	NA					
Zinc	350		487					NA	NA					
Volatile Organic Compounds**	1							NA	NA					
Toluene		0.290			0.120						0.110		0.072	
Benzene					0.058						0.052		0.086	
1,1,1-Trichloroethane			0.074		0.110							0.450		
Xylenes		0.230									0.550		0.084	
Tetrachloroethane					0.075								0.160	
Base Neutrals	10							NA	NA					
Butyl Benzyl Phthalate**		120	72			8.9					28			
Bis (2-Ethylhexyl) Phthalate**		6000	3400		4.5	52	26000	B		1582	890	0.56	9800	32
Di-N-Octyl Phthalate**		1000	470		0.530	8.8	460				73			
Fluoranthene**				8.1		21		NA	NA					29
Phenanthrene**				6.9		19								12
TOTAL BASE NEUTRALS	10	7010	3942	15	5.030	91.7	26460	NA	NA	1582	991		9800	73
Petroleum Hydrocarbons	100	20100	2910	105	222	7830	1120	6030	3590	15966	20100	11600	6040	

*Unpublished
**Five most abundant
+Previous sampling event
B = Analyte also found in method blank.

NOTES

1. NA = Not Applicable - Not analyzed for this parameter.
2. Blanks indicate that sample was analyzed for this parameter but level was below ECRA cleanup guideline.

MW-4 and MW-5 were installed between B-9 and the tank farm area.

In the cores from MW-4 at 6"-12", the concentration of bis (2-ethylhexyl) phthalate was reported to be 890 ppm; butyl benzyl phthalate, 28 ppm, and di-N-octyl phthalate, 73 ppm (sample no. 7874). At 42"-48" (sample no. 7875) polynuclear aromatics were reported as follows:

Pyrene	4.5 ppm
Benzo Fluoranthene	3 ppm
Fluoranthene	3.5 ppm
Benzo (a) Anthracene	2.1 ppm
Benzo (a) Pyrene	2.2 ppm

Bis (2-ethylhexyl) phthalate was reported to be 0.56 ppm.

In the shallow sample, trace volatiles were found but did not exceed 1 ppm (ECRA cleanup guidelines).

In the core (6"-12") from MW-5 trace volatiles were also found. However, bis (2-ethylhexyl) phthalate was again the main constituent. The concentration of "bis" was 9,800 ppm which prevented quantification of all other compounds by raising the method reporting limit to 360 ppm or higher (sample no. 7876).

Bis (2-ethylhexyl) phthalate (32 ppm) was also most abundant in the 42"-48" sample no. 7877). However, polynuclear aromatics make up the majority of the compounds found. They were:

Phenanthrene	12 ppm
Anthracene	2.8 ppm
Fluoranthene	29 ppm
Pyrene	30 ppm
Benzo (a) Anthracene	12 ppm
Chrysene	17 ppm
Benzo fluoranthene	28 ppm
Benzo (a) pyrene	16 ppm
Indeno, 1,2,3-c,d) Pyrene	13 ppm
Benzo (g,h,i) Perylene	12 ppm

<u>Area 8</u> <u>Dust Collector and Former Material Storage Area</u> (see Table E)

A soil sample was taken in the area where materials are reported to have been stored in a centrally located area of the property. The sample designated B-13 was taken below the asphalt parking surface at 6"-12" and 20"-26" depths. Butyl benzyl phthalate, and bis (2-ethylhexyl) phthalate were detected in both intervals. Other compounds were detected in the base neutral fraction (see results for sample nos. 7791 and 7792).

TABLE E

Dust Collector Area - Parameters and Sampling Which Exceed Known Guidelines

Results in ppm

	ECRA Cleanup Guidelines*	B11/1	B11/2	B12/1	B12/2	B13/1	B13/2	MW3/1	MW3/2
Metals									
Antimony	2				48			61	38
Cadmium	3	8.5		5.2	563			69.5	8.4
Lead	100	288		159				527	
Thallium	5			11					
Zinc	350			397	594				
Volatile Organics	1								
Methylene Chloride**									1.0
Acetone**								0.330	
1,1,-Dichloroethene**			0.094						0.140
Tetrachloroethene**			0.081				0.120		0.210
Benzene**			0.066						0.130
Base Neutrals									
Butyl Benzyl Phthalate**		30	2.5	210	8.2	1.4	24	220	14
N-Nitrosodiphenylamine**				10					
Bis (2-Ethylhexyl) Phthalate**		8.5		7.3		6.2	4.3	150	1.1
Di-N-Octyl Phthalate**						0.480		6.5	
Phananthrene		1.0			2.5	0.310			
TOTAL BASE NEUTRALS	10	39.5	2.5	227.3	10.7	8.390			
Petroleum Hydrocarbons	100	322		124		5350	3320	2070	735

*Unpublished
**Five most abundant

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The deeper sample contains the higher concentration of compounds. Butyl benzyl phthalate was reported at 24 ppm, bis (2-ethylhexyl) phthalate was reported at 4.3 ppm. Total base neutrals in the 6"-12" interval did not exceed 10 ppm.

The Sampling Plan targeted the dust collector area for sampling of heavy metals. B-11, B-12 and MW -3 were located in this area.

Heavy metals were detected north and south of the dust collector discharge. Antimony, Lead and cadmium were detected above ECRA cleanup guideline levels at the 6"-12" interval. In one boring at this depth, thallium and zinc cleanup guideline levels were also exceeded (sample nos. 7798 and 7789).

The soil samples from the two borings also showed butyl benzyl phthalate down to the water table at 32". In B-12 at the 6"-12" interval, the concentration of butyl benzyl phthalate obstructed GC/MS calibrating for other compounds. The method reporting limits were raised to over 15 ppm to quantify the three most abundant compounds, N-nitrosodiphenylamine (10 ppm), butyl benzyl phthalate (210 ppm) and Bis 2-ethylhexyl phthalate (7.3 ppm) (sample no. 7789.

The average concentrations of the three (3) most abundant compounds in the deep core samples were:

Butyl Benzyl Phthalate	8.2 ppm
Phenanthrene	2.5 ppm
Fluoranthene	2.3 ppm (see sample nos 7790 and 7799)

Soil samples from the MW-3 cores corroborate the B-11 and B-12 results. Antimony, lead and cadmium exceeded ECRA cleanup guidelines in the 6"-12" sample. Only antimony and cadmium exceeded the cleanup guidelines in the 30"-36" sample (sample no. 7851).

Once again, base neutrals were present to first water. In the 6"-12" sample, butyl benzyl phthalate (220 ppm), bis (2-ethylhexyl) phthalate (150 ppm) and Di-N-octyl phthalate (6.5 ppm) were reported.

In the 30"-36" interval the base neutral results indicate butyl benzyl phthalate (14 ppm) and bis (2-ethylhexyl) phthalate (1.1 ppm).

The following trace volatiles were also found in the deeper sample: 1,1-dichloroethene (0.14 ppm), benzene (0.13 ppm), tetrachloroethene (0.21 ppm) and toluene (0.11 ppm).

Area 9 Boiler Blowdown Discharged to Soils

Condition No. 11 of the NJ DEP approval letter required analysis at the location of B-22 for boiler blow down additive. A review was conducted of these additives and their Material Safety Data Sheets (MSDS). Based upon the MSDS listings, soils were analyzed for those constituents reported to be hazardous by OSHA regulations. MSDS and sampling results are attached as Appendix VI.

Compounds for which analyses were performed and results reported are:

Sodium	76 ppm
Magnesium	10,100 ppm
Water Soluble Sulfates	254 ppm
Water Soluble Chlorides	153 ppm
poly (sodium 4-styrene sulfonate)	ND
Dodecylbenzene Sulfonic Acid	300 ppm*
Methyl Cellosolve	ND
Butyl Cellosolve	ND

*Average of two samples.
ND = None Detected

Area 10 Discharge Sink

Condition No. 9 of the Bureau's approval of the sampling plan (and revised sampling plan) required the collection of a soil sample from the area where a sink (formerly used by maintenance employees) discharged to the surface. This sample was designated B-34. In the 0-6" sample collected, reported values were butyl benzyl phthalate (51 ppm) and bis (2-ethylhexyl) phthalate (340 ppm) and di-N-octyl phthalate (14 ppm). Also detected below the method reporting limit of 48 ppm were: phenanthrene (6.5 ppm), fluoranthene (11 ppm), pyrene (12 ppm), benzo (a) anthracene (7 ppm), chrysene (11 ppm), benzo fluoranthene (10 ppm) benzo (a) pyrene (7.1 ppm) (sample no. 7849). Petroleum hydrocarbon analyses was reported to be 19,300 ppm.

Area 11

Three borings were made in the transformer substation. Samples were collected at the 6"-12" level. The results indicate that no polychlorinated biphenyls (PCB's) are present. The soils were also analyzed for petroleum hydrocarbons. The concentrations were all reported to be over 100 ppm. The highest value 1080 ppm was reported in B-17 (sample no. 8287). This was the closest to the building.

Area 12 Random Sampling (see Table F)

Nine (9) random soil samples were collected at three borings located (B-31, B-32 and B-33) in an area of urban fill between the facility and the Passaic River.

The sample designated B-31 was advanced and samples collected at 0-6", 6"-12" and 42"-47". Antimony, cadmium and lead contamination were above ECRA cleanup guideline levels at all three depths at this location. Additionally, zinc was present above ECRA levels at the 42"-47" interval. Butyl benzyl phthalate and bis(2-ethylhexyl) phthalate were detected in the two deeper samples; the concentrations were 160 ppm and 81 ppm respectively at the 6"-12" depth and not detectable and 2.8 ppm at 42"-47". Total base neutrals at 42"- 47" depth are greater than 500 ppm. Other compounds detected in the base neutral fraction at the 42"-47" interval are reported in Appendix VII and IX (see results for sample nos. 7884 and 7885).

In boring B-32, ECRA cleanup guidelines for antimony, cadmium, lead, mercury and zinc were exceeded at the 0-6" interval. The 6"-12" and 40"-44" intervals of sample B-32 contained antimony and lead levels above ECRA guidelines. Beryllium and cadmium were found above ECRA guidelines at the 40"-44" interval. Butyl benzyl phthalate, bis (2-ethylhexyl) phthalate and other base neutral compounds were found at the 6"-12" and 40"-44" intervals. Total base neutrals for these intervals exceed 40 ppm and 13 ppm respectively (see results for sample nos. 7887-7888).

B-33 was advanced and samples taken at 0-6", 6"-12" and 45"-50". The following contaminants were found above ECRA cleanup levels; antimony, beryllium and cadmium were detected at 0-6" and 6"-12"; lead at the 0-6" interval and antimony, copper, chromium, lead and zinc were detected at the 45"-50" interval. Butyl benzyl phthalate (91 ppm) and bis (2-ethylhexyl) phthalate (27 ppm) as well as other base neutrals were found at the 6"-12" and 45"-50" intervals (see results for sample nos. 7890-7891).

TABLE F

Random Soil Samples - Parameters and Sampling Which Exceeds Known Guidelines

Results are in ppm

Priority Pollutant Metals

	ECRA Cleanup Guidelines*	B31/1	B31/2	B31/3	B32/1	B32/2	B32/3	B33/1	B33/2	B33/3
Antimony	2	38	29	25	33	34	34	42	21	2350
Beryllium	1						1.7	1.7	1.6	
Cadmium	3	130	250	18	9		7	9	510	510
Chromium	100									145
Copper	170									2070
Lead	100	360	265	225	229	123	221	161		802
Mercury	1				1.4					
Zinc	350				470					1180
Volatile Organic Compounds	1	NA			NA			NA		
Methylene Chloride**			1.113	1.413		2.2B	2.0B		1.1B	1.4B
Acetone**			0.260							
Tetrachloroethene**			0.140	0.180		0.230	0.260			
1,1-Dichloroethene**			0.120			0.140	0.120			
Benzene*			0.098	0.076		0.078				
Base Neutrals		NA			NA			NA		
Butyl Benzyl Phthalate**			160			29	1.4		110	91
Bis (2-Ethylhexyl) Phthalate**			81			3.7	5.9		34	27
Fluoranthene**			1.2			2.7	2.0			3.8
Phenanthrene**			0.870			2.0	1.6			3.1
Benzo Fluoranthene**			0.990			1.8	1.2			3.0
Petroleum Hydrocarbons	100	NA	1330		NA	299	182	NA	153	6240

*Unpublished
**Five most abundant
B Analyte found in method blank
++Were sampled but none detected.

NOTES

1. NA = Not Applicable - Not analyzed for this parameter.
2. Blanks indicate that sample was analyzed for this parameter but found below ECRA cleanup guidelines.

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4.0 RESULTS OF SHALLOW GROUNDWATER SAMPLING (see Table G)

Monitoring wells were sampled on June 24 and 25, 1987. Analyses were for full priority pollutants plus the library search of the 40 most abundant peaks. Prior to sampling, three volumes of standing water were purged with a centrifugal pump.

Samples were collected in appropriate containers per the sampling protocol of EPA SW846. Containers originated from ERCO Laboratories, Cambridge, Massachusetts. Collected samples were preserved per protocol and shipped to ERCO by overnight Federal Express.

Bis (2-ethylhexyl) phthalate was reported in all the samples as well as the field blank and laboratory method blank. The concentration in the laboratory method blank was 65 ppb, which was higher than results for all but MW-4.

In Monitoring Well No. 4, bis (2-ethylhexyl) phthalate was reported to be 130 ug/l (ppb). Pentachlorophenol was reported at 14 ppb. Petroleum hydrocarbons were found at 2.5 mg/l (ppm).

In Monitoring Well No. 5, bis (2-ethylhexyl) phthalate was detected at 32 ppb. Lead was measured at 83 ppb and chloroethane was found at 13 ppb.

The petroleum hydrocarbon value was reported at 0.8 ppm.

Monitoring Well No. 1 which was installed to serve as a background or upgradient sample location was found to contain bis (2-ethylhexyl) phthalate at 21 ppb. Lead was found below the US EPA primary drinking water standard of 50 ppb. Petroleum hydrocarbons were reported at 7.4 mg/l. The detection of these parameters suggests possible off site contamination sources.

Monitoring Well No. 2 was reported to contain bis (2-ethylhexyl) phthalate) at 10 ppb, lead at 13 ppb and petroleum hydrocarbons at 2.4 ppm.

Bis (2-ethylhexyl) phthalate was the only compound reported in MW-6; the value was 11 ppb.

Bis (2-ethylhexyl) phthalate and lead were found in MW-7 at 12 ppb and 16 ppb respectively.

Table G summarizes significant monitoring well results.

Water level measurements were conducted six (6) hours apart on June 10, 1987. From the data collected on that date, two water level maps have been drawn. It can be inferred from the water contours that the groundwater is influenced by tidal conditions. A summary table of pertinent geophysical data is included in Appendix IV.

TABLE G

RESULTS OF MONITORING WELL SAMPLING
June 24 and 25, 1987

Results in mg/l (ppm)

Monitoring Well No.	Sample I.D.	Cyanide Total	Phenolics Total	Petroleum Hydrocarbons	Conductivity (Micro.)	Bis (2-Ethylhexyl) Phthalates	Penta-Chlorophenol	Lead
1	8105	<0.010	<0.010	7.4	724	0.021	ND	0.021
2	8106	<0.010	<0.010	2.4	690	0.010	ND	0.013
3	8107	<0.010	<0.010	<0.5	465	0.020	0.016	0.034
4	8108	0.015	0.011	2.5	995	0.130	0.014	ND
5	8109	<0.010	<0.010	0.8	780	0.032	ND	0.083
6	8110	<0.010	<0.010	<0.5	515	0.011	ND	ND
7	8111	<0.010	<0.010	ND	207	0.012	ND	0.016
	8111 (spike)	103%	101%			NA		
	8111 (duplicate spike)	106%	104%			NA		
Field Blank	8112	<0.010	<0.010			22		
	ERCO Blank	<0.010	<0.010			0.065		

5.0 DEVIATIONS FROM ORIGINAL SAMPLING PLAN

Monitoring Well No. 1 was originally to be located near the northern boundary of the Franklin Plastics property. The location was also close to overhead utility lines. Upon consultation with the NJ DEP geologist, the well was moved to the location indicated on RECON Drawing No. 1126-004-C.

Visibly contaminated soils were not excavated, only sampled.

With respect to "Area 6", sample results are not yet available for RCRA waste classification of soils. Contingent upon the results of these analyses, soil will be excavated and removed for disposal.

6.0 CONCLUSIONS

The data indicate that soil contamination is present on site, however, it appears that shallow groundwater has not been materially impacted.

Specific contaminants found are phthalates, polynuclear aromatic hydrocarbons (PNA's) and the heavy metals lead and cadmium. Other compounds are found in individual samples but are not widespread.

PNA's are found at various locations on the site. Also found throughout the fill were coal cinders and ash. This type of material has been associated, and is perhaps the source, for the detected PNA's.

Phthalates were most often associated with areas where plasticizer oils were stored or loaded and were also found in areas where fugitive dusts may settle.

Some petroleum hydrocarbon contamination is apparently present near the main gate, which is on the perimeter of the property. The extent and source has not been delineated.

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7.0 RECOMMENDATIONS

Management of fugitive materials in loading and storage areas has been addressed with the company, and appropriate plans are being developed and implemented.

Further study should be conducted to identify the source of the PNA's and correlation between soil (urban fill) types and the presence of PNA's.

extent/distribution site-wide

Also, further investigation should be conducted into the risk and benefits associated with leaving the soils in place with appropriate engineering or remediation. These studies would address the mobility of phthalates and PNA's in the soils and the impacts on groundwater which could be predicted from that information.

Among methods of remediation to be considered would be onsite stabilization, isolation (e.g. clay slurry wall and cap).

Study should proceed to define soil integrity in areas around structures where remediation is deemed necessary.

Also, further geophysical testing of the property is needed to assess the feasibility of isolation techniques. To the extent that excavation and removal of soil may be required, further delineation sampling and waste classification analyses will be proposed.

Further study should be conducted into present groundwater conditions. This work should include resampling of existing wells and measuring water levels at tidal peaks.

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ANALYSIS REPORT FOR PESTICIDES/PCB'S BY GAS CHROMATOGRAPHY

CLIENT : RECON #6881 B-1 LOADING AREA
SAMPLE ID. : #0940
SAMPLE MATRIX : SOIL

METHOD : EPA 608
ANALYSIS DATE: 02/24/87
ANALYST : L.F.

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	ALDRIN	ND	10
2)	DIELDRIN	ND	10
3)	CHLORDANE	ND	10
4)	p,p'-DDT	ND	10
5)	p,p'-DDE	ND	10
6)	p,p'-DDD	ND	10
7)	ENDOSULFAN I	ND	10
8)	ENDOSULFAN II	ND	10
9)	ENDOSULFAN SULFATE	ND	10
10)	ENDRIN	ND	10
11)	ENDRIN ALDEHYDE	ND	10
12)	HEPTACHLOR	ND	10
13)	HEPTACHLOR EPOXIDE	ND	10
14)	alpha-BHC	ND	10
15)	beta -BHC	ND	10
16)	delta-BHC	ND	10
17)	gamma-BHC	ND	10
18)	TOXAPHENE	ND	100
19)	PCB-1016	ND	100
20)	PCB-1221	ND	100
21)	PCB-1232	ND	100
22)	PCB-1242	ND	100
23)	PCB-1248	ND	100
24)	PCB-1254	ND	100
25)	PCB-1260	ND	100

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

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ACID EXTRACTABLE ANALYSIS REPORT

CLIENT : RECON 6881 B-1 LOADING AREA
SAMPLE ID : SOIL/#0940
DATA FILE : >C1910

METHOD : EPA 625
ANALYSIS DATE : 03/04/87
ANALYST : P.G.

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	4-CHLORO-3-METHYL PHENOL	ND	5100
2)	2-CHLOROPHENOL	ND	5100
3)	2,4-DICHLOROPHENOL	ND	5100
4)	2,4-DIMETHYLPHENOL	ND	5100
5)	2,4-DINITROPHENOL	ND	24800
6)	2-METHYL-4,6-DINITROPHENOL	ND	24800
7)	2-NITROPHENOL	ND	5100
8)	4-NITROPHENOL	ND	5100
9)	PENTACHLOROPHENOL	ND	5100
10)	PHENOL	ND	5100
11)	2,4,6-TRICHLOROPHENOL	ND	5100

BMDL=BELOW METHOD DETECTION LIMIT
MDL =METHOD DETECTION LIMIT
ND =NON DETECTABLE

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ANALYSIS REPORT FOR VOLATILE ORGANICS BY GC/MS

CLIENT : RECON 6881 B-1 LOADING AREA
SAMPLE ID.: SOIL FOR VOA/#0940
GC/MS FILE : >A4014

METHOD : EPA 624
ANALYSIS DATE: 02/17/87
ANALYST : CJD

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	BENZENE	ND	10
2)	BROMOFORM	ND	10
3)	BROMODICHLOROMETHANE	ND	10
4)	BROMOMETHANE	ND	10
5)	CARBON TETRACHLORIDE	ND	10
6)	CHLOROBENZENE	ND	10
7)	CHLOROETHANE	ND	10
8)	2-CHLOROETHYL VINYL ETHER	ND	10
9)	CHLOROFORM	ND	10
10)	CHLOROMETHANE	ND	10
11)	cis-1,3-DICHLOROPROPENE	ND	10
12)	DIBROMOCHLOROMETHANE	ND	10
13)	1,2-DICHLOROBENZENE	ND	10
14)	1,3-DICHLOROBENZENE	ND	10
15)	1,4-DICHLOROBENZENE	ND	10
16)	1,1-DICHLOROETHANE	ND	10
17)	1,2-DICHLOROETHANE	ND	10
18)	1,1-DICHLOROETHYLENE	ND	10
19)	trans-1,2-DICHLOROETHYLENE	ND	10
20)	trans-1,3-DICHLOROPROPENE	ND	10
21)	1,2-DICHLOROPROPANE	ND	10
22)	ETHYLBENZENE	ND	10
23)	METHYLENE CHLORIDE	ND	10
24)	1,1,2,2-TETRACHLORETHANE	42	10
25)	TETRACHLOROETHYLENE	ND	10
26)	TOLUENE	ND	10
27)	1,1,1-TRICHLOROETHANE	1.3 J	10
28)	1,1,2-TRICHLOROETHANE	ND	10
29)	TRICHLOROETHYLENE	ND	10
30)	TRICHLOROFLUOROMETHANE	ND	10
31)	VINYL CHLORIDE	ND	10
32)	m-XYLENE	ND	10
33)	p,o-XYLENE	ND	10

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : RECON #6881 B-1 LOADING AREA
SAMPLE ID : SOIL/#0940
DATA FILE : >C1910

METHOD : EPA 625
ANALYSIS DATE: 03/04/87
ANALYST : P.G.

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	ACENAPHTHENE	ND	5100
2)	ACENAPHTHYLENE	ND	5100
3)	ANTHRACENE	ND	5100
4)	BENZIDENE	ND	24800
5)	BENZO (A) ANTHRACENE	ND	5100
6)	BENZO (A) PYRENE	ND	5100
7)	BENZO (B) FLUORANTHENE	ND	5100
8)	BENZO (K) FLUORANTHENE	ND	5100
9)	BENZO (GHI) PERYLENE	ND	5100
10)	BIS (2-CHLOROETHOXY) METHANE	ND	5100
11)	BIS (2-CHLOROETHYL) ETHER	ND	5100
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	5100
13)	BIS (2-ETHYLHEXYL) PHTHALATE	1582813 B	5100
14)	4-BROMOPHENYL PHENYL ETHER	ND	5100
15)	BUTYL BENZYL PHTHALATE	ND	5100
16)	2-CHLORONAPHTHALENE	ND	5100
17)	4-CHLOROPHENYL PHENYL ETHER	ND	5100
18)	CHRYSENE	ND	5100
19)	DIBENZO (A,H) ANTHRACENE	ND	5100
20)	1,2-DICHLOROBENZENE	ND	5100
21)	1,3-DICHLOROBENZENE	ND	5100
22)	1,4-DICHLOROBENZENE	ND	5100
23)	3,3'-DICHLOROBENZIDENE	ND	5100
24)	DIETHYL PHTHALATE	ND	10200
25)	DIMETHYL PHTHALATE	ND	5100
26)	DI-N-BUTYL PHTHALATE	ND	5100
27)	2,4-DINITROTOLUENE	301318 B	5100
28)	2,6-DINITROTOLUENE	ND	5100
29)	DI-N-OCTYL PHTHALATE	ND	5100
30)	1,2-DIPHENYLHYDRAZINE	859 J	5100
31)	FLUORANTHENE	ND	5100
32)	FLUORENE	ND	5100
33)	HEXACHLOROBENZENE	ND	5100
34)	HEXACHLOROBUTADIENE	ND	5100
35)	HEXACHLOROCYCLOPENTADIENE	ND	5100
36)	HEXACHLOROETHANE	ND	5100
37)	INDENO (1,2,3-CD) PYRENE	ND	5100
38)	ISOPHORONE	ND	5100
39)	NAPHTHALENE	ND	5100
40)	NITROBENZENE	ND	5100
41)	N-NITROSODIMETHYLAMINE	ND	5100
42)	N-NITROSODI-N-PROPYLAMINE	ND	5100
43)	N-NITROSODIPHENYLAMINE	ND	5100
44)	PHENANTHRENE	ND	5100
45)	PYRENE	ND	5100
46)	1,2,4-TRICHLOROBENZENE	ND	5100

J = BELOW METHOD DETECTION LIMIT
MDL= METHO DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : RECON #6882 B-2 TANK FARM
SAMPLE ID : SOIL/#0941
DATA FILE : >C1911

METHOD : EPA 625
ANALYSIS DATE: 03/04/87
ANALYST : P.G.

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	ACENAPHTHENE	ND	25800
2)	ACENAPHTHYLENE	ND	25800
3)	ANTHRACENE	ND	25800
4)	BENZIDENE	ND	125100
5)	BENZO (A) ANTHRACENE	ND	25800
6)	BENZO (A) PYRENE	ND	25800
7)	BENZO (B) FLUORANTHENE	ND	25800
8)	BENZO (K) FLUORANTHENE	ND	25800
9)	BENZO (GHI) PERYLENE	ND	25800
10)	BIS (2-CHLOROETHOXY) METHANE	ND	25800
11)	BIS (2-CHLOROETHYL) ETHER	ND	25800
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	25800
13)	BIS (2-ETHYLHEXYL) PHTHALATE	801270 B	25800
14)	4-BROMOPHENYL PHENYL ETHER	ND	25800
15)	BUTYL BENZYL PHTHALATE	ND	25800
16)	2-CHLORONAPHTHALENE	ND	25800
17)	4-CHLOROPHENYL PHENYL ETHER	ND	25800
18)	CHRYSENE	ND	25800
19)	DIBENZO (A,H) ANTHRACENE	ND	25800
20)	1,2-DICHLOROBENZENE	ND	25800
21)	1,3-DICHLOROBENZENE	ND	25800
22)	1,4-DICHLOROBENZENE	ND	25800
23)	3,3'-DICHLOROBENZIDENE	ND	51600
24)	DIETHYL PHTHALATE	ND	25800
25)	DIMETHYL PHTHALATE	ND	25800
26)	DI-N-BUTYL PHTHALATE	87160 B	25800
27)	2,4-DINITROTOLUENE	ND	25800
28)	2,6-DINITROTOLUENE	ND	25800
29)	DI-N-OCTYL PHTHALATE	108459	25800
30)	1,2-DIPHENYLHYDRAZINE	ND	25800
31)	FLUORANTHENE	ND	25800
32)	FLUORENE	ND	25800
33)	HEXACHLOROBENZENE	ND	25800
34)	HEXACHLOROBUTADIENE	ND	25800
35)	HEXACHLOROCYCLOPENTADIENE	ND	25800
36)	HEXACHLOROETHANE	ND	25800
37)	INDENO (1,2,3-CD) PYRENE	ND	25800
38)	ISOPHORONE	ND	25800
39)	NAPHTHALENE	ND	25800
40)	NITROBENZENE	ND	25800
41)	N-NITROSODIMETHYLAMINE	ND	25800
42)	N-NITROSODI-N-PROPYLAMINE	ND	25800
43)	N-NITROSODIPHENYLAMINE	ND	25800
44)	PHENANTHRENE	ND	25800
45)	PYRENE	ND	25800
46)	1,2,4-TRICHLOROBENZENE	ND	25800

J = BELOW METHOD DETECTION LIMIT
MDL= METHO DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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ANALYSIS REPORT FOR VOLATILE ORGANICS BY GC/MS

CLIENT : RECON 6882 B-2 TANK FARM
SAMPLE ID.: SOIL FOR VOA/#0941
DATA FILE : >A4005

METHOD : EPA 624
ANALYSIS DATE: 02/16/87
ANALYST : CJD

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	BENZENE	ND	10
2)	BROMOFORM	ND	10
3)	BROMODICHLOROMETHANE	ND	10
4)	BROMOMETHANE	ND	10
5)	CARBON TETRACHLORIDE	ND	10
6)	CHLOROBENZENE	ND	10
7)	CHLOROETHANE	ND	10
8)	2-CHLOROETHYL VINYL ETHER	ND	10
9)	CHLOROFORM	ND	10
10)	CHLOROMETHANE	ND	10
11)	cis-1,3-DICHLOROPROPENE	ND	10
12)	DIBROMOCHLOROMETHANE	ND	10
13)	1,2-DICHLOROBENZENE	ND	10
14)	1,3-DICHLOROBENZENE	ND	10
15)	1,4-DICHLOROBENZENE	ND	10
16)	1,1-DICHLOROETHANE	ND	10
17)	1,2-DICHLOROETHANE	ND	10
18)	1,1-DICHLOROETHYLENE	ND	10
19)	trans-1,2-DICHLOROETHYLENE	ND	10
20)	trans-1,3-DICHLOROPROPENE	ND	10
21)	1,2-DICHLOROPROPANE	ND	10
22)	ETHYLBENZENE	ND	10
23)	METHYLENE CHLORIDE	ND	10
24)	1,1,2,2-TETRACHLORETHANE	ND	10
25)	TETRACHLOROETHYLENE	ND	10
26)	TOLUENE	9.9 J	10
27)	1,1,1-TRICHLOROETHANE	59	10
28)	1,1,2-TRICHLOROETHANE	ND	10
29)	TRICHLOROETHYLENE	ND	10
30)	TRICHLOROFLUOROMETHANE	ND	10
31)	VINYL CHLORIDE	ND	10
32)	m-XYLENE	ND	10
33)	p,o-XYLENE	ND	10

J =BELOW METHOD DETECTION LIMIT
MDL=METHOD DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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ANALYSIS REPORT FOR BASE NEUTRAL EXTRACTABLES BY GC/MS

CLIENT : RECON #6883 B-3 TANK FARM
SAMPLE ID : SOIL/#0942
DATA FILE : >C1912

METHOD : EPA 625
ANALYSIS DATE: 03/05/87
ANALYST : P.G.

