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JOHN ENGLER, Governor

DEPARTMENT OF NATURAL RESOURCES

Stevens T. Mason Building, P.O. Box 30028, Lansing, MI 48909

ROLAND HARMES, Director

June 28, 1994

2 Videos attached

Ms. Leah Evison
Remedial Project Manager (HSRW-6J)
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

Dear Leah:

Enclosed for your information and review are copies of the analytical data and the video tape from the test pitting conducted at the Albion-Sheridan Township Landfill site in Calhoun County, Michigan. The draft test pitting report is expected to be available July 15, 1994. I will send you a copy of the report as soon as possible.

If you have any questions or comments regarding this information or the site, please feel free to contact me.

Sincerely,

Jim Myers

Jim Myers
Superfund Section
Environmental Response Division
517-373-2745

cc: Ms. Claudia Kerbawy, MDNR
Albion-Sheridan file (H3)

PRINTED ON RECYCLED PAPER

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL LABORATORY

REPORT Environmental Response Div.
TO ~~Mason~~ Building Capitol
Lansing, MI 48909

ATTEN JIM MYERS

LABORATORY WORK ORDER # 94-06-076
WORK ID ALBION-SHERIDAN LANDFILL
P.O. # LJAN COST $ 1324.80
RECEIVED 06/10/94 CLIENT ER
REPORTED _____ NUMBER OF SAMPLES 1
LAB CONTACT OR IN MATRIX ORGANIC

TEST UNITS	TP-9-3
Aluminium in Oil mg/kg (wet)	2470
Arsenic in Oil mg/kg (wet)	1.3
Barium in Oil mg/kg (wet)	1
Beryllium in Oil mg/kg (wet)	K 0.2
Cadmium in Oil mg/kg (wet)	K 4
Cobalt in Oil mg/kg (wet)	K 10
Chromium in Oil mg/kg (wet)	157
Copper in Oil mg/kg (wet)	K 4
Iron in Oil mg/kg (wet)	660
Mercury in Oil mg/kg (wet)	K 0.1
Lithium in Oil mg/kg (wet)	K 4
Manganese in Oil mg/kg (wet)	K 4
Molybdenum in Oil mg/kg (wet)	K 5
Nickel in Oil mg/kg (wet)	K 10
Lead in Oil mg/kg (wet)	773
Titanium in Oil mg/kg (wet)	273
Vanadium in Oil mg/kg (wet)	4
Zinc in Oil mg/kg (wet)	K 10

RECEIVED JUN 21 1994 SUPERFUND

SE,CA,NA,MG,K UNAVAILABLE ON ORGANGIC MATRICES.

Report prepared By: Lani C. Utes

 DNR Laboratory REPORT Work Order # 94-06-076
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-3 FRACTION 01A TEST CODE O BN NAME Base Neutral-Oil/Organic
Date & Time Collected 06/08/94 Category

Form not available.

Received: 06/10/94 06/16/94 13:23:27

Environmental Response Div.

9406076-01
BASE NEUTRAL OIL

The sample was an off-white, putty-like substance. 5 grams of it was mixed with 100 grams of sodium sulfate. This mixture was placed in an oil column, eluted with 150 ml of methylene chloride, then brought down on the turbovap. The final volume was 5 ml of a beige colored sample. This was diluted to 1/100 for GC/MS analysis.

The following compound was identified through GC/MS analysis, with estimated concentrations in ppb.

COMPOUND NAME	EST. PPB	
NAPTHALENE	3,200,000	J

A pattern of alkyl benzenes was present.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES	PROCEDURE ENVIRONMENTAL LABORATORY	NO: PD-13 DATE: Rev. 2/1/94

Subject: *Laboratory Result Remark Codes*

A	value reported is the mean of two or more determinations.
C	value calculated from other independent parameters.
J	estimated value or value not accurate.
K	actual value is known to be less than the value given, i.e. substance, if present, is below detection limit.
L	actual value is known to be greater than the value given.
T	value reported is less than criteria of detection.
W	value observed is less than lowest value reportable under **"T"** code.
DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems.
HT	recommended laboratory holding time was exceeded before analysis.
LH	Q. C. indicated possible low recovery. Actual level may be higher.
LL	Q. C. indicated possible high recovery. Actual level may be lower.
MM	analytical method or matrix is not within SOP of this laboratory.
NC	no confirmation by a second technique.
NH	non-homogeneous sample made analysis of a representative sample questionable.
PI	possible interference may have affected the accuracy of the laboratory result.
QC	quality control problems exists.
RB	Reagent Blank. The level of reagent blank contamination is reported in the comment column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used.
ACC	laboratory accident resulted in no obtainable value.
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interference encountered during analysis resulted in no obtainable value.
IST	Improper sample collection/preservation. Sample not suitable for analysis.
NAV	requested analysis not available.
QNS	quantity not sufficient to perform requested analysis.
STR	settleable residue was not analyzed due to low suspended solids.

Approved by: _____ 2/2/94
George Su, Laboratory Director Date

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL LABORATORY

REPORT Environmental Response Div.
TO ~~Mason~~ Building Capitol
Lansing, MI 48909

ATTEN JIM MYERS

LABORATORY WORK ORDER # 94-06-079
WORK ID ALBION-SHERIDAN LANDFILL
P.O. # LJAN COST $ 1324.80
RECEIVED 06/10/94 CLIENT ER
REPORTED _____ NUMBER OF SAMPLES 1
LAB CONTACT OR IN MATRIX ORGANIC

TEST UNITS	TP-9-8
Aluminium in Oil mg/kg (wet)	4200
Arsenic in Oil mg/kg (wet)	2.7
Barium in Oil mg/kg (wet)	2
Beryllium in Oil mg/kg (wet)	K 0.2
Cadmium in Oil mg/kg (wet)	K 4
Cobalt in Oil mg/kg (wet)	K 10
Chromium in Oil mg/kg (wet)	2
Copper in Oil mg/kg (wet)	K 4
Iron in Oil mg/kg (wet)	480
Mercury in Oil mg/kg (wet)	K 0.1
Lithium in Oil mg/kg (wet)	19
Manganese in Oil mg/kg (wet)	9.8
Molybdenum in Oil mg/kg (wet)	K 5
Nickel in Oil mg/kg (wet)	K 10
Lead in Oil mg/kg (wet)	K 10
Titanium in Oil mg/kg (wet)	183
Vanadium in Oil mg/kg (wet)	2
Zinc in Oil mg/kg (wet)	15

RECEIVED 21 ERD-SUPERFUND

SE,CA,NA,MG,K ARE UNAVAILABLE ON ORGANIC MATRICES.

Report prepared By: Larry C. Ulrich

 DNR Laboratory REPORT Work Order # 94-06-079
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-8 FRACTION 01A TEST CODE O BN NAME Base Neutral-Oil/Organic
Date & Time Collected 06/09/94 Category

Form not available.

Received: 06/10/94 06/16/94 13:23:43

Environmental Response Div.

9406079-01
BASE NEUTRAL OIL

The sample looked like white paint, and contained metal shavings. 25 grams were mixed with 130 grams of sodium sulfate. This mixture was placed in an oil column, eluted with 150 ml methylene chloride, and brought down on the turbovap. The final volume was approximately 36 mls, and still resembled paint. It was diluted to 1/100 for GC/MS analysis.

The following compounds were identified by GC/MS analysis, with estimated concentrations in ppb.

COMPOUNDS	EST. PPB	
ISOPHORONE	390,000	J
NAPTHALENE	140,000	J

The sample also showed a pattern of alkyl benzenes.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES	PROCEDURE ENVIRONMENTAL LABORATORY	NO: PD-13 DATE: Rev. 2/1/94

Subject: *Laboratory Result Remark Codes*

A	value reported is the mean of two or more determinations.
C	value calculated from other independent parameters.
J	estimated value or value not accurate.
K	actual value is known to be less than the value given, i.e. substance, if present, is below detection limit.
L	actual value is known to be greater than the value given.
T	value reported is less than criteria of detection.
W	value observed is less than lowest value reportable under "T" code.
DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems.
HT	recommended laboratory holding time was exceeded before analysis.
LH	Q. C. indicated possible low recovery. Actual level may be higher.
LL	Q. C. indicated possible high recovery. Actual level may be lower.
MM	analytical method or matrix is not within SOP of this laboratory.
NC	no confirmation by a second technique.
NH	non-homogeneous sample made analysis of a representative sample questionable.
PI	possible interference may have affected the accuracy of the laboratory result.
QC	quality control problems exists.
RB	Reagent Blank. The level of reagent blank contamination is reported in the comment column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used.
ACC	laboratory accident resulted in no obtainable value.
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interference encountered during analysis resulted in no obtainable value.
IST	Improper sample collection/preservation. Sample not suitable for analysis.
NAV	requested analysis not available.
QNS	quantity not sufficient to perform requested analysis.
STR	settleable residue was not analyzed due to low suspended solids.

Approved by: _____ 2/2/94
George Su, Laboratory Director Date

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL LABORATORY

REPORT Environmental Response Div.
TO Mason Building Capitol
Lansing, MI 48909

ATTEN JIM MYERS, Supervisor

LABORATORY WORK ORDER # 94-06-078
WORK ID ALBION-SHERIDAN LANDFILL
P.O. # LJAN COST $ 1308.80
RECEIVED 06/10/94 CLIENT ER
REPORTED _____ NUMBER OF SAMPLES 1
LAB CONTACT GR IN MATRIX WATER

TEST	UNITS	TP-8-8
Arsenic in Oil	mg/kg (wet)	X 0.5
Cadmium in Oil	mg/kg (wet)	X 4
Chromium in Oil	mg/kg (wet)	6
Copper in Oil	mg/kg (wet)	X 4
Nickel in Oil	mg/kg (wet)	X 10
Lead in Oil	mg/kg (wet)	X 10
Zinc in Oil	mg/kg (wet)	16

Report prepared By: Louis C. Utesch

 DNR Laboratory REPORT Work Order # 94-06-076
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-S FRACTION 01E TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100 UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		0
541-73-1	1,3-Dichlorobenzene	ND		0
106-46-7	1,4-Dichlorobenzene	ND		0
95-50-1	1,2-Dichlorobenzene	ND		0
108-60-1	bis(2-Chloroisopropyl) ether	ND		0
821-64-7	N-Nitroso-di-n-propyl amine	ND		0
108-70-3	Hexachloroethane	ND		0
98-95-3	Nitrobenzene	ND		0
78-59-1	Isophorone	ND		0
111-91-1	bis(2-Chloroethoxy) methane	ND		0
120-82-1	1,2,4-Trichlorobenzene	ND		0
91-20-3	Naphthalene	150000	J,*	1900
87-68-3	Hexachlorobutadiene	ND		0
77-47-4	Hexachlorocyclopentadiene	ND		0
91-58-7	2-Chloronaphthalene	ND		0
131-11-3	Dimethyl phthalate	ND		0
208-96-8	Acenaphthylene	ND		0
606-20-2	2,6-Dinitrotoluene	ND		0
83-32-9	Acenaphthene	ND		0
121-14-2	2,4-Dinitrotoluene	ND		0
86-73-7	Fluorene	ND		0
84-66-2	Diethyl phthalate	ND		0
7005-72-3	4-Chlorodiphenyl ether	ND		0
86-30-6	N-Nitrosodiphenyl amine	ND		0
122-66-7	1,2-Diphenylhydrazine	ND		0
101-55-3	4-Bromodiphenyl ether	ND		0
118-74-1	Hexachlorobenzene	ND		0
85-01-8	Phenanthrene	ND		0
120-12-7	Anthracene	ND		0
84-74-2	Di-n-butyl pthtalate	ND		0
206-44-0	Fluoranthene	ND		0
92-87-5	* Benzidine	ND		0
129-00-0	Pyrene	ND		0
85-68-7	Butyl benzyl phthalate	ND		0
56-55-3	Benzo (a) anthracene	ND		0
91-94-1	* 3,3'-Dichlorobenzidine	ND		0
218-01-9	Chrysene	ND		0
117-81-7	bis(2-ethylhexyl) phthalate	ND		0
117-84-0	Di-n-octyl phthalate	ND		0
205-99-2	Benzo (b) fluoranthene	ND		0
207-08-9	Benzo (k) fluoranthene	ND		0
50-32-8	Benzo (a) pyrene	ND		0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		0

