

154336

FY92 SCHEDULE FOR PA&SI Training Course

SESSION	DATE	LOCATION	REGION
1	Week of 11/18	Dallas, TX	6
2	Week of 12/9	Boston, MA	1
3	January	New York, NY	2
4	January	Chicago, IL	5
5	April	Atlanta, GA	4
6	April	Kansas City, KS	7
7	June	Philadelphia, PA	3
8	June	Denver, CO	8
9	August	San Francisco, CA	9
10	August	Seattle, WA	10

AR100343

EASTERN MARYLAND WOOD TREATMENT (MD-242)

Report accepted  
as is. EPA ORIGINAL  
will obtain (REC)  
the additional  
material from  
EPA toxicology  
LAE/LS  
4/29/91

1. Page 3, last paragraph

The results of January 10, 1990 and February 28, 1990 samples are included.

2. Section 3.1

The operating municipal well fields are all within the Federalsburg city limits. Well #3 is 10,000 feet to the northeast, well #5 is 11,500 feet to the northeast and well #7 is 7600 feet to the northeast from the site. Only current criteria have been evaluated in this report. The new criteria will be utilized when they are in effect.

3. Section 3.6

The mean annual lake evaporation is readily determined by subtracting the net annual precipitation for the area (4.08") from the normal precipitation (44.83"). The resulting number, 40.75", is the mean annual lake precipitation. These values were obtained from the State Climatology Office.

4. Section 5.8.1

The concentrations units of the PAHs, as indicated in Figures 5 and 6, are expressed as "ion flux counts" which are measurements based upon RELATIVE concentrations of the compounds detected. The flux levels, from Figures 4 through 7, are presented as contours of the orders of magnitude differentiated by the flux. Following is the brief discussion of the techniques:

As volatiles (and small PAHs such as the naphthalenes) emanate from their source within the soil (or groundwater), the migration pathways of their vapors are affected by atmospheric and soil conditions present at the time. These conditions cause the concentrations of the vapors to fluctuate. The result of these conditions are to prevent ABSOLUTE measurements of contamination concentrations at any one time. The best that can be done here is to measure the relative concentrations of the compounds through a statistical approach (the time-weighted technique) by use of a collection devise.

AR100344

## EASTERN MARYLAND WOOD TREATMENT (MD-242)

A collecting device is placed on (or in) the ground. This device contains an absorbing unit which is capable of trapping different vapors that come into contact with the unit. After a specified period of time, the collecting device is removed, and the trapping absorbent unit is degassed in a vacuum. The degassed compounds are then identified -- usually with a mass spectrometer. The measurement is presented as the number of ions of a compound per unit time (a "flux rate").

From Figures 5 and 6, it can be seen that the background levels of the PAHs range from 0 to 15 ion counts. "High" levels, as expressed in the report (Section 5.8.1), and as seen on these two figures, are those areas having ion counts that are two to three orders of magnitude greater than background.

### 5. Section 5.8.5

There is a typographical error in the heading of this Section. The heading should read "Trichloroethene (TCE)".

### 6. Section 6.0

As of November, 1990, a remediation plan has been submitted, by the consultants of EMWT, which is currently under review by the MDE. The State will notify the EPA regarding future developments of the remediation operations.

This facility is a State RCRA lead site. It must be stressed that EMWT is under a court order to remediate the site, and that the MDE is acting as the court's representative to oversee that clean-up. Failure to comply to the court order is contempt of court and is punishable by a fine. Based on this evaluation, the site is recommended for a "No Further Remedial Action Planned" (NFRAP) status under CERCLA. However, should the status of the remediation efforts change and the PRP fail to continue their remediation under the agreement, the site will be re-evaluated under CERCLA.

AR100345





STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration  
201 W. Preston Street  
J. Mehsen Joseph, Ph.D., Director

MD. Dept. of Environment  
HSWMA  
2500 Broening Highway  
Baltimore, MD 21224

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

WVLE NUMBER AQ01109002 COLLECTOR Anthony Queen Dorchester  
SOURCE OF SAMPLE Eastern Maryland Wastewater Treatment Co.  
(Include Address) Clark's Cunningham Road, Federal Springs  
SAMPLE TYPE: Community  Noncommunity  Domestic  STP Station   
Observation Well MW2 Stream  Tidal Waters  Industrial Effluent   
Other (Specify) \_\_\_\_\_  
Preservative Used HCL 1:1 and ice

IMPORTANT: First time sampled \_\_\_\_\_ Last known sampling date \_\_\_\_\_  
Reason for submitting sample: Survey \_\_\_\_\_ Suspected Petroleum Contamination \_\_\_\_\_  
Suspected Industrial Chemical Contamination \_\_\_\_\_ Other (Specify) \_\_\_\_\_

CHAIN OF CUSTODY: From: \_\_\_\_\_ To: \_\_\_\_\_

REMARKS: pH 5.31 - Conductivity 99 - water temp 13.0  
Depth to water 4.37 ft - well depth 24.71 ft

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
											0	1	1	0	9	0				
TRANS TYPE			COUNTY				PLANT NO.				SAMPLING STATION				DATE COLLECTED				CARD NO.	

FIELD pH 5.31 FIELD RESID. CHLORINE: FREE \_\_\_\_\_ TOTAL \_\_\_\_\_ Time \_\_\_\_\_

Purgeable Halocarbons (EPA 601)	Concentration	Purgeable Halocarbons (EPA 601)	Concentration	Other Purgeables	Concentration
Chloromethane	<5	trans-1,3-Dichloropropene	<1	Benzene	<1
Bromomethane	<1	Trichloroethene	↓	Toluene	↓
Dichlorodifluoromethane	↓	Dibromochloromethane	↓	Ethylbenzene	↓
Vinyl chloride	↓	1,1,2-Trichloroethane	↓	Total Xylenes	<2
Chloroethane	↓	cis-1,3-Dichloropropene	↓	Total Purgeable Hydrocarbons	↓
Methylene chloride	↓	2-Chloroethylvinylether	<10	Tetrahydrofuran	↓
Trichlorofluoromethane	↓	Bromoform	<1	(2-Butanone MEK)	↓
1,1-Dichloroethane	↓	1,1,2,2-Tetrachloroethane	↓	Methylisobutylketone (MIBK)	↓
1,1-Dichloroethane	↓	Tetrachloroethene	↓	Acrolein	↓
trans-1,2-Dichloroethane	↓	Chlorobenzene	↓	Acrylonitrile	↓
Chloroform	↓	Total Trihalomethanes	↓	Carbon Disulfide	↓
1,2-Dichloroethane	↓	Other Purgeable Organics:		Vinyl Acetate	↓
1,1,1-Trichloroethane	↓			Acetone	↓
Carbon Tetrachloride	↓			2-Hexanone	↓
Bromodichloromethane	↓			Styrene	↓
1,2-Dichloropropane	↓			isopropyl ether	↓

AR100347









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DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration  
201 W. Preston Street

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MD. Dept. of Environment  
HSWMA  
2500 Broening Highway  
Baltimore, MD 21224

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

WUE NUMBER A001109007 COLLECTOR Anthony Queen Dorchester County

SOURCE OF SAMPLE Eastern Maryland Wood Treatment Co.  
(Include Address) Clarks Cornerhouse Road, Federalsburg

SAMPLE TYPE: Community  Noncommunity  Domestic  STP Station

Observation Well MW17 Stream  Tidal Waters  Industrial Effluent

Other (Specify) \_\_\_\_\_

Preservative Used HCL 1:1 and ice

IMPORTANT: First time sampled YES Last known sampling date \_\_\_\_\_

Reason for submitting sample: Survey  Suspected Petroleum Contamination

Suspected Industrial Chemical Contamination  Other (Specify) \_\_\_\_\_

CHAIN OF CUSTODY: From: \_\_\_\_\_ To: \_\_\_\_\_

REMARKS: pH 5.29 - Conduct 208 - water temp 11.0

Depth to water 4.89 ft - Total well depth 16.85 ft

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
											0	1	1	0	9	0				
TRANS TYPE			COUNTY				PLANT NO.				SAMPLING STATION				DATE COLLECTED				CARD NO.	

20	21	22	23	24	25	26
FIELD PH			FIELD RESID. CHLORINE: FREE		TOTAL	Time

Purgeable Halocarbons (EPA 601) 601 Other Purgeables

Chloromethane	<1	trans-1,3-Dichloropropene	<1	Benzene	<1
Bromomethane	<1	Trichloroethene	<1	Toluene	<1
Dichlorodifluoromethane	<1	Dibromochloromethane	<1	Ethylbenzene	<1
Vinyl chloride	<1	1,1,2-Trichloroethane	<1	Total Xylenes	<2
Chloroethane	<1	cis-1,3-Dichloropropene	<1	Total Purgeable Hydrocarbons	9
Methylene chloride	<1	2-Chloroethylvinylether	<1	Tetrahydrofuran	9
Trichlorofluoromethane	<1	Bromoform	<1	(2-Butanone MEK)	N/A
1,1-Dichloroethene	<1	1,1,2,2-Tetrachloroethane	<1	Methylisobutyketone (MIBK)	<1
1,1-Dichloroethane	<1	Tetrachloroethene	<1	Acrolein	<1
trans-1,2-Dichloroethene	<1	Chlorobenzene	<1	Acrylonitrile	<1
Chloroform	<1	Total Trihalomethanes	<1	Carbon Disulfide	<1
1,2-Dichloroethane	<1	Other Purgeable Organics:		Vinyl Acetate	<1
1,1,1-Trichloroethane	<1			Acetone	3
Carbon Tetrachloride	<1			2-Hexanone	N/A
Bromodichloromethane	<1			Styrene	<1
1,2-Dichloropropane	<1				

ARI00352







STATE OF MARYLAND  
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HSWMA  
2500 Broening Highway  
Baltimore, MD 21224

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

FILE NUMBER AQ01109011 COLLECTOR Anthony Queen Dorchester County

SOURCE OF SAMPLE Eastern Maryland Wood Treatment  
(Include Address) Clarks Canninghouse Rd. Federalsburg

SAMPLE TYPE: Community  Noncommunity  Domestic  STP Station   
Observation Well MW10 Stream  Tidal Waters  Industrial Effluent   
Other (Specify) \_\_\_\_\_  
Preservative Used HCL 1:1 and ice

IMPORTANT: First time sampled  Last known sampling date \_\_\_\_\_  
Reason for submitting sample: Survey  Suspected Petroleum Contamination   
Suspected Industrial Chemical Contamination  Other (Specify) \_\_\_\_\_

CHAIN OF CUSTODY: From: \_\_\_\_\_ To: \_\_\_\_\_

REMARKS: PH 5.45 - Conduct 115 - water temp 90  
Depth to water 12.41 ft - well depth 23.43

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
											0	1	1	0	9	0				
TRANS TYPE			COUNTY				PLANT NO.				SAMPLING STATION				DATE COLLECTED				CARD NO.	

FIELD PH    FIELD RESID. CHLORINE: FREE   TOTAL   Time

Purgeable Halocarbons (EPA 601)

Chloromethane	<5
Bromomethane	<1
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethane	
1,1-Dichloroethane	
trans-1,2-Dichloroethane	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	<10
Bromoform	<1
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	
Other Purgeable Organics:	N.D.

Other Purgeables

Benzene	<1
Toluene	
Ethylbenzene	
Total Xylenes	<2
Total Purgeable Hydrocarbons	
Tetrahydrofuran	N.D.
(2-Butanone MEK)	
Methylisobutylketone (MIBK)	
Acrolein	
Acrylonitrile	
Carbon Disulfide	
Vinyl Acetate	
Acetone	
2-Hexanone	
Styrene	

AR100355







STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston St.  
 P.O. Box 2355, Baltimore, Maryland 21203  
 J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
 Organic Analysis Report Form

Priority \_\_\_\_\_

Collector P. Quinn 11:15-12:27 90  
Name/Time/Date

Sample Source Eastern Maryland  
Treatment Co. Pesticides

Sample ID No. AR000079005

Preservative Used None

Sample Alert 11:20 AM 11/1

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: **RECEIVED**

Chain of Custody Sample Possession

From: \_\_\_\_\_  
Name/Time/Date

To: MAY 8 1990  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: GROUNDWATER AND SPECIAL INVESTIGATION  
Name/Time/Date (C/O)

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of the following:

GC Analysis indicates the presence of the following PCB/Pesticides:

DL = 3.4 ppb as Naphthalene

No PCB or Pesticide detected  
DL = 0.026 ppb as Lindane  
DL = 1.4 ppb as DCS 101b

*Handwritten notes:*  
 11/1  
 Mich. 11:20  
 8270  
 Phenols  
 penta  
 Detect

AR100359

Section Chief: \_\_\_\_\_

Date: 5-20-90 Verified By: 11

Authorized By: \_\_\_\_\_



STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehser Joseph, Ph.D., Director

LAB. NO. 770013

HAZARDOUS WASTE LABORATORY  
Organic Analysis Report Form

Priority \_\_\_\_\_

Collector William Joseph 11/11 (227-90)  
Name/Time/Date

Sample Source Eastern Maryland Waste Treatment  
Co. Landfills, Co.

Sample ID No. A000279004

Preservative Used TPE

Sample Alert W11 M102

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

**RECEIVED**

Chain of Custody Sample Possession

MAY 8 1990

From: \_\_\_\_\_  
Name/Time/Date

To: GROUNDWATER AND DECEMAL

From: \_\_\_\_\_  
Name/Time/Date

To: INVESTIGATION DIVISION

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity;

Priority Pollutant Scan;

PCB/Pesticides;

Identify/Compare

GC/MS analysis indicates the presence of  
the following:

No extractable priority pollutant  
detected  
DL = 3.3 ppb as pentachloro

GC Analysis indicates the presence of  
the following PCB/Pesticides:

No PCB or Pesticides detected  
DL = 0.025 ppb as lindane  
DL = 1.4 ppb as PCB 1016

Section Chief: \_\_\_\_\_

Date: 4-30-90 Verified By: 41

Authorized By: AR100361





STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ANTHONY QUINN 7/15/122790  
Name/Time/Date

Sample Source Excavation/Wharf/Industrial/Trucks

Sample ID No. AD 02 279001

Preservative Used T

Sample Alert WAD #3

**RECEIVED**

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_ **MAY 8 1990**

Chain of Custody Sample Possession

**GROUNDWATER AND SPECIAL INVESTIGATION DIVISION**

From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of the following:

No extractable priority pollutants detected.  
DL = 3.4 ppb as Naphthalene

GC Analysis indicates the presence of the following PCB/Pesticides:

No PCB or Pesticides detected.  
DL = 0.025 ppb as Lindane.  
DL = 1.4 PPh as PCB 1016

Section Chief: JC

Date: 5-8-90 Verified By: Ji

Authorized By: **ART00363**

RECEIVED

MAR 29 1990

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehnen Joseph, Ph.D., Director

Lab No. Date Received

0000002 3-2 3

Do not write above this line.

WATER ANALYSIS

Bottle Number: A 022790 Name: Eastern Maryland Wood County: Queen

Source of Sample: Clark Cunningham Road, Fellsburg Street: Clark Cunningham Road Town or City: Fellsburg Collector: 1990 (include telephone Number)

Sample Types (Circle):  
Drinking Water  
Landfill  
Stream  
Other  
Community (Public Treated)  
Non-Community (Pub. Untreated)  
Private  
Other  
Emergency Routine Recheck

Remarks: Monitoring well #3 - HSWMA

County: 00 Plant No.: 00 Sampling Station: MW03 Date Collected: 022790 Time: 0745 Iced:  Acid:  Type of Acid: HNO3

Field Data: pH: 5.9 Chlorine Residual: 00 Free: 00 Total: 00 Specific Conductance: 120

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403	5.9	Arsenic	01002	KA001
Alkalinity (Total)	00410		Barium	01007	001
pH*, Ca CO <sub>3</sub> SAT.	70311		Cadmium	01027	KA001
Alkalinity, Ca CO <sub>3</sub> SAT.	74023		Chromium	01034	001
Hardness	00900		Lead	01051	KA010
Ammonia-N	00608		Mercury	71900	KA0005
Nitrate-Nitrate N	00630		Selenium	01147	
Nitrite N	00615		Silver	01077	
MBAS	38260				
Chloride	00940		Aluminum	01105	
Fluoride	00951		Calcium	00916	
Color*	00081		Copper	01042	KA005
Turbidity*	00076		Iron	01045	
Conductance*, SPEC	00095		Magnesium	00927	
Sulfate	00945		Manganese	01055	
Total Solids	00500		Nickel	01067	
Dissolved Solids	70300		Potassium	00937	
			Sodium	00929	115
			Zinc	01092	

AR100364

\*Results reported in units, all others in milligrams per liter (ppm)

Asoka I. Katumuluwa

Date Received: MAR 22 1990 Date Reported: MAR 22 1990 Chemist: Asoka I. Katumuluwa

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston St.  
 P.O. Box 2355, Baltimore, Maryland 21203  
 J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
 Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ANTHONY J. HEN 9:10/11/710  
Name/Time/Date

Sample Source Eastern Maryland Lead Treatment Company, Annapolis?

Sample ID No. RG 02 279002

Preservative Used TCF

Sample Alert MW/4 # MW 4

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

RECEIVED

MAY 8 1990

Chain of Custody Sample Possession

From: \_\_\_\_\_  
Name/Time/Date

To: GROUNDWATER AND SPECIAL ANALYSIS DIVISION  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of the following:

No detectable polycyclic aromatic hydrocarbons  
DL = 3.2 ppb as naphthalene

GC Analysis indicates the presence of the following PCB/Pesticides:

No PCB or Pesticides detected.  
DL = 0.025 ppb as Lindane  
DL = 1.4 ppb as ~~PCB~~ PCB 1016

ART00365

Section Chief: \_\_\_\_\_

Date: 5-11-90 Verified By: 11

Authorized By: \_\_\_\_\_

**RECEIVED**  
**MAR 29 1990**  
**INDUSTRIAL DISCHARGE PROGRAM**

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston St.  
 P.O. Box 2355, Baltimore, Maryland 21203  
 J. Mehsen Joseph, Ph.D., Director

Lab No. Date Received  
 ORIGINAL  
 (FBI)  
 0000135 E-2 B

**WATER ANALYSIS**

Do not write above this line.

Bottle Number: AQ02079002 Name: Eastern Maryland Road Treatment Plant  
 Source of Sample: Clark's Community Center Rd, Federal Hill, Baltimore, Md  
 Street Town or City State Telephone Number

Sample Types (Circle):  
 Drinking Water  
 Landfill  
 Stream  
 Other (circled)  
 Community (Public Treated)  
 Non-Community (Pub. Untreated)  
 Private  
 Other  
 Groundwater  
 Distribution (Treated)  
 MCL  
 Emergency Routine  
 AND SPECIAL  
 INVESTIGATION DIVISION

Remarks: Monitoring well #4 - HSWMA

County: MD Plant No.: MD04 Sampling Station: MD04 Date Collected: 022790 Date & Time are Required for Valid Samples  
 Time: 0910 Iced:  Acid:  Type of Acid: HCl

Field Data: pH: 6.0 Chlorine Residual:  Free  Total Specific Conductance: 469

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403	6.0	Arsenic	01002	KDQ1
Alkalinity (Total)	00410	100	Barium	01007	100
pH*, Ca CO <sub>3</sub> SAT.	70311	100	Cadmium	01027	KDQ1
Alkalinity, Ca CO <sub>3</sub> SAT.	74023	100	Chromium	01034	KDQ1
Hardness	00900	100	Lead	01051	KDQ1
Ammonia-N	00608	100	Mercury	71900	KDQ005
Nitrate-Nitrate N	00630	100	Selenium	01147	100
Nitrite N	00615	100	Silver	01077	100
MBAS	38260	100			
Chloride	00940	100	Aluminum	01105	100
Fluoride	00951	100	Calcium	00916	100
Color*	00081	100	Copper	01042	KDQ5
Turbidity*	00076	100	Iron	01045	100
Conductance*, SPEC	00095	469	Magnesium	00927	100
Sulfate	00945	100	Manganese	01055	100
Total Solids	00500	100	Nickel	01067	100
Dissolved Solids	70300	100	Potassium	00937	100
			Sodium	00929	593
			Zinc	01092	100

AR100366

\*Results reported in units, all others in milligrams per liter (ppm)

STATE OF MARYLAND  
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J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ANTHONY QUINN 2/11/90 Sample Source Excess W. W. W. Investigation  
Name/Time/Date Co. Co. [unclear]

Sample ID No. AR 02 279003 Preservative Used TRF

Sample Alert 10398 MW5

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

RECEIVED

Chain of Custody Sample Possession

From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date

MAY 8 1990

GROUNDWATER AND SPECIAL  
DIVISION

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of  
the following:

No detectable quantity of PCBs  
DL = 3.0 ppb as Naphthalene

GC Analysis indicates the presence of  
the following PCB/Pesticides:

No PCB or Pesticides detected.  
DL = 0.025 ppb as Lindane  
DL = 1.4 ppb as PCB 1016

Section Chief: \_\_\_\_\_ Date: 4-20-90 Verified By: AL Authorized By: \_\_\_\_\_

**RECEIVED**  
MAR 29 1990

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

Lab No. Date Received

000001-2 00

Do not write above this line.

WATER ANALYSIS

Bottle Number: 202379003 Name: Eastern Maryland Wood Treatment County: A  
Source of Sample: Eastern Maryland Wood Treatment Co. Collector: A. J. Miller  
Clark Lane Industrial Street Town or City: Clarksville (include telephone number)

Sample Types (Circle):  
 Drinking Water  
 Landfill  
 Stream  
 Other  
 Community (Public Treated)  
 Non-Community (Pub. Untreated)  
 Private  
 Other  
 South of Maryland  
 Distribution (Treated)  
 Emergency Routine Recheck

GROUNDWATER AND SPECIAL INVESTIGATION DIVISION

Remarks: HSWMA

County: 00 Plant No.: 0000 Sampling Station: MW05 Date Collected: 022790 Date & Time are Required for Valid Samples  
 Time: 0940 Iced:  Acid:  Type of Acid: HNO3  
 Field Data: pH: 5.6 Chlorine Residual: 00 Free: 00 Total: 00 Specific Conductance: 121

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403	5.6	Arsenic	01002	ND
Alkalinity (Total)	00410	ND	Barium	01007	ND
pH*, Ca CO <sub>3</sub> SAT.	70311	ND	Cadmium	01027	ND
Alkalinity, Ca CO <sub>3</sub> SAT.	74023	ND	Chromium	01034	ND
Hardness	00900	ND	Lead	01051	ND
Ammonia-N	00608	ND	Mercury	71900	ND
Nitrate-Nitrate N	00630	ND	Selenium	01147	ND
Nitrite N	00615	ND	Silver	01077	ND
MBAS	38260	ND			
Chloride	00940	ND	Aluminum	01105	ND
Fluoride	00951	ND	Calcium	00916	ND
Color*	00081	ND	Copper	01042	ND
Turbidity*	00076	ND	Iron	01045	ND
Conductance*, SPEC	00095	121	Magnesium	00927	ND
Sulfate	00945	ND	Manganese	01055	ND
Total Solids	00500	ND	Nickel	01067	ND
Dissolved Solids	70300	ND	Potassium	00937	ND
			Sodium	00929	2317
			Zinc	01092	ND

AR100368

\*Results reported in units, all others in milligrams per liter (ppm)

Date Received: \_\_\_\_\_ Date Reported: MAR 22 1990 Chemist: Asoka I. Katuruluwa  
DHMH 90-A 8/83 PROGRAM COPY

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston St.  
 P.O. Box 2355, Baltimore, Maryland 21203  
 J. Mehsen Joseph, Ph.D., Director

LAB. NO. 1000369

HAZARDOUS WASTE LABORATORY

Organic Analysis Report Form

Priority \_\_\_\_\_

Collector P. J. J. 09:05-10-27-90  
Name/Time/Date

Sample Source Eastern Maryland Wood  
Threatened

Sample ID No. AR100369009

Preservative Used TCE

Sample Alert W272 MWL

Specify Program:

RCRA:

NPDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

RECEIVED

Chain of Custody Sample Possession

MAY 8 1990

From: \_\_\_\_\_  
Name/Time/Date

To: GROUNDWATER TOTAL  
INVESTIGATION DIVISION

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity: \_\_\_\_\_

Priority Pollutant Scan:

PCB/Pesticides:

Identify/Compare \_\_\_\_\_

GC/MS analysis indicates the presence of the following:

GC Analysis indicates the presence of the following PCB/Pesticides:

1,2,3-trichlorobenzene 0.12 ppm  
1,2,4-trichlorobenzene 0.10  
1,3,5-trichlorobenzene 0.024  
1,2,4-trichlorobenzene 0.023  
1,2,3-trichlorobenzene 0.011

NO PCB or Pesticides detected  
DL = 0.025 ppb as Lindane  
DL = 1.4 ppb as DCB 1016

218 ppb total

120 ppb Naphthalene

AR100369

Section Chief: \_\_\_\_\_

Verified By: AL

Authorized By: \_\_\_\_\_







STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY

Organic Analysis Report Form

Priority \_\_\_\_\_  
Collector: P. Mehsen Joseph 05-28-90 Name/Time/Date Sample Source: Eastern Maryland Waste Treatment Co.

Sample ID No. AD00289010 Preservative Used ICE

Sample Alert 10:45 AM 5/28/90

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: RECEIVED

Chain of Custody Sample Possession

From: \_\_\_\_\_ Name/Time/Date To: MAY 8 1990 Name/Time/Date

From: \_\_\_\_\_ Name/Time/Date To: GROUNDWATER AND SPECIAL INVESTIGATION Name/Time/Date

From: \_\_\_\_\_ Name/Time/Date To: \_\_\_\_\_ Name/Time/Date

Circle Parameters Requested:

EP Toxicity: \_\_\_\_\_ Priority Pollutant Scan: PCB/Pesticides Identify/Compare

GC/MS analysis indicates the presence of the following:

DL = 3.5 ppb as monohalene

GC Analysis indicates the presence of the following PCB/Pesticides:

DL = 0.022 ppb as Lindane  
DL = 1.4 ppb as DCB 1016

Section Chief: \_\_\_\_\_ Date: 5-28-90 Verified By: [Signature] Authorized By: ART00372





STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY

Organic Analysis Report Form

*Eastern Maryland water treatment plant*

Priority \_\_\_\_\_

Collector J. P. Allen 12:30 - 020790  
Name/Time/Date

Sample Source \_\_\_\_\_

Sample ID No. AR100379017

Preservative Used ICE

Sample Alert W11 MW8

Specify Program:

RCRA:

NPDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

**RECEIVED**

Chain of Custody Sample Possession

From: \_\_\_\_\_  
Name/Time/Date

To: MAY 8 1990  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: GROUNDWATER AND SPECIAL INVESTIGATION  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity; \_\_\_\_\_

Priority Pollutant Scan;

PCB/Pesticides;

Identify/Compare \_\_\_\_\_

GC/MS analysis indicates the presence of the following:

DL = 3.5 ppb as Naphthalene

GC Analysis indicates the presence of the following PCB/Pesticides:

No PCB or Pesticides detected.  
DL = 0.026 ppb as Lindane  
DL = 1.4 ppb as PCB 1016

Section Chief: \_\_\_\_\_

Date: 5-8-90

Verified By: [Signature]

Authorized By: \_\_\_\_\_

**AR100375**

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehser Joseph, Ph.D., Director

Lab No. Date Received

00000000 0-2 8

Do not write above this line.

WATER ANALYSIS

**CRIMINAL DISCHARGE PROGRAM**  
MAR 29 1990

Bottle Number: 0227907 Name: Eastern Maryland Wood Treatment Plant  
Source of Sample: Charles Cunningham Rd. Forest Hill, Md. Collector: [Signature]  
Street Town or City (include telephone Number)

Data Category Code,

Sample Types (Circle):  
 Drinking Water  
 Landfill  
 Stream  
 Other  
 Community (Public Treated)  
 Non-Community (Pub. Untreated)  
 Private  
 Other  
 Source (Raw Water)  Emergency  
 Distribution (Treated)  Routine  
 Recheck   
**GROUNDWATER AND SPECIAL INVESTIGATION DIVISION**

Remarks: Monitoring well

County:    Plant No.:    Sampling Station: MW08 Date Collected: 032790 Date & Time are Required for Valid Samples:  Time: 12:50 Iced:  Acid:  Type of Acid: MCO3  
 Field Data: pH: 5.79 Chlorine Residual:   Free:   Total:   Specific Conductance: 103

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403		✓ Arsenic	01002	KDIA
Alkalinity (Total)	00410		✓ Barium	01007	KD
pH*, Ca CO <sub>3</sub> SAT.	70311		✓ Cadmium	01027	KDIA
Alkalinity, Ca CO <sub>3</sub> SAT.	74023		✓ Chromium (total)	01034	KDIA
Hardness	00900		✓ Lead	01051	KDIA
Ammonia-N	00608		✓ Mercury	71900	KDIAACIS
Nitrate-Nitrate N	00630		Selenium	01147	
Nitrite N	00615		Silver	01077	
MBAS	38260				
Chloride	00940		Aluminum	01105	
Fluoride	00951		Calcium	00916	
Color*	00081		✓ Copper	01042	KDIA5
Turbidity*	00076		Iron	01045	
Conductance*, SPEC	00095		Magnesium	00927	
Sulfate	00945		Manganese	01055	
Total Solids	00500		Nickel	01067	
Dissolved Solids	70300		Potassium	00937	
			✓ Sodium	00929	158
			Zinc	01092	
			AR100376		

\*Results reported in units, all others in milligrams per liter (ppm)

Date Received: \_\_\_\_\_ Date Reported: MAR 22 1990 Chemist: Asoka I. Katumuluwa



STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehser Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY

Organic Analysis Report Form

*Eastern Maryland  
Waste Treatment Co.*

Priority \_\_\_\_\_

Collector A. J. ... 10/22/89  
Name/Time/Date

Sample Source \_\_\_\_\_

Sample ID No. PQA2 289011

Preservative Used ICP

Sample Alert Mc-ite-well MW09

Specify Program:

RCRA:

NPDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

RECEIVED

Chain of Custody Sample Possession

MAY 8 1990

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity: \_\_\_\_\_

Priority Pollutant Scan:

PCB/Pesticides:

Identify/Compare \_\_\_\_\_

GC/MS analysis indicates the presence of  
the following:

GC Analysis indicates the presence of  
the following PCB/Pesticides:

DL = 3.9 ppb as Magnesium

DL = 0.022 ppb as ...  
DL = 1.4 ppb as PCB 1015

Section Chief: \_\_\_\_\_

Date: 1-20-90 Verified By: AL

Authorized By: ARI00378







STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
Organic Analysis Report Form

Priority \_\_\_\_\_

Collector P. J. Vines 1/15/90 - 255790  
Name/Time/Date

Sample Source Eastern Maryland - I was  
treated at the 2nd site

Sample ID No. AD02579009

Preservative Used TCE

Sample Alert WV MW 10

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

RECEIVED

MAY 8 1990

Chain of Custody Sample Possession

From: \_\_\_\_\_  
Name/Time/Date

To: GROUNDWATER SPECIAL  
INVESTIGATION DIVISION  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of  
the following:

DL = 3.3 ppb as Naphthalene

GC Analysis indicates the presence of  
the following PCB/Pesticides:

No PCB or Pesticides detected  
DL = 0.025 ppb as Lindane  
DL = 1.4 ppb as PCP 1016

Section Chief: \_\_\_\_\_

Date: 5-10-90 Verified By: \_\_\_\_\_

Authorized By: \_\_\_\_\_

AR100381





STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston St.  
 P.O. Box 2355, Baltimore, Maryland 21203  
 J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
 Organic Analysis Report Form

Priority \_\_\_\_\_  
 Collector: J. Quinn 15:15-02-2890 Name/Time/Date Sample Source: Eastern Maryland Wood Treatment Co.

Sample ID No. A0022890/2 Preservative Used ice

Sample Alert W/FP (Fire Protection)

Specify Program:  
 RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

**RECEIVED**

Chain of Custody Sample Possession

From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date

Circle Parameters Requested:  
 EP Toxicity: \_\_\_\_\_ Priority Pollutant Scan:      PCB/Pesticides:      Identify/Compare \_\_\_\_\_

GC/MS analysis indicates the presence of the following:

_____	0.15 ppm
2-methyl-2-propanol	0.004 ppm
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

GC Analysis indicates the presence of the following PCB/Pesticides:

No PCB or Pesticides detected.  
 DL = 0.024 ppb as Lindane  
 DL = 1.4 ppb as PCB 1016

215.5 ppb total

150ppb Naphthalene  
AR100384

Section Chief:    Verified By:    Authorized By: \_\_\_\_\_

**RECEIVED**

**MAR 29 1990**

**INDUSTRIAL DISCHARGE PROGRAM**

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

Lab No. Date Received

0000000000

Do not write above this line.

**WATER ANALYSIS**

Bottle Number: AR00229012 Name: Eastern Maryland Wood Treatment Co. County: Charles  
Source of Sample: Clark's Runninghouse Rd. Federal Collector: J. Mehsen Joseph  
Street: \_\_\_\_\_ Town or City: \_\_\_\_\_ (include telephone number)

Sample Types (Circle): Other Drinking Water, Landfill, Stream, Other  
Community (Public Treated), Non-Community (Pub. Untreated), Private, Other  
Source (Date): MAR 29 1990 Emergency, Routine, Recheck  
Distribution (Treated)  
MCL GROUNDWATER AND SPECIAL INVESTIGATION DIVISION

Remarks: Fire Protection well

County: 00 Plant No.: 0000 Sampling Station: FPO1 Date Collected: 022890 Date & Time are Required for Valid Samples  
Time: 1215 Iced:  Acid:  Type of Acid: HNO3

Field Data: pH\*: 6.3 Chlorine Residual: 00 Free: 00 Total: 00 Specific Conductance: 910

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403	6.3	Arsenic	01002	0.02
Alkalinity (Total)	00410	105	Barium	01007	0.5
pH*, Ca CO <sub>3</sub> SAT.	70311		Cadmium	01027	<0.01
Alkalinity, Ca CO <sub>3</sub> SAT.	74023		Chromium	01034	<0.01
Hardness	00900		Lead	01051	<0.01
Ammonia-N	00608		Mercury	71900	<0.0005
Nitrate-Nitrate N	00630		Selenium	01147	
Nitrite N	00615		Silver	01077	
MBAS	38260				
Chloride	00940		Aluminum	01105	
Fluoride	00951		Calcium	00916	
Color*	00081		Copper	01042	<0.05
Turbidity*	00076		Iron	01045	
Conductance*, SPEC	00095		Magnesium	00927	
Sulfate	00945		Manganese	01055	
Total Solids	00500		Nickel	01067	
Dissolved Solids	70300		Potassium	00937	
			Sodium	00929	39.6
			Zinc	01092	

AR100385

\*Results reported in units, all others in milligrams per liter (ppm)

Date Received: \_\_\_\_\_ Date Reported: MAR 22 1990 Chemist: Asoka I. Katumuluwa





STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehsen Joseph, Ph.D., Director

LAB. NO. \_\_\_\_\_

HAZARDOUS WASTE LABORATORY

Organic Analysis Report Form

Priority \_\_\_\_\_  
Collector A. Quinn 10/50 0258-90 Name/Time/Date Sample Source Eastern Maryland Wood Treatment Co.  
Sample ID No. R002-89014 Preservative Used TSP  
Sample Alert WELL FP2 (EPA Protection)

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

RECEIVED

Chain of Custody Sample Possession

From: \_\_\_\_\_ Name/Time/Date To: 11/2/90 Name/Time/Date  
From: \_\_\_\_\_ Name/Time/Date To: GROUNDWATER INVESTIGATION DIVISION Name/Time/Date  
From: \_\_\_\_\_ Name/Time/Date To: \_\_\_\_\_ Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of the following:

DL = 25000 AS WASH-AG-202  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

GC Analysis indicates the presence of the following PCB/Pesticides:

DL = 2022 PPS 10/21/90  
DL = 14 PPS AS PCB/016  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

AR100387

Section Chief: \_\_\_\_\_ Date: 11-2-90 Verified By: [Signature] Authorized By: \_\_\_\_\_

RECEIVED

MAR 29 1990

INDUSTRIAL DISCHARGE PROGRAM

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehlen Joseph, Ph.D., Director

Lab No. Date Received

0000000000

Do not write above this line.

WATER ANALYSIS

Bottle Number

AG02289014

Name:

Eastern Maryland Wood Treatment Co.

Data Category Code

County

Harford

Source of Sample:

Clarks Cunningham House Road

Collection

11/19/90

Sample Types (Circle):

Drinking Water  
Landfill  
Stream  
Other

Community (Public Treated)  
Non-Community (Pub. Untreated)  
Private  
Other

GROUNDWATER  
DISTRIBUTION SYSTEM  
MCL  
EMERGENCY  
AND SPECIAL  
CHECK

Remarks:

well FP2 (Fire Protection)

County

Plant No.