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	ACENAPHTHENE	ND	24000
2)	ACENAPHTHYLENE	ND	24000
3)	ANTHRACENE	ND	24000
4)	BENZIDENE	ND	116400
5)	BENZO (A) ANTHRACENE	ND	24000
6)	BENZO (A) PYRENE	ND	24000
7)	BENZO (B) FLUORANTHENE	ND	24000
8)	BENZO (K) FLUORANTHENE	ND	24000
9)	BENZO (GHI) PERYLENE	ND	24000
10)	BIS (2-CHLOROETHOXY) METHANE	ND	24000
11)	BIS (2-CHLOROETHYL) ETHER	ND	24000
12)	BIS (2-CHLOROISOPROPYL) ETHER	ND	24000
13)	BIS (2-ETHYLHEXYL) PHTHALATE	834765 B	24000
14)	4-BROMOPHENYL PHENYL ETHER	ND	24000
15)	BUTYL BENZYL PHTHALATE	1428697	24000
16)	2-CHLORONAPHTHALENE	ND	24000
17)	4-CHLOROPHENYL PHENYL ETHER	ND	24000
18)	CHRYSENE	ND	24000
19)	DIBENZO (A,H) ANTHRACENE	ND	24000
20)	1,2-DICHLOROBENZENE	ND	24000
21)	1,3-DICHLOROBENZENE	ND	24000
22)	1,4-DICHLOROBENZENE	ND	24000
23)	3,3'-DICHLOROBENZIDENE	ND	24000
24)	DIETHYL PHTHALATE	ND	48000
25)	DIMETHYL PHTHALATE	ND	24000
26)	DI-N-BUTYL PHTHALATE	191679 B	24000
27)	2,4-DINITROTOLUENE	ND	24000
28)	2,6-DINITROTOLUENE	ND	24000
29)	DI-N-OCTYL PHTHALATE	7644 J	24000
30)	1,2-DIPHENYLHYDRAZINE	ND	24000
31)	FLUORANTHENE	ND	24000
32)	FLUORENE	ND	24000
33)	HEXACHLOROBENZENE	ND	24000
34)	HEXACHLOROBUTADIENE	ND	24000
35)	HEXACHLOROCYCLOPENTADIENE	ND	24000
36)	HEXACHLOROETHANE	ND	24000
37)	INDENO (1,2,3-CD) PYRENE	ND	24000
38)	ISOPHORONE	ND	24000
39)	NAPHTHALENE	ND	24000
40)	NITROBENZENE	ND	24000
41)	N-NITROSODIMETHYLAMINE	ND	24000
42)	N-NITROSODI-N-PROPYLAMINE	ND	24000
43)	N-NITROSODIPHENYLAMINE	ND	24000
44)	PHENANTHRENE	ND	24000
45)	PYRENE	ND	24000
46)	1,2,4-TRICHLOROBENZENE	ND	24000

J = BELOW METHOD DETECTION LIMIT
MDL= METHO DETECTION LIMIT
ND =NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

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ANALYSIS REPORT FOR VOLATILE ORGANICS BY GC/MS

CLIENT : RECON 6883 B-3 TANK FARM
SAMPLE ID.: SOIL FOR VOA/#0942
DATA FILE : >A4006

METHOD : EPA 624
ANALYSIS DATE: 02/16/87
ANALYST : CJD

	COMPOUND	RESULT(UG/KG)	MDL(UG/KG)
1)	BENZENE	ND	20
2)	BROMOFORM	ND	20
3)	BROMODICHLOROMETHANE	ND	20
4)	BROMOMETHANE	ND	20
5)	CARBON TETRACHLORIDE	ND	20
6)	CHLOROBENZENE	ND	20
7)	CHLOROETHANE	ND	20
8)	2-CHLOROETHYL VINYL ETHER	ND	20
9)	CHLOROFORM	ND	20
10)	CHLOROMETHANE	ND	20
11)	cis-1,3-DICHLOROPROPENE	ND	20
12)	DIBROMOCHLOROMETHANE	ND	20
13)	1,2-DICHLOROBENZENE	ND	20
14)	1,3-DICHLOROBENZENE	ND	20
15)	1,4-DICHLOROBENZENE	ND	20
16)	1,1-DICHLOROETHANE	ND	20
17)	1,2-DICHLOROETHANE	ND	20
18)	1,1-DICHLOROETHYLENE	ND	20
19)	trans-1,2-DICHLOROETHYLENE	ND	20
20)	trans-1,3-DICHLOROPROPENE	ND	20
21)	1,2-DICHLOROPROPANE	ND	20
22)	ETHYLBENZENE	ND	20
23)	METHYLENE CHLORIDE	ND	20
24)	1,1,2,2-TETRACHLORETHANE	ND	20
25)	TETRACHLOROETHYLENE	ND	20
26)	TOLUENE	ND	20
27)	1,1,1-TRICHLOROETHANE	5.6 J	20
28)	1,1,2-TRICHLOROETHANE	ND	20
29)	TRICHLOROETHYLENE	ND	20
30)	TRICHLOROFLUOROMETHANE	ND	20
31)	VINYL CHLORIDE	ND	20
32)	m-XYLENE	ND	20
33)	p,o-XYLENE	ND	20

=BELOW METHOD DETECTION LIMIT
DL=METHOD DETECTION LIMIT
=NON DETECTABLE

B=ANALYTE WAS ALSO FOUND IN METHOD BLANK INDICATING POSSIBLE/PROBABLE LAB BLANK CONTAMINATION.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7824 B-5 - 6-12"

Laboratory ID: 87-007546

Matrix: Soil Sampled: 05/27/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	2,900B	µg/kg (dry wt)	150
Acetone	430*B	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	77	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	120	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	230	µg/kg (dry wt)	60
Toluene	98	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	140	µg/kg (dry wt)	60

Solid content = 82%

ND = Not detected.

*Trace concentrations detected below the reporting limit.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Au/sc

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7824 B-5 6-12"
Laboratory ID: 87-007546
Matrix: Solid Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	3,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	3,000
2-Chlorophenol	ND	µg/kg (dry wt)	3,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	3,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	3,000
Benzyl alcohol	ND	µg/kg (dry wt)	3,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	3,000
2-Methylphenol	ND	µg/kg (dry wt)	3,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	3,000
4-Methylphenol	ND	µg/kg (dry wt)	3,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	3,000
Hexachloroethane	ND	µg/kg (dry wt)	3,000
Nitrobenzene	ND	µg/kg (dry wt)	3,000
Isophorone	ND	µg/kg (dry wt)	3,000
2-Nitrophenol	ND	µg/kg (dry wt)	3,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	3,000
Benzoic Acid	ND	µg/kg (dry wt)	15,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	3,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	3,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	3,000
Naphthalene	ND	µg/kg (dry wt)	3,000
4-Chloroaniline	ND	µg/kg (dry wt)	3,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	3,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	3,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	3,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	3,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	3,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	15,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	3,000
2-Nitroaniline	ND	µg/kg (dry wt)	15,000
Dimethyl phthalate	ND	µg/kg (dry wt)	3,000
Acenaphthylene	ND	µg/kg (dry wt)	3,000
3-Nitroaniline	ND	µg/kg (dry wt)	15,000
Acenaphthene	ND	µg/kg (dry wt)	3,000

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7824 B-5 6-12"
Laboratory ID: 87-007546
Matrix: Solid Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	15,000
4-Nitrophenol	ND	µg/kg (dry wt)	15,000
Dibenzofuran	ND	µg/kg (dry wt)	3,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	3,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	3,000
Diethyl phthalate	ND	µg/kg (dry wt)	3,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	3,000
Fluorene	ND	µg/kg (dry wt)	3,000
4-Nitroaniline	ND	µg/kg (dry wt)	15,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	15,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	3,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	3,000
Hexachlorobenzene	ND	µg/kg (dry wt)	3,000
Pentachlorophenol	ND	µg/kg (dry wt)	15,000
Phenanthrene	3,100	µg/kg (dry wt)	3,000
Anthracene	610*	µg/kg (dry wt)	3,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	3,000
Fluoranthene	4,700	µg/kg (dry wt)	3,000
Pyrene	4,100	µg/kg (dry wt)	3,000
Butyl benzyl phthalate	3,900	µg/kg (dry wt)	3,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	6,000
Benzo(a)anthracene	2,300*	µg/kg (dry wt)	3,000
bis(2-Ethylhexyl)phthalate	1,100*	µg/kg (dry wt)	3,000
Chrysene	2,600*	µg/kg (dry wt)	3,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	3,000
Benzo(b)fluoranthene)† Benzo(k)fluoranthene)†	3,800	µg/kg (dry wt)	3,000
Benzo(a)pyrene	2,200	µg/kg (dry wt)	3,000
Indeno(1,2,3-c,d)pyrene	1,400	µg/kg (dry wt)	3,000
Dibenzo(a,h)anthracene	430	µg/kg (dry wt)	3,000
Benzo(g,h,i)perylene	1,500	µg/kg (dry wt)	3,000

Solid content = 64%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by ANL Approved by DG

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7824 B-5 6-12"
Laboratory ID: 87-007546
Matrix: Soil Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 07/01/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	28	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 63.8%

ND = Not detected.

Reported by YHL Approved by EH

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7825 B 5 30 - 40"

Laboratory ID: 87-007547

Matrix: Soil Sampled: 05/27/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	1,400B	µg/kg (dry wt)	150
Acetone	2,000B	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	82	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	53*	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	60	µg/kg (dry wt)	60
Toluene	48*	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 84%

ND = Not detected.

*Trace concentrations detected below the reporting limit.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/EC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7825 BS 34-40
Laboratory ID: 87-007547
Matrix: Solid Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	430
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	430
2-Chlorophenol	ND	µg/kg (dry wt)	430
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	430
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	430
Benzyl alcohol	ND	µg/kg (dry wt)	430
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	430
2-Methylphenol	ND	µg/kg (dry wt)	430
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	430
4-Methylphenol	ND	µg/kg (dry wt)	430
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	430
Hexachloroethane	ND	µg/kg (dry wt)	430
Nitrobenzene	ND	µg/kg (dry wt)	430
Isophorone	ND	µg/kg (dry wt)	430
2-Nitrophenol	ND	µg/kg (dry wt)	430
2,4-Dimethylphenol	ND	µg/kg (dry wt)	430
Benzoic Acid	ND	µg/kg (dry wt)	2,100
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	430
2,4-Dichlorophenol	ND	µg/kg (dry wt)	430
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	430
Naphthalene	ND	µg/kg (dry wt)	430
4-Chloroaniline	ND	µg/kg (dry wt)	430
Hexachlorobutadiene	ND	µg/kg (dry wt)	430
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	430
2-Methylnaphthalene	ND	µg/kg (dry wt)	430
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	430
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	430
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	2,100
2-Chloronaphthalene	ND	µg/kg (dry wt)	430
2-Nitroaniline	ND	µg/kg (dry wt)	2,100
Dimethyl phthalate	ND	µg/kg (dry wt)	430
Acenaphthylene	ND	µg/kg (dry wt)	430
3-Nitroaniline	ND	µg/kg (dry wt)	2,100
Acenaphthene	ND	µg/kg (dry wt)	430

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7825 B5 30-40"
Laboratory ID: 87-007547
Matrix: Solid Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	2,100
4-Nitrophenol	ND	µg/kg (dry wt)	2,100
Dibenzofuran	ND	µg/kg (dry wt)	430
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	430
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	430
Diethyl phthalate	ND	µg/kg (dry wt)	430
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	430
Fluorene	ND	µg/kg (dry wt)	430
4-Nitroaniline	ND	µg/kg (dry wt)	2,100
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	2,100
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	430
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	430
Hexachlorobenzene	ND	µg/kg (dry wt)	430
Pentachlorophenol	ND	µg/kg (dry wt)	2,100
Phenanthrene	300*	µg/kg (dry wt)	430
Anthracene	98*	µg/kg (dry wt)	430
Di-n-butyl phthalate	ND	µg/kg (dry wt)	430
Fluoranthene	470	µg/kg (dry wt)	430
Pyrene	430	µg/kg (dry wt)	430
Butyl benzyl phthalate	210*	µg/kg (dry wt)	430
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	850
Benzo(a)anthracene	240*	µg/kg (dry wt)	430
bis(2-Ethylhexyl)phthalate	270*	µg/kg (dry wt)	430
Chrysene	340*	µg/kg (dry wt)	430
Di-n-octyl phthalate	ND	µg/kg (dry wt)	430
Benzo(b)fluoranthene)† Benzo(k)fluoranthene)†	490	µg/kg (dry wt)	430
Benzo(a)pyrene	300*	µg/kg (dry wt)	430
Indeno(1,2,3-c,d)pyrene	57*	µg/kg (dry wt)	430
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	430
Benzo(g,h,i)perylene	44*	µg/kg (dry wt)	430

Solid content = 85%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7825 B5 34-40
Laboratory ID: 87-007547
Matrix: Soil Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 07/01/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 85.1%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7878 B6 6-12"

Laboratory ID: 87-007562

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride ----------	290B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	ND	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	ND	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	ND	µg/kg (dry wt)	60
Toluene	ND	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 85%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by WS Approved by Am/JC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7878 B6 6-12'
Laboratory ID: 87-007562
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	11,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	11,000
2-Chlorophenol	ND	µg/kg (dry wt)	11,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	11,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	11,000
Benzyl alcohol	ND	µg/kg (dry wt)	11,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	11,000
2-Methylphenol	ND	µg/kg (dry wt)	11,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	11,000
4-Methylphenol	ND	µg/kg (dry wt)	11,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	11,000
Hexachloroethane	ND	µg/kg (dry wt)	11,000
Nitrobenzene	ND	µg/kg (dry wt)	11,000
Isophorone	ND	µg/kg (dry wt)	11,000
2-Nitrophenol	ND	µg/kg (dry wt)	11,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	11,000
Benzoic Acid	ND	µg/kg (dry wt)	11,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	53,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	11,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	11,000
Naphthalene	ND	µg/kg (dry wt)	11,000
4-Chloroaniline	ND	µg/kg (dry wt)	11,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	11,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	11,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	11,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	11,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	11,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	11,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	53,000
2-Nitroaniline	ND	µg/kg (dry wt)	11,000
Dimethyl phthalate	ND	µg/kg (dry wt)	53,000
Acenaphthylene	ND	µg/kg (dry wt)	11,000
3-Nitroaniline	ND	µg/kg (dry wt)	11,000
Acenaphthene	ND	µg/kg (dry wt)	53,000
			11,000

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7878 B-6 6-12"
Laboratory ID: 87-007562
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	53,000
4-Nitrophenol	ND	µg/kg (dry wt)	53,000
Dibenzofuran	ND	µg/kg (dry wt)	11,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	11,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	11,000
Diethyl phthalate	ND	µg/kg (dry wt)	11,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	11,000
Fluorene	ND	µg/kg (dry wt)	11,000
4-Nitroaniline	ND	µg/kg (dry wt)	11,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	53,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	53,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	11,000
Hexachlorobenzene	ND	µg/kg (dry wt)	11,000
Pentachlorophenol	ND	µg/kg (dry wt)	11,000
Phenanthrene	2,300*	µg/kg (dry wt)	53,000
Anthracene	ND	µg/kg (dry wt)	11,000
Di-n-butyl phthalate	3,100*	µg/kg (dry wt)	11,000
Fluoranthene	2,100*	µg/kg (dry wt)	11,000
Pyrene	1,700*	µg/kg (dry wt)	11,000
Butyl benzyl phthalate	19,000	µg/kg (dry wt)	11,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	21,000
Benzo(a)anthracene	980*	µg/kg (dry wt)	11,000
bis(2-Ethylhexyl)phthalate	100,000	µg/kg (dry wt)	11,000
Chrysene	1,200*	µg/kg (dry wt)	11,000
Di-n-octyl phthalate	2,500*	µg/kg (dry wt)	11,000
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	1,600*	µg/kg (dry wt)	11,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	11,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	11,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	11,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	11,000

Solid content = 85%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by NL Approved by DG

Enseco

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7878 B-6 6-12"
Laboratory ID: 87-007562
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/22/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 84.6%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7879 B6 40-46"

Laboratory ID: 87-007563

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride ----------	790B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	ND	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	ND	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	ND	µg/kg (dry wt)	60
Toluene	ND	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 81%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am | LC

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

Ensec

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7879 B-6 40-46'
Laboratory ID: 87-007563
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	1,500
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	1,500
2-Chlorophenol	ND	µg/kg (dry wt)	1,500
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	1,500
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	1,500
Benzyl alcohol	ND	µg/kg (dry wt)	1,500
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	1,500
2-Methylphenol	ND	µg/kg (dry wt)	1,500
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	1,500
4-Methylphenol	ND	µg/kg (dry wt)	1,500
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	1,500
Hexachloroethane	ND	µg/kg (dry wt)	1,500
Nitrobenzene	ND	µg/kg (dry wt)	1,500
Isophorone	ND	µg/kg (dry wt)	1,500
2-Nitrophenol	ND	µg/kg (dry wt)	1,500
2,4-Dimethylphenol	ND	µg/kg (dry wt)	1,500
Benzoic Acid	ND	µg/kg (dry wt)	7,600
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	1,500
2,4-Dichlorophenol	ND	µg/kg (dry wt)	1,500
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	1,500
Naphthalene	ND	µg/kg (dry wt)	1,500
4-Chloroaniline	ND	µg/kg (dry wt)	1,500
Hexachlorobutadiene	ND	µg/kg (dry wt)	1,500
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	1,500
2-Methylnaphthalene	ND	µg/kg (dry wt)	1,500
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	1,500
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	1,500
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	7,600
2-Chloronaphthalene	ND	µg/kg (dry wt)	1,500
2-Nitroaniline	ND	µg/kg (dry wt)	7,600
Dimethyl phthalate	ND	µg/kg (dry wt)	1,500
Acenaphthylene	ND	µg/kg (dry wt)	1,500
3-Nitroaniline	ND	µg/kg (dry wt)	7,600
Acenaphthene	ND	µg/kg (dry wt)	1,500

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7879 B-6 40-46'
Laboratory ID: 87-007563
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	7,600
4-Nitrophenol	ND	µg/kg (dry wt)	7,600
Dibenzofuran	ND	µg/kg (dry wt)	1,500
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,500
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,500
Diethyl phthalate	ND	µg/kg (dry wt)	1,500
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,500
Fluorene	ND	µg/kg (dry wt)	1,500
4-Nitroaniline	ND	µg/kg (dry wt)	7,600
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	7,600
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	1,500
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,500
Hexachlorobenzene	ND	µg/kg (dry wt)	1,500
Pentachlorophenol	ND	µg/kg (dry wt)	7,600
Phenanthrene	ND	µg/kg (dry wt)	1,500
Anthracene	ND	µg/kg (dry wt)	1,500
Di-n-butyl phthalate	ND	µg/kg (dry wt)	1,500
Fluoranthene	ND	µg/kg (dry wt)	1,500
Pyrene	ND	µg/kg (dry wt)	1,500
Butyl benzyl phthalate -------	1,200*	µg/kg (dry wt)	1,500
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	3,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	1,500
bis(2-Ethylhexyl)phthalate --	22,000	µg/kg (dry wt)	1,500
Chrysene	ND	µg/kg (dry wt)	1,500
Di-n-octyl phthalate	ND	µg/kg (dry wt)	1,500
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	1,500
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	1,500
Benzo(a)pyrene	ND	µg/kg (dry wt)	1,500
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	1,500
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	1,500
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	1,500

Solid content = 84%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by NL Approved by DG

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7879 B-6 40-46'
Laboratory ID: 87-007563
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/22/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 84.0%

ND = Not detected.

Reported by YHL Approved by EH

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7795 TANK FARM B7A
Laboratory ID: 87-007237
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/10/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
is(2-Chloroethyl)ether	ND	µg/kg (dry wt)	44,000
3-Dichlorobenzene	ND	µg/kg (dry wt)	44,000
4-Dichlorobenzene	ND	µg/kg (dry wt)	44,000
2-Dichlorobenzene	ND	µg/kg (dry wt)	44,000
is(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	44,000
Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	44,000
achloroethane	ND	µg/kg (dry wt)	44,000
robenzene	ND	µg/kg (dry wt)	44,000
phorone	ND	µg/kg (dry wt)	44,000
is(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	44,000
2,4-Trichlorobenzene	ND	µg/kg (dry wt)	44,000
thalene	ND	µg/kg (dry wt)	44,000
Chloroaniline	ND	µg/kg (dry wt)	44,000
achlorobutadiene	ND	µg/kg (dry wt)	44,000
Methylnaphthalene	ND	µg/kg (dry wt)	44,000
achlorocyclopentadiene	ND	µg/kg (dry wt)	44,000
Chloronaphthalene	ND	µg/kg (dry wt)	44,000
Nitroaniline	ND	µg/kg (dry wt)	44,000
thyl phthalate	ND	µg/kg (dry wt)	220,000
naphthylene	ND	µg/kg (dry wt)	44,000
Nitroaniline	ND	µg/kg (dry wt)	44,000
naphthene	ND	µg/kg (dry wt)	220,000
enzofuran	ND	µg/kg (dry wt)	44,000
4-Dinitrotoluene	ND	µg/kg (dry wt)	44,000
6-Dinitrotoluene	ND	µg/kg (dry wt)	44,000
thyl phthalate	ND	µg/kg (dry wt)	44,000
Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	44,000
rene	ND	µg/kg (dry wt)	44,000
Nitroaniline	ND	µg/kg (dry wt)	44,000
Nitrosodiphenylamine --------	28,000*	µg/kg (dry wt)	220,000
romophenyl phenyl ether	ND	µg/kg (dry wt)	44,000

(continued on following page)

ace concentrations detected below the reporting limit.

• Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7795 TANK FARM B7A
Laboratory ID: 87-007237
Matrix: Solid
Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/10/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/kg (dry wt)	44,000
Phenanthrene	ND	µg/kg (dry wt)	44,000
Anthracene	ND	µg/kg (dry wt)	44,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	44,000
Fluoranthene	ND	µg/kg (dry wt)	44,000
Pyrene	ND	µg/kg (dry wt)	44,000
Butyl benzyl phthalate	ND	µg/kg (dry wt)	44,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	44,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	88,000
Bis(2-Ethylhexyl)phthalate ----	54,000	µg/kg (dry wt)	44,000
Chrysene	ND	µg/kg (dry wt)	44,000
Di-n-octyl phthalate ----------	5,300*	µg/kg (dry wt)	44,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	44,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	44,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	44,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	44,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	44,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	44,000

Solid content = 72.0%

Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7794 B-7 36-42"
Laboratory ID: 87-007236
Matrix: Solid
Authorized: 06/01/87 Sampled: 05/26/87 Prepared: 06/11/87 Received: 05/29/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	240,000
4-Nitrophenol	ND	µg/kg (dry wt)	240,000
Dibenzofuran	ND	µg/kg (dry wt)	48,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	48,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	48,000
Diethyl phthalate	ND	µg/kg (dry wt)	48,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	48,000
Fluorene	ND	µg/kg (dry wt)	48,000
4-Nitroaniline	ND	µg/kg (dry wt)	48,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	48,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	240,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	240,000
Hexachlorobenzene	ND	µg/kg (dry wt)	48,000
Pentachlorophenol	ND	µg/kg (dry wt)	48,000
Phenanthrene	ND	µg/kg (dry wt)	48,000
Anthracene	ND	µg/kg (dry wt)	240,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	48,000
Fluoranthene	ND	µg/kg (dry wt)	48,000
Pyrene	ND	µg/kg (dry wt)	48,000
Butyl benzyl phthalate	ND	µg/kg (dry wt)	48,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	48,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	48,000
Bis(2-Ethylhexyl)phthalate -----	420,000	µg/kg (dry wt)	96,000
Chrysene	ND	µg/kg (dry wt)	48,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	48,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	48,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	48,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	48,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	48,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	48,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	48,000

Solid content = 80.4%

ND = Not detected.

Reported by PD Approved by DG

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Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7793 B-7 6-12"
Laboratory ID: 87-007235
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,100,000
4-Nitrophenol	ND	µg/kg (dry wt)	1,100,000
Dibenzofuran	ND	µg/kg (dry wt)	220,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	220,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	220,000
Diethyl phthalate	ND	µg/kg (dry wt)	220,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	220,000
Fluorene	ND	µg/kg (dry wt)	220,000
4-Nitroaniline	ND	µg/kg (dry wt)	1,100,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,100,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	220,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	220,000
Hexachlorobenzene	ND	µg/kg (dry wt)	220,000
Pentachlorophenol	ND	µg/kg (dry wt)	1,100,000
Phenanthrene	ND	µg/kg (dry wt)	220,000
Anthracene	ND	µg/kg (dry wt)	220,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	220,000
Fluoranthene	ND	µg/kg (dry wt)	220,000
Pyrene	ND	µg/kg (dry wt)	220,000
Butyl benzyl phthalate	ND	µg/kg (dry wt)	220,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	440,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	220,000
Bis(2-Ethylhexyl)phthalate ---	2,300,000	µg/kg (dry wt)	220,000
Chrysene	ND	µg/kg (dry wt)	220,000
Di-n-octyl phthalate ----------	43,000*	µg/kg (dry wt)	220,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	220,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	220,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	220,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	220,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	220,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	220,000

Solid content = 89.6%

* = concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7785 B-8 6-12"

Laboratory ID: 87-007227

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/10/87 Analyzed: 06/22/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	180
Bromomethane	ND	µg/kg (dry wt)	180
Vinyl chloride	ND	µg/kg (dry wt)	180
Chloroethane	ND	µg/kg (dry wt)	180
Methylene chloride	ND	µg/kg (dry wt)	700
Acetone	ND	µg/kg (dry wt)	1,800
Carbon disulfide	ND	µg/kg (dry wt)	70
1,1-Dichloroethene	ND	µg/kg (dry wt)	70
1,1-Dichloroethane	ND	µg/kg (dry wt)	70
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	70
Chloroform	ND	µg/kg (dry wt)	70
1,2-Dichloroethane	ND	µg/kg (dry wt)	70
2-Butanone	ND	µg/kg (dry wt)	350
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	70
Carbon tetrachloride	ND	µg/kg (dry wt)	70
Vinyl acetate	ND	µg/kg (dry wt)	350
Bromodichloromethane	ND	µg/kg (dry wt)	70
1,2-Dichloropropane	ND	µg/kg (dry wt)	70
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	70
Trichloroethene	ND	µg/kg (dry wt)	70
Dibromochloromethane	ND	µg/kg (dry wt)	70
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	70
Benzene	ND	µg/kg (dry wt)	70
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	70
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	350
Bromoform	ND	µg/kg (dry wt)	70
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	350
2-Hexanone	ND	µg/kg (dry wt)	350
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	70
Tetrachloroethene	ND	µg/kg (dry wt)	70
Toluene ----------	290	µg/kg (dry wt)	70
Chlorobenzene	ND	µg/kg (dry wt)	70
Ethyl benzene	ND	µg/kg (dry wt)	70
Styrene	ND	µg/kg (dry wt)	70
Total xylenes ----------	230	µg/kg (dry wt)	70

Solid content = 77%

ND = Not detected.

Reported by AT Approved by Am

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7785 B-8 6-12"
Laboratory ID: 87-007227
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,800,000
4-Nitrophenol	ND	µg/kg (dry wt)	1,800,000
Dibenzofuran	ND	µg/kg (dry wt)	360,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	360,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	360,000
Diethyl phthalate	ND	µg/kg (dry wt)	360,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	360,000
Fluorene	ND	µg/kg (dry wt)	360,000
4-Nitroaniline	ND	µg/kg (dry wt)	1,800,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,800,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	360,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	360,000
Hexachlorobenzene	ND	µg/kg (dry wt)	360,000
Pentachlorophenol	ND	µg/kg (dry wt)	1,800,000
Phenanthrene	ND	µg/kg (dry wt)	360,000
Anthracene	ND	µg/kg (dry wt)	360,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	360,000
Fluoranthene	ND	µg/kg (dry wt)	360,000
Pyrene	ND	µg/kg (dry wt)	360,000
Butyl benzyl phthalate ---------	120,000*	µg/kg (dry wt)	360,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	720,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	360,000
bis(2-Ethylhexyl)phthalate ---	6,000,000	µg/kg (dry wt)	360,000
Chrysene	ND	µg/kg (dry wt)	360,000
Di-n-octyl phthalate ---------	1,000,000	µg/kg (dry wt)	360,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	360,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	360,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	360,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	360,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	360,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	360,000

Solid content = 79.4%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7786 B-8 14-20'
Laboratory ID: 87-007228
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,100,000
4-Nitrophenol	ND	µg/kg (dry wt)	1,100,000
Dibenzofuran	ND	µg/kg (dry wt)	210,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	210,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	210,000
Diethyl phthalate	ND	µg/kg (dry wt)	210,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	210,000
Fluorene	ND	µg/kg (dry wt)	210,000
4-Nitroaniline	ND	µg/kg (dry wt)	1,100,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,100,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	210,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	210,000
Hexachlorobenzene	ND	µg/kg (dry wt)	210,000
Pentachlorophenol	ND	µg/kg (dry wt)	1,100,000
Phenanthrene	ND	µg/kg (dry wt)	210,000
Anthracene	ND	µg/kg (dry wt)	210,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	210,000
Fluoranthene	ND	µg/kg (dry wt)	210,000
Pyrene	ND	µg/kg (dry wt)	210,000
Butyl benzyl phthalate ----------	72,000*	µg/kg (dry wt)	210,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	420,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	210,000
bis(2-Ethylhexyl)phthalate ---	3,400,000	µg/kg (dry wt)	210,000
Chrysene	ND	µg/kg (dry wt)	210,000
Di-n-octyl phthalate ----------	470,000	µg/kg (dry wt)	210,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	210,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	210,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	210,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	210,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	210,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	210,000

Solid content = 87.5%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7787 B-9 6-12'

Laboratory ID: 87-007229

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	ND	µg/kg (dry wt)	500
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane ----------	74	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 92%

ND = Not detected.

Reported by AT Approved by An/JC

445

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7787
Laboratory ID: 87-007229 B-9 6-12"
Matrix: Solid
Authorized: 06/01/87 Sampled: 05/26/87 Received: 05/29/87
Prepared: 06/11/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	9,500
4-Nitrophenol	ND	µg/kg (dry wt)	9,500
Dibenzofuran	410*	µg/kg (dry wt)	1,900
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,900
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,900
Diethyl phthalate	ND	µg/kg (dry wt)	1,900
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,900
Fluorene	700*	µg/kg (dry wt)	1,900
4-Nitroaniline	ND	µg/kg (dry wt)	1,900
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	9,500
N-Nitrosodiphenylamine	380*	µg/kg (dry wt)	9,500
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,900
Hexachlorobenzene	ND	µg/kg (dry wt)	1,900
Pentachlorophenol	ND	µg/kg (dry wt)	1,900
Phenanthrene	6,900	µg/kg (dry wt)	9,500
Anthracene	1,800*	µg/kg (dry wt)	1,900
Di-n-butyl phthalate	ND	µg/kg (dry wt)	1,900
Fluoranthene	8,100	µg/kg (dry wt)	1,900
Pyrene	6,900	µg/kg (dry wt)	1,900
Butyl benzyl phthalate	ND	µg/kg (dry wt)	1,900
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	3,800
Benzo(a)anthracene	3,000	µg/kg (dry wt)	1,900
Bis(2-Ethylhexyl)phthalate	1,200*	µg/kg (dry wt)	1,900
Chrysene	2,900	µg/kg (dry wt)	1,900
Di-n-octyl phthalate	ND	µg/kg (dry wt)	1,900
Benzo(b)fluoranthene)	4,200	µg/kg (dry wt)	1,900
Benzo(k)fluoranthene)†	2,800	µg/kg (dry wt)	1,900
Benzo(a)pyrene	1,400*	µg/kg (dry wt)	1,900
Indeno(1,2,3-c,d)pyrene	540*	µg/kg (dry wt)	1,900
Dibenzo(a,h)anthracene	1,500*	µg/kg (dry wt)	1,900
Benzo(g,h,i)perylene		µg/kg (dry wt)	1,900

Solid content = 92.9%
Diluted.

Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7787 B-9 6-12"
Laboratory ID: 87-007229
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	1,900
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	1,900
2-Chlorophenol	ND	µg/kg (dry wt)	1,900
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	1,900
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	1,900
Benzyl alcohol	ND	µg/kg (dry wt)	1,900
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	1,900
2-Methylphenol	ND	µg/kg (dry wt)	1,900
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	1,900
4-Methylphenol	ND	µg/kg (dry wt)	1,900
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	1,900
Hexachloroethane	ND	µg/kg (dry wt)	1,900
Nitrobenzene	ND	µg/kg (dry wt)	1,900
Isophorone	ND	µg/kg (dry wt)	1,900
2-Nitrophenol	ND	µg/kg (dry wt)	1,900
2,4-Dimethylphenol	ND	µg/kg (dry wt)	1,900
Benzoic Acid	ND	µg/kg (dry wt)	1,900
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	9,500
2,4-Dichlorophenol	ND	µg/kg (dry wt)	1,900
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	1,900
Naphthalene ----------	320*	µg/kg (dry wt)	1,900
4-Chloroaniline	ND	µg/kg (dry wt)	1,900
Hexachlorobutadiene	ND	µg/kg (dry wt)	1,900
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	1,900
2-Methylnaphthalene	ND	µg/kg (dry wt)	1,900
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	1,900
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	1,900
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	1,900
2-Chloronaphthalene	ND	µg/kg (dry wt)	9,500
2-Nitroaniline	ND	µg/kg (dry wt)	1,900
Dimethyl phthalate	ND	µg/kg (dry wt)	9,500
Acenaphthylene	ND	µg/kg (dry wt)	1,900
3-Nitroaniline	ND	µg/kg (dry wt)	1,900
Acenaphthene ----------	720*	µg/kg (dry wt)	9,500
		µg/kg (dry wt)	1,900

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

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HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7788

Laboratory ID: 87-007230 B-9 40-46"

Matrix: Solid

Authorized: 06/01/87 Sampled: 05/26/87 Prepared: 06/11/87 Received: 05/29/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,900
4-Nitrophenol	ND	µg/kg (dry wt)	1,900
Dibenzofuran	69*	µg/kg (dry wt)	370
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	370
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	370
Diethyl phthalate	ND	µg/kg (dry wt)	370
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	370
Fluorene	ND	µg/kg (dry wt)	370
4-Nitroaniline	ND	µg/kg (dry wt)	370
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,900
N-Nitrosodiphenylamine	130*	µg/kg (dry wt)	1,900
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	370
Hexachlorobenzene	ND	µg/kg (dry wt)	370
Pentachlorophenol	ND	µg/kg (dry wt)	370
Phenanthrene	250*	µg/kg (dry wt)	1,900
Anthracene	52*	µg/kg (dry wt)	370
Di-n-butyl phthalate	ND	µg/kg (dry wt)	370
Fluoranthene	280*	µg/kg (dry wt)	370
Pyrene	250*	µg/kg (dry wt)	370
Butyl benzyl phthalate	59*	µg/kg (dry wt)	370
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	370
Benzo(a)anthracene	150*	µg/kg (dry wt)	740
Bis(2-Ethylhexyl)phthalate	4,500	µg/kg (dry wt)	370
Chrysene	170*	µg/kg (dry wt)	370
Di-n-octyl phthalate	530	µg/kg (dry wt)	370
Benzo(b)fluoranthene)		µg/kg (dry wt)	370
Benzo(k)fluoranthene)†	230*	µg/kg (dry wt)	370
Benzo(a)pyrene	140*	µg/kg (dry wt)	370
Indeno(1,2,3-c,d)pyrene	69*	µg/kg (dry wt)	370
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	370
Benzo(g,h,i)perylene	51*	µg/kg (dry wt)	370

Solid content = 89.2%

†Coeluted.

