ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

Waste Samples

ATTN: MARK DOUGLAS

INVOICE # 31729 SEMIVOLATILE ORGANIC COMPOUNDS
PROJECT # 8168 - SAUGET, METHOD SW-846 8270
SITE G PAGE ONE

SAMPLE ID: METHOD BLANK
LAB ID: SASBLK6242

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
62-75-9	N-Nitrosodimethylamine	10 mg/kg	U mg/kg
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	o-Cresol	10	U
39638-32-9	bis-(2-Chloro2propyl)Ether	10	U
106-44-5	m & p-Cresol	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	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
103-33-3	Azobenzene	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U

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RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729 **SEMIVOLATILE ORGANIC COMPOUNDS**
PROJECT # 8168 - SAUGET **METHOD SW-846 8270**
SITE G **PAGE TWO**

SAMPLE ID: METHOD BLANK
LAB ID: SASBLK6242

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
100-02-7	4-Nitrophenol	50 mg/kg	U mg/kg
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenol phenyl ether	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	10	U
101-55-3	4-Bromophenyl phenyl ether	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	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
92-87-4	Benzidine	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	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	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	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

MAY 1, 1995

DATE COLLECTED : ---
DATE RECEIVED : ---
DATE EXTRACTED : 4/18/95
DATE ANALYZED : 4/21/95
ANALYST : D.C.

WAYNE L. COOPER Ph.D
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729 SEMIVOLATILE ORGANIC COMPOUNDS
PROJECT # 8168 - SAUGET, METHOD SW-846 8270
SITE G PAGE ONE

SAMPLE ID: METHOD BLANK
LAB ID: SASBLK6255

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
62-75-9	N-Nitrosodimethylamine	10 mg/kg	U mg/kg
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	o-Cresol	10	U
39638-32-9	bis-(2-Chloro2propyl)Ether	10	U
106-44-5	m & p-Cresol	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	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
103-33-3	Azobenzene	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729 **SEMIVOLATILE ORGANIC COMPOUNDS**
PROJECT # 8168 - SAUGET **METHOD SW-846 8270**
SITE G **PAGE TWO**

SAMPLE ID: METHOD BLANK
LAB ID: SASBLK6255

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
100-02-7	4-Nitrophenol	50 mg/kg	U mg/kg
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenol phenyl ether	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	10	U
101-55-3	4-Bromophenyl phenyl ether	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	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
92-87-4	Benzidine	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	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	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	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

MAY 1, 1995

DATE COLLECTED : ---
DATE RECEIVED : ---
DATE EXTRACTED : 4/24/95
DATE ANALYZED : 4/25/95
ANALYST : D.C.

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
-NSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729
PROJECT # 8168 - SAUGET, SITE G

ANALYSIS RESULTS

PCBs IN OIL

METHOD EPA 600/4-81-045

LAB NO.	SAMPLE NO.	IDENTIFICATION	TOTAL ppm	TYPE
9504/230-001		EP-2-1 9:30	<2	--
9504/230-005		EP-3-1 12:00	802,818	1248/1260
METHOD BLANK		PCB 3437	<2	--

All Values are ± 10%

DATE COLLECTED : 4/14/95
DATE RECEIVED : 4/14/95 14:41
DATE ANALYZED : 4/21-25/95
ANALYST : C.D.

MAY 1, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
'NSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729
PROJECT # 8168 - SAUGET, SITE G

ANALYSIS REPORT

PCBs IN WATER

METHOD EPA 608

LAB NO.	IDENTIFICATION	TOTAL ppb	TYPE
9504/230-007	EP-3-GW 12:00	149,000	1260
WATER METHOD BLANK	PCB3431	<2	--

DATE COLLECTED : 4/14/95
DATE RECEIVED : 4/14/95 14:41
DATE ANALYZED : 4/21-25/95
ANALYST : C.D.