SAMPLE ID TP-9-8 FRACTION 01E TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		0
191-24-2	Benzo (g,h,i) perylene	ND		0

COMMENTS 1=RB=10.000. J=EST. DUE TO FINAL VOLUME OF 17 ML OIL.
ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

SAMPLE ID TP-9-8 FRACTION 01A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 410 UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		41
106-46-7	1,4-Dichlorobenzene	ND		41
95-50-1	1,2-Dichlorobenzene	ND		41
67-72-1	Hexachloroethane	ND		4.1
108-70-3	1,3,5-Trichlorobenzene	ND		4.1
120-82-1	1,2,4-Trichlorobenzene	ND		4.1
87-61-6	1,2,3-Trichlorobenzene	ND		4.1
87-68-3	Hexachlorobutadiene	ND		4.1
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		4.1
77-47-4	Hexachlorocyclopentadiene	ND		4.1
91-58-7	2-Chloronaphthalene	ND		82
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		4.1
608-68-8	Pentachlorobenzene	ND		4.1
319-84-6	a-BHC	ND		4.1
118-74-1	Hexachlorobenzene	ND		4.1
319-85-7	b-BHC	ND		4.1
58-89-9	g-BHC (lindane)	ND		4.1
82-68-8	Pentachloronitrobenzene	ND		4.1
319-86-8	d-BHC	ND		4.1
76-44-8	Heptachlor	ND		4.1
309-00-2	Aldrin	ND		4.1
1024-57-3	Heptachlor epoxide	ND		4.1
5103-74-2	g-Chlordane	ND		4.1
959-98-8	*Endosulfan I	ND		4.1
5103-71-9	a-Chlordane	ND		4.1
72-55-9	4,4'-DDE	ND		4.1
72-20-8	Endrin	ND		4.1
60-57-1	Dieldrin	ND		4.1
72-54-8	4,4'-DDD	ND		21
50-29-3	4,4'-DDT	ND		4.1
79-34-5	Hexabromobenzene	ND		4.1
72-43-5	Methoxychlor	ND		21
2385-85-5	Mirex	ND		4.1
53469-21-9	Aroclor 1242 (PCB)	ND		41
11097-69-1	Aroclor 1254 (PCB)	ND		41
11096-82-5	Aroclor 1260 (PCB)	ND		41
12674-11-1	*Aroclor 1016 (PCB)	ND		41
11104-28-2	*Aroclor 1221 (PCB)	ND		41
11141-16-5	*Aroclor 1232 (PCB)	ND		41
12672-29-6	*Aroclor 1248 (PCB)	ND		41
- -	*Aroclor 1262 (PCB)	ND		41
11100-14-4	*Aroclor 1268 (PCB)	ND		41
37324-23-5	EP-2 (PCB)	ND		21

SAMPLE ID TP-9-8 FRACTION 01A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

8001-35-2	*Toxaphene ND		41

COMMENTS MM=SAMPLE TURNED TO OIL, DM=DIL DUE TO MATRIX PROBLEM

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

MICHIGAN DEPARTMENT OF NATURAL RESOURCES	PROCEDURE ENVIRONMENTAL LABORATORY	NO: PD-13 DATE: Rev. 2/1/94

Subject: ***Laboratory Result Remark Codes***

A	value reported is the mean of two or more determinations.
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DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems.
HT	*recommended laboratory holding time was exceeded before analysis.*
LH	Q. C. indicated possible low recovery. Actual level may be higher.
LL	Q. C. indicated possible high recovery. Actual level may be lower.
MM	analytical method or matrix is not within SOP of this laboratory.
NC	no confirmation by a second technique.
NH	non-homogeneous sample made analysis of a representative sample questionable.
PI	possible interference may have affected the accuracy of the laboratory result.
QC	quality control problems exists.
RB	Reagent Blank. The level of reagent blank contamination is reported in the comment column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used.
ACC	laboratory accident resulted in no obtainable value.
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interference encountered during analysis resulted in no obtainable value.
IST	Improper sample collection/preservation. Sample not suitable for analysis.
NAV	requested analysis not available.
QNS	quantity not sufficient to perform requested analysis.
STR	settleable residue was not analyzed due to low suspended solids.

Approved by: _____ 2/2/94
George Su, Laboratory Director Date

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL LABORATORY

RECEIVED
JUN 22 1994
ERD-SUPERFUND

REPORT Environmental Response Div.
TO ~~Mason~~ Building
Lansing, MI 48909

ATTEN JIM MYERS

LABORATORY WORK ORDER # 94-06-072
WORK ID ALBION-SHERIDAN LANDFILL
P.O. # LJAN COST $12547.80
RECEIVED 06/10/94 CLIENT ER
REPORTED NUMBER OF SAMPLES 8
LAB CONTACT OR IN MATRIX WATER

TEST UNITS	TP-101	TP-201	TP-9-7	TP-9-1
Arsenic by Furnace ug/l		K 1.0		3.1
Cadmium in Water ug/l		K 20		K 20
Chromium in Water ug/l		K 20		1900
Copper in Water ug/l		K 20		190
GC/MS Library Search -	06/20/94	06/20/94	06/20/94	06/20/94
Nickel in Water ug/l		K 50		180
Arsenic in Oil mg/kg (wet)	K 0.5		K 0.5	
Cadmium in Oil mg/kg (wet)	K 4		K 4	
Chromium in Oil mg/kg (wet)	30		60	
Copper in Oil mg/kg (wet)	K 4		K 4	
Nickel in Oil mg/kg (wet)	K 10		K 10	
Lead in Oil mg/kg (wet)	80		14	
Zinc in Oil mg/kg (wet)	K 10		K 10	
Lead in Water ug/l		K 50		320
Zinc in Water ug/l		K 50		5000

TEST UNITS	TP-9-2	TP-9-4	TP-01	TP-9-6
Arsenic by Furnace ug/l			K 1.0	
Cadmium in Water ug/l			K 20	

TEST	UNITS	TP-9-2	TP-9-4	TP-01	TP-9-6
Chromium in Water	ug/l			K 20	
Copper in Water	ug/l			170	
GC/MS Library Search	-	06/20/94	06/20/94	06/21/94	06/21/94
Nickel in Water	ug/l			K 50	
Arsenic in Oil	mg/kg (wet)	K 0.5	4.1		K 0.5
Cadmium in Oil	mg/kg (wet)	K 4	K 4		K 4
Chromium in Oil	mg/kg (wet)	15	7		96
Copper in Oil	mg/kg (wet)	K 4	86		K 4
Nickel in Oil	mg/kg (wet)	K 10	13		K 10
Lead in Oil	mg/kg (wet)	K 10	K 10		337
Zinc in Oil	mg/kg (wet)	K 10	46		K 10
Lead in Water	ug/l			K 50	
Zinc in Water	ug/l			K 50	

Report prepared By: D Harlig 6-22-94

Received: 06/10/94

DNR Laboratory REPORT
Results by Sample

Work Order # 94-06-072

SAMPLE ID TP-101 FRACTION 01B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		0
541-73-1	1,3-Dichlorobenzene	ND		0
106-46-7	1,4-Dichlorobenzene	ND		0
95-50-1	1,2-Dichlorobenzene	ND		0
108-60-1	bis(2-Chloroisopropyl) ether	ND		0
821-64-7	N-Nitroso-di-n-propyl amine	ND		0
108-70-3	Hexachloroethane	ND		0
98-95-3	Nitrobenzene	ND		0
78-59-1	Isophorone	ND		0
111-91-1	bis(2-Chloroethoxy) methane	ND		0
120-82-1	1,2,4-Trichlorobenzene	ND		0
91-20-3	Naphthalene	450000	J,*	8300
87-68-3	Hexachlorobutadiene	ND		0
77-47-4	Hexachlorocyclopentadiene	ND		0
91-58-7	2-Chloronaphthalene	ND		0
131-11-3	Dimethyl phthalate	ND		0
208-96-8	Acenaphthylene	ND		0
606-20-2	2,6-Dinitrotoluene	ND		0
83-32-9	Acenaphthene	ND		0
121-14-2	2,4-Dinitrotoluene	ND		0
86-73-7	Fluorene	ND		0
84-66-2	Diethyl phthalate	ND		0
7005-72-3	4-Chlorodiphenyl ether	ND		0
86-30-6	N-Nitrosodiphenyl amine	ND		0
122-66-7	1,2-Diphenylhydrazine	ND		0
101-55-3	4-Bromodiphenyl ether	ND		0
118-74-1	Hexachlorobenzene	ND		0
85-01-8	Phenanthrene	ND		0
120-12-7	Anthracene	ND		0
84-74-2	Di-n-butyl pthtalate	ND		0
206-44-0	Fluoranthene	ND		0
92-87-5	* Benzidine	ND		0
129-00-0	Pyrene	ND		0
85-68-7	Butyl benzyl phthalate	ND		0
56-55-3	Benzo (a) anthracene	ND		0
91-94-1	* 3,3'-Dichlorobenzidine	ND		0
218-01-9	Chrysene	ND		0
117-81-7	bis(2-ethylhexyl) phthalate	ND		0
117-84-0	Di-n-octyl phthalate	ND		0
205-99-2	Benzo (b) fluoranthene	ND		0
207-08-9	Benzo (k) fluoranthene	ND		0
50-32-8	Benzo (a) pyrene	ND		0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		0

SAMPLE ID TP-101 FRACTION 01B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		0
191-24-2	Benzo (g,h,i) perylene	ND		0

COMMENTS J:EST. DUE TO FINAL VOL 75 ML.; *= RB=4600

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-101 FRACTION 01A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 600

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		60
106-46-7	1,4-Dichlorobenzene	ND		60
95-50-1	1,2-Dichlorobenzene	ND		60
67-72-1	Hexachloroethane	ND		6.0
108-70-3	1,3,5-Trichlorobenzene	ND		6.0
120-82-1	1,2,4-Trichlorobenzene	ND		6.0
87-61-6	1,2,3-Trichlorobenzene	ND		6.0
87-68-3	Hexachlorobutadiene	ND		6.0
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		6.0
77-47-4	Hexachlorocyclopentadiene	ND		6.0
91-58-7	2-Chloronaphthalene	ND		120
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		6.0
608-68-8	Pentachlorobenzene	ND		6.0
319-84-6	a-BHC	ND		6.0
118-74-1	Hexachlorobenzene	ND		6.0
319-85-7	b-BHC	ND		6.0
58-89-9	g-BHC (lindane)	ND		6.0
82-68-8	Pentachloronitrobenzene	ND		6.0
319-86-8	d-BHC	ND		6.0
76-44-8	Heptachlor	ND		6.0
309-00-2	Aldrin	ND		6.0
1024-57-3	Heptachlor epoxide	ND		6.0
5103-74-2	g-Chlordane	ND		6.0
959-98-8	*Endosulfan I	ND		6.0
5103-71-9	a-Chlordane	ND		6.0
72-55-9	4,4'-DDE	ND		6.0
72-20-8	Endrin	ND		6.0
60-57-1	Dieldrin	ND		6.0
72-54-8	4,4'-DDD	ND		30
50-29-3	4,4'-DDT	ND		6.0
79-34-5	Hexabromobenzene	ND		6.0
72-43-5	Methoxychlor	ND		30
2385-85-5	Mirex	ND		6.0
53469-21-9	Aroclor 1242 (PCB)	ND		60
11097-69-1	Aroclor 1254 (PCB)	ND		60
11096-82-5	Aroclor 1260 (PCB)	ND		60
12674-11-1	*Aroclor 1016 (PCB)	ND		60
11104-28-2	*Aroclor 1221 (PCB)	ND		60
11141-16-5	*Aroclor 1232 (PCB)	ND		60
12672-29-6	*Aroclor 1248 (PCB)	ND		60
- -	*Aroclor 1262 (PCB)	ND		60
11100-14-4	*Aroclor 1268 (PCB)	ND		60
37324-23-5	BP-6 (PBB)	ND		30