*Trace concentrations detected below the reporting limit.

ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7788 B-9 40-46"

Laboratory ID: 87-007230

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/10/87 Analyzed: 06/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	ND	µg/kg (dry wt)	900
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	50
1,1,1-Trichloroethane ----------	110	µg/kg (dry wt)	250
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	50
Bromodichloromethane	ND	µg/kg (dry wt)	250
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene ----------	58	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	50
Bromoform	ND	µg/kg (dry wt)	250
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	50
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	250
Tetrachloroethene ----------	75	µg/kg (dry wt)	50
Toluene ----------	120	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 90%

ND = Not detected.

Reported by AT Approved by

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7790 B-12 26-32
Laboratory ID: 87-007232
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	2,000
4-Nitrophenol	ND	µg/kg (dry wt)	2,000
Dibenzofuran	230*	µg/kg (dry wt)	400
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	400
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	400
Diethyl phthalate	ND	µg/kg (dry wt)	400
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	400
Fluorene	320*	µg/kg (dry wt)	400
4-Nitroaniline	ND	µg/kg (dry wt)	2,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	2,000
N-Nitrosodiphenylamine	93*	µg/kg (dry wt)	400
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	400
Hexachlorobenzene	ND	µg/kg (dry wt)	400
Pentachlorophenol	ND	µg/kg (dry wt)	2,000
Phenanthrene	2,500	µg/kg (dry wt)	400
Anthracene	720	µg/kg (dry wt)	400
Di-n-butyl phthalate	ND	µg/kg (dry wt)	400
Fluoranthene	2,300	µg/kg (dry wt)	400
Pyrene	1,900	µg/kg (dry wt)	400
Butyl benzyl phthalate	8,200	µg/kg (dry wt)	400
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	800
Benzo(a)anthracene	980	µg/kg (dry wt)	200
Bis(2-Ethylhexyl)phthalate	290*	µg/kg (dry wt)	200
Chrysene	820	µg/kg (dry wt)	200
Di-n-octyl phthalate	ND	µg/kg (dry wt)	200
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	1,100	µg/kg (dry wt)	200
Benzo(a)pyrene	690	µg/kg (dry wt)	200
Indeno(1,2,3-c,d)pyrene	290*	µg/kg (dry wt)	200
Dibenzo(a,h)anthracene	81*	µg/kg (dry wt)	200
Benzo(g,h,i)perylene	200*	µg/kg (dry wt)	200

Solid content = 76.3%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

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Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7789 B-12 6-12"
Laboratory ID: 87-007231
Matrix: Solid
Authorized: 06/01/87 Sampled: 05/26/87 Received: 05/29/87
Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	75,000
4-Nitrophenol	ND	µg/kg (dry wt)	75,000
Dibenzofuran	ND	µg/kg (dry wt)	15,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	15,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	15,000
Diethyl phthalate	ND	µg/kg (dry wt)	15,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	15,000
Fluorene	ND	µg/kg (dry wt)	15,000
4-Nitroaniline	ND	µg/kg (dry wt)	15,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	75,000
N-Nitrosodiphenylamine --------	10,000*	µg/kg (dry wt)	75,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	15,000
Hexachlorobenzene	ND	µg/kg (dry wt)	15,000
Pentachlorophenol	ND	µg/kg (dry wt)	15,000
Phenanthrene	ND	µg/kg (dry wt)	75,000
Anthracene	ND	µg/kg (dry wt)	15,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	15,000
Fluoranthene	ND	µg/kg (dry wt)	15,000
Pyrene	ND	µg/kg (dry wt)	15,000
Butyl benzyl phthalate -------	210,000	µg/kg (dry wt)	15,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	15,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	30,000
Bis(2-Ethylhexyl)phthalate -----	7,300*	µg/kg (dry wt)	15,000
Chrysene	ND	µg/kg (dry wt)	15,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	15,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	15,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	15,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	15,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	15,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	15,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	15,000

Solid content = 90.9%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7792 B-13 20-26"

Laboratory ID: 87-007234

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/22/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	ND	µg/kg (dry wt)	1,500
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	ND	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	120	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	180	µg/kg (dry wt)	60
Toluene	160	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	270	µg/kg (dry wt)	60

Solid content = 86%

ND = Not detected.

Reported by AT Approved by Am

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Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7792
Laboratory ID: 87-007234 B-13 20-26"
Matrix: Solid
Authorized: 06/01/87 Sampled: 05/26/87 Prepared: 06/11/87 Received: 05/29/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	10,000
4-Nitrophenol	ND	µg/kg (dry wt)	10,000
Dibenzofuran	ND	µg/kg (dry wt)	2,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	2,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	2,000
Diethyl phthalate	ND	µg/kg (dry wt)	2,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	2,000
Fluorene	ND	µg/kg (dry wt)	2,000
4-Nitroaniline	ND	µg/kg (dry wt)	2,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	10,000
N-Nitrosodiphenylamine	680*	µg/kg (dry wt)	10,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	2,000
Hexachlorobenzene	ND	µg/kg (dry wt)	2,000
Pentachlorophenol	ND	µg/kg (dry wt)	2,000
Phenanthrene	590*	µg/kg (dry wt)	10,000
Anthracene	ND	µg/kg (dry wt)	2,000
Di-n-butyl phthalate	540*	µg/kg (dry wt)	2,000
Fluoranthene	700*	µg/kg (dry wt)	2,000
Pyrene	850*	µg/kg (dry wt)	2,000
Butyl benzyl phthalate	24,000	µg/kg (dry wt)	2,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	2,000
Benzo(a)anthracene	410*	µg/kg (dry wt)	4,000
Bis(2-Ethylhexyl)phthalate	4,300	µg/kg (dry wt)	2,000
Chrysene	550*	µg/kg (dry wt)	2,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	2,000
Benzo(b)fluoranthene)	800*	µg/kg (dry wt)	2,000
Benzo(k)fluoranthene)†	530*	µg/kg (dry wt)	2,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	2,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	2,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	2,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	2,000

Solid content = 84.0%
Diluted.
Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7791 B-13 6-12"
Laboratory ID: 87-007233
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,400
4-Nitrophenol	ND	µg/kg (dry wt)	1,400
Dibenzofuran	ND	µg/kg (dry wt)	280
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	280
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	280
Diethyl phthalate	ND	µg/kg (dry wt)	280
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	280
Fluorene	ND	µg/kg (dry wt)	280
4-Nitroaniline	ND	µg/kg (dry wt)	280
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,400
N-Nitrosodiphenylamine	90*	µg/kg (dry wt)	1,400
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	280
Hexachlorobenzene	ND	µg/kg (dry wt)	280
Pentachlorophenol	ND	µg/kg (dry wt)	280
Phenanthrene	310	µg/kg (dry wt)	1,400
Anthracene	100*	µg/kg (dry wt)	280
Di-n-butyl phthalate	ND	µg/kg (dry wt)	280
Fluoranthene	480	µg/kg (dry wt)	280
Pyrene	690	µg/kg (dry wt)	280
Butyl benzyl phthalate	1,400	µg/kg (dry wt)	280
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	280
Benzo(a)anthracene	270*	µg/kg (dry wt)	560
Bis(2-Ethylhexyl)phthalate	6,200	µg/kg (dry wt)	280
Chrysene	390	µg/kg (dry wt)	280
Di-n-octyl phthalate	480	µg/kg (dry wt)	280
Benzo(b)fluoranthene, Benzo(k)fluoranthene)†	440	µg/kg (dry wt)	280
Benzo(a)pyrene	420	µg/kg (dry wt)	280
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	280
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	280
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	280

Solid content = 84.4%
Coeluted.
*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

ACCUTEST®
LABORATORIES
578 LIVINGSTON AVENUE • NORTH BRUNSWICK, N.J. 08902 •(201) 249-0100

CLIENT: RECON SYSTEMS, INC.

SAMPLE ID: 0942, 87-1523; #6883

MATRIX: SOIL

METALS

PARAMETER	RESULT	MDL
ANTIMONY	0.647	0.100
ARSENIC	1.52	0.100
BERYLLIUM	0.527	0.500
CADMIUM	3.27	0.500
CHROMIUM	20.4	2.50
COPPER	43.6	2.00
LEAD	83.4	0.100
MERCURY	<0.100	0.100
NICKEL	16.9	4.00
SELENIUM	0.497	0.100
SILVER	1.26	1.00
THALLIUM	<0.100	0.100
ZINC	191	0.500
CYANIDE	<0.500	0.500
PHENOLS	12.5	2.50

RESULTS ARE IN MG/KG(DRY WEIGHT BASIS)
MDL = METHOD DETECTION LIMIT

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HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7797 B-10 30-36"

Laboratory ID: 87-007239

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/21/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	180
Bromomethane	ND	µg/kg (dry wt)	180
Vinyl chloride	ND	µg/kg (dry wt)	180
Chloroethane	ND	µg/kg (dry wt)	180
Methylene chloride	ND	µg/kg (dry wt)	180
Acetone	ND	µg/kg (dry wt)	700
Carbon disulfide	410	µg/kg (dry wt)	1,800
1,1-Dichloroethene	ND	µg/kg (dry wt)	70
1,1-Dichloroethane	ND	µg/kg (dry wt)	70
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	70
Chloroform	ND	µg/kg (dry wt)	70
1,2-Dichloroethane	ND	µg/kg (dry wt)	70
2-Butanone	ND	µg/kg (dry wt)	70
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	350
Carbon tetrachloride	ND	µg/kg (dry wt)	70
Vinyl acetate	ND	µg/kg (dry wt)	70
Bromodichloromethane	ND	µg/kg (dry wt)	350
1,2-Dichloropropane	ND	µg/kg (dry wt)	70
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	70
Trichloroethene	ND	µg/kg (dry wt)	70
Dibromochloromethane	ND	µg/kg (dry wt)	70
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	70
Benzene	190	µg/kg (dry wt)	70
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	70
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	70
Bromoform	ND	µg/kg (dry wt)	350
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	70
2-Hexanone	ND	µg/kg (dry wt)	350
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	350
Tetrachloroethene	ND	µg/kg (dry wt)	70
Toluene	860	µg/kg (dry wt)	70
Chlorobenzene	ND	µg/kg (dry wt)	70
Ethyl benzene	2,900	µg/kg (dry wt)	70
Styrene	ND	µg/kg (dry wt)	70
Total xylenes	490	µg/kg (dry wt)	70

Solid content = 72%

ND = Not detected.

Reviewed by AT Approved by An

456

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HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7797 B-10 30-36"
Laboratory ID: 87-007239
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	13,000,000
4-Nitrophenol	ND	µg/kg (dry wt)	13,000,000
Dibenzofuran	ND	µg/kg (dry wt)	2,500,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	2,500,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	2,500,000
Diethyl phthalate	ND	µg/kg (dry wt)	2,500,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	2,500,000
Fluorene	ND	µg/kg (dry wt)	2,500,000
4-Nitroaniline	ND	µg/kg (dry wt)	2,500,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	13,000,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	13,000,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	2,500,000
Hexachlorobenzene	ND	µg/kg (dry wt)	2,500,000
Pentachlorophenol	ND	µg/kg (dry wt)	2,500,000
Phenanthrene	ND	µg/kg (dry wt)	13,000,000
Anthracene	ND	µg/kg (dry wt)	2,500,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	2,500,000
Fluoranthene	ND	µg/kg (dry wt)	2,500,000
Pyrene	ND	µg/kg (dry wt)	2,500,000
Butyl benzyl phthalate	ND	µg/kg (dry wt)	2,500,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	2,500,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	5,000,000
Bis(2-Ethylhexyl)phthalate --- 26,000,000		µg/kg (dry wt)	2,500,000
Chrysene	ND	µg/kg (dry wt)	2,500,000
Di-n-octyl phthalate ---------- 460,000*		µg/kg (dry wt)	2,500,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	2,500,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	2,500,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	2,500,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	2,500,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	2,500,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	2,500,000

Solid content = 45.8%

Trace concentrations detected below the reporting limit.
ND = Not detected.

Reviewed by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7796 B-10 6-12"
Laboratory ID: 87-007238
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	23,000
4-Nitrophenol	ND	µg/kg (dry wt)	23,000
Dibenzofuran	2,200*	µg/kg (dry wt)	4,600
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	4,600
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	4,600
Diethyl phthalate	ND	µg/kg (dry wt)	4,600
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	4,600
Fluorene	1,900*	µg/kg (dry wt)	4,600
4-Nitroaniline	ND	µg/kg (dry wt)	4,600
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	23,000
N-Nitrosodiphenylamine	940*	µg/kg (dry wt)	23,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	4,600
Hexachlorobenzene	ND	µg/kg (dry wt)	4,600
Pentachlorophenol	ND	µg/kg (dry wt)	4,600
Phenanthrene	19,000	µg/kg (dry wt)	23,000
Anthracene	4,700	µg/kg (dry wt)	4,600
Di-n-butyl phthalate	ND	µg/kg (dry wt)	4,600
Fluoranthene	21,000	µg/kg (dry wt)	4,600
Pyrene	14,000	µg/kg (dry wt)	4,600
Butyl benzyl phthalate	8,900	µg/kg (dry wt)	4,600
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	4,600
Benzo(a)anthracene	7,500	µg/kg (dry wt)	9,200
Bis(2-Ethylhexyl)phthalate	52,000	µg/kg (dry wt)	4,600
Chrysene	7,900	µg/kg (dry wt)	4,600
Di-n-octyl phthalate	8,800	µg/kg (dry wt)	4,600
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	14,000	µg/kg (dry wt)	4,600
Benzo(a)pyrene	7,500	µg/kg (dry wt)	4,600
Indeno(1,2,3-c,d)pyrene	2,500	µg/kg (dry wt)	4,600
Dibenzo(a,h)anthracene	710*	µg/kg (dry wt)	4,600
Benzo(g,h,i)perylene	1,800*	µg/kg (dry wt)	4,600

Solid content = 87.8%
Diluted.
Trace concentrations detected below the reporting limit.
* Not detected.

Reported by PD Approved by DG

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HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7796 B10 6-12"

Laboratory ID: 87-007238

Matrix: Solid Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	4,600
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	4,600
2-Chlorophenol	ND	µg/kg (dry wt)	4,600
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	4,600
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	4,600
Benzyl alcohol	ND	µg/kg (dry wt)	4,600
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	4,600
2-Methylphenol	ND	µg/kg (dry wt)	4,600
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	4,600
4-Methylphenol	ND	µg/kg (dry wt)	4,600
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	4,600
Hexachloroethane	ND	µg/kg (dry wt)	4,600
Nitrobenzene	ND	µg/kg (dry wt)	4,600
Isophorone	ND	µg/kg (dry wt)	4,600
2-Nitrophenol	ND	µg/kg (dry wt)	4,600
2,4-Dimethylphenol	ND	µg/kg (dry wt)	4,600
Benzoic Acid	ND	µg/kg (dry wt)	4,600
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	23,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	4,600
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	4,600
Naphthalene ----------	1,600*	µg/kg (dry wt)	4,600
4-Chloroaniline	ND	µg/kg (dry wt)	4,600
Hexachlorobutadiene	ND	µg/kg (dry wt)	4,600
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	4,600
2-Methylnaphthalene	ND	µg/kg (dry wt)	4,600
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	4,600
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	4,600
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	4,600
2-Chloronaphthalene	ND	µg/kg (dry wt)	23,000
2-Nitroaniline	ND	µg/kg (dry wt)	4,600
Dimethyl phthalate	ND	µg/kg (dry wt)	23,000
Acenaphthylene ----------	1,300*	µg/kg (dry wt)	4,600
3-Nitroaniline	ND	µg/kg (dry wt)	4,600
Acenaphthene ----------	1,300*	µg/kg (dry wt)	23,000
		µg/kg (dry wt)	4,600

(continued on following page)

Trace concentrations detected below the reporting limit.

* = Not detected.

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HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7798 B-11 6-12"

Laboratory ID: 87-007240

Matrix: Solid Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	9,000
4-Nitrophenol	ND	µg/kg (dry wt)	9,000
Dibenzofuran	ND	µg/kg (dry wt)	1,800
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,800
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,800
Diethyl phthalate	ND	µg/kg (dry wt)	1,800
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,800
Fluorene	ND	µg/kg (dry wt)	1,800
4-Nitroaniline	ND	µg/kg (dry wt)	9,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	9,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	1,800
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,800
Hexachlorobenzene	ND	µg/kg (dry wt)	1,800
Pentachlorophenol	ND	µg/kg (dry wt)	9,000
Phenanthrene	1,000*	µg/kg (dry wt)	1,800
Anthracene	330*	µg/kg (dry wt)	1,800
Di-n-butyl phthalate	ND	µg/kg (dry wt)	1,800
Fluoranthene	1,500*	µg/kg (dry wt)	1,800
Pyrene	1,400*	µg/kg (dry wt)	1,800
Butyl benzyl phthalate	30,000	µg/kg (dry wt)	1,800
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	3,600
Benzo(a)anthracene	730*	µg/kg (dry wt)	1,800
bis(2-Ethylhexyl)phthalate	8,500	µg/kg (dry wt)	1,800
Chrysene	780*	µg/kg (dry wt)	1,800
Di-n-octyl phthalate	680*	µg/kg (dry wt)	1,800
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	1,400*	µg/kg (dry wt)	1,800
Benzo(a)pyrene	770*	µg/kg (dry wt)	1,800
Indeno(1,2,3-c,d)pyrene	260*	µg/kg (dry wt)	1,800
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	1,800
Benzo(g,h,i)perylene	220*	µg/kg (dry wt)	1,800

Solid content = 89.3%

†Coeluted.

*Trace concentrations detected below the reporting limit.

ND = Not detected.

Reported by PD Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7798 B-11 6-12"

Laboratory ID: 87-007240

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/22/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	ND	µg/kg (dry wt)	250
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	[illegible]
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene ----------	59	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 89%

ND = Not detected.

Reported by AT Approved by Am

Enseco

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.

Client ID: 7798 B-11 6-12"

Laboratory ID: 87-007240

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 05/29/87 Prepared: 06/10/87 Analyzed: 07/01/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	16
beta-BHC	ND	µg/kg (dry wt)	16
delta-BHC	ND	µg/kg (dry wt)	16
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	16
Heptachlor	ND	µg/kg (dry wt)	16
Aldrin	ND	µg/kg (dry wt)	16
Heptachlor Epoxide	ND	µg/kg (dry wt)	16
Endosulfan I	ND	µg/kg (dry wt)	16
Dieldrin	ND	µg/kg (dry wt)	32
4,4'-DDE	ND	µg/kg (dry wt)	32
Endrin	ND	µg/kg (dry wt)	32
Endosulfan II	ND	µg/kg (dry wt)	32
4,4'-DDD	ND	µg/kg (dry wt)	32
Endosulfan Sulfate	ND	µg/kg (dry wt)	32
4,4'-DDT	ND	µg/kg (dry wt)	32
Endrin Aldehyde	ND	µg/kg (dry wt)	32
Methoxychlor	ND	µg/kg (dry wt)	160
Chlordane	ND	µg/kg (dry wt)	160
Toxaphene	ND	µg/kg (dry wt)	320
Aroclor-1016	ND	µg/kg (dry wt)	160
Aroclor-1221	ND	µg/kg (dry wt)	160
Aroclor-1232	ND	µg/kg (dry wt)	160
Aroclor-1242	ND	µg/kg (dry wt)	160
Aroclor-1248	ND	µg/kg (dry wt)	160
Aroclor-1254	ND	µg/kg (dry wt)	320
Aroclor-1260	ND	µg/kg (dry wt)	320

Solid content = 89%

ND = Not detected.

Reported by YLC Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7799 B11 33-39'
Laboratory ID: 87-007241
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	550
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	550
2-Chlorophenol	ND	µg/kg (dry wt)	550
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	550
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	550
Benzyl alcohol	ND	µg/kg (dry wt)	550
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	550
2-Methylphenol	ND	µg/kg (dry wt)	550
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	550
4-Methylphenol	ND	µg/kg (dry wt)	550
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	550
Hexachloroethane	ND	µg/kg (dry wt)	550
Nitrobenzene	ND	µg/kg (dry wt)	550
Isophorone	ND	µg/kg (dry wt)	550
2-Nitrophenol	ND	µg/kg (dry wt)	550
2,4-Dimethylphenol	ND	µg/kg (dry wt)	550
Benzoic Acid	ND	µg/kg (dry wt)	550
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	2,800
2,4-Dichlorophenol	ND	µg/kg (dry wt)	550
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	550
Naphthalene ----------	99*	µg/kg (dry wt)	550
4-Chloroaniline	ND	µg/kg (dry wt)	550
Hexachlorobutadiene	ND	µg/kg (dry wt)	550
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	550
2-Methylnaphthalene	ND	µg/kg (dry wt)	550
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	550
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	550
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	550
2-Chloronaphthalene	ND	µg/kg (dry wt)	2,800
2-Nitroaniline	ND	µg/kg (dry wt)	550
Dimethyl phthalate	ND	µg/kg (dry wt)	2,800
Acenaphthylene	ND	µg/kg (dry wt)	550
3-Nitroaniline	ND	µg/kg (dry wt)	550
Acenaphthene	ND	µg/kg (dry wt)	2,800
		µg/kg (dry wt)	550

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 7799 B11 33-39"
Laboratory ID: 87-007241
Matrix: Solid Sampled: 05/26/87 Received: 05/29/87
Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	2,800
4-Nitrophenol	ND	µg/kg (dry wt)	550
Dibenzofuran	ND	µg/kg (dry wt)	550
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	550
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	550
Diethyl phthalate	ND	µg/kg (dry wt)	550
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	550
Fluorene	ND	µg/kg (dry wt)	550
4-Nitroaniline	ND	µg/kg (dry wt)	550
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	2,800
N-Nitrosodiphenylamine	62*	µg/kg (dry wt)	2,800
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	550
Hexachlorobenzene	ND	µg/kg (dry wt)	550
Pentachlorophenol	ND	µg/kg (dry wt)	550
Phenanthrene	88*	µg/kg (dry wt)	2,800
Anthracene	ND	µg/kg (dry wt)	550
Di-n-butyl phthalate	ND	µg/kg (dry wt)	550
Fluoranthene	130*	µg/kg (dry wt)	550
Pyrene	110*	µg/kg (dry wt)	550
Butyl benzyl phthalate	2,500	µg/kg (dry wt)	550
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	550
Benzo(a)anthracene	62*	µg/kg (dry wt)	1,100
bis(2-Ethylhexyl)phthalate	410*	µg/kg (dry wt)	550
Chrysene	71*	µg/kg (dry wt)	550
Di-n-octyl phthalate	ND	µg/kg (dry wt)	550
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	92*	µg/kg (dry wt)	550
Benzo(a)pyrene	57*	µg/kg (dry wt)	550
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	550
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	550
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	550

Solid content = 63.8%
†Coeluted.
*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Ense

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 7799 B11 33-39"

Laboratory ID: 87-007241

Matrix: Soil Sampled: 05/26/87 Received: 05/29/87

Authorized: 06/01/87 Prepared: 06/11/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	ND	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	1,300
1,1-Dichloroethene ----------	94	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	50
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	250
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	50
Bromodichloromethane	ND	µg/kg (dry wt)	250
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene ----------	66	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	50
Bromoform	ND	µg/kg (dry wt)	250
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	50
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	250
Tetrachloroethene ----------	81	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 84%

ND = Not detected.

Reported by _____ Approved by _____

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.

Client ID: 7799 B-11 33-39"

Laboratory ID: 87-007241

Matrix: Soil

Sampled: 05/26/87 Received: 05/29/87

Authorized: 05/29/87 Prepared: 06/25/87 Analyzed: 07/01/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	16
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	80
Aroclor-1016	ND	µg/kg (dry wt)	160
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 64%

ND = Not detected.

Reported by YUC Approved by EK

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

June 19, 198

TO: Franklin Platics Project

Attn: W. A. Moody
RECON Project No. 1126

Sample: Soil - sampled 5/27/87

Volatile Aromatics Results

All units are ug/Kg, dry wt. basis, except where noted

Sample ID	B-25	B-26	B-27	B-28	B-29	B-30	Field Blank 7826*	Spike % Recovery	Detection Limit
Sample No.	7818	7819	7820	7821	7822	7823			
Benzene	ND	ND	ND	ND	ND	ND	ND	89	5
Toluene	ND	ND	ND	ND	ND	ND	ND	91	5
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	87	5
Para-Xylene	ND	ND	ND	ND	ND	ND	ND	85	5
Meta-Xylene	ND	ND	ND	ND	ND	ND	ND	86	5
Ortho-Xylene	ND	ND	ND	ND	ND	ND	ND	83	5
Analytical Remarks	a	a	a	a	a	a	--	--	

Samples analyzed by EPA Method 503.1.

Samples from this project will be retained for sixty days from the date of this report unless otherwise directed. All runs terminated at standard time, unless otherwise indicated.

a = Possibly significant, unidentified peaks observed within normal run-time window.
b = Possibly significant, unidentified peaks observed subsequent to normal run-time window.
ND = None detected

* Units are ug/L

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Director

Richard N. Schaffer
Per Richard N. Schaffer, B.S.
Chemist

RNS/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample)

PROJECT MANAGER WAM

SAMPLE NO. E 7818 ANALYTICAL RESULTS TO BE REPORTED TO: PAT

SAMPLE LOCATION B25 16ft E 10 South middle Exc RECON JOB NO. 1126

SAMPLE DESCRIP SANDY SOIL SAMPLING DATE/TIME 5-27-87 1215

CONTAINER DESCRIP 2 ea 40 ml SAMPLED BY: WAM

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
WAM	RNS/R	Soil 4°C 35"-41"	BTX	RNS/R	6-13-87	6-15

MAKE ADDITIONAL COMMENTS/NOTES

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample)

PROJECT MANAGER WAm

SAMPLE NO. E 7819 ____ ANALYTICAL RESULTS TO BE REPORTED TO: WAm

SAMPLE LOCATION 11' from Pit (NEc) B26. RECON JOB NO. 1126

SAMPLE DESCRIP Soil SAMPLING DATE/TIME 5-27-87 / 13:30

CONTAINER DESCRIP 2 - Voc SAMPLED BY: DRG

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
DRG/R	RNS/R	2-Voc soil 4°C	BTX	RNS/R	6-13	6-15

MAKE ADDITIONAL COMMENTS/NOTES

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample)

PROJECT MANAGER WAM

SAMPLE NO. E 7820 ANALYTICAL RESULTS TO BE REPORTED TO: PAT

SAMPLE LOCATION 827 37"-43" 15' NORTH of EDGE CENTERTANK EXC. RECON JOB NO. 1126

SAMPLE DESCRIP SAND CINDERS SAMPLING DATE/TIME 5-27-87 1400

CONTAINER DESCRIP 2ea 40ml SAMPLED BY:

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
WAM	RNS/R	Soil 4°C	BTX	RNS/R.	6-13-87	6-15

MAKE ADDITIONAL COMMENTS/NOTES

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

470

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample)

PROJECT MANAGER WAM

SAMPLE NO E 7821 ANALYTICAL RESULTS TO BE REPORTED TO: WAM

SAMPLE LOCATION 10' from pit west side center RECON JOB NO. 1126

SAMPLE DESCRIP Soil B28 SAMPLING DATE/TIME 5-27-87 1500

CONTAINER DESCRIP 2 - VOC SAMPLED BY: DRG

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
DRG/R	RMS/K	VOC Soil 4°C	BTX	RMS/K	6-13-87	6-15

MAKE ADDITIONAL COMMENTS/NOTES

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample)

PROJECT MANAGER WAM

SAMPLE NO. E 7822 ANALYTICAL RESULTS TO BE REPORTED TO: PCI

SAMPLE LOCATION B29 39"-45" RECON JOB NO. 1126

SAMPLE DESCRIP Soil & cinders SAMPLING DATE/TIME 5-27-87 1540

CONTAINER DESCRIP 2ea 40ml SAMPLED BY: WAM

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
WAM	RMS/R	Soil 4°C	BTX	RMS/R	6-13-87	6/15

MAKE ADDITIONAL COMMENTS/NOTES

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample)

PROJECT MANAGER WAM

SAMPLE NO. E 7823 ____ ANALYTICAL RESULTS TO BE REPORTED TO: WAM

SAMPLE LOCATION 8' South of pit B30 RECON JOB NO. 1126

SAMPLE DESCRIP Soils SAMPLING DATE/TIME 5-27-87 = 17

CONTAINER DESCRIP 2-VOC SAMPLED BY: DRG

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
DRG/R	AMS/K	2-VOC Soils 4°C	BTX	AMS/R	6-13-87	6-15-87

MAKE ADDITIONAL COMMENTS/NOTES

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

Area 3

	MW2/1 7840	MW2/2 7841
Sb	ND	31
As	7.9	15
Be	<2 ?	1.2 *
Cd	<2 ?	<1.0
Cr	24.2	15.4
Cu	11.9	11.7
Pb	51	69
Hg	0.3	<0.2
Ni	35.9	15.3
Se	ND	0.2
Ag	ND	3.0
Th	46	34 *
Zn	65.9	48.2

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7840 Core from MW-2 6-12"

Laboratory ID: 87-007549

Matrix: Soil Sampled: 05/28/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/23/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride ----------	280B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 94%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/JC

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7840 Core from MW2- 6-12"
Laboratory ID: 87-007549
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	21,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	21,000
2-Chlorophenol	ND	µg/kg (dry wt)	21,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	21,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	21,000
Benzyl alcohol	ND	µg/kg (dry wt)	21,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	21,000
2-Methylphenol	ND	µg/kg (dry wt)	21,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	21,000
4-Methylphenol	ND	µg/kg (dry wt)	21,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	21,000
Hexachloroethane	ND	µg/kg (dry wt)	21,000
Nitrobenzene	ND	µg/kg (dry wt)	21,000
Isophorone	ND	µg/kg (dry wt)	21,000
2-Nitrophenol	ND	µg/kg (dry wt)	21,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	21,000
Benzoic Acid	ND	µg/kg (dry wt)	110,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	21,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	21,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	21,000
Naphthalene	ND	µg/kg (dry wt)	21,000
4-Chloroaniline	ND	µg/kg (dry wt)	21,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	21,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	21,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	21,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	21,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	21,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	110,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	21,000
2-Nitroaniline	ND	µg/kg (dry wt)	110,000
Dimethyl phthalate	ND	µg/kg (dry wt)	21,000
Acenaphthylene	ND	µg/kg (dry wt)	21,000
3-Nitroaniline	ND	µg/kg (dry wt)	110,000
Acenaphthene	ND	µg/kg (dry wt)	21,000

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7840 Core from MW-2 6-12"
Laboratory ID: 87-007549
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	110,000
4-Nitrophenol	ND	µg/kg (dry wt)	110,000
Dibenzofuran	ND	µg/kg (dry wt)	21,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	21,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	21,000
Diethyl phthalate	ND	µg/kg (dry wt)	21,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	21,000
Fluorene	ND	µg/kg (dry wt)	21,000
4-Nitroaniline	ND	µg/kg (dry wt)	110,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	110,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	21,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	21,000
Hexachlorobenzene	ND	µg/kg (dry wt)	21,000
Pentachlorophenol	ND	µg/kg (dry wt)	110,000
Phenanthrene	2,500*	µg/kg (dry wt)	21,000
Anthracene	ND	µg/kg (dry wt)	21,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	21,000
Fluoranthene	3,700*	µg/kg (dry wt)	21,000
Pyrene	4,100*	µg/kg (dry wt)	21,000
Butyl benzyl phthalate	12,000*	µg/kg (dry wt)	21,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	42,000
Benzo(a)anthracene	2,000*	µg/kg (dry wt)	21,000
bis(2-Ethylhexyl)phthalate	333,000	µg/kg (dry wt)	21,000
Chrysene	2,400*	µg/kg (dry wt)	21,000
Di-n-octyl phthalate	36,000	µg/kg (dry wt)	21,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	21,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	21,000
Benzo(a)pyrene	2,500*	µg/kg (dry wt)	21,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	21,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	21,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	21,000

Solid content = 94%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by AVL Approved by DG

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7840 Core from MW-2 6-12"
Laboratory ID: 87-007549
Matrix: Soil Sampled: 05/27/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 07/01/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 94.3%

ND = Not detected.