Sampling Station

Date Collected

Date & Time are Required for Valid Samples

Time

Iced

Acid

Type of Acid: HNO3

Field Data:

pH\* 5.4

Chlorine Residual

Free

Total

Specific Conductance 128

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403	5.4	Arsenic	01002	<MCL
Alkalinity (Total)	00410		Barium	01007	<MCL
pH*, Ca CO, SAT.	70311		Cadmium	01027	<MCL
Alkalinity, Ca CO, SAT.	74023		Chromium	01034	<MCL
Hardness	00900		Lead	01051	<MCL
Ammonia-N	00608		Mercury	71900	<MCL
Nitrate-Nitrate N	00630		Selenium	01147	
Nitrite N	00615		Silver	01077	
MBAS	38260				
Chloride	00940		Aluminum	01105	
Fluoride	00951		Calcium	00916	
Color*	00081		Copper	01042	<0.05
Turbidity*	00076		Iron	01045	
Conductance*, SPEC	00095		Magnesium	00927	
Sulfate	00945		Manganese	01055	
Total Solids	00500		Nickel	01067	
Dissolved Solids	70300		Potassium	00937	
			Sodium	00929	9.7
			Zinc	01092	

AR100388

\*Results reported in units, all others in milligrams per liter (ppm).

Asoka I. Katumuluwa

Date Received

Date Reported MAR 22 1990

Chemist





**RECEIVED**

MAR 29 1990

INDUSTRIAL DISCHARGE PROGRAM

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
201 W. Preston St.  
P.O. Box 2355, Baltimore, Maryland 21203  
J. Mehnen Joseph, Ph.D., Director

Lab No. Date Received

000000 3-29-90

Do not write above this line.

**WATER ANALYSIS**

Bottle Number: AG02299006 Name: Eastern Maryland Wood Treatment Co. - Greensburg County: Washington  
Source of Sample: 10000 Cunningham Rd. Street: RECEIVED Town or City: Queen  
Collector: AG (Include telephone Number)

Sample Types (Circle): Drinking Water, Landfill, Stream, Other  
Community (Public Treated), Non-Community (Pub. Untreated), Private, Other  
Source (Raw Water), Distribution (Treated), MCL, GROUNDWATER AND SPECIAL INVESTIGATION DIVISION  
Emergency, Routine, Recheck

Remarks: Monitoring well (Supply)

County: 00 Plant No.: 00 Sampling Station: 00 Date Collected: 032790 Date & Time are Required for Valid Samples  
Time: 1120 Iced:  Acid:  Type of Acid: HClO3

Field Data: pH\*: 5.5 Chlorine Residual: 00 Free: 00 Total: 00 Specific Conductance: 110

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	00403		✓ Arsenic	01002	K001
Alkalinity (Total)	00410		✓ Barium	01007	K011
pH*, Ca CO <sub>3</sub> SAT.	70311		✓ Cadmium	01027	K001
Alkalinity, Ca CO <sub>3</sub> SAT.	74023		✓ Chromium	01034	K001
Hardness	00900		✓ Lead	01051	K010
Ammonia-N	00608		✓ Mercury	71900	K0005
Nitrate-Nitrate N	00630		Selenium	01147	
Nitrite N	00615		Silver	01077	
MBAS	38260				
Chloride	00940		Aluminum	01105	
Fluoride	00951		Calcium	00916	
Color*	00081		✓ Copper	01042	K005
Turbidity*	00076		Iron	01045	
Conductance*, SPEC	00095		Magnesium	00927	
Sulfate	00945		Manganese	01055	
Total Solids	00500		Nickel	01067	
Dissolved Solids	70300		Potassium	00937	
			✓ Sodium	00929	84
			Zinc	01092	

AR 100391

\*Results reported in units, all others in milligrams per liter (ppm)





**DEPARTMENT OF THE ENVIRONMENT**

2500 Broening Highway, Baltimore, Maryland 21224

Area Code 301 • 631-3440

**William Donald Schaefer**  
Governor

**Robert Perciasepe**  
Secretary

DEC 20 1990

Ms. Lynnette Elser  
Maryland Project Officer  
U.S. Environmental Protection Agency  
Region III (Code 3HW13)  
841 Chestnut Building  
Philadelphia, PA 19107

Dear Ms. Elser:

The purpose of this letter is to transmit addendums to the Screening Site Inspection Reports in response to Region III's comments for the following sites:

(MD-242)	Eastern Maryland Wood Treatment
(MD-259)	Louisa Lane Dump Site
(MD-331)	Reister Property

If you have any questions on these addendums, please call me or Mr. Eric Huang at (301) 631-3440. Please advise us of the finalized qualifiers after your review.

Sincerely,

Mary-Linda Adams, Section Head  
CERCLA/Pre-Remedial Division

MLA:eig

Enclosures

cc: Mr. Richard W. Collins  
Mr. James Pittman

AR100393

ORIGINAL  
(Rec)

A SCREENING SITE INSPECTION  
OF  
EASTERN MARYLAND WOOD TREATMENT PLANT  
FEDERALSBURG, MARYLAND  
(MD-242)

FINAL REPORT  
FEBRUARY, 1990

Prepared By: Maryland Department of the Environment  
Hazardous and Solid Waste Management Administration  
2500 Broening Highway  
Baltimore, Maryland 21224

Prepared For: U.S. Environmental Protection Agency  
Region III  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107

AR100394



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(Rec)

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## 1.0 INTRODUCTION

### 1.1 AUTHORIZATION

The Maryland Department of the Environment, Hazardous and Solid Waste Management Administration (MDE/HSWMA) performed this study under the U.S. Environmental Protection Agency (EPA) contract No. MD88-0526-0408.

### 1.2 SCOPE OF WORK

The MDE/HSWMA was contracted to conduct a Screening Site Inspection (SSI) at the subject site. The purpose of this study is to present and discuss the contamination of the soil, surface water and groundwater detected through earlier sampling conducted on the site. This information will be used in evaluating the relative potential of the facility in causing health and safety problems or ecologic and environmental damages. If the site does not meet the criteria needed for a Listing Site Inspection (LSI), it will be evaluated for further assessment and continued clean-up under the State Superfund Program.

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### 1.3 EXECUTIVE SUMMARY

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Eastern Maryland Wood Treatment (EMWT) came to the attention of the MDE in 1986, following a request from the EPA to examine all wood treatment facilities. The EPA made this decision based on past problems associated with such companies nation-wide. A Preliminary Assessment (PA) of EMWT was performed in April of 1987 which noted some operational discrepancies and the presence of stained soils throughout much of the facility. Subsequently, several site inspections were conducted during which suspicions were aroused regarding the possibility of the illegal burial of drums. The suspected contaminants were creosote, which is a suspected carcinogen, and copper chromate arsenate (CCA). These suspicions were supported by the testimony given to MDE investigators. On October 3, 1987, state police executed a search and seizure warrant. Utilizing a back-hoe, they uncovered the buried drums on the EMWT grounds on October 4.

Criminal and civil charges were brought against EMWT and the company's vice president, Richard J. Petti, which included conspiracy to violate Maryland laws on storing, treating, discharging and disposing of hazardous wastes. In addition, the company was charged in two separate felony counts with unlawfully burying 10 55-gallon drums. Each defendant waived the right to be charged by a grand jury indictment or be granted a preliminary hearing. The owners of the company agreed, on September 6, 1988,

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to pay a \$150,000 criminal fine (which is reduced to \$35,000 pending successful completion of parole), to pay a \$25,000 civil fine over a three-year period, to detail the extent of the contamination, and to cleanup the site. This remediation process will be initiated after the extent of the contamination is determined through phased studies.

Several studies have already been performed which include: an electro-magnetic (EM-31) survey, the installation of five more monitoring wells and subsequent water analyses, a soil gas survey, soil borings and sampling, sampling of the drainage ditch area, and surface water sampling. Two on-site surface water samples were analyzed and contained up to 135.76 ug/l total Polynuclear Aromatic Hydrocarbons (PAHs). Over 100,000 ug/l total PAH's were detected in 17 of the 43 soil samples taken. Two surface water samples were collected off-site and analyzed for priority pollutants and total metals. The off-site samples were clean.

It is possible that a more detailed groundwater study will further indicate the existence of contamination in the local aquifers because one of the compounds used at this facility, CCA, is very soluble. The latest sampling of the on-site wells took place on January 10, 1990. Complete sampling results have not been submitted at the time of this report, but those that have been returned can be found in Appendix A. One well that was tested on 1/10/90, MW-6, is located near an underground fuel tank and

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demonstrates the presence of benzene, toluene, ethylbenzene and xylene. Only benzene (26 ppb) is above drinking water standards of 5 ppb. Other volatile organic compounds (VOC's) were not identified in MW-6.

The soil gas survey indicated the presence of combined halogenated hydrocarbons (TCA, TCE, Freon 113, and PCE), aromatics, naphthalenes, and groupings of alkanes, cycloalkanes, and alkenes.

Because EMWT is engaged in a State-supervised remediation of the site, it is recommended that a "No Further Remediation Action Planned" (NFRAP) under CERCLA occur. However, should the status of the remediation change, the site may be re-evaluated.

It is recommended that more groundwater testing be performed at this site because not enough information currently exists on the extent of groundwater contamination. Results from MW-6 (Appendix A) show the presence of gasoline-related contaminants. Although these contaminants are designated as "floaters", deeper wells may have to be drilled to lower aquifers to determine if contamination has reached these levels. These aquifers are exploited for potable water in this area.

A more detailed sediment sampling should be conducted east of the site. This would be in the direction of surface water runoff, towards Marshyhope Creek. This could determine if contamination

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is migrating off-site via surface runoff waters. Currently, only one off-site sample east of the facility has been collected. This sample was clean.

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## 2.0 THE SITE

### 2.1 LOCATION

Eastern Maryland Wood Treating Company (P.O. Box 155, Federalsburg, MD, 21632) is located in northeastern Dorchester County approximately 1 1/2 miles southwest of Federalsburg in southern Caroline County (see Figure 1). To access the site from Baltimore, take I-97 south to U.S. 50 east and cross over the William Preston Lane Memorial Bridge (the Bay Bridge) to the Eastern Shore. Stay on U.S. 50, turning east on MD Hwy 331 in the town of Easton, and proceed to the intersection of MD Hwy 318. Turn left at this intersection and proceed to MD Hwy 313 (the Federalsburg Bypass). Head south for 1/2 mile on MD Hwy 313 before turning off onto MD Hwy 307 to the southwest. MD Hwy 307 will intersect with Clark Canning House Road. Turn left (east) on this road, cross the railroad tracks (approximately 450 feet after the turnoff) and turn right at the entrance just beyond the tracks. This trip will take about 2 1/2 hours.

Grid coordinates for the facility are 38° 40' 31" N latitude and 75° 48' 09" W longitude.

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## 2.2 SITE LAYOUT AND OPERATIONS

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The operation is situated on 25 acres that is within both open farm land and scrubby pine woods. There are four structures on the property which, from north to south, consist of: a boiler building, a combination office/wood treating building; housing for the kiln and; a storage area for wood chips to fuel the kiln (see Figure 1). There are large stacks of logs, both treated and untreated, lying across the entire extent of the property in a somewhat organized fashion.

The land does not drain well as evident during a site visit in January, 1990 (see Section 3.5 on Soils). Topographically, the property is 35 feet above sea level and exhibits slopes of 0-2%.

EMWT applies both creosote and copper chromate arsenate (CCA) solutions in wood treatment and employs the full cell and empty cell processes. Both of these processes involve the use of closed system pressurized treatment cylinders (retorts). After the charge of wood is placed in the cylinder, a vacuum is applied and the appropriate amount solution is pumped into the retorts. Next, the retort's interior is subjected to a high pressure for a desired length of time, forcing solution into the wood. Then, the unused solution is pumped from the retort back into the work tank. A final vacuum is pulled in order to remove excess solution which the wood fibers did not absorb.



EMWT has three active retorts at their facility. Two of these (rec) are used for creosote impregnation while the third is used for the treatment of wood with CCA. Directly outside of all the retorts are tram tracks along which the wood is loaded and unloaded in the cylinders. On the unloading end of the retorts are the "cooling sheds" which are covered drip pads with concrete floors where excess solution from treated wood is allowed to drip. Sump pits are located at the base of each retort where the cooling shed begins. Any excess solution remaining in the retort after treatment, as well as drippage from the cooling wood is collected in these pits. Dirt and debris saturated with solution is also swept into the sump pits. CCA solution is water soluble and wasted CCA is hosed into the sump pit for collection. Creosote, on the other hand, is not so easily cleaned up as this substance tends to collect within the retorts until cleaning crews scrape it off the walls when deemed necessary by plant supervisors.

Before EMWT was allowed to operate, the Dorchester County Environmental Health Department required the installation of monitoring wells. Five monitoring wells were installed by Delmarva Drilling Company in August, 1983. Samples were taken by the State of Maryland in October, 1983, prior to the commencement of plant operations and analyzed for volatile organics and metals. These sample results, which showed no contamination, are found in Appendix A. The MDE has performed subsequent sampling since then.

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EMWT purchases creosote from several companies (which include Koppers Company, Aristech Chemical Company, and Crowley Tar Products Company) approximately twice a week at 5000 gallons per load. The material is applied to the wood in the same concentration which it is received. The creosote is stored in four 15,000 gallon tanks which are located in the same building as the retorts. CCA is purchased from the Hickson Corporation once a month at about 3500 gallons per load. The CCA solution is purchased in a 50% active ingredient solution. The concentrated CCA is stored in a single 5000 gallon tank while the CCA to be used is diluted to a 2.5% solution, in a 5000 gallon mix tank, and stored in two 7000 gallon tanks.

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Wood products treated at the EMWT facility are dried of their natural fluids on-site prior to treatment. From the company's inception until about November 1986, wood was dried by means of steam drying in the creosote treatment retorts. The use of moist heat produced a waste sludge which consisted of water, wood, sap and creosote that was left in the cylinder from the previous treatment. This material was then removed to an oil/water separator tank where the creosote was extracted and reused.

In November of 1986, EMWT replaced the steam drying process with a kiln drying one. This system uses kilns which are capable of heating to 1500° Fahrenheit and are fueled by wood chips. This system has proven to be faster, more economical and produces no

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liquid waste.

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Hazardous waste generated at EMWT consists of CCA and creosote which accumulates in the retorts, sumps, and on the drip pads. In addition, waste drippage had also been noted where the wood was stored. For several years, EMWT claimed that it had very little waste to report or ship (The total waste reported shipped from the site in 1986 was reported as 1600 pounds solid and 1100 gallons liquid). On several occasions, only one or two drums of waste would be found on the site by the inspectors. It was the accidental discovery of 18 drums of waste on the site along with the presence of discolored soil that led to the initiation of a police investigation.

### 2.3 OWNERSHIP HISTORY

The last transaction of the land parcel occurred on November 30, 1982, when the property was delivered to the Eastern Maryland Wood Treatment Company from George Petti (Liber P.L.C., No. 225, folio 286, Dorchester County records). The ownership history has been traced back to 1918, and it is believed that no industrial use of the land has occurred before 1961. The detailed ownership is as follows:

OWNER	DATE ACQUIRED	DOCUMENTATION	ORIGINAL (Red)
Joseph W. Long	not traced	not traced	
William H. Clark + wife	3/22/18	Report of Sales, No. 6290 Dorchester Co. Circuit Court	
County Trust Co.	4/15/39	Liber R.S.M., No. 39, f. 193	
Katie M. Clark	5/17/39	Liber R.S.M., No. 39, f. 319	
Naomi J. Harper	4/24/47	Liber R.S.M., No. 62, f. 329	
Katie M. Clark + Harold L. Clark	4/24/47	Liber R.S.M., No. 62, f. 331	
Boma Corporation	7/17/61	Liber P.L.C., No. 124, f. 243	
Delmarva Packing Co.	7/07/64	Liber P.L.C., No. 138, f. 687	
George Faulkner	7/12/71	Liber P.L.C., No. 170, f. 134	
George Petti	4/28/80	Liber P.L.C., No. 218, f. 372	
Eastern Maryland Wood Treatment Co.	11/30/82	Liber P.L.C., No. 225, f. 286	

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William Clark purchased a considerable amount of land from Joseph Long which included land in both Caroline and Dorchester Counties. In 1939, much of this land was set aside for his daughter-in-law, Katie M. Clark, in the form of a trust which was awarded later that year. ORIGINAL (Rec)

Katie M. Clark's transaction of the property with Naomi J. Harper was what is called a "Straw deed" which was commonly performed during that period to have the name(s) on ownership papers changed. In this case, her husband's name was added to her's as co-owner of the property.

In 1961, the widowed Mrs. Clark sold the land to the Boma Corporation which very little is known about at this time. It is thought that the Boma organization may have been involved in some form of foodstuff packaging operation because when this company sold the land to the Delmarva Packing Company in 1964, much of the equipment was also sold as part of the title transfer. The Delmarva Packing Company was involved in the packaging of food.

Delmarva Company sold one parcel of their property to George Faulkner in 1971 who founded the Williamsburg Canning Company on the land. A portion of the Faulkner property was in sold in 1980 to the founder of EMWT, George Petti, who would later transfer the title of the land to his company in 1982.

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#### 2.4 SITE USE HISTORY

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Prior to the Boma Corporation purchasing the land in 1961, there is no evidence that the land was used for any kind of commercial enterprise with perhaps the exception of farming. It is not known how much of the property was utilized by the Boma Corporation or for what purposes. After 1961, there was light industry in the form of food processing which continued until 1971, when the large land holding of the Delmarva Company was subdivided with George Faulkner purchasing a tract to build the future Williamsburg Canning Company. Part of this tract was later sold to George Petti and consequently, EMWT. As far as it can be determined, only EMWT has actually operated an industry on the acreage it owns. Although other parties have owned that acreage, no industry had ever been developed on it.

#### 2.5 PERMIT AND REGULATORY ACTION HISTORY

EMWT has been designated by the EPA as MDD981040207. In April of 1980, a state permit to construct a creosote impregnation facility on Clarks Canning House Road near Federalsburg, was granted to Railcon Materials, Inc., a company owned by the Petti family. This permit was applied for by the Petti organization with the understanding that specific company would open operations at the site. However, because of tax reasons, a new company, EMWT, was formed and this company took title to all of the permits

originally made out to Railcon. Eastern Maryland Wood Treatment  
Company, Inc., was incorporated on December 11, 1981, to operate  
a wood treating facility at the same address. Although the  
property was purchased on April 28, 1980, construction of the plant  
was not started until February 1983.

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In 1986, EMWT applied for, and obtained, a permit (No. 09-6-0021-N) enabling the plant to construct kilns needed to dry the wood that was treated. Dry kilns did not generate waste water as the original "steam drying" practice did. The air permits needed to operate the kilns (09-0089-6-0016, 0017, and 0018) are currently up-to-date but will expire on April 30, 1990. EMWT never applied for or received a permit from any government agency authorizing it to treat, store or dispose of controlled hazardous substances.

Between May, 1984, and June, 1985, three inspections of EMWT were conducted by state representatives who met with the vice-president of the company, Richard Petti, and his plant production manager, John Holland. During each of these visits, both men were advised that a generator who accumulates hazardous waste for more than 90 days or up to 500 kilograms (approximately 2 1/2 drums) for 180 days from the date of the initial accumulation was considered to be an operator of a treatment, storage and disposal facility and subject to all regulations therein.

In November, 1985, EMWT had 11 drums of waste stored on the

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property. Fearing an impending site visit from state officials, R. Petti ordered that the nine drums be hidden in the boiler room on the site. During the inspection (11/19/85), Holland informed the inspectors that only the two remaining drums of material had been generated since the last inspection. ORIGINAL (Red)

In November of 1985, in order to comply with state regulations, EMWT was instructed to submit a Contingency Plan which outlined the procedures that would be taken in the event of an accidental release of hazardous material. Holland provided the State with this plan in March of 1986, and in it, both Holland and Petti were named as Emergency Coordinators. This plan stated that the coordinator on-site during an emergency was responsible for ensuring proper treating, storing and disposal of recovered waste and to record and report such incidents to the State.

On August 8, 1986, 3500 gallons of liquid creosote were being unloaded from a tanker truck. During this operation, a valve was accidentally left open which allowed approximately 1000 gallons to spill onto the ground and into an open drainage ditch. No effort was made to halt the flow of creosote into the ditch nor remove that which had filled it. Holland contacted Petti about the incident but no report was ever filed with the State. Holland also failed to record the details of the accident in an operating log, as required by law and in EMWT's Contingency Plan.



The State did not learn of this incident until an inspection was performed on September 3, 1987. During this inspection, 18 <sup>ORIGINAL</sup> ~~(Red)~~ gallon drums of contaminated soil, debris and cylinder sludge were seen at various points of the plant. The Maryland State Police were called and they initiated an investigation into the handling of hazardous waste at EMWT. A search warrant was obtained to search the property for buried drums of hazardous waste and, on October 4, 1987, 10 full 55-gallon drums of creosote waste sludge and 1 ton of creosote contaminated soil were exhumed. In addition, the contaminated soil that was later excavated from the drainage ditch area filled over 200 similar drums.

The creosote waste that was uncovered by the State Police was deliberately buried by EMWT personnel acting under orders from EMWT supervisors. The actual burial was supervised by Stephan Zinser, a wood treating supervisor, who answered directly only to Petti and Holland (MDE/ECU files, 1990). Once excavated by the Maryland Police, the creosote waste was properly transported off-site and disposed of.

## 2.6 REMEDIAL ACTION TO DATE

There has been no remedial action taken to date. The MDE Enforcement Division is currently conducting tests to determine the extent and severity of the contamination. These studies have included the installation and testing of monitoring wells, bore

hole sampling, soil gas studies, surface water sampling, and sampling of the drainage ditch where the creosote was allowed to collect. ORIGINAL (Red)

## 2.7 PREVIOUS STUDIES

All of the laboratory results discussed in this section can be found in Appendices A, B and C.

The first study conducted at EMWT was the mandatory sampling in November, 1983, of the original five monitoring wells necessary to commence operations. The samples were free of contamination.

The next sampling event that occurred at EMWT was in September, 1987. The five monitoring wells, the company production well and two residential wells were sampled and subjected to a full scan analysis which included general inorganics, total metals, and volatile organics.

The analyses did not detect the presence of contamination of inorganic compounds or of total metals but did indicate that 1,1,1-trichloroethane (TCA), vinyl chloride, trans-1,2-dichloroethene (trans-DCE), methyl isobutyl ketone (MIBK), trichloroethene (TCE), tetrachloroethene (PCE), acetone, and oxirane were present in the sample obtained from the sink. Most of these contaminants were not detected in later analyses. In addition, methyl ethyl ketone (MEK)

and tetrahydrofuran were detected in nearly all of the samples and these compounds are found in glues that were used for connecting PVC casing. In MW-5, 8 ppb TCA was detected. There is no information available suggesting the amount of TCA possible disposed of on-site.

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In December of 1987, the MDE sampled the seven wells again. As before, the samples were subjected to a full scan analysis. The inorganic and total metal analyses failed to detect the presence of contamination but the organic volatile analyses indicated the presence of tetrahydrofuran and MEK.

The MDE began preparations for a full-site field study in August of 1988 to determine the extent of the contamination which was unearthed during the police investigation of October, 1987. This study would include the excavation and sampling of the drainage ditch where the large spill of 8/8/86 had occurred, installation of five new monitoring wells, boring of 20 holes and subsequent boring analysis, taking 18 soil samples, analysis of 5 sediment samples, and the analysis of 2 surface water samples (for sampling locations, see Figure 3).

The actual sampling occurred in September and October of 1989 and the results of this sampling event are found in Appendices A (monitoring well analyses), Appendix B (soil analyses) and Appendix C (surface water analyses). Appendix B shows that of 48 total soil

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samples analyzed, 17 had total PAHs values of greater than 100, ORIGINAL  
ug/l. The surface water samples of SW-1 and SW-2 had total PAH (Red)  
values of 79.02 ug/l and 135.76 ug/l respectively.

Prior to the large sampling event of September/October 1989, an electro-magnetic conductivity survey was run in December of 1988. Utilizing an EM-31, the survey was conducted over most of the EMWT grounds to collect information on buried wastes and shallow contamination plumes. This survey was later augmented in February 1989, with a soil gas study which included the placement of 155 soil gas collectors over approximately 700,000 square feet. The technique used in the soil gas study was a time-weighted collector system which left the collectors in place for 30 days for increased accuracy. It should be noted here that soil gas studies only measure the relative amounts of contaminants, not the actual concentrations. The soil gas results are illustrated in Figures 4 through 7. The areas of greatest contamination are found in the vicinity of the treatment plant and the kiln building although most of the entire site shows some degree of contamination.

During this same period in December, two off-site sediment samples were taken. One of these samples was taken from Skinners Run, southwest of the facility, while the other was taken southeast of EMWT from an unnamed creek (see Figure 8). These samples were analyzed for total metals and priority pollutants and indicated no contamination (see Appendix B).

On January 10, 1990, water was collected from the 10 monitoring wells, 2 fire protection wells and the production well and sent in for analysis. Complete results of this most recent sampling event are not available at the time of this report although benzene (26 ppb), toluene (34 ppb), ethylbenzene (14 ppb) and total xylenes (50 ppb) have been detected in MW-6 (see Appendix A). This well is situated near an underground fuel tank used to run the boilers.

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(Rec)

### 3.0 ENVIRONMENTAL SETTING

#### 3.1 WATER SUPPLY

The city of Federalsburg has a municipal water system that services 4500 people (2200 inside the city limits and 2300 outside the city limits in Caroline County) from a well field consisting of three operating wells and two standby wells that are all approximately 300 feet deep. This field is within the three-mile radius of the Eastern Maryland Wood facility and there are no current plans to expand the system. The Federalsburg field draws approximately 143.6 million gallons per year from the Manokin aquifer. In addition, groundwater is used by approximately 2000 people on private wells in Dorchester County that live within the three-mile radius giving an estimated 6500 people dependent upon groundwater in this area.

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used for fishing. There are no authorized surface water intakes on any of these bodies of water. ORIGINAL (Red)

There are several unnamed streams within a three-mile radius of the site. These local streams are seemingly haphazard in occurrence and orientation suggesting that the underlying geology does not exert a prominent influence and that their presence is controlled strictly by topography. In the vicinity of EMWT, surface waters drain primarily to the east. There are no standing bodies of water within the three-mile radius.

### 3.3 GEOLOGY

Regionally, the area is part of the Atlantic Coastal Plain Province which was formed by the fluvial and marine deposition of an enormous volume of sediments eroded from the Appalachian Mountains and the Piedmont Province to the west. Aggradation of this material continued eastward and resulted in the formation of features such as alluvial fans, deltas, barrier islands systems and mud flats. Fossil evidence demonstrates that these processes have been active since at least the Early Cretaceous and probably the Late Jurassic. Triassic sediments are not known to exist in Dorchester or Caroline Counties (Rasmussen, et al., 1957). The region experienced several cycles of emergence and subsequent erosion, followed by inundation which filled the erosional gouges with marine clastics. The net result of these cycles were to

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The private water supply for this area is drawn from wells of which there are at least 672 drilled since 1969 (MDE files, 1989) (Red) ORIGINAL  
There are no figures regarding the number of nearby wells prior to 1969 at this time. These wells range in depth from 26 to 560 feet and produce between 6 and 1000 gpm, averaging about 50 gpm.

The town of Hurlock, located over four miles southwest of EMWT, has its own municipal water supply. Hurlock draws its water from three wells located within its city limits.

The nearest domestic well is located approximately 1100 feet north of EMWT along Clark Canning House Road. There is no identification number on this well thereby no log can be found to provide depth and aquifer information. The current owner does not have this information. There is a well located on the site that is used as potable source (State identification no. DO-81-0484). This well is 50 feet deep and is screened in the Beaverdam Sand Formation (see Section 3.3 and Section 3.4).

### 3.2 SURFACE WATER

The nearest surface water is a small, unnamed stream that flows to the south, 2000 feet to the east of EMWT. This stream empties into Marshyhope Creek which in turn merges into the Nanticoke River, a major tributary of the Chesapeake Bay (see Figure 8). The unnamed stream is too small for boating but may be

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produce a monotonous "layer cake" structure of unconsolidated ORIGINAL  
sediments sitting unconformably on undetermined basement rocks. (Red)

The sediments were originally deposited upon basement crust which is thought to be approximately 3500 feet below sea level in the vicinity of EMWT. The sedimentary wedge thickens dramatically towards the southeast and reaches thicknesses of 8500 feet under the Atlantic coastline of Worchester County (Rasmussen, et al., 1957).

The local surface geology, within a three-mile radius of Eastern Maryland Wood (see Figure 9), consists of exposures of the Parsonsburg Sand (Upper Wisconsin), the Kent Island Formation (Middle Wisconsin or Upper Sangamon), The Beaverdam Sand (Pliocene), and the Pensauken Formation (Upper Miocene) (Owens and Denny, 1986). The site itself rests upon the Kent Island Formation (which ranges in thickness from 10-40 feet) which in turn rests atop of the Beaverdam Sand. These units consist primarily of unstable, poorly consolidated gravels, coarse-to-fine sands, silts, and clays and contain heavy mineral assemblages which demonstrate their Appalachian origins. Subsurface formations within this area (see Table 1) consist of the St. Mary's Formation (Miocene), Choptank Formation (Miocene), Calvert Formation (Miocene), Piney Point Formation (Eocene), Nanjemoy Formation (Eocene), Aquia Formation (?) (Wilcox) Brightseat Formation (Paleocene) and the Cretaceous units of the Monmouth, Matawan, Magothy, Raritan,



Patapsco and Arundel Formations (Upper Cretaceous) and the Patuxent Formation (Lower Cretaceous). Many of these units are important aquifers in the area as well as other parts of the state. Part of the structural relationship between some of these units can be seen in Figure 10.

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(Red)

3.4 HYDROGEOLOGY AND GROUNDWATER

In the vicinity of EMWT, there are approximately 12 geologic formations that have the ability or potential to produce potable water supplies (see Table 1). Naturally, the most exploited aquifers are shallow in depth (less than 300 feet) but water production is possible from stratigraphic units as deep as 3500 feet. The average depth of wells in the three-mile radius is estimated to be 80-100 feet (MDE files, 1990) making the geologic unit(s) near this interval the most important to study at this time. It should be mentioned that domestic well depths display an extreme variation in this area and have been found to be as shallow as 26 feet to as deep as 560 feet.

The local groundwater table in the immediate area of EMWT is found at depths of one-to-two feet below the ground surface (see Section 3.5 on Soils) with an assumed shallow subsurface flow direction to the east. This assumption is made because of the position of the facility on a crest of a slight hill and the position of an small unnamed stream also to the east (see Figure

8). The most shallow horizon known to be used as a water source is 26 feet deep although 80 feet is usually the average. Water at this depth is most likely to flow to the southeast as dictated by regional dip. No velocity estimates of either the shallow or deep groundwater flow are given at this time. ORIGINAL (Rec)

Because it not feasible at this stage of the investigation to determine which individual wells in the three-mile radius are producing from which formation, a generalized hydrologic summary is presented here. The vast majority of the wells within a three-mile radius of EMWT produce water from the following units; the Beaverdam Sand and the Pensauken Formations (collectively called the Columbia aquifer), the Chesapeake Group of Miocene age (which contains the Pocomoke, the Ocean City, the Manokin, the Frederica and the Cheswold aquifers, see Table 2), the Piney Point Formation of Eocene age, and possibly the Aquia Formation although the existence of the Aquia has not been demonstrated in this area (Rasmussen, et al., 1957). For purposes of brevity, aquifers below the Piney Point Formation (see Table 2) are omitted from this report because there is no evidence of wells completely penetrating the Piney Point in this area. In general, these aquifers are composed of fine-to-medium sands separated by lenses and stringers of clay which act as local barriers to fluid migration.

There are two regional aquitard units in this vicinity which are the ST. Mary's Formation and the Nanjemoy Formation although

there are sections within all of the aquifers which do not transmit water readily. The St. Mary's and Nanjemoy aquitards are composed of clays, silts, and fine sands which prevent the rapid passage of water, however water is still able to migrate through these units.

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(Red)

Hydraulic conductivity values for most of the aquifers in this region usually range from  $10^{-3}$  to  $10^{-5}$  cm/sec. Transmissivity and storage coefficient values for the producing units are scarce because most of the wells installed in this area are privately owned. Tests performed with the municipal wells in Federalsburg indicated transmissivity values of 100,000 gpd/ft and a storage coefficient of 0.15 for the Beaverdam Sand (Rasmussen, et al., 1957). General values for other formations are as follows;

Formation or Aquifer	Transmissivity (gpm/ft)	Storage Coef.	Specific Cap. (gpm/ft)
Parsonsburg	155,000	Not Known	Not Known
Pocomoke	1000-8000	0.0001-0.15	1-30
Ocean City	3000-7500	0.0003-0.001	NV
Manokin	950-20,000	0.0003-0.001	1-35
Frederica	6,000	0.003	3-11
Federalsburg	450-1400	0.0001-0.15	1-8
Cheswold	200-4000	0.0001-0.15	1-25
Piney Point	45,000	0.00009-0.00037	1-88

The town of Federalsburg draws its water supply from the

Manokin aquifer. This municipal system draws 143.6 million gpm/yr. ORIGINAL (Red)

### 3.5 SOILS

There are three soil types in the vicinity of the Eastern Maryland Wood facility. These are the; 1) Woodstown soils; 2) the Fallsington soils and; 3) the Pocomoke soils (U.S.D.A. 1982).

The Woodstown soils are developed in marine or very old alluvial sediments consisting of sand with considerable amounts of silt and some clay. The first 10 inches is a grayish brown loam that covers a brown sandy loam which is friable in character (loam is defined as being composed of 7-27% clay, 28-50% silt, and less than 52% sand). The material grades into a mottled yellow brown and becomes coarser in nature until gravel appears. This soil usually has a seasonal high water table (1.5 to 2.5 feet beneath the surface between February through April) which will cause occasional ponding. In the area surrounding and within the site, the slope is between 0-2%. The plasticity index ranges from NP (not plastic) to 12%.

The Fallsington soils have developed in beds of loamy material which are supported by very sandy deposits of the coastal plain. They are characterized by being deep and poorly drained. In addition, the plasticity index is listed by the USDA (1982) as ranging between NP to 12%. The soil is described as a very dark

grayish brown and gray sandy loam with a granular structure in the upper 10 inches. This grades into a structureless gray, sandy clay loam with distinct yellow-brown mottles. The high water table in this material is generally between December and May and is from 0 to 1.0 feet deep. This condition will cause ponding in low areas or areas that have undergone slight excavation.

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Pokomoke soils are derived from loamy coastal plain sediments and are characteristically deep and poorly drained. The first 20 inches of the soil profile is a black and very dark gray-brown sandy loam which grows lighter in color with depth and becomes mottled in appearance. The soil does not possess a high plasticity index value (NP to 15%) but does possess a high water table during the months between December and May where the table stands at the surface or only 0.5 feet beneath it.

### 3.6 METEOROLOGY

Readings taken from the Salisbury measuring station over a 30 year period indicate that the normal precipitation is 44.83 inches for this area although rainfall was only 40.08 inches in 1988. The average temperature, over the same period, is 56.9° Fahrenheit. Net precipitation for the area in 1988 was 4.08 inches while the 1-year/24 hour rainfall is estimated to be 3.0 inches

### 3.7 LAND USE

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The area is predominately agricultural in character with light industry in and around the town of Federalsburg such as a cannery, another wood treating company, farm equipment repair shops, and service stations.

### 3.8 POPULATION

The population within a three-mile radius of the site is estimated to be 4200 persons based upon the 1980 census for both Dorchester and Caroline Counties. The majority of these persons, approximately 2200 people, live within the city limits of Federalsburg. Since groundwater is the only source of water for this entire area, including the population in Federalsburg, it is assumed that all 4200 people are at risk. The Federalsburg water system serves an additional 2300 people outside the three mile radius raising the maximum number of persons at risk to 6500 people through a groundwater release and 4200 people through an air release route. No air release is to be expected with this site.

### 3.9 SENSITIVE ENVIRONMENTS

Within a one-mile radius, there are an estimated 700 acres of environmentally sensitive land occurring in patches larger than 5 acres. The majority of these lands are classified as palustrine

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(marsh lands) which occasionally are flooded and are dominated by conifers with only a small population of deciduous trees (USDI, 1982). The facility is situated in the center of several such ecosystems one of which forms the southern boundary of EMWT. Within the same one-mile radius, there are also fluvial or "riverine" areas designated as sensitive which are adjacent to Marshyhope Creek.

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The entire state of Maryland is designated a habitat for the peregrine falcon, the bald eagle, the Indiana bat, the eastern cougar, and the Maryland darter fish by the Fish and Wildlife Service. These animals are included on the U.S. Department of the Interior endangered species list.

#### 4.0 WASTE TYPE AND QUANTITY

On August 8, 1986, a creosote spill occurred on-site. The quantity of the spilled creosote was estimated to be 1000 gallons. There was no ensuing clean-up activities to remove this material other than burial. Testimony received by the Environmental Crimes Unit (ECU) indicated that the material was covered by simply shovelling soil over the spill. The creosote remained in the soil and posed a long-term threat to the groundwater and to the surface water. In addition, excavation activities on October 4, 1987, uncovered 10 full 55-gallon drums of creosote waste sludge (see Section 2.5).

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Sampling in September 1987, from the on-site monitoring wells showed 8 ppb of TCA in MW-5 (see Section 2.7). Several other chemicals (vinyl chloride, trans-DCE, TCE, PCE, MIBK, acetone and oxirane) were also detected in the sample collected from a sink located on the property. Surface waters analyzed in October of 1989, detected up to 135 ug/l of total PAHs.

The sampling event that occurred on January 10, 1990, detected 26 ppb benzene, 34 ppb toluene, 14 ppb ethylbenzene and 50 ppb total xylenes in MW-6. The complete results from this event are still not in.