SAMPLE ID TP-101 FRACTION 01A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

8001-35-2	*Toxaphene	ND	60

COMMENTS MM=SAMPLE TURNED TO OIL, DM=DIL DUE TO MATRIX PROBLEM

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-201 FRACTION 02B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 1 UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		1.0
541-73-1	1,3-Dichlorobenzene	ND		1.0
106-46-7	1,4-Dichlorobenzene	ND		1.0
95-50-1	1,2-Dichlorobenzene	ND		1.0
108-60-1	bis(2-Chloroisopropyl) ether	ND		1.0
821-64-7	N-Nitroso-di-n-propyl amine	ND		2.0
108-70-3	Hexachloroethane	ND		1.0
98-95-3	Nitrobenzene	ND		2.0
78-59-1	Isophorone	ND		1.0
111-91-1	bis(2-Chloroethoxy) methane	ND		2.0
120-82-1	1,2,4-Trichlorobenzene	ND		2.0
91-20-3	Naphthalene	ND		1.0
87-68-3	Hexachlorobutadiene	ND		2.0
77-47-4	Hexachlorocyclopentadiene	ND		2.0
91-58-7	2-Chloronaphthalene	ND		2.0
131-11-3	Dimethyl phthalate	ND		2.0
208-96-8	Acenaphthylene	ND		1.0
606-20-2	2,6-Dinitrotoluene	ND		5.0
83-32-9	Acenaphthene	ND		1.0
121-14-2	2,4-Dinitrotoluene	ND		5.0
86-73-7	Fluorene	ND		1.0
84-66-2	Diethyl phthalate	ND		1.0
7005-72-3	4-Chlorodiphenyl ether	ND		1.0
86-30-6	N-Nitrosodiphenyl amine	ND		5.0
122-66-7	1,2-Diphenylhydrazine	ND		2.0
101-55-3	4-Bromodiphenyl ether	ND		2.0
118-74-1	Hexachlorobenzene	ND		1.0
85-01-8	Phenanthrene	ND		1.0
120-12-7	Anthracene	ND		1.0
84-74-2	Di-n-butyl pthtalate	ND		1.0
206-44-0	Fluoranthene	ND		1.0
92-87-5	* Benzidine	ND		15
129-00-0	Pyrene	ND		1.0
85-68-7	Butyl benzyl phthalate	ND		1.0
56-55-3	Benzo (a) anthracene	ND		1.0
91-94-1	* 3,3'-Dichlorobenzidine	ND		10
218-01-9	Chrysene	ND		1.0
117-81-7	bis(2-ethylhexyl) phthalate	18		2.0
117-84-0	Di-n-octyl phthalate	ND		2.0
205-99-2	Benzo (b) fluoranthene	ND		2.0
207-08-9	Benzo (k) fluoranthene	ND		2.0
50-32-8	Benzo (a) pyrene	ND		2.0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		5.0

SAMPLE ID TP-201 FRACTION 02B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		5.0
191-24-2	Benzo (g,h,i) perylene	ND		5.0

COMMENTS

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-201 FRACTION 02A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 1

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		0.10
106-46-7	1,4-Dichlorobenzene	ND		0.10
95-50-1	1,2-Dichlorobenzene	ND		0.10
67-72-1	Hexachloroethane	ND		0.010
108-70-3	1,3,5-Trichlorobenzene	ND		0.010
120-82-1	1,2,4-Trichlorobenzene	ND		0.010
87-61-6	1,2,3-Trichlorobenzene	0.010	RB=0.010	0.010
87-68-3	Hexachlorobutadiene	ND		0.010
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		0.010
77-47-4	Hexachlorocyclopentadiene	ND		0.010
91-58-7	2-Chloronaphthalene	ND		0.20
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		0.010
608-68-8	Pentachlorobenzene	ND		0.010
319-84-6	a-BHC	ND		0.010
118-74-1	Hexachlorobenzene	ND		0.010
319-85-7	b-BHC	ND		0.010
58-89-9	g-BHC (lindane)	ND		0.010
82-68-8	Pentachloronitrobenzene	ND		0.010
319-86-8	d-BHC	ND		0.010
76-44-8	Heptachlor	ND		0.010
309-00-2	Aldrin	ND		0.010
1024-57-3	Heptachlor epoxide	ND		0.010
5103-74-2	g-Chlordane	ND		0.010
959-98-8	*Endosulfan I	ND		0.010
5103-71-9	a-Chlordane	ND		0.010
72-55-9	4,4'-DDE	ND		0.010
72-20-8	Endrin	ND		0.010
60-57-1	Dieldrin	ND		0.010
72-54-8	4,4'-DDD	ND		0.050
50-29-3	4,4'-DDT	ND		0.010
79-34-5	Hexabromobenzene	ND		0.010
72-43-5	Methoxychlor	ND		0.050
2385-85-5	Mirex	ND		0.010
53469-21-9	Aroclor 1242 (PCB)	ND		0.10
11097-69-1	Aroclor 1254 (PCB)	ND		0.10
11096-82-5	Aroclor 1260 (PCB)	ND		0.10
12674-11-1	*Aroclor 1016 (PCB)	ND		0.10
11104-28-2	*Aroclor 1221 (PCB)	ND		0.10
11141-16-5	*Aroclor 1232 (PCB)	ND		0.10
12672-29-6	*Aroclor 1248 (PCB)	ND		0.10
- -	*Aroclor 1262 (PCB)	ND		0.10
11100-14-4	*Aroclor 1268 (PCB)	ND		0.10
37324-23-5	BP-6 (PBB)	ND		0.050

SAMPLE ID TP-201 FRACTION 02A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

8001-35-2 *Toxaphene ND 0.10
COMMENTS RB IS NOT SUBTRACTED

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-7 FRACTION 03B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		0
541-73-1	1,3-Dichlorobenzene	ND		0
106-46-7	1,4-Dichlorobenzene	ND		0
95-50-1	1,2-Dichlorobenzene	ND		0
108-60-1	bis(2-Chloroisopropyl) ether	ND		0
821-64-7	N-Nitroso-di-n-propyl amine	ND		0
108-70-3	Hexachloroethane	ND		0
98-95-3	Nitrobenzene	ND		0
78-59-1	Isophorone	ND		0
111-91-1	bis(2-Chloroethoxy) methane	ND		0
120-82-1	1,2,4-Trichlorobenzene	ND		0
91-20-3	Naphthalene	220000	RB=1900J	3400
87-68-3	Hexachlorobutadiene	ND		0
77-47-4	Hexachlorocyclopentadiene	ND		0
91-58-7	2-Chloronaphthalene	ND		0
131-11-3	Dimethyl phthalate	ND		0
208-96-8	Acenaphthylene	ND		0
606-20-2	2,6-Dinitrotoluene	ND		0
83-32-9	Acenaphthene	ND		0
121-14-2	2,4-Dinitrotoluene	ND		0
86-73-7	Fluorene	ND		0
84-66-2	Diethyl phthalate	ND		0
7005-72-3	4-Chlorodiphenyl ether	ND		0
86-30-6	N-Nitrosodiphenyl amine	ND		0
122-66-7	1,2-Diphenylhydrazine	ND		0
101-55-3	4-Bromodiphenyl ether	ND		0
118-74-1	Hexachlorobenzene	ND		0
85-01-8	Phenanthrene	ND		0
120-12-7	Anthracene	ND		0
84-74-2	Di-n-butyl pthtalate	ND		0
206-44-0	Fluoranthene	ND		0
92-87-5	* Benzidine	ND		0
129-00-0	Pyrene	ND		0
85-68-7	Butyl benzyl phthalate	ND		0
56-55-3	Benzo (a) anthracene	ND		0
91-94-1	* 3,3'-Dichlorobenzidine	ND		0
218-01-9	Chrysene	ND		0
117-81-7	bis(2-ethylhexyl) phthalate	ND		0
117-84-0	Di-n-octyl phthalate	ND		0
205-99-2	Benzo (b) fluoranthene	ND		0
207-08-9	Benzo (k) fluoranthene	ND		0
50-32-8	Benzo (a) pyrene	ND		0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		0

Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-7 FRACTION 03A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 480

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		53
106-46-7	1,4-Dichlorobenzene	ND		53
95-50-1	1,2-Dichlorobenzene	ND		53
67-72-1	Hexachloroethane	ND		5.3
108-70-3	1,3,5-Trichlorobenzene	ND		5.3
120-82-1	1,2,4-Trichlorobenzene	ND		5.3
87-61-6	1,2,3-Trichlorobenzene	ND		5.3
87-68-3	Hexachlorobutadiene	ND		5.3
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		5.3
77-47-4	Hexachlorocyclopentadiene	ND		5.3
91-58-7	2-Chloronaphthalene	ND		110
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		5.3
608-68-8	Pentachlorobenzene	ND		5.3
319-84-6	a-BHC	ND		5.3
118-74-1	Hexachlorobenzene	ND		5.3
319-85-7	b-BHC	ND		5.3
58-89-9	g-BHC (lindane)	ND		5.3
82-68-8	Pentachloronitrobenzene	ND		5.3
319-86-8	d-BHC	ND		5.3
76-44-8	Heptachlor	ND		5.3
309-00-2	Aldrin	ND		5.3
1024-57-3	Heptachlor epoxide	ND		5.3
5103-74-2	g-Chlordane	ND		5.3
959-98-8	*Endosulfan I	ND		5.3
5103-71-9	a-Chlordane	ND		5.3
72-55-9	4,4'-DDE	ND		5.3
72-20-8	Endrin	ND		5.3
60-57-1	Dieldrin	ND		5.3
72-54-8	4,4'-DDD	ND		26
50-29-3	4,4'-DDT	ND		5.3
79-34-5	Hexabromobenzene	ND		5.3
72-43-5	Methoxychlor	ND		26
2385-85-5	Mirex	ND		5.3
53469-21-9	Aroclor 1242 (PCB)	ND		53
11097-69-1	Aroclor 1254 (PCB)	ND		53
11096-82-5	Aroclor 1260 (PCB)	ND		53
12674-11-1	*Aroclor 1016 (PCB)	ND		53
11104-28-2	*Aroclor 1221 (PCB)	ND		53
11141-16-5	*Aroclor 1232 (PCB)	ND		53
12672-29-6	*Aroclor 1248 (PCB)	ND		53
- -	*Aroclor 1262 (PCB)	ND		53
11100-14-4	*Aroclor 1268 (PCB)	ND		53
37324-23-5	BP-6 (PBB)	ND		26

SAMPLE ID TP-9-7 FRACTION 03A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