Reported by YHL Approved by EH

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7841 Core from MW-2 42-48"

Laboratory ID: 87-007550

Matrix: Soil Sampled: 05/28/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	1,200B	µg/kg (dry wt)	150
Acetone	1,100*	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	130	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	79	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	94	µg/kg (dry wt)	60
Toluene	77	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 85%

ND = Not detected.

*Trace concentrations detected below the reporting limit.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Ar/JC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7841 Core from MW-2 42-48"
Laboratory ID: 87-007550
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	430
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	430
2-Chlorophenol	ND	µg/kg (dry wt)	430
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	430
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	430
Benzyl alcohol	ND	µg/kg (dry wt)	430
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	430
2-Methylphenol	ND	µg/kg (dry wt)	430
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	430
4-Methylphenol	ND	µg/kg (dry wt)	430
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	430
Hexachloroethane	ND	µg/kg (dry wt)	430
Nitrobenzene	ND	µg/kg (dry wt)	430
Isophorone	ND	µg/kg (dry wt)	430
2-Nitrophenol	ND	µg/kg (dry wt)	430
2,4-Dimethylphenol	ND	µg/kg (dry wt)	430
Benzoic Acid	ND	µg/kg (dry wt)	2,200
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	430
2,4-Dichlorophenol	ND	µg/kg (dry wt)	430
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	430
Naphthalene ----------	47*	µg/kg (dry wt)	430
4-Chloroaniline	ND	µg/kg (dry wt)	430
Hexachlorobutadiene	ND	µg/kg (dry wt)	430
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	430
2-Methylnaphthalene	ND	µg/kg (dry wt)	430
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	430
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	430
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	2,200
2-Chloronaphthalene	ND	µg/kg (dry wt)	430
2-Nitroaniline	ND	µg/kg (dry wt)	2,200
Dimethyl phthalate	ND	µg/kg (dry wt)	430
Acenaphthylene	ND	µg/kg (dry wt)	430
3-Nitroaniline	ND	µg/kg (dry wt)	2,200
Acenaphthene	ND	µg/kg (dry wt)	430

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7841 Core from MW-2 42-48"
Laboratory ID: 87-007550
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	2,200
4-Nitrophenol	ND	µg/kg (dry wt)	2,200
Dibenzofuran	ND	µg/kg (dry wt)	430
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	430
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	430
Diethyl phthalate	ND	µg/kg (dry wt)	430
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	430
Fluorene	ND	µg/kg (dry wt)	430
4-Nitroaniline	ND	µg/kg (dry wt)	2,200
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	2,200
N-Nitrosodiphenylamine	71*	µg/kg (dry wt)	430
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	430
Hexachlorobenzene	ND	µg/kg (dry wt)	430
Pentachlorophenol	ND	µg/kg (dry wt)	2,200
Phenanthrene	310*	µg/kg (dry wt)	430
Anthracene	97*	µg/kg (dry wt)	430
Di-n-butyl phthalate	ND	µg/kg (dry wt)	430
Fluoranthene	450	µg/kg (dry wt)	430
Pyrene	450	µg/kg (dry wt)	430
Butyl benzyl phthalate	3,700	µg/kg (dry wt)	430
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	870
Benzo(a)anthracene	330*	µg/kg (dry wt)	430
bis(2-Ethylhexyl)phthalate	390*	µg/kg (dry wt)	430
Chrysene	320*	µg/kg (dry wt)	430
Di-n-octyl phthalate	ND	µg/kg (dry wt)	430
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	490	µg/kg (dry wt)	430
Benzo(a)pyrene	340*	µg/kg (dry wt)	430
Indeno(1,2,3-c,d)pyrene	230*	µg/kg (dry wt)	430
Dibenzo(a,h)anthracene	56*	µg/kg (dry wt)	430
Benzo(g,h,i)perylene	230*	µg/kg (dry wt)	430

Solid content = 73.9%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG / [illegible]

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Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7841 Core from MW-2 42-48"
Laboratory ID: 87-007550
Matrix: Soil Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 73.9%

ND = Not detected.

Reported by YHL Approved by EW

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7842 Core from MW7 6-12"

Laboratory ID: 87-007551

Matrix: Soil Sampled: 05/28/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	1,000
Bromomethane	ND	µg/kg (dry wt)	1,000
Vinyl chloride	ND	µg/kg (dry wt)	1,000
Chloroethane	ND	µg/kg (dry wt)	1,000
Methylene chloride	4,600B	µg/kg (dry wt)	1,000
Acetone	4,000*	µg/kg (dry wt)	10,000
Carbon disulfide	ND	µg/kg (dry wt)	400
1,1-Dichloroethene	ND	µg/kg (dry wt)	400
1,1-Dichloroethane	ND	µg/kg (dry wt)	400
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	400
Chloroform	ND	µg/kg (dry wt)	400
1,2-Dichloroethane	ND	µg/kg (dry wt)	400
2-Butanone	ND	µg/kg (dry wt)	2,000
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	400
Carbon tetrachloride	ND	µg/kg (dry wt)	400
Vinyl acetate	ND	µg/kg (dry wt)	2,000
Bromodichloromethane	ND	µg/kg (dry wt)	400
1,2-Dichloropropane	ND	µg/kg (dry wt)	400
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	400
Trichloroethene	ND	µg/kg (dry wt)	400
Dibromochloromethane	ND	µg/kg (dry wt)	400
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	400
Benzene	ND	µg/kg (dry wt)	400
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	400
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	2,000
Bromoform	ND	µg/kg (dry wt)	400
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	2,000
2-Hexanone	ND	µg/kg (dry wt)	2,000
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	400
Tetrachloroethene	ND	µg/kg (dry wt)	400
Toluene	ND	µg/kg (dry wt)	400
Chlorobenzene	ND	µg/kg (dry wt)	400
Ethyl benzene	ND	µg/kg (dry wt)	400
Styrene	ND	µg/kg (dry wt)	400
Total xylenes	ND	µg/kg (dry wt)	400

Solid content = 89%

ND = Not detected.

*Trace concentrations detected below the reporting limit.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Au/fc

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7842 Core from MW-7 6-12"
Laboratory ID: 87-007551
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	8,300
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	8,300
2-Chlorophenol	ND	µg/kg (dry wt)	8,300
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	8,300
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	8,300
Benzyl alcohol	ND	µg/kg (dry wt)	8,300
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	8,300
2-Methylphenol	ND	µg/kg (dry wt)	8,300
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	8,300
4-Methylphenol	ND	µg/kg (dry wt)	8,300
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	8,300
Hexachloroethane	ND	µg/kg (dry wt)	8,300
Nitrobenzene	ND	µg/kg (dry wt)	8,300
Isophorone	ND	µg/kg (dry wt)	8,300
2-Nitrophenol	ND	µg/kg (dry wt)	8,300
2,4-Dimethylphenol	ND	µg/kg (dry wt)	8,300
Benzoic Acid	ND	µg/kg (dry wt)	42,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	8,300
2,4-Dichlorophenol	ND	µg/kg (dry wt)	8,300
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	8,300
Naphthalene ----------	1,700*	µg/kg (dry wt)	8,300
4-Chloroaniline	ND	µg/kg (dry wt)	8,300
Hexachlorobutadiene	ND	µg/kg (dry wt)	8,300
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	8,300
2-Methylnaphthalene ----------	5,100*	µg/kg (dry wt)	8,300
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	8,300
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	8,300
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	42,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	8,300
2-Nitroaniline	ND	µg/kg (dry wt)	42,000
Dimethyl phthalate	ND	µg/kg (dry wt)	8,300
Acenaphthylene	ND	µg/kg (dry wt)	8,300
3-Nitroaniline	ND	µg/kg (dry wt)	42,000
Acenaphthene	ND	µg/kg (dry wt)	8,300

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7842 Core from MW-1 6-12"
Laboratory ID: 87-007551
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	42,000
4-Nitrophenol	ND	µg/kg (dry wt)	42,000
Dibenzofuran	ND	µg/kg (dry wt)	8,300
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	8,300
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	8,300
Diethyl phthalate	ND	µg/kg (dry wt)	8,300
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	8,300
Fluorene	ND	µg/kg (dry wt)	8,300
4-Nitroaniline	ND	µg/kg (dry wt)	8,300
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	42,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	42,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	8,300
Hexachlorobenzene	ND	µg/kg (dry wt)	8,300
Pentachlorophenol	ND	µg/kg (dry wt)	8,300
Phenanthrene	ND	µg/kg (dry wt)	42,000
Anthracene	ND	µg/kg (dry wt)	8,300
Di-n-butyl phthalate	ND	µg/kg (dry wt)	8,300
Fluoranthene	1,600*	µg/kg (dry wt)	8,300
Pyrene	1,700*	µg/kg (dry wt)	8,300
Butyl benzyl phthalate	ND	µg/kg (dry wt)	8,300
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	8,300
Benzo(a)anthracene	ND	µg/kg (dry wt)	17,000
bis(2-Ethylhexyl)phthalate	1,500*	µg/kg (dry wt)	8,300
Chrysene	ND	µg/kg (dry wt)	8,300
Di-n-octyl phthalate	ND	µg/kg (dry wt)	8,300
Benzo(b)fluoranthene)†		µg/kg (dry wt)	8,300
Benzo(k)fluoranthene)†	1,800*	µg/kg (dry wt)	8,300
Benzo(a)pyrene	890*	µg/kg (dry wt)	8,300
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	8,300
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	8,300
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	8,300

Solid content = 93%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Ens

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7842 Core from MW-1 6-12"
Laboratory ID: 87-007551
Matrix: Soil Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	8
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	16
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	80
Aroclor-1016	ND	µg/kg (dry wt)	160
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	80
Aroclor-1260	ND	µg/kg (dry wt)	160
			160

Solid content = 91.6%

ND = Not detected.

Reported by YHL Approved by EH

Ense

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7843 Core from MW-1 44-50"

Laboratory ID: 87-007552

Matrix: Soil Sampled: 05/28/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	1,300B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	ND	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	ND	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	ND	µg/kg (dry wt)	60
Toluene	ND	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 84%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/Ic

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7843 Core from MW-7 44-50'
Laboratory ID: 87-007552
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 07/07/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	420
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	420
2-Chlorophenol	ND	µg/kg (dry wt)	420
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	420
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	420
Benzyl alcohol	ND	µg/kg (dry wt)	420
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	420
2-Methylphenol	ND	µg/kg (dry wt)	420
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	420
4-Methylphenol	ND	µg/kg (dry wt)	420
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	420
Hexachloroethane	ND	µg/kg (dry wt)	420
Nitrobenzene	ND	µg/kg (dry wt)	420
Isophorone	ND	µg/kg (dry wt)	420
2-Nitrophenol	ND	µg/kg (dry wt)	420
2,4-Dimethylphenol	ND	µg/kg (dry wt)	420
Benzoic Acid	ND	µg/kg (dry wt)	420
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	2,100
2,4-Dichlorophenol	ND	µg/kg (dry wt)	420
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	420
Naphthalene ----------	250*	µg/kg (dry wt)	420
4-Chloroaniline	ND	µg/kg (dry wt)	420
Hexachlorobutadiene	ND	µg/kg (dry wt)	420
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	420
2-Methylnaphthalene ----------	100*	µg/kg (dry wt)	420
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	420
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	420
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	420
2-Chloronaphthalene	ND	µg/kg (dry wt)	2,100
2-Nitroaniline	ND	µg/kg (dry wt)	420
Dimethyl phthalate	ND	µg/kg (dry wt)	2,100
Acenaphthylene	ND	µg/kg (dry wt)	420
3-Nitroaniline	ND	µg/kg (dry wt)	420
Acenaphthene	ND	µg/kg (dry wt)	2,100
		µg/kg (dry wt)	420

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7843 Core from MW7 44-50"
Laboratory ID: 87-007552
Matrix: Solid Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 07/07/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	2,100
4-Nitrophenol	ND	µg/kg (dry wt)	2,100
Dibenzofuran	ND	µg/kg (dry wt)	420
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	420
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	420
Diethyl phthalate	ND	µg/kg (dry wt)	420
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	420
Fluorene	ND	µg/kg (dry wt)	420
4-Nitroaniline	ND	µg/kg (dry wt)	2,100
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	2,100
N-Nitrosodiphenylamine ----------	88*	µg/kg (dry wt)	420
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	420
Hexachlorobenzene	ND	µg/kg (dry wt)	420
Pentachlorophenol	ND	µg/kg (dry wt)	2,100
Phenanthrene ----------	68*	µg/kg (dry wt)	420
Anthracene	ND	µg/kg (dry wt)	420
Di-n-butyl phthalate	ND	µg/kg (dry wt)	420
Fluoranthene	ND	µg/kg (dry wt)	420
Pyrene	ND	µg/kg (dry wt)	420
Butyl benzyl phthalate	ND	µg/kg (dry wt)	420
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	850
Benzo(a)anthracene	ND	µg/kg (dry wt)	420
bis(2-Ethylhexyl)phthalate ------	47*	µg/kg (dry wt)	420
Chrysene	ND	µg/kg (dry wt)	420
Di-n-octyl phthalate	ND	µg/kg (dry wt)	420
Benzo(b)fluoranthene)† Benzo(k)fluoranthene)† ----------	44*	µg/kg (dry wt)	420
Benzo(a)pyrene	ND	µg/kg (dry wt)	420
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	420
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	420
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	420

Solid content = 89%

†Coeluted.
*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by AVL Approved by DG

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7843 Core from MW-7 44-50"
Laboratory ID: 87-007552
Matrix: Soil Sampled: 05/28/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 83.8%

ND = Not detected.

Reported by YHL Approved by EK

	MW1/1 7852	MW2/2 7853
Pet H.C	761	4800
Sb	ND	40
As	2.8	15
Be	ND	<1.0
Cd	1.4	22.7
Cr	20.9	7.5
Cu	37.6	212
Pb	229 x	179
Hg	0.4	0.7
Ni	13.9	18.5
Se	<0.2	0.3
Ag	ND	ND
Tl	ND	ND
Zn	122	482

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7852 Core from MW-1 6-12"

Laboratory ID: 87-007556

Matrix: Soil Sampled: 05/29/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	720B	µg/kg (dry wt)	130
Acetone	190*	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	190	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	87	µg/kg (dry wt)	50

Solid content = 89%

ND = Not detected.

*Trace concentrations detected below the reporting limit.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by [illegible]

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7852 Core from MW-1 6-12"
Laboratory ID: 87-007556
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	3,600
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	3,600
2-Chlorophenol	ND	µg/kg (dry wt)	3,600
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	3,600
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	3,600
Benzyl alcohol	ND	µg/kg (dry wt)	3,600
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	3,600
2-Methylphenol	ND	µg/kg (dry wt)	3,600
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	3,600
4-Methylphenol	ND	µg/kg (dry wt)	3,600
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	3,600
Hexachloroethane	ND	µg/kg (dry wt)	3,600
Nitrobenzene	ND	µg/kg (dry wt)	3,600
Isophorone	ND	µg/kg (dry wt)	3,600
2-Nitrophenol	ND	µg/kg (dry wt)	3,600
2,4-Dimethylphenol	ND	µg/kg (dry wt)	3,600
Benzoic Acid	ND	µg/kg (dry wt)	3,600
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	18,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	3,600
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	3,600
Naphthalene	ND	µg/kg (dry wt)	3,600
4-Chloroaniline	ND	µg/kg (dry wt)	3,600
Hexachlorobutadiene	ND	µg/kg (dry wt)	3,600
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	3,600
2-Methylnaphthalene	ND	µg/kg (dry wt)	3,600
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	3,600
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	3,600
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	3,600
2-Chloronaphthalene	ND	µg/kg (dry wt)	18,000
2-Nitroaniline	ND	µg/kg (dry wt)	3,600
Dimethyl phthalate	ND	µg/kg (dry wt)	18,000
Acenaphthylene	ND	µg/kg (dry wt)	3,600
3-Nitroaniline	ND	µg/kg (dry wt)	3,600
Acenaphthene	ND	µg/kg (dry wt)	18,000
	ND	µg/kg (dry wt)	3,600

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7849 B-34 0-6"
Laboratory ID: 87-007553
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	48,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	48,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	48,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	48,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	48,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	48,000
Hexachloroethane	ND	µg/kg (dry wt)	48,000
Nitrobenzene	ND	µg/kg (dry wt)	48,000
Isophorone	ND	µg/kg (dry wt)	48,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	48,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	48,000
Naphthalene	ND	µg/kg (dry wt)	48,000
4-Chloroaniline	ND	µg/kg (dry wt)	48,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	48,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	48,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	48,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	48,000
2-Nitroaniline	ND	µg/kg (dry wt)	48,000
Dimethyl phthalate	ND	µg/kg (dry wt)	240,000
Acenaphthylene	ND	µg/kg (dry wt)	48,000
3-Nitroaniline	ND	µg/kg (dry wt)	48,000
Acenaphthene	ND	µg/kg (dry wt)	240,000
Dibenzofuran	ND	µg/kg (dry wt)	48,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	48,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	48,000
Diethyl phthalate	ND	µg/kg (dry wt)	48,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	48,000
Fluorene	ND	µg/kg (dry wt)	48,000
4-Nitroaniline	ND	µg/kg (dry wt)	48,000
N-Nitrosodiphenylamine -------	4,900*	µg/kg (dry wt)	240,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	48,000

(continued on following page)

*Trace concentrations detected below the reporting limit.

ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7849 B-34 0-6"
Laboratory ID: 87-007553
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/kg (dry wt)	48,000
Phenanthrene	6,500*	µg/kg (dry wt)	48,000
Anthracene	ND	µg/kg (dry wt)	48,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	48,000
Fluoranthene	11,000*	µg/kg (dry wt)	48,000
Pyrene	12,000*	µg/kg (dry wt)	48,000
Butyl benzyl phthalate	51,000	µg/kg (dry wt)	48,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	95,000
Benzo(a)anthracene	7,000*	µg/kg (dry wt)	48,000
bis(2-Ethylhexyl)phthalate	340,000	µg/kg (dry wt)	48,000
Chrysene	11,000*	µg/kg (dry wt)	48,000
Di-n-octyl phthalate	14,000	µg/kg (dry wt)	48,000
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	10,000*	µg/kg (dry wt)	48,000
Benzo(a)pyrene	7,100*	µg/kg (dry wt)	48,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	48,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	48,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	48,000

Solid content = 84%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7850 Core from MW-3 6-12"

Laboratory ID: 87-007554

Matrix: Soil Sampled: 05/29/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	1,000B	µg/kg (dry wt)	130
Acetone	330*B	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	56	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 88%

ND = Not detected.

*Trace concentrations detected below the reporting limit.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by [illegible]

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7850 Core from MW-3 6-12"

Laboratory ID: 87-007554

Matrix: Solid Sampled: 05/29/87 Received: 06/04/87

Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	20,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	20,000
2-Chlorophenol	ND	µg/kg (dry wt)	20,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	20,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	20,000
Benzyl alcohol	ND	µg/kg (dry wt)	20,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	20,000
2-Methylphenol	ND	µg/kg (dry wt)	20,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	20,000
4-Methylphenol	ND	µg/kg (dry wt)	20,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	20,000
Hexachloroethane	ND	µg/kg (dry wt)	20,000
Nitrobenzene	ND	µg/kg (dry wt)	20,000
Isophorone	ND	µg/kg (dry wt)	20,000
2-Nitrophenol	ND	µg/kg (dry wt)	20,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	20,000
Benzoic Acid	ND	µg/kg (dry wt)	20,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	100,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	20,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	20,000
Naphthalene	ND	µg/kg (dry wt)	20,000
4-Chloroaniline	ND	µg/kg (dry wt)	20,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	20,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	20,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	20,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	20,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	20,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	20,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	100,000
2-Nitroaniline	ND	µg/kg (dry wt)	20,000
Dimethyl phthalate	ND	µg/kg (dry wt)	100,000
Acenaphthylene	ND	µg/kg (dry wt)	20,000
3-Nitroaniline	ND	µg/kg (dry wt)	20,000
Acenaphthene	ND	µg/kg (dry wt)	100,000
	ND	µg/kg (dry wt)	20,000

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7850 Core from MW-3 6-12"
Laboratory ID: 87-007554
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	100,000
4-Nitrophenol	ND	µg/kg (dry wt)	100,000
Dibenzofuran	ND	µg/kg (dry wt)	20,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	20,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	20,000
Diethyl phthalate	ND	µg/kg (dry wt)	20,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	20,000
Fluorene	ND	µg/kg (dry wt)	20,000
4-Nitroaniline	ND	µg/kg (dry wt)	100,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	100,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	20,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	20,000
Hexachlorobenzene	ND	µg/kg (dry wt)	20,000
Pentachlorophenol	ND	µg/kg (dry wt)	100,000
Phenanthrene	ND	µg/kg (dry wt)	20,000
Anthracene	ND	µg/kg (dry wt)	20,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	20,000
Fluoranthene	ND	µg/kg (dry wt)	20,000
Pyrene	ND	µg/kg (dry wt)	20,000
Butyl benzyl phthalate -----	220,000	µg/kg (dry wt)	20,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	40,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	20,000
bis(2-Ethylhexyl)phthalate -	150,000	µg/kg (dry wt)	20,000
Chrysene	ND	µg/kg (dry wt)	20,000
Di-n-octyl phthalate ---------	6,500*	µg/kg (dry wt)	20,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	20,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	20,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	20,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	20,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	20,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	20,000

Solid content = 90%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by AL Approved by DG

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7850 Core from MW-3 6-12"
Laboratory ID: 87-007554
Matrix: Soil Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 90.4%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7851 Core from MW-3 30-36"

Laboratory ID: 87-007555

Matrix: Soil Sampled: 05/29/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	1,900B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	140	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	130	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	210	µg/kg (dry wt)	60
Toluene	110	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 83%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Sm/JC

500

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7851 Core from MW-3 30-36"
Laboratory ID: 87-007555
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	1,600
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	1,600
2-Chlorophenol	ND	µg/kg (dry wt)	1,600
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	1,600
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	1,600
Benzyl alcohol	ND	µg/kg (dry wt)	1,600
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	1,600
2-Methylphenol	ND	µg/kg (dry wt)	1,600
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	1,600
4-Methylphenol	ND	µg/kg (dry wt)	1,600
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	1,600
Hexachloroethane	ND	µg/kg (dry wt)	1,600
Nitrobenzene	ND	µg/kg (dry wt)	1,600
Isophorone	ND	µg/kg (dry wt)	1,600
2-Nitrophenol	ND	µg/kg (dry wt)	1,600
2,4-Dimethylphenol	ND	µg/kg (dry wt)	1,600
Benzoic Acid	ND	µg/kg (dry wt)	1,600
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	7,900
2,4-Dichlorophenol	ND	µg/kg (dry wt)	1,600
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	1,600
Naphthalene	ND	µg/kg (dry wt)	1,600
4-Chloroaniline	ND	µg/kg (dry wt)	1,600
Hexachlorobutadiene	ND	µg/kg (dry wt)	1,600
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	1,600
2-Methylnaphthalene	ND	µg/kg (dry wt)	1,600
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	1,600
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	1,600
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	1,600
2-Chloronaphthalene	ND	µg/kg (dry wt)	7,900
2-Nitroaniline	ND	µg/kg (dry wt)	1,600
Dimethyl phthalate	ND	µg/kg (dry wt)	7,900
Acenaphthylene	ND	µg/kg (dry wt)	1,600
3-Nitroaniline	ND	µg/kg (dry wt)	1,600
Acenaphthene	ND	µg/kg (dry wt)	7,900
	ND	µg/kg (dry wt)	1,600

(continued on following page)

ND = Not detected.

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HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7851 Core from MW-3 30-36"
Laboratory ID: 87-007555
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	7,900
4-Nitrophenol	ND	µg/kg (dry wt)	7,900
Dibenzofuran	ND	µg/kg (dry wt)	1,600
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,600
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,600
Diethyl phthalate	ND	µg/kg (dry wt)	1,600
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,600
Fluorene	ND	µg/kg (dry wt)	1,600
4-Nitroaniline	ND	µg/kg (dry wt)	1,600
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	7,900
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	7,900
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,600
Hexachlorobenzene	ND	µg/kg (dry wt)	1,600
Pentachlorophenol	ND	µg/kg (dry wt)	1,600
Phenanthrene	ND	µg/kg (dry wt)	7,900
Anthracene	ND	µg/kg (dry wt)	1,600
Di-n-butyl phthalate	ND	µg/kg (dry wt)	1,600
Fluoranthene	ND	µg/kg (dry wt)	1,600
Pyrene	ND	µg/kg (dry wt)	1,600
Butyl benzyl phthalate ------	14,000	µg/kg (dry wt)	1,600
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	1,600
Benzo(a)anthracene	ND	µg/kg (dry wt)	3,200
bis(2-Ethylhexyl)phthalate ---	1,100*	µg/kg (dry wt)	1,600
Chrysene	ND	µg/kg (dry wt)	1,600
Di-n-octyl phthalate	ND	µg/kg (dry wt)	1,600
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	1,600
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	1,600
Benzo(a)pyrene	ND	µg/kg (dry wt)	1,600
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	1,600
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	1,600
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	1,600

Solid content = 83%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by AL Approved by DG

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7851 Core from MW-3 30-36"
Laboratory ID: 87-007555
Matrix: Soil Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/22/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 83.3%

ND = Not detected.

Reported by YHL Approved by EK

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7852 Core from MW-1 6-12"
Laboratory ID: 87-007556
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	3,600
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	3,600
2-Chlorophenol	ND	µg/kg (dry wt)	3,600
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	3,600
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	3,600
Benzyl alcohol	ND	µg/kg (dry wt)	3,600
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	3,600
2-Methylphenol	ND	µg/kg (dry wt)	3,600
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	3,600
4-Methylphenol	ND	µg/kg (dry wt)	3,600
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	3,600
Hexachloroethane	ND	µg/kg (dry wt)	3,600
Nitrobenzene	ND	µg/kg (dry wt)	3,600
Isophorone	ND	µg/kg (dry wt)	3,600
2-Nitrophenol	ND	µg/kg (dry wt)	3,600
2,4-Dimethylphenol	ND	µg/kg (dry wt)	3,600
Benzoic Acid	ND	µg/kg (dry wt)	3,600
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	18,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	3,600
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	3,600
Naphthalene	ND	µg/kg (dry wt)	3,600
4-Chloroaniline	ND	µg/kg (dry wt)	3,600
Hexachlorobutadiene	ND	µg/kg (dry wt)	3,600
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	3,600
2-Methylnaphthalene	ND	µg/kg (dry wt)	3,600
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	3,600
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	3,600
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	3,600
2-Chloronaphthalene	ND	µg/kg (dry wt)	18,000
2-Nitroaniline	ND	µg/kg (dry wt)	3,600
Dimethyl phthalate	ND	µg/kg (dry wt)	18,000
Acenaphthylene	ND	µg/kg (dry wt)	3,600
3-Nitroaniline	ND	µg/kg (dry wt)	3,600
Acenaphthene	ND	µg/kg (dry wt)	18,000
			3,600

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7852 Core from MW-1 6"-12"
Laboratory ID: 87-007556
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/25/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	18,000
4-Nitrophenol	ND	µg/kg (dry wt)	18,000
Dibenzofuran	ND	µg/kg (dry wt)	3,600
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	3,600
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	3,600
Diethyl phthalate	ND	µg/kg (dry wt)	3,600
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	3,600
Fluorene	ND	µg/kg (dry wt)	3,600
4-Nitroaniline	ND	µg/kg (dry wt)	18,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	18,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	3,600
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	3,600
Hexachlorobenzene	ND	µg/kg (dry wt)	3,600
Pentachlorophenol	ND	µg/kg (dry wt)	18,000
Phenanthrene	1,400*	µg/kg (dry wt)	3,600
Anthracene	460*	µg/kg (dry wt)	3,600
Di-n-butyl phthalate	ND	µg/kg (dry wt)	3,600
Fluoranthene	2,000*	µg/kg (dry wt)	3,600
Pyrene	1,700*	µg/kg (dry wt)	3,600
Butyl benzyl phthalate	430*	µg/kg (dry wt)	3,600
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	7,200
Benzo(a)anthracene	960*	µg/kg (dry wt)	3,600
bis(2-Ethylhexyl)phthalate	650*	µg/kg (dry wt)	3,600
Chrysene	1,200*	µg/kg (dry wt)	3,600
Di-n-octyl phthalate	ND	µg/kg (dry wt)	3,600
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	1,600*	µg/kg (dry wt)	3,600
Benzo(a)pyrene	1,200*	µg/kg (dry wt)	3,600
Indeno(1,2,3-c,d)pyrene	490*	µg/kg (dry wt)	3,600
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	3,600
Benzo(g,h,i)perylene	490*	µg/kg (dry wt)	3,600

Solid content = 90%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by ANL Approved by DG

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 78512 Core from MW-1 6-12"
Laboratory ID: 87-007556
Matrix: Soil Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	8
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	16
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	80
Aroclor-1016	ND	µg/kg (dry wt)	160
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	80
Aroclor-1260	ND	µg/kg (dry wt)	160
			160

Solid content = 90.4%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7853 Core from MW-1 42-48"

Laboratory ID: 87-007557

Matrix: Soil Sampled: 05/29/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	720B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	150
Carbon disulfide	ND	µg/kg (dry wt)	1,500
1,1-Dichloroethene	160	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	60
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	300
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	60
Bromodichloromethane	ND	µg/kg (dry wt)	300
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	ND	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	60
Bromoform	ND	µg/kg (dry wt)	300
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	60
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	300
Tetrachloroethene	140	µg/kg (dry wt)	60
Toluene	ND	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 82%

*Trace concentrations detected below the reporting limit.

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Ann/JC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7853 Core from MW-1 42-43'
Laboratory ID: 87-007557
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	1,400
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	1,400
2-Chlorophenol	ND	µg/kg (dry wt)	1,400
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	1,400
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	1,400
Benzyl alcohol	ND	µg/kg (dry wt)	1,400
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	1,400
2-Methylphenol	ND	µg/kg (dry wt)	1,400
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	1,400
4-Methylphenol	ND	µg/kg (dry wt)	1,400
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	1,400
Hexachloroethane	ND	µg/kg (dry wt)	1,400
Nitrobenzene	ND	µg/kg (dry wt)	1,400
Isophorone	ND	µg/kg (dry wt)	1,400
2-Nitrophenol	ND	µg/kg (dry wt)	1,400
2,4-Dimethylphenol	ND	µg/kg (dry wt)	1,400
Benzoic Acid	ND	µg/kg (dry wt)	6,800
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	1,400
2,4-Dichlorophenol	ND	µg/kg (dry wt)	1,400
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	1,400
Naphthalene	ND	µg/kg (dry wt)	1,400
4-Chloroaniline	ND	µg/kg (dry wt)	1,400
Hexachlorobutadiene	ND	µg/kg (dry wt)	1,400
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	1,400
2-Methylnaphthalene ----------	600*	µg/kg (dry wt)	1,400
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	1,400
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	1,400
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	6,800
2-Chloronaphthalene	ND	µg/kg (dry wt)	1,400
2-Nitroaniline	ND	µg/kg (dry wt)	6,800
Dimethyl phthalate	ND	µg/kg (dry wt)	1,400
Acenaphthylene	ND	µg/kg (dry wt)	1,400
3-Nitroaniline	ND	µg/kg (dry wt)	6,800
Acenaphthene	ND	µg/kg (dry wt)	1,400

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7853 Core from MW-1 42-48"
Laboratory ID: 87-007557
Matrix: Solid Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	6,800
4-Nitrophenol	ND	µg/kg (dry wt)	6,800
Dibenzofuran	ND	µg/kg (dry wt)	1,400
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,400
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,400
Diethyl phthalate	ND	µg/kg (dry wt)	1,400
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,400
Fluorene	ND	µg/kg (dry wt)	1,400
4-Nitroaniline	ND	µg/kg (dry wt)	6,800
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	6,800
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	1,400
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,400
Hexachlorobenzene	ND	µg/kg (dry wt)	1,400
Pentachlorophenol	ND	µg/kg (dry wt)	6,800
Phenanthrene	710*	µg/kg (dry wt)	1,400
Anthracene	ND	µg/kg (dry wt)	1,400
Di-n-butyl phthalate	ND	µg/kg (dry wt)	1,400
Fluoranthene	1,100*	µg/kg (dry wt)	1,400
Pyrene	1,100*	µg/kg (dry wt)	1,400
Butyl benzyl phthalate	ND	µg/kg (dry wt)	1,400
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	2,700
Benzo(a)anthracene	540*	µg/kg (dry wt)	1,400
bis(2-Ethylhexyl)phthalate	210*	µg/kg (dry wt)	1,400
Chrysene	660*	µg/kg (dry wt)	1,400
Di-n-octyl phthalate	ND	µg/kg (dry wt)	1,400
Benzo(b)fluoranthene)† Benzo(k)fluoranthene)†	890*	µg/kg (dry wt)	1,400
Benzo(a)pyrene	650*	µg/kg (dry wt)	1,400
Indeno(1,2,3-c,d)pyrene	430*	µg/kg (dry wt)	1,400
Dibenzo(a,h)anthracene	190*	µg/kg (dry wt)	1,400
Benzo(g,h,i)perylene	400*	µg/kg (dry wt)	1,400

Solid content = 85%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Enseco

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7853 Core from MW-1 42-48"
Laboratory ID: 87-007557
Matrix: Soil Sampled: 05/29/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 84.7%

ND = Not detected.