MAY 1, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
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RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729 **SEMIVOLATILE ORGANIC COMPOUNDS**
PROJECT # 8168 - SAUGET, **METHOD SW-846 8270**
SITE G **PAGE ONE**

SAMPLE ID: METHOD BLANK
LAB ID: WASBLK6242

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
62-75-9	N-Nitrosodimethylamine	10 µg/l	U µg/l
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	o-Cresol	10	U
39638-32-9	bis-(2-Chloro2propyl)Ether	10	U
106-44-5	m & p-Cresol	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	10	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	10	U
103-33-3	Azobenzene	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U

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INVOICE # 31729 **SEMIVOLATILE ORGANIC COMPOUNDS**
PROJECT # 8168 - SAUGET **METHOD SW-846 8270**
SITE G **PAGE TWO**

SAMPLE ID: METHOD BLANK
LAB ID: WASBLK6242

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
100-02-7	4-Nitrophenol	50 µg/l	U µg/l
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenol phenyl ether	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	10	U
101-55-3	4-Bromophenyl phenyl ether	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	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
92-87-4	Benzidine	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	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	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	Dibenzo(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

DATE COLLECTED : ---
DATE RECEIVED : ---
DATE EXTRACTED : 4/18/95
DATE ANALYZED : 4/21/95
ANALYST : D.C.

MAY 1, 1995

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

RIEDEL ENVIRONMENTAL SERVICES
500 EASTERN AVENUE
BENSONVILLE, IL 60106

ATTN: MARK DOUGLAS

INVOICE # 31729 **SEMIVOLATILE ORGANIC COMPOUNDS**
PROJECT # 8168 - SAUGET, **METHOD SW-846 8270**
SITE G **PAGE ONE**

SAMPLE ID: METHOD BLANK
LAB ID: WDSBLK6244

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
62-75-9	N-Nitrosodimethylamine	100 mg/l	U mg/l
108-95-2	Phenol	100	U
111-44-4	bis(2-chloroethyl)Ether	100	U
95-57-8	2-Chlorophenol	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
100-51-6	Benzyl Alcohol	100	U
95-50-1	1,2-Dichlorobenzene	100	U
95-48-7	o-Cresol	100	U
39638-32-9	bis-(2-Chloro2propyl)Ether	100	U
106-44-5	m & p-Cresol	100	U
621-64-7	N-Nitroso-Di-n-propylamine	100	U
67-72-1	Hexachloroethane	100	U
98-95-3	Nitrobenzene	100	U
78-59-1	Isophorone	100	U
88-75-5	2-Nitrophenol	100	U
105-67-9	2,4-Dimethylphenol	100	U
65-85-0	Benzoic Acid	500	U
111-91-1	bis(2-Chloroethoxy)methane	100	U
120-83-2	2,4-Dichlorophenol	100	U
120-82-1	1,2,4-Trichlorobenzene	100	U
91-20-3	Naphthalene	100	U
106-47-8	4-Chloroaniline	100	U
87-68-3	Hexachlorobutadiene	100	U
59-50-7	4-Chloro-3-methylphenol	100	U
91-57-6	2-Methylnaphthalene	100	U
77-47-4	Hexachlorocyclopentadiene	100	U
88-06-2	2,4,6-Trichlorophenol	100	U
95-95-4	2,4,5-Trichlorophenol	100	U
91-58-7	2-Chloronaphthalene	100	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	100	U
103-33-3	Azobenzene	100	U
208-96-8	Acenaphthylene	100	U
606-20-2	2,6-Dinitrotoluene	100	U
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	100	U
51-28-5	2,4-Dinitrophenol	500	U

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INVOICE # 31729 **SEMIVOLATILE ORGANIC COMPOUNDS**
PROJECT # 8168 - SAUGET **METHOD SW-846 8270**
SITE G **PAGE TWO**

SAMPLE ID: METHOD BLANK
LAB ID: WDSBLK6244

CAS NUMBER		PRACTICAL QUANTITATION LIMIT	RESULTS
100-02-7	4-Nitrophenol	500 mg/l	U mg/l
132-64-9	Dibenzofuran	100	U
121-14-2	2,4-Dinitrotoluene	100	U
84-66-2	Diethylphthalate	100	U
7005-72-3	4-Chlorophenol phenyl ether	100	U
86-73-7	Fluorene	100	U
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	U
86-30-6	N-Nitrosodiphenylamine	100	U
101-55-3	4-Bromophenyl phenyl ether	100	U
118-74-1	Hexachlorobenzene	100	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	100	U
120-12-7	Anthracene	100	U
84-74-2	Carbazole	100	U
84-74-2	Di-n-butylphthalate	100	U
206-44-0	Fluoranthene	100	U
92-87-4	Benzidine	100	U
129-00-0	Pyrene	100	U
85-68-7	Butylbenzylphthalate	100	U
91-94-1	3,3'-Dichlorobenzidine	100	U
56-55-3	Benzo(a)anthracene	100	U
218-01-9	Chrysene	100	U
117-81-7	bis(2-Ethylhexyl)phthalate	100	U
117-84-0	Di-n-octylphthalate	100	U
205-99-2	Benzo(b)fluoranthene	100	U
207-08-9	Benzo(k)fluoranthene	100	U
50-32-8	Benzo(a)pyrene	100	U
193-39-5	Indeno(1,2,3-cd)pyrene	100	U
53-70-3	Dibenzo(a,h)anthracene	100	U
191-24-2	Benzo(g,h,i)perylene	100	U