## 5.0 TOXICOLOGICAL EVALUATION

### 5.1 INTRODUCTION

A site investigation was performed by MDE/HSWMA at the Eastern Maryland Wood Treatment facility in the fall of 1989. During the site investigation, notable concentrations of both inorganic and organic parameters were discovered at the site. Samples for the site investigation were by the Maryland Department of Health and Mental Hygiene's Laboratory (MD-DHMH Lab). Though the results are not Contract Laboratory Program (CLP) data, the MD-DHMH Lab has provided reliable analyses.

Soil samples were obtained from September 25, 1989 to

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September 29, 1989 and from October 2, 1989 to October 3, 1989. The 43 soil samples were analyzed for semi-volatiles (BNAs), phenols (total), total chromium, total copper, total arsenic and total moisture (see Appendix B). In addition, surface water samples obtained on October 4, 1989, from two locations (SW-1 and SW-2) were analyzed for phenols (total) and semi-volatiles (BNAs) (see Appendix C).

Soil samples taken on-site revealed high concentrations of semi-volatiles (locations SS-8, SS-14, SS-10, B-19, B-12, B-10, B-3, DS-1, DS-2, DS-3, DS-5, SS-7, SS-11, SS-12, and SS-13) including naphthalene, acenaphthylene, fluorene, phenanthrene, fluoranthene, pyrene, chrysene, and dibenz (A,H) anthracene. In addition, elevated concentrations of arsenic, chromium and copper were found in these soil samples.

Surface water samples (locations SW-1 and SW-2) revealed high concentrations of semi-volatiles including carbazole, chrysene, acenaphthalene, acenaphthylene, and pyrene. These compounds are known as Polynuclear Aromatic Hydrocarbons (PAHs) and are considered a hazardous waste and a priority toxic pollutant by the U.S. EPA. Concentrations for any PAH compound or total PAH's should not exceed 0.2 ug/l (see Section 4.8.1. and Appendix C). Some of the contaminants found (eg. chromium) are persistent in the environment and toxic to aquatic life and may bioaccumulate in the food chain.

## 5.2 POTENTIAL ENVIRONMENTAL AND HUMAN EXPOSURE PATHWAYS

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Potential environmental pathways include those related to human exposure to contaminated soil, surface water, air and the food chain. The potential of human exposure includes the direct contact or inhalation of contaminated soils by workers. The facility is completely open and there is minimal security. Therefore, the threat of exposure to children or other persons in the vicinity of the site is maximized. There is a potential for equipment and workmen working on-site to pick up contaminated soil on tires and boots, further spreading the contaminated soil. A possibility exists for surface water to pick up contaminants and transport them off-site.

Considering the site's proximity to Marshyhope Creek, which eventually flows into the Chesapeake Bay (approximately 40 miles away), some possibility exists that contaminants deposited on and in the vicinity of the site could contaminate near surface soils and impact the surface water and groundwater. The contaminants found on-site could possibly degrade the water quality for aquatic life in the Chesapeake Bay system. In addition, contaminated groundwater could have an impact on nearby surface water, which may bioaccumulate in the food chain. A remote threat exists for people consuming seafood from both the tributaries and rivers receiving run-off from the site.

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### 5.3 DEMOGRAPHICS

The facility is located on the northeastern border of Dorchester County approximately 1 mile southwest of Federalsburg in southern Caroline County. EMWT is found in a predominately agricultural area. However, there is a small amount of industry in and around the town of Federalsburg which has a municipal water system that services 4,500 residents from three operating wells and two standby wells. The rest of the water supply for this area is drawn from private wells. The nearest surface water is a small unnamed stream that flows to the south, 2,000 feet to the east of EMWT. This stream flows into Marshyhope Creek which empties into the Nanticoke River, a major tributary of the Chesapeake Bay.

### 5.4 SURFACE WATER AND GROUNDWATER

No surface water intakes exist within a three (3) mile radius of the facility. Marshyhope Creek and the Nanticoke River are used for recreational purposes. Water that does not evaporate, or enter storm drainage lines, will eventually enter Marshyhope and flow into the Nanticoke River. The surface water pathways of runoff in the site are generally to the southeast.

### 5.5 RESIDENTIAL WELLS

According to information obtained from the MDE Division of  
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Residential Sanitation, the entire population within a three (3) mile radius of the site is on well water. Including the population in Federalsburg, it is believed that 4200 people are at risk. The Federalsburg water system serves an additional 2300 people outside the three-mile radius increasing the total number of persons at risk to 6500 people.

#### 5.6 SOIL CONTAMINATION

Soil samples were taken in order to evaluate the extent of contamination. Elevated concentrations of chromium, arsenic, and copper were found. In addition, high concentrations of semi-volatiles (BNAs) were revealed including naphthalene, acenaphthalene, fluorene, phenanthrene, fluoranthene, pyrene, chrysene, and dibenz (A,H) anthracene. Most contaminants found appear to be related to the wood treating processes at the facility.

The facility is only 200 feet away from a small stream which eventually flows into the Chesapeake Bay, 40 miles away. The chromium found on-site could conceivably leach into the stream, possibly degrading the water quality for aquatic life.

#### 5.7 SURFACE WATER CONTAMINATION

Two surface water samples were obtained on October 4, 1989,

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from a ditch which eventually flows into a small stream 2,000 feet away from the facility. Samples were analyzed in order to evaluate the extent of contamination. High concentrations of semi-volatiles (BNAs) were revealed including carbazole (up to 60.4 ppb) pyrene (up to 17.6 ppb) and acenaphthalene (up to 19.7 ppb). A drinking water standard for ingestion has been set, not to exceed 0.2 ug/l, but for the protection of human health, the levels should preferably be zero. Total PAHs for SW-1 were 79.02 ppb and 135.76 ppb for SW-2. These values exceed the drinking water standard.

## 5.8 HEALTH EFFECTS OF CONTAMINATION FOUND

### 5.8.1 POLYNUCLEAR AROMATIC HYDROCARBONS (PAH's)

Most of the Polynuclear Aromatic Hydrocarbons (PAHs) found on-site were associated with the soils on the northeastern side of the facility (see Figures 4 through 7). In addition, the two surface water analyses SW-1 and SW-2, sampled on October 4, 1989, revealed a high concentration of PAHs (79.023 and 135.76 total PAHs respectively). The PAHs are considered to be a hazardous waste and a priority toxic pollutant by the U.S. EPA. A drinking water standard has been set, not to exceed 0.2 ug/l, but for the protection of human health, the levels should preferably be zero. Certain PAHs have been demonstrated as a carcinogen in test animals at relatively high exposure levels.

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### 5.8.2 CHROMIUM

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Chromium was detected in soil samples obtained from the site up to 350,000 ppb. Chromium is considered to be a hazardous substance and a priority pollutant by the U.S. EPA. Chromium compounds act as allergens which cause dermatitis to exposed skin. Chromium compounds in the +3 state are of low order to toxicity. In the +6 state, chromium compounds are irritants and corrosives, and may enter the body by ingestion, inhalation, and through the skin. Workers may experience a variety of symptoms including inflammation of the conjunctiva, nasal itch, and soreness, and chronic asthmatic bronchitis. Hepatic injury has been reported from exposure to chromic acid used in plating baths.

Although EMWT does not produce chrome, chrome is found in elevated concentrations in the soil. It is possible that working in areas with high concentrations of chromate increases the risk of lung cancer (Handbook of Toxic and Hazardous Chemicals and Carcinogens, 1985).

### 5.8.3 ARSENIC

Arsenic was detected in soil samples obtained (from September 25, 1989 to October 3, 1989) from the site, up to 133,000 ppb. Arsenic is a naturally occurring trace element found in most soils, water and air. In its concentrated form it may be a highly

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effective poison. Currently, it is used in wood treatment, the manufacture of glass and as a raw material in the manufacture of electronic components. Arsenic is considered to be a carcinogen, a hazardous waste constituent, a hazardous substance in some forms and a priority toxic pollutant by the U.S EPA. The interim maximum contaminant level (IMCL) for arsenic in public drinking water is 50 ppb.

Arsenic enters the human body through skin, eyes or respiration or ingestion. Arsenic compounds may produce contact dermatitis and skin sensitization, skin cancer and lung cancer. Skin cancer in humans is associated with exposure to arsenic compounds in drinking water, drugs and occupational environment. Arsenic compounds have been reported to be teratogenic, fetotoxic and embryotoxic in several animal species. An increased incidence of multiple malformations among children born to women occupationally exposed to arsenic have been reported. Arsenic compounds have been found to cause chromosomal damage in animals and chromosomes aberrations in humans (Clement Associates, 1985 and Sittig, 1985).

#### 5.8.4 COPPER

Elevated concentrations of copper were detected in soil samples obtained (from September 25, 1989 to October 3, 1989) from the site, up to 144,000 ppb. Copper is considered to be a

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hazardous substance, a hazardous waste (copper cyanide), and a priority toxic pollutant by the U.S. EPA. Copper salts act as irritants which causes itching and dermatitis to exposed skin. In addition, exposure of copper salts to the eyes may cause conjunctivitis and turbidity of the cornea. The dust, mist and fumes from copper causes irritation of upper respiratory tract, nausea, and may cause discoloration of the skin and hair. It is unlikely that poisoning by ingestion in industry would progress to a serious point as small amounts induce vomiting which empties the stomach of copper salts.

#### 5.8.5 TRICHLOROETHANE (TCE)

TCE was detected in soil gas samples obtained on-site (for a discussion of the soil gas interpretations, please refer to Section 2.7). It is considered to be an animal carcinogen by the IARC. In addition, TCE is considered to be a hazardous substance, a hazardous waste and a priority toxic pollutant by the U.S. EPA. The maximum contaminant level (MCL) for TCE in public drinking water is 5 ppb. Routes of entry to the body include inhalation, ingestion, skin absorption and skin and eye contact. Irritation to eyes, nose and throat may be a result of exposure to TCE vapor. Liquid TCE may cause dermatitis after prolonged or repeated skin contact. Acute exposure to TCE depresses the central nervous system and unconsciousness and death have been reported (Sittig, 1985).



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The National Cancer Institute (NCI) in the United States has issued a "State of Concern" alert, warning producers, users and regulatory agencies that TCE administered by gastric interbatation to mice induced predominantly hepatocellular carcinomas with some metastases to the lungs (Handbook of Toxic and Hazardous Chemicals and Carcinogens, 1985).

#### 5.8.6 TETRACHLOROETHYLENE (PCE)

PCE was detected in soil gas samples obtained from the facility. PCE is considered to be a hazardous waste by the U.S EPA. Acute exposure to tetrachloroethylene may cause central nervous system depression, hepatic injury and anesthetic death. The main points of attack include the liver, kidneys, eyes, upper respiratory system and the central nervous system (Handbook of Toxic and Hazardous Chemicals and Carcinogens, 1985).

#### 5.8.7 1,1,1-TRICHLOROETHANE (TCA)

1,1,1-Trichloroethane (TCA) was found in soil gas samples obtained on-site. TCA is considered to be a hazardous waste and a priority toxic pollutant by the U.S. EPA. TCA acts as a narcotic and depresses the central nervous system. Acute exposure symptoms include dizziness, drowsiness, incoordination, unconsciousness and death. TCA has been subjected to carcinogenesis bioassay by the National Cancer Institute and found not to be carcinogenic

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(Handbook of Toxic and Hazardous Chemicals and Carcinogens, 1985).

5.8.8 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (Freon 113)

1,1,2-Trichloro-1,2,2-Trifluoroethane was detected in soil gas samples obtained from the northeastern portion of the site where the treatment plant, kiln building, and wood chip building are located. In addition, Freon 113 was also found in the central, southern portion of the site. Freon 113 is a colorless, noncombustible liquid with a sweet odor which is used as a refrigerant, industrial solvent and as a pharmaceutical rotary tablet press lubricant.

Acute (short-term) health effects may occur immediately or shortly after exposure including irritation of the eyes, nose and throat, drowsiness, difficulty in concentrating and mild lethargy (threshold concentration is about 2,500 ppm). Breathing high concentrations may cause the heart to beat irregularly or stop which can cause death. Chronic (long term) exposure may result in skin irritation and rash which may last for months or years. In addition, fluorocarbons may become concentrated in human lipids, however, adverse effects of cardiac sensitization due to this storage are not expected.

5.8.9 ALKANES

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The alkane group was detected in soil gas survey samples. Alkanes are relatively nonreactive compounds. In general, the high molecular weight alkanes are rather persistent in the natural environment and biodegradation is probably an important fate process. Alkanes with more than six carbons probably bind readily to organic materials in soil and sediment, therefore they are readily immobile.

Long chain alkanes generally are not very toxic, but they are irritants and several may be neurotoxic; the effect becoming more severe as the number of carbons increases (at least up to C-9, the heaviest alkane tested). A study done with young Coho Salmon being exposed to pentane hexane and heptane at levels of 100 mg/liter in aerated seawater was not lethal, however it caused irritation. In addition, goldfish exposed to either n-hexane or n-heptane had a 24 hour LD d50 u value of 4 mg/liter.

#### 5.8.10 CYCLOALKANES (CYCLOPARAFFINS)

Cycloalkanes or cycloparaffins (sometimes called naphthenes) were detected on-site using the soil gas technique. These compounds were wide spread throughout the site and the higher concentrations were located east of the treatment plant and around the wood chip building. These organic compounds are characterized by the arrangement of the carbon atoms in a closed ring structures (not to be confused with aromatic compounds having the hexagonal

benzene ring). Most of these compounds are derived from petroleum or coal tar. The best-known cycloparaffins are cyclopropane, cyclopentane and cyclohexane.

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Cyclohexane is used as a paint remover, a solvent for lacquers and resins, and also in making organic materials like nylon. Cyclopentane is mainly used as a laboratory chemical and is also used as a solvent. Cyclopropane is used as a surgical anesthetic and to make other chemicals.

In general, exposure to cycloparaffins may cause some of the following acute health effects: dizziness, light headedness, and unconsciousness (very high levels could cause coma or even death); contact can irritate the skin, eyes, nose and throat. Prolonged or repeated skin contact can cause drying, chapping and cracking of the skin. These compounds have not been tested for their ability to cause cancer in animals.

#### 5.8.11 ALKENES (OLEFINS)

Alkenes or olefins were detected on-site using the soil gas technique. These compounds were wide-spread throughout the site and the higher concentrations were located east of the treatment plant and around the wood chip building. These organic compounds are a class of unsaturated aliphatic hydrocarbons having one double bond, obtained by cracking naphtha or other petroleum fractions at

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high temperatures (1,500 to 1,700 °F). Exposure to these compounds can cause dizziness, nausea, unconsciousness, and also may cause irritation to the eyes, nose, throat and skin.

#### 5.8.12 BENZENE

Benzene is an important industrial solvent, a chemical intermediate, and is a rather volatile compound. Benzene is now considered a hazardous substance and a priority toxic pollutant by the U.S. EPA. It is a known human carcinogen, causing leukemia in exposed individuals. In addition, individuals who have been subjected to chronic exposures of benzene sometimes demonstrate a condition known as aplastic anemia (inability to form or regenerate blood cells) that may not become apparent for up to ten years. Exposure to benzene increases the rate of chromosomal aberrations. Furthermore, these changes in the bone marrow are stable and may occur several years after exposure has ceased. Exposure to 20,000 ppm of benzene may be fatal within minutes. Liquid and vapor phases of benzene may cause irritation to the eyes, skin, and upper respiratory tract. Liquid aspirated into the lungs may cause pulmonary edema and hemorrhage (Clement Associates, 1985; Sittig, 1985). Acute values for one fish and five invertebrate species (saltwater) range from 10,900 ug/l to 924,000 ug/l.

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#### 5.8.13 TOLUENE

Toluene is used as a solvent for paints and coatings, gums, resins, most oils and rubber and also for aviation and high-octane fuel. Toluene is considered a hazardous waste and a priority pollutant by the U.S. EPA. Toluene may cause irritation of the eyes, respiratory tract and skin. Repeated exposure or contact with toluene may cause removal of the natural lipids from the skin which causes dry skin (fissured dermatitis). Acute exposure to toluene predominantly results in central nervous system depression (Clements Associates, 1985; Sittig, 1985). Symptoms for this condition include dizziness, headache, fatigue, muscular weakness, skin paresthesia (abnormal or impaired skin sensation such as burning, prickling, itching or tingling) collapse and coma.

#### 5.8.14 ETHYLBENZENE (EB)

Ethylbenzene is used a solvent or diluents in the paint industry, in agricultural sprays for insecticides and in gasoline blends. In addition, it is used in the production of cellulose acetate, styrene and synthetic rubber. EB is a defatting agent and may cause dermatitis following prolonged exposure. EB is an irritant to the eyes and mucus membranes at concentrations of 200 ppm and greater. Other adverse effects and symptoms include kidney disease, liver disease (EB is metabolized by the liver), chronic respiratory disease and skin disease. Furthermore, there is recent

evidence that EB causes adverse reproductive effects in animals.

#### 5.8.15 TOTAL XYLENES

Xylene is used in aviation fuel, protective coatings, as a solvent for alkyd resins, lacquers, enamels, rubber cements and synthesis of organic chemicals. Xylene is also used in the manufacturing of quartz crystal oscillators, hydrogen peroxide, perfumes, insect repellents, epoxy resins, pharmaceuticals and in the leather industry.

Xylene is considered a hazardous waste by the U.S. EPA. Xylene vapors may cause irritation of the eyes, nose and throat. Prolonged or repeated skin contact with xylene may cause drying and defatting of the skin which may lead to dermatitis. Acute exposure to xylene vapor may cause central nervous system depression and minor reversible effects upon the liver and kidneys. Exposure to high concentrations of this vapor may cause dizziness, drowsiness, unconsciousness, nausea, vomiting, abdominal pain, anorexia and pulmonary edema (Sittig, 1985).

#### 5.9 EVALUATION AND DISCUSSION

The contaminants found on-site are located in several large areas. These areas include the treatment plant, kiln building, wood chip building and drip pad and several more locations south and southwest of these buildings. Soils in these areas are

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contaminated with semi-volatiles (BNAs), arsenic, copper, and chromium, TCE, TCA, freon 113, and PCE. The site is not secured against entry, so any individual may be exposed to the contaminated soils via dermal contact, inhalation, and ingestion and be at direct risk. Soil contaminants absorbed by surface water could conceivably enter Marshyhope Creek which eventually flows into the Chesapeake Bay expediting degradation of the water quality for marine life.

The entire population within a three (3) mile radius of the site is on well water. Therefore, if the groundwater is contaminated then 4,200 people are at risk, plus an additional 2,300 people outside the three mile radius raising the total population to 6,500 people at risk. In addition, there are an estimated 700 acres of environmentally sensitive land occurring in patches larger than five acres.

Groundwater samples were obtained on January 10, 1990, and the State is awaiting the results to determine the extent of contamination. These results will assist the State in determining the extent that the site is a potential health concern.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

At the time of this report, the facility is actively being subjected to a series of studies by the MDE/HSWMA. These studies



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will outline the severity and extent of the contamination on the site prior to the design and construction of a remediation system. EMWT is currently operating under a Consent Judgement to clean up the grounds and is displaying good faith in remediation efforts.

EMWT is on parole. The court has the power to demand \$115,000 in fines which have been suspended should the company not live up to the conditions imposed by this parole. Because EMWT is engaged in a State-supervised remediation of the site, it is recommended that a "No Further Remedial Action Planned" (NFRAP) under CERCLA occur. However should the status of the remediation change, the site may be re-evaluated.

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**TABLES**

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TABLE 1

Geologic Formations and their Water-bearing Properties in Caroline, Dorchester, and Talbot Counties

System	Series (Group)	Formation (Range in depth to top of formation, in feet, northwest to southeast)	Thickness (feet) Range (Average)	General character, probable origin, and boundaries	Water-bearing properties
Quaternary	Recent	0	0-10 (3)	Loam soil, alluvial sand and silt, dune sand, and peat.	Provides water to a few shallow wells of small yield.
	Pleistocene (Columbia group)	Parsonsbury sand Talbot and Pamlico formations, undifferentiated Walston silt Beaverdam sand (0-10)	0-100+ (30+)	Unconsolidated, stratified, lenticular deposits of buff sand and silt, with small amounts of gravel and clay. The deposits occur as stratified drift, with a few erratic boulders; stabilized dunes; marsh mud; fluvial thin stratified, crossbedded channel fill; massive, well-sorted beach sands; and possibly marine sands. Disconformable lower boundary.	Yields moderate to large quantities of water to a few wells, small quantities to many wells. Water-table conditions prevail. The water is suitable for almost all purposes.
Tertiary	Pliocene(?)	Brandywine formation Bryn Mawr gravel (0-40)	0-45+ (10?)	Slightly cemented red, orange, and brown gravelly sand. Locally contains hard ledges, a few inches to 2 feet thick, usually at the base. Occurs chiefly as channel fill. Disconformable lower boundary.	Yields moderate quantities of water to wells in conjunction with overlying Pleistocene deposits, under water-table conditions. Capable of large yields in buried channel deposits. The quality of water is excellent for most purposes.
	Upper and middle Miocene (Chesapeake group)	Yorktown and Cohansey(?) formations, undifferentiated (0-50+)	0-50 (20)	Gray sands with gray or blue clayey silt. Occurs only in the southern end of the area beneath Elliott Island and Bishops Head. Marine littoral. Slightly disconformable.	Not known to yield water in this area. The sands lie under a marsh cover, and the water is probably of undesirable quality.
		St. Marys formation (0-83)	0-110+ (60±)	Predominantly clayey silt and silty clay with some very fine sand, shells and Foraminifera. Conformable lower boundary.	An aquiclude. A few wells derive water locally from stringer sands in Caroline County and eastern Dorchester County.
		Choptank formation (0-200)	0-130 (80+)	Gray and brown sand and clay, containing shell marl and Foraminifera. Marine. Conformable lower boundary.	Yields small to moderate quantities of water to wells in Caroline County and eastern Dorchester County. The water is moderately hard and may be irony.
		Calvert formation (0-230)	20-300 (200±)	Gray diatomaceous silts and clays, containing lenses and thin sheets of gray sand, shell beds and Foraminifera. Marine.	Largely an aquiclude, but contains two or three aquifers which locally yield large quantities of water at Easton, Federalsburg, Hurlock, and Vienna. The quality ranges from usable for some purposes to usable only for limited purposes.
	Oligocene	None	—	An interval of erosion or nondeposition. Regional unconformity.	An angular boundary between Miocene and Eocene strata.

ORIGINAL  
(Red)

System	Series (Group)	Formation (Range in depth to top of formation, in feet, northwest to southeast)	Thickness (feet) Range (Average)	General character, probable origin, and boundaries	Water-bearing properties
Tertiary—Continued	Eocene (Jackson group equivalents)	Piney Point formation (70-620)	2-191 (74)	An olive-green to black quartz sand, slightly to moderately glauconitic, predominantly medium to coarse grain, with some lenses of fine sand, silt, and clay, containing Foraminifera. Very uneven lower boundary. Marine. Formation wedges out in Queen Annes County, but this probably does not serve as an impermeable boundary. Recharge from the intake belt of the Aquia greensand probably occurs across Eocene formation boundaries.	The most important artesian aquifer in the area, providing large quantities of ground water in Dorchester County, lower Talbot County and central Caroline County, and small quantities in northwestern Talbot County. The quality of water is suitable for most purposes. The water level has been lowered over 100 feet below sea level at Cambridge in a huge cone of depression which has extended out into Dorchester County and into Talbot County.
	Eocene (Pamunkey group)	Nanjemoy formation (75-510)	0-294 (166)	Blackish-green highly glauconitic sand, silt and clay. Conformable lower boundary. Marine.	A leaky aquiclude in the northwest; probably a tighter confining formation in the southeast.
	(Wilcox group equivalents)	Aquia greensand (250-600)	0-231+ (100±)	A green glauconitic quartz sand, with a few lenses of clay, containing shell fragments, Foraminifera, and hardbeds. Marine. Limited to western Talbot County and northwestern Dorchester County with an impermeable boundary passing northeastward through Trappe. A recharge boundary strikes northeastward through Annapolis, Anne Arundel County, about 15 miles from Claiborne.	An important aquifer, capable of providing moderate quantities of water to many wells. Average water level is a few feet above sea level. Average specific capacity of the wells is 2.0 gpm per foot of drawdown.
	Paleocene	Brightseat(?) formation (300-1,000)	70-300+ (150)	Alternate hard and soft beds of gray clay and sparsely glauconitic sand containing Foraminifera and shells. Marine. Regional unconformity.	Generally an aquiclude, but yields water to five wells at moderate to small rates of yield. The water is soft, nonirony, but high in sodium bicarbonate.
Cretaceous	Upper Cretaceous	Monmouth formation (450-1,100)	34-230 (98)	Dark-green glauconitic sand and lead-gray clay containing shells and Foraminifera. Marine. Lower boundary conformable.	An aquiclude. A small quantity of water is obtained from the formation in a well at Easton.
		Matawan formation (650-1,200)	98-176 (128)	Black micaceous glauconitic clay and brown glauconitic sand. Marine. Not conformable to the Magothy formation.	An aquifer in Talbot and Caroline Counties which has produced in six wells in conjunction with other sands. An aquiclude in Dorchester County as logged in five wells.

AR100448

ORIGINAL  
(Red)

System	Series (Group)	Formation (Range in depth to top of formation, in feet, northwest to southeast)	Thickness (feet) Range (Average)	General character, probable origin, and boundaries	Water-bearing properties
Cretaceous—Continued	Upper Cretaceous—Continued	Magothy formation (650-1,400)	43-139 (88)	White, yellow, and gray sand inter-laminated with gray and brown shale, containing lignite and carbonaceous matter, but no animal fossils. Nonmarine. Unconformable lower boundary.	Yields large quantities of water to seven wells and is potentially productive throughout the area. The water flows initially in wells developed at low altitude. The quality is suitable for almost all purposes. The temperature ranges from 68.5° to 78°F.
		Raritan, Patapsco, and Arundel formations, undifferentiated (900-1,600)	600-1,700 (1,100)	Intercalated thin sands and shales. The sands are generally gray, fine-grained, micaceous, and lignitic. The shales are mottled pale-gray, brown, and red in the upper section and gray-brown in the lower. The formation is predominantly deltaic and estuarine. The lower boundary is unconformable.	A potential aquifer. One well (Tal-Cb 89) penetrated a water-bearing, medium-grained sand, 69 feet thick, at depths of 1,351-1,420 ft. below land surface (alt. 13 ft.). A flow of 8.5 gpm in 1953 was obtained at an elevation 19 ft. above sea level. The water is low in dissolved solids, soft, but high in iron (10-13 ppm). Temperature 69°F. One other well, at Church Creek, is believed to derive its flow from the Raritan formation.
	Lower Cretaceous	Patuxent formation (1,600-3,300)	600-800 (700)	Not penetrated by the drill in this area, but presumed to be extensively present because of its occurrence in deep oil tests in Wicomico and Worcester Counties, and in the outcrop in Cecil County and on the Western Shore. Probably composed of thick sands and thin shales.	A potential aquifer. The water is warm to hot, and probably is too highly mineralized for most uses.
Paleozoic and pre-Cambrian		Crystalline complex (2,200-4,000)	Extends to indefinite depth	Not penetrated in Carline, Dorchester, and Talbot Counties, but presumed to form a basement rock beneath this area.	An aquifuge; hard crystalline rocks that neither contain nor transmit ground water.

AR100449

ORIGINAL  
(Red)

Table 2 — Coastal Plain stratigraphic nomenclature and aquifers of the Eastern Shore of Maryland.

System	Series (Group)	Geologic Unit		Thickness (feet)	Hydrogeologic Unit(s)	Dominant Lithologic Character	
QUATERNARY & TERTIARY (?)	Holocene	Holocene deposits		0 - 40	—	Soil, alluvial sand and silt, dune sand, and peat. Disconformable base.	
	Pleistocene and Pliocene (?) (Columbia Group)	Shoreline complex		0 - 230	Columbia aquifer	Lenticular deposits of sand, silt, clay, and peat. Some beds of coarse sand and fine gravel. Tan; some gray and blue clay.	
		Salisbury Formation	Beaverdam Fm. and Pensauken Fm. of Owens and Denny (1979)			Beaverdam Sand: Light gray to light tan, fine to coarse grained, moderately sorted, feldspathic sand. Pensauken Formation: Light tan to orange tan, medium to coarse grained, moderately to poorly sorted, pebbly feldspathic sand.	
TERTIARY	Miocene (Chesapeake Group)	Upper Miocene Aquifer Complex		0 - 50	Upper confining bed	Lenticular silts, clays, and fine sands. Green-blue silt and fine gray sand most common, but occasionally includes blue-green pebbly clay.	
				0 - 80	Pocomoke aquifer	Sand, gray or tan-gray; coarse and pebbly generally, but locally fine.	
				Yorktown and Chatham Formations (?) of Rasmussen and Slaughter (1955)	0 - 85	Lower confining bed Ocean City aquifer	Blue and gray clayey silt and sand; some peat. Some beds of shell and calcite and/or limestone. Coarse gray sand, fine gravel.
					0 - 240	Manokin aquifer	Fine to very coarse gray sand, and some lignite or peat. Some silty sand and clay. Occasional beds of shell and/or "rock".
		St. Marys Formation	0 - 190	Confining Layer	Gray fossiliferous clay, silt, fine sand, and silty and sandy clay.		
		Choptank Formation	0 - 340	Frederica aquifer and confining Layer	Gray fine sand. Thin beds of shell and calcite.		
		Calvert Formation	0 - 680	Cheswood aquifer and confining layers	Green or brown clay and fine sand. Thin beds of shell and calcite or limestone.		
		Eocene	Piney Point Formation	0 - 220	Piney Point aquifer	Olive-green to greenish-gray quartz sand, slightly to moderately glauconitic; shell beds.	
	Nanjemoy Formation		0 - 294	Confining Layer	Gray to dark gray, glauconitic, silt, sand, and clay.		
	Paleocene	Aquia and Hornerstown Formations (undivided)	0 - 165	Aquia aquifer	Green to brown, fine to coarse grained, glauconitic sand; interstratified with grayish-green silt and clays; calcite cemented sands and fossil beds.		
		Brightseat Formation	0 - <100	Confining Layer	Dark gray clay and fine, silty, micaceous sand.		
	CRETACEOUS	Upper Cretaceous	Matawan and Monmouth Formations (undivided)	0 - 960 ?	Matawan-Monmouth aquifers	Dark greenish-gray to reddish-brown, fine to occasionally coarse quartz sand. Facies may be glauconitic, micaceous, shaly and/or clayey.	
			Magothy Formation	<50 - 100	Magothy aquifer	Light gray to white "sugary", medium to coarse grained quartz sand and fine gravel; interbedded dark gray clays in upper part.	
Lower Cretaceous (Potomac Group)		Patuxent Formation	<50 - 1,750	Aquifers and confining layers	Interbedded, variegated (gray, brown, and red) silt and clay, and argillaceous, subrounded, fine to medium quartz sand.		
		Arundel and Patuxent Formations (undivided)	<50 - 2,950	Aquifers and confining layers	White to light gray to orange brown, moderately sorted, angular and subrounded quartz sand; also gray to ochreous silt and clay beds, which occur in amounts ranging from less than 2% to greater than 7% of formation.		
JURASSIC (?)	—	Unnamed	0 - 135	—	White quartzite conglomerate, dark gray, reddish-green and apple green shales, sandy shales, and arkosic sandstones. Does not outcrop on the Eastern Shore.		
PALEOZOIC (?) & PRECAMBRIAN	Basement Complex			—	Believed to be chiefly schist, granite, gabbro, and gneiss.		

1/ The nomenclature is that of the Maryland Geological Survey.

2/ Compiled from Rasmussen and Slaughter (1957), Hansen (1972; oral commun., 1982), and Weigle (1976).

AR108450

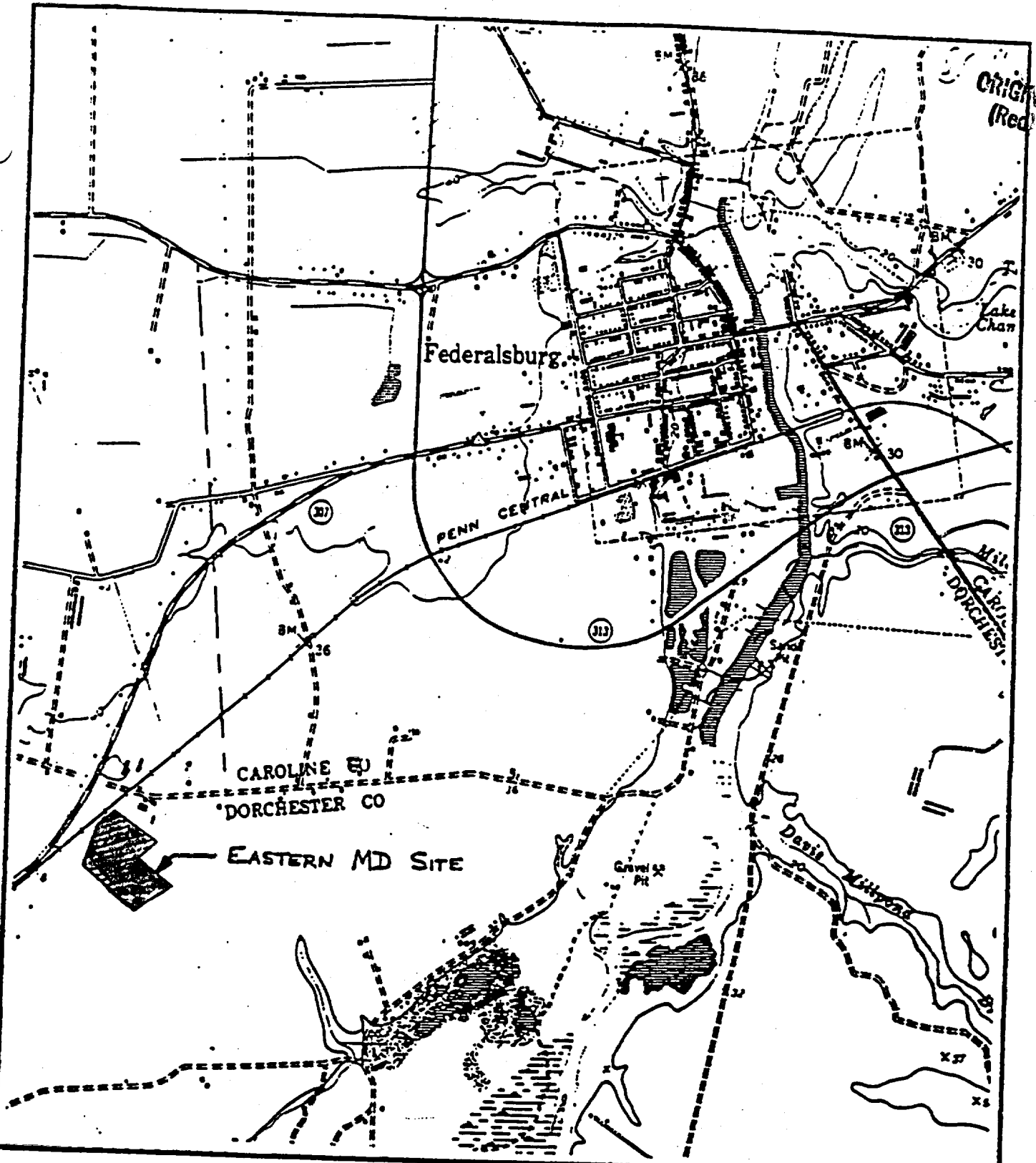


ORIGINAL  
(Red)

FIGURES

AR100451.