8001-35-2 *Toxaphene ND 53
COMMENTS MM=SAMPLE TURNED TO OIL, DM=DIL DUE TO MATRIX PROBLEM

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-1 FRACTION 04B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100 UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		110
541-73-1	1,3-Dichlorobenzene	ND		110
106-46-7	1,4-Dichlorobenzene	ND		110
95-50-1	1,2-Dichlorobenzene	ND		110
108-60-1	bis(2-Chloroisopropyl) ether	ND		110
821-64-7	N-Nitroso-di-n-propyl amine	ND		220
108-70-3	Hexachloroethane	ND		110
98-95-3	Nitrobenzene	ND		220
78-59-1	Isophorone	ND		110
111-91-1	bis(2-Chloroethoxy) methane	ND		220
120-82-1	1,2,4-Trichlorobenzene	ND		220
91-20-3	Naphthalene	1300	RB=63	110
87-68-3	Hexachlorobutadiene	ND		220
77-47-4	Hexachlorocyclopentadiene	ND		220
91-58-7	2-Chloronaphthalene	ND		220
131-11-3	Dimethyl phthalate	ND		220
208-96-8	Acenaphthylene	ND		110
606-20-2	2,6-Dinitrotoluene	ND		550
83-32-9	Acenaphthene	ND		110
121-14-2	2,4-Dinitrotoluene	ND		550
86-73-7	Fluorene	ND		110
84-66-2	Diethyl phthalate	ND		110
7005-72-3	4-Chlorodiphenyl ether	ND		110
86-30-6	N-Nitrosodiphenyl amine	ND		550
122-66-7	1,2-Diphenylhydrazine	ND		220
101-55-3	4-Bromodiphenyl ether	ND		220
118-74-1	Hexachlorobenzene	ND		110
85-01-8	Phenanthrene	ND		110
120-12-7	Anthracene	ND		110
84-74-2	Di-n-butyl pthtalate	ND		110
206-44-0	Fluoranthene	ND		110
92-87-5	* Benzidine	ND		1700
129-00-0	Pyrene	ND		110
85-68-7	Butyl benzyl phthalate	ND		110
56-55-3	Benzo (a) anthracene	ND		110
91-94-1	* 3,3'-Dichlorobenzidine	ND		1100
218-01-9	Chrysene	ND		110
117-81-7	bis(2-ethylhexyl) phthalate	ND		220
117-84-0	Di-n-octyl phthalate	ND		220
205-99-2	Benzo (b) fluoranthene	ND		220
207-08-9	Benzo (k) fluoranthene	ND		220
50-32-8	Benzo (a) pyrene	ND		220
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		550

SAMPLE ID TP-9-1 FRACTION 04B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		550
191-24-2	Benzo (g,h,i) perylene	ND		550

COMMENTS

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-1 FRACTION 04A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 1 UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND	LH ALL	0.11
106-46-7	1,4-Dichlorobenzene	ND		0.11
95-50-1	1,2-Dichlorobenzene	ND		0.11
67-72-1	Hexachloroethane	ND		0.011
108-70-3	1,3,5-Trichlorobenzene	0.074		0.011
120-82-1	1,2,4-Trichlorobenzene	ND		0.011
87-61-6	1,2,3-Trichlorobenzene	ND		0.011
87-68-3	Hexachlorobutadiene	ND		0.011
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		0.055
77-47-4	Hexachlorocyclopentadiene	ND	K	0.055
91-58-7	2-Chloronaphthalene	ND		0.22
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		0.011
608-68-8	Pentachlorobenzene	ND		0.011
319-84-6	a-BHC	ND		0.011
118-74-1	Hexachlorobenzene	ND		0.011
319-85-7	b-BHC	ND	K	0.030
58-89-9	g-BHC (lindane)	ND	K	0.030
82-68-8	Pentachloronitrobenzene	ND		0.011
319-86-8	d-BHC	ND		0.011
76-44-8	Heptachlor	ND		0.011
309-00-2	Aldrin	ND	K	0.030
1024-57-3	Heptachlor epoxide	ND		0.011
5103-74-2	g-Chlordane	ND		0.011
959-98-8	*Endosulfan I	ND		0.011
5103-71-9	a-Chlordane	ND		0.011
72-55-9	4,4'-DDE	ND		0.011
72-20-8	Endrin	ND		0.011
60-57-1	Dieldrin	ND	K	0.030
72-54-8	4,4'-DDD	ND		0.055
50-29-3	4,4'-DDT	ND		0.011
79-34-5	Hexabromobenzene	ND		0.011
72-43-5	Methoxychlor	ND		0.055
2385-85-5	Mirex	ND		0.011
53469-21-9	Aroclor 1242 (PCB)	ND		0.11
11097-69-1	Aroclor 1254 (PCB)	ND		0.11
11096-82-5	Aroclor 1260 (PCB)	ND		0.11
12674-11-1	*Aroclor 1016 (PCB)	ND		0.11
11104-28-2	*Aroclor 1221 (PCB)	ND		0.11
11141-16-5	*Aroclor 1232 (PCB)	ND		0.11
12672-29-6	*Aroclor 1248 (PCB)	ND		0.11
- -	*Aroclor 1262 (PCB)	ND		0.11
11100-14-4	*Aroclor 1268 (PCB)	ND		0.11
37324-23-5	BP-6 (PBB)	ND		0.055

SAMPLE ID TP-9-1 FRACTION 04A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

8001-35-2 *Toxaphene ND 0.11
COMMENTS MANY UnID PEAKS. LH=QC IND. LOW RECOVERY

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Received: 06/10/94

DNR Laboratory REPORT
Results by Sample

Work Order # 94-06-072

SAMPLE ID TP-9-2 FRACTION 05B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		0
541-73-1	1,3-Dichlorobenzene	ND		0
106-46-7	1,4-Dichlorobenzene	ND		0
95-50-1	1,2-Dichlorobenzene	ND		0
108-60-1	bis(2-Chloroisopropyl) ether	ND		0
821-64-7	N-Nitroso-di-n-propyl amine	ND		0
108-70-3	Hexachloroethane	ND		0
98-95-3	Nitrobenzene	ND		0
78-59-1	Isophorone	ND		0
111-91-1	bis(2-Chloroethoxy) methane	ND		0
120-82-1	1,2,4-Trichlorobenzene	ND		0
91-20-3	Naphthalene	290000	RB=1600J	2900
87-68-3	Hexachlorobutadiene	ND		0
77-47-4	Hexachlorocyclopentadiene	ND		0
91-58-7	2-Chloronaphthalene	ND		0
131-11-3	Dimethyl phthalate	ND		0
208-96-8	Acenaphthylene	ND		0
606-20-2	2,6-Dinitrotoluene	ND		0
83-32-9	Acenaphthene	ND		0
121-14-2	2,4-Dinitrotoluene	ND		0
86-73-7	Fluorene	ND		0
84-66-2	Diethyl phthalate	ND		0
7005-72-3	4-Chlorodiphenyl ether	ND		0
86-30-6	N-Nitrosodiphenyl amine	ND		0
122-66-7	1,2-Diphenylhydrazine	ND		0
101-55-3	4-Bromodiphenyl ether	ND		0
118-74-1	Hexachlorobenzene	ND		0
85-01-8	Phenanthrene	ND		0
120-12-7	Anthracene	ND		0
84-74-2	Di-n-butyl pthtalate	ND		0
206-44-0	Fluoranthene	ND		0
92-87-5	* Benzidine	ND		0
129-00-0	Pyrene	ND		0
85-68-7	Butyl benzyl phthalate	ND		0
56-55-3	Benzo (a) anthracene	ND		0
91-94-1	* 3,3'-Dichlorobenzidine	ND		0
218-01-9	Chrysene	ND		0
117-81-7	bis(2-ethylhexyl) phthalate	ND		0
117-84-0	Di-n-octyl phthalate	ND		0
205-99-2	Benzo (b) fluoranthene	ND		0
207-08-9	Benzo (k) fluoranthene	ND		0
50-32-8	Benzo (a) pyrene	ND		0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		0

SAMPLE ID TP-9-2 FRACTION 05B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		0
191-24-2	Benzo (g,h,i) perylene	ND		0

COMMENTS J:ESTIMATE. SAMPLE TURNED INTO 25 ML OF OIL.

ND = not detected at the specified detection limit.

* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-2 FRACTION 05A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 370

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		44
106-46-7	1,4-Dichlorobenzene	ND		44
95-50-1	1,2-Dichlorobenzene	ND		44
67-72-1	Hexachloroethane	ND		4.4
108-70-3	1,3,5-Trichlorobenzene	ND		4.4
120-82-1	1,2,4-Trichlorobenzene	ND		4.4
87-61-6	1,2,3-Trichlorobenzene	ND		4.4
87-68-3	Hexachlorobutadiene	ND		4.4
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		4.4
77-47-4	Hexachlorocyclopentadiene	ND		4.4
91-58-7	2-Chloronaphthalene	ND		89
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		4.4
608-68-8	Pentachlorobenzene	ND		4.4
319-84-6	a-BHC	ND		4.4
118-74-1	Hexachlorobenzene	ND		4.4
319-85-7	b-BHC	ND		4.4
58-89-9	g-BHC (lindane)	ND		4.4
82-68-8	Pentachloronitrobenzene	ND		4.4
319-86-8	d-BHC	ND		4.4
76-44-8	Heptachlor	ND		4.4
309-00-2	Aldrin	ND		4.4
1024-57-3	Heptachlor epoxide	ND		4.4
5103-74-2	g-Chlordane	ND		4.4
959-98-8	*Endosulfan I	ND		4.4
5103-71-9	a-Chlordane	ND		4.4
72-55-9	4,4'-DDE	ND		4.4
72-20-8	Endrin	ND		4.4
60-57-1	Dieldrin	ND		4.4
72-54-8	4,4'-DDD	ND		22
50-29-3	4,4'-DDT	ND		4.4
79-34-5	Hexabromobenzene	ND		4.4
72-43-5	Methoxychlor	ND		22
2385-85-5	Mirex	ND		4.4
53469-21-9	Aroclor 1242 (PCB)	ND		44
11097-69-1	Aroclor 1254 (PCB)	ND		44
11096-82-5	Aroclor 1260 (PCB)	ND		44
12674-11-1	*Aroclor 1016 (PCB)	ND		44
11104-28-2	*Aroclor 1221 (PCB)	ND		44
11141-16-5	*Aroclor 1232 (PCB)	ND		44
12672-29-6	*Aroclor 1248 (PCB)	ND		44
- -	*Aroclor 1262 (PCB)	ND		44
11100-14-4	*Aroclor 1268 (PCB)	ND		44
37324-23-5	BP-6 (PBB)	ND		22

SAMPLE ID TP-9-2 FRACTION 05A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

8001-35-2 *Toxaphene ND 44
COMMENTS MM=SAMPLE TURNED TO OIL, DM=DIL DUE TO MATRIX PROBLEM

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-4 FRACTION 06B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		0
541-73-1	1,3-Dichlorobenzene	ND		0
106-46-7	1,4-Dichlorobenzene	ND		0
95-50-1	1,2-Dichlorobenzene	ND		0
108-60-1	bis(2-Chloroisopropyl) ether	ND		0
821-64-7	N-Nitroso-di-n-propyl amine	ND		0
108-70-3	Hexachloroethane	ND		0
98-95-3	Nitrobenzene	ND		0
78-59-1	Isophorone	ND		0
111-91-1	bis(2-Chloroethoxy) methane	ND		0
120-82-1	1,2,4-Trichlorobenzene	ND		0
91-20-3	Naphthalene	ND		0
87-68-3	Hexachlorobutadiene	ND		0
77-47-4	Hexachlorocyclopentadiene	ND		0
91-58-7	2-Chloronaphthalene	ND		0
131-11-3	Dimethyl phthalate	ND		0
208-96-8	Acenaphthylene	ND		0
606-20-2	2,6-Dinitrotoluene	ND		0
83-32-9	Acenaphthene	ND		0
121-14-2	2,4-Dinitrotoluene	ND		0
86-73-7	Fluorene	ND		0
84-66-2	Diethyl phthalate	ND		0
7005-72-3	4-Chlorodiphenyl ether	ND		0
86-30-6	N-Nitrosodiphenyl amine	ND		0
122-66-7	1,2-Diphenylhydrazine	ND		0
101-55-3	4-Bromodiphenyl ether	ND		0
118-74-1	Hexachlorobenzene	ND		0
85-01-8	Phenanthrene	3200	J	1300
120-12-7	Anthracene	ND		0
84-74-2	Di-n-butyl pthtalate	ND		0
206-44-0	Fluoranthene	ND		0
92-87-5	* Benzidine	ND		0
129-00-0	Pyrene	ND		0
85-68-7	Butyl benzyl phthalate	ND		0
56-55-3	Benzo (a) anthracene	ND		0
91-94-1	* 3,3'-Dichlorobenzidine	ND		0
218-01-9	Chrysene	ND		0
117-81-7	bis(2-ethylhexyl) phthalate	ND		0
117-84-0	Di-n-octyl phthalate	ND		0
205-99-2	Benzo (b) fluoranthene	ND		0
207-08-9	Benzo (k) fluoranthene	ND		0
50-32-8	Benzo (a) pyrene	ND		0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		0