U = UNDETECTED
B = PRESENT IN BLANK
J = DETECTED, BUT BELOW PRACTICAL QUANTITATION LIMIT

MAY 1, 1995

DATE COLLECTED : ---
DATE RECEIVED : ---
DATE EXTRACTED : 4/20/95
DATE ANALYZED : 4/21/95
ANALYST : D.C.

WAYNE L. COOPER PhD
LABORATORY DIRECTOR

11B

SEMIVOLATILE ORGANICS LAB CONTROL SAMPLE

EPA SAMPLE NO.

EP-2

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

Lab Code: 8270 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 9504-230-002MS

Sample wt/vol: 10 (g/ml) g Lab File ID: >A6640

Level: (low/med) MED Date Received: 04/14/95

% Moisture: NA decanted: (Y/N) N Date Extracted: 04/24/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.0 (uL) Dilution Factor: 147,493

GPC Cleanup: (Y/N) N pH: NA Level: MED

COMPOUND	Conc.	Sx.	Spike	Recovery
Phenol	12000	0	15000	72
2-Chlorophenol	12000	0	15000	75
1,4-Dichlorobenzene	5400	0	7400	76
N-Nitroso-Di-nPropylamine	6800	0	7400	82
1,2,4-Trichlorobenzene	7000	0	7400	88
4-Chloro-3-Methylphenol	13000	0	15000	81
Acenaphthene	5900	0	7400	71
4-Nitrophenol	4300000	2200000	15000	13000
2,4-Dinitrotoluene	1500	0	7400	62
Pentachlorophenol	5500	0	15000	55
Pyrene	4200	0	7400	65

FORM XI SV-3 3/90 Rev

11B

SEMIVOLATILE ORGANICS LAB CONTROL SPIKE

EPA SAMPLE NO.

WATER SPIKE

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

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

Matrix: (soil/water) WATER Lab Sample ID: WASLCS6242

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >A6614

Level: (low/med) LOW Date Received: 04/14/95

% Moisture: decanted: (Y/N) N Date Extracted: 04/18/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/21/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: NA

COMPOUND	Conc.	Spike	Recovery
Phenol	110	200	54
2-Chlorophenol	120	200	63
1,4-Dichlorobenzene	52	100	52
N-Nitroso-Di-nPropylamine	83	100	83
1,2,4-Trichlorobenzene	55	100	55
4-Chloro-3-Methylphenol	140	200	73
Acenaphthene	57	100	57
4-Nitrophenol	193	200	47
2,4-Dinitrotoluene	69	100	69
Pentachlorophenol	200	200	103
Pyrene	70	100	70

FORM XI SV-3 3/90 Rev

11B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS LAB CONTROL SAMPLE

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

SPIKE

Lab Name: Environmetrics Contract: RIEDEL

Lab Code: 8270 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: SASLCS6242

Sample wt/vol: 10 (g/ml) g Lab File ID: >A6615

Level: (low/med) LOW Date Received: 04/14/95

% Moisture: NA decanted: (Y/N) N Date Extracted: 04/18/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/21/95

Injection Volume: 1.0 (uL) Dilution Factor: 1000

GPC Cleanup: (Y/N) N pH: NA Level: MED

COMPOUND	Conc.	Spike	Recovery
2-Methylphenol	92000	100000	92
4-Methylphenol	73000	100000	74
1,4-Dichlorobenzene	28000	50000	56
N-Nitroso-Di-nPropylamine	44000	50000	88
1,2,4-Trichlorobenzene	35000	50000	70
2,4,6-Trichlorophenol	87000	100000	87
2,4,5-Trichlorophenol	100000	100000	105
Acenaphthene	37000	50000	74
2,4-Dinitrotoluene	36000	50000	73
Pentachlorophenol	97000	100000	97
Pyrene	39000	50000	78