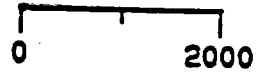
ORIGINAL  
(Red)



**REFERENCE:**

USGS 7.5 MINUTE  
FEDERALSBURG, MD.  
QUADRANGLE, 1974

**SCALE (FEET)**



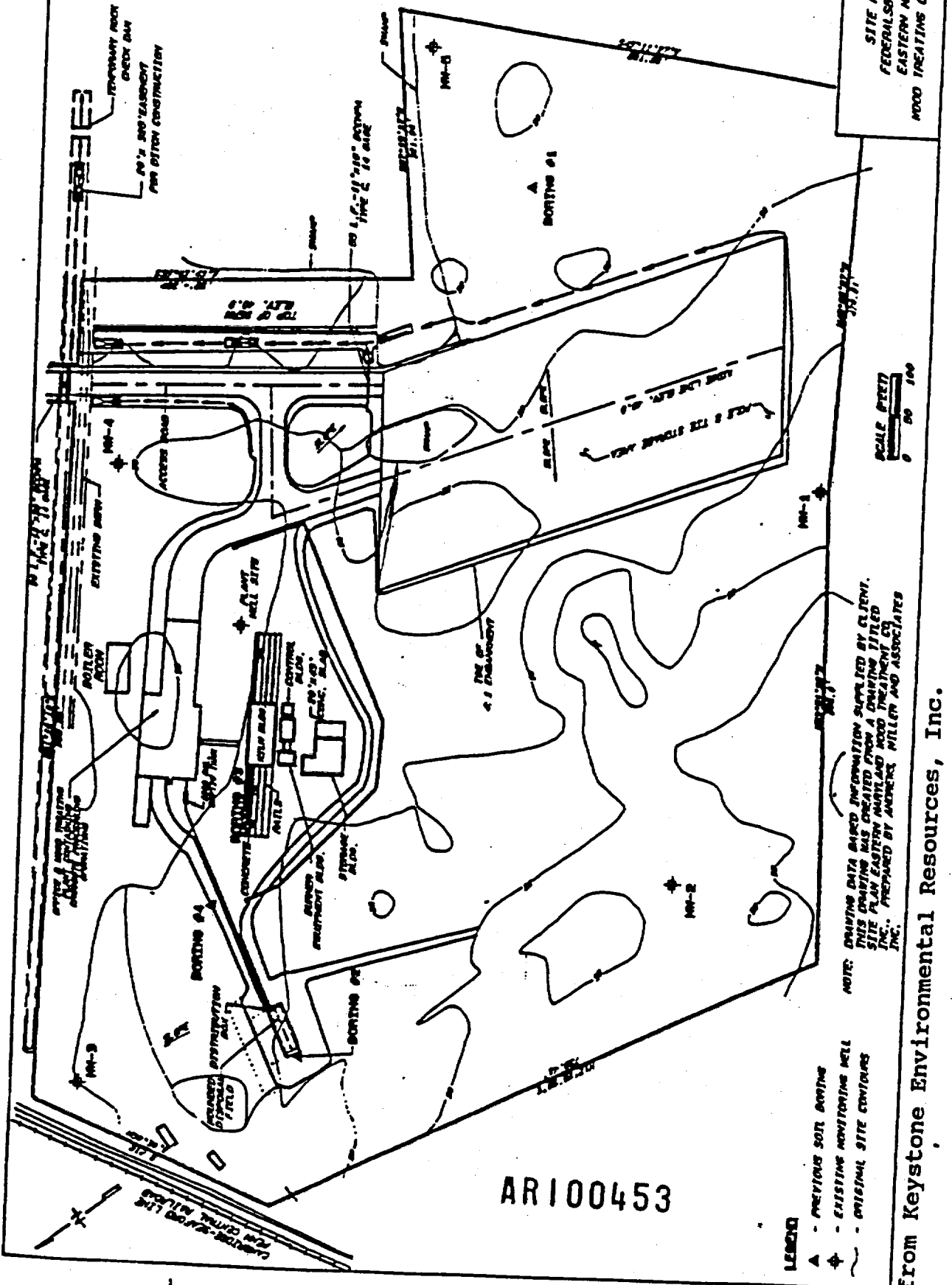
AR100452

**FIGURE 1**

**SITE VICINITY MAP**

FEDERALSBURG, MARYLAND

FIGURE 2



AR100453

- LEGEND**
- ▲ - PREVIOUS SOIL BORINGS
  - ◆ - EXISTING MONITORING WELL
  - - - ORIGINAL SITE CONTOURS

NOTE: DRAINING DATA BASED INFORMATION SUPPLIED BY CLIENT. THIS DRAINING WAS CREATED FROM A DRAINING TITLED SITE PLAN EASTERN MARILAND WOOD TREATMENT CO. INC., PREPARED BY AMBERLY MILLEY AND ASSOCIATES, INC.

SCALE (FEET)  
0 50 100

SITE PLAN  
FEDERALSPUR AND  
EASTERN MARILAND  
WOOD TREATING COMPANY, INC.



ORIGINAL  
(Red)

from Keystone Environmental Resources, Inc.



FIGURE 4

ORIGINAL  
(Revised)

Legend:  
Ion Counts  
 ≥ 1000  
 200-999

△ Flux level indicates elevated value due to presence of terpenes. (see text for explanation)

Note: All flux values divided by 100  
 MW - Missing Sample

100455



SCALE: 1" = 113' 500  
 FEET

**KEYSTONE ENVIRONMENTAL**

Eastern Maryland Wood Treating Co.  
 Maryland  
 Federalsburg.

Relative Flux  
 Alkanes, Cycloalkanes, and Alkenes

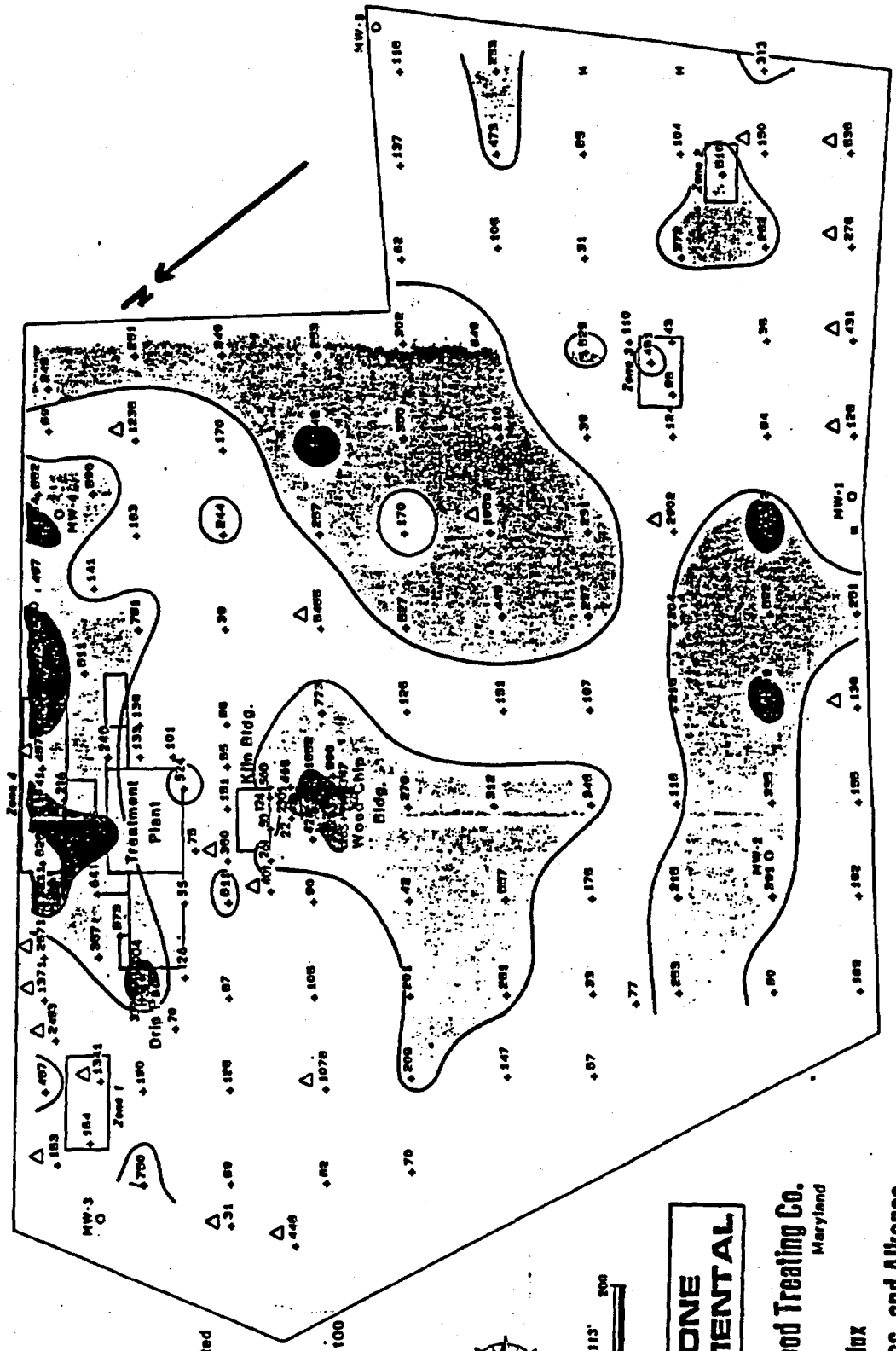
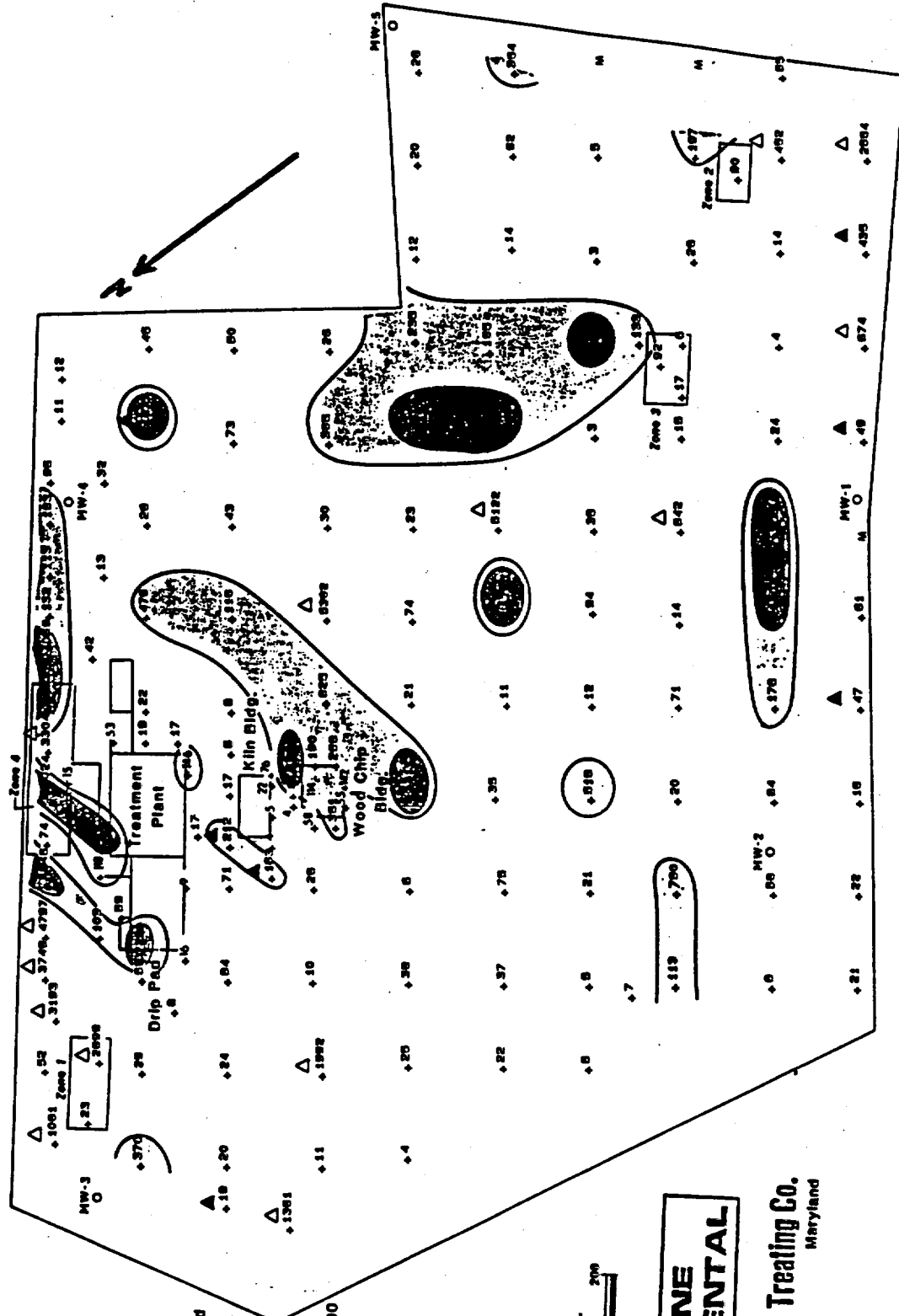


FIGURE 5



ORIGINAL  
(Red)

**Legend:**  
Ion Counts

- ≥ 1000
- 100-889

△ Flux level indicates elevated value due to presence of terpenes. (see text for explanation)

▲ Presence of terpenes and aromatics.

Note: All flux values divided by 100

○ Missing Sample

AP 100456



SCALE: 1" = 115' 200 FEET

**KEYSTONE ENVIRONMENTAL**

**Eastern Maryland Wood Treating Co.**  
Federalburg, Maryland

Relative Flux  
Aromatics

FIGURE 6

- Legend:
- Ion Counts
  - ≥ 1000
  - 100-999
  - 10-99

△ Flux level indicates elevated value due to presence of terpenes. (see text for explanation)

Note: All flux values divided by 100  
M Missing Sample

AR100457

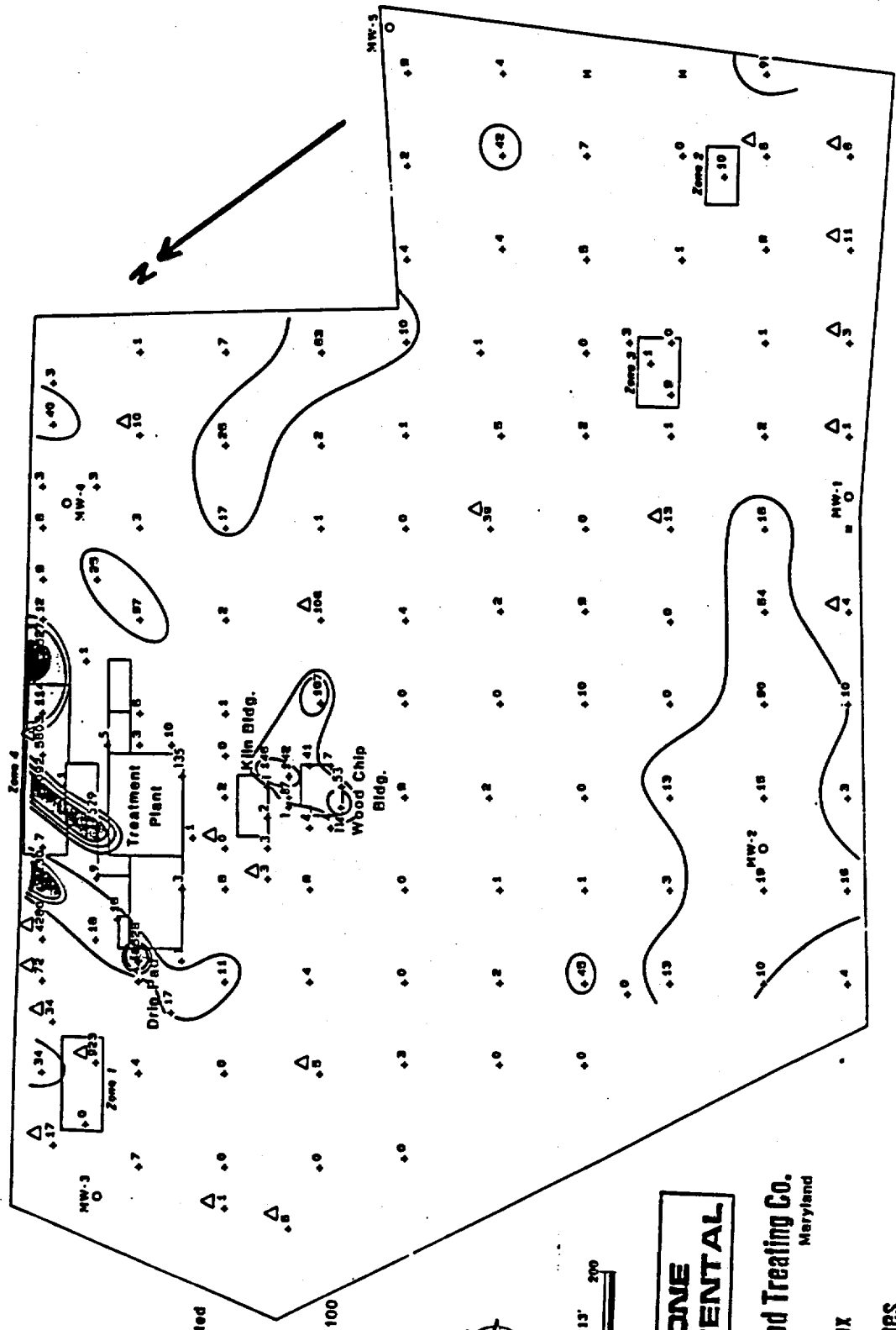


SCALE: 1"=113' 200 FEET

**KEYSTONE ENVIRONMENTAL**

**Eastern Maryland Wood Treating Co.**  
Maryland  
Federalsburg.

Relative Flux  
Naphthalenes



ORIGINAL (red)

FIGURE 7

Legend:  
Ion Counts

- ≥ 1000
- 100-999
- 15-99

△ Flux level indicates elevated value due to presence of terpenes. (see text for explanation)

Note: All flux values divided by 100  
M - Missing Sample

AR100458

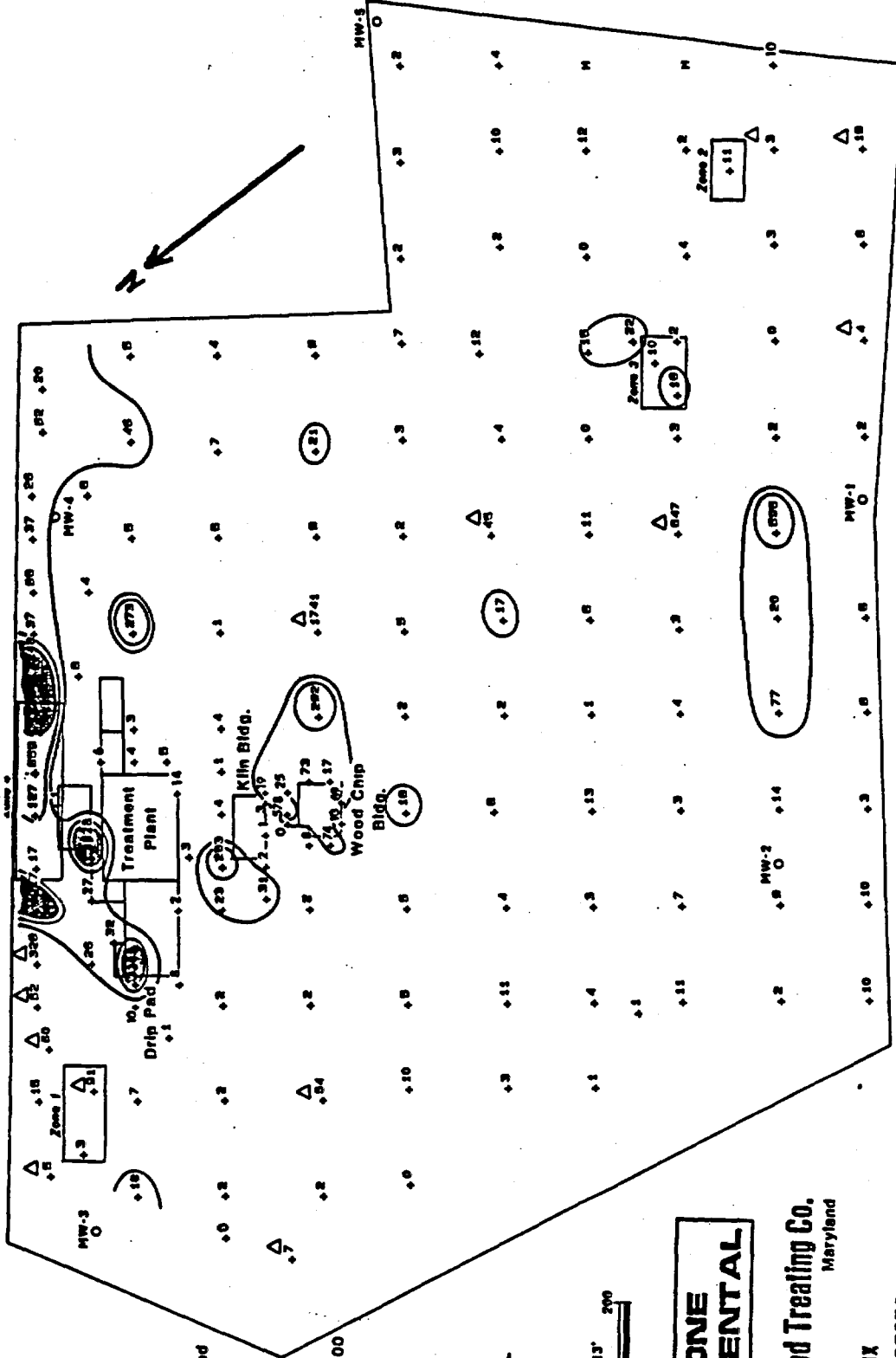


SCALE: 1" = 113'  
FEET

**KEYSTONE ENVIRONMENTAL**

Eastern Maryland Wood Treating Co.  
Maryland  
Feddersburg.

Relative Flux  
Combined Halogens  
TCA, TCE, Freon 113, & PCE

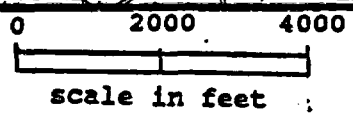
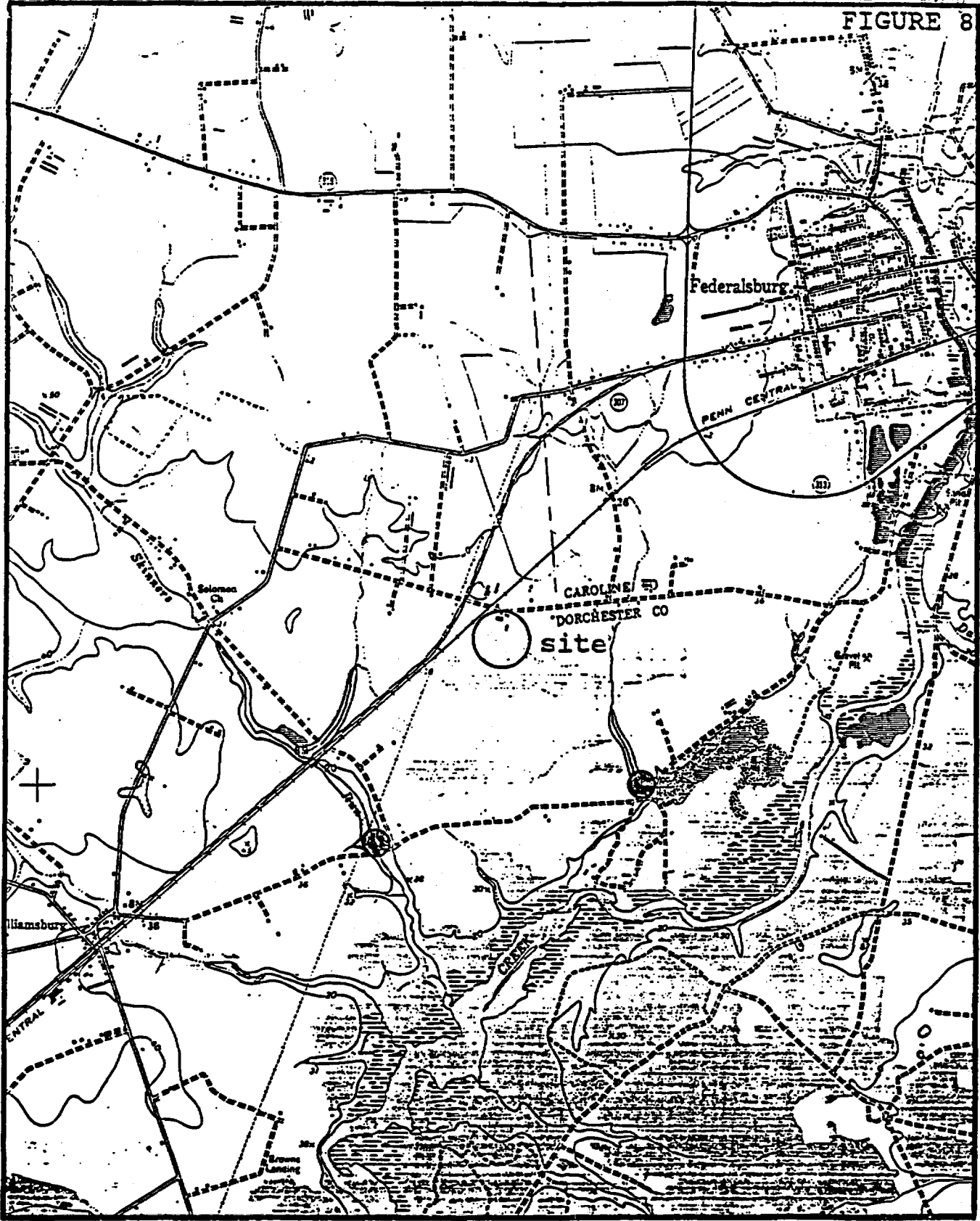




TOPOGRAPHIC AND WATER DRAINAGE MAP OF EMWT AREA

ORIGINAL

FIGURE 8



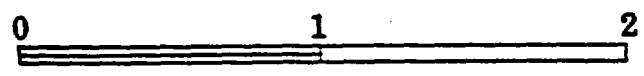
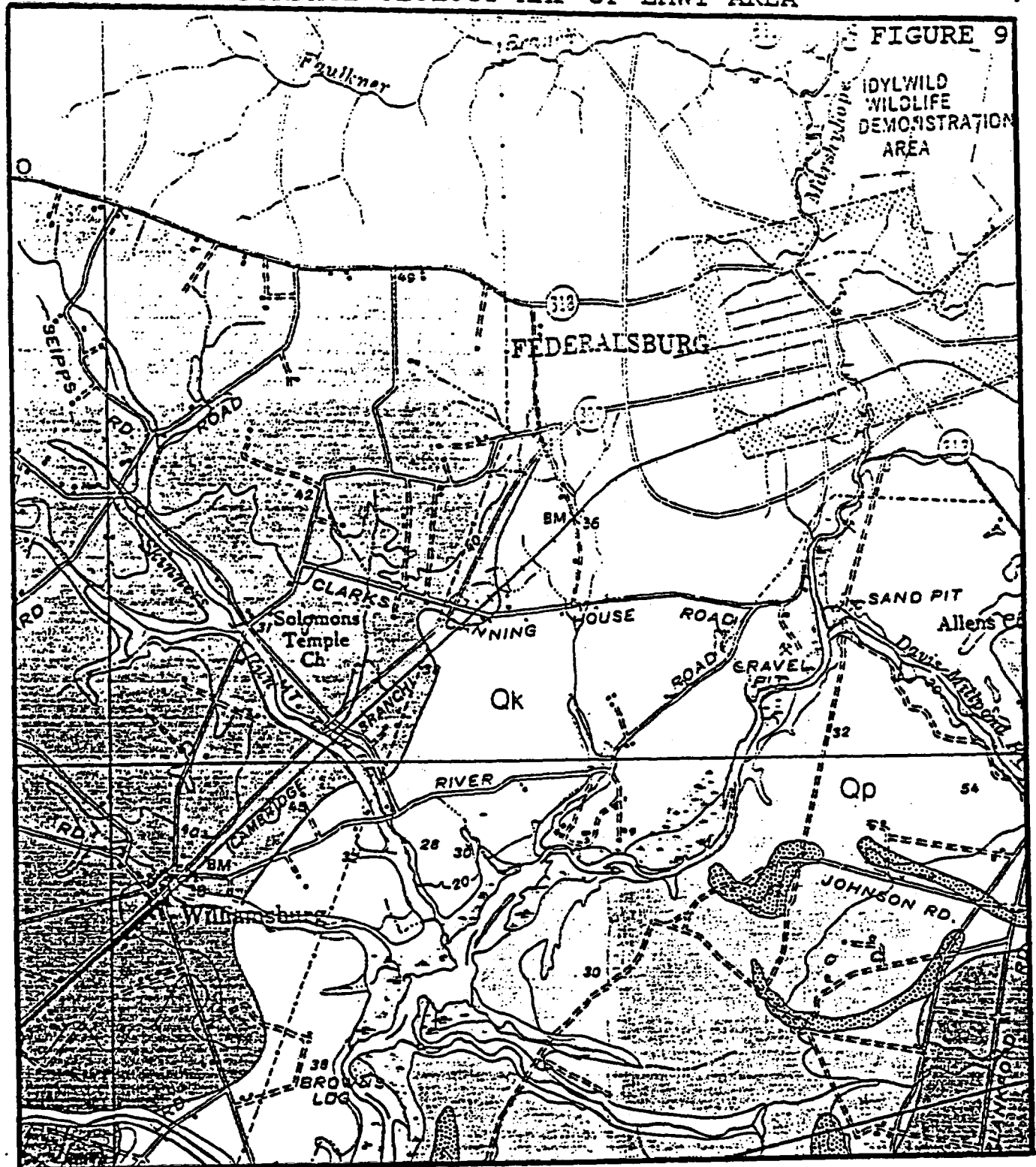
USGS, 1944, revised 1974

AR100459 site sediment sample point, 12/88

ORIGINAL  
(Red)

# SURFACE GEOLOGY MAP OF EMWT AREA

FIGURE 9



Scale  
Miles



AR100460

James P. Owens and Charles S. Denny  
U.S. Geological Survey

- QtM Quaternary tidal marsh deposits
- Qp Quaternary Parsonsburg Sand
- Qk Kent Island Formation
- Tb Beaverdam Sand

1986

# CROSS SECTION OF REGIONAL GEOLOGIC STRUCTURE

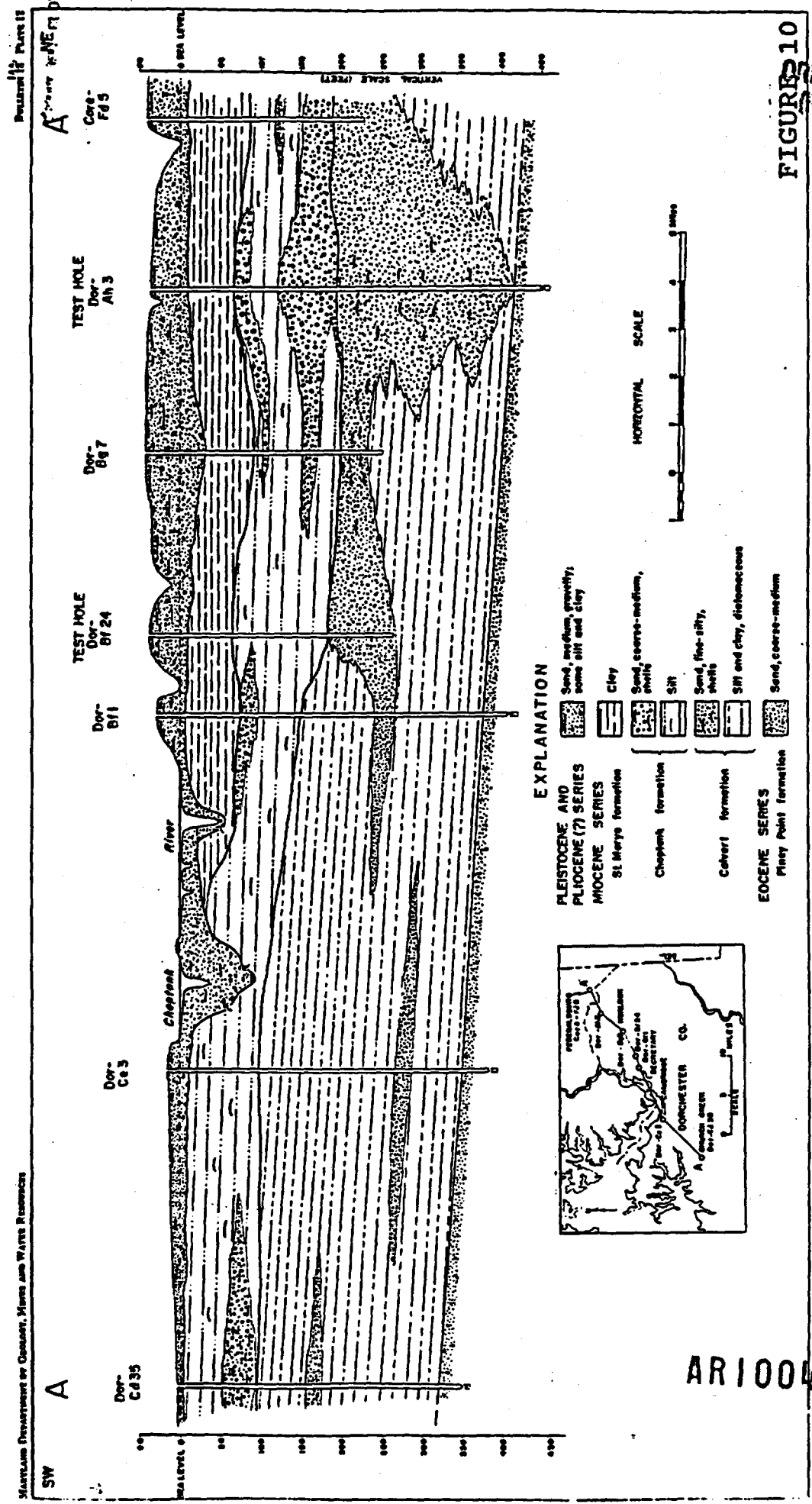


FIGURE 10  
ORIGINAL  
(Red)

AR10046J

MARITIME DEPARTMENT OF GEOLGY, MINES AND WATER RESOURCES

PLATE 13

ORIGINAL  
(17-00)

**APPENDIX A**

**AR100462**

JAN 25 1984

Lab. No. 000926

Hazardous Waste Laboratory  
 Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ASD EN/KIRK/FORTUNE 10-14-83 Sample Source EASTERN MARYLAND LEAD TESTING  
 Name/time/date

Sample ID No. EM-187 Preservative Used ICED

Sample Alert \_\_\_\_\_

Chain of Custody sample possession

From BART KIPP 11 2 AM 10/4/83 to V.V. Hill, Jr. 1/12/84 OCT 4 1983  
 Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
 Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
 Name/time/date Name/time/date

☐ Toxicity Organics  
 PPb

endrin \_\_\_\_\_  
 lindane \_\_\_\_\_  
 methoxychlor \_\_\_\_\_  
 toxaphene \_\_\_\_\_  
 2, 4-D \_\_\_\_\_  
 2, 4, 5-TP(silvex) \_\_\_\_\_

Organics Analysis

- 
- 
- 
- 
- 
- 
- 
- 
- 
- 

- \*Purgeable halocarbons
- \*Purgeable aromatics
- \*Acrolein & Acrylonitrile
- \*Phenols
- \*Phthalate esters
- \*Organochlorine Pesticides & PCB
- \*Nitroaromatics & Isophorone
- \*Polynuclear aromatic hydrocarbons
- \*Haloethers
- \*Chlorinated hydrocarbons
- \*see other side for specific compounds

\_\_\_\_\_  
 \_\_\_\_\_  
 SEE ATTACHED SHEET  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

AR100463

Organic identification and comparison \_\_\_\_\_

oil and grease \_\_\_\_\_ PPK

Section Chief: V.V. Hill

Date: JAN 17 1984

Verified By: V.V. Hill



31  
STATE OF MARYLAND

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

LABORATORIES ADMINISTRATION  
TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Red)

BOTTLE NUMBER Em-187

MORCHESTER  
Name of County

SOURCE OF SAMPLE EASTERN MARYLAND WOOD TREATING COLLECTOR ASPLEN/KIRK/FORTUNE

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(Specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private MONITORING WELL

Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (Specify) BACKGROUND WELL SAMPLE PRIOR TO PLANT OPERATION

REMARKS: COLLECTED FROM WELL NO. DC-SI-0187 - pumped off 15 GAL (approx 7-8 volumes); recharged fairly rapidly; turbid

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
											1	0	0	4	8	3		
TRANS TYPE			COUNTY			PLANT NO			SAMPLING STATION			DATE COLLECTED					CARD NO	

20	21	22	23	24	25	26
FIELD DM			FIELD RESID. CHLORINE: FREE			TOTAL

Purgeable Halocarbons (EPA 601)

Chloromethane <1.

Bromomethane \_\_\_\_\_

Dichlorodifluoromethane \_\_\_\_\_

Vinyl chloride \_\_\_\_\_

Chloroethane \_\_\_\_\_

Methylene chloride \_\_\_\_\_

Trichlorofluoromethane \_\_\_\_\_

1,1-Dichloroethane \_\_\_\_\_

1,1-Dichloroethane \_\_\_\_\_

trans-1,2-Dichloroethane \_\_\_\_\_

Chloroform \_\_\_\_\_

1,2-Dichloroethane \_\_\_\_\_

1,1,1-Trichloroethane \_\_\_\_\_

Carbon Tetrachloride \_\_\_\_\_

Bromodichloromethane \_\_\_\_\_

1,2-Dichloropropane \_\_\_\_\_

trans-1,3-Dichloropropene <1.

Trichloroethene \_\_\_\_\_

Dibromochloromethane \_\_\_\_\_

1,1,2-Trichloroethane \_\_\_\_\_

cis-1,3-Dichloropropene \_\_\_\_\_

2-Chloroethylvinylether \_\_\_\_\_

Bromoform \_\_\_\_\_

1,1,2,2-Tetrachloroethane \_\_\_\_\_

Tetrachloroethene \_\_\_\_\_

Chlorobenzene \_\_\_\_\_

Total Trihalomethanes \_\_\_\_\_

Other Purgeable Organics:

Purgeable Aromatics (EPA 602)

Benzene <1.

Toluene <1.

Ethylbenzene <1.

Total Xylenes <2.