SAMPLE ID TP-9-4 FRACTION 06B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		0
191-24-2	Benzo (g,h,i) perylene	ND		0

COMMENTS J: ESTIMATE. SAMPLE TURNED INTO 12 ML OF OIL.
ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-4 FRACTION 06A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 250

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		25
106-46-7	1,4-Dichlorobenzene	ND		25
95-50-1	1,2-Dichlorobenzene	ND		25
67-72-1	Hexachloroethane	ND		2.5
108-70-3	1,3,5-Trichlorobenzene	ND		2.5
120-82-1	1,2,4-Trichlorobenzene	ND		2.5
87-61-6	1,2,3-Trichlorobenzene	ND		2.5
87-68-3	Hexachlorobutadiene	ND		2.5
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		2.5
77-47-4	Hexachlorocyclopentadiene	ND		2.5
91-58-7	2-Chloronaphthalene	ND		50
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		2.5
608-68-8	Pentachlorobenzene	ND		2.5
319-84-6	a-BHC	ND		2.5
118-74-1	Hexachlorobenzene	ND		2.5
319-85-7	b-BHC	ND		2.5
58-89-9	g-BHC (lindane)	ND		2.5
82-68-8	Pentachloronitrobenzene	ND		2.5
319-86-8	d-BHC	ND		250
76-44-8	Heptachlor	ND		250
309-00-2	Aldrin	ND		250
1024-57-3	Heptachlor epoxide	ND		250
5103-74-2	g-Chlordane	ND		250
959-98-8	*Endosulfan I	ND	K	700
5103-71-9	a-Chlordane	ND		250
72-55-9	4,4'-DDE	ND		250
72-20-8	Endrin	ND		250
60-57-1	Dieldrin	ND		250
72-54-8	4,4'-DDD	ND		1300
50-29-3	4,4'-DDT	ND	K	500
79-34-5	Hexabromobenzene	ND		250
72-43-5	Methoxychlor	ND		1300
2385-85-5	Mirex	ND		250
53469-21-9	Aroclor 1242 (PCB)	ND		2500
11097-69-1	Aroclor 1254 (PCB)	ND		2500
11096-82-5	Aroclor 1260 (PCB)	ND		2500
12674-11-1	*Aroclor 1016 (PCB)	ND		2500
11104-28-2	*Aroclor 1221 (PCB)	ND		2500
11141-16-5	*Aroclor 1232 (PCB)	ND		2500
12672-29-6	*Aroclor 1248 (PCB)	ND		2500
- -	*Aroclor 1262 (PCB)	ND		2500
11100-14-4	*Aroclor 1268 (PCB)	ND		2500
37324-23-5	BP-6 (PBB)	ND		1300

SAMPLE ID TP-9-4 FRACTION 06A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

8001-35-2	*Toxaphene	ND	2500

COMMENTS MM=SAMPLE TURNED TO OIL, DM=DIL DUE TO MATRIX PROBLEM

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Received: 06/10/94 Results by Sample

SAMPLE ID TP-01 FRACTION 07B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 1

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		1.1
541-73-1	1,3-Dichlorobenzene	ND		1.1
106-46-7	1,4-Dichlorobenzene	ND		1.1
95-50-1	1,2-Dichlorobenzene	ND		1.1
108-60-1	bis(2-Chloroisopropyl) ether	ND		1.1
821-64-7	N-Nitroso-di-n-propyl amine	ND		2.2
108-70-3	Hexachloroethane	ND		1.1
98-95-3	Nitrobenzene	ND		2.2
78-59-1	Isophorone	ND		1.1
111-91-1	bis(2-Chloroethoxy) methane	ND		2.2
120-82-1	1,2,4-Trichlorobenzene	ND		2.2
91-20-3	Naphthalene	ND		1.1
87-68-3	Hexachlorobutadiene	ND		2.2
77-47-4	Hexachlorocyclopentadiene	ND		2.2
91-58-7	2-Chloronaphthalene	ND		2.2
131-11-3	Dimethyl phthalate	ND		2.2
208-96-8	Acenaphthylene	ND		1.1
606-20-2	2,6-Dinitrotoluene	ND		5.5
83-32-9	Acenaphthene	ND		1.1
121-14-2	2,4-Dinitrotoluene	ND		5.5
86-73-7	Fluorene	ND		1.1
84-66-2	Diethyl phthalate	ND		1.1
7005-72-3	4-Chlorodiphenyl ether	ND		1.1
86-30-6	N-Nitrosodiphenyl amine	ND		5.5
122-66-7	1,2-Diphenylhydrazine	ND		2.2
101-55-3	4-Bromodiphenyl ether	ND		2.2
118-74-1	Hexachlorobenzene	ND		1.1
85-01-8	Phenanthrene	ND		1.1
120-12-7	Anthracene	ND		1.1
84-74-2	Di-n-butyl pthtalate	ND		1.1
206-44-0	Fluoranthene	ND		1.1
92-87-5	* Benzidine	ND		17
129-00-0	Pyrene	ND		1.1
85-68-7	Butyl benzyl phthalate	ND		1.1
56-55-3	Benzo (a) anthracene	ND		1.1
91-94-1	* 3,3'-Dichlorobenzidine	ND		11
218-01-9	Chrysene	ND		1.1
117-81-7	bis(2-ethylhexyl) phthalate	ND		2.2
117-84-0	Di-n-octyl phthalate	ND		2.2
205-99-2	Benzo (b) fluoranthene	ND		2.2
207-08-9	Benzo (k) fluoranthene	ND		2.2
50-32-8	Benzo (a) pyrene	ND		2.2
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		5.5

SAMPLE ID TP-01 FRACTION 07B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/08/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		5.5
191-24-2	Benzo (g,h,i) perylene	ND		5.5

COMMENTS

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Received: 06/10/94 Results by Sample

SAMPLE ID TP-01 FRACTION 07A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 1 UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		0.10
106-46-7	1,4-Dichlorobenzene	ND		0.10
95-50-1	1,2-Dichlorobenzene	ND		0.10
67-72-1	Hexachloroethane	ND		0.010
108-70-3	1,3,5-Trichlorobenzene	ND		0.010
120-82-1	1,2,4-Trichlorobenzene	ND		0.010
87-61-6	1,2,3-Trichlorobenzene	0.010	RB=0.010	0.010
87-68-3	Hexachlorobutadiene	ND		0.010
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		0.010
77-47-4	Hexachlorocyclopentadiene	ND		0.010
91-58-7	2-Chloronaphthalene	ND		0.20
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		0.010
608-68-8	Pentachlorobenzene	ND		0.010
319-84-6	a-BHC	ND		0.010
118-74-1	Hexachlorobenzene	ND		0.010
319-85-7	b-BHC	ND		0.010
58-89-9	g-BHC (lindane)	ND		0.010
82-68-8	Pentachloronitrobenzene	ND		0.010
319-86-8	d-BHC	ND		0.010
76-44-8	Heptachlor	ND		0.010
309-00-2	Aldrin	ND		0.010
1024-57-3	Heptachlor epoxide	ND		0.010
5103-74-2	g-Chlordane	ND		0.010
959-98-8	*Endosulfan I	ND		0.010
5103-71-9	a-Chlordane	ND		0.010
72-55-9	4,4'-DDE	ND		0.010
72-20-8	Endrin	ND		0.010
60-57-1	Dieldrin	ND		0.010
72-54-8	4,4'-DDD	ND		0.050
50-29-3	4,4'-DDT	ND		0.010
79-34-5	Hexabromobenzene	ND		0.010
72-43-5	Methoxychlor	ND		0.050
2385-85-5	Mirex	ND		0.010
53469-21-9	Aroclor 1242 (PCB)	ND		0.10
11097-69-1	Aroclor 1254 (PCB)	ND		0.10
11096-82-5	Aroclor 1260 (PCB)	ND		0.10
12674-11-1	*Aroclor 1016 (PCB)	ND		0.10
11104-28-2	*Aroclor 1221 (PCB)	ND		0.10
11141-16-5	*Aroclor 1232 (PCB)	ND		0.10
12672-29-6	*Aroclor 1248 (PCB)	ND		0.10
- -	*Aroclor 1262 (PCB)	ND		0.10
11100-14-4	*Aroclor 1268 (PCB)	ND		0.10
37324-23-5	BP-6 (PBB)	ND		0.050

SAMPLE ID TP-01 FRACTION 07A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/08/94 Category

8001-35-2	*Toxaphene	ND	0.10

COMMENTS RB IS NOT SUBTRACTED

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-01 FRACTION 07D TEST CODE W VOL NAME Volatile 8260/624 WATER
Date & Time Collected 06/08/94 Category

ANALYST WEI
ANALYZED 06/10/94
DILUTION 1

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
74-87-3	Chloromethane	ND		5.0
75-01-4	Vinyl chloride	ND		5.0
74-83-9	Bromomethane	ND		5.0
75-00-3	Chloroethane	ND		5.0
67-64-1	2-Propanone (Acetone)	30		25
75-35-4	1,1-Dichloroethene	ND		1.0
75-09-2	Methylene chloride	ND		5.0
75-15-0	Carbon Disulfide	ND		5.0
156-60-5	trans-1,2-Dichloroethene	ND		1.0
1634-04-4	Methyl Tert. Butyl Ether	ND		5.0
75-34-3	1,1-Dichloroethane	ND		1.0
78-93-3	2-Butanone (MEK)	ND		5.0
156-59-2	cis-1,2-Dichloroethene	ND		1.0
67-66-3	Chloroform	ND		1.0
71-55-6	1,1,1-Trichloroethane	ND		1.0
107-06-2	1,2-Dichloroethane	ND		1.0
71-43-2	Benzene	ND		1.0
56-23-5	Carbon tetrachloride	ND		1.0
78-87-5	1,2-Dichloropropane	ND		1.0
79-01-6	Trichloroethene	ND		1.0
75-27-4	Bromodichloromethane	ND		1.0
591-78-6	2-Hexanone	ND		5.0
10061-01-5	cis-1,3-Dichloropropene	ND		1.0
10061-02-6	trans-1,3-Dichloropropene	ND		1.0
108-88-3	Toluene	ND		1.0
79-00-5	1,1,2-Trichloroethane	ND		1.0
108-10-1	4-Methyl-2-Pentanone (MIBK)	ND		5.0
124-48-1	Dibromochloromethane	ND		1.0
106-93-4	1,2-Dibromoethane	ND		1.0
127-18-4	Tetrachloroethene	ND		1.0
108-90-7	Chlorobenzene	ND		1.0
100-41-4	Ethylbenzene	ND		1.0
108-38-3 & 106-42-3	m & p Xylene	ND		2.0
75-25-2	Bromoform	ND		1.0
100-42-5	Styrene	ND		1.0
95-47-6	o-Xylene	ND		1.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0

COMMENTS

ND = not detected at the specified detection limit.