FORM XI SV-3 3/90 Rev

11B

SEMIVOLATILE ORGANICS LAB CONTROL SAMPLE

EPA SAMPLE NO.

| SPIKE BLANK |

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

Lab Code: 8270 Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: SASLCS6255RE

Sample wt/vol: 10 (g/ml) g Lab File ID: >A6639

Level: (low/med) MED Date Received: 04/14/95

% Moisture: NA decanted: (Y/N) N Date Extracted: 04/24/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.0 (uL) Dilution Factor: 1000

GPC Cleanup: (Y/N) N pH: NA Level: MED

COMPOUND	Conc.	Spike	Recovery
Phenol	72000	100000	72
2-Chlorophenol	75000	100000	75
1,4-Dichlorobenzene	34000	50000	76
N-Nitroso-Di-nPropylamine	41000	50000	82
1,2,4-Trichlorobenzene	44000	50000	88
4-Chloro-3-Methylphenol	81000	100000	81
Acenaphthene	35000	50000	71
4-Nitrophenol	60000	100000	60
2,4-Dinitrotoluene	31000	50000	62
Pentachlorophenol	60000	100000	60
Pyrene	33000	50000	65

FORM XI SV-3 3/90 Rev

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

code: Case No.: SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (DCB)#	S3 (FBP)#	S4 (TPH)#	S5 (PHL)#	S6 (2CP)#	S7 (2FP)#	S8 (TBP)#	TOT OUT
01	WASBLK6242	61	45	57	83	49	60	63	82	0
02	WDASBLK6244	102	122 *	128 *	102	97 *	99 *	116 *	78	5
03	WASLCS6242	67	50	66	79	50	63	66	83	0
04	9504-230-001	0	0	0	0	0	D	0	0	0
05										
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (DCB)	= 1,2-Dichlorobenzene-d4	(35-114)	(advisory)
S3 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S4 (TPH)	= Terphenyl-d14	(33-141)	
S5 (PHL)	= Phenol-d5	(10- 94)	
S6 (2CP)	= 2-Chlorophenol-d4	(10- 94)	(advisory)
S7 (2FP)	= 2-Fluorophenol	(21-100)	
S8 (TBP)	= 2,4,6-Tribromophenol	(10-123)	

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

page __ of __.

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2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

Lab code: Case No.: DRY SAS No.: SDG No.:

Level: (low/med) ~~Low~~ Med
DMC 4/20/95

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (DCB)#	S3 (FBP)#	S4 (TPH)#	S5 (PHL)#	S6 (2CP)#	S7 (2FP)#	S8 (TBP)#	TOT OUT
01	SASBLK6242	70	64	90	97	73	69	75	90	0
02	9504230002	98	93	119 *	130	74	74	82	73	1
03	9504230003	0	0	0	0	0	0	0	0	0
04	9504230004	0	0	0	0	0	0	0	0	0
05	9504230009	0	0	0	0	0	0	0	0	0
06	9504230010	0	0	0	0	0	0	0	0	0
07	SASLCS6242	60	48	87	102	66	65	62	79	0
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (DCB)	= 1,2-Dichlorobenzene-d4	(23-120)	(advisory)
S3 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S4 (TPH)	= Terphenyl-d14	(18-137)	
S5 (PHL)	= Phenol-d5	(24-113)	
S6 (2CP)	= 2-Chlorophenol-d4	(24-113)	(advisory)
S7 (2FP)	= 2-Fluorophenol	(25-121)	
S8 (TBP)	= 2,4,6-Tribromophenol	(19-122)	

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted cut

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2C

WATER SEMIVOLATILE SURROGATE RECOVERY

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

code: Case No.: SAS No.: SDG No.:

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (DCB)#	S3 (FBP)#	S4 (TPH)#	S5 (PHL)#	S6 (2CP)#	S7 (2FP)#	S8 (TBP)#	TOT OUT
01	9504230007	79	64	83	79	54	65	50	79	0
02	9504230005	0	0	0	0	0	0	0	0	0
03										
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (DCB)	= 1,2-Dichlorobenzene-d4	(35-114)	(advisory)
S3 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S4 (TPH)	= Terphenyl-d14	(33-141)	
S5 (PHL)	= Phenol-d5	(10- 94)	
S6 (2CP)	= 2-Chlorophenol-d4	(10- 94)	(advisory)
S7 (2FP)	= 2-Fluorophenol	(21-100)	
S8 (TBP)	= 2,4,6-Tribromophenol	(10-123)	