Reported by VHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7874 Core from MW-4 - 6-12"

Laboratory ID: 87-007558

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	1,000B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	52	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	110	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	160	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	550	µg/kg (dry wt)	50

Solid content = 93%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/JC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7874 Core from MW-4 6-12"
Laboratory ID: 87-007558
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	41,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	41,000
2-Chlorophenol	ND	µg/kg (dry wt)	41,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	41,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	41,000
Benzyl alcohol	ND	µg/kg (dry wt)	41,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	41,000
2-Methylphenol	ND	µg/kg (dry wt)	41,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	41,000
4-Methylphenol	ND	µg/kg (dry wt)	41,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	41,000
Hexachloroethane	ND	µg/kg (dry wt)	41,000
Nitrobenzene	ND	µg/kg (dry wt)	41,000
Isophorone	ND	µg/kg (dry wt)	41,000
2-Nitrophenol	ND	µg/kg (dry wt)	41,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	41,000
Benzoic Acid	ND	µg/kg (dry wt)	210,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	41,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	41,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	41,000
Naphthalene	ND	µg/kg (dry wt)	41,000
4-Chloroaniline	ND	µg/kg (dry wt)	41,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	41,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	41,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	41,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	41,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	41,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	210,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	41,000
2-Nitroaniline	ND	µg/kg (dry wt)	210,000
Dimethyl phthalate	ND	µg/kg (dry wt)	41,000
Acenaphthylene	ND	µg/kg (dry wt)	41,000
3-Nitroaniline	ND	µg/kg (dry wt)	210,000
Acenaphthene	ND	µg/kg (dry wt)	41,000

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7874 Core from MW4 6-12"
Laboratory ID: 87-007558
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	210,000
4-Nitrophenol	ND	µg/kg (dry wt)	210,000
Dibenzofuran	ND	µg/kg (dry wt)	41,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	41,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	41,000
Diethyl phthalate	ND	µg/kg (dry wt)	41,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	41,000
Fluorene	ND	µg/kg (dry wt)	41,000
4-Nitroaniline	ND	µg/kg (dry wt)	210,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	210,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	41,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	41,000
Hexachlorobenzene	ND	µg/kg (dry wt)	41,000
Pentachlorophenol	ND	µg/kg (dry wt)	210,000
Phenanthrene	ND	µg/kg (dry wt)	41,000
Anthracene	ND	µg/kg (dry wt)	41,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	41,000
Fluoranthene	ND	µg/kg (dry wt)	41,000
Pyrene	ND	µg/kg (dry wt)	41,000
Butyl benzyl phthalate ------	28,000*	µg/kg (dry wt)	41,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	82,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	41,000
bis(2-Ethylhexyl)phthalate -	890,000	µg/kg (dry wt)	41,000
Chrysene	ND	µg/kg (dry wt)	41,000
Di-n-octyl phthalate --------	73,000	µg/kg (dry wt)	41,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	41,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	41,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	41,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	41,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	41,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	41,000

Solid content = 95%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by HL

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7874 Core from MW-4 6-12"
Laboratory ID: 87-007558
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/22/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 94.5%

ND = Not detected.

Reported by YHL Approved by EK

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7875 Core from MW 4 42-48"
Laboratory ID: 87-007559
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/25/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	2,900
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	2,900
2-Chlorophenol	ND	µg/kg (dry wt)	2,900
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	2,900
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	2,900
Benzyl alcohol	ND	µg/kg (dry wt)	2,900
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	2,900
2-Methylphenol	ND	µg/kg (dry wt)	2,900
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	2,900
4-Methylphenol	ND	µg/kg (dry wt)	2,900
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	2,900
Hexachloroethane	ND	µg/kg (dry wt)	2,900
Nitrobenzene	ND	µg/kg (dry wt)	2,900
Isophorone	ND	µg/kg (dry wt)	2,900
2-Nitrophenol	ND	µg/kg (dry wt)	2,900
2,4-Dimethylphenol	ND	µg/kg (dry wt)	2,900
Benzoic Acid	ND	µg/kg (dry wt)	2,900
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	15,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	2,900
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	2,900
Naphthalene	ND	µg/kg (dry wt)	2,900
4-Chloroaniline	ND	µg/kg (dry wt)	2,900
Hexachlorobutadiene	ND	µg/kg (dry wt)	2,900
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	2,900
2-Methylnaphthalene	ND	µg/kg (dry wt)	2,900
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	2,900
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	2,900
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	2,900
2-Chloronaphthalene	ND	µg/kg (dry wt)	15,000
2-Nitroaniline	ND	µg/kg (dry wt)	2,900
Dimethyl phthalate	ND	µg/kg (dry wt)	15,000
Acenaphthylene	ND	µg/kg (dry wt)	2,900
3-Nitroaniline	ND	µg/kg (dry wt)	2,900
Acenaphthene	ND	µg/kg (dry wt)	15,000
	ND	µg/kg (dry wt)	2,900

(continued on following page)

ND = Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7875 Core from MW4 42-48"

Laboratory ID: 87-007559

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	280B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 95%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/HC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7875 Core from MW 4 42-48"
Laboratory ID: 87-007559
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/25/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	15,000
4-Nitrophenol	ND	µg/kg (dry wt)	15,000
Dibenzofuran	ND	µg/kg (dry wt)	2,900
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	2,900
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	2,900
Diethyl phthalate	ND	µg/kg (dry wt)	2,900
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	2,900
Fluorene	ND	µg/kg (dry wt)	2,900
4-Nitroaniline	ND	µg/kg (dry wt)	2,900
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	15,000
N-Nitrosodiphenylamine	980*	µg/kg (dry wt)	15,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	2,900
Hexachlorobenzene	ND	µg/kg (dry wt)	2,900
Pentachlorophenol	ND	µg/kg (dry wt)	2,900
Phenanthrene	1,700*	µg/kg (dry wt)	15,000
Anthracene	ND	µg/kg (dry wt)	2,900
Di-n-butyl phthalate	650*	µg/kg (dry wt)	2,900
Fluoranthene	3,500	µg/kg (dry wt)	2,900
Pyrene	4,500	µg/kg (dry wt)	2,900
Butyl benzyl phthalate	ND	µg/kg (dry wt)	2,900
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	2,900
Benzo(a)anthracene	2,100*	µg/kg (dry wt)	5,900
bis(2-Ethylhexyl)phthalate	560*	µg/kg (dry wt)	2,900
Chrysene	2,400*	µg/kg (dry wt)	2,900
Di-n-octyl phthalate	ND	µg/kg (dry wt)	2,900
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	3,000	µg/kg (dry wt)	2,900
Benzo(a)pyrene	2,200*	µg/kg (dry wt)	2,900
Indeno(1,2,3-c,d)pyrene	1,600*	µg/kg (dry wt)	2,900
Dibenzo(a,h)anthracene	470*	µg/kg (dry wt)	2,900
Benzo(g,h,i)perylene	1,500*	µg/kg (dry wt)	2,900

Solid content = 88%

†Coeluted.
*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by AVL Approved by DG

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7876 Core from MW 5 6-12"

Laboratory ID: 87-007560

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	1,400B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	440	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	450	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 89%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/JC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7876 Core from MW5 6-12"
Laboratory ID: 87-007560
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	360,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	360,000
2-Chlorophenol	ND	µg/kg (dry wt)	360,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	360,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	360,000
Benzyl alcohol	ND	µg/kg (dry wt)	360,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	360,000
2-Methylphenol	ND	µg/kg (dry wt)	360,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	360,000
4-Methylphenol	ND	µg/kg (dry wt)	360,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	360,000
Hexachloroethane	ND	µg/kg (dry wt)	360,000
Nitrobenzene	ND	µg/kg (dry wt)	360,000
Isophorone	ND	µg/kg (dry wt)	360,000
2-Nitrophenol	ND	µg/kg (dry wt)	360,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	360,000
Benzoic Acid	ND	µg/kg (dry wt)	360,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	1,800,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	360,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	360,000
Naphthalene	ND	µg/kg (dry wt)	360,000
4-Chloroaniline	ND	µg/kg (dry wt)	360,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	360,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	360,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	360,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	360,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	360,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	360,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	1,800,000
2-Nitroaniline	ND	µg/kg (dry wt)	360,000
Dimethyl phthalate	ND	µg/kg (dry wt)	1,800,000
Acenaphthylene	ND	µg/kg (dry wt)	360,000
3-Nitroaniline	ND	µg/kg (dry wt)	360,000
Acenaphthene	ND	µg/kg (dry wt)	1,800,000
			360,000

(continued on following page)

ND = Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7876 Core from MW5 6-12"
Laboratory ID: 87-007560
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,800,000
4-Nitrophenol	ND	µg/kg (dry wt)	1,800,000
Dibenzofuran	ND	µg/kg (dry wt)	360,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	360,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	360,000
Diethyl phthalate	ND	µg/kg (dry wt)	360,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	360,000
Fluorene	ND	µg/kg (dry wt)	360,000
4-Nitroaniline	ND	µg/kg (dry wt)	1,800,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,800,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	360,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	360,000
Hexachlorobenzene	ND	µg/kg (dry wt)	360,000
Pentachlorophenol	ND	µg/kg (dry wt)	1,800,000
Phenanthrene	ND	µg/kg (dry wt)	360,000
Anthracene	ND	µg/kg (dry wt)	360,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	360,000
Fluoranthene	ND	µg/kg (dry wt)	360,000
Pyrene	ND	µg/kg (dry wt)	360,000
Butyl benzyl phthalate	ND	µg/kg (dry wt)	360,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	720,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	360,000
bis(2-Ethylhexyl)phthalate	9,800,000	µg/kg (dry wt)	360,000
Chrysene	ND	µg/kg (dry wt)	360,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	360,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	360,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	360,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	360,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	360,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	360,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	360,000

Solid content = 92%

ND = Not detected.

Reported by PD Approved by AWL

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7876 Core from MW5 6-12"
Laboratory ID: 87-007560
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/22/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide ----------	12	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 91.5%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7877 Core from MW5 42-48"
Laboratory ID: 87-007561
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	4,300
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	4,300
2-Chlorophenol	ND	µg/kg (dry wt)	4,300
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	4,300
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	4,300
Benzyl alcohol	ND	µg/kg (dry wt)	4,300
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	4,300
2-Methylphenol	ND	µg/kg (dry wt)	4,300
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	4,300
4-Methylphenol	ND	µg/kg (dry wt)	4,300
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	4,300
Hexachloroethane	ND	µg/kg (dry wt)	4,300
Nitrobenzene	ND	µg/kg (dry wt)	4,300
Isophorone	ND	µg/kg (dry wt)	4,300
2-Nitrophenol	ND	µg/kg (dry wt)	4,300
2,4-Dimethylphenol	ND	µg/kg (dry wt)	4,300
Benzoic Acid	ND	µg/kg (dry wt)	4,300
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	22,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	4,300
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	4,300
Naphthalene ----------	450*	µg/kg (dry wt)	4,300
4-Chloroaniline	ND	µg/kg (dry wt)	4,300
Hexachlorobutadiene	ND	µg/kg (dry wt)	4,300
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	4,300
2-Methylnaphthalene	ND	µg/kg (dry wt)	4,300
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	4,300
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	4,300
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	4,300
2-Chloronaphthalene	ND	µg/kg (dry wt)	22,000
2-Nitroaniline	ND	µg/kg (dry wt)	4,300
Dimethyl phthalate	ND	µg/kg (dry wt)	22,000
Acenaphthylene ----------	1,300*	µg/kg (dry wt)	4,300
3-Nitroaniline	ND	µg/kg (dry wt)	4,300
Acenaphthene	ND	µg/kg (dry wt)	22,000
		µg/kg (dry wt)	4,300

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7877 Core from MW5 42-48"
Laboratory ID: 87-007561
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	22,000
4-Nitrophenol	ND	µg/kg (dry wt)	22,000
Dibenzofuran	ND	µg/kg (dry wt)	4,300
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	4,300
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	4,300
Diethyl phthalate	ND	µg/kg (dry wt)	4,300
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	4,300
Fluorene	ND	µg/kg (dry wt)	4,300
4-Nitroaniline	ND	µg/kg (dry wt)	4,300
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	22,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	22,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	4,300
Hexachlorobenzene	ND	µg/kg (dry wt)	4,300
Pentachlorophenol	ND	µg/kg (dry wt)	4,300
Phenanthrene	12,000	µg/kg (dry wt)	22,000
Anthracene	2,800*	µg/kg (dry wt)	4,300
Di-n-butyl phthalate	ND	µg/kg (dry wt)	4,300
Fluoranthene	29,000	µg/kg (dry wt)	4,300
Pyrene	30,000	µg/kg (dry wt)	4,300
Butyl benzyl phthalate	ND	µg/kg (dry wt)	4,300
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	4,300
Benzo(a)anthracene	12,000	µg/kg (dry wt)	8,600
bis(2-Ethylhexyl)phthalate	32,000	µg/kg (dry wt)	4,300
Chrysene	17,000	µg/kg (dry wt)	4,300
Di-n-octyl phthalate	ND	µg/kg (dry wt)	4,300
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	28,000	µg/kg (dry wt)	4,300
Benzo(a)pyrene	16,000	µg/kg (dry wt)	4,300
Indeno(1,2,3-c,d)pyrene	13,000	µg/kg (dry wt)	4,300
Dibenzo(a,h)anthracene	3,200*	µg/kg (dry wt)	4,300
Benzo(g,h,i)perylene	12,000	µg/kg (dry wt)	4,300

Solid content = 86%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG / [illegible]

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7877 Core from MW5 42-48"

Laboratory ID: 87-007561

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/24/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	2,100B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	81	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	86	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	160	µg/kg (dry wt)	60
Toluene	72	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	84	µg/kg (dry wt)	60

Solid content = 81%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by [illegible]

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7877 Core from MW5 42-48"
Laboratory ID: 87-007561
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	8
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	16
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	80
Aroclor-1016	ND	µg/kg (dry wt)	160
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	80
Aroclor-1260	ND	µg/kg (dry wt)	160
			160

Solid content = 85.5%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7880 Core from MW-6 6-12"

Laboratory ID: 87-007564

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride ----------	480B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 87%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/1C

526

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7880 Core from MW-6 6-12"
Laboratory ID: 87-007564
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	1,800
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	1,800
2-Chlorophenol	ND	µg/kg (dry wt)	1,800
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	1,800
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	1,800
Benzyl alcohol	ND	µg/kg (dry wt)	1,800
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	1,800
2-Methylphenol	ND	µg/kg (dry wt)	1,800
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	1,800
4-Methylphenol	ND	µg/kg (dry wt)	1,800
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	1,800
Hexachloroethane	ND	µg/kg (dry wt)	1,800
Nitrobenzene	ND	µg/kg (dry wt)	1,800
Isophorone	ND	µg/kg (dry wt)	1,800
2-Nitrophenol	ND	µg/kg (dry wt)	1,800
2,4-Dimethylphenol	ND	µg/kg (dry wt)	1,800
Benzoic Acid	ND	µg/kg (dry wt)	9,200
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	1,800
2,4-Dichlorophenol	ND	µg/kg (dry wt)	1,800
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	1,800
Naphthalene	ND	µg/kg (dry wt)	1,800
4-Chloroaniline	ND	µg/kg (dry wt)	1,800
Hexachlorobutadiene	ND	µg/kg (dry wt)	1,800
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	1,800
2-Methylnaphthalene	ND	µg/kg (dry wt)	1,800
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	1,800
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	1,800
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	9,200
2-Chloronaphthalene	ND	µg/kg (dry wt)	1,800
2-Nitroaniline	ND	µg/kg (dry wt)	9,200
Dimethyl phthalate	ND	µg/kg (dry wt)	1,800
Acenaphthylene	ND	µg/kg (dry wt)	1,800
3-Nitroaniline	ND	µg/kg (dry wt)	9,200
Acenaphthene	ND	µg/kg (dry wt)	1,800

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7880 Core from MW-6 6-12"
Laboratory ID: 87-007564
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	9,200
4-Nitrophenol	ND	µg/kg (dry wt)	9,200
Dibenzofuran	ND	µg/kg (dry wt)	1,800
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,800
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,800
Diethyl phthalate	ND	µg/kg (dry wt)	1,800
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,800
Fluorene	ND	µg/kg (dry wt)	1,800
4-Nitroaniline	ND	µg/kg (dry wt)	1,800
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	9,200
N-Nitrosodiphenylamine ---------	230*	µg/kg (dry wt)	9,200
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,800
Hexachlorobenzene	ND	µg/kg (dry wt)	1,800
Pentachlorophenol	ND	µg/kg (dry wt)	1,800
Phenanthrene	ND	µg/kg (dry wt)	9,200
Anthracene	ND	µg/kg (dry wt)	1,800
Di-n-butyl phthalate ----------	630*	µg/kg (dry wt)	1,800
Fluoranthene ----------	260*	µg/kg (dry wt)	1,800
Pyrene ----------	240*	µg/kg (dry wt)	1,800
Butyl benzyl phthalate -------	1,500*	µg/kg (dry wt)	1,800
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	1,800
Benzo(a)anthracene	ND	µg/kg (dry wt)	3,700
bis(2-Ethylhexyl)phthalate --	14,000	µg/kg (dry wt)	1,800
Chrysene	ND	µg/kg (dry wt)	1,800
Di-n-octyl phthalate ----------	660*	µg/kg (dry wt)	1,800
Benzo(b)fluoranthene) Benzo(k)fluoranthene)† ----------	250*	µg/kg (dry wt)	1,800
Benzo(a)pyrene	ND	µg/kg (dry wt)	1,800
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	1,800
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	1,800
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	1,800

Solid content = 90%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Enseco

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

nt Name: RECON Systems, Inc.

ient ID: 7880 Core from MW-6 6-12"

tory ID: 87-007564

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

horized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

eter	Result	Units	Reporting Limit
-BHC	ND	µg/kg (dry wt)	8
BHC	ND	µg/kg (dry wt)	8
-BHC	ND	µg/kg (dry wt)	8
-BHC (Lindane)	ND	µg/kg (dry wt)	8
chlor	ND	µg/kg (dry wt)	8
n	ND	µg/kg (dry wt)	8
achlor Epoxide	ND	µg/kg (dry wt)	8
ulfan I	ND	µg/kg (dry wt)	8
rin	ND	µg/kg (dry wt)	16
-DDE	ND	µg/kg (dry wt)	16
n	ND	µg/kg (dry wt)	16
ulfan II	ND	µg/kg (dry wt)	16
-DDD	ND	µg/kg (dry wt)	16
sulfan Sulfate	ND	µg/kg (dry wt)	16
DDT	ND	µg/kg (dry wt)	16
n Aldehyde	ND	µg/kg (dry wt)	16
oxychlor	ND	µg/kg (dry wt)	80
dane	ND	µg/kg (dry wt)	80
hene	ND	µg/kg (dry wt)	160
lor-1016	ND	µg/kg (dry wt)	80
lor-1221	ND	µg/kg (dry wt)	80
lor-1232	ND	µg/kg (dry wt)	80
lor-1242	ND	µg/kg (dry wt)	80
lor-1248	ND	µg/kg (dry wt)	80
lor-1254	ND	µg/kg (dry wt)	160
lor-1260	ND	µg/kg (dry wt)	160

d content = 89.7%

Not detected.

rted by YHL Approved by EK

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7880 Core from MW-6 6-12"
Laboratory ID: 87-007564
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 89.7%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7881

Laboratory ID: 87-007565 Core from MW-6 76-84"

Matrix: Soil Sampled: 06/01/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	530B	µg/kg (dry wt)	150
Acetone	230*	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	87	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	65	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	92	µg/kg (dry wt)	60
Toluene	62	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 76%

*Trace concentrations detected below the reporting limit.

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Ar/SC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7881 Core from MW-6 76-84"
Laboratory ID: 87-007565
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	420
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	420
2-Chlorophenol	ND	µg/kg (dry wt)	420
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	420
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	420
Benzyl alcohol	ND	µg/kg (dry wt)	420
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	420
2-Methylphenol	ND	µg/kg (dry wt)	420
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	420
4-Methylphenol	ND	µg/kg (dry wt)	420
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	420
Hexachloroethane	ND	µg/kg (dry wt)	420
Nitrobenzene	ND	µg/kg (dry wt)	420
Isophorone	ND	µg/kg (dry wt)	420
2-Nitrophenol	ND	µg/kg (dry wt)	420
2,4-Dimethylphenol	ND	µg/kg (dry wt)	420
Benzoic Acid	ND	µg/kg (dry wt)	420
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	2,100
2,4-Dichlorophenol	ND	µg/kg (dry wt)	420
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	420
Naphthalene ----------	74*	µg/kg (dry wt)	420
4-Chloroaniline	ND	µg/kg (dry wt)	420
Hexachlorobutadiene	ND	µg/kg (dry wt)	420
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	420
2-Methylnaphthalene	ND	µg/kg (dry wt)	420
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	420
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	420
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	420
2-Chloronaphthalene	ND	µg/kg (dry wt)	2,100
2-Nitroaniline	ND	µg/kg (dry wt)	420
Dimethyl phthalate	ND	µg/kg (dry wt)	2,100
Acenaphthylene	ND	µg/kg (dry wt)	420
3-Nitroaniline	ND	µg/kg (dry wt)	420
Acenaphthene	ND	µg/kg (dry wt)	2,100
		µg/kg (dry wt)	420

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7881 Core from MW-6 76-84'
Laboratory ID: 87-007565
Matrix: Solid Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	2,100
4-Nitrophenol	ND	µg/kg (dry wt)	2,100
Dibenzofuran	ND	µg/kg (dry wt)	420
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	420
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	420
Diethyl phthalate	ND	µg/kg (dry wt)	420
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	420
Fluorene	ND	µg/kg (dry wt)	420
4-Nitroaniline	ND	µg/kg (dry wt)	2,100
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	2,100
N-Nitrosodiphenylamine	130*	µg/kg (dry wt)	420
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	420
Hexachlorobenzene	ND	µg/kg (dry wt)	420
Pentachlorophenol	ND	µg/kg (dry wt)	2,100
Phenanthrene	300*	µg/kg (dry wt)	420
Anthracene	73*	µg/kg (dry wt)	420
Di-n-butyl phthalate	210*	µg/kg (dry wt)	420
Fluoranthene	280*	µg/kg (dry wt)	420
Pyrene	280*	µg/kg (dry wt)	420
Butyl benzyl phthalate	630	µg/kg (dry wt)	420
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	850
Benzo(a)anthracene	130*	µg/kg (dry wt)	420
bis(2-Ethylhexyl)phthalate	860	µg/kg (dry wt)	420
Chrysene	210*	µg/kg (dry wt)	420
Di-n-octyl phthalate	ND	µg/kg (dry wt)	420
Benzo(b)fluoranthene)† Benzo(k)fluoranthene)†	210*	µg/kg (dry wt)	420
Benzo(a)pyrene	130*	µg/kg (dry wt)	420
Indeno(1,2,3-c,d)pyrene	60*	µg/kg (dry wt)	420
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	420
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	420

Solid content = 78%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Enseco

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7881 Core from MW-6 76-84"
boratory ID: 87-007565
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

rameter	Result	Units	Reporting Limit
pha-BHC	ND	µg/kg (dry wt)	8
ta-BHC	ND	µg/kg (dry wt)	8
lta-BHC	ND	µg/kg (dry wt)	8
mma-BHC (Lindane)	ND	µg/kg (dry wt)	8
ptachlor	ND	µg/kg (dry wt)	8
drin	ND	µg/kg (dry wt)	8
ptachlor Epoxide	ND	µg/kg (dry wt)	8
dosulfan I	ND	µg/kg (dry wt)	8
ieldrin	ND	µg/kg (dry wt)	16
4'-DDE	ND	µg/kg (dry wt)	16
drin	ND	µg/kg (dry wt)	16
dosulfan II	ND	µg/kg (dry wt)	16
4'-DDD	ND	µg/kg (dry wt)	16
dosulfan Sulfate	ND	µg/kg (dry wt)	16
4'-DDT	ND	µg/kg (dry wt)	16
drin Aldehyde	ND	µg/kg (dry wt)	16
thoxychlor	ND	µg/kg (dry wt)	80
lordane	ND	µg/kg (dry wt)	80
xaphene	ND	µg/kg (dry wt)	160
oclor-1016	ND	µg/kg (dry wt)	80
oclor-1221	ND	µg/kg (dry wt)	80
oclor-1232	ND	µg/kg (dry wt)	80
oclor-1242	ND	µg/kg (dry wt)	80
oclor-1248	ND	µg/kg (dry wt)	80
oclor-1254	ND	µg/kg (dry wt)	160
oclor-1260	ND	µg/kg (dry wt)	160

lid content = 77.6%

= Not detected.

ported by YHL Approved by EY

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7881 Core from MW-6 76-84"
Laboratory ID: 87-007565
Matrix: Soil Sampled: 06/01/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 77.6%

ND = Not detected.

Reported by YHL Approved by EY

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7884 B-31 6-12"

Laboratory ID: 87-007567

Matrix: Soil Sampled: 06/02/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	1,100B	µg/kg (dry wt)	130
Acetone	260*	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	120	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	98	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	140	µg/kg (dry wt)	50
Toluene	87	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	90	µg/kg (dry wt)	50

Solid content = 89%

*Trace concentrations detected below the reporting limit.

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Au/2C

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7884 B31 6-12"
Laboratory ID: 87-007567
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	7,200
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	7,200
2-Chlorophenol	ND	µg/kg (dry wt)	7,200
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	7,200
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	7,200
Benzyl alcohol	ND	µg/kg (dry wt)	7,200
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	7,200
2-Methylphenol	ND	µg/kg (dry wt)	7,200
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	7,200
4-Methylphenol	ND	µg/kg (dry wt)	7,200
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	7,200
Hexachloroethane	ND	µg/kg (dry wt)	7,200
Nitrobenzene	ND	µg/kg (dry wt)	7,200
Isophorone	ND	µg/kg (dry wt)	7,200
2-Nitrophenol	ND	µg/kg (dry wt)	7,200
2,4-Dimethylphenol	ND	µg/kg (dry wt)	7,200
Benzoic Acid	ND	µg/kg (dry wt)	7,200
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	36,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	7,200
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	7,200
Naphthalene	ND	µg/kg (dry wt)	7,200
4-Chloroaniline	ND	µg/kg (dry wt)	7,200
Hexachlorobutadiene	ND	µg/kg (dry wt)	7,200
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	7,200
2-Methylnaphthalene	ND	µg/kg (dry wt)	7,200
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	7,200
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	7,200
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	7,200
2-Chloronaphthalene	ND	µg/kg (dry wt)	36,000
2-Nitroaniline	ND	µg/kg (dry wt)	7,200
Dimethyl phthalate	ND	µg/kg (dry wt)	36,000
Acenaphthylene	ND	µg/kg (dry wt)	7,200
3-Nitroaniline	ND	µg/kg (dry wt)	7,200
Acenaphthene	ND	µg/kg (dry wt)	36,000
	ND	µg/kg (dry wt)	7,200

(continued on following page)

ND = Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7884 B-31 6-12"
Laboratory ID: 87-007567
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	36,000
4-Nitrophenol	ND	µg/kg (dry wt)	36,000
Dibenzofuran	ND	µg/kg (dry wt)	7,200
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	7,200
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	7,200
Diethyl phthalate	ND	µg/kg (dry wt)	7,200
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	7,200
Fluorene	ND	µg/kg (dry wt)	7,200
4-Nitroaniline	ND	µg/kg (dry wt)	36,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	36,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	7,200
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	7,200
Hexachlorobenzene	ND	µg/kg (dry wt)	7,200
Pentachlorophenol	ND	µg/kg (dry wt)	36,000
Phenanthrene	870*	µg/kg (dry wt)	7,200
Anthracene	ND	µg/kg (dry wt)	7,200
Di-n-butyl phthalate	1,900*	µg/kg (dry wt)	7,200
Fluoranthene	1,200*	µg/kg (dry wt)	7,200
Pyrene	1,600*	µg/kg (dry wt)	7,200
Butyl benzyl phthalate	160,000	µg/kg (dry wt)	7,200
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	14,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	7,200
bis(2-Ethylhexyl)phthalate	81,000	µg/kg (dry wt)	7,200
Chrysene	ND	µg/kg (dry wt)	7,200
Di-n-octyl phthalate	ND	µg/kg (dry wt)	7,200
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	990*	µg/kg (dry wt)	7,200
Benzo(a)pyrene	ND	µg/kg (dry wt)	7,200
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	7,200
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	7,200
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	7,200

Solid content = 90%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by PD Approved by AVL

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7884 B-31 6-12"
Laboratory ID: 87-007567
Matrix: Soil Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 89.6%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7885 B-31 42-47"

Laboratory ID: 87-007568

Matrix: Soil Sampled: 06/02/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	1,400B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	ND	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	69*	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	76	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	58*	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	180	µg/kg (dry wt)	60
Toluene	97	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	160	µg/kg (dry wt)	60

Solid content = 83%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Am/RC

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7885 B31 42-47"
Laboratory ID: 87-007568
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	8,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	8,000
2-Chlorophenol	ND	µg/kg (dry wt)	8,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	8,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	8,000
Benzyl alcohol	ND	µg/kg (dry wt)	8,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	8,000
2-Methylphenol	ND	µg/kg (dry wt)	8,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	8,000
4-Methylphenol	ND	µg/kg (dry wt)	8,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	8,000
Hexachloroethane	ND	µg/kg (dry wt)	8,000
Nitrobenzene	ND	µg/kg (dry wt)	8,000
Isophorone	ND	µg/kg (dry wt)	8,000
2-Nitrophenol	ND	µg/kg (dry wt)	8,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	8,000
Benzoic Acid	ND	µg/kg (dry wt)	40,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	8,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	8,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	8,000
Naphthalene ----------	4,200*	µg/kg (dry wt)	8,000
4-Chloroaniline	ND	µg/kg (dry wt)	8,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	8,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	8,000
2-Methylnaphthalene ----------	2,700*	µg/kg (dry wt)	8,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	8,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	8,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	40,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	8,000
2-Nitroaniline	ND	µg/kg (dry wt)	40,000
Dimethyl phthalate	ND	µg/kg (dry wt)	8,000
Acenaphthylene ----------	1,500*	µg/kg (dry wt)	8,000
3-Nitroaniline	ND	µg/kg (dry wt)	40,000
Acenaphthene ----------	8,700	µg/kg (dry wt)	8,000

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7885 B31 42-47"
Laboratory ID: 87-007568
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	40,000
4-Nitrophenol	ND	µg/kg (dry wt)	40,000
Dibenzofuran	5,000*	µg/kg (dry wt)	8,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	8,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	8,000
Diethyl phthalate	ND	µg/kg (dry wt)	8,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	8,000
Fluorene	8,200	µg/kg (dry wt)	8,000
4-Nitroaniline	ND	µg/kg (dry wt)	40,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	40,000
N-Nitrosodiphenylamine	1,800*	µg/kg (dry wt)	8,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	8,000
Hexachlorobenzene	ND	µg/kg (dry wt)	8,000
Pentachlorophenol	ND	µg/kg (dry wt)	40,000
Phenanthrene	94,000	µg/kg (dry wt)	8,000
Anthracene	26,000	µg/kg (dry wt)	8,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	8,000
Fluoranthene	110,000	µg/kg (dry wt)	8,000
Pyrene	91,000	µg/kg (dry wt)	8,000
Butyl benzyl phthalate	ND	µg/kg (dry wt)	8,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	16,000
Benzo(a)anthracene	39,000	µg/kg (dry wt)	8,000
bis(2-Ethylhexyl)phthalate	2,800*	µg/kg (dry wt)	8,000
Chrysene	40,000	µg/kg (dry wt)	8,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	8,000
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	47,000	µg/kg (dry wt)	8,000
Benzo(a)pyrene	36,000	µg/kg (dry wt)	8,000
Indeno(1,2,3-c,d)pyrene	19,000	µg/kg (dry wt)	8,000
Dibenzo(a,h)anthracene	5,000*	µg/kg (dry wt)	8,000
Benzo(g,h,i)perylene	14,000	µg/kg (dry wt)	8,000