 DNR Laboratory REPORT Work Order # 94-06-072
Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-6 FRACTION 08B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

ANALYST HO
ANALYZED 06/15/94
DILUTION 100

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
111-44-4	bis(2-Chloroethyl) ether	ND		0
541-73-1	1,3-Dichlorobenzene	ND		0
106-46-7	1,4-Dichlorobenzene	ND		0
95-50-1	1,2-Dichlorobenzene	ND		0
108-60-1	bis(2-Chloroisopropyl) ether	ND		0
821-64-7	N-Nitroso-di-n-propyl amine	ND		0
108-70-3	Hexachloroethane	ND		0
98-95-3	Nitrobenzene	ND		0
78-59-1	Isophorone	ND		0
111-91-1	bis(2-Chloroethoxy) methane	ND		0
120-82-1	1,2,4-Trichlorobenzene	ND		0
91-20-3	Naphthalene	36000	RE=305.J	560
87-68-3	Hexachlorobutadiene	ND		0
77-47-4	Hexachlorocyclopentadiene	ND		0
91-58-7	2-Chloronaphthalene	ND		0
131-11-3	Dimethyl phthalate	ND		0
208-96-8	Acenaphthylene	ND		0
606-20-2	2,6-Dinitrotoluene	ND		0
83-32-9	Acenaphthene	ND		0
121-14-2	2,4-Dinitrotoluene	ND		0
86-73-7	Fluorene	ND		0
84-66-2	Diethyl phthalate	ND		0
7005-72-3	4-Chlorodiphenyl ether	ND		0
86-30-6	N-Nitrosodiphenyl amine	ND		0
122-66-7	1,2-Diphenylhydrazine	ND		0
101-55-3	4-Bromodiphenyl ether	ND		0
118-74-1	Hexachlorobenzene	ND		0
85-01-8	Phenanthrene	ND		0
120-12-7	Anthracene	ND		0
84-74-2	Di-n-butyl pthtalate	ND		0
206-44-0	Fluoranthene	ND		0
92-87-5	* Benzidine	ND		0
129-00-0	Pyrene	ND		0
85-68-7	Butyl benzyl phthalate	ND		0
56-55-3	Benzo (a) anthracene	ND		0
91-94-1	* 3,3'-Dichlorobenzidine	ND		0
218-01-9	Chrysene	ND		0
117-81-7	bis(2-ethylhexyl) phthalate	ND		0
117-84-0	Di-n-octyl phthalate	ND		0
205-99-2	Benzo (b) fluoranthene	ND		0
207-08-9	Benzo (k) fluoranthene	ND		0
50-32-8	Benzo (a) pyrene	ND		0
193-39-5	Indeno (1,2,3-c,d) pyrene	ND		0

SAMPLE ID TP-9-6 FRACTION 08B TEST CODE BN NAME Base Neutral in Water
Date & Time Collected 06/09/94 Category

53-70-3	Dibenzo (a,h) anthracene	ND		0
191-24-2	Benzo (g,h,i) perylene	ND		0

COMMENTS J: ESTIMATE, FINAL VOL COULD NO BRING DOWN TO < 5 ML.
ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Received: 06/10/94 Results by Sample

SAMPLE ID TP-9-6 FRACTION 08A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

ANALYST TS ST
ANALYZED 06/15/94
DILUTION 1

UNITS ug/L ppb

CAS#	COMPOUND	RESULT	REMARK	REPORTED DETECTION LIMIT
541-73-1	1,3-Dichlorobenzene	ND		0.10
106-46-7	1,4-Dichlorobenzene	ND		0.10
95-50-1	1,2-Dichlorobenzene	ND		0.10
67-72-1	Hexachloroethane	ND		0.010
108-70-3	1,3,5-Trichlorobenzene	ND		0.010
120-82-1	1,2,4-Trichlorobenzene	ND		0.010
87-61-6	1,2,3-Trichlorobenzene	0.012	RB=0.010	0.010
87-68-3	Hexachlorobutadiene	ND		0.010
95-94-3	1,2,4,5-Tetrachlorobenzene	ND		0.010
77-47-4	Hexachlorocyclopentadiene	ND		0.010
91-58-7	2-Chloronaphthalene	ND		0.20
634-66-2	1,2,3,4-Tetrachlorobenzene	ND		0.010
608-68-8	Pentachlorobenzene	ND		0.010
319-84-6	a-BHC	ND		0.010
118-74-1	Hexachlorobenzene	ND		0.010
319-85-7	b-BHC	ND		0.010
58-89-9	g-BHC (lindane)	ND		0.010
82-68-8	Pentachloronitrobenzene	ND		0.010
319-86-8	d-BHC	ND		0.010
76-44-8	Heptachlor	ND		0.010
309-00-2	Aldrin	ND		0.010
1024-57-3	Heptachlor epoxide	ND		0.010
5103-74-2	g-Chlordane	ND		0.010
959-98-8	*Endosulfan I	ND		0.010
5103-71-9	a-Chlordane	ND		0.010
72-55-9	4,4'-DDE	ND		0.010
72-20-8	Endrin	ND		0.010
60-57-1	Dieldrin	ND		0.010
72-54-8	4,4'-DDD	ND		0.050
50-29-3	4,4'-DDT	ND		0.010
79-34-5	Hexabromobenzene	ND		0.010
72-43-5	Methoxychlor	ND		0.050
2385-85-5	Mirex	ND		0.010
53469-21-9	Aroclor 1242 (PCB)	ND		0.10
11097-69-1	Aroclor 1254 (PCB)	ND		0.10
11096-82-5	Aroclor 1260 (PCB)	ND		0.10
12674-11-1	*Aroclor 1016 (PCB)	ND		0.10
11104-28-2	*Aroclor 1221 (PCB)	ND		0.10
11141-16-5	*Aroclor 1232 (PCB)	ND		0.10
12672-29-6	*Aroclor 1248 (PCB)	ND		0.10
- -	*Aroclor 1262 (PCB)	ND		0.10
11100-14-4	*Aroclor 1268 (PCB)	ND		0.10
37324-23-5	BP-6 (PBB)	ND		0.050

SAMPLE ID TP-9-6 FRACTION 08A TEST CODE SC 3 NAME Scan 3 Water
Date & Time Collected 06/09/94 Category

8001-35-2	*Toxaphene ND		0.10

COMMENTS MM=NOT SOP, NH=NON-HOMOG, QC PROB, RB NOT SUBTRACTED

ND = not detected at the specified detection limit.
* Results and Det. Limit reported semi-quantitatively *

Environmental Response Div.

9406072
=======
THE FOLLOWING COMPOUNDS ARE TENTATIVELY IDENTIFIED THROUGH LIBRARY SEARCH.

-01:

- BENZENE, PROPYL
- BENZENE, 1-ETHYL-2-METHYL-
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,4-TRIMETHYL BENZENE
- 1,2,3-TRIMETHYL BENZENE
- BENZENE, BUTYL-
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, 4-ETHYL-1,2-DIMETHYL-
- BENZENE, (1-METHYLPROPYL)-
- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-
- BENZENE, 1-EHTYL-2,4-DIMETHYL-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-
- BENZENE, 2-BUTENYL-
- BENZENE, 2,4-DIMETHYL-1-(1-METHYLETYYL)-
- BENZENE, 1,3-DIETHYL-5-METHYL-

- INDANE

-02:

- BENZENE, PROPYL-
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,3 -TRIMETHYL BENZENE
- 1,2,4 -TRIMETHYL BENZENE
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, (1-METHYLPROPYL)-
- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 1-ETHYL-2,4-DIMETHYL-
- BENZENE, 1-ETHYL-2,3,-DIMETHYL-
- BENZENE, 1-METHYL-3-(1-METHYLETHYL)-
- BENZENE, 2-ETHENYL-1,4-DIMETHYL-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-

- INDANE

- HEXANEDIOIC ACID, DIOCTYL ESTER

-03:

- BENZENE, PROPYL-

Environmental Response Div.

- BENZENE, 1-ETHYL-2-METHYL-
- 1,2,3-TRIMETHYL BENZENE
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,4-TRIMETHYL BENZENE
- BENZENE, (2-METHYLPROPYL)-
- BENZENE, (1-METHYLPROPYL)-
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-
- BENZENE, 1-ETHYL-2,4-DIMETHYL-
- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 4-ETHYL-1,2-DIMETHYL-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-
- BENZENE, 1-METHYL-2-(1-METHYLETHYL)-
- BENZENE, PENTAMETHYL-

- INDANE
- 1H-INDEN-1-ONE, 2,3-DIHYDRO-
- 1H-INDENE, 2,3-DIHYDRO-4,7-DIMETHYL-

- NAPHTHALENE,1-METHYL-

-04:

- BENZENE, PROPYL-
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,3-TRIMETHYLBENZENE
- BENZENE, 1-ETHYL-2-METHYL-
- 1,2,4-TRIMETHYLBENZENE
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-
- BENZENE, (1-METHYLPROPYL)-
- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 2-ETHYL-2,4-DIMETHYL-
- BENZENE, 1-METHYL-2-(1-METHYLETHYL)-
- BENZENE, 1-ETHYL-2,4-DIMETHYL-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-
- BENZENE, 1,2,3,4-TETRAMETHYL-
- BENZENE, (1,1-DIMETHYLPROPYL)-
- BENZENE, PENTAMETHYL-
- BENZENE, ETHYL-1,2,4-TRIMETHYL-

- 1-BUTANAMINE, N-BUTYL-
- DECANE, 4-METHYL-
- DECANE, 3-METHYL-
- UNDECANE

- AZULENE
- 1H-INDENE,2,3-DIHYDRO-4,6-DIMETHYL-

Environmental Response Div.

- HEXADECANOIC ACID
- 9,17-OCTADECADIENAL, (Z)-
- OCTADECANOIC ACID

-05:

- BENZENE, PROPYL-
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,3-TRIMETHYLBENZENE
- 1,2,4-TRIMETHYLBENZENE
- 1,3,5-TRIMETHYLBENZENE
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, 1-METHYL-2-(1-METHYLETHYL)-
- BENZENE, (1-METHYLPROPYL)-
- BENZENE, 1-ETHYL-2,4-DIMETHYL-
- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-
- BENZENE, 4-ETHYL-1,2-DIMETHYL-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-
- BENZENE, 1-METHYL-4-(1-METHYLETHYL)-
- BENZENE, (1,1-DIMETHYLPROPYL)-
- BENZENE, 2,4-DIMETHYL-1-(1-METHYLETHYL)-
- BENZENE, PENTAMETHYL-

- NONANE, 3-METHYL-
- DECANE, 4-METHYL-
- UNDECANE
- CYCLOHEXANE, PROPYL-
- CYCLOHEXANE, BUTYL-
- PHTHALIC ANHYDRIDE
- 1H-INDENE, 2,3-DIHYDRO-4,7-DIMETHYL-
- 9,17-OCTADECADIENAL, (Z)-

- 9,12-OCTADECADIENOIC ACID, METHYL ESTER
- 10-OCTADECENOIC ACID, METHYL ESTER
- OCTADECANOIC ACID, METHYL ESTER

-06:

- BENZENE, PROPYL-
- BENZENE, 1-ETHYL-2-METHYL-
- 1,2,4-TRIMETHYLBENZENE
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,3-TRIMETHYLBENZENE
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, 4-ETHYL-1,2-DIMETHYL-
- BENZENE, (1-METHYLPROPYL)-

Environmental Response Div.

- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-

- UNDECANE
- DODECANE
- UNDECANE, 2,6-DIMETHYL-
- DODECANE, 2-METHYL-
- DECANE, 2,6,7-TRIMETHYL-
- TRIDECANE
- DODECANE, 3-METHYL-
- TRIDECANE, 3-METHYL-
- DODECANE, 2,6,11-TRIMETHYL-
- TETRADECANE
- PENTADECANE
- HEXADECANE
- HEPTADECANE
- PENTADECANE, 2,6,10,14-TETRAMETHYL-
- OCTADECANE
- NONADECANE
- EICOSANE
- EICOSANE, 2-METHYL-
- 5-EICOSENE, (E)-
- HEPTADECANE, 2,6,10,15-TETRAMETHYL-

- CYCLOHEXANE, (4-METHYLPENTYL)-
- OCTANE, 2-CYCLOHEXYL-
- CYCLOHEXANE, DECYL-
- DODECYLCYCLOHEXANE
- CYCLOHEXANE,1,1'-(1,4-BUTANEDIYL)BIS-

- INDANE
- TETRADECANE, 1-CHLORO-
- OCTADECANE, 1-CHLORO-
- TETRADECANOIC ACID, METHYL ESTER
- HEXADECANOIC ACID, METHYL ESTER
- 10-OCTADECENOIC ACID, METHYL ESTER
- OCTADECANOIC ACID, METHYL ESTER

-07:

- BENZENE, PROPYL-
- BENZENE, 1-ETHYL-4-METHYL-
- 1,2,4-TRIMETHYLBENZENE
- BENZENE, 1-ETHYL-2-METHYL-
- BENZENE,1-METHYL-3-PROPYL-
- BENZENE, (1-METHYLPROPYL)-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-
- BENZENE, 4-ETHYL-1,2-DIMETHYL-

Environmental Response Div.