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

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2D

SOIL SEMIVOLATILE SURROGATE RECOVERY

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043-3529
(314) 427-0550

Lab Name: Environmetrics Contract: RIEDEL

Lab code: Case No.: DRY SAS No.: SDG No.:

Level:(low/med) ~~LOW~~ Med
DMC 4/20/95

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (DCB)#	S3 (FBP)#	S4 (TPH)#	S5 (PHL)#	S6 (2CP)#	S7 (2FP)#	S8 (TBP)#	TOT OUT
01	SASBLK6255RE	86	94	98	94	77	76	78	85	0
02	SASLCS6255RE	84	91	97	86	76	75	76	85	0
03	9504230-2MSRE	74	82	87	82	76	75	77	15 *	1
04	~~9504230-2MSDRE~~	~~c~~	~~c~~	~~c~~	~~c~~	~~c~~	~~c~~	~~c~~	~~c~~	~~c~~
05	not used DMC 4/27/95									
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		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (DCB)	= 1,2-Dichlorobenzene-d4	(23-120)	(advisory)
S3 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S4 (TPH)	= Terphenyl-d14	(18-137)	
S5 (PHL)	= Phenol-d5	(24-113)	
S6 (2CP)	= 2-Chlorophenol-d4	(24-113)	(advisory)
S7 (2FP)	= 2-Fluorophenol	(25-121)	
S8 (TBP)	= 2,4,6-Tribromophenol	(19-122)	

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

page ___ of ___.

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CASE NARRATIVE

Metals

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- General Requirements/Information (Required for all QA/QC Levels)

1. Date sampled 04-14-95 Date received 04-14-95

2. Number of samples received 10

3. Sample description Liquid

4. Sample preparation date 4/19/95
   Date extracted (if applicable) _____

5. Date analyzed 4/19-25/95 Time analyzed _____
   Analyst RLD/JN

6. Did Riedel indicate a specific method? Yes X No ___

   a. If Yes, what was that method? Metals 6000/7000 (contract)

7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes X No ___ If yes, please specify. MS, Blank, Surrogate (contract)

   a. What QA/QC level was requested? see above Used by lab? _____

   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. _____

- QC Remarks (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? _____

2. Test Methods

   a. Parameters Metals
   b. *Approved* Methods 6010A / 7471A
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses?* N/A

      1. Yes ___ No ___
      2. If No, what method was used and why? _____
      3. If Yes, identify method used? _____

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No ___ If Yes, please comment. N/A

4. Initial calibration (% Relative Standard Deviation) N/A

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. _____

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No ___ N/A

   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. _____

7. Were surrogates run *for Organic Analyses*? Yes ___ No ___ N/A

   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. _____
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.

   a. Minimum Detection Limits: _____
   b. Estimated Quantitation Limits: _____
   c. Dilution Factor:

9. Were *any other annomalies encountered during the analysis*? Yes ___ No ___

   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No___

    a. If yes, Environmetrics states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. WARNING!! NO DATA SHALL BE RELEASED verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.

PCB

CASE NARRATIVE

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- **General Requirements/Information** (Required for all QA/QC Levels)

1. Date sampled 04-14-95 Date received 04-14-95
2. Number of samples received 10
3. Sample description liquid
4. Sample preparation date _____
   Date extracted (if applicable) 4-20-95 4-26-95

   4-21 ~~22:41~~ 16:11 - 23:53
   4-26 18:05 - 23:45
   4-25 12:20 - 13:05
5. Date analyzed 4-21 & 24 & 25 Time analyzed _____
   Analyst CT DOTSON
6. Did Riedel indicate a specific method? Yes X No ___
   a. If Yes, what was that method? PCB 8080 (contract)
7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes X No ___ If yes, please specify. MS, Blank, Surrogate (contract)
   a. What QA/QC level was requested? see above Used by lab? _____
   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. _____

- **QC Remarks** (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? _____
2. Test Methods
   a. Parameters PCB
   b. *Approved* Methods 8080
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses*?
      1. Yes ___ No X
      2. If No, what method was used and why? Florisil - Acid wash
      3. If Yes, identify method used? _____

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No X If Yes, please comment. _

4. Initial calibration (% Relative Standard Deviation) < 20

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. <15

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No X

   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. Only MS Analyzed

7. Were surrogates run *for Organic Analyses*? Yes ___ No X

   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. Pattern Recognition
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.

   a. Minimum Detection Limits: < 2
   b. Estimated Quantitation Limits: < 2
   c. Dilution Factor: Variable depending on Matrix + dilution

9. Were *any other annomalies encountered during the analysis*? Yes ___ No X

   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No ___

    a. If yes, Environmetrics states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. **WARNING!! NO DATA SHALL BE RELEASED** verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.