Solid content = 81%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by NL Approved by DG

Enseco

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7885 B-31 42-47"
Laboratory ID: 87-007568
Matrix: Soil Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 81.5%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7887 B-32 6-12"

Laboratory ID: 87-007569

Matrix: Soil Sampled: 06/02/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	2,200B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	140	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	59	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	78	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	230	µg/kg (dry wt)	50
Toluene	95	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	97	µg/kg (dry wt)	50

Solid content = 90%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by CS Approved by Am/Se

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7887 B-32 6-12"
Laboratory ID: 87-007569
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	1,600
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	1,600
2-Chlorophenol	ND	µg/kg (dry wt)	1,600
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	1,600
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	1,600
Benzyl alcohol	ND	µg/kg (dry wt)	1,600
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	1,600
2-Methylphenol	ND	µg/kg (dry wt)	1,600
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	1,600
4-Methylphenol	ND	µg/kg (dry wt)	1,600
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	1,600
Hexachloroethane	ND	µg/kg (dry wt)	1,600
Nitrobenzene	ND	µg/kg (dry wt)	1,600
Isophorone	ND	µg/kg (dry wt)	1,600
2-Nitrophenol	ND	µg/kg (dry wt)	1,600
2,4-Dimethylphenol	ND	µg/kg (dry wt)	1,600
Benzoic Acid	ND	µg/kg (dry wt)	7,800
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	1,600
2,4-Dichlorophenol	ND	µg/kg (dry wt)	1,600
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	1,600
Naphthalene	ND	µg/kg (dry wt)	1,600
4-Chloroaniline	ND	µg/kg (dry wt)	1,600
Hexachlorobutadiene	ND	µg/kg (dry wt)	1,600
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	1,600
2-Methylnaphthalene	ND	µg/kg (dry wt)	1,600
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	1,600
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	1,600
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	7,800
2-Chloronaphthalene	ND	µg/kg (dry wt)	1,600
2-Nitroaniline	ND	µg/kg (dry wt)	7,800
Dimethyl phthalate	ND	µg/kg (dry wt)	1,600
Acenaphthylene	ND	µg/kg (dry wt)	1,600
3-Nitroaniline	ND	µg/kg (dry wt)	7,800
Acenaphthene	250*	µg/kg (dry wt)	1,600

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7887 B-32 6-12"
Laboratory ID: 87-007569
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	7,800
4-Nitrophenol	ND	µg/kg (dry wt)	7,800
Dibenzofuran	ND	µg/kg (dry wt)	1,600
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	1,600
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	1,600
Diethyl phthalate	ND	µg/kg (dry wt)	1,600
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	1,600
Fluorene	190*	µg/kg (dry wt)	1,600
4-Nitroaniline	ND	µg/kg (dry wt)	7,800
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	7,800
N-Nitrosodiphenylamine	430*	µg/kg (dry wt)	1,600
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	1,600
Hexachlorobenzene	ND	µg/kg (dry wt)	1,600
Pentachlorophenol	ND	µg/kg (dry wt)	7,800
Phenanthrene	2,000	µg/kg (dry wt)	1,600
Anthracene	740*	µg/kg (dry wt)	1,600
Di-n-butyl phthalate	770*	µg/kg (dry wt)	1,600
Fluoranthene	2,700	µg/kg (dry wt)	1,600
Pyrene	2,500	µg/kg (dry wt)	1,600
Butyl benzyl phthalate	29,000	µg/kg (dry wt)	1,600
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	3,100
Benzo(a)anthracene	1,200*	µg/kg (dry wt)	1,600
bis(2-Ethylhexyl)phthalate	3,700	µg/kg (dry wt)	1,600
Chrysene	1,200*	µg/kg (dry wt)	1,600
Di-n-octyl phthalate	490*	µg/kg (dry wt)	1,600
Benzo(b)fluoranthene) Benzo(k)fluoranthene)†	1,800	µg/kg (dry wt)	1,600
Benzo(a)pyrene	1,300*	µg/kg (dry wt)	1,600
Indeno(1,2,3-c,d)pyrene	770*	µg/kg (dry wt)	1,600
Dibenzo(a,h)anthracene	190*	µg/kg (dry wt)	1,600
Benzo(g,h,i)perylene	740*	µg/kg (dry wt)	1,600

Solid content = 90%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG / STM

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7887 B32 6-12"
Laboratory ID: 87-007569
Matrix: Soil Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 90.4%

ND = Not detected.

Reported by YHL Approved by EL

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7888 B-32 40-44"

Laboratory ID: 87-007570

Matrix: Soil Sampled: 06/02/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride	2,000B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	120	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	210	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	58*	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	260	µg/kg (dry wt)	60
Toluene	ND	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 83%

*Trace concentrations detected below the reporting limit.

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by CB Approved by Am/SC

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7888 B-32 40-44"
Laboratory ID: 87-007570
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	380
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	380
2-Chlorophenol	ND	µg/kg (dry wt)	380
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	380
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	380
Benzyl alcohol	ND	µg/kg (dry wt)	380
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	380
2-Methylphenol	ND	µg/kg (dry wt)	380
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	380
4-Methylphenol	ND	µg/kg (dry wt)	380
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	380
Hexachloroethane	ND	µg/kg (dry wt)	380
Nitrobenzene	ND	µg/kg (dry wt)	380
Isophorone	ND	µg/kg (dry wt)	380
2-Nitrophenol	ND	µg/kg (dry wt)	380
2,4-Dimethylphenol	ND	µg/kg (dry wt)	380
Benzoic Acid	ND	µg/kg (dry wt)	1,900
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	380
2,4-Dichlorophenol	ND	µg/kg (dry wt)	380
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	380
Naphthalene	110*	µg/kg (dry wt)	380
4-Chloroaniline	ND	µg/kg (dry wt)	380
Hexachlorobutadiene	ND	µg/kg (dry wt)	380
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	380
2-Methylnaphthalene	90*	µg/kg (dry wt)	380
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	380
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	380
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	1,900
2-Chloronaphthalene	ND	µg/kg (dry wt)	380
2-Nitroaniline	ND	µg/kg (dry wt)	1,900
Dimethyl phthalate	ND	µg/kg (dry wt)	380
Acenaphthylene	ND	µg/kg (dry wt)	380
3-Nitroaniline	ND	µg/kg (dry wt)	1,900
Acenaphthene	150*	µg/kg (dry wt)	380

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7888 B-32 40-44"
Laboratory ID: 87-007570
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	1,900
4-Nitrophenol	ND	µg/kg (dry wt)	1,900
Dibenzofuran	68*	µg/kg (dry wt)	380
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	380
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	380
Diethyl phthalate	ND	µg/kg (dry wt)	380
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	380
Fluorene	120*	µg/kg (dry wt)	380
4-Nitroaniline	ND	µg/kg (dry wt)	1,900
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	1,900
N-Nitrosodiphenylamine	71*	µg/kg (dry wt)	380
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	380
Hexachlorobenzene	ND	µg/kg (dry wt)	380
Pentachlorophenol	ND	µg/kg (dry wt)	1,900
Phenanthrene	1,600	µg/kg (dry wt)	380
Anthracene	480	µg/kg (dry wt)	380
Di-n-butyl phthalate	ND	µg/kg (dry wt)	380
Fluoranthene	2,000	µg/kg (dry wt)	380
Pyrene	1,700	µg/kg (dry wt)	380
Butyl benzyl phthalate	1,400	µg/kg (dry wt)	380
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	760
Benzo(a)anthracene	900	µg/kg (dry wt)	380
bis(2-Ethylhexyl)phthalate	5,900	µg/kg (dry wt)	380
Chrysene	810	µg/kg (dry wt)	380
Di-n-octyl phthalate	64*	µg/kg (dry wt)	380
Benzo(b)fluoranthene)† Benzo(k)fluoranthene)†	1,200	µg/kg (dry wt)	380
Benzo(a)pyrene	770	µg/kg (dry wt)	380
Indeno(1,2,3-c,d)pyrene	500	µg/kg (dry wt)	380
Dibenzo(a,h)anthracene	110*	µg/kg (dry wt)	380
Benzo(g,h,i)perylene	480	µg/kg (dry wt)	380

Solid content = 85%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7888 B-32 40-44"
Laboratory ID: 87-007570
Matrix: Soil Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 84.6%

ND = Not detected.

Reported by YHL Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7890 6-12"

Laboratory ID: 87-007571

Matrix: Soil Sampled: 06/02/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	130
Bromomethane	ND	µg/kg (dry wt)	130
Vinyl chloride	ND	µg/kg (dry wt)	130
Chloroethane	ND	µg/kg (dry wt)	130
Methylene chloride	1,100B	µg/kg (dry wt)	130
Acetone	ND	µg/kg (dry wt)	1,300
Carbon disulfide	ND	µg/kg (dry wt)	50
1,1-Dichloroethene	ND	µg/kg (dry wt)	50
1,1-Dichloroethane	ND	µg/kg (dry wt)	50
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	50
Chloroform	ND	µg/kg (dry wt)	50
1,2-Dichloroethane	ND	µg/kg (dry wt)	50
2-Butanone	ND	µg/kg (dry wt)	250
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	50
Carbon tetrachloride	ND	µg/kg (dry wt)	50
Vinyl acetate	ND	µg/kg (dry wt)	250
Bromodichloromethane	ND	µg/kg (dry wt)	50
1,2-Dichloropropane	ND	µg/kg (dry wt)	50
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
Trichloroethene	ND	µg/kg (dry wt)	50
Dibromochloromethane	ND	µg/kg (dry wt)	50
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	50
Benzene	ND	µg/kg (dry wt)	50
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	50
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	250
Bromoform	ND	µg/kg (dry wt)	50
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	250
2-Hexanone	ND	µg/kg (dry wt)	250
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	50
Tetrachloroethene	ND	µg/kg (dry wt)	50
Toluene	ND	µg/kg (dry wt)	50
Chlorobenzene	ND	µg/kg (dry wt)	50
Ethyl benzene	ND	µg/kg (dry wt)	50
Styrene	ND	µg/kg (dry wt)	50
Total xylenes	ND	µg/kg (dry wt)	50

Solid content = 93%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Ant/SC

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7890 B-33 6-12"
Laboratory ID: 87-007571
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	13,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	13,000
2-Chlorophenol	ND	µg/kg (dry wt)	13,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	13,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	13,000
Benzyl alcohol	ND	µg/kg (dry wt)	13,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	13,000
2-Methylphenol	ND	µg/kg (dry wt)	13,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	13,000
4-Methylphenol	ND	µg/kg (dry wt)	13,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	13,000
Hexachloroethane	ND	µg/kg (dry wt)	13,000
Nitrobenzene	ND	µg/kg (dry wt)	13,000
Isophorone	ND	µg/kg (dry wt)	13,000
2-Nitrophenol	ND	µg/kg (dry wt)	13,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	13,000
Benzoic Acid	ND	µg/kg (dry wt)	13,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	65,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	13,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	13,000
Naphthalene	ND	µg/kg (dry wt)	13,000
4-Chloroaniline	ND	µg/kg (dry wt)	13,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	13,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	13,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	13,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	13,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	13,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	13,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	65,000
2-Nitroaniline	ND	µg/kg (dry wt)	13,000
Dimethyl phthalate	ND	µg/kg (dry wt)	65,000
Acenaphthylene	ND	µg/kg (dry wt)	13,000
3-Nitroaniline	ND	µg/kg (dry wt)	13,000
Acenaphthene	ND	µg/kg (dry wt)	65,000
	ND	µg/kg (dry wt)	13,000

(continued on following page)

ND = Not detected.

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7890 B-33 6-12"
Laboratory ID: 87-007571
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/26/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	65,000
4-Nitrophenol	ND	µg/kg (dry wt)	65,000
Dibenzofuran	ND	µg/kg (dry wt)	13,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	13,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	13,000
Diethyl phthalate	ND	µg/kg (dry wt)	13,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	13,000
Fluorene	ND	µg/kg (dry wt)	13,000
4-Nitroaniline	ND	µg/kg (dry wt)	13,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	65,000
N-Nitrosodiphenylamine	ND	µg/kg (dry wt)	65,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	13,000
Hexachlorobenzene	ND	µg/kg (dry wt)	13,000
Pentachlorophenol	ND	µg/kg (dry wt)	13,000
Phenanthrene	ND	µg/kg (dry wt)	65,000
Anthracene	ND	µg/kg (dry wt)	13,000
Di-n-butyl phthalate ---------	1,300*	µg/kg (dry wt)	13,000
Fluoranthene	ND	µg/kg (dry wt)	13,000
Pyrene	ND	µg/kg (dry wt)	13,000
Butyl benzyl phthalate -----	110,000	µg/kg (dry wt)	13,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	13,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	26,000
bis(2-Ethylhexyl)phthalate --	34,000	µg/kg (dry wt)	13,000
Chrysene	ND	µg/kg (dry wt)	13,000
Di-n-octyl phthalate	ND	µg/kg (dry wt)	13,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	13,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	13,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	13,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	13,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	13,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	13,000

Solid content = 95%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by AVL

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7890 B-33 6-12"
Laboratory ID: 87-007571
Matrix: Soil Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/19/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 94.6%

ND = Not detected.

Reported by VHL Approved by EK

Ense

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: #7891 ~~2372~~ 45-50"

Laboratory ID: 87-007572

Matrix: Soil Sampled: 06/02/87 Received: 06/04/87

Authorized: 06/04/87 Prepared: 06/15/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	150
Bromomethane	ND	µg/kg (dry wt)	150
Vinyl chloride	ND	µg/kg (dry wt)	150
Chloroethane	ND	µg/kg (dry wt)	150
Methylene chloride ----------	1,400B	µg/kg (dry wt)	150
Acetone	ND	µg/kg (dry wt)	1,500
Carbon disulfide	ND	µg/kg (dry wt)	60
1,1-Dichloroethene	ND	µg/kg (dry wt)	60
1,1-Dichloroethane	ND	µg/kg (dry wt)	60
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	60
Chloroform	ND	µg/kg (dry wt)	60
1,2-Dichloroethane	ND	µg/kg (dry wt)	60
2-Butanone	ND	µg/kg (dry wt)	300
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	60
Carbon tetrachloride	ND	µg/kg (dry wt)	60
Vinyl acetate	ND	µg/kg (dry wt)	300
Bromodichloromethane	ND	µg/kg (dry wt)	60
1,2-Dichloropropane	ND	µg/kg (dry wt)	60
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
Trichloroethene	ND	µg/kg (dry wt)	60
Dibromochloromethane	ND	µg/kg (dry wt)	60
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	60
Benzene	ND	µg/kg (dry wt)	60
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	60
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	300
Bromoform	ND	µg/kg (dry wt)	60
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	300
2-Hexanone	ND	µg/kg (dry wt)	300
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	60
Tetrachloroethene	ND	µg/kg (dry wt)	60
Toluene	ND	µg/kg (dry wt)	60
Chlorobenzene	ND	µg/kg (dry wt)	60
Ethyl benzene	ND	µg/kg (dry wt)	60
Styrene	ND	µg/kg (dry wt)	60
Total xylenes	ND	µg/kg (dry wt)	60

Solid content = 73%

ND = Not detected.

B = Analyte was also found in the Erco blank.

Reported by LS Approved by Ar/IC

555

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7891 B33 45-50"
Laboratory ID: 87-007572
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	11,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	11,000
2-Chlorophenol	ND	µg/kg (dry wt)	11,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	11,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	11,000
Benzyl alcohol	ND	µg/kg (dry wt)	11,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	11,000
2-Methylphenol	ND	µg/kg (dry wt)	11,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	11,000
4-Methylphenol	ND	µg/kg (dry wt)	11,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	11,000
Hexachloroethane	ND	µg/kg (dry wt)	11,000
Nitrobenzene	ND	µg/kg (dry wt)	11,000
Isophorone	ND	µg/kg (dry wt)	11,000
2-Nitrophenol	ND	µg/kg (dry wt)	11,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	11,000
Benzoic Acid	ND	µg/kg (dry wt)	11,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	11,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	53,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	11,000
Naphthalene	ND	µg/kg (dry wt)	11,000
4-Chloroaniline	ND	µg/kg (dry wt)	11,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	11,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	11,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	11,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	11,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	11,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	11,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	11,000
2-Nitroaniline	ND	µg/kg (dry wt)	53,000
Dimethyl phthalate	ND	µg/kg (dry wt)	11,000
Acenaphthylene	ND	µg/kg (dry wt)	53,000
3-Nitroaniline	ND	µg/kg (dry wt)	11,000
Acenaphthene	ND	µg/kg (dry wt)	11,000
	ND	µg/kg (dry wt)	53,000
			11,000

(continued on following page)

ND = Not detected.

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: #7891 B-33 45-50"
Laboratory ID: 87-007572
Matrix: Solid Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/05/87 Prepared: 06/16/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	53,000
4-Nitrophenol	ND	µg/kg (dry wt)	53,000
Dibenzofuran	ND	µg/kg (dry wt)	11,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	11,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	11,000
Diethyl phthalate	ND	µg/kg (dry wt)	11,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	11,000
Fluorene	ND	µg/kg (dry wt)	11,000
4-Nitroaniline	ND	µg/kg (dry wt)	11,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	53,000
N-Nitrosodiphenylamine -------	1,900*	µg/kg (dry wt)	53,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	11,000
Hexachlorobenzene	ND	µg/kg (dry wt)	11,000
Pentachlorophenol	ND	µg/kg (dry wt)	11,000
Phenanthrene ----------	3,100*	µg/kg (dry wt)	53,000
Anthracene	ND	µg/kg (dry wt)	11,000
Di-n-butyl phthalate ---------	1,500*	µg/kg (dry wt)	11,000
Fluoranthene ----------	3,800*	µg/kg (dry wt)	11,000
Pyrene ----------	3,300*	µg/kg (dry wt)	11,000
Butyl benzyl phthalate ------	91,000	µg/kg (dry wt)	11,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	11,000
Benzo(a)anthracene ----------	1,700*	µg/kg (dry wt)	21,000
bis(2-Ethylhexyl)phthalate --	27,000	µg/kg (dry wt)	11,000
Chrysene ----------	2,000*	µg/kg (dry wt)	11,000
Di-n-octyl phthalate ---------	1,000*	µg/kg (dry wt)	11,000
Benzo(b)fluoranthene)†		µg/kg (dry wt)	11,000
Benzo(k)fluoranthene)† --------	3,000*	µg/kg (dry wt)	11,000
Benzo(a)pyrene ----------	2,200*	µg/kg (dry wt)	11,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	11,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	11,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	11,000

Solid content = 69%

*Trace concentrations detected below the reporting limit.
ND = Not detected.
†Coeluted.

Reported by AVL Approved by DG

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.
Client ID: 7891 B-33 45-50"
Laboratory ID: 87-007572
Matrix: Soil Sampled: 06/02/87 Received: 06/04/87
Authorized: 06/04/87 Prepared: 06/22/87 Analyzed: 07/10/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	8
beta-BHC	ND	µg/kg (dry wt)	8
delta-BHC	ND	µg/kg (dry wt)	8
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	8
Heptachlor	ND	µg/kg (dry wt)	8
Aldrin	ND	µg/kg (dry wt)	8
Heptachlor Epoxide	ND	µg/kg (dry wt)	8
Endosulfan I	ND	µg/kg (dry wt)	8
Dieldrin	ND	µg/kg (dry wt)	16
4,4'-DDE	ND	µg/kg (dry wt)	16
Endrin	ND	µg/kg (dry wt)	16
Endosulfan II	ND	µg/kg (dry wt)	16
4,4'-DDD	ND	µg/kg (dry wt)	16
Endosulfan Sulfate	ND	µg/kg (dry wt)	16
4,4'-DDT	ND	µg/kg (dry wt)	16
Endrin Aldehyde	ND	µg/kg (dry wt)	16
Methoxychlor	ND	µg/kg (dry wt)	80
Chlordane	ND	µg/kg (dry wt)	80
Toxaphene	ND	µg/kg (dry wt)	160
Aroclor-1016	ND	µg/kg (dry wt)	80
Aroclor-1221	ND	µg/kg (dry wt)	80
Aroclor-1232	ND	µg/kg (dry wt)	80
Aroclor-1242	ND	µg/kg (dry wt)	80
Aroclor-1248	ND	µg/kg (dry wt)	80
Aroclor-1254	ND	µg/kg (dry wt)	160
Aroclor-1260	ND	µg/kg (dry wt)	160

Solid content = 69.4%

ND = Not detected.

Reported by YHL Approved by EK

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 8080

Client Name: RECON Systems, Inc.

Client ID: 8215 B-14 NJPDES Sump.

Laboratory ID: 87-010072

Matrix: Soil Sampled: 07/03/87 Received: 07/13/87

Authorized: 07/14/87 Prepared: 07/15/87 Analyzed: 08/21/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/kg (dry wt)	400
beta-BHC	ND	µg/kg (dry wt)	400
delta-BHC	ND	µg/kg (dry wt)	400
gamma-BHC (Lindane)	ND	µg/kg (dry wt)	400
Heptachlor	ND	µg/kg (dry wt)	400
Aldrin	ND	µg/kg (dry wt)	400
Heptachlor Epoxide	ND	µg/kg (dry wt)	400
Endosulfan I	ND	µg/kg (dry wt)	400
Dieldrin	ND	µg/kg (dry wt)	400
4,4'-DDE	ND	µg/kg (dry wt)	800
Endrin	ND	µg/kg (dry wt)	800
Endosulfan II	ND	µg/kg (dry wt)	800
4,4'-DDD	ND	µg/kg (dry wt)	800
Endosulfan Sulfate	ND	µg/kg (dry wt)	800
4,4'-DDT	ND	µg/kg (dry wt)	800
Endrin Aldehyde	ND	µg/kg (dry wt)	800
Methoxychlor	ND	µg/kg (dry wt)	800
Chlordane	ND	µg/kg (dry wt)	4,000
Toxaphene	ND	µg/kg (dry wt)	4,000
Aroclor-1016	ND	µg/kg (dry wt)	8,000
Aroclor-1221	ND	µg/kg (dry wt)	4,000
Aroclor-1232	ND	µg/kg (dry wt)	4,000
Aroclor-1242	ND	µg/kg (dry wt)	4,000
Aroclor-1248	ND	µg/kg (dry wt)	4,000
Aroclor-1254	ND	µg/kg (dry wt)	4,000
Aroclor-1260	ND	µg/kg (dry wt)	8,000
			8,000

Solid content = 68%

ND = Not detected.

Reported by MEF Approved by EL.

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8215 B-14 NJPDES SUMP
Laboratory ID: 87-010072
Matrix: Solid Sampled: 07/03/87 Received: 07/13/87
Authorized: 07/14/87 Prepared: 07/16/87 Analyzed: 07/30/87

Parameter	Result	Units	Reporting Limit
2,4-Dinitrophenol	ND	µg/kg (dry wt)	240,000
4-Nitrophenol	ND	µg/kg (dry wt)	240,000
Dibenzofuran	ND	µg/kg (dry wt)	49,000
2,4-Dinitrotoluene	ND	µg/kg (dry wt)	49,000
2,6-Dinitrotoluene	ND	µg/kg (dry wt)	49,000
Diethyl phthalate	ND	µg/kg (dry wt)	49,000
4-Chlorophenyl phenyl ether	ND	µg/kg (dry wt)	49,000
Fluorene	ND	µg/kg (dry wt)	49,000
4-Nitroaniline	ND	µg/kg (dry wt)	240,000
4,6-Dinitro-2-methylphenol	ND	µg/kg (dry wt)	240,000
N-Nitrosodiphenylamine ---------	10,000*	µg/kg (dry wt)	49,000
4-Bromophenyl phenyl ether	ND	µg/kg (dry wt)	49,000
Hexachlorobenzene	ND	µg/kg (dry wt)	49,000
Pentachlorophenol	ND	µg/kg (dry wt)	240,000
Phenanthrene	ND	µg/kg (dry wt)	49,000
Anthracene	ND	µg/kg (dry wt)	49,000
Di-n-butyl phthalate	ND	µg/kg (dry wt)	49,000
Fluoranthene	ND	µg/kg (dry wt)	49,000
Pyrene	ND	µg/kg (dry wt)	49,000
Butyl benzyl phthalate ------	1,600,000	µg/kg (dry wt)	49,000
3,3'-Dichlorobenzidine	ND	µg/kg (dry wt)	98,000
Benzo(a)anthracene	ND	µg/kg (dry wt)	49,000
bis(2-Ethylhexyl)phthalate --	1,100,000	µg/kg (dry wt)	49,000
Chrysene	ND	µg/kg (dry wt)	49,000
Di-n-octyl phthalate ----------	51,000	µg/kg (dry wt)	49,000
Benzo(b)fluoranthene	ND	µg/kg (dry wt)	49,000
Benzo(k)fluoranthene	ND	µg/kg (dry wt)	49,000
Benzo(a)pyrene	ND	µg/kg (dry wt)	49,000
Indeno(1,2,3-c,d)pyrene	ND	µg/kg (dry wt)	49,000
Dibenzo(a,h)anthracene	ND	µg/kg (dry wt)	49,000
Benzo(g,h,i)perylene	ND	µg/kg (dry wt)	49,000

Solid content = 68%

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by PD Approved by DG

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 8270/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8215 B-14 NJPDES Sump
Laboratory ID: 87-010072
Matrix: Solid Sampled: 07/03/87 Received: 07/13/87
Authorized: 07/14/87 Prepared: 07/16/87 Analyzed: 07/30/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/kg (dry wt)	49,000
bis(2-Chloroethyl)ether	ND	µg/kg (dry wt)	49,000
2-Chlorophenol	ND	µg/kg (dry wt)	49,000
1,3-Dichlorobenzene	ND	µg/kg (dry wt)	49,000
1,4-Dichlorobenzene	ND	µg/kg (dry wt)	49,000
Benzyl alcohol	ND	µg/kg (dry wt)	49,000
1,2-Dichlorobenzene	ND	µg/kg (dry wt)	49,000
2-Methylphenol	ND	µg/kg (dry wt)	49,000
bis(2-Chloroisopropyl)ether	ND	µg/kg (dry wt)	49,000
4-Methylphenol	ND	µg/kg (dry wt)	49,000
N-Nitroso-di-n-propylamine	ND	µg/kg (dry wt)	49,000
Hexachloroethane	ND	µg/kg (dry wt)	49,000
Nitrobenzene	ND	µg/kg (dry wt)	49,000
Isophorone	ND	µg/kg (dry wt)	49,000
2-Nitrophenol	ND	µg/kg (dry wt)	49,000
2,4-Dimethylphenol	ND	µg/kg (dry wt)	49,000
Benzoic Acid	ND	µg/kg (dry wt)	49,000
bis(2-Chloroethoxy)methane	ND	µg/kg (dry wt)	240,000
2,4-Dichlorophenol	ND	µg/kg (dry wt)	49,000
1,2,4-Trichlorobenzene	ND	µg/kg (dry wt)	49,000
Naphthalene	ND	µg/kg (dry wt)	49,000
4-Chloroaniline	ND	µg/kg (dry wt)	49,000
Hexachlorobutadiene	ND	µg/kg (dry wt)	49,000
4-Chloro-3-methylphenol	ND	µg/kg (dry wt)	49,000
2-Methylnaphthalene	ND	µg/kg (dry wt)	49,000
Hexachlorocyclopentadiene	ND	µg/kg (dry wt)	49,000
2,4,6-Trichlorophenol	ND	µg/kg (dry wt)	49,000
2,4,5-Trichlorophenol	ND	µg/kg (dry wt)	49,000
2-Chloronaphthalene	ND	µg/kg (dry wt)	240,000
2-Nitroaniline	ND	µg/kg (dry wt)	49,000
Dimethyl phthalate	ND	µg/kg (dry wt)	240,000
Acenaphthylene	ND	µg/kg (dry wt)	49,000
3-Nitroaniline	ND	µg/kg (dry wt)	49,000
Acenaphthene	ND	µg/kg (dry wt)	240,000
	ND	µg/kg (dry wt)	49,000

(continued on following page)

ND = Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 8240/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8215 B-14 NJPDES Sump.

Laboratory ID: 87-010072

Matrix: Sludge Sampled: 07/03/87 Received: 07/13/87

Authorized: 07/13/87 Prepared: 07/15/87 Analyzed: 07/19/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/kg (dry wt)	220
Bromomethane	ND	µg/kg (dry wt)	220
Vinyl chloride	ND	µg/kg (dry wt)	220
Chloroethane	ND	µg/kg (dry wt)	220
Methylene chloride	ND	µg/kg (dry wt)	220
Acetone	ND	µg/kg (dry wt)	2,200
Carbon disulfide	ND	µg/kg (dry wt)	90
1,1-Dichloroethene	ND	µg/kg (dry wt)	90
1,1-Dichloroethane	ND	µg/kg (dry wt)	90
trans-1,2-Dichloroethene	ND	µg/kg (dry wt)	90
Chloroform	ND	µg/kg (dry wt)	90
1,2-Dichloroethane	ND	µg/kg (dry wt)	90
2-Butanone	ND	µg/kg (dry wt)	450
1,1,1-Trichloroethane	ND	µg/kg (dry wt)	90
Carbon tetrachloride	ND	µg/kg (dry wt)	90
Vinyl acetate	ND	µg/kg (dry wt)	450
Bromodichloromethane	ND	µg/kg (dry wt)	90
1,2-Dichloropropane	ND	µg/kg (dry wt)	90
trans-1,3-Dichloropropene	ND	µg/kg (dry wt)	90
Trichloroethene	ND	µg/kg (dry wt)	90
Dibromochloromethane	ND	µg/kg (dry wt)	90
1,1,2-Trichloroethane	ND	µg/kg (dry wt)	90
Benzene	ND	µg/kg (dry wt)	90
cis-1,3-Dichloropropene	ND	µg/kg (dry wt)	90
2-Chloroethyl vinyl ether	ND	µg/kg (dry wt)	450
Bromoform	ND	µg/kg (dry wt)	90
4-Methyl-2-pentanone	ND	µg/kg (dry wt)	450
2-Hexanone	ND	µg/kg (dry wt)	450
1,1,2,2-Tetrachloroethane	ND	µg/kg (dry wt)	90
Tetrachloroethene	ND	µg/kg (dry wt)	90
Toluene	ND	µg/kg (dry wt)	90
Chlorobenzene	ND	µg/kg (dry wt)	90
Ethyl benzene	160	µg/kg (dry wt)	90
Styrene	ND	µg/kg (dry wt)	90
Total xylenes	ND	µg/kg (dry wt)	90

Solid content = 55%

ND = Not detected.

Reported by SA Approved by

Er

POLYCHLORINATED BIPHENYLS (PCBs)

EPA Method 8080

Client Name: RECON Systems, Inc.

Client ID: 8285 B-15 6-12"

Laboratory ID: 87-009987

Matrix: Soil

Sampled: 07/09/87 Received: 07/13/87

Authorized: 07/13/87 Prepared: 08/20/87 Analyzed: 08/31/87

Parameter	Result	Units	Reporting Limit
Aroclor-1016	ND	µg/kg (dry wt)	8,000
Aroclor-1221	ND	µg/kg (dry wt)	8,000
Aroclor-1232	ND	µg/kg (dry wt)	8,000
Aroclor-1242	ND	µg/kg (dry wt)	8,000
Aroclor-1248	ND	µg/kg (dry wt)	8,000
Aroclor-1254	ND	µg/kg (dry wt)	8,000
Aroclor-1260	ND	µg/kg (dry wt)	8,000

Solid content = 79%

ND = Not detected.

Reported by HEF Approved by EK

Ens

POLYCHLORINATED BIPHENYLS (PCBs)

EPA Method 8080

Client Name: RECON Systems, Inc.