Total Purgeable Hydrocarbons \_\_\_\_\_

Tetrahydrofuran \_\_\_\_\_

Methyl ethyl ketone \_\_\_\_\_

(2-Butanone) (MEK) \_\_\_\_\_

Methyl isobutyl ketone (MIBK) \_\_\_\_\_

AR100465

Results reported in micograms per liter (parts per billion)

DATE RECEIVED ACT 4 1983

DATE REPORTED \_\_\_\_\_

W. J. L. P. 00092

32 STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 LABORATORIES ADMINISTRATION  
 REPORT OF WATER ANALYSIS

OCT 21 1983

WMA

Bottle Number: EM-187 Name: EASTERN MARYLAND WOOD TREATING County: DORCHESTER

Source of Sample: Cocks Carring House Rd Federalburg, MD Collector: BSOEN/KIRK/FOOTE  
Street Town or City

Sample Type (Circle): Community Source    Non-Community Distribution    Private MCL    Emergency Recheck    Routine

Remarks: COLLECTED FROM WELL NO. DO-81-0187; pumped off 15 GAL (approx 7:8 AM)  
collected; recharging fairly rapidly

County: DO Plant No.      Sampling Station      Date Collected 100483 Time 0940 10AM HRS  Acid  Iced

Field Data: pH      Chlorine Residual      Free      Total      Specific Conductance     

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	011		✓ Arsenic	253	
Alkalinity (Total)	040		Barium	262	
Alkalinity (HCO <sub>3</sub> )	050		Cadmium	273	
Alkalinity (CO <sub>3</sub> )	060		✓ Chromium	283	
pH*, Ca CO <sub>3</sub> SAT.	071		Lead	302	
Alkalinity, Ca CO <sub>3</sub> SAT	080		Mercury	314	
Hardness	110		Selenium	323	
Ammonia-N	143		Silver	333	
Nitrate-Nitrite N	162		Aluminum	192	
Nitrite N	173		Calcium	231	
MBAS	182		✓ Copper	241	
Chloride	091		Iron	122	
Fluoride	101		Magnesium	241	
Color*	020		Manganese	133	
Turbidity*	031		Nickel	391	
Conductance*, SPEC.	201		Potassium	361	
Silica	210		Sodium	371	
Sulfate	220		Zinc	342	
Total Residue	381		Send copy:		
			Office of Environmental Programs		
			Waste Management Administration		
			Centreville Multi-Services Center		
			120 Broadway, Centreville MD 21616		

\* Results reported in units, all others in milligrams per liter (ppm)  
 Date Received OCT 4 1983 Date Reported OCT 16 1983 Chemist: Bruce L. Solnick 04581







35  
STATE OF MARYLAND

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

LABORATORIES ADMINISTRATION  
TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Red)

BOTTLE NUMBER EM-188

DORCHESTER  
Name of County

SOURCE OF SAMPLE EASTERN MARYLAND WOOD TREEDING COLLECTOR ASPLEN / KIRK / FORTUNE

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private IDENTIFIED WELL

Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (specify) BACKGROUND WELL SAMPLE FROM TO PLANT OPERATION

REMARKS: COLLECTED FROM WELL NO. DC-91-A122; strong hydrogen sulfide odor; pump  
SS IS GEL; turbid

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1	2	3	4	5	6	7	8	9	10	11	1	0	0	4	8	3	1	8	
TRANS TYPE	COUNTY		PLANT NO				SAMP. NO STATION				DATE COLLECTED					CARD NO			
FIELD CM			FIELD RESID. CHLORINE FREE			TOTAL													

Purgeable Halocarbons (EPA 601)

Chloromethane	<1.
Bromomethane	
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1.
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	
Bromoform	
1,1,1,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	

Other Purgeable Organics:

Purgeable Aromatics (EPA 602)

Benzene	<1.
Toluene	<1.
Ethylbenzene	<1.
Total Xylenes	<2.
Total Purgeable Hydrocarbons	
Tetrahydrofuran	
Methylethylketone	
(2-Butanone) (MEK)	
Methylisobutylketone (MIBK)	

AR100469

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED OCT 4 1983 DATE REPORTED OCT 24 1983 ANALYST VP/llc LAB NO. 00092

DEPT. OF HEALTH AND MENTAL HYGIENE  
LABORATORIES ADMINISTRATION  
REPORT OF WATER ANALYSIS

WMMH  
CRONIN

Bottle Number: EM-198 Name: EASTERN MARYLAND WOOD TREATING County: DORCHESTER

Source of Sample: Clarks Canning House Rd Federalburg, MD Collector: ASPLEN/KIRK/FOX  
Street Town or City

Sample Type (Circle): Community Source Non-Community Distribution Private MCL Emergency Recheck Routine

Remarks: COLLECTED FROM WELL NO. DO-81-0188; strong odor of hydrogen sulfide pumped off 15 GAL; turbid - grayish

County: DO Plant No. [ ] [ ] [ ] [ ] Sampling Station: [ ] [ ] [ ] [ ] Date Collected: 100483 Time: 1005 10 AM HRS. Acid: [ ] Iced:  Field Data: pH: [ ] [ ] Chlorine Residual: Free [ ] Total [ ] Specific Conductance: [ ] [ ] [ ] [ ]

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	011		Arsenic	253	≤ 0.01
Alkalinity (Total)	040		Barium	252	
Alkalinity (HCO <sub>3</sub> )	050		Cadmium	273	
Alkalinity (CO <sub>3</sub> )	060		Chromium	263	0.02
pH*, Ca CO <sub>3</sub> SAT.	071		Lead	302	
Alkalinity, Ca CO <sub>3</sub> SAT	080		Mercury	314	
Hardness	110		Selenium	323	
Ammonia-N	143		Silver	333	
Nitrate-Nitrite N	162		Aluminum	192	
Nitrite N	173		Calcium	231	
MBAS	182		Copper	241	0.01
Chloride	091		Iron	122	
Fluoride	101		Magnesium	241	
Color*	020		Manganese	133	
Turbidity*	031		Nickel	391	
Conductance*, SPEC.	201		Potassium	361	
Silica	210		Sodium	371	
Sulfate	220		Zinc	342	
Total Residue	381				

AR100470

Office of Envir. Hygiene & Health  
Waste Management & Control  
Centreville Multi-Service Co.  
120 Broadway  
Centreville, Md. 21613

\* Results reported in units, all others in milligrams per liter (ppm)  
Date Received: 08/14/82 Date Reported: 08/18/82 Chemist: Bruce L. Solnick, Ph.D. Lab No. 04582  
DMMH 90-A 10'82 50M

37  
 MARYLAND STATE DEPARTMENT OF HEALTH AND NEPHROLOGY HYGIENE  
 Laboratories Administration  
 Howard and Biddle Streets  
 P.O. Box 2355, Baltimore, Maryland 21203

JAN 25 1984

Lab. No. 000928

Hazardous Waste Laboratory  
 Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ROSEN/KIRK/FORTUNE 12-14-83 104018 Sample Source EASTERN MARYLAND WOOD TREATING  
 Name/time/date

Sample ID No. EM-189 Preservative Used ICED

Sample Alert \_\_\_\_\_

Chain of Custody sample possession

From BRIAN VIK 11 27 AM 10/4/83 to V. Kelly Jr. 11/27/ OCT 4 1983  
 Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
 Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
 Name/time/date Name/time/date

EP Toxicity Organics  
 PPb

- endrin \_\_\_\_\_
- lindane \_\_\_\_\_
- methoxychlor \_\_\_\_\_
- toxaphene \_\_\_\_\_
- 2, 4-D \_\_\_\_\_
- 2, 4, 5-TP(silvex) \_\_\_\_\_

Organics Analysis

- 
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- \*Purgeable halocarbons
- \*Purgeable aromatics
- \*Acrolein & Acrylonitrile
- \*Phenols
- \*Phthalate esters
- \*Organochlorine Pesticides & PCB
- \*Nitroaromatics & Isophorone
- \*Polynuclear aromatic hydrocarbons
- \*Haloethers
- \*Chlorinated hydrocarbons
- \*see other side for specific compounds

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 SEE ATTACHED SHEET  
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AR100471

Organic identification and comparison \_\_\_\_\_

oil and grease \_\_\_\_\_ PPM

Section Chief: [Signature]

Date: JAN 17 1984

Verified BY: [Signature]



39  
STATE OF MARYLAND

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

LABORATORIES ADMINISTRATION  
TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Red)

BOTTLE NUMBER EM-189

DORCHESTER  
Name of County

SOURCE OF SAMPLE EASTERN MARYLAND WOOD TREATING COLLECTOR ASPLEN / KIRK / FORTUNE

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(specify)  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private MONITORING WELL  
 Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) BACKGROUND WELL SAMPLE PRIOR TO PLANT OPERATION

REMARKS: COLLECTED FROM WELL NO. D0-91-0159; molecularly strong hydrogen sulfide odor; pumped @ 15 GPM (approx 8 1/2 gal); slightly greenish

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
											1	0	0	4	8	3		
TRANS TYPE	COUNTY	PLANT NO	SAMPLING STATION	DATE COLLECTED			CARD NO	FIELD DM		FIELD RESID. CHLORINE: FREE	TOTAL							

Purgeable Halocarbons (EPA 601)		Purgeable Aromatics (EPA 602)	
Chloromethane	<1.	trans-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Dichlorodifluoromethane		Dibromochloromethane	
Vinyl chloride		1,1,2-Trichloroethane	
Chloroethane		cis-1,3-Dichloropropene	
Methylene chloride		2-Chloroethylvinylether	
Trichlorofluoromethane		Bromoform	
1,1-Dichloroethene		1,1,2,2-Tetrachloroethane	
1,1-Dichloroethane		Tetrachloroethene	
trans-1,2-Dichloroethene		Chlorobenzene	
Chloroform		Total Trihalomethanes	
1,2-Dichloroethane		Other Purgeable Organics:	
1,1,1-Trichloroethane			
Carbon Tetrachloride			
Bromodichloromethane			
1,2-Dichloropropane			

AR100473

DATE RECEIVED OCT 4 1983 RESULTS REPORTED IN MICROGRAMS PER LITER (PARTS PER BILLION) DATE REPORTED OCT 24 1983 CHEMIST Chell 0009

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
LABORATORIES ADMINISTRATION  
REPORT OF WATER ANALYSIS

WMA

ORIGINAL  
(Red)

Bottle Number: EM-189 Name: EASTERN MARYLAND WOOD TREATING County: DORCHESTER

Source of Sample: Stacks County Home Rd Federicksburg MD Collector: BSA/EN/KIRK/EG  
Street Town or City

Sample Type (Circle): Community Source Non-Community Distribution Private MCL Emergency Recheck Routine

Remarks: COLLECTED FROM WELL NO. 00-81-0189; moderately strong hydrogen sulfide odor; pumped off 15 GAL (approx 8 Vol)

DO County Plant No. Sampling Station 100483 Date Collected 1040 HRS 11 AM Time Acid Iced Field Data: pH\* Chlorine Residual Free Total Specific Conductance

Table with columns: ANALYSIS, CODE, RESULTS, ANALYSIS, CODE, RESULTS. Rows include pH\*, Alkalinity (Total), Alkalinity (HCO3), Alkalinity (CO3), pH\*, Ca CO3 SAT., Alkalinity, Ca CO3 SAT, Hardness, Ammonia-N, Nitrate-Nitrite N, Nitrite N, MBAS, Chloride, Fluoride, Color\*, Turbidity\*, Conductance\*, SPEC., Silica, Sulfate, Total Residue, Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver, Aluminum, Calcium, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Sodium, Zinc.

\* Results reported in units, all others in milligrams per liter (ppm)  
Date Received \_\_\_\_\_ Date Reported \_\_\_\_\_ Chemist 15 Lab No. 04583  
DHMH 90-A 10/82 14 B4 50M

AR100474  
Office of Env. H. 110:11:11  
Waste Management: Additional  
Centerville 71111: 51111: 11111  
120 Broadway 12116: 17  
Centerville 51111: 11111: 11111



MARYLAND DEPARTMENT OF HEALTH AND PUBLIC HYGIENE  
Laboratories Administration  
Howard and Biddle Streets  
P.O. Box 2355, Baltimore, Maryland 21203

PAGE 1 OF 1

Lab. No. 000924

Hazardous Waste Laboratory  
Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ASPLEN/KIRK/FOXTUNE 10-24-83 CC/WH Sample Source EASTERN MARYLAND WOOD TRAILING  
Name/time/date

Sample ID No. EM-190 Preservative Used KED

Sample Alert \_\_\_\_\_

Chain of Custody sample possession

From BRENT KIRK 11:25 AM 10/4/83 to KL Hill, Jr. 11:25 OCT 4 1983  
Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
Name/time/date Name/time/date

EP Toxicity Organics  
PPb

endrin \_\_\_\_\_  
lindane \_\_\_\_\_  
methoxychlor \_\_\_\_\_  
toxaphene \_\_\_\_\_  
2, 4-D \_\_\_\_\_  
2, 4, 5-TP(silvex) \_\_\_\_\_

Organics Analysis

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- \*Purgeable halocarbons
- \*Purgeable aromatics
- \*Acrolein & Acrylonitrile
- \*Phenols
- \*Phthalate esters
- \*Organochlorine Pesticides & PCB
- \*Nitroaromatics & Isophorone
- \*Polynuclear aromatic hydrocarbons
- \*Haloethers
- \*Chlorinated hydrocarbons
- \*see other side for specific compounds

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SEE ATTACHED SHEET  
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AR100475

Organic identification and comparison \_\_\_\_\_

oil and grease \_\_\_\_\_ PPM

Section Chief: KL Hill

Date: IAN 17 1984

Verified By: KL Hill



DEPARTMENT OF HEALTH AND MENTAL HYGIENE

LABORATORIES ADMINISTRATION  
TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

BOTTLE NUMBER EM-190

DORCHESTER  
Name of County

SOURCE OF SAMPLE EASTERN MARYLAND WOOD TREATING COLLECTOR ROSEN/KIRK/FORTUNE

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(Specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private MUNICIPAL WELL

Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (Specify) BACKGROUND WELL SAMPLE PRIOR TO PLANT OPERATION

REMARKS: COLLECTED FROM WELL NO. DC-51-C190; pumped off total of 15 gal;  
turbid; pumped down 3 times before collection

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
											1	0	0	4	8	3		
TRANS TYPE		COUNTY		PLANTING				SAMPLING STATION				DATE COLLECTED					CARD NO	

20	21	22	23	24	25	26
FIELD RESID. CHLORINE FREE			TOTAL			

Purgeable Halocarbons (EPA 601)

Chloromethane	<1
Bromomethane	
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethane	
1,1-Dichloroethane	
trans-1,2-Dichloroethane	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	
Bromoform	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	

Other Purgeable Organics:

Purgeable Aromatics (EPA 602)

Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<2
Total Purgeable Hydrocarbons	
Tetrahydrofuran	
Methylethylketone	
(2-Butanone) (MEK)	
Methylisobutylketone (MIBK)	

ART00477

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED OCT 4 1983

DATE REPORTED OCT 24 1983

CHEMIST V. Hill

LAB NO 00092

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

LABORATORIES ADMINISTRATION

REPORT OF WATER ANALYSIS

WMP

Bottle Number: EM-190 Name: EASTERN TRADING WOOD TRADING County: DORCHESTER

Source of Sample: clocks Conroy House Rd Franklin, MD Collector: BAEEN/KIRK/E

Sample Type (Circle): Community Source  Non-Community Distribution  Private MCL  Emergency Recheck  Routine

Remarks: COLLECTED FROM WELL NO. DO-SI-0190 ; pumped 255 total of 15  
EBL ; pumped dry three times before collection

County: 00

Plant No.     

Sampling Station     

Date Collected 100483

Time 0910 09 AM 0 HRS

Acid

Ice

Field Data: pH     

Chlorine Residual

Free     

Total     

Specific Conductance     

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	011		✓ Arsenic	253	< 0.01
Alkalinity (Total)	040		Barium	262	
Alkalinity (HCO <sub>3</sub> )	050		Cadmium	273	
Alkalinity (CO <sub>3</sub> )	060		✓ Chromium	223	< 0.01
pH*, Ca CO <sub>3</sub> SAT.	071		Lead	302	
Alkalinity, Ca CO <sub>3</sub> SAT	080		Mercury	314	
Hardness	110		Selenium	323	
Ammonia-N	143		Silver	333	
Nitrate-Nitrite N	162		Aluminum	192	
Nitrite N	173		Calcium	231	
MBAS	182		✓ Copper	241	0.01
Chloride	091		Iron	122	
Fluoride	101		Magnesium	241	
Color*	020		Manganese	133	
Turbidity*	031		Nickel	391	
Conductance*, SPEC.	201		Potassium	361	
Silica	210		Sodium	371	
Sulfate	220		Zinc	342	
Total Residue	381		Office of Environ. & Planning Waste Management Administration Centreville Multi-Service Center 120 Broadway, Centreville, Md 21617		

\* Results reported in parts, all others in milligrams per liter (ppm)  
Date Received OCT 4 1983 Date Reported 10/11/83 Chemist Erica L. Smith Lab No. 04584  
DHMH 90-A 10.82

45  
MARYLAND STATE DEPARTMENT OF HEALTH AND PUBLIC HYGIENE  
Laboratories Administration  
Howard and Riddle Streets  
P.O. Box 2355, Baltimore, Maryland 21203

JAN 25 1984  
REC'D

Lab. No. 000925

Hazardous Waste Laboratory  
Organic Analysis Report Form

Priority \_\_\_\_\_

Collector ASPLEY/KIRK/EXTINE 10-24-83 10:30 AM Sample Source EASTERN MARYLAND WOOD TREATING  
Name/time/date

Sample ID No. EM-191 Preservative Used ICED

Sample Alert \_\_\_\_\_

Chain of Custody sample possession

From BRENT KIRK 11 26 AM 10/4/83 to V.V. Hill Jr. 11/26/ OCT 4 1983  
Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
Name/time/date Name/time/date

From \_\_\_\_\_ to \_\_\_\_\_  
Name/time/date Name/time/date

EP Toxicity Organics  
PPb

endrin \_\_\_\_\_  
lindane \_\_\_\_\_  
methoxychlor \_\_\_\_\_  
toxaphene \_\_\_\_\_  
2, 4-D \_\_\_\_\_  
2, 4, 5-TP(silvex) \_\_\_\_\_

Organics Analysis

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- \*Purgeable halocarbons \_\_\_\_\_
- \*Purgeable aromatics \_\_\_\_\_
- \*Acrolein & Acrylonitrile \_\_\_\_\_
- \*Phenols \_\_\_\_\_
- \*Phthalate esters \_\_\_\_\_
- \*Organochlorine Pesticides & PCB \_\_\_\_\_
- \*Nitroaromatics & Isophorone \_\_\_\_\_
- \*Polynuclear aromatic hydrocarbons \_\_\_\_\_
- \*Haloethers \_\_\_\_\_
- \*Chlorinated hydrocarbons \_\_\_\_\_
- \*see other side for specific compounds

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\_\_\_\_\_  
SEE ATTACHED SHEET  
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AR100479

Organic identification and comparison \_\_\_\_\_

oil and grease \_\_\_\_\_ PPM

Section Chief: V. Hill

Date: 1 7 1984

Verified By: V. Hill



47  
STATE OF MARYLAND

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

LABORATORIES ADMINISTRATION  
TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Rec)

BOTTLE NUMBER EM-191

DORCHESTER  
Name of County

SOURCE OF SAMPLE EASTERN MARYLAND WOOD TREATING COLLECTOR ASBEN / KIRK / FORTUNE

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(specify)  
Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private MONITORING WELL  
Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
Suspected Industrial Chemical Contamination \_\_\_\_\_  
Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
Other (specify) BACKGROUND WELL SAMPLE PRIOR TO PLANT OPERATION

REMARKS: COLLECTED FROM WELL NO. DG-91-0191; 2-3 GPM pumped well dry; very turbid; left well 50 min to recharge

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
											1	0	0	4	8	3		
TRANS TYPE		COUNTY		PLANT NO				SAMPLING STATION				DATE COLLECTED					CARD NO	

20	21	22	23	24	25	26
FIELD pH			FIELD RESID. CHLORINE: FREE		TOTAL	

Purgeable Halocarbons (EPA 601)

Chloromethane	<1.
Bromomethane	
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	✓

trans-1,3-Dichloropropene	<1.
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	
Bromoform	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	✓
Total Trihalomethanes	

Other Purgeable Organics:

Purgeable Aromatics (EPA 602)

Benzene	<1.
Toluene	↓
Ethylbenzene	↓
Total Xylenes	<2.
Total Purgeable Hydrocarbons	
Tetrahydrofuran	
Methylethylketone	
(2-Butanone) (MEK)	
Methylisobutylketone (MIBK)	
AR100481	

Results reported in micrograms per liter (parts per billion)  
DATE RECEIVED OCT 4 1983 DATE REPORTED OCT 24 1983 CHEMIST W. Hill LAB NO. 00092

DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 LABORATORIES ADMINISTRATION  
 REPORT OF WATER ANALYSIS

WMA

Bottle Number: EM-191 Name: EASTERN MARYLAND WOOD TREATING County: CORCHESTER  
 Source of Sample: Clarks Landing House Rd Federalburg, MD Collector: ESLEN/KIRK/ENC

Sample Type (Circle): Community Source Non-Community Distribution Private MCL Emergency Recheck Routine

Remarks: collected from well no. DO-91-0191; 2-3 gal pumped well dry; left 50 min to recharge before collection

Field Data:

County: DO Plant No. [ ] [ ] [ ] [ ] Sampling Station [ ] [ ] [ ] [ ] Date Collected: 100483 Time: 10:20 AM <sup>HRS</sup> Acid  Iced

pH: [ ] [ ] [ ] Chlorine Residual: [ ] [ ] Free: [ ] [ ] Total: [ ] [ ] Specific Conductance: [ ] [ ] [ ] [ ]

ANALYSIS	CODE	RESULTS	ANALYSIS	CODE	RESULTS
pH*	011		Arsenic	253	
Alkalinity (Total)	040		Barium	262	
Alkalinity (HCO <sub>3</sub> )	050		Cadmium	273	
Alkalinity (CO <sub>3</sub> )	060		Chromium	283	
pH*, Ca CO <sub>3</sub> SAT.	071		Lead	302	
Alkalinity, Ca CO <sub>3</sub> SAT	080		Mercury	314	
Hardness	110		Selenium	323	
Ammonia-N	143		Silver	333	
Nitrate-Nitrite N	162		Aluminum	192	
Nitrite N	173		Calcium	231	
MBAS	182		Copper	241	
Chloride	091		Iron	122	
Fluoride	101		Magnesium	241	
Color*	020		Manganese	133	
Turbidity*	031		Nickel	391	
Conductance*, SPEC.	201		Potassium	361	
Silica	210		Sodium	371	
Sulfate	220		Zinc	342	
Total Residue	381				

Office of Environmental & Hazardous Waste Management Administration  
 Centreville Health Statistics Section  
 120 Broadway, Centreville, Md 21613

AR100482



Edder

ORIGINAL  
(Red)

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

Howard and Biddle Streets

P.O. Box 2355, Baltimore, Maryland 21203

Program:

RCRA X

NPDES \_\_\_\_\_

SPECIFY \_\_\_\_\_

Hazardous Waste Laboratory

Multi Sample Submission Form

Lab. No. 871094

Priority

ASAP

Collector

Hofer 12/8/87  
Name/time/date

Sample Source

EASTLW MD WOODS

Sample ID No. (List below)

Preservative Used

2-PLAIN / 1-HNO<sup>3</sup>

Sample Alert

NONE

Chain of Custody sample possession

From

Hofer 10:25 12/9/87  
Name/time/date

to

Kevin Reed 10:25 12-9-87  
Name/time/date

From

Name/time/date

to

Name/time/date

From

Name/time/date

to

Name/time/date

ORGANIC

INORGANIC

METAL

1 EMWT W-1

11

2 " W-2

12

3 " W-3

13

4 " W-4

14

5 " W-5

15

6 " PW-1

16

7 Three Cubes Per Well

17

8 \_\_\_\_\_

18

9 \_\_\_\_\_

19

AR100483

DS 1-20-88

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mahan Joseph, Ph.D., Director  
 TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

RECEIVED  
 OCT 9 1987  
 ENVIRONMENTAL DIVISION  
 ORIGINAL (Red)

BOTTLE NUMBER

EWV-1

Dorchester  
 Name of County

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. HOFER

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 (specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_

Landfill observation well  stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (specify) \_\_\_\_\_

REMARKS: 2" wells

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
											0	9	0	3	8	7		
TRANS TYPE		COUNTY		PLANT NO			SAMPLING STATION				DATE COLLECTED					CARD NO		

20	21	22	23	24	25	26
FIELD pH			FIELD RESID. CHLORINE-FREE		TOTAL	

0904 P1001

Purgeable Halocarbons (EPA 8162A)

Chloromethane	<1.
Bromomethane	
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
monochloromethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1.
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	
Bromoform	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	

Other Purgeable Organics: N.D.

Purgeable Aromatics

Benzene	<1.
Toluene	
Ethylbenzene	
Total Xylenes	<2.
Total Purgeable Hydrocarbons	
Tetrahydrofuran	13.
(2-Butanone) (MEK)	N.D.
Methylisobutylketone (MIBK)	
Acrolein	
Acrylonitrile	

AR100484

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED SEP 4 1987

DATE REPORTED OCT 01 1987

CHEMIST Will

LAB. NO. 881061

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration

P.O. Box 2355  
Baltimore, Maryland 21203

HAZARDOUS WASTE LABORATORY

General Inorganic Analysis Report Form

Lab No. 879094

Priority ASAP

Collector Hof 12/8/87  
Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID no. EMWT-W-21

Preservative Used NONE

Sample Alert

Specify Program:

RCRA: X

NEDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From: Hof 12/8/87  
Name/Time/Date

To: SUB FORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>6.0</u>	<input checked="" type="checkbox"/> Chloride	<u>15.0</u>	CCM-Cl
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>71925°C</u>	<input type="checkbox"/> Fluoride		CCM-F
<input checked="" type="checkbox"/> Turbidity	<u>240</u> NTU	<input type="checkbox"/> Iodide		CCM-I
<input type="checkbox"/> Color		<input type="checkbox"/> Cyanide, total		CCM-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>129</u> ppm	<input type="checkbox"/> Cyanide, reactive		CCM-CN
<input checked="" type="checkbox"/> Residue filterable	<u>92</u> ppm	<input type="checkbox"/> Cyanide, available to chlorination		CCM-CN
<input type="checkbox"/> Residue, total		<input type="checkbox"/> Phenol, L&P		CCM-phenol
<input type="checkbox"/> Residue volatile		<input type="checkbox"/> Acidity, total		CCM-CaCO <sub>3</sub>
<input type="checkbox"/> Specific gravity	<u>025°C</u>	<input checked="" type="checkbox"/> Alkalinity, total	<u>30.7</u>	CCM-CaCO <sub>3</sub>
<input type="checkbox"/> Free liquid test	<u>2</u>	<input checked="" type="checkbox"/> Hardness, total	<u>27.3</u>	CCM-CaCO <sub>3</sub>
<input type="checkbox"/> Corrosivity	<u>pH</u>	<input type="checkbox"/> Carbon Dioxide		CCM-CaCO <sub>3</sub>
<input type="checkbox"/> Ignitability	<u>°C</u>	<input type="checkbox"/> Methylene Blue Active Substance		CCM-MBAS
<input type="checkbox"/> Oil and Grease	<u>ppm</u>	<input checked="" type="checkbox"/> Chlorine, total	<u>&lt; 0.44</u>	CCM-Cl
<input type="checkbox"/> Ammonia	<u>CCM-N</u>	<input type="checkbox"/> Chlorine, free		CCM-Cl
<input type="checkbox"/> Kjeldahl Nitrogen	<u>CCM-N</u>	<input type="checkbox"/> Dissolved oxygen		CCM-DO
<input checked="" type="checkbox"/> Nitrite	<u>CCM-N</u>	<input type="checkbox"/> Biochemical oxygen demand		CCM-BOD
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>CCM-N</u>	<input type="checkbox"/> Nitrogen oxygen demand		CCM-NOD
<input type="checkbox"/> Phosphate, ortho	<u>CCM-P</u>	<input checked="" type="checkbox"/> Chemical oxygen demand		CCM-COD
<input type="checkbox"/> Phosphate, total	<u>CCM-P</u>	<input type="checkbox"/> Organic carbon, total		CCM-C
<input checked="" type="checkbox"/> Sulfate	<u>26</u> CCM-SO <sub>4</sub>	<input type="checkbox"/> Inorganic carbon		CCM-C
<input type="checkbox"/> Sulfite	<u>CCM-SO<sub>3</sub></u>	<input type="checkbox"/> Tannin, Lignin		CCM-C
<input type="checkbox"/> Sulfide	<u>CCM-S</u>	<input type="checkbox"/> Salinity		CCM-Taric acid
<input type="checkbox"/> Sulfide, reactive	<u>CCM-S</u>			0/00
<input type="checkbox"/> Bromide	<u>CCM-Br</u>			

Section Chief: \_\_\_\_\_

Date: 1-20-88

Verified By: Quarini

Authorized By: \_\_\_\_\_

ART00485

Box 2155, Baltimore, Maryland 21203

PRIORITY

ASAP

Collector

Nof

Name/Title/Date

12/8/81

Sample Source

EASTERN MD WOOD

LAB NO.

871094

Sample ID No.

EMWT W-1

Preservative Used

HNO<sup>3</sup>

Sample Alert

Specify Program:

FEA: X

NEPS:     

COOP:     

Chain of Custody Sample Possession:

From:

Nof

Name/Title/Date

12/8/81

To:

SUBFORM

Name/Title/Date

From:

To:

IF TOTALS ARE HIGH ON FP TOXICITY

Name/Title/Date

Circle Type of Analysis:

1.  Toxicology

2.  Priority Pathogens

3.  Total Metals

4.  Dissolved Metals

Indicate Type of Sample:

Liquid X

Solid     

JAN 19 1985

RECEIVED

Element	Metals in <u>    </u>		Element	ENFORCEMENT FILE FILE COPY ONLY	
	Eq	Total		Eq	Total
<input type="checkbox"/> Antimony			<input checked="" type="checkbox"/> MAGNESIUM		2.1
<input checked="" type="checkbox"/> Arsenic		40.00	<input checked="" type="checkbox"/> MANGANESE		<0.5
<input checked="" type="checkbox"/> Barium		40.5			
<input type="checkbox"/> Beryllium					
<input checked="" type="checkbox"/> Cadmium		40.05			
<input checked="" type="checkbox"/> Chromium		40.5			
<input type="checkbox"/> Copper					
<input checked="" type="checkbox"/> Iron		19			
<input checked="" type="checkbox"/> Lead		40.5			
<input checked="" type="checkbox"/> Mercury		40.00			
<input type="checkbox"/> Nickel					
<input checked="" type="checkbox"/> Selenium		0.00			
<input type="checkbox"/> Silver					
<input checked="" type="checkbox"/> Thallium		40.5			
<input checked="" type="checkbox"/> Zinc		40.05			
<input checked="" type="checkbox"/> Chromium Cr-6	40.1				

SELECT OTHER ELEMENTS FROM REVERSE SIDE OF THIS FORM

Section Chief:

Date:

Verified By:

MO

AR100486

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21203

HW 80  
 ORIGINAL  
 (Hand)

Priority ASAP

HAZARDOUS WASTE LABORATORY Lab No. \_\_\_\_\_  
 General Inorganic Analysis Report Form II

Collector Hofu 12/8/81  
 Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID No. EMWT W-1

Preservative Used NONE

Sample Alert \_\_\_\_\_

Specify Program:

RCRA: X NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_ ETO

Main of Custody Sample Possession:

From: Hofu 12/8/81  
 Name/Time/Date

To: SUBFORM  
 Name/Time/Date

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>L.A.</u> ppm-N
<input type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.008</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>&lt;0.2</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>&lt;10</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100487

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

201 W. Preston Street

J. Michael Joseph, Ph.D., Director

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

Original  
(100)

BOTTLE NUMBER EMWT W-1

Dorchester  
Name of County

SOURCE OF SAMPLE EASTERN MIDDLEWOOD COLLECTOR Hof

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_

observation well  stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (specify) \_\_\_\_\_

REMARKS: Hof 12/8/87 - 1209 P2652

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
										W1	12	08	87					
TRANS TYPE	COUNTY		PLANT NO				SAMPLING STATION				DATE COLLECTED				CARD NO			

20	21	22	23	24	25	26
FIELD RESID. CHLORINE: FREE			TOTAL			

Purgeable Halocarbons (EPA 821)

Purgeable Aromatics

Chloromethane	<1	trans-1,3-Dichloropropene	<1	Benzene	<1
Bromomethane		Trichloroethene		Toluene	↓
Dichlorodifluoromethane		Dibromochloromethane		Ethylbenzene	↓
Vinyl chloride		1,1,2-Trichloroethane		Total Xylenes	<2
Chloroethane		cis-1,3-Dichloropropene		Total Purgeable Hydrocarbons	
Methylene chloride		2-Chloroethyl methyl ether		Tetrahydrofuran	9
Trichlorofluoromethane		Ethylform		(2-Butanone) (MEK)	23
1,1-Dichloroethene		1,1,2,2-Tetrachloroethane		Methylisobutylketone (MIBK)	N.D.
1,1-Dichloroethane		Tetrachloroethene		Acrolein	↓
trans-1,2-Dichloroethene		Chlorobenzene	↓	Acrylonitrile	↓
Chloroform		Total Trihalomethanes			
1,2-Dichloroethane		Other Purgeable Organics: N.D.			
1,1,1-Trichloroethane					
Carbon Tetrachloride					
Bromodichloromethane					
1,2-Dichloropropane					

AR100488

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED DEC 10 1987 DATE REPORTED DEC 17 1987 CHEMIST [Signature] LAB. NO. 882652



MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21203

HW 45

Priority ASAP HAZARDOUS WASTE LABORATORY Lab No. 870847  
 General Inorganic Analysis Report Form II ORIGINAL (Reg)  
 Collector HOFER 9/3/99 Sample Source EASTERN MIDWOOD TREATING  
 Name/Time/Date  
 Sample ID No. EW W-3 Preservative Used NONE  
 Sample Alert NONE

Specify Program:

FPCA:  NPDES:  OTHER:

Chain of Custody Sample Possession:

From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>0.9</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>0.20</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>40.2</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>25</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100490

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_





SP. O. 2155  
Baltimore, Maryland 21203

Priority ASAP

ORIGINAL  
871094

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form

Lab No.