CASE NARRATIVE

8270

REQUIREMENTS FOR ANY QA/QC LEVEL

Please Note: If a CLP Package or the USEPA QA/QC Reporting Package known as "Quality Assurance/Quality Control - Guidance for Removal Activities" is requested all QA/QC reporting documentation required in those documents takes precedence over these requirements.

- General Requirements/Information (Required for all QA/QC Levels)

1. Date sampled 04-14-95 Date received 04-14-95

2. Number of samples received 10

3. Sample description liquid

4. Sample preparation date _____
   Date extracted (if applicable) 4-18-95,

5. Date analyzed 4-25-95, 4-21-95, 4-26-95 Time analyzed 4-21 04:58 to 20:17; 4-25 14:53 to 22:38; 4-26 09:39 to 19:25
   Analyst Denise Cook

6. Did Riedel indicate a specific method? Yes X No ___

   a. If Yes, what was that method? BNA 8270 (contract)

7. Did Riedel specify additional QA/QC requirement beyond the minimum and mandatory items? Yes X No ___ If yes, please specify. MS, Blank, Surrogate (contract)

   a. What QA/QC level was requested? See above Used by lab? _____

   b. If lab used a different QA/QC level than requested by Riedel, an explanation must be supplied by lab. _____

- QC Remarks (Required as relates to QA/QC level requested)

1. Were holding times met? Yes X No ___ If No, why? _____

2. Test Methods

   a. Parameters Semi-VOCS
   b. *Approved* Methods 8270
   c. Was a cleanup method requested *for Semi-Volatile Organic Analyses*?

      1. Yes ___ No X
      2. If No, what method was used and why? None needed
      3. If Yes, identify method used? _____

3. Were peak resolutions *(i.e. Chromatograms)* requested? Yes ___ No X If Yes, please comment. _

4. Initial calibration (% Relative Standard Deviation) < 30

5. Has continuing calibration (% difference) been requested? If yes, indicate % difference. < 20

6. Were all Matrix Spikes/Matrix Spike duplicates < 20% RSD? Yes ___ No X

   a. If Yes, indicate I.D. No. and %. _____
   b. If No, indicate I.D. No. and %, plus why the < 20% RSD was not obtained. Only MS analyzed + reported

7. Were surrogates run *for Organic Analyses*? Yes X No ___

   a. If Yes, indicate type and recovery (Min. Recovery is 80%). _____
   b. If not, indicate why not. See Surrogate Form - Sample matrix had to be diluted - diluted out the Surrogates or Matrix interference
   c. If min. recovery was not obtained, indicate why not? _____

8. Please provide the following as applicable.

   a. Minimum Detection Limits: <10
   b. Estimated Quantitation Limits: <10
   c. Dilution Factor: Variable depending on Matrix + dilution

9. Were *any other annomalies encountered during the analysis*? Yes ___ No X

   a. If Yes, type: _____
   b. If Yes, why were they observed? _____

10. Was this laboratory work performed under either "Minimum and Mandatory Contractual Terms for Analytical Laboratories not on the Pre-Approved Midwest/Great Lakes Region Acceptance List" or a "Master Subcontract" with your laboratory, specifically for ERCS Region V? Yes X No ___

    a. If yes, Environmetrics states that the USEPA document known as "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan and Data Validation Procedures Interim Final EPA/540/G-90/004 April 1990" was utilized as guidance in the review and validation of all data for this project.

11. **WARNING!! NO DATA SHALL BE RELEASED** verbally, written, or otherwise to any authorized representative of Riedel Environmental Services, Inc. or their client that does not meet or exceed the QA/QC levels established in any written or verbal RFP for this project, or the requirements for any and all SW 846 Methods or EPA Methods utilized for this project.

Any incorrect data that is released to any authorized Riedel Environmental Services, Inc. representative or their client that causes improper site related work or disposal decisions to be made by Riedel Environmental Services, Inc. or their client, will cause Environmetrics to be completely liable for all costs associated with those decisions.