Client ID: 8286 B-16 6-12"

Laboratory ID: 87-009988

Matrix: Soil Sampled: 07/09/87 Received: 07/13/87

Authorized: 07/13/87 Prepared: 08/20/87 Analyzed: 08/31/87

Parameter	Result	Units	Reporting Limit
Aroclor-1016	ND	µg/kg (dry wt)	1,600
Aroclor-1221	ND	µg/kg (dry wt)	1,600
Aroclor-1232	ND	µg/kg (dry wt)	1,600
Aroclor-1242	ND	µg/kg (dry wt)	1,600
Aroclor-1248	ND	µg/kg (dry wt)	1,600
Aroclor-1254	ND	µg/kg (dry wt)	1,600
Aroclor-1260	ND	µg/kg (dry wt)	1,600

Solid content = 85%

ND = Not detected.

Reported by ACF Approved by EK

Ense

POLYCHLORINATED BIPHENYLS (PCBs)

EPA Method 8080

Client Name: RECON Systems, Inc.

Client ID: 8287 B-17 6" - 12"

Laboratory ID: 87-009989

Matrix: Soil Sampled: 07/09/87 Received: 07/13/87

Authorized: 07/13/87 Prepared: 08/20/87 Analyzed: 08/31/87

Parameter	Result	Units	Reporting Limit
Aroclor-1016	ND	µg/kg (dry wt)	1,600
Aroclor-1221	ND	µg/kg (dry wt)	1,600
Aroclor-1232	ND	µg/kg (dry wt)	1,600
Aroclor-1242	ND	µg/kg (dry wt)	1,600
Aroclor-1248	ND	µg/kg (dry wt)	1,600
Aroclor-1254	ND	µg/kg (dry wt)	1,600
Aroclor-1260	ND	µg/kg (dry wt)	1,600

Solid content = 85%

ND = Not detected.

Reported by MEF Approved by EK

APPENDIX VIIb

Soil Analysis Reports

METALS

1126.SR 9.28.87

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

July 30, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil Sampled 5/27/87

RECON ID	MW 3/1 7850	MW 3/2 7851	MW 1/1 7852	MW 1/2 7853	Minimum Detection Limit
	mg/kg				
Antimony	61	38	ND	40	20
Arsenic	6.5	11	2.8	15	0.40
Beryllium	ND	<1.0	ND	<1.0	1.0
Cadmium	69.5	8.4	1.4	22.7	1.0
Chromium	39.4	7.1	20.9	7.5	6.0
Copper	96.9	20.9	37.6	212	3.0
Lead	527	68	229	179	10
Mercury	0.5	<0.2	0.4	0.7	0.2
Nickel	40.0	14.3	13.9	18.5	6.0
Selenium	<0.2	<0.2	<0.2	0.3	0.2
Silver	ND	ND	ND	ND	3.0
Thallium	ND	ND	ND	ND	10
Zinc	333	32.5	122	482	1.0

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

July 27, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil Sampled 5/27/87

RECON ID	B 5/1 7824	B 5/2 7825	MW 2/1 7840	MW 2/2 7841	MW 7/1 7842	MW 7/2 7843	Minimum Detection Limit
	mg/kg						
Antimony	ND	ND	ND	31	ND	ND	20
Arsenic	16	20	7.9	15	3.2	9.9	0.4
Beryllium	ND	1.2	<2	1.2	ND	<2	1.0
Cadmium	38.4	1.1	<2	<1.0	1.8	43.7	1.0
Chromium	19.6	7.5	24.2	15.4	19.0	31.0	6.0
Copper	164	64.6	11.9	11.7	124	210	3.0
Lead	312	739	51	69	239	146	10
Mercury	0.7	0.4	0.3	<0.2	0.4	0.5	0.2
Nickel	22.4	22.1	35.9	15.3	12.5	16.2	6.0
Selenium	0.2	<0.2	ND	0.2	<0.2	0.2	0.2
Silver	ND	ND	ND	3.0	<3.0	ND	3.0
Thallium	27	24	46	34	ND	ND	10
Zinc	589	193	65.9	48.2	474	1570	1.0

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Hajozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 5, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil - Priority Pollutants

Sampled 6/1/87

RECON ID	Method Blank	MW4/1 6-12" 7874	MW4/2 42-48" 7875	MW5/1 6-12" 7876	MW5/2 42-48" 7877	B6/1 6-12" 7878	Minimum Detection Limit
	mg/kg						
Antimony	ND	38	29	20	25	<20	20
Arsenic	ND	<0.4	ND	2.5	<0.4	2.0	0.4
Beryllium	ND	<1.0	ND	<1.0	<1.0	<1.0	1.0
Cadmium	ND	44	10	85	4	450	1
Chromium	ND	26	21	14	18	22	6
Copper	ND	174	136	23.2	717	69.6	3.0
Lead	ND	218	217	40	436	160	10
Mercury	ND	0.3	0.1	0.1	0.7	0.4	0.1
Nickel	ND	26	25	14	16	20	6
Selenium	ND	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Silver	ND	ND	ND	ND	ND	ND	3
Thallium	ND	ND	ND	ND	ND	ND	20
Zinc	1.0	278	270	64.3	302	303	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

ND = none detected
< = less than the value shown

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.
ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 5, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil - Priority Pollutants

Sampled	6/1/87	6/1/87	6/1/87	6/2/87	6/2/87	
	B6/2	MW6/1	MW6/2	Composite	Duplicate	Minimum
	40-46"	6-12"	76-84"			Detection
RECON ID	7879	7880	7881	7882	7882D	Limit
	mg/kg					
Antimony	29	25	42	34	21	20
Arsenic	0.8	1.7	2.1	<0.4	1.0	0.4
Beryllium	1.3	1.3	1.3	<1.0	<1.0	1.0
Cadmium	1	480	1	5	4	1
Chromium	14	31	18	78	87	1
Copper	31.5	75.8	136	132	132	3.0
Lead	48	302	1150	392	389	10
Mercury	<0.1	0.6	0.2	0.3	0.2	0.1
Nickel	20	27	22	54	50	6
Selenium	ND	<0.2	0.36	<0.2	<0.2	0.2
Silver	ND	ND	ND	ND	ND	3
Thallium	ND	ND	ND	ND	ND	20
Zinc	62.7	454	133	510	506	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

ND = none detected
< = less than the value shown

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.
ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 5, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil - Priority Pollutants

Sample 6/2/87

RECON ID	B31/1 0-6" 7883	B31/2 6-12" 7884	B31/3 42-47" 7885	B32/2 0-6" 7886	B32/3 6-12" 7887	Minimum Detection Limit
	mg/kg					
Antimony	38	29	25	33	34	20
Arsenic	0.5	0.8	2.4	ND	2.0	0.4
Beryllium	<1.0	<1.0	<1.0	<1.0	<1.0	1.0
Cadmium	130	250	18	9	2	1
Chromium	65	67	15	32	16	6
Copper	88.0	84.9	81.0	106	25.0	3.0
Lead	360	265	225	229	123	10
Mercury	0.6	0.3	0.6	1.4	0.3	0.1
Nickel	87	66	18	55	19	6
Selenium	<0.2	<0.2	0.2	<0.2	<0.2	0.2
Silver	ND	ND	ND	<3	ND	3
Thallium	ND	ND	ND	ND	ND	20
Zinc	234	131	740	470	341	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

ND = none detected
< = less than the value shown

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 6, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil - Priority Pollutants

Sample 6/2/87

RECON ID	B32/3 40-44" 7888	B33/1 0-6" 7889	B33/2 6-12" 7890	B33/3 45-50" 7891	Minimum Detection Limit
	mg/kg				
Antimony	34	42	21	2350	20
Arsenic	1.1	8.3	1.5	ND	0.4
Beryllium	1.7	1.7	1.6	<1.0	1.0
Cadmium	7	9	510	510	1
Chromium	26	33	32	145	6
Copper	45.6	46.1	20.5	2070	3.0
Lead	221	161	44	802	10
Mercury	0.5	0.2	<0.1	0.2	0.1
Nickel	26	69	44	31	6
Selenium	<0.2	<0.2	ND	<0.2	0.2
Silver	ND	ND	ND	ND	3
Thallium	ND	ND	ND	ND	20
Zinc	258	214	126	1180	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

ND = none detected
< = less than the value shown

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.
ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

July 30, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil Sampled 5/26/87

RECON ID	B 10/1 7796	B 10/2 7797	B 11/1 7798	B 11/2 7799	Minimum Detection Limit
	mg/kg				
Antimony	<40	<40	<40	<40	40
Arsenic	1.4	0.52	0.69	1.8	0.40
Beryllium	ND	ND	ND	ND	1.0
Cadmium	10.5	1.0	8.5	1.4	1.0
Chromium	12.6	ND	12.4	22.9	6.0
Copper	291	29.9	60.2	21.7	3.0
Lead	283	2150	288	72	10
Mercury	0.8	4.8	0.3	0.2	0.1
Nickel	19.5	<6.0	15.0	26.1	6.0
Selenium	<0.2	<0.2	<0.2	ND	0.2
Silver	3.2	ND	3.1	3.9	3.0
Thallium	11	ND	<10	ND	10
Zinc	290	20.0	227	91.7	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

July 30, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil Sampled 5/26/87

RECON ID	B 12/2 7790	B 13/1 7791	B 13/2 7792	B 7/1 7793	Dupl. 7793	B 7/2 7794	Minimum Detection Limit
	mg/kg						
Antimony	48	<40	<40	<40	<40	<40	40
Arsenic	1.2	ND	0.7	<0.4	1.6	1300	0.4
Beryllium	ND	ND	ND	ND	ND	ND	1.0
Cadmium	563	1.8	1.1	1.0	1.1	287	1.0
Chromium	10.3	7.7	<6.0	<6.0	7.7	41.5	6.0
Copper	32.1	34.0	24.1	40.2	42.0	232	3.0
Lead	82	94	76	67	67	1040	10
Mercury	<0.1	ND	0.4	<0.1	0.1	1.7	0.1
Nickel	7.0	22.0	17.7	8.7	8.9	11.1	6.0
Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Silver	3.2	ND	ND	ND	ND	7.3	3.0
Thallium	ND	ND	ND	ND	ND	ND	10
Zinc	594	131	127	49.3	50.5	3020	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

July 27, 1987

TO: Franklin Plastics

ATTN: W. A. Moody
RECON Project No. 1126

Sample: Soil Sampled 5/26/87

RECON ID	Method Blank	B 8/1 7785	B 8/2 7786	B 9/1 7787	B 9/2 7788	B 12/1 7789	Minimum Detection Limit
	mg/kg						
Antimony	<40	<40	<40	<40	<40	<40	40
Arsenic	ND	0.8	0.7	2.0	<0.4	1.8	0.4
Beryllium	ND	ND	ND	ND	ND	ND	1.0
Cadmium	<1.0	185	59.8	<1.0	1.2	5.2	1.0
Chromium	ND	53.8	31.1	23.2	<6.0	20.6	6.0
Copper	<3.0	123	89.7	12.9	31.8	53.0	3.0
Lead	<10	1740	523	31	126	159	10
Mercury	ND	0.1	0.4	ND	0.1	0.4	0.1
Nickel	<6.0	43.5	26.5	<6.0	17.5	19.8	6.0
Selenium	ND	<0.2	<0.2	ND	<0.2	<0.2	0.2
Silver	ND	3.9	3.2	ND	<3	3.2	3.0
Thallium	ND	17	11	ND	ND	11	10
Zinc	<0.8	293	487	36.8	46.9	397	0.8

Samples for this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

APPENDIX VIIc

Soil Analysis Reports

PETROLEUM HYDROCARBONS

1126.SR 9.28.87

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 17, 1987

TO: Franklin Plastics Project

Attn: William A. Moody
RECON Project No. 1126

SAMPLE: Soil sampled 5/26/87, Kearny, New Jersey

RECON Sample No.	Sample Description (Soil)	Petroleum Hydrocarbons (mg/kg)
7785	B-8/1	20100
7786	B-8/2	2910
7787	B-9/1	105
7788	B-9/2	222
7789	B-12/1	124
7790	B-12/2	68
7791	B-13/1	5350
7792	B-13/2	3320
7793	B-7/1	188
7794	B-7/2	79
7796	B-10/1	7830
7797	B-10/2	1120
7798	B-11/1	322
7799	B-11/2	<25
7800	B-18/1	6030
7801	B-18/2	3590
7802	B-23/1	321
7803	B-23/2	123
7804	B-24/1	10400
7805	B-24/2	451

Analyzed via EPA Method 418.1, modified for solids.

Minimum Detection Limit (Soil) 25

QA/QC DATA

RECON Sample No.	Sample Type	Petroleum Hydrocarbons (mg/kg)	
7801	Soil	3590	
Duplicate	Soil	4200	15% Difference
Spike Recovery			136%

Samples from this project will be retained for sixty days from the date of this report unless otherwise directed.

Per Richard N. Schaffer, B.A.
Chemist

Submitted By
Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

N. J. State Certified Water Laboratory - Certification No. 10196

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 17, 1987

TO: Franklin Plastics Project

Attn: William A. Moody
RECON Project No. 1126

SAMPLE: Soil and Water - sampled 5/27, 28, 29, 1987

RECON Sample No.	Sample Description (Soil)		Petroleum Hydrocarbons (mg/kg)
7824	B-5/1	5/27/87	122
7825	B-5/2	5/27/87	38
7840	MW-2/1	5/28/87	222
7841	MW-2/2	5/28/87	72
7842	MW-7/1	5/28/87	18100
7843	MW-7/2	5/28/87	55
7849	B-34	5/29/87	19300
7850	MW-3/1	5/29/87	2070
7851	MW-3/2	5/29/87	735
7852	MW-1/1	5/29/87	761
7853	MW-1/2	5/29/87	4800
Minimum Detection Limit (Soil)			25
	(Water)		(mg/l)
7826	Field Blank-5/29/87		ND
Minimum Detection Limit (Water)			0.5

QA/QC DATA

RECON Sample No.	Sample Type	Petroleum Hydrocarbons (mg/kg)
7850	Soil	2070
Duplicate	Soil	2550
Spike Recovery	Soil	106%

Samples from this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Per Richard N. Schaffer, B.A.
Chemist

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 17, 1987

TO: Franklin Plastics Project

Attn: William A. Moody
RECON Project No. 1126

SAMPLE: Soil and Water - Kearny, N.J. Sampled 6/1, 6/2, 1987

RECON Sample No.	Sample Description (Soil)	Petroleum Hydrocarbons (mg/kg)
7874	MW-4/1 6/1/87	20100
7875	MW-4/2 6/1/87	11600
7876	MW-5/1 6/1/87	6040
7877	MW-5/2 6/1/87	143
7878	B-6/1 6/1/87	305
7879	B-6/2 6/1/87	286
7880	MW-6/1 6/1/87	217
7881	MW-6/2 6/2/87	301
7882	B-19 thru 22 composite	6620
7884	MW-31/2 6/2/87	1330
7885	MW-31/3 6/2/87	96
7887	MW-32/2 6/2/87	299
7888	MW-32/3 6/2/87	182
7890	MW-33/2 6/2/87	153
7891	MW-33/3 6/2/87	6240
Minimum Detection Limit (Soil)		25

	(Water)	(mg/l)
7892	Field blank 6/2/87	ND
Minimum Detection Limit (Water)		0.5

QA/QC DATA

RECON Sample No.	Sample Type	Petroleum Hydrocarbons (mg/kg)	
7876	Soil	6040	
Duplicate	Soil	5920	2.0 % Difference
Spike Recovery	Soil	93%	

Samples from this project will be retained for sixty days from the date of this report unless otherwise directed.

Richard N. Schaffer
Per Richard N. Schaffer
Chemist

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 3, 1987

TO: FRANKLIN PLASTIC PROJECT

Attn: W. A. Moody
RECON Project No. 1126

Sample: Soil, Sampled 7/9/87 Kearny, New Jersey

RECON Sample No.	Sample Description (Soil)	Petroleum Hydrocarbons (mg/kg)
8285	B-15	192
8286	B-16	298
8287	B-17	1080
Minimum Detection Limit (Soil)		25

QA/QC DATA

RECON Sample No.	Sample Type	Petroleum Hydrocarbons (mg/kg)
8286	Soil	298
Duplicate	Soil	463

Soil Spike Recovery 105%

Samples from this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Richard N. Schaffer /PAT
Per Richard N. Schaffer, B.A.
Chemist

RNS/clo

New Jersey State Certified Water Laboratory
Certification No. 10196

APPENDIX VIII

Water Analysis Reports

1126.SR 9.28.87

APPENDIX VIIIa

Water Analysis Reports

ORGANICS

1126.SR 9.28.87

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8105 MW-1

Laboratory ID: 87-008870

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by CB Approved by

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8105

Laboratory ID: 87-008870

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/L	0.05
beta-BHC	ND	µg/L	0.05
delta-BHC	ND	µg/L	0.05
gamma-BHC (Lindane)	ND	µg/L	0.05
Heptachlor	ND	µg/L	0.05
Aldrin	ND	µg/L	0.05
Heptachlor Epoxide	ND	µg/L	0.05
Endosulfan I	ND	µg/L	0.05
Dieldrin	ND	µg/L	0.05
4,4'-DDE	ND	µg/L	0.10
Endrin	ND	µg/L	0.10
Endosulfan II	ND	µg/L	0.10
4,4'-DDD	ND	µg/L	0.10
Endosulfan Sulfate	ND	µg/L	0.10
4,4'-DDT	ND	µg/L	0.10
Endrin Aldehyde	ND	µg/L	0.10
Methoxychlor	ND	µg/L	0.10
Chlordane	ND	µg/L	0.50
Toxaphene	ND	µg/L	0.50
Aroclor-1016	ND	µg/L	1.0
Aroclor-1221	ND	µg/L	0.50
Aroclor-1232	ND	µg/L	0.50
Aroclor-1242	ND	µg/L	0.50
Aroclor-1248	ND	µg/L	0.50
Aroclor-1254	ND	µg/L	0.50
Aroclor-1260	ND	µg/L	0.50

ND = Not detected.

Reported by MEF Approved by EH

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8105
Laboratory ID: 87-008870
Matrix: Aqueous
Authorized: 06/26/87
Sampled: 06/23/87
Prepared: 06/29/87
Received: 06/26/87
Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	20
1,3-Dichlorobenzene	ND	µg/L	20
1,4-Dichlorobenzene	ND	µg/L	20
1,2-Dichlorobenzene	ND	µg/L	20
bis(2-Chloroisopropyl)ether	ND	µg/L	20
N-Nitroso-di-n-propylamine	ND	µg/L	20
Hexachloroethane	ND	µg/L	20
Nitrobenzene	ND	µg/L	20
Isophorone	ND	µg/L	20
bis(2-Chloroethoxy)methane	ND	µg/L	20
1,2,4-Trichlorobenzene	ND	µg/L	20
Naphthalene	6.0*	µg/L	20
4-Chloroaniline	ND	µg/L	20
Hexachlorobutadiene	ND	µg/L	20
2-Methylnaphthalene	2.1*	µg/L	20
Hexachlorocyclopentadiene	ND	µg/L	20
2-Chloronaphthalene	ND	µg/L	20
2-Nitroaniline	ND	µg/L	20
Dimethyl phthalate	ND	µg/L	100
Acenaphthylene	ND	µg/L	20
3-Nitroaniline	ND	µg/L	20
Acenaphthene	ND	µg/L	100
Dibenzofuran	ND	µg/L	20
2,4-Dinitrotoluene	ND	µg/L	20
2,6-Dinitrotoluene	ND	µg/L	20
Diethyl phthalate	ND	µg/L	20
4-Chlorophenyl phenyl ether	ND	µg/L	20
Fluorene	ND	µg/L	20
4-Nitroaniline	ND	µg/L	20
N-Nitrosodiphenylamine	ND	µg/L	100
4-Bromophenyl phenyl ether	ND	µg/L	20

(continued on following page)

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8105
Laboratory ID: 87-008870
Matrix: Aqueous
Sampled: 06/23/87
Received: 06/26/87
Authorized: 06/26/87
Prepared: 06/29/87
Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate	ND	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate	21	µg/L	20
Chrysene	2.6*	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene)†	3.9*	µg/L	20
Benzo(k)fluoranthene)			
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

†Coeluted.

*Trace concentrations detected below the reporting limit.

NA = Not applicable.

ND = Not detected.

Reported by PD Approved by DG

Ense

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8106 MW-2

Laboratory ID: 87-008872

Matrix: Water

Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	2
1,1,1-Trichloroethane	ND	µg/L	10
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	2
Bromodichloromethane	ND	µg/L	10
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	2
Bromoform	ND	µg/L	10
4-Methyl-2-pentanone	ND	µg/L	2
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	10
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by OB Approved by Ar

Ens

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8106

Laboratory ID: 87-008872

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
al[illegible]a-BHC	ND	µg/L	0.05
[illegible]BHC	ND	µg/L	0.05
[illegible]-BHC	ND	µg/L	0.05
[illegible]-BHC (Lindane)	ND	µg/L	0.05
[illegible]chlor	ND	µg/L	0.05
[illegible]n	ND	µg/L	0.05
[illegible]chlor Epoxide	ND	µg/L	0.05
[illegible]sulfan I	ND	µg/L	0.05
[illegible]drin	ND	µg/L	0.05
4,4'-DDE	ND	µg/L	0.10
Endrin	ND	µg/L	0.10
Endosulfan II	ND	µg/L	0.10
4,4'-DDD	ND	µg/L	0.10
Endosulfan Sulfate	ND	µg/L	0.10
4,4'-DDT	ND	µg/L	0.10
Endrin Aldehyde	ND	µg/L	0.10
Methoxychlor	ND	µg/L	0.10
Chlordane	ND	µg/L	0.50
Toxaphene	ND	µg/L	0.50
Aroclor-1016	ND	µg/L	1.0
Aroclor-1221	ND	µg/L	0.50
Aroclor-1232	ND	µg/L	0.50
Aroclor-1242	ND	µg/L	0.50
Aroclor-1248	ND	µg/L	0.50
Aroclor-1254	ND	µg/L	0.50
Aroclor-1260	ND	µg/L	0.50

ND = Not detected.

Reported by MEF Approved by EH

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8106
Laboratory ID: 87-008872
Matrix: Aqueous
Sampled: 06/23/87
Received: 06/26/87
Authorized: 06/26/87
Prepared: 06/29/87
Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	20
2-Chlorophenol	ND	µg/L	20
Benzyl alcohol	ND	µg/L	20
2-Methylphenol	ND	µg/L	20
4-Methylphenol	ND	µg/L	20
2-Nitrophenol	ND	µg/L	20
2,4-Dimethylphenol	ND	µg/L	20
Benzoic Acid	ND	µg/L	20
2,4-Dichlorophenol	ND	µg/L	100
4-Chloro-3-methylphenol	ND	µg/L	20
2,4,6-Trichlorophenol	ND	µg/L	20
2,4,5-Trichlorophenol	ND	µg/L	20
2,4-Dinitrophenol	ND	µg/L	100
4-Nitrophenol	ND	µg/L	100
4,6-Dinitro-2-methylphenol	ND	µg/L	100
Pentachlorophenol	ND	µg/L	100

ND = Not detected.

Reported by PD
Approved by DG

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8106
Laboratory ID: 87-008872
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	20
1,3-Dichlorobenzene	ND	µg/L	20
1,4-Dichlorobenzene	ND	µg/L	20
1,2-Dichlorobenzene	ND	µg/L	20
bis(2-Chloroisopropyl)ether	ND	µg/L	20
N-Nitroso-di-n-propylamine	ND	µg/L	20
Hexachloroethane	ND	µg/L	20
Nitrobenzene	ND	µg/L	20
Isophorone	ND	µg/L	20
bis(2-Chloroethoxy)methane	ND	µg/L	20
1,2,4-Trichlorobenzene	ND	µg/L	20
Naphthalene	ND	µg/L	20
4-Chloroaniline	ND	µg/L	20
Hexachlorobutadiene	ND	µg/L	20
2-Methylnaphthalene	ND	µg/L	20
Hexachlorocyclopentadiene	ND	µg/L	20
2-Chloronaphthalene	ND	µg/L	20
2-Nitroaniline	ND	µg/L	20
Dimethyl phthalate	ND	µg/L	100
Acenaphthylene	ND	µg/L	20
3-Nitroaniline	ND	µg/L	20
Acenaphthene	ND	µg/L	100
Dibenzofuran	ND	µg/L	20
2,4-Dinitrotoluene	ND	µg/L	20
2,6-Dinitrotoluene	ND	µg/L	20
Diethyl phthalate	ND	µg/L	20
4-Chlorophenyl phenyl ether	ND	µg/L	20
Fluorene	ND	µg/L	20
4-Nitroaniline	ND	µg/L	20
N-Nitrosodiphenylamine	ND	µg/L	100
4-Bromophenyl phenyl ether	ND	µg/L	20

(continued on following page)

ND = Not detected.

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8106
Laboratory ID: 87-008872
Matrix: Aqueous
Authorized: 06/26/87
Sampled: 06/23/87
Prepared: 06/29/87
Received: 06/26/87
Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate	ND	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate ------	10*	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by fD Approved by bG

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8107 MW-3

Laboratory ID: 87-008873

Matrix: Water

Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	2
1,1,1-Trichloroethane	ND	µg/L	10
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	2
Bromodichloromethane	ND	µg/L	10
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	2
Bromoform	ND	µg/L	10
4-Methyl-2-pentanone	ND	µg/L	2
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	10
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by OB Approved by Ar

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8107

Laboratory ID: 87-008873

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/L	0.50
beta-BHC	ND	µg/L	0.50
delta-BHC	ND	µg/L	0.50
gamma-BHC (Lindane)	ND	µg/L	0.50
Heptachlor	ND	µg/L	0.50
Aldrin	ND	µg/L	0.50
Heptachlor Epoxide	ND	µg/L	0.50
Endosulfan I	ND	µg/L	0.50
Dieldrin	ND	µg/L	0.50
4,4'-DDE	ND	µg/L	1.0
Endrin	ND	µg/L	1.0
Endosulfan II	ND	µg/L	1.0
4,4'-DDD	ND	µg/L	1.0
Endosulfan Sulfate	ND	µg/L	1.0
4,4'-DDT	ND	µg/L	1.0
Endrin Aldehyde	ND	µg/L	1.0
Methoxychlor	ND	µg/L	1.0
Chlordane	ND	µg/L	5.0
Toxaphene	ND	µg/L	5.0
Aroclor-1016	ND	µg/L	10.0
Aroclor-1221	ND	µg/L	5.0
Aroclor-1232	ND	µg/L	5.0
Aroclor-1242	15	µg/L	5.0
Aroclor-1248	ND	µg/L	5.0
Aroclor-1254	ND	µg/L	5.0
Aroclor-1260	ND	µg/L	5.0

ND = Not detected.

Reported by MEF Approved by EK

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8107
Laboratory ID: 87-008873
Matrix: Aqueous
Sampled: 06/23/87
Received: 06/26/87
Authorized: 06/26/87
Prepared: 06/29/87
Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	20
2-Chlorophenol	ND	µg/L	20
Benzyl alcohol	ND	µg/L	20
2-Methylphenol	ND	µg/L	20
4-Methylphenol	ND	µg/L	20
2-Nitrophenol	ND	µg/L	20
2,4-Dimethylphenol	ND	µg/L	20
Benzoic Acid	ND	µg/L	20
2,4-Dichlorophenol	ND	µg/L	100
4-Chloro-3-methylphenol	ND	µg/L	20
2,4,6-Trichlorophenol	ND	µg/L	20
2,4,5-Trichlorophenol	ND	µg/L	20
2,4-Dinitrophenol	ND	µg/L	100
4-Nitrophenol	ND	µg/L	100
4,6-Dinitro-2-methylphenol	ND	µg/L	100
Pentachlorophenol ----------	16*	µg/L	100

*Trace concentration detected below the reporting limit.
ND = Not detected.

Reported by PD
Approved by DG

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8107
Laboratory ID: 87-008873
Matrix: Aqueous
Sampled: 06/23/87
Received: 06/26/87
Authorized: 06/26/87
Prepared: 06/29/87
Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	20
1,3-Dichlorobenzene	ND	µg/L	20
1,4-Dichlorobenzene	ND	µg/L	20
1,2-Dichlorobenzene	ND	µg/L	20
bis(2-Chloroisopropyl)ether	ND	µg/L	20
N-Nitroso-di-n-propylamine	ND	µg/L	20
Hexachloroethane	ND	µg/L	20
Nitrobenzene	ND	µg/L	20
Isophorone	ND	µg/L	20
bis(2-Chloroethoxy)methane	ND	µg/L	20
1,2,4-Trichlorobenzene	ND	µg/L	20
Naphthalene	ND	µg/L	20
4-Chloroaniline	ND	µg/L	20
Hexachlorobutadiene	ND	µg/L	20
2-Methylnaphthalene	ND	µg/L	20
Hexachlorocyclopentadiene	ND	µg/L	20
2-Chloronaphthalene	ND	µg/L	20
2-Nitroaniline	ND	µg/L	20
Dimethyl phthalate	ND	µg/L	100
Acenaphthylene	ND	µg/L	20
3-Nitroaniline	ND	µg/L	20
Acenaphthene	ND	µg/L	100
Dibenzofuran	ND	µg/L	20
2,4-Dinitrotoluene	ND	µg/L	20
2,6-Dinitrotoluene	ND	µg/L	20
Diethyl phthalate	ND	µg/L	20
4-Chlorophenyl phenyl ether	ND	µg/L	20
Fluorene	ND	µg/L	20
4-Nitroaniline	ND	µg/L	20
N-Nitrosodiphenylamine	ND	µg/L	100
4-Bromophenyl phenyl ether	ND	µg/L	20

(continued on following page)

ND = Not detected.

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8107
Laboratory ID: 87-008873
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate	ND	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate ------	20	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

ND = Not detected.

Reported by PD Approved by DG

Ensec

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8108 MW-4

Laboratory ID: 87-008874

Matrix: Water Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 07/01/87 Analyzed: 07/01/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by CB Approved by Sm/gc

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8108

Laboratory ID: 87-008874

Matrix: Water Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/L	0.05
beta-BHC	ND	µg/L	0.05
delta-BHC	ND	µg/L	0.05
gamma-BHC (Lindane)	ND	µg/L	0.05
Heptachlor	ND	µg/L	0.05
Aldrin	ND	µg/L	0.05
Heptachlor Epoxide	ND	µg/L	0.05
Endosulfan I	ND	µg/L	0.05
Dieldrin	ND	µg/L	0.05
4,4'-DDE	ND	µg/L	0.10
Endrin	ND	µg/L	0.10
Endosulfan II	ND	µg/L	0.10
4,4'-DDD	ND	µg/L	0.10
Endosulfan Sulfate	ND	µg/L	0.10
4,4'-DDT	ND	µg/L	0.10
Endrin Aldehyde	ND	µg/L	0.10
Methoxychlor	ND	µg/L	0.10
Chlordane	ND	µg/L	0.50
Toxaphene	ND	µg/L	0.50
Aroclor-1016	ND	µg/L	1.0
Aroclor-1221	ND	µg/L	0.50
Aroclor-1232	ND	µg/L	0.50
Aroclor-1242	ND	µg/L	0.50
Aroclor-1248	ND	µg/L	0.50
Aroclor-1254	ND	µg/L	0.50
Aroclor-1260	ND	µg/L	0.50

ND = Not detected.

Reported by MEF Approved by EK

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8108
Laboratory ID: 87-008874
Matrix: Aqueous
Authorized: 06/26/87
Sampled: 06/24/87
Prepared: 06/29/87
Received: 06/26/87
Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	20
2-Chlorophenol	ND	µg/L	20
Benzyl alcohol	ND	µg/L	20
2-Methylphenol	ND	µg/L	20
4-Methylphenol	ND	µg/L	20
2-Nitrophenol	ND	µg/L	20
2,4-Dimethylphenol	ND	µg/L	20
Benzoic Acid	ND	µg/L	100
2,4-Dichlorophenol	ND	µg/L	20
4-Chloro-3-methylphenol	ND	µg/L	20
2,4,6-Trichlorophenol	ND	µg/L	20
2,4,5-Trichlorophenol	ND	µg/L	100
2,4-Dinitrophenol	ND	µg/L	100
4-Nitrophenol	ND	µg/L	100
4,6-Dinitro-2-methylphenol	ND	µg/L	100
Pentachlorophenol ----------	14*	µg/L	100

*Trace concentration detected below the reporting limit.
ND = Not detected.