Collector Hof 12/8/87  
Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID no. EMWT-W-4

Preservative Used NONE

Sample Alert

Specify Program:

PCPA: X

NEPES: \_\_\_\_\_

Other: \_\_\_\_\_

JAN 27 1988

Chain of Custody Sample Possession

From: Hof 12/8/87  
Name/Time/Date

To: SUB FORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.2</u>		<input checked="" type="checkbox"/> Chloride	<u>18.1</u>	com-Cl
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>138</u>	825°C	<input type="checkbox"/> Fluoride		com-F
<input checked="" type="checkbox"/> Turbidity	<u>63</u>	NTU	<input type="checkbox"/> Iodide		com-I
<input type="checkbox"/> Color		Color	<input type="checkbox"/> Cyanide, total		com-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>264</u>	mg/l	<input type="checkbox"/> Cyanide, reactive		com-CN
<input checked="" type="checkbox"/> Residue filterable	<u>131</u>	mg/l	<input type="checkbox"/> Cyanide, amenable to chlorination		com-CN
<input type="checkbox"/> Residue, total		mg/l	<input type="checkbox"/> Phenol, LSP		com-phenol
<input type="checkbox"/> Residue volatile		mg/l	<input type="checkbox"/> Acidity, total		com-CaCO <sub>3</sub>
<input type="checkbox"/> Specific gravity			<input checked="" type="checkbox"/> Alkalinity, total	<u>21.6</u>	com-CaCO <sub>3</sub>
<input type="checkbox"/> Free liquid test			<input checked="" type="checkbox"/> Hardness, total	<u>15.0</u>	com-CaCO <sub>3</sub>
<input type="checkbox"/> Corrosivity			<input type="checkbox"/> Carbon Dioxide		com-CaCO <sub>3</sub>
<input type="checkbox"/> Ignitability			<input type="checkbox"/> Methylene Blue Active Substance		com-MBAS
<input type="checkbox"/> Oil and Grease		com	<input checked="" type="checkbox"/> Chloride, total	<u>20.44</u>	com-Cl
<input type="checkbox"/> Ammonia		com-N	<input type="checkbox"/> Chloride, free		com-Cl
<input type="checkbox"/> Kjeldahl Nitrogen		com-N	<input type="checkbox"/> Dissolved oxygen		com-DO
<input checked="" type="checkbox"/> Nitrate		com-N	<input type="checkbox"/> Biochemical oxygen demand		com-BOD
<input checked="" type="checkbox"/> Nitrate plus Nitrite		com-N	<input type="checkbox"/> Nitrogen oxygen demand		com-NOD
<input type="checkbox"/> Phosphate, ortho		com-P	<input checked="" type="checkbox"/> Chemical oxygen demand		com-COD
<input type="checkbox"/> Phosphate, total		com-P	<input type="checkbox"/> Organic carbon, total		com-C
<input checked="" type="checkbox"/> Sulfate	<u>31</u>	com-SO <sub>4</sub>	<input type="checkbox"/> Inorganic carbon		com-C
<input type="checkbox"/> Sulfite		com-SO <sub>3</sub>	<input type="checkbox"/> Tannin, Lignin		com-Tannic acid
<input type="checkbox"/> Sulfide		com-S	<input type="checkbox"/> Salinity		com-S
<input type="checkbox"/> Sulfide, reactive		com-S			com-S
<input type="checkbox"/> Bromide		com-Br			com-Br

AR 100492

Section Chief: \_\_\_\_\_

Date: 1-20-88

Verified by: \_\_\_\_\_

Priority: ASAP  
 Collector: Nof Date: 12/8/81  
 Sample ID No.: EMWT W-4  
 Sample Source: Eastern MD Wood  
 Preservative Used: HNO<sup>3</sup>

LPS NO. 0871094  
 (Res)

Specify Program:  
 FOR: X TESTS: \_\_\_\_\_ OTHER: \_\_\_\_\_  
 Chain of Custody Sample Possession:  
 From: Nof Date: 12/8/81 To: SUBFORM  
 From: \_\_\_\_\_ Date: \_\_\_\_\_ To: \_\_\_\_\_  
 From: \_\_\_\_\_ Date: \_\_\_\_\_ To: \_\_\_\_\_

IF TOTALS ARE High CW EP Toxicity  
 Circle Type of Analysis:  
 1. In Toxicology      2. Primary Pollutant      3. **Total Metals**      4. Dissolved Metals

Indicate Type of Sample:  
 Liquid X Solid \_\_\_\_\_  
 JAN 10 1982

**RECEIVED**

Element	IN	UNIT	Element	IN	UNIT
Asbestos					
Asenic			X MAGNESIUM		2.3
BARIUM		0.02	X MANGANOSE		< 0.5
Beryllium		< 0.5			
Calcium					
Chromium		< 0.05			
Copper		< 0.5			
Iron					
Lead		7.0			
Manganese		< 0.5			
Nickel		< 0.001			
Selenium					
Silver		< 0.003			
Titanium					
Zinc		< 0.5			
Carbon C+6		< 0.08			
	20.1				

AR 100493

HW 7.7

Priority ASAP

HAZARDOUS WASTE LABORATORY

Lab No. \_\_\_\_\_

General Inorganic Analysis Report Form II

Collector Hofu 12/8/87  
Name/Time/Date

Sample Source EASTERN MD ORIGINAL

Sample ID No. EMWT W-4

Preservative Used NONE

Sample Alert \_\_\_\_\_

Specify Program:

PCPA: 0 NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

DTG: \_\_\_\_\_

Main of Custody Sample Possession:

From: Hofu 12/8/87  
Name/Time/Date

To: SUBFORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/>	pH	_____
<input checked="" type="checkbox"/>	Ammonia	<u>L.A.</u> ppm-N
<input type="checkbox"/>	Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/>	Nitrite	<u>0.33</u> ppm-N
<input checked="" type="checkbox"/>	Nitrate plus Nitrite	<u>40.2</u> ppm-N
<input type="checkbox"/>	Phosphate, ortho	_____ ppm-P
<input type="checkbox"/>	Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/>	Chlorine, total	_____ ppm-Cl
<input type="checkbox"/>	Chlorine, free	_____ ppm-Cl
<input type="checkbox"/>	Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/>	Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/>	Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/>	Chemical Oxygen Demand	<u>19</u> ppm-COD
<input type="checkbox"/>	Organic carbon, total	_____ ppm-C
<input type="checkbox"/>	Inorganic Carbon	_____ ppm-C

AR100494

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mahan Joseph, Ph.D., Director  
 TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Red)

BOTTLE NUMBER EMWT W-4

Dorchester  
 Name of County

SOURCE OF SAMPLE EASTERN MIDDLEWOOD COLLECTOR Hof

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_  
 (specify)

Observation well  stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (specify) \_\_\_\_\_

REMARKS: Hof W-4 12/8/87 -

1289 5261

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
SPANS			COUNTY				PLANT NO				SAMPLING STATION				DATE COLLECTED				CARD NO	

20	21	22	23	24	25	26
FIELD PM			FIELD RESID. CHLORINE: FREE		TOTAL	

Purgeable Halocarbons (EPA 821)		Purgeable Aromatics	
Chloromethane	<1	trans-1,3-Dichloropropene	<1
Bromomethane		Trichloroethene	
Dichlorodifluoromethane		Dibromochloromethane	
Vinyl chloride		1,1,2-Trichloroethane	
Chloroethane		cis-1,3-Dichloropropene	
Methylene chloride		2-Chloroethylvinylether	
Trichlorofluoromethane		Bromoform	
1,1-Dichloroethene		1,1,2,2-Tetrachloroethane	
1,1-Dichloroethane		Tetrachloroethene	
trans-1,2-Dichloroethene		Chlorobenzene	
Chloroform		Total Trihalomethanes	
1,2-Dichloroethane		Other Purgeable Organics: ND	
1,1,1-Trichloroethane			
Carbon Tetrachloride			
1,1-Dichloroethane			
1,2-Dichloropropane			

AR100495

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED DEC 14 1987 DATE REPORTED DEC 17 1987 CHEMIST WJH LAB. NO. 882655



OCT 2 1981

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form Lab No. 870817

Collector HUFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MD. (1900) TREATMENT

Sample ID no. EW W-4

Preservative Used NONE

Sample Alert NONE

Specify Program:

PCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.3</u>	<input checked="" type="checkbox"/> Chloride	<u>20</u>	_____
<input checked="" type="checkbox"/> Conductivity, umhos/cm	<u>128</u>	<input type="checkbox"/> Sulfate	_____	_____
<input checked="" type="checkbox"/> Turbidity	<u>550</u>	<input type="checkbox"/> Iodide	_____	_____
<input type="checkbox"/> Color	_____	<input type="checkbox"/> Cyanide, total	_____	_____
<input checked="" type="checkbox"/> Residue non-filterable	<u>728</u>	<input type="checkbox"/> Cyanide, reactive	_____	_____
<input checked="" type="checkbox"/> Residue filterable	<u>232</u>	<input type="checkbox"/> Cyanide, amenable to colorimetric	_____	_____
<input type="checkbox"/> Residue, total	_____	<input type="checkbox"/> Phos., total	_____	_____
<input type="checkbox"/> Residue volatile	_____	<input type="checkbox"/> Acidity, total	_____	_____
<input type="checkbox"/> Specific gravity	_____	<input checked="" type="checkbox"/> Alkalinity, total	<u>20</u>	_____
<input type="checkbox"/> Free liquid loss	_____	<input checked="" type="checkbox"/> Hardness, total	<u>14</u>	_____
<input type="checkbox"/> Corrosivity	_____	<input type="checkbox"/> Carbon Dioxide	_____	_____
<input type="checkbox"/> Ignitability	_____	<input type="checkbox"/> Methylene Blue Active Substance	_____	_____
<input type="checkbox"/> Oil and Grease	_____	<input checked="" type="checkbox"/> Chlorine, total	<u>20.44</u>	_____
<input type="checkbox"/> Ammonia	_____	<input type="checkbox"/> Chlorine, free	_____	_____
<input type="checkbox"/> Clean Nitrogen	_____	<input type="checkbox"/> Dissolved Oxygen	_____	_____
<input checked="" type="checkbox"/> Nitrite	_____	<input type="checkbox"/> Bicarbonate oxygen demand	_____	_____
<input checked="" type="checkbox"/> Nitrate plus Nitrite	_____	<input type="checkbox"/> Nitrogen oxygen demand	_____	_____
<input type="checkbox"/> Phosphate, ortho	_____	<input checked="" type="checkbox"/> Chemical oxygen demand	_____	_____
<input type="checkbox"/> Phosphate, total	_____	<input type="checkbox"/> Organic carbon, total	_____	_____
<input checked="" type="checkbox"/> Sulfide	<u>23</u>	<input type="checkbox"/> Inorganic carbon	_____	_____
<input type="checkbox"/> Sulfite	_____	<input type="checkbox"/> Tannin, lignin	_____	_____
<input type="checkbox"/> Sulfate	_____	<input type="checkbox"/> Salinity	_____	_____
<input type="checkbox"/> Sulfate, reactive	_____			
<input type="checkbox"/> Bromide	_____			

ARI00497  
Tannic acid  
0/100

9-24-87

Jm.

HW44

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form II

Lab No. 890847  
(1989)

Collector HOFFER 9/3/89 Sample Source EASTERN MD WOOD TREATMENT  
Name/Time/Date

Sample ID No. EW 11-4 Preservative Used NONE

Sample Alert NONE

Specify Program:

PCPA:  NPDES:  OTHER:

Chain of Custody Sample Possession:

From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>1.7</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>0.05</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>4.06</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>13</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100498

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_



STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mehan Joseph, Ph.D., Director

RECEIVED

OCT 2 1987

TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

ORIGINAL  
 (Red)  
 Dorchester  
 Name of County

BOTTLE NUMBER EW W-5

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. Hofer

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 (specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_

Landfill observation well X stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (specify) \_\_\_\_\_

REMARKS: 2" wells

1 TRANS TYPE	2 3 COUNTY	4 5 6 7 PLANT NO.	8 9 10 11 SAMPLING STATION	12 13 14 15 16 17 DATE COLLECTED	18 19 CARD NO.
			5	090387	

20 21 22 FIELD pH	23 24 FIELD RESID. CHLORIDE: FREE	25 26 TOTAL

0904 T1069

Purgeable Halocarbons (EPA 821 b24)

Purgeable Aromatics

Chloromethane	<1.	trans-1,3-Dichloropropene	<1.	Benzene	<1.
Bromomethane	↓	Trichloroethene	↓	Toluene	↓
Dichlorodifluoromethane	↓	Dibromochloromethane	↓	Ethylbenzene	↓
Vinyl chloride	↓	1,1,2-Trichloroethane	↓	Total Xylenes	<2
Chloroethane	↓	cis-1,3-Dichloropropene	↓	Total Purgeable Hydrocarbons	
Methylene chloride	↓	2-Chloroethylvinylether	↓	Tetrahydrofuran	1,056.
Trichlorofluoromethane	↓	Bromoform	↓	(2-Butanone) (MEK)	91.
1,1-Dichloroethene	↓	1,1,2,2-Tetrachloroethane	↓	Methylisobutylketone (MIBK)	N.D.
1,1-Dichloroethane	↓	Tetrachloroethene	↓	Acrolein	↓
trans-1,2-Dichloroethene	↓	Chlorobenzene	↓	Acrylonitrile	↓
Chloroform	↓	Total Trihalomethanes			
1,2-Dichloroethane	↓	Other Purgeable Organics: N.D.			
1,1,1-Trichloroethane	8.				
Carbon Tetrachloride	<1.				
monochloromethane	↓				
1,2-Dichloropropane	↓				

AR100499

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED SEP 1 1987 DATE REPORTED OCT 01 1987 CHEMIST Bill LAB. NO. 881053

Priority ASAP

**HAZARDOUS WASTE LABORATORY**  
 General Inorganic Analysis Report Form

Lab No. 871094  
**ORIGINAL**  
 (Red)

Collector Hof 12/8/87  
 Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID no. EMWT-W-5

Preservative Used NONE

Sample Alert \_\_\_\_\_

Specify Program: \_\_\_\_\_

PCPA: X

NEDES: \_\_\_\_\_

Other: \_\_\_\_\_

JAN 5 1988

Chain of Custody Sample Possession

From: Hof 12/8/87  
 Name/Time/Date

To: SUB FORM  
 Name/Time/Date

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.9</u>		<input checked="" type="checkbox"/> Chloride	<u>41.5</u>	CCM-Cl
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>658</u>	25°C	<input type="checkbox"/> Fluoride		CCM-F
<input checked="" type="checkbox"/> Turbidity	<u>540</u>	NTU	<input type="checkbox"/> Iodide		CCM-I
<input type="checkbox"/> Color		Color	<input type="checkbox"/> Cyanide, total		CCM-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>640</u>	CCM	<input type="checkbox"/> Cyanide, reactive		CCM-CN
<input checked="" type="checkbox"/> Residue filterable	<u>552</u>	CCM	<input type="checkbox"/> Cyanide, amenable to chlorination		CCM-CN
<input type="checkbox"/> Residue, total		CCM	<input type="checkbox"/> Phenol, 2,4,6		CCM-Phenol
<input type="checkbox"/> Residue volatile		CCM	<input type="checkbox"/> Acidity, total		CCM-CaCo <sub>3</sub>
<input type="checkbox"/> Specific gravity		25°C	<input checked="" type="checkbox"/> Alkalinity, total	<u>355</u>	CCM-CaCo <sub>3</sub>
<input type="checkbox"/> Free liquid test		%	<input checked="" type="checkbox"/> Hardness, total	<u>129</u>	CCM-CaCo <sub>3</sub>
<input type="checkbox"/> Corrosivity		pH	<input type="checkbox"/> Carbon Dioxide		CCM-CaCo <sub>3</sub>
<input type="checkbox"/> Ignitability		°C	<input type="checkbox"/> Methylene Blue Active Substance		CCM-MBAS
<input type="checkbox"/> Oil and Grease		CCM	<input checked="" type="checkbox"/> Chloride, total	<u>&lt; 0.44</u>	CCM-Cl
<input type="checkbox"/> Ammonia		CCM-N	<input type="checkbox"/> Chloride, free		CCM-Cl
<input type="checkbox"/> Kjeldahl Nitrogen		CCM-N	<input type="checkbox"/> Dissolved oxygen		CCM-DO
<input checked="" type="checkbox"/> Nitrite		CCM-N	<input type="checkbox"/> Biochemical oxygen demand		CCM-BOD
<input checked="" type="checkbox"/> Nitrate plus Nitrite		CCM-N	<input type="checkbox"/> Nitrogen oxygen demand		CCM-NOD
<input type="checkbox"/> Phosphate, ortho		CCM-P	<input checked="" type="checkbox"/> Chemical oxygen demand		CCM-COD
<input type="checkbox"/> Phosphate, total		CCM-P	<input type="checkbox"/> Organic carbon, total		CCM-C
<input checked="" type="checkbox"/> Sulfate	<u>26</u>	CCM-SO <sub>4</sub>	<input type="checkbox"/> Inorganic carbon		CCM-C
<input type="checkbox"/> Sulfite		CCM-SO <sub>3</sub>	<input type="checkbox"/> Tannin, Lignin		CCM-Tannic acid
<input type="checkbox"/> Sulfide		CCM-S	<input type="checkbox"/> Salinity		CCM-S
<input type="checkbox"/> Sulfide, reactive		CCM-S			
<input type="checkbox"/> Bromide		CCM-Br			

AR 100500

Section Chief: \_\_\_\_\_

Date: 12/8/87

Verified by: \_\_\_\_\_

ORIGINAL  
(Red)  
871011

PRIORITY ASAP  
 Collector Not 12/8/87  
 Sample ID No. EMWT W-5  
 Sample Alias \_\_\_\_\_  
 Sample Source Eastern MD Wood  
 Preservative Used HNO<sup>3</sup>

Specify Program: \_\_\_\_\_  
 Chain of Custody Sample Preservation: \_\_\_\_\_  
 From: Not 12/8/87 To: SUBFORM  
 From: \_\_\_\_\_ To: \_\_\_\_\_

IF TOTALS ARE High CWV EP Toxicity  
 Circle Type of Analysis:  
 1. EP Toxicity      2. Priority Pollutant      3. Total Metals  
 Indicate Type of Sample: \_\_\_\_\_

RECEIVED

LIQUID X SOLID \_\_\_\_\_ JAN 19 1988

ENFORCEMENT FILE  
FILE COPY ONLY

Element	EP	Total	Element	EP	Total
As			X MAGNESIUM		3.9
X Arsenic			X MANGANESE		40.5
X Barium		0.02			
Beryllium		<0.5			
X Cadmium		<0.05			
X Chromium		<0.5			
Copper					
X Iron		23			
X Lead		<0.5			
X Mercury		<0.001			
Nickel					
X Selenium					
Silver		0.002			
X Thallium		<0.5			
X Zinc		<0.05			
X Chromium Cr+6		<0.1			

AR 100501

HW 26 ORIGINAL (Red)

Priority: ASAP

HAZARDOUS WASTE LABORATORY

Lab No. \_\_\_\_\_

General Inorganic Analysis Report Form II

Collector: Hofe 12/8/81  
Name/Time/Date

Sample Source: EASTERN MD WOOD

Sample ID No.: EMWT W-5

Preservative Used: NONE

Sample Alert: \_\_\_\_\_

Specify Program:

PCPA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession:

From: <u>Hofe</u> <u>12/9/81</u> Name/Time/Date	To: <u>SUBFORM</u> Name/Time/Date
From: <u>Marie Hart</u> <u>11:25 12-9-81</u> Name/Time/Date	To: <u>Marie Hart</u> <u>11:25 12-9-81</u> Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	_____
_____ Kjeldahl Nitrogen	_____
<input checked="" type="checkbox"/> Nitrite	_____
<input checked="" type="checkbox"/> Nitrate plus Nitrite	_____
_____ Phosphate, ortho	_____
_____ Phosphate, total	_____
<input checked="" type="checkbox"/> Chlorine, total	_____
_____ Chlorine, free	_____
_____ Dissolved Oxygen	_____
_____ Biochemical Oxygen Demand	_____
_____ Nitrogen Oxygen Demand	_____
<input checked="" type="checkbox"/> Chemical Oxygen Demand	_____
_____ Organic carbon, total	_____
_____ Inorganic Carbon	_____

* <u>LoA</u>	ppm-N
_____	ppm-N
<u>.043</u>	ppm-N
<u>20.2</u>	ppm-N
_____	ppm-P
_____	ppm-P
_____	ppm-Cl
_____	ppm-Cl
_____	ppm-DO
_____	ppm-BOD
_____	ppm-NOD
<u>14</u>	ppm-COD
_____	ppm-C
_____	ppm-C

\* we did not preserve sample properly 502

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_





Priority ASAP

EMERGENCY WASTE LABORATORY  
 General Inorganic Analysis Report Form

ORIGINAL

Collector HUFER 9/3/87  
 Name/Time/Date

Lab No. 8708917  
 Sample Source EASTERN MD. WOOD TREATING

Sample ID no. EW W-5

Preservative Used NONE

Sample Alias NONE

Specify Program:

REACT: X METALS: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.6</u>	<input checked="" type="checkbox"/> Chloride	<u>64</u>	SEM-01
<input checked="" type="checkbox"/> Conductivity (µmhos/cm)	<u>613</u>	<input type="checkbox"/> Chloride		SEM-02
<input checked="" type="checkbox"/> Turbidity	<u>560</u>	<input type="checkbox"/> Iodide		SEM-03
Color		<input type="checkbox"/> Cyanide, total		SEM-04
<input checked="" type="checkbox"/> Residue non-filterable	<u>784</u>	<input type="checkbox"/> Cyanide, reactive		SEM-05
<input checked="" type="checkbox"/> Residue filterable	<u>424</u>	<input type="checkbox"/> Cyanide, available to coloration		SEM-06
Residue, total		<input type="checkbox"/> Sulfide, total		SEM-07
Residue volatile		<input type="checkbox"/> Acidity, total		SEM-08
Specific gravity		<input checked="" type="checkbox"/> Alkalinity, total	<u>250</u>	SEM-09
Free HCl's conc		<input checked="" type="checkbox"/> Hardness, total	<u>232</u>	SEM-10
Corrosivity		Carbon Dioxide		SEM-11
Ignitability		Methylene Blue Active Substance		SEM-12
Oil and Grease		<input checked="" type="checkbox"/> Chlorine, total	<u>&lt; 0.44</u>	SEM-13
Amonia		Chlorine, free		SEM-14
Calcium Nitrogen		Dissolved oxygen		SEM-15
<input checked="" type="checkbox"/> Nitrite		Biochemical oxygen demand		SEM-16
<input checked="" type="checkbox"/> Nitrate plus Nitrite		Nitrogen oxygen demand		SEM-17
Phosphate, ortho		<input checked="" type="checkbox"/> Chemical oxygen demand		SEM-18
Phosphate, total		Organic carbon, total		SEM-19
<input checked="" type="checkbox"/> Sulfide	<u>18</u>	Inorganic carbon		SEM-20
Sulfite		Tannin, lignin		SEM-21
Sulfite		Sulfidity		SEM-22
Sulfite, reactive				SEM-23
Sulfate				SEM-24

AR100505

9-24-87

SM

LABORATORIES ADMINISTRATION  
 P.O. Box 2355  
 Baltimore, Maryland 21203

**HW43**

Priority: ASAP

HAZARDOUS WASTE LABORATORY  
 General Inorganic Analysis Report Form II

Lab No. 870847  
(Red)

Collector: HOFFER 9/3/87  
Name/Time/Date

Sample Source: EASTERN MIDWOOD TREATMENT

Sample ID No. EW W-5

Preservative Used: NONE

Sample Alert: NONE

Specify Program:

METALS:    
 TRACE:    
 OTHER:

Chain of Custody Sample Possession:

From:	_____	To:	_____
	<small>Name/Time/Date</small>		<small>Name/Time/Date</small>
From:	_____	To:	_____
	<small>Name/Time/Date</small>		<small>Name/Time/Date</small>
From:	_____	To:	_____
	<small>Name/Time/Date</small>		<small>Name/Time/Date</small>
From:	_____	To:	_____
	<small>Name/Time/Date</small>		<small>Name/Time/Date</small>

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	0.8 ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	.022 ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	49.2 ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	77 ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100506

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_



Laboratories Administration  
P.O. Box 2355  
Baltimore, Maryland 21203

ORIGINAL  
(Red)  
871094

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form

Lab No. \_\_\_\_\_

Collector Hof 12/8/87  
Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID no. EMWT PW-1

Preservative Used NONE

Sample Alert \_\_\_\_\_

Specify Program: \_\_\_\_\_

PCRA: X

NOTES: \_\_\_\_\_

Other: \_\_\_\_\_

Chain of Custody Sample Possession

From: Hof 12/8/87  
Name/Time/Date

To: SUB FORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.5</u>		<input checked="" type="checkbox"/> Chloride	<u>22.6</u>	CCM-Cl
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>137</u>	825°C	<input checked="" type="checkbox"/> Fluoride		CCM-F
<input checked="" type="checkbox"/> Turbidity	<u>9.0</u>	NTU	<input checked="" type="checkbox"/> Iodide		CCM-I
<input type="checkbox"/> Color			<input checked="" type="checkbox"/> Cyanide, total		CCM-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>6</u>	CCM	<input checked="" type="checkbox"/> Cyanide, reactive		CCM-CN
<input checked="" type="checkbox"/> Residue filterable	<u>87</u>	CCM	<input checked="" type="checkbox"/> Cyanide, amenable to chlorination		CCM-CN
<input type="checkbox"/> Residue, total		CCM	<input type="checkbox"/> Phenol, L&P		CCM-phenol
<input type="checkbox"/> Residue volatile		CCM	<input type="checkbox"/> Acidity, total		CCM-CaCo
<input type="checkbox"/> Specific gravity		825°C	<input checked="" type="checkbox"/> Alkalinity, total	<u>20.8</u>	CCM-CaCo
<input type="checkbox"/> Free liquid test		2	<input checked="" type="checkbox"/> Hardness, total	<u>14.5</u>	CCM-CaCo
<input type="checkbox"/> Corrosivity		pH	<input type="checkbox"/> Carbon Dioxide		CCM-CaCo
<input type="checkbox"/> Ignitability		°C	<input type="checkbox"/> Methylene Blue Active Substance		CCM-MBAS
<input type="checkbox"/> Oil and Grease		CCM	<input checked="" type="checkbox"/> Chloride, total	<u>20.44</u>	CCM-Cl
<input type="checkbox"/> Ammonia		CCM-N	<input type="checkbox"/> Chloride, free		CCM-Cl
<input type="checkbox"/> Kjeldahl Nitrogen		CCM-N	<input type="checkbox"/> Dissolved oxygen		CCM-DO
<input checked="" type="checkbox"/> Nitrate		CCM-N	<input type="checkbox"/> Biochemical oxygen demand		CCM-BOD
<input checked="" type="checkbox"/> Nitrate plus Nitrite		CCM-N	<input type="checkbox"/> Nitrogen oxygen demand		CCM-NOD
<input type="checkbox"/> Phosphate, ortho		CCM-P	<input checked="" type="checkbox"/> Chemical oxygen demand		CCM-COD
<input type="checkbox"/> Phosphate, total		CCM-P	<input type="checkbox"/> Organic carbon, total		CCM-C
<input checked="" type="checkbox"/> Sulfate	<u>21</u>	CCM-SO	<input type="checkbox"/> Inorganic carbon		CCM-C
<input type="checkbox"/> Sulfite		CCM-SO	<input type="checkbox"/> Tannin, Lignin		CCM-Tanic acid
<input type="checkbox"/> Sulfide		CCM-S	<input type="checkbox"/> Salinity		g/100
<input type="checkbox"/> Sulfide, reactive		CCM-S			
<input type="checkbox"/> Bromide		CCM-Br			

ART00507

Section Chief: D-5

Date: 1-20-88

URGENCY ASAP

Collector Hof 12/8/81  
NAME/DATE/DATE

LAB NO. 890044  
(REQ)

Sample ID No. EMWTPW-1

Sample Source EASTERN MD WOOD

Sample Alert \_\_\_\_\_

Preservative Used HNO<sup>3</sup>

Specify Project: \_\_\_\_\_

Case of Custody Sample Possession: \_\_\_\_\_

From: Hof 12/8/81  
NAME/DATE/DATE

To: SUBFORM  
NAME/DATE/DATE

From: \_\_\_\_\_

IF TOTALS ARE High LOW FP Toxicity  
NAME/DATE/DATE

Circle Type of Analysis:  
 1.  EP Toxicity  
 2.  Priority Pollutants

3.  Total Metals  
 4.  Dissolved Metals

Indicate Type of Sample: \_\_\_\_\_

Liquid  Solid \_\_\_\_\_

JAN 18 1982

RECEIVED

Element	EP	Concn	Element	EP	Concn
Barium			X1 MAGNESIUM		1.7
X1 Bismuth			X1 MANGANESE		<0.5
X1 Boron		<0.004			
Barium		<0.5			
X1 Cadmium					
X1 Calcium		0.05			
X1 Chromium		<0.5			
Copper					
X1 Iron		17			
X1 Lead		<0.5			
X1 Mercury		<0.10			
Nickel					
X1 Selenium					
Silver		0.002			
X1 Thallium		<0.5			
X1 Zinc		<0.05			
X1 Chromium Cr6		50.1 (M)			

PT00508

HW 81

Priority ASAP

HAZARDOUS WASTE LABORATORY

Lab No. \_\_\_\_\_

General Inorganic Analysis Report Form II

Collector Hofu 12/8/81  
Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID No. EMWT. PW-1

Preservative Used NONE

Sample Alert \_\_\_\_\_

Specify Program:

RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession:

From: <u>Hofu</u> <u>12/9/81</u> Name/Time/Date	To: <u>SUBFORM</u> Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>12.4</u> ppm-N
_____ Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.006</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>40.2</u> ppm-N
_____ Phosphate, ortho	_____ ppm-P
_____ Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
_____ Chlorine, free	_____ ppm-Cl
_____ Dissolved Oxygen	_____ ppm-DO
_____ Biochemical Oxygen Demand	_____ ppm-BOD
_____ Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>&lt;10</u> ppm-COD
_____ Organic carbon, total	_____ ppm-C
_____ Inorganic Carbon	_____ ppm-C

ARI00509

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mehsen Joseph, Ph.D., Director  
 TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

REC'D  
 OCT 8 1987

ORIGINAL  
 (Part)

BOTTLE NUMBER EW PW-1

Dorchester  
 Name of County

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. HOFER

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_ (specify)  
 Landfill observation well X stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

REMARKS: ~~WATER~~ TAKEN FROM SINK

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19						
							P	W	I		0	9	0	3	8	7								
TRANS TYPE			COUNTY				PLANT NO.				SAMPLING STATION						DATE COLLECTED						CARD NO.	

20	21	22	23	24	25	26		
FIELD pH			FIELD RESID. CHLORINE: FREE				TOTAL	

0904 U1071

Purgeable Halocarbons (EPA 603 b2b)			Purgeable Aromatics (EPA 624)		
Chloromethane	<1.	trans-1,3-Dichloropropene	<1.	Benzene	<1.
Bromomethane		Trichloroethene	2.	Toluene	
Dichlorodifluoromethane		Dibromochloromethane	<1.	Ethylbenzene	
Vinyl chloride	2.	1,1,2-Trichloroethane		Total Xylenes	<2
Chloroethane	<1.	cis-1,3-Dichloropropene		Total Purgeable Hydrocarbons	
Methylene chloride		2-Chloroethylvinylether		Tetrahydrofuran	N.D.
Trichlorofluoromethane		Bromoform		(2-Butanone) (MEK)	N.D.
1,1-Dichloroethene		1,1,2,2-Tetrachloroethane		Methylisobutylketone (MIBK)	20.
1,1-Dichloroethane		Tetrachloroethene	217.	Acrolein	N.D.
trans-1,2-Dichloroethene	50.	Chlorobenzene	<1.	Acrylonitrile	N.D.
Chloroform	<1.	Total Trihalomethanes		ACETONE	37.
1,2-Dichloroethane		Other Purgeable Organics:			
1,1,1-Trichloroethane		OXIRANE	154.		
Carbon Tetrachloride					
1,1-Dichloroethane					
1,2-Dichloropropane					

AR100510

Results reported in micrograms per liter (parts per billion)  
 DATE RECEIVED SEP 4 1987 DATE REPORTED OCT 01 1987 CHEMIST F. Hill LAB. NO. 88.107  
 DHMH 748 11/86

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Meisen Joseph, Ph.D., Director  
 TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Recd)

BOTTLE NUMBER EMWTPW-1

Dorchester  
 Name of County

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR Hof

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_  
 observation well  stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

REMARKS: Hofen 12/9/87 -

1209U2657

1 TRANS TYPE	2 3 COUNTY	4 5 6 7 PLANT NO	8 9 10 11 SAMPLING STATION	12 13 14 15 16 17 DATE COLLECTED	18 19 CARD NO
			PW11	12 08 87	
20 21 22 FIELD PH	FIELD RESID. CHLORINE-FREE		23 24 TOTAL	25 26	
	624				

Purgeable Halocarbons (EPA 821)		Purgeable Aromatics	
Chloromethane	<1	trans-1,3-Dichloropropene	<1
Bromomethane		Trichloroethene	
Dichlorodifluoromethane		Dibromochloromethane	
Vinyl chloride		1,1,2-Trichloroethane	<2
Chloroethane		cis-1,3-Dichloropropene	Total Purgeable Hydrocarbons
Methylene chloride		2-Chloroethylvinylether	Tetrahydrofuran
Trichlorofluoromethane		Bromoform	(2-Butanone) (MEK)
1,1-Dichloroethene		1,1,2,2-Tetrachloroethane	Methylisobutylketone (MIBK)
1,1-Dichloroethane		Tetrachloroethene	Acrolein
trans-1,2-Dichloroethene		Chlorobenzene	Acrylonitrile
Chloroform		Total Trihalomethanes	
1,2-Dichloroethane		Other Purgeable Organics: N.D.	
1,1,1-Trichloroethane			
Carbon Tetrachloride			
Bromodichloromethane			
1,2-Dichloropropane			

AR100511

Results reported in micrograms per liter (parts per billion)  
 DATE RECEIVED DEC 29 1987 DATE REPORTED DEC 17 1987 CHEMIST Wish LAB. NO. 882657  
 DHMH 749 11/86



Laboratory Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21203

OCT 2 1987

Priority ASAP

EMERGENCY WASTE LABORATORY  
 General Inorganic Analysis Report Form

Lab No. 8708 ORIGINAL

Collector HOFER 9/3/87  
 Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING

Sample ID no. FUIPW-1

Preservative Used NONE

Sample Name NONE

Specify Program:  
 REA:  WRES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From: _____	To: _____
Name/Time/Date	Name/Time/Date
From: _____	To: _____
Name/Time/Date	Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.6</u>	<input checked="" type="checkbox"/> Chloride	<u>8</u>	com-C1
<input checked="" type="checkbox"/> Conductivity, $\mu\text{mhos/cm}$	<u>122</u>	<input type="checkbox"/> Sulfate		com-F
<input checked="" type="checkbox"/> Turbidity	<u>30</u>	<input type="checkbox"/> Iodide		com-I
Color		<input type="checkbox"/> Cyanide, total		com-C11
<input checked="" type="checkbox"/> Residue non-filterable	<u>3</u>	<input type="checkbox"/> Cyanide, reactive		com-C11
<input checked="" type="checkbox"/> Residue filterable	<u>83</u>	<input type="checkbox"/> Cyanide, available to		
Residue, total		information		com-C11
Residue volatile		<input type="checkbox"/> Phenol, total		com-phenol
Specific gravity		<input type="checkbox"/> Acidity, total		com-CaCo
Free HCl's test		<input checked="" type="checkbox"/> Alkalinity, total	<u>26</u>	com-CaCo
Corrosivity		<input checked="" type="checkbox"/> Hardness, total	<u>14</u>	com-CaCo
Ignitability		Carbon Dioxide		com-CaCo
Oil and Grease		<input type="checkbox"/> Mercury's Free Active Substance		com-MBAS
Ammonia		<input checked="" type="checkbox"/> Chlorine, total	<u>&lt;0.44</u>	com-C1
Clean: Nitrogen		<input type="checkbox"/> Chlorine, free		com-C1
<input checked="" type="checkbox"/> Nitrite		<input type="checkbox"/> Dissolved oxygen		com-DO
<input checked="" type="checkbox"/> Nitrate plus Nitrite		<input type="checkbox"/> Bicarbonate oxygen demand		com-BOD
Phosphate, ortho		<input type="checkbox"/> Nitrogen oxygen demand		com-NOD
Phosphate, total		<input checked="" type="checkbox"/> Chemical oxygen demand		com-COD
<input checked="" type="checkbox"/> Sulfide	<u>13</u>	<input type="checkbox"/> Organic carbon, total		com-C
Sulfide		<input type="checkbox"/> Inorganic carbon		com-C
Sulfide		Tannin	<u>AR-100513</u>	com-Tannic acid
Sulfide, reactive		<input type="checkbox"/> Salinity		0/CC
Bromide				

9-24-87

Jm.

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21201

HW 42  
 8708  
 (Rec)

Priority: ASAP

HAZARDOUS WASTE LABORATORY

Lab No.