- BENZENE, 1-ETHYL-2,4-DIMETHYL-
- BENZENE, 2-ETHYL-1,3-DIMETHYL-
- BENZENE, 1-METHYL-2-(1-METHYLETHYL)-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-
- BENZENE, (1,1-DIMETHYLPROPYL)-

- INDANE
- UNDECANE

-08:

- BENZENE, PROPYL-
- BENZENE, (1-METHYLETHYL)-
- 1,2,4-TRIMETHYLBENZENE
- BENZENE, 1-ETHYL-4-METHYL-
- BENZENE, BUTYL-
- BENZENE, (1-METHYLPROPYL)-
- 1,2,3-TRIMETHYLBENZENE
- BENZENE, 1-METHYL-3-PROPYL-
- BENZENE, 1-ETHYL-2,3-DIMETHYL-
- BENZENE, 4-ETHYL-1,2-DIMETHYL-
- BENZENE, 1-ETHYL-2,4-DIMETHYL-
- BENZENE, 1,2,4,5-TETRAMETHYL-
- BENZENE, 1-METHYL-2-(2-PROPENYL)-
- BENZENE, 2-BUTENYL-
- BENZENE, 1,4-DIETHYL-2-METHYL-
- BENZENE, (1,1-DIMETHYLPROPYL)-
- BENZENE, 2,4-DIMETHYL-1-(1-METHYLETHYL)-
- BENZENE, PENTAMETHYL-

- INDANE
- 1H-INDENE, 2,3-DIHYDRO-4,7-DIMETHYL-

MICHIGAN DEPARTMENT OF NATURAL RESOURCES	PROCEDURE ENVIRONMENTAL LABORATORY	NO: PD-13 DATE: Rev. 2/1/94

Subject: ***Laboratory Result Remark Codes***

A	value reported is the mean of two or more determinations.
C	value calculated from other independent parameters.
J	estimated value or value not accurate.
K	actual value is known to be less than the value given, i.e. substance, if present, is below detection limit.
L	actual value is known to be greater than the value given.
T	value reported is less than criteria of detection.
W	value observed is less than lowest value reportable under "T" code.
DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems.
HT	recommended laboratory holding time was exceeded before analysis.
LH	Q. C. indicated possible low recovery. Actual level may be higher.
LL	Q. C. indicated possible high recovery. Actual level may be lower.
MM	analytical method or matrix is not within SOP of this laboratory.
NC	no confirmation by a second technique.
NH	non-homogeneous sample made analysis of a representative sample questionable.
PI	possible interference may have affected the accuracy of the laboratory result.
QC	quality control problems exists.
RB	Reagent Blank. The level of reagent blank contamination is reported in the comment column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used.
ACC	laboratory accident resulted in no obtainable value.
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interference encountered during analysis resulted in no obtainable value.
IST	Improper sample collection/preservation. Sample not suitable for analysis.
NAV	requested analysis not available.
QNS	quantity not sufficient to perform requested analysis.
STR	settleable residue was not analyzed due to low suspended solids.

Approved by: _____ 2/2/94
George Su, Laboratory Director Date

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

VOLATILE ORGANIC COMPOUNDS DETECTION LIMITS

	COMPOUND NAME	DETECTION LIMIT WATER ug/L	DETECTION LIMIT SEDIMENT ug/Kg
1	Chloromethane	5	10
2	Vinyl Chloride	5	10
3	Bromomethane	5	10
4	Chloroethane	5	10
5	Acetone	5	10
6	1,1-Dichloroethene	2	5
7	Methylene Chloride	2	5
8	Carbon Disulfide	2	5
9	trans-1,2-Dichloroethene	2	5
10	Methyl Tertiary Butyl Ether (MTBE)	2	5
11	1,1-Dichloroethane	2	5
12	2-Butanone (MEK)	5	10
13	cis-1,2-Dichloroethene	2	5
14	Chloroform	2	5
15	1,1,1-Trichloroethane	2	5
16	1,2-Dichloroethane	2	5
17	Benzene	2	5
18	Carbon Tetrachloride	2	5
19	1,2-Dichloropropane	2	5
20	Trichloroethene	2	5
21	Bromodichloromethane	2	5
22	2-Hexanone	5	10
23	cis-1,3-Dichloropropene	2	5
24	trans-1,3-Dichloropropene	2	5
25	Toluene	2	5
26	1,1,2-Trichloroethane	2	5
27	4-Methyl-2-Pentanone (MIBK)	5	10
28	Dibromochloromethane	2	5
29	1,2-Dibromoethane	2	5
30	Tetrachloroethene	2	5
31	Chlorobenzene	2	5
32	Ethylbenzene	2	5
33	m/p-Xylene	2	5
34	Styrene	2	5
35	Bromoform	2	5
36	o-Xylene	2	5
37	1,1,2,2-Tetrachloroethane	2	5

Case Narrative for Albion/Sheridan Landfill

Volatile analysis of drum samples from Albion/Sheridan indicated the absence of chlorinated compounds. Samples TP-9-1, TP-9-2, TP-9-7, and TP-9-8 had similar characteristic GC patterns. This pattern indicated the presence of unidentified organic compounds. Mass spectra library search of these compounds tentatively identified these unknowns as substituted benzenes and cyclohexanes. The following is a list of unknowns tentatively identified by mass spectra library search:

1) 1-ethyl-2-methyl cyclohexane
2) propyl cyclohexane
3) butyl cyclohexane
4) isomers of ethyl-methyl benzenes
5) isomers of methyl-propyl benzenes
6) isomers of ethyl-dimethyl benzenes
7) isomers of methyl-methylethyl benzenes
8) 1,2,4,5-tetramethyl benzene
9) methyl-propenyl benzene
10) 1,2-diethyl benzene

Sample TP-9-4 and TP-101 had two separate and distinct phases. The upper phase had the appearance of an oil like substance while the lower phase had the appearance of a water like substance. Both phases were analyzed separately and the results reported out.

DNR ENVIRONMENTAL LABORATORY : RESULT REMARK CODES

A	value reported is the mean of two or more determinations.
C	value calculated from other independant parameters.
J	estimated value.
K	actual value is known to be less than the value given.
L	actual value is known to be greater than thhe value given.
T	value reported is less than the criteria of detection.
W	value observed is less than the lowest value reportable under "T" code.
DL	sample analyzed using a dilution(s).
DM	dilution required due to matrix problems.
HT	recommended laboratory holding time was exceeded before analysis.
LH	Q.C. indicated possible low recovery. Actual value may be higher.
LL	Q.C. indicated possible high recovery. Actual value may be lcwer.
MM	analytical method or matrix is not within SOP of this laboratory.
NC	no confirmation by a second technique.
NH	non-homoeneous sample made analysis of a representative sample questionable.
PI	possible interferance may have affected the accuracy of the laboratory result.
QC	quality control problems exist.
RB	Reagent Blank.The level of reagent blank contamination is reported in the lab code column and may be subtracted from the analyte value by the user.
ST	recommended sample collection/preservation technique not used.
ACC	laboratory accident resulted in no obtainable value.
FCN	free cyanide was not analyzed due to low level of total cyanide.
INT	interferance encountered during analysis resulted in no obtainable value.
IST	improper sample collection/preservaton. Sample not suitable for analysis
NAV	requested analysis not available.
QNS	quanity not sufficient to perform requested anlysis.
STR	settable residue was not analyzed due to low suspended solids.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-1

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/8/94

SAMPLE WT/VOL (g / ml): 1:50 dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	2-Hexanone	580	250	DL	Y
2	Toluene	1700	50	DL	Y
3	Ethylbenzene	2000	50	DL	Y
4	m/p-Xylene	7900	50	DL	Y
5	o-Xylene	4000	50	DL	Y
6	Isopropyl benzene	200	50	DL	Y
	n-Propylbenzene	680	50	DL	Y
8	1,3,5-Trimethyl benzene	1300	50	DL	Y
9	1,2,4-Trimethyl benzene	4900	50	DL	Y
10	Naphthalene	1400	50	DL	Y
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-2

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/8/94

SAMPLE WT/VOL (g / ml): 1:50K/5M dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Methyl Ethyl Ketone	2,000,000	250,000	DL	Y
2	Toluene	6,300,000	50,000	DL	Y
3	Ethylbenzene	12,000,000	5,000,000	DL	Y
4	m/p-Xylene	40,000,000	5,000,000	DL	Y
5	o-Xylene	15,000,000	5,000,000	DL	Y
6	Isopropyl benzene	1,300,000	50,000	DL	Y
	n-Propylbenzene	7,400,000	50,000	DL	Y
8	1,3,5-Trimethyl benzene	13,000,000	5,000,000	DL	Y
9	1,2,4-Trimethyl benzene	39,000,000	5,000,000	DL	Y
10	Naphthalene	6,100,000	50,000	DL	Y
11	2-Methyl Naphthalene	550,000	50,000	DL	Y
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-4 Liquid (lower) Layer

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/8/94

SAMPLE WT/VOL (g / ml): 1:100/10K dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Acetone	610,000	50,000	DL	Y
2	Ethylbenzene	1600	100	DL	Y
3	m/p-Xylene	8800	100	DL	Y
4	o-Xylene	6400	100	DL	Y
5	1,2,4-Trimethyl benzene	160	100	DL	Y
6	Naphthalene	120	100	DL	Y
	2-Methyl Naphthalene	540	100	DL	Y
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-4 Viscous (upper) Layer

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/8/94

SAMPLE WT/VOL (g / ml): 1:100/100K dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Ethylbenzene	* *			
2	m/p-Xylene	490,000	50,000	DL	Y
3	o-Xylene	350,000	50,000	DL	Y
4	Isopropyl benzene	* *			
5	n-Propylbenzene	* *			
6	1,3,5-Trimethyl benzene	* *			
7	1,2,4-Trimethyl benzene	* *			
8	Naphthalene	* *			
9	2- Methyl Naphthalene	* *			
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* * Comments: Due to matrix interference the internal standards performance was unsatisfactory. As a result no accurate quantitation of these compounds could be done. Only qualitative results are reported.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-5

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94

SAMPLE WT/VOL (g / ml): 1:10K/100K dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Acetone	6,500,000	500,000	DL	Y
2	2-Hexanone	110,000	50,000	DL	Y
3	Toluene	10,000	10,000	DL	Y
4	Ethylbenzene	19,000	10,000	DL	Y
5	m/p-Xylene	71,000	10,000	DL	Y
6	o-Xylene	320,000	10,000	DL	Y
	Isopropyl benzene	88,000	10,000	DL	Y
8	n-Propylbenzene	240,000	10,000	DL	Y
9	1,3,5-Trimethyl benzene	240,000	10,000	DL	Y
10	1,2,4-Trimethyl benzene	1,000,000	10,000	DL	Y
11	Naphthalene	14,000	10,000	DL	Y
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-6

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94

SAMPLE WT/VOL (g / ml): 1:10K/1M dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Acetone	340,000	50,000	DL	Y
2	Toluene	280,000	10,000	DL	Y
3	Ethylbenzene	390,000	10,000	DL	Y
4	m/p-Xylene	3,200,000	1,000,000	DL	Y
5	o-Xylene	7,800,000	1,000,000	DL	Y
6	Isopropyl benzene	5,900, 000	1,000,000	DL	Y
'	n-Propylbenzene	48,000,000	1,000,000	DL	Y
8	1,3,5-Trimethyl benzene	90,000,000	1,000,000	DL	Y
9	1,2,4-Trimethyl benzene	227,000,000	1,000,000	J,DL	Y
10	Naphthalene	6,500,000	1,000,000	DL	Y
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-7