Reported by DG Approved by PD

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8108
Laboratory ID: 87-008874
Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	20
1,3-Dichlorobenzene	ND	µg/L	20
1,4-Dichlorobenzene	ND	µg/L	20
1,2-Dichlorobenzene	ND	µg/L	20
bis(2-Chloroisopropyl)ether	ND	µg/L	20
N-Nitroso-di-n-propylamine	ND	µg/L	20
Hexachloroethane	ND	µg/L	20
Nitrobenzene	ND	µg/L	20
Isophorone	ND	µg/L	20
bis(2-Chloroethoxy)methane	ND	µg/L	20
1,2,4-Trichlorobenzene	ND	µg/L	20
Naphthalene	ND	µg/L	20
4-Chloroaniline	ND	µg/L	20
Hexachlorobutadiene	ND	µg/L	20
2-Methylnaphthalene	ND	µg/L	20
Hexachlorocyclopentadiene	ND	µg/L	20
2-Chloronaphthalene	ND	µg/L	20
2-Nitroaniline	ND	µg/L	20
Dimethyl phthalate	ND	µg/L	100
Acenaphthylene	ND	µg/L	20
3-Nitroaniline	ND	µg/L	20
Acenaphthene	6.1*	µg/L	100
Dibenzofuran	ND	µg/L	20
2,4-Dinitrotoluene	ND	µg/L	20
2,6-Dinitrotoluene	ND	µg/L	20
Diethyl phthalate	ND	µg/L	20
4-Chlorophenyl phenyl ether	ND	µg/L	20
Fluorene	3.2*	µg/L	20
4-Nitroaniline	ND	µg/L	100
N-Nitrosodiphenylamine	ND	µg/L	20
4-Bromophenyl phenyl ether	ND	µg/L	20

(continued on following page)

*Trace concentrations detected below the reporting limit.

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8108

Laboratory ID: 87-008874

Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate	ND	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate -----	130	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

ND = Not detected.

Reported by DG Approved by PD

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8109 MW-5

Laboratory ID: 87-008875

Matrix: Water Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 07/01/87 Analyzed: 07/01/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane ----------	13	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by CB Approved by Am / SC

Ense

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8109

Laboratory ID: 87-008875

Matrix: Water Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/L	0.05
beta-BHC	ND	µg/L	0.05
delta-BHC	ND	µg/L	0.05
gamma-BHC (Lindane)	ND	µg/L	0.05
Heptachlor	ND	µg/L	0.05
Aldrin	ND	µg/L	0.05
Heptachlor Epoxide	ND	µg/L	0.05
Endosulfan I	ND	µg/L	0.05
Dieldrin	ND	µg/L	0.10
4,4'-DDE	ND	µg/L	0.10
Endrin	ND	µg/L	0.10
Endosulfan II	ND	µg/L	0.10
4,4'-DDD	ND	µg/L	0.10
Endosulfan Sulfate	ND	µg/L	0.10
4,4'-DDT	ND	µg/L	0.10
Endrin Aldehyde	ND	µg/L	0.10
Methoxychlor	ND	µg/L	0.50
Chlordane	ND	µg/L	0.50
Toxaphene	ND	µg/L	1.0
Aroclor-1016	ND	µg/L	0.50
Aroclor-1221	ND	µg/L	0.50
Aroclor-1232	ND	µg/L	0.50
Aroclor-1242	ND	µg/L	0.50
Aroclor-1248	ND	µg/L	0.50
Aroclor-1254	ND	µg/L	0.50
Aroclor-1260	ND	µg/L	0.50

ND = Not detected.

Reported by MEF Approved by EK

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8109

Laboratory ID: 87-008875

Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	20
2-Chlorophenol	ND	µg/L	20
Benzyl alcohol	ND	µg/L	20
2-Methylphenol	ND	µg/L	20
4-Methylphenol	ND	µg/L	20
2-Nitrophenol	ND	µg/L	20
2,4-Dimethylphenol	ND	µg/L	20
Benzoic Acid	ND	µg/L	100
2,4-Dichlorophenol	ND	µg/L	20
4-Chloro-3-methylphenol	ND	µg/L	20
2,4,6-Trichlorophenol	ND	µg/L	20
2,4,5-Trichlorophenol	ND	µg/L	100
2,4-Dinitrophenol	ND	µg/L	100
4-Nitrophenol	ND	µg/L	100
4,6-Dinitro-2-methylphenol	ND	µg/L	100
Pentachlorophenol	ND	µg/L	100

ND = Not detected.

Reported by DG Approved by FD

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8109
Laboratory ID: 87-008875
Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	20
1,3-Dichlorobenzene	ND	µg/L	20
1,4-Dichlorobenzene	ND	µg/L	20
1,2-Dichlorobenzene	ND	µg/L	20
bis(2-Chloroisopropyl)ether	ND	µg/L	20
N-Nitroso-di-n-propylamine	ND	µg/L	20
Hexachloroethane	ND	µg/L	20
Nitrobenzene	ND	µg/L	20
Isophorone	ND	µg/L	20
bis(2-Chloroethoxy)methane	ND	µg/L	20
1,2,4-Trichlorobenzene	ND	µg/L	20
Naphthalene	ND	µg/L	20
4-Chloroaniline	ND	µg/L	20
Hexachlorobutadiene	ND	µg/L	20
2-Methylnaphthalene	ND	µg/L	20
Hexachlorocyclopentadiene	ND	µg/L	20
2-Chloronaphthalene	ND	µg/L	20
2-Nitroaniline	ND	µg/L	20
Dimethyl phthalate	ND	µg/L	100
Acenaphthylene	ND	µg/L	20
3-Nitroaniline	ND	µg/L	20
Acenaphthene	ND	µg/L	100
Dibenzofuran	ND	µg/L	20
2,4-Dinitrotoluene	ND	µg/L	20
2,6-Dinitrotoluene	ND	µg/L	20
Diethyl phthalate	ND	µg/L	20
4-Chlorophenyl phenyl ether	ND	µg/L	20
Fluorene	ND	µg/L	20
4-Nitroaniline	ND	µg/L	20
N-Nitrosodiphenylamine	ND	µg/L	100
4-Bromophenyl phenyl ether	ND	µg/L	20

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8109
Laboratory ID: 87-008875
Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate ----------	2.1*	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	40
Benzo(a)anthracene	ND	µg/L	20
bis(2-Ethylhexyl)phthalate ------	32	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by DG Approved by RD

Ensec

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8110 MW-6

Laboratory ID: 87-008876

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 06/30/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by CB Approved by

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8110

Laboratory ID: 87-008876

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/L	0.05
beta-BHC	ND	µg/L	0.05
delta-BHC	ND	µg/L	0.05
gamma-BHC (Lindane)	ND	µg/L	0.05
Heptachlor	ND	µg/L	0.05
Aldrin	ND	µg/L	0.05
Heptachlor Epoxide	ND	µg/L	0.05
Endosulfan I	ND	µg/L	0.05
Dieldrin	ND	µg/L	0.05
4,4'-DDE	ND	µg/L	0.10
Endrin	ND	µg/L	0.10
Endosulfan II	ND	µg/L	0.10
4,4'-DDD	ND	µg/L	0.10
Endosulfan Sulfate	ND	µg/L	0.10
4,4'-DDT	ND	µg/L	0.10
Endrin Aldehyde	ND	µg/L	0.10
Methoxychlor	ND	µg/L	0.10
Chlordane	ND	µg/L	0.50
Toxaphene	ND	µg/L	0.50
Aroclor-1016	ND	µg/L	1.0
Aroclor-1221	ND	µg/L	0.50
Aroclor-1232	ND	µg/L	0.50
Aroclor-1242	ND	µg/L	0.50
Aroclor-1248	ND	µg/L	0.50
Aroclor-1254	ND	µg/L	0.50
Aroclor-1260	ND	µg/L	0.50

ND = Not detected.

Reported by MEF Approved by EH

608

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8110
Laboratory ID: 87-008876
Matrix: Aqueous
Sampled: 06/23/87
Received: 06/26/87
Authorized: 06/26/87
Prepared: 06/29/87
Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	20
2-Chlorophenol	ND	µg/L	20
Benzyl alcohol	ND	µg/L	20
2-Methylphenol	ND	µg/L	20
4-Methylphenol	ND	µg/L	20
2-Nitrophenol	ND	µg/L	20
2,4-Dimethylphenol	ND	µg/L	20
Benzoic Acid	ND	µg/L	100
2,4-Dichlorophenol	ND	µg/L	20
4-Chloro-3-methylphenol	ND	µg/L	20
2,4,6-Trichlorophenol	ND	µg/L	20
2,4,5-Trichlorophenol	ND	µg/L	100
2,4-Dinitrophenol	ND	µg/L	100
4-Nitrophenol	ND	µg/L	100
4,6-Dinitro-2-methylphenol	ND	µg/L	100
Pentachlorophenol	ND	µg/L	100

ND = Not detected.

Reported by DG Approved by PD

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8110
Laboratory ID: 87-008876
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	20
1,3-Dichlorobenzene	ND	µg/L	20
1,4-Dichlorobenzene	ND	µg/L	20
1,2-Dichlorobenzene	ND	µg/L	20
bis(2-Chloroisopropyl)ether	ND	µg/L	20
N-Nitroso-di-n-propylamine	ND	µg/L	20
Hexachloroethane	ND	µg/L	20
Nitrobenzene	ND	µg/L	20
Isophorone	ND	µg/L	20
bis(2-Chloroethoxy)methane	ND	µg/L	20
1,2,4-Trichlorobenzene	ND	µg/L	20
Naphthalene	ND	µg/L	20
4-Chloroaniline	ND	µg/L	20
Hexachlorobutadiene	ND	µg/L	20
2-Methylnaphthalene	ND	µg/L	20
Hexachlorocyclopentadiene	ND	µg/L	20
2-Chloronaphthalene	ND	µg/L	20
2-Nitroaniline	ND	µg/L	20
Dimethyl phthalate	ND	µg/L	100
Acenaphthylene	ND	µg/L	20
3-Nitroaniline	ND	µg/L	20
Acenaphthene	ND	µg/L	100
Dibenzofuran	ND	µg/L	20
2,4-Dinitrotoluene	ND	µg/L	20
2,6-Dinitrotoluene	ND	µg/L	20
Diethyl phthalate	ND	µg/L	20
4-Chlorophenyl phenyl ether	ND	µg/L	20
Fluorene	ND	µg/L	20
4-Nitroaniline	ND	µg/L	20
N-Nitrosodiphenylamine	ND	µg/L	100
4-Bromophenyl phenyl ether	ND	µg/L	20

(continued on following page)

ND = Not detected.

Ensec

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8110
Laboratory ID: 87-008876
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate	ND	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate ------	11*	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by DG Approved by PD

Enseco

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: RECON Systems, Inc.

Client ID: 8111 MW-7

Laboratory ID: 87-008877

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 06/29/87

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	50
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by CB Approved by [signature]

612

Ensec

PRIORITY POLLUTANT ORGANOCHLORINE PESTICIDES/PCBs

EPA Method 608

Client Name: RECON Systems, Inc.

Client ID: 8111

Laboratory ID: 87-008877

Matrix: Water Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/26/87

Parameter	Result	Units	Reporting Limit
alpha-BHC	ND	µg/L	0.05
beta-BHC	ND	µg/L	0.05
delta-BHC	ND	µg/L	0.05
gamma-BHC (Lindane)	ND	µg/L	0.05
Heptachlor	ND	µg/L	0.05
Aldrin	ND	µg/L	0.05
Heptachlor Epoxide	ND	µg/L	0.05
Endosulfan I	ND	µg/L	0.05
Dieldrin	ND	µg/L	0.10
4,4'-DDE	ND	µg/L	0.10
Endrin	ND	µg/L	0.10
Endosulfan II	ND	µg/L	0.10
4,4'-DDD	ND	µg/L	0.10
Endosulfan Sulfate	ND	µg/L	0.10
4,4'-DDT	ND	µg/L	0.10
Endrin Aldehyde	ND	µg/L	0.10
Methoxychlor	ND	µg/L	0.50
Chlordane	ND	µg/L	0.50
Toxaphene	ND	µg/L	1.0
Aroclor-1016	ND	µg/L	0.50
Aroclor-1221	ND	µg/L	0.50
Aroclor-1232	ND	µg/L	0.50
Aroclor-1242	ND	µg/L	0.50
Aroclor-1248	ND	µg/L	0.50
Aroclor-1254	ND	µg/L	0.50
Aroclor-1260	ND	µg/L	0.50

ND = Not detected.

Reported by MEF Approved by EK

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8111
Laboratory ID: 87-008877
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	33
2-Chlorophenol	ND	µg/L	33
Benzyl alcohol	ND	µg/L	33
2-Methylphenol	ND	µg/L	33
4-Methylphenol	ND	µg/L	33
2-Nitrophenol	ND	µg/L	33
2,4-Dimethylphenol	ND	µg/L	33
Benzoic Acid	ND	µg/L	170
2,4-Dichlorophenol	ND	µg/L	33
4-Chloro-3-methylphenol	ND	µg/L	33
2,4,6-Trichlorophenol	ND	µg/L	33
2,4,5-Trichlorophenol	ND	µg/L	170
2,4-Dinitrophenol	ND	µg/L	170
4-Nitrophenol	ND	µg/L	170
4,6-Dinitro-2-methylphenol	ND	µg/L	170
Pentachlorophenol	ND	µg/L	170

ND = Not detected.

Reported by NG Approved by PD

Ense

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8111
Laboratory ID: 87-008877
Matrix: Aqueous
Authorized: 06/26/87
Sampled: 06/23/87
Prepared: 06/29/87
Received: 06/26/87
Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
bis(2-Chloroethyl)ether	ND	µg/L	33
1,3-Dichlorobenzene	ND	µg/L	33
1,4-Dichlorobenzene	ND	µg/L	33
1,2-Dichlorobenzene	ND	µg/L	33
bis(2-Chloroisopropyl)ether	ND	µg/L	33
N-Nitroso-di-n-propylamine	ND	µg/L	33
Hexachloroethane	ND	µg/L	33
Nitrobenzene	ND	µg/L	33
Isophorone	ND	µg/L	33
bis(2-Chloroethoxy)methane	ND	µg/L	33
1,2,4-Trichlorobenzene	ND	µg/L	33
Naphthalene	ND	µg/L	33
4-Chloroaniline	ND	µg/L	33
Hexachlorobutadiene	ND	µg/L	33
2-Methylnaphthalene	ND	µg/L	33
Hexachlorocyclopentadiene	ND	µg/L	33
2-Chloronaphthalene	ND	µg/L	33
2-Nitroaniline	ND	µg/L	33
Dimethyl phthalate	ND	µg/L	170
Acenaphthylene	ND	µg/L	33
3-Nitroaniline	ND	µg/L	33
Acenaphthene	ND	µg/L	170
Dibenzofuran	ND	µg/L	33
2,4-Dinitrotoluene	ND	µg/L	33
2,6-Dinitrotoluene	ND	µg/L	33
Diethyl phthalate	ND	µg/L	33
4-Chlorophenyl phenyl ether	ND	µg/L	33
Fluorene	ND	µg/L	33
4-Nitroaniline	ND	µg/L	170
N-Nitrosodiphenylamine	ND	µg/L	33
4-Bromophenyl phenyl ether	ND	µg/L	33

(continued on following page)

ND = Not detected.

Enseco

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8111
Laboratory ID: 87-008877
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	33
Phenanthrene	ND	µg/L	33
Anthracene	ND	µg/L	33
Di-n-butyl phthalate	ND	µg/L	33
Fluoranthene	ND	µg/L	33
Pyrene	ND	µg/L	33
Butyl benzyl phthalate	ND	µg/L	33
3,3'-Dichlorobenzidine	ND	µg/L	33
Benzo(a)anthracene	ND	µg/L	67
bis(2-Ethylhexyl)phthalate ------	12*	µg/L	33
Chrysene	ND	µg/L	33
Di-n-octyl phthalate	ND	µg/L	33
Benzo(b)fluoranthene	ND	µg/L	33
Benzo(k)fluoranthene	ND	µg/L	33
Benzo(a)pyrene	ND	µg/L	33
Indeno(1,2,3-c,d)pyrene	ND	µg/L	33
Dibenzo(a,h)anthracene	ND	µg/L	33
Benzo(g,h,i)perylene	ND	µg/L	33

*Trace concentrations detected below the reporting limit.
ND = Not detected.

Reported by DG Approved by AD

616

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS

EPA Method 625/A/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8112 FIELD BLANK
Laboratory ID: 87-008886
Matrix: Aqueous
Sampled: 06/23/87
Received: 06/26/87
Authorized: 06/26/87
Prepared: 06/29/87
Analyzed: 07/20/87

Parameter	Result	Units	Reporting Limit
Phenol	ND	µg/L	20
2-Chlorophenol	ND	µg/L	20
Benzyl alcohol	ND	µg/L	20
2-Methylphenol	ND	µg/L	20
4-Methylphenol	ND	µg/L	20
2-Nitrophenol	ND	µg/L	20
2,4-Dimethylphenol	ND	µg/L	20
Benzoic Acid	ND	µg/L	100
2,4-Dichlorophenol	ND	µg/L	20
4-Chloro-3-methylphenol	ND	µg/L	20
2,4,6-Trichlorophenol	ND	µg/L	20
2,4,5-Trichlorophenol	ND	µg/L	100
2,4-Dinitrophenol	ND	µg/L	100
4-Nitrophenol	ND	µg/L	100
4,6-Dinitro-2-methylphenol	ND	µg/L	100
Pentachlorophenol	ND	µg/L	100

ND = Not detected.

Reported by NG Approved by FD

617

Ens

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.
Client ID: 8112
Laboratory ID: 87-008886
Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87
Authorized: 06/26/87 Prepared: 06/29/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate	ND	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate ------	22	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

ND = Not detected.

Reported by DG Approved by PD

618

HAZARDOUS SUBSTANCE LIST (HSL)
SEMIVOLATILE ORGANICS (CONT.)

EPA Method 625/BN/HSL List

Client Name: RECON Systems, Inc.

Client ID: Erco Blank

Laboratory ID: 87-008870B

Matrix: Aqueous Sampled: NA Received: NA

Authorized: NA Prepared: 06/29/87 Analyzed: 07/15/87

Parameter	Result	Units	Reporting Limit
Hexachlorobenzene	ND	µg/L	20
Phenanthrene	ND	µg/L	20
Anthracene	ND	µg/L	20
Di-n-butyl phthalate ----------	3.8*	µg/L	20
Fluoranthene	ND	µg/L	20
Pyrene	ND	µg/L	20
Butyl benzyl phthalate	ND	µg/L	20
3,3'-Dichlorobenzidine	ND	µg/L	20
Benzo(a)anthracene	ND	µg/L	40
bis(2-Ethylhexyl)phthalate ------	65	µg/L	20
Chrysene	ND	µg/L	20
Di-n-octyl phthalate	ND	µg/L	20
Benzo(b)fluoranthene	ND	µg/L	20
Benzo(k)fluoranthene	ND	µg/L	20
Benzo(a)pyrene	ND	µg/L	20
Indeno(1,2,3-c,d)pyrene	ND	µg/L	20
Dibenzo(a,h)anthracene	ND	µg/L	20
Benzo(g,h,i)perylene	ND	µg/L	20

*Trace concentrations detected below the reporting limit.

NA = Not applicable.

ND = Not detected.

Reported by DG Approved by PD

APPENDIX VIIIb

Water Analysis Reports

METALS, CYANIDE, PHENOLS

1126.SR 9.28.87

Enseco

CLIENT: RECON Systems, Inc.

SAMPLE RECEIVED: 06/26/87

ANALYSIS COMPLETED: 07/02/87

RESULTS IN: mg/L (ppm)*

REPORTED BY: MD

CHECKED BY: SD | CTM

INORGANIC ANALYSIS

AQUEOUS

- Data Report -

Erco ID	Client ID	Cyanide, Total	Phenolics, Total
87-008870	8105 MW 1	<0.010	<0.010
87-008872	8106 MW 2	<0.010	<0.010
87-008873	8107 MW 3	<0.010	<0.010
87-008874	8108 MW 4	0.015	0.011
87-008875	8109 MW 5	<0.010	<0.010
87-008876	8110 MW 6	<0.010	<0.010
87-008877	8111 MW 7	<0.010	<0.010
87-008878	8111 Spike	103%	101%
87-008885	8111 Spike Dup.	106%	104%
87-008886	8112 FIELD BLNK	<0.010	<0.010
87-008887	Erco Blank	<0.010	<0.010
Erco Blank Spike		106%	97%
Erco Blank Spike Dup.		104%	98%
Method Used:		335.3	420.2

If customer has any questions regarding analysis, refer to sample in question by its ERCO ID#.

*Unless otherwise indicated.

Enseco

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008105 mw-1

Laboratory ID: 87-008870

Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	ND	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	ND	mg/L	0.02	200.7
Lead	0.021	mg/L	0.01	239.2
Mercury	ND	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	0.12	mg/L	0.05	200.7

ND = Not detected.

Reported by LAS Approved by [illegible]

Enseco

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008106 MW-2

Laboratory ID: 87-008872

Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	ND	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	ND	mg/L	0.02	200.7
Lead	0.013	mg/L	0.01	239.2
Mercury	ND	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	ND	mg/L	0.05	200.7

ND = Not detected.

Reported by LAS Approved by CMC

Enseco

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008107 MW-3

Laboratory ID: 87-008873

Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	ND	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	ND	mg/L	0.02	200.7
Lead	0.034	mg/L	0.01	239.2
Mercury	0.0003	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	ND	mg/L	0.05	200.7

ND = Not detected.

Reported by WAS Approved by CAIL

Enseco

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008108 mw-4

Laboratory ID: 87-008874

Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	ND	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	ND	mg/L	0.02	200.7
Lead	ND	mg/L	0.01	239.2
Mercury	ND	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	ND	mg/L	0.05	200.7

ND = Not detected.

Reported by LAS Approved by CAL

625

Enseco

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008109 MW-5

Laboratory ID: 87-008875

Matrix: Aqueous Sampled: 06/24/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	0.012	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	0.36	mg/L	0.02	200.7
Lead	0.083	mg/L	0.01	239.2
Mercury	ND	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	0.28	mg/L	0.05	200.7

ND = Not detected.

Reported by VAS Approved by CAL

626

Enseco

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008110 MW-6

Laboratory ID: 87-008876

Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	ND	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	ND	mg/L	0.02	200.7
Lead	ND	mg/L	0.01	239.2
Mercury	ND	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	ND	mg/L	0.05	200.7

ND = Not detected.

Reported by LAS Approved by CAK

bet

Ensecc

PRIORITY POLLUTANT METALS

Client Name: RECON Systems, Inc.

Client ID: 87-008111 mw-7

Laboratory ID: 87-008877

Matrix: Aqueous Sampled: 06/23/87 Received: 06/26/87

Authorized: 06/26/87 Prepared: 06/30/87 Analyzed: 07/16/87

Parameter	Result	Units	Reporting Limit	Analytical Method
Antimony	ND	mg/L	0.05	200.7
Arsenic	0.0053	mg/L	0.005	206.2
Beryllium	ND	mg/L	0.001	200.7
Cadmium	ND	mg/L	0.005	200.7
Chromium	ND	mg/L	0.01	200.7
Copper	ND	mg/L	0.02	200.7
Lead	0.016	mg/L	0.01	239.2
Mercury	ND	mg/L	0.0002	245.1
Nickel	ND	mg/L	0.04	200.7
Selenium	ND	mg/L	0.005	270.2
Silver	ND	mg/L	0.005	200.7
Thallium	ND	mg/L	0.01	279.2
Zinc	ND	mg/L	0.05	200.7

ND = Not detected.

Reported by AS Approved by CAC

APPENDIX VIIIc

Water Analysis Reports

PETROLEUM HYDROCARBONS

1126.SR 9.28.87

RECON SYSTEMS INC.

ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

ANALYSIS REPORT

August 14, 1987

TO: Franklin Plastics

Attn: William A. Moody
RECON Project No. 1126

SAMPLE: Water-sampled 6/24, 6/25, 1987

RECON Sample No.	Sample Description (Water)	Petroleum Hydrocarbons (mg/l)
8105	MW-1	7.4
8106	MW-2	2.4
8107	MW-3	<0.5
8108	MW-4	2.5
8109	MW-5	0.8
8110	MW-6	<0.5
8111	MW-7	ND

Minimum Detection Limit (Water) 0.5

Samples from this project will be retained for sixty days from the date of this report unless otherwise directed.

Submitted By

Norman J. Weinstein, Ph.D., P.E.
Laboratory Manager

Per Wayne K. Halozan, B.A.
Chemist

WKH/ak

New Jersey State Certified Water Laboratory
Certification No. 10196

Attachment: Chain-of-custody and lab data

630

RECON SYSTEMS, INC.
ROUTE 202N, BOX 460, THREE BRIDGES, NJ 08887
201-782-5900

SAMPLE RECORD FORM FOR CHAIN-OF-CUSTODY/REQUEST FOR ANALYSIS
(Use one form for each sample) PROJECT MANAGER ~~SEL~~ WAM

SAMPLE NO. 8105 - 8113, ~~8125~~ ANALYTICAL RESULTS TO BE REPORTED TO: ~~SEL~~ PAT

SAMPLE LOCATION Franklin Plastics RECON JOB NO. 1126

SAMPLE DESCRIP MW-1-7, Field blank (2) SAMPLING DATE/TIME mw-1 16:40 mw-3 1405 mw-4 1330 mw-2 1050 mw-5 1415

CONTAINER DESCRIP 2ea 40ml, 1ea gal, 1ea 500ml plastic 1ea Liter, 1ea 250ml SAMPLED BY: SEL/Gim

Relinquished By Person/Organ. (Signature)	Received By Person/Organ/ Date/Time (Signature)	Sample Description and Preservative	Analysis Requested	Analysis Performed By Person/Lab	Date/Time Analysis Performed	Date Results Reported
29/9M		WATER H_2SO_4	Pet. H.C.	SL/R	7-28	7-29
			conductivity	mw1	6/24/87	~~[illegible]~~ 724
				GSH mw2	6/25	690
				GSH mw3	6/25	465
				GSH mw4	6/25	995
				GSH mw5	6/25	780
				GSH mw6	6/25	515
				GSH mw7	6/24/87	~~[illegible]~~ 207
		4°C	624+15			
		4°C	625A+10			
		4°C	625B+15	ER		
		4°C	608	CO		
		H_2SO_4	phenols			
		"	cyanide			
		HNO_3	ppmetal			

MAKE ADDITIONAL COMMENTS/NOTES

RUSH WORK Yes ☐ No ☐

EMERGENCY WORK Yes ☐ No ☐

COPIES OF THIS FORM MUST BE ATTACHED TO EACH LABORATORY REPORT.

L-37A (CP8)

SUMMARY OF PETROLEUM HYDROCARBON in WATER RESULTS

SAMPLE ID	SAMPLE #	FINAL CONCENTRATION (mg/l)	
MW-1	8105	7.4	0
MW-2	8106	2.4	0
MW-3	8107	0.5	NA
MW-4	8108	2.5	0
MW-5	8109	0.8	0
MW-6	8110	0.5	NA

RECON SYSTEMS INC
THREE BRIDGES, NJ

Client: FRANKLIN PLASTICS
Job Number: 1126

PETROLEUM HYDROCARBONS IN WATER
Sample Location: KEARNY, NJ
Sample Date: JUNE 24,25, 1987

Report Date: 28-Jul-87

Samples Run: 6

All samples analyzed by
EPA Method 418.1

SPIKE RECOVERY-

Analyst: WKH, SL

Notebook pp. IR #2 pg. 10,12

632

SUMMARY OF PETROLEUM HYDROCARBON in WATER RESULTS

SAMPLE ID	SAMPLE #	FINAL CONCENTRATION (mg/l)		
1126 MW-7	8111	0.5	ND	NA
1258 Stream at R/R Culvert	8374	2.3		0
1258 Stream at Pacific Ave	8375	0.5	ND	NA
				NA
				NA
				NA
				NA
				NA
				NA

RECON SYSTEMS INC
THREE BRIDGES, NJ

Client: VARIOUS
Job Number: VARIOUS

PETROLEUM HYDROCARBONS IN WATER
Sample Location: VARIOUS
Sample Date: VARIOUS

Report Date: 29-Jul-87

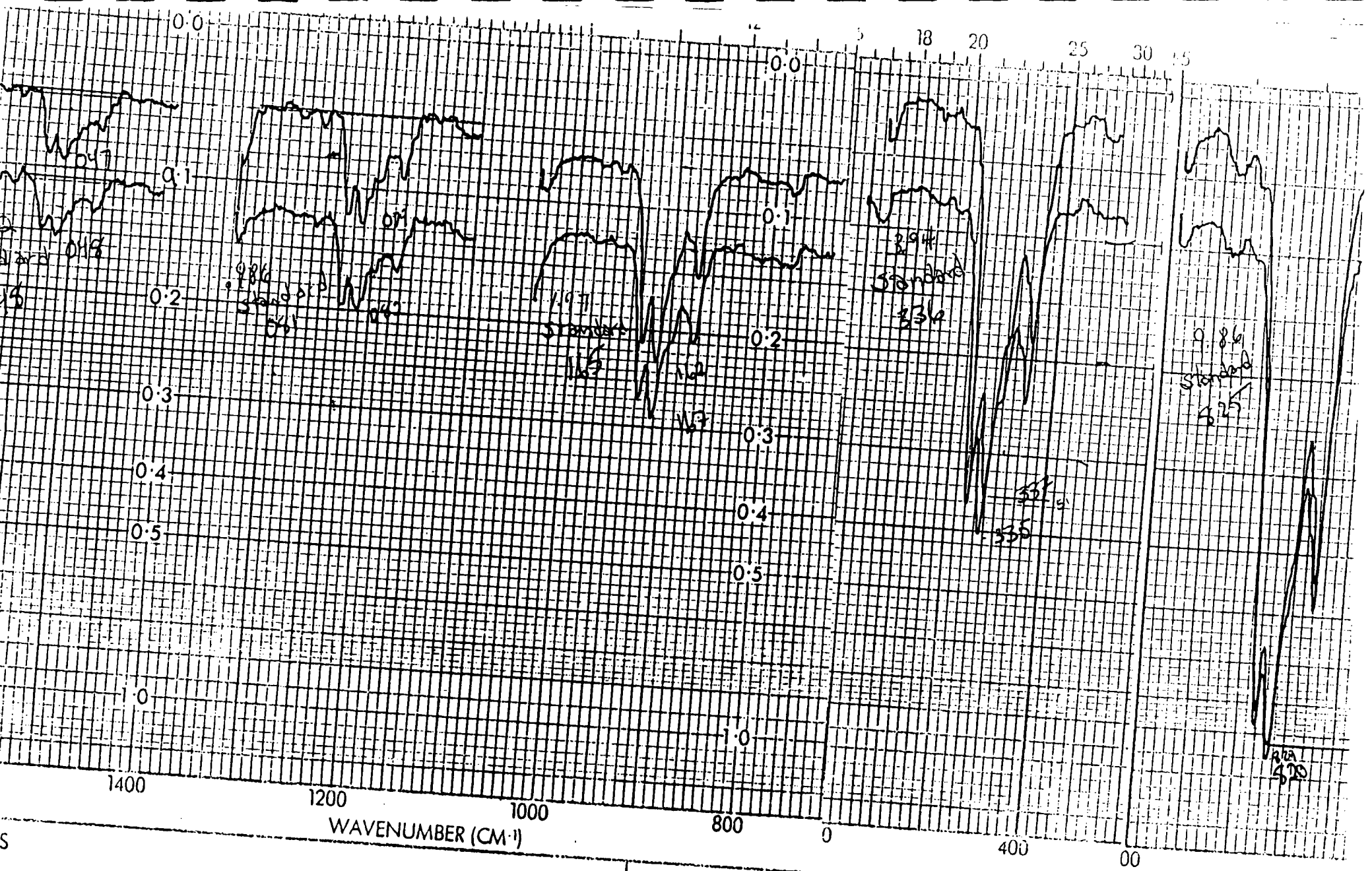
Samples Run: 9

All samples analyzed by
EPA Method 418.1

SPIKE RECOVERY-

Analyst: WKH, SL

Notebook pp. IR #2 pg. 13,14



SCAN MODE_____
SLIT_____TIME CONS_____
RECORDING
GRAPHIC CONTROLS CO
BUFFALO, NEW
No. PR 5100

OPERATOR_____
DATE_____
REF No._____

SAMPLE
ORIGIN_____

REFERENCE NO. 14

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO.:	DATE:	TIME:
02-9002-24	07/24/90	0945

DISTRIBUTION:

Franklin Plastics Corp.

BETWEEN:	OF:	PHONE:
Andrew Dillman	ECRA - Enforcement Branch	(609) 633-7141

AND: K. Campbell (NUS)

DISCUSSION:

Discussed current status of Franklin Plastics in regards to ECRA actions. Franklin is currently in the process of implementing the second phase of sampling. This includes the installation of 3 deep production wells and approximately six additional borings. Rscon Systems has been retained to perform the sampling. Mr. Dillman expects a report, including the data, on or by August 22nd, 1990. The report of data should include a clean-up plan unless something unusual appears in the data that would warrant additional sampling.

Mr. Dillman requested our EPA representative's address to have a copy of the completed report.

ACTION ITEMS:

K. Campbell 07/24/90

NUS 067 REVISED 0685

631