General Inorganic Analysis Report Form II

Collector: HOFER 9/3/89  
 Name/Time/Date

Sample Source: EASTERN MIDWOOD TREATMENT

Sample ID No. EW PW-1

Preservative Used: NONE

Sample Alert: NONE

Specify Program:

PCRA:  NPDES:  OTHER:

Chain of Custody Sample Possession:

From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>40.2</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>&lt;0.1</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>40.6</u> ppm-N
___ Phosphate, ortho	_____ ppm-P
___ Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
___ Chlorine, free	_____ ppm-Cl
___ Dissolved Oxygen	_____ ppm-DO
___ Biochemical Oxygen Demand	_____ ppm-BCD
___ Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>30</u> ppm-COD
___ Organic carbon, total	_____ ppm-C
___ Inorganic Carbon	_____ ppm-C

AR100514

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_



STATE OF MASSACHUSETTS  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mehan Joseph, Ph.D., Director  
 TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

OCT 2 1987

ORIGINAL  
(Red)

Dorchester  
Name of County (Red)

BOTTLE NUMBER EWR-1

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. Hofer

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private X  
 Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

REMARKS: (John Kramer) ARDox 100' well

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
							R	I			0	9	0	3	8	7		
TRANS TYPE		COUNTY		PLANT NO			SAMPLING STATION				DATE COLLECTED					CARD NO		

20	21	22	23	24	25	26
FIELD pH			FIELD RESID. CHLORINE: FREE		TOTAL	

Purgeable Halocarbons (EPA 601)		Purgeable Aromatics	
Chloromethane	<u>&lt;5.</u>	trans-1,3-Dichloropropene	<u>&lt;1.</u>
Bromomethane	<u>&lt;1.</u>	Trichloroethene	<u>↓</u>
Dichlorodifluoromethane	<u>↓</u>	Dibromochloromethane	<u>↓</u>
Vinyl chloride	<u>↓</u>	1,1,2-Trichloroethane	<u>↓</u>
Chloroethane	<u>↓</u>	cis-1,3-Dichloropropene	<u>↓</u>
Methylene chloride	<u>↓</u>	2-Chloroethylvinylether	<u>&lt;10.</u>
Trichlorofluoromethane	<u>↓</u>	Bromoform	<u>&lt;1.</u>
1,1-Dichloroethene	<u>↓</u>	1,1,2,2-Tetrachloroethane	<u>↓</u>
1,1-Dichloroethane	<u>↓</u>	Tetrachloroethene	<u>↓</u>
trans-1,2-Dichloroethene	<u>↓</u>	Chlorobenzene	<u>↓</u>
Chloroform	<u>↓</u>	Total Trihalomethanes	<u>↓</u>
1,2-Dichloroethane	<u>↓</u>	Other Purgeable Organics: <u>N.D.</u>	
1,1,1-Trichloroethane	<u>↓</u>		
Carbon Tetrachloride	<u>↓</u>		
1,1-Dichloroethane	<u>↓</u>		
1,2-Dichloropropane	<u>↓</u>		
			<u>AR100515</u>

Results reported in micrograms per liter (parts per billion) L. Will 881073  
 DATE RECEIVED SEP 4 1987 DATE REPORTED OCT 01 1987 CHEMIST \_\_\_\_\_ LAB. NO. \_\_\_\_\_  
 DHMH 749 11/86

ORIGINAL  
 (Rec'd)  
 821817

Priority ASAP

HAZARDOUS WASTE LABORATORY  
 General Inorganic Analysis Report Form

Lab No. \_\_\_\_\_

Collector HOFER 9/3/87  
 Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING

Sample ID no. FWR-1

Preservative Used NONE

Sample Alert NONE

Specify Program: \_\_\_\_\_

PCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From: _____	To: _____
From: _____	To: _____
From: _____	To: _____

<input checked="" type="checkbox"/> pH	<u>7.2</u>	<input checked="" type="checkbox"/> Chloride	
<input checked="" type="checkbox"/> Conductivity, $\mu\text{mhos}/\text{cm}$	<u>310</u> @ 25°C	<input type="checkbox"/> Fluoride	<u>7</u> ppm-F
<input checked="" type="checkbox"/> Turbidity	<u>1</u> NTU	<input type="checkbox"/> Iodide	ppm-I
Color	_____	<input type="checkbox"/> Cyanide, total	ppm-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>&lt;1</u> ppm	<input type="checkbox"/> Cyanide, reactive	ppm-CN
<input checked="" type="checkbox"/> Residue filterable	<u>221</u> ppm	<input type="checkbox"/> Cyanide, available to coloration	ppm-CN
Residue, total	ppm	<input type="checkbox"/> Sulfate, total	ppm-SO <sub>4</sub>
Residue volatile	ppm	<input type="checkbox"/> Sulfate, total	ppm-SO <sub>4</sub>
Specific gravity	25°C	<input checked="" type="checkbox"/> Alkalinity, total	ppm-CaCO <sub>3</sub>
Free HCl's test	0	<input checked="" type="checkbox"/> Hardness, total	<u>177</u> ppm-CaCO <sub>3</sub>
Corrosivity	ppm	<input type="checkbox"/> Carbon Dioxide	<u>115</u> ppm-CaCO <sub>3</sub>
Ignitability	ppm	<input type="checkbox"/> Mercury's 2% Active Substance	ppm-MGAS
Oil and Grease	ppm	<input checked="" type="checkbox"/> Chlorine, total	<u>&lt;0.44</u> ppm-Cl
Ammonia	ppm-N	<input type="checkbox"/> Chlorine, free	ppm-Cl
Calcium Nitrogen	ppm-N	<input type="checkbox"/> Dissolved oxygen	ppm-DO
<input checked="" type="checkbox"/> Nitrite	ppm-N	<input type="checkbox"/> Biochemical oxygen demand	ppm-BOD
<input checked="" type="checkbox"/> Nitrate plus Nitrite	ppm-N	<input type="checkbox"/> Nitrogen oxygen demand	ppm-NOD
Phosphate, ortho	ppm-P	<input checked="" type="checkbox"/> Chemical oxygen demand	ppm-COD
Phosphate, total	ppm-P	<input type="checkbox"/> Organic carbon, total	ppm-C
<input checked="" type="checkbox"/> Sulfide	<u>&lt;5</u> ppm-S <sub>2</sub>	<input type="checkbox"/> Inorganic carbon	ppm-C
Sulfide	ppm-S <sub>2</sub>	<input type="checkbox"/> Tannin, lignin	ppm-T
Sulfide	ppm-S	<input type="checkbox"/> Salinity	ppm-S
Sulfide, reactive	ppm-S		
Sulfide	ppm-S <sub>2</sub>		

ARI 1005416 ac'd  
 9/10

9-27-87 *jm.*

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Program: RCRA ✓ NPDES \_\_\_\_\_  
 OTHER: \_\_\_\_\_

Laboratories Administration  
 Howard and Biddle Streets  
 P.O. Box 2355, Baltimore, Maryland 21203

870877  
 (Red)  
 Priority ASAP

HAZARDOUS WASTE LABORATORY  
 Metals Analysis Report Form

Lab No. 870877

Collector HOFER 9/3/87  
 Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING  
 Name/Time/Date

Sample ID No. FW R-1

Preservative Used NONE

Chain of Custody Sample Possession:

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

Circle Type of Analysis:

1. EP Toxicity      2. Priority Pollutant      3. Total Metals      4. Dissolved Metals

Indicate Type of Sample:

Liquid ✓      Solid \_\_\_\_\_

Metals in ppm

Element	EP	Total
Antimony	_____	_____
✓ Arsenic	<u>&lt;0.02</u>	_____
✓ Barium	<u>&lt;0.5</u>	_____
Beryllium	_____	_____
✓ Cadmium	<u>&lt;0.05</u>	_____
✓ Chromium	<u>&lt;0.5</u>	_____
Copper	_____	_____
✓ Lead	<u>&lt;0.5</u>	_____
✓ Mercury	<u>&lt;0.002</u>	_____
Nickel	_____	_____
✓ Selenium	<u>&lt;0.002</u>	_____
Silver	_____	_____
✓ Thallium	<u>&lt;0.5</u>	_____
✓ Zinc	<u>0.15</u>	_____
✓ Chromium Cr+6	<u>&lt;0.05</u>	_____
✓ Iron <del>Fe</del>	<u>&lt;0.5</u>	_____

Element	EP	Total
✓ MAGNESIUM	<u>1.4</u>	_____
✓ MANGANESE	<u>&lt;0.5</u>	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

AR100517

SELECT OTHER ELEMENTS FROM REVERSE SIDE OF THIS FORM

Section Chief: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_ Date: \_\_\_\_\_

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21203

**HW 41**

Priority ASAP

HAZARDOUS WASTE LABORATORY

Lab No. 870847

General Inorganic Analysis Report Form II

ORIGINAL

Collector HOFER 9/3/87 Sample Source EASTERN MIDWOOD REACTING  
Name/Time/Date

Sample ID No. EW R-1 Preservative Used NONE

Sample Alert NONE

Specify Program:

PCPA:  NPDES:  OTHER:

Chain of Custody/ Sample Possession:

From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>20.2</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>&lt; 0.05</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>2.2</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>&lt; 10</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100518

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mehan Joseph, Ph.D., Director

RECEIVED  
 OCT 8 1987

TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

BOTTLE NUMBER EW R-1A

Dorchester  
 Name of County (1985)

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. Hofer

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private X (specify)  
 Landfill observation well \_\_\_\_\_ stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

REMARKS: John KRAMER (Chicken House) APPROX 30' well

1 TRANS TYPE	2 3 COUNTY	4 5 6 7 PLANT NO	8 9 10 11 SAMPLING STATION <u>R111A</u>	12 13 14 15 16 17 DATE COLLECTED <u>090387</u>	18 19 CARD NO
20 21 22 FIELD pH	23 24 FIELD RESID. CHLORINE: FREE			25 26 TOTAL	

Purgeable Halocarbons (EPA 601)		Purgeable Aromatics	
Chloromethane	<u>&lt;5.</u>	trans-1,3-Dichloropropene	<u>&lt;1.</u>
Bromomethane	<u>&lt;1.</u>	Trichloroethene	<u>↓</u>
Dichlorodifluoromethane	<u>↓</u>	Dibromochloromethane	<u>↓</u>
Vinyl chloride	<u>↓</u>	1,1,2-Trichloroethane	<u>↓</u>
Chloroethane	<u>↓</u>	cis-1,3-Dichloropropene	<u>↓</u>
Methylene chloride	<u>↓</u>	2-Chloroethylvinylether	<u>&lt;10.</u>
Trichlorofluoromethane	<u>↓</u>	Bromoform	<u>&lt;1.</u>
1,1-Dichloroethene	<u>↓</u>	1,1,2,2-Tetrachloroethane	<u>↓</u>
1,1-Dichloroethane	<u>↓</u>	Tetrachloroethene	<u>↓</u>
trans-1,2-Dichloroethene	<u>↓</u>	Chlorobenzene	<u>↓</u>
Chloroform	<u>↓</u>	Total Trihalomethanes	<u>↓</u>
1,2-Dichloroethane	<u>↓</u>	Other Purgeable Organics: <u>N.D.</u>	
1,1,1-Trichloroethane	<u>↓</u>		
Carbon Tetrachloride	<u>↓</u>		
1,1-Dichloroethane	<u>↓</u>		
1,2-Dichloropropane	<u>↓</u>		

AR100519

Results reported in micrograms per liter (parts per billion)  
 DATE RECEIVED SEP 4 1987 DATE REPORTED OCT 01 1987 CHEMIST V. L. Smith LAB. NO. 881075  
 DHMH 749 1/85 2M

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form

Lab No. 870847

Collector HUFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING

Sample ID no. EW R-1A

Preservative Used NONE

Sample Alert NONE

Specify Program:

FEH:

WES:

CHM:

Chain of Custody Sample Possession

From:

Name/Time/Date

To:

Name/Time/Date

From:

Name/Time/Date

To:

Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>4.5</u>	<input checked="" type="checkbox"/> Chloride	<u>22</u>	ppm-Cl
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>.107</u> 25°C	<input type="checkbox"/> Fluoride		ppm-F
<input checked="" type="checkbox"/> Turbidity	<u>1</u> NTU	<input type="checkbox"/> Iodide		ppm-I
Color		<input type="checkbox"/> Cyanide, total		ppm-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>&lt;1</u> ppm	<input type="checkbox"/> Cyanide, reactive		ppm-CN
<input checked="" type="checkbox"/> Residue filterable	<u>84</u> ppm	<input type="checkbox"/> Cyanide, treatable to coloration		ppm-CN
Residue, total		<input type="checkbox"/> Phosph, total		ppm-PPH
Residue volatile		<input type="checkbox"/> Acidity, total		ppm-CaCO <sub>3</sub>
Specific gravity		<input checked="" type="checkbox"/> Alkalinity, total	<u>1</u>	ppm-CaCO <sub>3</sub>
Free HCl's test		<input checked="" type="checkbox"/> Hardness, total	<u>21</u>	ppm-CaCO <sub>3</sub>
Corrosivity		Carbon Dioxide		ppm-CaCO <sub>3</sub>
Ignitability		Methylene Blue Active Substance		ppm-MBAS
Oil and Grease		<input checked="" type="checkbox"/> Chlorine, total	<u>&lt;0.44</u>	ppm-Cl
Selenium		<input type="checkbox"/> Chlorine, free		ppm-Cl
Clean Nitrogen		<input type="checkbox"/> Dissolved oxygen		ppm-O <sub>2</sub>
<input checked="" type="checkbox"/> Nitrite		<input type="checkbox"/> Biochemical oxygen demand		ppm-BOD
<input checked="" type="checkbox"/> Nitrate plus Nitrite		<input type="checkbox"/> Nitrogen oxygen demand		ppm-NOD
Phosphate, ortho		<input checked="" type="checkbox"/> Chemical oxygen demand		ppm-COD
Phosphate, total		Organic carbon, total		ppm-C
<input checked="" type="checkbox"/> Sulfide	<u>18</u> ppm-S <sub>2</sub>	Inorganic carbon		ppm-C
Sulfide		Tannin, lignin		ppm-Tannic ac'd
Sulfide		Salinity		g/l
Sulfide, reactive				
Bromide				

AR100520

DS

9-24-87

Am.



EASTERN MARYLAND WOOD TREATING  
SUMMARY OF SOIL ANALYTICAL RESULTS  
SAMPLES RECEIVED SEPTEMBER 30, 1999

BOREHOLE LOCATION DEPTH (FT) DATE SAMPLED COMPOUND	UNITS	B-8	B-9	B-10	B-10	B-11	B-11	B-12	B-12	B-18	B-19	B-20	SS-5	SS-4	SS-10	SS-17
TOTAL RECOVERABLE PHENOLS	MG/KG	<0.125	<0.125	0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.250	<0.125	<0.125	0.323	<0.125
ARSENIC	MG/KG	<1000	1230	<1000	<1000	1790	1790	<1000	<1000	1430	<100	1000	2700	130000	2816	<1000
CHROMIUM	MG/KG	5000	4430	6760	6130	7130	6990	7720	6220	8110	6950	6950	10100	320000	6100	<1000
COPPER	MG/KG	<2500	<2500	<2500	<2500	<2500	3200	<2500	<2500	<2500	2350	2350	3290	144000	2320	<2500
CARBAZOLE	MG/KG	237	<100	<100	<100	<100	1430	<100	<100	<100	<100	<100	<100	<100	24000	<100
NAPHTHALENE	MG/KG	1620	274	6460	282	3420	347	<100	<100	9440	<100	<100	130	373	21800	<100
ACENAPHTHYLENE	MG/KG	<100	<100	<100	<100	<100	4000	<100	<100	3470	<100	<100	<100	<100	<100	<100
ACENAPHTHENE	MG/KG	<100	<100	17300	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
FLUORENE	MG/KG	571	75.5	49300	<20	2100	34300	<20	<20	7170	<20	<20	<100	<100	<100	<100
PHENANTHRENE	MG/KG	279R	171R	79100	112R	2500	39300	51.5R	60.2R	11100	3900	54.4R	31.6R	31	28700	<20
ANTHRACENE	MG/KG	<50	<50	33900	64.9	806	12900	<50	<50	11000	3800	<50	51.8R	34.5R	13400	34.5R
FLUORANTHENE	MG/KG	259	90.3	194000	516	9480	12900	<50	<50	24700	<50	<50	<50	3900	3900	<50
PYRENE	MG/KG	955	295	<20	864	14300	64.5	91900	21.6	24700	<50	<50	33.9	176	29700	37.1
BENZOXANTHRAcene	MG/KG	229	117	49100	157	3310	130000	<50	<50	38600	<50	<50	<50	1270	81800	<50
BENZOPYRANTHRENE	MG/KG	235	235	71400	296	6940	27100	<50	<50	6570	<50	<50	63.7	326	11400	<50
BENZOFURANTHRENE	MG/KG	331	120	36000	109	10800	55100	<15	<15	11200	6570	<2.00	63.7	694	19600	<15
BENZOPYRANTHRENE	MG/KG	13.1	45.4	13700	109	31	27400	6.25	17.8	3890	<15	<15	60.1	500	11900	11.5
BENZOPYRANTHRENE	MG/KG	17.4	51.2	20000	42.6	13.9	9040	<2.00	5.19	1310	8.17	8.17	16.7	137	5720	3.83
DIBENZOPYRANTHRENE	MG/KG	415	75.5	44900	54.7	6320	15300	<2.00	<2.00	2190	2.19	<2.00	27.4	147	6950	<2.00
BENZOPYRANTHRENE	MG/KG	211	20.6	23300	151	12800	<3.00	<3.00	<3.00	577	577	<3.00	140	848	17700	<3.00
BENZOPYRANTHRENE	MG/KG	179	21	11000	37.7	3330	21100	<3.00	<3.00	278	278	<3.00	71.3	392	8460	<3.00
TOTAL PAHS		5281.5	1441.5	652940	2649.4	84406	203.9	510477	28.85	22.94	124359	10.34	634.7	9153	510340	52.43

R) Designates that the data point is level blind  
due to concentration found in the lab blank  
at 70.6 ug/g. This is based on the  
EPA criteria that no positive sample results  
should be reported unless the concentration  
of a compound found in a sample exceeds  
10 times the amount found in any blank for common  
laboratory contaminants. If it exceeds 5 times the  
amount for other compounds.

ORIGINAL  
(Red)

100522



Laboratories Administration  
P.O. Box 2355  
Essex, Maryland 21223

Hw40

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form II

Lab No. 870847

Collector Hoffer 9/3/97 Sample Source EASTERN MIDWOOD TREATMENT  
Name/Time/Date

Sample ID No. EW R-1A Preservative Used NONE

Sample Alert NONE

Specify Program:

PAPA:  NPDES:  OTHER:

Chain of Custody Sample Possession:

From:	To:
Name/Time/Date	Name/Time/Date
Name/Time/Date	Name/Time/Date
Name/Time/Date	Name/Time/Date
Name/Time/Date	Name/Time/Date

<input checked="" type="checkbox"/> pH	
<input checked="" type="checkbox"/> Ammonia	<u>2.2</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.009</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>40.2</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	ppm-P
<input type="checkbox"/> Phosphate, total	ppm-P
<input checked="" type="checkbox"/> Chlorine, total	ppm-Cl
<input type="checkbox"/> Chlorine, free	ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>44</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	ppm-C
<input type="checkbox"/> Inorganic Carbon	ppm-C

AR100523

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratory Administration  
201 W. Preston Street  
J. Mehsen Joseon, Ph.D., Director

MD. Dept. of Environment  
HSWMA  
2500 Broening Highway  
Baltimore, MD 21224

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

ORIGINAL

Bottle Number AG01109008 COLLECTOR Anthony Queen Dorchester County

SOURCE OF SAMPLE Eastern Maryland Wood Treatment Co.  
(Include Address) Clark Cunningham Rd. Federalsburg

SAMPLE TYPE: Community \_\_\_\_\_ Noncommunity \_\_\_\_\_ Domestic \_\_\_\_\_ STP Station \_\_\_\_\_  
Observation Well \_\_\_\_\_ Stream \_\_\_\_\_ Tidal Waters \_\_\_\_\_ Industrial Effluent \_\_\_\_\_  
Other (Specify) Supply Well  
Preservative Used HCL 1:1 and ice

IMPORTANT: First time sampled 1/25 Last known sampling date \_\_\_\_\_  
Reason for submitting sample: Survey \_\_\_\_\_ Suspected Petroleum Contamination \_\_\_\_\_  
Suspected Industrial Chemical Contamination  Other (Specify) \_\_\_\_\_

CHAIN OF CUSTODY: From: \_\_\_\_\_ To: \_\_\_\_\_

REMARKS: pH 5.83 Conduct 105 Water Temp 11°  
Depth to water 5.45 ft well depth 19.6 ft

1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	17	18	19		
										011090									
TRANS TYPE			COUNTY				PLANT NO.				SAMPLING STATION				DATE COLLECTED			CARD NO.	
20	21	22	FIELD RESID. CHLORINE: FREE				23	24	TOTAL		25	26	Time						
FIELD pH																			

Purgeable Halocarbons (EPA 601)

Chloromethane	<5
Bromomethane	<1
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	<10
Bromoform	<1
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	
Other Purgeable Organics:	N.D.

Other Purgeables

Benzene	<1
Toluene	
Ethylbenzene	
Total Xylenes	<2
Total Purgeable Hydrocarbons	
Tetrahydrofuran	N.D.
(2-Butanone MEK)	
Methylisobutylketone (MIBK)	
Acrolein	
Acrylonitrile	
Carbon Disulfide	
Vinyl Acetate	
Acetone	
2-Hexanone	
Styrene	

AR100524

DATE RECEIVED JAN 12 1990 Results reported in micrograms per (parts per billion)  
DATE REPORTED JAN 17 1990 CHEMIST J. Cormier LAB. NO. 90-074









STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration  
201 W. Preston Street  
J. Mehsen Joseph, Ph.D., Director

MD. Dept. of Environment  
HSWMA  
2500 Broening Highway  
Baltimore, MD 21224

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

TITLE NUMBER AQ01109011 COLLECTOR Anthony Queen Dorchester County

SOURCE OF SAMPLE Eastern Maryland Wood Treatment  
Include Address) Clarks Cunningham Rd. Federalsburg

SAMPLE TYPE: Community  Noncommunity  Domestic  STP Station   
Observation Well MW10 Stream  Tidal Waters  Industrial Effluent   
Other (Specify) \_\_\_\_\_  
Preservative Used HCL 1:1 and ice

IMPORTANT: First time sampled  Last known sampling date \_\_\_\_\_  
Reason for submitting sample: Survey  Suspected Petroleum Contamination   
Suspected Industrial Chemical Contamination  Other (Specify) \_\_\_\_\_

CHAIN OF CUSTODY: From: \_\_\_\_\_ To: \_\_\_\_\_

REMARKS: PH 5.45 - Conduct 115 - water temp 90  
Depth to water 104 ft - well depth 23143

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
											0	1	1	0	9	0				
TRANS TYPE			COUNTY				PLANT NO.				SAMPLING STATION				DATE COLLECTED				CARD NO.	

20	21	22	23	24	25	26	Time

Purgeable Halocarbons (EPA 601)

Chloromethane	<5
Bromomethane	<1
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	<10
Bromoform	<1
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	

Other Purgeable Organics: N.D.

Other Purgeables

Benzene	<1
Toluene	
Ethylbenzene	
Total Xylenes	<2
Total Purgeable Hydrocarbons	
Tetrahydrofuran	N.D.
(2-Butanone MEK)	
Methylisobutylketone (MIBK)	
Acrolein	
Acrylonitrile	
Carbon Disulfide	
Vinyl Acetate	
Acetone	
2-Hexanone	
Styrene	

AR 100529

JAN 12 1998

Results reported in micrograms per liter (parts per million/billion)

DATE REPORTED JAN 17 1998

CHEMIST J. Corcoran

LAB. NO. 9007

ORIGINAL  
FILED

**APPENDIX B**

**AR100530**



FWT  
Stream sample

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
P.O. Box 2355, Baltimore, Maryland 21203

PRIORITY A.S.A.P. HAZARDOUS WASTE LABORATORY  
Metals Analysis Report Form LAB NO. ORIGINAL 123  
Collector W.N. PRICE 1345th. 12-15-87 Sample Source SKENNER'S RUN  
Name/Time/Date (FRESHWATER)  
Sample ID No. WP121587-06-B Preservative Used ICE & HNO<sub>3</sub>  
Sample Alert \_\_\_\_\_

Specify Program: RCRA:  NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession:

From: William N. Price 12-15-87 To: Jean-Lai 12-21-87  
Name/Time/Date Name/Time/Date

From: \_\_\_\_\_ To: \_\_\_\_\_  
Name/Time/Date Name/Time/Date

Circle Type of Analysis:

1. EP Toxicity      2. Priority Pollutant      3. Total Metals      4. Dissolved Metals

Indicate Type of Sample:

Liquid  Solid \_\_\_\_\_

Metals In ppm

Element	EP	Total	Element	EP	Total
Antimony	_____	_____		_____	_____
✓ Arsenic	_____	<u>40.001</u>		_____	_____
Barium	_____	_____		_____	_____
Beryllium	_____	_____		_____	_____
Cadmium	_____	_____		_____	_____
✓ Chromium	_____	<u>40.5</u>		_____	_____
✓ Copper	_____	<u>40.05</u>		_____	_____
Iron	_____	_____		_____	_____
Lead	_____	_____		_____	_____
Mercury	_____	_____		_____	_____
Nickel	_____	_____		_____	_____
Selenium	_____	_____		_____	_____
Silver	_____	_____		_____	_____
Thallium	_____	_____		_____	_____
Zinc	_____	_____		_____	_____
Chromium Cr+6	_____	_____		_____	_____

SELECT OTHER ELEMENTS FROM REVERSE SIDE OF THIS FORM

Section Chief: DS Date: 1-20-88 Verified By: mQ Authorized By: \_\_\_\_\_

MARYLAND STATE DEPARTMENT OF HEALTH AND ENVIRONMENTAL HYGIENE  
 Laboratories Administration  
 P.O. Box 2355, Baltimore, Maryland 21203

HAZARDOUS WASTE LABORATORY  
 Metals Analysis Report Form

ORIGINAL  
 (126)

PRIORITY A.S.A.P.

LAB NO. \_\_\_\_\_

Collector W.H. PRICE BOUNDS - 12-15-87  
 Name/Time/Date

Sample Source TRIBUTARY TO  
 HANSHAW CREEK  
 (FEDERAL RD)

Sample ID No. WP121587-05B

Preservative Used ICE + HNO<sub>3</sub>

Sample Alert \_\_\_\_\_

Specify Program:

RCRA:

NPDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

Chain of Custody Sample Possession:

From: William H. Price, 162542, 12-21-87  
 Name/Time/Date

To: Jim Lin, 11:35, 12-21-87  
 Name/Time/Date

From: \_\_\_\_\_  
 Name/Time/Date

To: \_\_\_\_\_  
 Name/Time/Date

Circle Type of Analysis:

1. EP Toxicity

2. Priority Pollutant

3. Total Metals

4. Dissolved Metals

Indicate Type of Sample:

Liquid

Solid \_\_\_\_\_

Metals In ppm

Element	EP	Total	Element	EP	Total
Antimony	_____	_____		_____	_____
<input checked="" type="checkbox"/> Arsenic	_____	<u>0.06</u>		_____	_____
Barium	_____	_____		_____	_____
Beryllium	_____	_____		_____	_____
Cadmium	_____	_____		_____	_____
<input checked="" type="checkbox"/> Chromium	_____	<u>&lt;0.5</u>		_____	_____
<input checked="" type="checkbox"/> Copper	_____	<u>&lt;0.05</u>		_____	_____
Iron	_____	_____		_____	_____
Lead	_____	_____		_____	_____
Mercury	_____	_____		_____	_____
Nickel	_____	_____		_____	_____
Selenium	_____	_____		_____	_____
Silver	_____	_____		_____	_____
Thallium	_____	_____		_____	_____
Zinc	_____	_____		_____	_____
Chromium Cr+6	_____	_____		_____	_____

AR100532

SELECT OTHER ELEMENTS FROM REVERSE SIDE OF THIS FORM

Section Chief: \_\_\_\_\_

Date: 1-20-88

Verified By: mq

Authorized By: \_\_\_\_\_

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
P.O. Box 2355  
Baltimore, Maryland 21203

Priority A.S.A.F.

HAZARDOUS WASTE LABORATORY  
Organic Analysis Report Form

Lab No. 871123

Collector W.H. POPE 1345 Ave. 10-15-87 Sample Source SKINNERS RUN  
Name/Time/Date (FEDERAL BUREAU)

Sample ID No. WP12587-06-C Preservative Used ICE

Sample Alert: \_\_\_\_\_

Specify Program:

RCRA:

NPDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From: William H. Pope, 12-15-87 To: Jean Lai, 11-25 12-21-87  
Name/Time/Date Name/Time/Date

From: \_\_\_\_\_ To: \_\_\_\_\_  
Name/Time/Date Name/Time/Date

From: \_\_\_\_\_ To: \_\_\_\_\_  
Name/Time/Date Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of the following:

NO PRIORITY POLLUTANTS DETECTED

D.L. = 13 PPB AS NAPHTHALENE

GC Analysis indicates the presence of the following PCB/Pesticides:

Name Detected

DL: 2.2ppb 1254

DL: 0.3ppb Lindane

H

**RECEIVED**

SEP 1 1988

MSWMA  
ENFORCEMENT PROGRAM

ART00533

Section Chief: Jth. Date: 8/19/88 Verified By: Jth. Authorized By: \_\_\_\_\_

EMMT  
Stream sample

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
Laboratories Administration  
P.O. Box 2355  
Baltimore, Maryland 21203

ORIGINAL  
(Red)

Priority A.S.A.P.

HAZARDOUS WASTE LABORATORY  
Organic Analysis Report Form

Lab No. \_\_\_\_\_

Collector W.H. ROZE / 1900H. 12-15-87  
Name/Time/Date

Sample Source TRIBUTARY TO MARSHYME CREEK (FEDERALSVING)

Sample ID No. WP 121587-05C

Preservative Used ICE

Sample Alert: DOWNSTREAM FROM WASTE TREATING PLANT (CLASOTE) (CCA)

Specify Program:

RCRA:

NPDES: \_\_\_\_\_

OTHER: \_\_\_\_\_

Chain of Custody Sample Possession

From: Challenger / 1125H. 12-21-87  
Name/Time/Date

To: John Lane 11:21- 12-21-87  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Parameters Requested:

EP Toxicity; Priority Pollutant Scan; PCB/Pesticides; Identify/Compare

GC/MS analysis indicates the presence of the following:

No extractable priority pollutants detected.  
DL = 0.081 ppm as naphthalene

GC Analysis indicates the presence of the following PCB/Pesticides:

None Detected.  
DL = 2.2ppb 1254  
DL = 0.3ppb Lindane

RECEIVED

NOV 23 1987

HSWMA  
ENFORCEMENT PROGRAM

AR100534

Section Chief: DS

Date: 8-10-87

Verified By: RR

Authorized By: \_\_\_\_\_

EASTERN MARYLAND WOOD TREATING  
SUMMARY OF SOIL ANALYTICAL RESULTS  
SAMPLES RECEIVED SEPTEMBER 23, 1999

FORMING LOCATION (WATER TREATMENT) DATE SAMPLED COMPOUND	UNITS	B-1 0.2 9/27/99	B-1 4.4 9/27/99	B-2 4.4 9/28/99	B-3 6.8 9/28/99	B-4 2.4 9/28/99	B-7 0.2 9/28/99	B-13 2.4 9/27/99	B-15 0.3 9/23/99	B-15 B-10 9/23/99	B-16 4.4 9/28/99	B-17 4.4 9/27/99	E-1 2.4 9/23/99	SS-8 PAST of SS-9 0.0.3 9/28/99	ES-9 0.0.5 9/28/99	ES-14 0.5 INCHES 9/28/99
TOTAL RECOVERABLE PHTHOLS	NO/KG	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125	0.271	<0.125	<0.125
ARSENIC	UO/KG	<1000	<1000	1590	2420	<1000	1790	<1000	<1000	1870	1180	1410	2310	8090	1810	<10000
CHROMIUM	UO/KG	7470	15100	15900	15100	7990	7990	4960	9740	24300	7470	18700	12000	11600	4000	14500
COPPER	UO/KG	2750	6350	5410	6350	<2500	<2500	<2500	<2500	9430	2710	5780	5410	6400	2530	20300
CARBAZOLE	UO/KG	403	341	399	341	978	972	833	978	377	899	373	679	<10000	1200	<10000
1-METHYLAZINE	UO/KG	879	464	272	145	243	<100	408	1020	<100	103	<100	149	24300	140	237000
1-CYANOPYRILENE	UO/KG	340	2160	194	<100	<100	<100	<100	918	<100	<100	<100	<100	31400	<100	93900
1-TETRAHYDRO	UO/KG	<1000	<1000	<100	<100	<100	<100	<100	<1000	<100	<100	<100	<100	99200	<100	<10000
1-NONANTHRENE	UO/KG	216	152	<20	<20	<20	<20	<20	870	<20	<20	<20	<20	10400	<20	140000
1-ANTHRACENE	UO/KG	184	110	<20	<20	52.8	<20	<20	1320	<20	85.4	72.8	51.1	10200	72	733000
1-LUORANTHRENE	UO/KG	141	81.5	<20	<20	<20	<20	3070	<20	<20	<20	<20	<20	4150	<20	320000
1-INDOLE	UO/KG	1000	772	39.6	<20	242	<20	211	2170	<20	<20	<20	<20	15800	<20	807000
1-INDOXANTHRACENE	UO/KG	1940	1720	703	<20	250	<20	<20	<20	<20	<20	<20	<20	31700	<20	507000
1-INDOLE	UO/KG	704	635	102	<20	58.7	<20	<20	383	<20	<20	<20	<20	8160	<20	173000
1-INDOXYLUORANTHRENE	UO/KG	1250	1140	184	<15	94	<15	1230	<15	<15	<15	<15	<15	13700	<15	284000
1-INDOXYLUORANTHRENE	UO/KG	695	700	102	<20	35	<20	42.7	42.7	<20	<20	<20	11.4	8320	<20	103000
1-INDOXYLUORANTHRENE	UO/KG	207	216	45.4	15.5	<20	<20	19.8	<20	<20	<20	<20	4.02	2990	<20	43500
1-INDOXYLUORANTHRENE	UO/KG	332	332	31.3	12.5	<20	<20	18	<20	<20	<20	<20	<20	4830	<20	64900
1-INDOXYLUORANTHRENE	UO/KG	1240	1070	188	<20	<20	<20	<20	<20	<20	<20	<20	<20	18700	<20	151000
1-INDOXYLUORANTHRENE	UO/KG	702	643	101	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	8430	<3.00	81900
1-INDOXYLUORANTHRENE	UO/KG	346	301	31.2	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	<3.00	4730	<3.00	39400
TOTAL PAHS		10638	11022.5	3006.5	304	1965.5	972	1277.9	12192.5	577	1039.4	447.8	834.52	294030	1472	372200

ORIGINAL  
(Red)

AR100535



ORIGINAL  
(Red)

EASTERN MARYLAND WOOD TREATING  
SUMMARY OF SOIL ANALYTICAL RESULTS  
SAMPLES RECEIVED OCTOBER 3, 1989  
(Continued)

FORING LOCATION DEPTH (FEET) DATE SAMPLED COMPOUND	UNITS	SS-1 0-0.5 10/02/89	SS-2 0-0.5 10/02/89	SS-3 0-0.5 10/02/89	SS-4 0-0.5 10/02/89	SS-7 0-0.5 10/03/89	SS-11 0-0.5 10/04/89	SS-12 0-0.5 10/05/89	SS-13 0-0.5 10/02/89	SS-15 0-0.5 10/02/89	SS-16 0-0.5 10/02/89	SS-18 0-0.5 10/02/89
TOTAL RECOVERABLE PHTHALATES OIL & GREASE	MG/KG	<0.125	<0.125	<0.125	<0.125	<0.125	0.137	0.044	0.276	<0.125	<0.125	3.06
ARSENIC	MG/KG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORAMINE	MG/KG	8400	8040	2700	2510	1400	1390	1600	2800	2750	1190	<1000
CORTER	MG/KG	17400	19400	3030	10200	6940	7300	7600	11600	10100	9400	2110
	MG/KG	6470	9120	<3500	6300	3410	2750	4020	4300	4970	2940	<2500
CARBAZOLE	MG/KG	1630	1600	947	1070	24500	21100	<4600	32000	1500	370	1300
NAFTHALENE	MG/KG	<115	278	212	221	34100	47700	130000	130000	1240	490	<115
ACENANTHRENE	MG/KG	<115	<114	192	166	5160	12700	81600	82100	<1170	<111	<115
FLUORINE	MG/KG	<115	<114	<124	<111	64300	15300	1070000	234000	<1170	<111	<115
PIENANTHRENE	MG/KG	74.9R	89.5R	81.8R	82.2R	44600	1230	401000	13000	<234	<22.2	<23.0
ANTHRACENE	MG/KG	<0.0	<0.0	<0.0	<0.0	116000	4960	1370000	97600	237R	56.0R	72.4R
FLUORANTHRENE	MG/KG	<0.0	112	<0.0	<0.0	9460	471	634000	44600	81.4	<50.0	<0.0
PIENZOANTHRACENE	MG/KG	<0.0	406	<0.0	198	130000	34100	1190000	316000	1310	23.2	<23.0
CHRYSENE	MG/KG	<0.0	101	99.9	40.3	24900	7260	130000	477000	3750	1470	<23.0
BENZO[B]FLUORANTHRENE	MG/KG	<17.3	205	172	61.7	37400	13400	332000	87400	1270	103	<23.0
BENZO[A]FLUORANTHRENE	MG/KG	8.44	137	145	50.4	14400	9430	440000	1150000	1940	216	<17.3
BENZO[A]PYRENE	MG/KG	3.38	52.3	31.7	22.6	6040	18000	180000	69900	1370	108	10.1
DIBENZO[A,H]ANTHRACENE	MG/KG	<2.30	39.8	48.8	12.2	7790	3740	68000	27200	377	38.6	4.58
BENZO[G]HETEROPYRENE	MG/KG	<0.0	143	221	<0.3	11000	8420	117000	29200	393	52.3	<2.30
INDENO[1,2,3-CD]PYRENE	MG/KG	<0.75	103	89.6	<0.3	7900	5820	104000	37900	1770	189	<0.75
	MG/KG	<0.75	23.6	14.4	<0.3	1320	1290	19400	3700	1020	114	<0.75
TOTAL PAHS		1642.02	3171.7	2340.6	1973.2	64070.5	211231	4333300	179729	156674	3790.5	1014.08

R) Designation that the data point is invalid  
due to contamination found in the lab blank  
at 60.1 ug/g. This is based on the  
EPA criteria that no positive sample results  
should be reported unless the concentration  
of a compound found in a sample exceeds  
10 times the amount found in any blank for common  
laboratory contaminants, or exceeds 5 times the  
amount of other compounds.