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94

SAMPLE WT/VOL (g / ml): 1:50K/1:1M dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Toluene	280,000	50,000	DL	Y
2	Ethylbenzene	270,000	50,000	DL	Y
3	m/p-Xylene	2,200,000	50,000	DL	Y
4	o-Xylene	7,200,000	50,000	DL	Y
5	Isopropyl benzene	7,300,000	50,000	DL	Y
6	n-Propylbenzene	310,000,000	1,000,000	J,DL	Y
	1,3,5-Trimethyl benzene	280,000,000	1,000,000	J,DL	Y
8	1,2,4-Trimethyl benzene	730,000,000	1,000,000	J,DL	Y
9	Naphthalene	5,800,000	50,000	DL	Y
10	2 - Methyl Naphthalene	260,000	50,000	DL	Y
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-9-8

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94

SAMPLE WT/VOL (g / ml): 1:50K/1:1M dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Toluene	890,000	50,000	DL	Y
2	Ethylbenzene	1,900,000	50,000	DL	Y
3	m/p-Xylene	6,700,000	50,000	DL	Y
4	o-Xylene	5,100,000	50,000	DL	Y
5	Isopropyl benzene	3,400,000	50,000	DL	Y
6	n-Propylbenzene	180,000,000	1,000,000	DL	Y
7	1,3,5-Trimethyl benzene	280,000,000	1,000,000	J,DL	Y
8	1,2,4-Trimethyl benzene	550,000,000	1,000,000	J,DL	Y
9	Naphthalene	9,700,000	50,000	DL	Y
10	2 - Methyl Naphthalene	570,000	50,000	DL	Y
11	Methyl Ethyl Ketone (MEK)	300,000	50,000	DL	Y
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-101 water portion

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94

SAMPLE WT/VOL (g / ml): 1:1000 dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Acetone	47,000	5,000	DL	Y
2	Methyl Ethyl Ketone (MEK)	56,000	5,000	DL	Y
3	o-Xylene	2,600	1,000	DL	Y
4	Isopropyl benzene	1,100	1,000	DL	Y
5	n-Propylbenzene	8,200	1,000	DL	Y
6	1,3,5-Trimethyl benzene	18,000	1,000	DL	Y
7	1,2,4-Trimethyl benzene	50,000	1,000	DL	Y
8	Naphthalene	5,000	1,000	DL	Y
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

FIELD ID. or DESCRIPTION: TP-101 solvent portion

MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94

SAMPLE WT/VOL (g / ml): 1:10K/1M dilution ANALYST NAME: F. CALERA

% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	Benzene	10,000	10,000	DL	Y
2	Toluene	31,000	10,000	DL	Y
3	Ethylbenzene	44,000	10,000	DL	Y
4	m/p-Xylene	3,300,000	10,000	DL	Y
5	o-Xylene	9,100,000	1,000,000	DL	Y
6	Isopropyl benzene	6,800,000	1,000,000	DL	Y
7	n-Propylbenzene	55,000,000	1,000,000	DL	Y
8	1,3,5-Trimethyl benzene	110,000,000	1,000,000	DL	Y
9	1,2,4-Trimethyl benzene	260,000,000	1,000,000	J,DL	Y
10	Naphthalene	7,800,000	1,000,000	DL	Y
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Comments: Unidentified Peaks. Library Search tentatively identified the unknowns as substituted benzene. See attached narrative for details

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY
EPA 8260 VOLATILE ANALYSIS SAMPLE REPORT

SITE NAME: ALBION SHERIDAN LANDFILL
SITE LOCATION: ALBION
FIELD ID. or DESCRIPTION: TP - 201
MATRIX (SOIL/WATER): WATER ANALYSIS DATE: 6/9/94
SAMPLE WT/VOL (g / ml): 5 ml. ANALYST NAME: F. CALERA
% TOTAL SOLIDS (SOILS ONLY): LAB. LOG #: 94-06-058

#	COMPOUND NAME	CONCENTRATION (UG/L)	DETECTION LIMIT	LAB. CODES	DILUTION (Y/N)
1	none detected				N
2					
3					
4					
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MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

VOLATILE INTERNAL STANDARDS SUMMARY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

ANALYSIS DATE: 6/8/94 ANALYST NAME: F. CALERA

	IS1 (PFB) AREA	IS2 (DFB) AREA	IS3 (CBZ) AREA	IS4(DCB) AREA
DAILY STANDARD	730935	1328410	1185445	531272
UPPER LIMIT	1461870	2656820	2370890	1062544
LOWER LIMIT	365468	664205	592723	265636
FIELD SAMPLE ID.	XXXXXXX	XXXXXXX	XXXXXXX	XXXXX
SYSTEM BLANK 1	653044	1180641	1031818	474214
TP-9-1 (1:5K)	620471	1138875	1001851	493829
TP-9-2 (1:50K)	756486	1312485	1091070	459089
TP-9-1 (1:50)	790198	1402846	1216790	515453
TP-9-1 (1:50) RE	785164	1351224	1184464	515632
TP-9-2 (1:5M)	797826	1393649	1229137	539084
TP-9-4 LOWER 1:10K	947916	1574788	1343989	589190
TP-9-4 UPPER 1:0.1M	834752	1423488	1231808	553000
TP-9-4 LOWER 1:100	804069	1403265	1210864	523174

INTERNAL STANDARDS

IS1 (PFB) = PENTAFLUOROBENZENE

IS2 (DFB) = 1,4-DIFLUOROBENZENE

IS3 (CBZ) = CHLOROBENZENE-d5

IS4(DCB) = DICHLOROBENZENE-d4

* = VALUES OUTSIDE OF QC LIMITS

AREA UPPER/LOWER CONTROL LIMIT = +100/- 50% OF INTERNAL STANDARD

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

VOLATILE INTERNAL STANDARDS SUMMARY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

ANALYSIS DATE: 6/9/94 ANALYST NAME: F. CALERA

	IS1 (PFB) AREA	IS2 (DFB) AREA	IS3 (CBZ) AREA	IS4(DCB) AREA
DAILY STANDARD	810272	1394967	1211835	543777
UPPER LIMIT	1620544	2789934	2423670	1087554
LOWER LIMIT	405136	697484	605918	271889
FIELD SAMPLE ID.	XXXXXXX	XXXXXXX	XXXXXXX	XXXXX
SYSTEM BLANK 1	819329	1412296	1220300	552408
TP-9-5 (1:10K)	729065	1236109	1098381	508046
TP-9-6 (1:10K)	785360	1346282	1186577	42002*
TP-101 (1:10K) SOLV	776249	1328357	1166507	38101*
TP-101 (1:1K) WATER	882673	1551135	1319965	578617
TP-9-5 (1:100K)	849048	1469504	1231241	550515
TP-9-6 (1:1M)	838130	1467002	1237130	542435
TP-101 (1:1M)	816260	1441798	1236245	531653
TP-9-7 (1:50K)	862098	1517041	1263262	502882
TP-9-8 (1:50K)	858858	1496455	1252103	507552
TP-9-7 (1:1M)	903734	1568046	1350702	549434
TP-9-8 (1:1M)	923159	1608935	1384385	561002
MS TP-9-5 (1:100K)	913046	1586950	1392544	618478
MSD TP-9-5 (1:100K)	911162	1567130	1373628	604150
TP-201	958335	1627991	1403586	633731
TP-9-4 (1:1000)	758062	1289723	198269*	6130*
SYSTEM BLANK 2	920942	1597752	1382598	627039

INTERNAL STANDARDS

IS1 (PFB) = PENTAFLUOROBENZENE

IS2 (DFB) = 1,4-DIFLUOROBENZENE

IS3 (CBZ) = CHLOROBENZENE-d5

IS4(DCB) = DICHLOROBENZENE-d4

* = VALUES OUTSIDE OF QC LIMITS

AREA UPPER/LOWER CONTROL LIMIT = +100/- 50% OF INTERNAL STANDARD

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

WATER VOLATILE SYSTEM MONITORING COMPOUNDS RECOVERY

SITE NAME : ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

ANALYSIS DATE: 6/8/94 ANALYST NAME: F. Calera

FIELD SAMPLE ID.	SMC1 (DCE) 76-114	SMC2 (TOL) 88-110	SMC3 (BFB) 86-115	TOTAL OUT
SYSTEM BLANK 1	98	103	104	
TP-9-1 (1:5K)	136*	105	104	1
TP-9-2 (1:50K)	136*	108	110	1
TP-9-1 (1:50)	131*	106	99	1
TP-9-1 (1:50) RE	136*	105	99	1
TP-9-2 (1:5M)	131	108	100	1
TP-9-4 LOWER 1:10K	125*	108	100	1
TP-9-4 UPPER 1:0.1M	130*	107	101	1
TP-9-4 LOWER 1:100	131*	106	99	1

SYSTEM MONITORING COMPOUNDS

SMC1 (DCE) = 1,2-DICHLOROETHENE-d4

SMC2 (TOL) = TOLUENE-d8

SMC3 (BFB) = BROMOFLUOROBENZENE

* = INDICATES VALUES OUTSIDE QC LIMITS

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

WATER VOLATILE SYSTEM MONITORING COMPOUNDS RECOVERY

SITE NAME : ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

ANALYSIS DATE: 6/9/94 ANALYST NAME: F. Calera

FIELD SAMPLE ID.	SMC1 (DCE) 76-114	SMC2 (TOL) 88-110	SMC3 (BFB) 86-115	TOTAL OUT
SYSTEM BLANK 1	103	101	101	
TP-9-5 (1:10K)	102	100	103	
TP-9-6 (1:10K)	98	100	77*	1
TP-101 (1:10K) SOLV	99	100	77*	1
TP-101 (1:1K) WATER	97	102	99	
TP-9-5 (1:100K)	97	104	100	
TP-9-6 (1:1M)	99	103	99	
TP-101 (1:1M) SOLV	98	102	98	
TP-9-7 (1:50K)	97	103	98	
TP-9-8 (1:50K)	95	104	99	
TP-9-7 (1:1M)	95	101	97	
TP-9-8 (1:1M)	94	100	97	
MS TP-9-5 (1:100K)	94	100	99	
MSD TP-9-5 (1:100K)	94	100	97	
TP-201	93	101	99	
TP-9-4 (1:1000)	91	561*	31*	2
SYSTEM BLANK 2	94	100	98	

SYSTEM MONITORING COMPOUNDS

SMC1 (DCE) = 1,2-DICHLOROETHENE-d4

SMC2 (TOL) = TOLUENE-d8

SMC3 (BFB) = BROMOFLUOROBENZENE

* = INDICATES VALUES OUTSIDE QC LIMITS

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL RESPONSE DIVISION - MOBILE LABORATORY

SEDIMENT VOLATILE MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SITE NAME: ALBION SHERIDAN LANDFILL

SITE LOCATION: ALBION

MATRIX SPIKE ID.: TP-9-5

ANALYSIS DATE: 6/9/94 ANALYST NAME: F. CALERA

MATRIX SPIKE RECOVERY

COMPOUND NAME	SPIKE ADDED (ug / L)	SAMPLE CONC. (ug / L)	MS CONC. (ug / L)	MS REC. %	QC. LIMITS REC.
1,1-DICHLOROETHENE	50		44.00	88	59 - 172
BENZENE	50		48.00	96	66 - 142
TRICHLOROETHENE	50		38.00	76	62 - 137
TOLUENE	50		49.00	98	59 - 139
CHLOROBENZENE	50		53.00	106	60 - 133

MATRIX SPIKE DUPLICATE RECOVERY

COMPOUND NAME	SPIKE ADDED (ug / L)	SAMPLE CONC. (ug / L)	MS CONC. (ug / L)	MS REC. %	QC. LIMITS REC.
1,1-DICHLOROETHENE	50		48.00	96	59 - 172
BENZENE	50		51.00	102	66 - 142
TRICHLOROETHENE	50		41.00	82	62 - 137
TOLUENE	50		53.00	106	59 - 139
CHLOROBENZENE	50		56.00	112	60 - 133

MS/MSD PRECISION

COMPOUND NAME	MS/MSD RPD %	QC, LIMITS RPD
1,1-DICHLOROETHENE	8.7	22
BENZENE	6.1	21
TRICHLOROETHENE	7.6	24
TOLUENE	7.8	21
CHLOROBENZENE	5.5	21

* INDICATES VALUE OUTSIDE QC LIMITS