0537

ORIGINAL  
(Red)

APPENDIX C

AR100538



EASTERN MARYLAND WOOD TREATING  
SUMMARY OF SURFACE WATER ANALYTICAL RESULTS  
SAMPLES RECEIVED OCTOBER 5, 1989

ORIGINAL  
(Rec)

LOCATION		SW-1	SW-2
DATE SAMPLED		10/04/89	10/04/89
COMPOUND	UNITS		
OIL & GREASE	MG/L	<6.00	<6.00
PHENOL	MG/L	<0.005	<0.005
CARBAZOLE	UG/L	48.7	60.4
NAPHTHALENE	UG/L	5.43	7.52
ACENAPHTHYLENE	UG/L	<2.00	19.7
ACENAPHTHENE	UG/L	<2.00	12.3
FLUORENE	UG/L	<0.2	0.924
PHENANTHRENE	UG/L	<0.5	<0.5
ANTHRACENE	UG/L	<0.5	<0.5
FLUORANTHENE	UG/L	1.83	3.15
PYRENE	UG/L	14.1	17.6
BENZO(A)ANTHRACENE	UG/L	1.12	2.33
CHRYSENE	UG/L	3.25	4.9
BENZO(B)FLUORANTHEN	UG/L	1.24	2.43
BENZO(K)FLUORANTHE	UG/L	0.48	0.899
BENZO(A)PYRENE	UG/L	0.268	0.55
DIBENZ(A,H)ANTHRACE	UG/L	1.52	1.72
BENZO(GH)PERYLENE	UG/L	0.897	1.1
INDENO(1,2,3-CD)PYREN	UG/L	0.188	0.241
TOTAL PAHS		79.023	135.764

AR100539

Priority ASAP

EMERGENCY WASTE LABORATORY  
General Inorganic Analysis Report Form

Lab No. 870817

Collector HUFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING

Sample ID no. FWW-1

Preservative Used NONE

Sample Alias NONE

Specify Program:

PCB:

NPDES:

Other:

Chain of Custody Sample Possession

From:	Name/Time/Date	To:	Name/Time/Date
From:		To:	
From:		To:	
From:		To:	

<input checked="" type="checkbox"/> pH	<u>5.8</u>	<input checked="" type="checkbox"/> Chloride	<u>16</u>	ppm-Cl
<input checked="" type="checkbox"/> Conductivity - $\mu\text{mhos/cm}$	<u>127</u>	<input type="checkbox"/> Fluoride		ppm-F
<input checked="" type="checkbox"/> Turbidity	<u>650</u>	<input type="checkbox"/> Iodide		ppm-I
<input type="checkbox"/> Color		<input type="checkbox"/> Cyanide, total		ppm-CN
<input checked="" type="checkbox"/> Residue Non-filterable	<u>736</u>	<input type="checkbox"/> Cyanide, reactive		ppm-CN
<input checked="" type="checkbox"/> Residue Filterable	<u>168</u>	<input type="checkbox"/> Cyanide, available to coloration		ppm-CN
<input type="checkbox"/> Residue, total		<input type="checkbox"/> Phenol, total		ppm-Phenol
<input type="checkbox"/> Residue volatile		<input type="checkbox"/> Acidity, total		ppm-CaCO <sub>3</sub>
<input type="checkbox"/> Specific gravity		<input checked="" type="checkbox"/> Alkalinity, total	<u>47.2</u>	ppm-CaCO <sub>3</sub>
<input type="checkbox"/> Free HCl's test		<input checked="" type="checkbox"/> Hardness, total	<u>24</u>	ppm-CaCO <sub>3</sub>
<input type="checkbox"/> Corrosivity		<input type="checkbox"/> Carbon Dioxide		ppm-CaCO <sub>3</sub>
<input type="checkbox"/> Ignitability		<input type="checkbox"/> Heavy Metals Active Substance		ppm-MBAS
<input type="checkbox"/> Oil and Grease		<input checked="" type="checkbox"/> Chlorine, total		ppm-Cl
<input type="checkbox"/> Ammonia		<input type="checkbox"/> Chlorine, free		ppm-Cl
<input type="checkbox"/> Clean Nitrogen		<input type="checkbox"/> Dissolved oxygen		ppm-DO
<input checked="" type="checkbox"/> Nitrate plus Nitrite		<input type="checkbox"/> Biochemical oxygen demand		ppm-BOD
<input type="checkbox"/> Phosphate, ortho		<input type="checkbox"/> Nitrogen oxygen demand		ppm-NOD
<input type="checkbox"/> Phosphate, total		<input checked="" type="checkbox"/> Chemical oxygen demand		ppm-COD
<input checked="" type="checkbox"/> Sulfide	<u>5</u>	<input type="checkbox"/> Organic carbon, total		ppm-C
<input type="checkbox"/> Sulfide		<input type="checkbox"/> Inorganic carbon		ppm-C
<input type="checkbox"/> Sulfide		<input type="checkbox"/> Total Solids		ppm-TSS
<input type="checkbox"/> Sulfide, reactive		<input type="checkbox"/> Salinity		g/lcc
<input type="checkbox"/> Bromide				

ART 100540

9-24-87

fm

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Program:

Laboratories Administration

RCRA  NPDES \_\_\_\_\_

Howard and Biddle Streets  
P.O. Box 2355, Baltimore, Maryland 21203

OTHER: \_\_\_\_\_

HAZARDOUS WASTE LABORATORY  
Metals Analysis Report Form

Lab No.

Priority ASAP  
870817

Collector HOFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING  
Name/Time/Date

Sample ID No. FW W-1

Preservative Used NONE

Chain of Custody Sample Possession:

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Type of Analysis:

1. EP Toxicity      2. Priority Pollutant      3. Total Metals      4. Dissolved Metals

Indicate Type of Sample:

Liquid h

Solid \_\_\_\_\_

Metals in ppm

Element	EP	Total	Element	EP	Total
Antimony			<input checked="" type="checkbox"/> MAGNESIUM	1.8	
<input checked="" type="checkbox"/> Arsenic	<0.001		<input checked="" type="checkbox"/> MANGANESE	<0.5	
<input checked="" type="checkbox"/> Barium	28				
Beryllium					
<input checked="" type="checkbox"/> Cadmium	<0.05				
<input checked="" type="checkbox"/> Chromium	<0.5				
Copper					
<input checked="" type="checkbox"/> Lead	<0.5				
<input checked="" type="checkbox"/> Mercury	<0.002				
Nickel					
<input checked="" type="checkbox"/> Selenium	<0.002				
Silver					
<input checked="" type="checkbox"/> Thallium	<0.5				
<input checked="" type="checkbox"/> Zinc	0.11				
<input checked="" type="checkbox"/> Chromium Cr+6	<0.05				
<input checked="" type="checkbox"/> Iron	6.8				

AR100541

SELECT OTHER ELEMENTS FROM REVERSE SIDE OF THIS FORM

Section Chief: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_ Date: \_\_\_\_\_

Laboratories Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21203

**Hw39**

Priority: ASAP

HAZARDOUS WASTE LABORATORY

Lab No. 870847

General Inorganic Analysis Report Form II

ORIGINAL  
(Red)

Collector: Hofer 9/3/89 Sample Source: EASTERN MIDWOOD TREATMENT  
Name/Time/Date

Sample ID No. EW-1 Preservative Used: NONE

Sample Alert: NONE

Specify Program:

PCRA:  NPDES:  OTHER:

Chain of Custody Sample Possession:

From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date

<input checked="" type="checkbox"/> pH	
<input checked="" type="checkbox"/> Ammonia	<u>1.5</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen <i>J-K-N</i>	ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.038</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>2.5</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	ppm-P
<input type="checkbox"/> Phosphate, total	ppm-P
<input checked="" type="checkbox"/> Chlorine, total	ppm-Cl
<input type="checkbox"/> Chlorine, free	ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>&lt;10</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	ppm-C
<input type="checkbox"/> Inorganic Carbon	ppm-C

AR100542

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MASSACHUSETTS  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mehsen Joseph, Ph.D., Director  
 TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

090421063  
 Name of County Dorchester

WELL NUMBER EW W-2

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. HOFER

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_  
 Landfill observation well X stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

REMARKS: 2" wells

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
											0	9	0	3	8	7		
TRANS TYPE		COUNTY		PLANT NO			SAMPLING STATION				DATE COLLECTED					CARD NO		

FIELD pH 

20	21	22
----	----	----

 FIELD RESID. CHLORINE: FREE 

23	24
----	----

 TOTAL 

25	26
----	----

090421063

Purgeable Halocarbons (EPA 624)			Purgeable Aromatics (EPA 624)		
Chloromethane	<1.	trans-1,3-Dichloropropene	<1.	Benzene	<1.
Bromomethane		Trichloroethene		Toluene	↓
Dichlorodifluoromethane		Dibromochloromethane		Ethylbenzene	↓
Vinyl chloride		1,1,2-Trichloroethane		Total Xylenes	<2
Chloroethane		cis-1,3-Dichloropropene		Total Purgeable Hydrocarbons	
Methylene chloride		2-Chloroethylvinylether		Tetrahydrofuran	19.
Trichlorofluoromethane		Bromoform		(2-Butanone) (MEK)	N.D.
1,1-Dichloroethene		1,1,2,2-Tetrachloroethane		Methylisobutylketone (MIBK)	↓
1,1-Dichloroethane		Tetrachloroethene		Acrolein	↓
trans-1,2-Dichloroethene		Chlorobenzene		Acrylonitrile	↓
Chloroform		Total Trihalomethanes			
1,2-Dichloroethane		Other Purgeable Organics: N.D.			
1,1,1-Trichloroethane					
Carbon Tetrachloride					
1,1-Dichloroethane					
1,2-Dichloropropane					

DATE RECEIVED SEP 4 1987 DATE REPORTED OCT 01 1987 CHEMIST [Signature] LAB. NO. 881063  
 DHMH 743 11/86

LABORATORIES ADMINISTRATION  
P.O. Box 2155  
Baltimore, Maryland 21201

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form

Lab No. 871094

Collector Hof 12/8/87  
Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID no. EMWT-W-2

Preservative Used NONE

Sample Alert

Specify Program:

PCA: X

NCDES: \_\_\_\_\_

Other: \_\_\_\_\_

DATE BY 1988

Chain of Custody Sample Possession

From: Hof 12/8/87  
Name/Time/Date

To: SUB FORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.4</u>		<input checked="" type="checkbox"/> Chloride	<u>14.3</u>	ccm-Cl
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>7.2</u>	25°C	<input checked="" type="checkbox"/> Fluoride		ccm-F
<input checked="" type="checkbox"/> Turbidity	<u>188</u>	NTU	<input checked="" type="checkbox"/> Iodide		ccm-I
<input type="checkbox"/> Color		Color	<input checked="" type="checkbox"/> Cyanide, total		ccm-CN
<input checked="" type="checkbox"/> Residue non-filterable	<u>133</u>	ccm	<input checked="" type="checkbox"/> Cyanide, reactive		ccm-CN
<input checked="" type="checkbox"/> Residue filterable	<u>106</u>	ccm	<input checked="" type="checkbox"/> Cyanide, amenable to chlorination		ccm-CN
<input type="checkbox"/> Residue, total		ccm	<input type="checkbox"/> Phenol, total		ccm-CN
<input type="checkbox"/> Residue volatile		ccm	<input type="checkbox"/> Acidity, total		ccm-pH
<input type="checkbox"/> Specific gravity		25°C	<input checked="" type="checkbox"/> Alkalinity, total		ccm-CaCo <sub>3</sub>
<input type="checkbox"/> Free liquid test			<input checked="" type="checkbox"/> Hardness, total	<u>24.9</u>	ccm-CaCo <sub>3</sub>
<input type="checkbox"/> Corrosivity			<input type="checkbox"/> Carbon Dioxide	<u>16.8</u>	ccm-CaCo <sub>3</sub>
<input type="checkbox"/> Ignitability		°C	<input type="checkbox"/> Methylene Blue Active Substance		ccm-CaCo <sub>3</sub>
<input type="checkbox"/> Oil and Grease		ccm	<input checked="" type="checkbox"/> Chloride, total	<u>&lt; 0.4</u>	ccm-MSAS
<input type="checkbox"/> Ammonia		ccm-N	<input type="checkbox"/> Chloride, free		ccm-Cl
<input type="checkbox"/> Kjeldahl Nitrogen		ccm-N	<input type="checkbox"/> Dissolved oxygen		ccm-Cl
<input checked="" type="checkbox"/> Nitrite		ccm-N	<input type="checkbox"/> Biochemical oxygen demand		ccm-DO
<input checked="" type="checkbox"/> Nitrate plus Nitrite		ccm-N	<input type="checkbox"/> Nitrogen oxygen demand		ccm-NDO
<input type="checkbox"/> Phosphate, ortho		ccm-P	<input checked="" type="checkbox"/> Chemical oxygen demand		ccm-COD
<input type="checkbox"/> Phosphate, total		ccm-P	<input type="checkbox"/> Organic carbon, total		ccm-C
<input checked="" type="checkbox"/> Sulfate	<u>15</u>	ccm-SO <sub>4</sub>	<input type="checkbox"/> Inorganic carbon		ccm-C
<input type="checkbox"/> Sulfite		ccm-SO <sub>3</sub>	<input type="checkbox"/> Tannin, Lignin		ccm-Tannic acid
<input type="checkbox"/> Sulfide		ccm-S	<input type="checkbox"/> Salinity		AR 100544
<input type="checkbox"/> Sulfide, reactive		ccm-S			706
<input type="checkbox"/> Bromide		ccm-Br			

Section Chief: \_\_\_\_\_

Date: 1-20-88

Verifical No. 100544

PRIORITY ASAP

Environmental Administration  
Box 2855, Baltimore, Maryland 21203  
EPA/DOCS FAST LABORATORY  
Metals Analysis Report Form

Collector: Hof 12/8/81  
Name/Title/Date

LIS NO. 8701094

Sample ID No. EMWT W-2

Sample Source Eastern MD Wood

Sample Area \_\_\_\_\_

Preservative Used HNO<sup>3</sup>

Specify Program: \_\_\_\_\_

Chain of Custody Sample Possession: \_\_\_\_\_

From: Hof 12/8/81  
Name/Title/Date

To: \_\_\_\_\_

From: \_\_\_\_\_

To: SUBFORM  
Name/Title/Date

IF TOTALS ARE High Low FP Toxicity  
Circle type of analysis: \_\_\_\_\_

- 1. In Toxicity
- 2. Priority Pollutant
- 3. Total Metals
- 4. Dissolved Metals

Indicate type of sample: \_\_\_\_\_  
Liquid  Solid \_\_\_\_\_

RECEIVED

JAN 19 1982

Element	IP	Unit	Element	ENFORCEMENT FILE	FILE COPY ONLY
As			XI MAGNESIUM		1.7
XI Arsenic		<0.001	XI MANGANESE		<0.5
XI Barium		<0.5			
Beryllium					
XI Cadmium		<0.05			
XI Chromium		<0.5			
Copper					
XI Lead		13			
XI Lead		<0.5			
XI Mercury		<0.001			
Nickel					
XI Selenium		<0.001			
Silver					
XI Strontium		<0.5			
XI Zinc		<0.05			
Chromium Cr6	<0.1				

100545

SECTION ONE: ANALYSIS WITH REVERSE SIDE OF THIS FORM  
mg

HW 29  
ORIGINAL  
(Rec)

Priority: ASAP

HAZARDOUS WASTE LABORATORY

General Inorganic Analysis Report Form II

Lab No. \_\_\_\_\_

Collector: Hofu 12/8/81  
Name/Time/Date

Sample Source: EASTERN MD WOOD

Sample ID No.: EMWT. W-2

Preservative Used: NONE

Sample Alert: \_\_\_\_\_

Specify Program: \_\_\_\_\_

PCPA: X NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession:

From: <u>Hofu</u> <u>12/9/81</u> Name/Time/Date	To: <u>SUBFORM</u> Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date
From: _____ Name/Time/Date	To: _____ Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>Lo A.</u> ppm-N
<input type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.029</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>&lt; 0.2</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>10</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

ARI00546

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_



STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

201 W. Preston Street

J. Michael Joseph, Ph.D., Director

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

ORIGINAL  
(Recd)

BOTTLE NUMBER

EMWT W-2

Dorchester  
Name of County

SOURCE OF SAMPLE

EASTERN MD WOOD

COLLECTOR

Hof

SAMPLE TYPE:

DISTRIBUTION

SOURCE

OTHER (specify)

Community

noncommunity

private

observation well

stream

tidal waters

Industrial effluent

STP sampling station

STP effluent

Chlorinated

preserved with thiosulfate

Reason for submitting sample: Trihalomethane Survey

Suspected Industrial Chemical Contamination

Suspected Petroleum (gasoline, etc.) Contamination

Other (specify)

REMARKS:

Hof 12/9/87 -

120182653

1  
TRANS TYPE

2 3  
COUNTY

4 5 6 7  
PLANT NO

8 9 10 11  
SAMPLING STATION  
W2

12 13 14 15 16 17  
DATE COLLECTED  
12 08 87

18 19  
CARD NO

20 21 22  
FIELD PW

FIELD RESID. CHLORINE: FREE

23 24

TOTAL

25 26

Purgeable Halocarbons (EPA)

Chloromethane	<1
Bromomethane	
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
1,1-Dichloroethane	
1,2-Dichloropropane	↓

trans-1,3-Dichloropropene	<1
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,2 Dichloropropene	
2-Chloroethylvinylether	
Bromoform	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	↓
Total Trihalomethanes	

Other Purgeable Organics: N.D.

Purgeable Aromatics

Benzene	<1
Toluene	↓
Ethylbenzene	↓
Total Xylenes	<2
Total Purgeable Hydrocarbons	
Tetrahydrofuran	25
(2-Butanone) (MEK)	N.D.
Methylisobutylketone (MIBK)	↓
Acrolein	↓
Acrylonitrile	↓

AR100547

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED

DEC 09 1987

DATE REPORTED

DEC 17 1987

CHEMIST

Mill

LAB. NO.

882653

Laboratories Administration  
 P.O. Box 2355  
 Baltimore, Maryland 21203

8/10/87

Priority ASAP

ERZARDUS WASTE LABORATORY  
 General Inorganic Analysis Report Form Lab No. 870847

Collector HOFER 9/3/87  
 Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING

Sample ID no. FUW-2

Preservative Used NONE

Sample Alert NONE

Specify Program:

PCRA:  NRES:  OTHER:

Chain of Custody/ Sample Possession

From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.3</u>	<input checked="" type="checkbox"/> Chloride	<u>20</u>	SEM-01
<input checked="" type="checkbox"/> Conductivity, umhos/cm	<u>87</u>	<input type="checkbox"/> Fluoride		SEM-02
<input checked="" type="checkbox"/> Turbidity	<u>640</u>	<input type="checkbox"/> Iodide		SEM-03
<input type="checkbox"/> Color		<input type="checkbox"/> Cyanide, total		SEM-04
<input checked="" type="checkbox"/> Residue non-filterable	<u>968</u>	<input type="checkbox"/> Cyanide, reactive		SEM-05
<input checked="" type="checkbox"/> Residue filterable	<u>92</u>	<input type="checkbox"/> Cyanide, amenable to confirmation		SEM-06
<input type="checkbox"/> Residue, total		<input type="checkbox"/> Phenol, total		SEM-07
<input type="checkbox"/> Residue volatile		<input type="checkbox"/> Acidity, total		SEM-08
<input type="checkbox"/> Specific gravity		<input checked="" type="checkbox"/> Alkalinity, total	<u>21</u>	SEM-09
<input type="checkbox"/> Free HCl's test		<input checked="" type="checkbox"/> Hardness, total	<u>9</u>	SEM-10
<input type="checkbox"/> Corrosivity		<input type="checkbox"/> Carbon Dioxide		SEM-11
<input type="checkbox"/> Ignitability		<input checked="" type="checkbox"/> Methylene Blue Active Substance		SEM-12
<input type="checkbox"/> Oil and Grease		<input type="checkbox"/> Chlorine, total	<u>20.44</u>	SEM-13
<input type="checkbox"/> Ammonia		<input type="checkbox"/> Chlorine, free		SEM-14
<input type="checkbox"/> Total Nitrogen		<input type="checkbox"/> Dissolved Oxygen		SEM-15
<input checked="" type="checkbox"/> Nitrate		<input type="checkbox"/> Bicarbonate oxygen demand		SEM-16
<input checked="" type="checkbox"/> Nitrate plus Nitrite		<input type="checkbox"/> Nitrogen oxygen demand		SEM-17
<input type="checkbox"/> Phosphate, ortho		<input checked="" type="checkbox"/> Chemical oxygen demand		SEM-18
<input type="checkbox"/> Phosphate, total		<input type="checkbox"/> Organic carbon, total		SEM-19
<input checked="" type="checkbox"/> Sulfate	<u>9</u>	<input type="checkbox"/> Inorganic carbon		SEM-20
<input type="checkbox"/> Sulfide		<input type="checkbox"/> Tannin, lignin		SEM-21
<input type="checkbox"/> Sulfide, reactive		<input type="checkbox"/> Salinity		SEM-22
<input type="checkbox"/> Bromide				SEM-23

AR100548

9-24-87

JH

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Program:

RCRA ✓ NPDES \_\_\_\_\_

OTHER: \_\_\_\_\_

Laboratories Administration  
Howard and Biddle Streets  
P.O. Box 2355, Baltimore, Maryland 21203

HAZARDOUS WASTE LABORATORY  
Metals Analysis Report Form

Lab No. 870847

Priority ASAP

Collector HOFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MD. WOOD TREATING  
Name/Time/Date

Sample ID No. FW W-2

Preservative Used NONE

Chain of Custody Sample Possession:

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

Circle Type of Analysis:

1. EP Toxicity      2. Priority Pollutant      3. Total Metals      4. Dissolved Metals

Indicate Type of Sample:

Liquid h      Solid \_\_\_\_\_

Metals in ppm

Element	EP	Total	Element	EP	Total
Antimony			<u>✓</u> MAGNESIUM	<u>1.0</u>	
<u>✓</u> Arsenic	<u>10.001</u>		<u>✓</u> MANGANESE	<u>&lt;0.5</u>	
<u>✓</u> Barium	<u>10.5</u>				
Beryllium					
<u>✓</u> Cadmium	<u>10.05</u>				
<u>✓</u> Chromium	<u>10.5</u>				
Copper					
<u>✓</u> Lead	<u>10.5</u>				
<u>✓</u> Mercury	<u>10.002</u>				
Nickel					
<u>✓</u> Selenium	<u>10.002</u>				
Silver					
<u>✓</u> Thallium	<u>10.5</u>				
<u>✓</u> Zinc	<u>0.12</u>				
<u>✓</u> Chromium Cr+6	<u>10.05</u>				
<u>✓</u> Iron <del>Fe</del>	<u>9.6</u>				

AR100549

SELECT OTHER ELEMENTS FROM REVERSE SIDE OF THIS FORM

Section Chief: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_ Date: \_\_\_\_\_

HW46

Priority ASAP

HAZARDOUS WASTE LABORATORY

Lab No. 870847

General Inorganic Analysis Report Form II

Collector HOFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MIDWOOD TREATING

Sample ID No. EW W-2

Preservative Used NONE

Sample Alert NONE

Specify Program:

PCPA:  NPDES:  OTHER:

Chain of Custody Sample Possession:

From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date
From:	_____	To:	_____
	Name/Time/Date		Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>1.8</u> ppm-N
<input checked="" type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.077</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>45.0</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>&lt;10</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100550

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_

STATE OF MARYLAND  
 DEPARTMENT OF HEALTH AND MENTAL HYGIENE  
 Laboratories Administration  
 201 W. Preston Street  
 J. Mehsen Joseph, Ph.D., Director

OCT 2 1987

TRACE ORGANICS LABORATORY  
 VOLATILE ORGANICS ANALYSIS

BOTTLE NUMBER EW-W-3

Dorchester  
 Name of County

SOURCE OF SAMPLE EASTERN MD WOOD COLLECTOR E. Hofer

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
 Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_  
 Landfill observation well  stream \_\_\_\_\_ tidal waters \_\_\_\_\_  
 Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_  
 Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_  
 Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_  
 Suspected Industrial Chemical Contamination \_\_\_\_\_  
 Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

REMARKS: 2" wells

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
									3		0	9	0	3	8	7		
TRANS TYPE		COUNTY		PLANT NO.			SAMPLING STATION				DATE COLLECTED					CARD NO.		

20	21	22	23	24	25	26
FIELD pH			FIELD RESID. CHLORINE: FREE		TOTAL	

0904R1065

Purgeable Halocarbons (EPA 601/602)

Chloromethane	<1.
Bromomethane	
Dichlorodifluoromethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
Trichlorofluoromethane	
1,1-Dichloroethene	
1,1-Dichloroethane	
trans-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon Tetrachloride	
1,1-Dichloroethane	
1,2-Dichloropropane	

trans-1,3-Dichloropropene	<1.
Trichloroethene	
Dibromochloromethane	
1,1,2-Trichloroethane	
cis-1,3-Dichloropropene	
2-Chloroethylvinylether	
Bromoform	
1,1,2,2-Tetrachloroethane	
Tetrachloroethene	
Chlorobenzene	
Total Trihalomethanes	

Other Purgeable Organics: N.D.

Purgeable Aromatics (EPA 621)

Benzene	<1.
Toluene	
Ethylbenzene	
Total Xylenes	<2
Total Purgeable Hydrocarbons	
Tetrahydrofuran	277.
(2-Butanone) (MEK)	34.
Methylisobutylketone (MIBK)	N.D.
Acrolein	
Acrylonitrile	

AR100551

DATE RECEIVED SEP 4 1987 DATE REPORTED OCT 01 1987 CHEMIST W.H. LAB. NO. 881065  
 Results reported in micrograms per liter (parts per billion)

P.O. Box 2555  
Baltimore, Maryland 21203

Priority ASAP

HAZARDOUS WASTE LABORATORY

General Inorganic Analysis Report Form Lab No.

ORIGINAL  
871094

Collector Hof 12/8/87  
Name/Time/Date

Sample Source EASTERN MD WOOD

Sample ID no. EMWT-W-3

Preservative Used NONE

Sample Alert

Specify Program:

RCRA: X

NPDES: \_\_\_\_\_

Other: \_\_\_\_\_

JAN 27 1988

Chain of Custody Sample Possession

From: Hof 12/8/87  
Name/Time/Date

To: SUB FORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.3</u>		<input checked="" type="checkbox"/> Chloride	
<input checked="" type="checkbox"/> Conductivity-umhos/cm	<u>169</u>	925°C	<input type="checkbox"/> Fluoride	<u>21.4</u> scm-Cl
<input checked="" type="checkbox"/> Turbidity	<u>8</u>	NPT	<input type="checkbox"/> Iodide	scm-F
<input type="checkbox"/> Color		Color	<input type="checkbox"/> Cyanide, total	scm-I
<input checked="" type="checkbox"/> Residue non-filterable	<u>7</u>	scm	<input type="checkbox"/> Cyanide, reactive	scm-CN
<input checked="" type="checkbox"/> Residue filterable	<u>127</u>	scm	<input type="checkbox"/> Cyanide, absorbable to	scm-CN
<input type="checkbox"/> Residue, total		scm	<input type="checkbox"/> Chlorination	
<input type="checkbox"/> Residue volatile		scm	<input type="checkbox"/> Phenol, Lapp	scm-CN
<input type="checkbox"/> Specific gravity		925°C	<input type="checkbox"/> Acidity, total	scm-phenol
<input type="checkbox"/> Free liquid test			<input checked="" type="checkbox"/> Alkalinity, total	scm-CaCo <sub>3</sub>
<input type="checkbox"/> Corrosivity		2	<input type="checkbox"/> Hardness, total	<u>16.5</u> scm-CaCo <sub>3</sub>
<input type="checkbox"/> Ignitability		OH	<input type="checkbox"/> Carbon Dioxide	<u>22.8</u> scm-CaCo <sub>3</sub>
<input type="checkbox"/> Oil and Grease		°C	<input type="checkbox"/> Methylene Blue Active Substance	scm-CaCo <sub>3</sub>
<input type="checkbox"/> Ammonia		scm	<input checked="" type="checkbox"/> Chlorine, total	scm-MBAS
<input type="checkbox"/> Kjeldahl Nitrogen		scm-N	<input type="checkbox"/> Chlorine, free	<u>&lt; 0.44</u> scm-Cl
<input checked="" type="checkbox"/> Nitrite		scm-N	<input type="checkbox"/> Dissolved oxygen	scm-Cl
<input checked="" type="checkbox"/> Nitrate plus Nitrite		scm-N	<input type="checkbox"/> Biochemical oxygen demand	scm-DO
<input type="checkbox"/> Phosphate, ortho		scm-P	<input type="checkbox"/> Nitrogen oxygen demand	scm-BOD
<input type="checkbox"/> Phosphate, total		scm-P	<input checked="" type="checkbox"/> Chemical oxygen demand	scm-NCO
<input checked="" type="checkbox"/> Sulfate		scm-S	<input type="checkbox"/> Organic carbon, total	scm-COO
<input type="checkbox"/> Sulfite	<u>39</u>	scm-SO <sub>3</sub>	<input type="checkbox"/> Inorganic carbon	scm-C
<input type="checkbox"/> Sulfide		scm-SO <sub>3</sub>	<input type="checkbox"/> Tannin, Lignin	scm-C
<input type="checkbox"/> Sulfide, reactive		scm-S	<input type="checkbox"/> Salinity	scm-Tannic acid
<input type="checkbox"/> Bromide		scm-Br		°/OC

AR 100552

Section Chief: \_\_\_\_\_ Date: 1-24-88

**PRIORITY** ASAP  
**Collector** Nof 12/8/81  
**Sample ID No.** EMWT W-3  
**Sample Alias** \_\_\_\_\_  
**Specify Program:** \_\_\_\_\_  
**Chain of Custody Sample Possession:**  
**From:** Nof 12/8/81 **To:** SUBFORM  
**From:** \_\_\_\_\_ **To:** \_\_\_\_\_  
**Circle Type of Analysis:**  
 1.  Toxicology    2.  Priority Pathology    3.  Total Metals    4.  Selected Metals  
**Indicate Type of Sample:** Liquid X Solid \_\_\_\_\_  
**RECEIVED**  
 JAN 19 1982

Element	IP	Total	Element	IP	Total
Antimony					
X Arsenic		0.003	X MAGNESIUM		3.7
X Barium		40.5	X MANGANESE		40.5
Beryllium					
X Cadmium		40.05			
X Chromium		40.5			
Copper					
X Iron		5.8			
X Lead		40.5			
X Mercury		40.061			
Nickel					
X Selenium					
X Silver		0.001			
X Thallium		40.5			
X Zinc		40.05			
X Chromium Cr+6	40.1				

ENFORCEMENT FILE  
 FILE COPY ONLY  
 SERVICE CHIEF \_\_\_\_\_  
 SIDE OF THIS FORM

HW 78

Priority ASAP

HARAZICUS WASTE LABORATORY

Lab No. \_\_\_\_\_

General Inorganic Analysis Report Form II

Collector Hofu 12/8/87  
Name/Time/Date

Sample Source EASTERN MIL WOOD

Sample ID No. EMWT W-3

Preservative Used NONE

Sample Alert \_\_\_\_\_

Specify Program:

REPA: 0 NPDES: \_\_\_\_\_ OTHER: \_\_\_\_\_

Chain of Custody Sample Possession:

From: Hofu 12/9/87  
Name/Time/Date

To: SUBFORM  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

From: \_\_\_\_\_  
Name/Time/Date

To: \_\_\_\_\_  
Name/Time/Date

<input checked="" type="checkbox"/> pH	_____
<input checked="" type="checkbox"/> Ammonia	<u>LA</u> ppm-N
<input type="checkbox"/> Kjeldahl Nitrogen	_____ ppm-N
<input checked="" type="checkbox"/> Nitrite	<u>.005</u> ppm-N
<input checked="" type="checkbox"/> Nitrate plus Nitrite	<u>&lt; 0.2</u> ppm-N
<input type="checkbox"/> Phosphate, ortho	_____ ppm-P
<input type="checkbox"/> Phosphate, total	_____ ppm-P
<input checked="" type="checkbox"/> Chlorine, total	_____ ppm-Cl
<input type="checkbox"/> Chlorine, free	_____ ppm-Cl
<input type="checkbox"/> Dissolved Oxygen	_____ ppm-DO
<input type="checkbox"/> Biochemical Oxygen Demand	_____ ppm-BOD
<input type="checkbox"/> Nitrogen Oxygen Demand	_____ ppm-NOD
<input checked="" type="checkbox"/> Chemical Oxygen Demand	<u>&lt; 10</u> ppm-COD
<input type="checkbox"/> Organic carbon, total	_____ ppm-C
<input type="checkbox"/> Inorganic Carbon	_____ ppm-C

AR100554

Section Chief: \_\_\_\_\_ Date: \_\_\_\_\_ Verified By: \_\_\_\_\_ Authorized By: \_\_\_\_\_



STATE OF MARYLAND  
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

Laboratories Administration

201 W. Preston Street

J. Meisen Joseph, Ph.D., Director

TRACE ORGANICS LABORATORY  
VOLATILE ORGANICS ANALYSIS

BOTTLE NUMBER EMWT W-3

Dorchester  
Name of County

SOURCE OF SAMPLE EASTERN MIDDLEWOOD COLLECTOR Hof

SAMPLE TYPE: \_\_\_\_\_ DISTRIBUTION \_\_\_\_\_ SOURCE \_\_\_\_\_ OTHER \_\_\_\_\_  
(Specify)

Community \_\_\_\_\_ noncommunity \_\_\_\_\_ private \_\_\_\_\_

Observation well  stream \_\_\_\_\_ tidal waters \_\_\_\_\_

Industrial effluent \_\_\_\_\_ STP sampling station \_\_\_\_\_ STP effluent \_\_\_\_\_

Chlorinated \_\_\_\_\_ preserved with thiosulfate \_\_\_\_\_

Reason for submitting sample: Trihalomethane Survey \_\_\_\_\_

Suspected Industrial Chemical Contamination \_\_\_\_\_

Suspected Petroleum (gasoline, etc.) Contamination \_\_\_\_\_

Other (Specify) \_\_\_\_\_

REMARKS: Hof 12/8/87 - 1709 R 2610

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
										W3	12	08	87					
TRANS TYPE			PLANT NO				SAMPLING STATION				DATE COLLECTED				CAPD NO			

20	21	22	23	24	25	26
FIELD RESID. CHLORINE-FREE			TOTAL			

Purgeable Halocarbons (EPA 816)

Purgeable Aromatics

Chloromethane	<1	trans-1,3-Dichloropropene	<1	Benzene	<1
Bromomethane		Trichloroethene		Toluene	
Dichlorodifluoromethane		Dibromochloromethane		Ethylbenzene	
Vinyl chloride		1,1,2-Trichloroethane		Total Xylenes	<2
Chloroethane		cis-1,3-Dichloropropene		Total Purgeable Hydrocarbons	
Methylene chloride		2-Chloroethylvinylether		Tetrahydrofuran	N.D.
Trichlorofluoromethane		Bromoform		(2-Butanone) (MEK)	
1,1-Dichloroethene		1,1,1,2-Tetrachloroethane		Methylisobutylketone (MIBK)	
1,1-Dichloroethane		Tetrachloroethene		Acrolein	
trans-1,2-Dichloroethene		Chlorobenzene		Acrylonitrile	
Chloroform		Total Trihalomethanes			
1,2-Dichloroethane		Other Purgeable Organics: N.D.			
1,1,1-Trichloroethane					
Carbon Tetrachloride					
Bromodichloromethane					
1,2-Dichloropropane					

AR100555

Results reported in micrograms per liter (parts per billion)

DATE RECEIVED DEC 9 1987 DATE REPORTED DEC 17 1987 CHEMIST Will LAB. NO. 882654

Priority ASAP

HAZARDOUS WASTE LABORATORY  
General Inorganic Analysis Report Form

Lab No. 870847

Collector HUFER 9/3/87  
Name/Time/Date

Sample Source EASTERN MD. WOOD TREATMENT

Sample ID no. EW W-3

Preservative Used NONE

Sample Alert NONE

Specify Program:

PERM:

NEDES:

OTHER:

Chain of Custody Sample Possession

From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date
From:	Name/Time/Date	To:	Name/Time/Date

<input checked="" type="checkbox"/> pH	<u>5.4</u>	<input checked="" type="checkbox"/> Chloride	<u>29</u>
<input checked="" type="checkbox"/> Conductivity, $\mu\text{mhos/cm}$	<u>19.7</u> @25°C	<input type="checkbox"/> Fluoride	
<input checked="" type="checkbox"/> Turbidity	<u>98</u> NTU	<input type="checkbox"/> Iodide	
<input type="checkbox"/> Color		<input type="checkbox"/> Cyanide, total	
<input checked="" type="checkbox"/> Residue non-filterable	<u>146</u> ppm	<input type="checkbox"/> Cyanide, reactive	
<input checked="" type="checkbox"/> Residue filterable	<u>168</u> ppm	<input type="checkbox"/> Cyanide, available to chloramination	
<input type="checkbox"/> Residue, total		<input type="checkbox"/> Phenol, total	
<input type="checkbox"/> Residue volatile		<input type="checkbox"/> Acidity, total	
<input type="checkbox"/> Specific gravity	@25°C	<input checked="" type="checkbox"/> Alkalinity, total	<u>21</u>
<input type="checkbox"/> Free HCl's test		<input checked="" type="checkbox"/> Hardness, total	<u>18</u>
<input type="checkbox"/> Corrosivity	pH	<input type="checkbox"/> Carbon Dioxide	
<input type="checkbox"/> Ignitability	°C	<input type="checkbox"/> Methylene Blue Active Substance	
<input type="checkbox"/> Oil and Grease	ppm	<input checked="" type="checkbox"/> Chlorine, total	<u>60.44</u>
<input type="checkbox"/> Ammonia	ppm-N	<input type="checkbox"/> Chlorine, free	
<input type="checkbox"/> Clean Nitrogen	ppm-N	<input type="checkbox"/> Dissolved oxygen	
<input checked="" type="checkbox"/> Nitrite	ppm-N	<input type="checkbox"/> Biochemical oxygen demand	
<input checked="" type="checkbox"/> Nitrate plus Nitrite	ppm-N	<input type="checkbox"/> Nitrogen oxygen demand	
<input type="checkbox"/> Phosphate, ortho	ppm-P	<input checked="" type="checkbox"/> Chemical oxygen demand	
<input type="checkbox"/> Phosphate, total	ppm-P	<input type="checkbox"/> Organic carbon, total	
<input checked="" type="checkbox"/> Sulfate	<u>38</u> ppm-SO <sub>4</sub>	<input type="checkbox"/> Inorganic carbon	
<input type="checkbox"/> Sulfide	ppm-SO <sub>3</sub>	<input type="checkbox"/> Tarwa, lignin	
<input type="checkbox"/> Sulfite	ppm-S	<input type="checkbox"/> Salinity	
<input type="checkbox"/> Sulfite, reactive	ppm-S		
<input type="checkbox"/> Bromide	ppm-Br		

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