



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 251



251 1

File:
C.G. 541. 460. D**received**
6/13/97

251

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
MEMPHIS ENVIRONMENTAL FIELD OFFICE
SUITE E-845, PERIMETER PARK
2510 MT. MORIAH
MEMPHIS, TENNESSEE 38115-1520

June 13, 1997

Commander
Defense Distribution Depot Memphis
ATTN.: DDMT-DE (Mr. Glenn Kaden)
2163 Airways Blvd.
Memphis, Tennessee 38114-5210

RE: Results of TDSF split samples at Defense Depot Memphis, Tennessee
TDEC/DSF #79-736, cc 82

Dear Mr. Kaden:

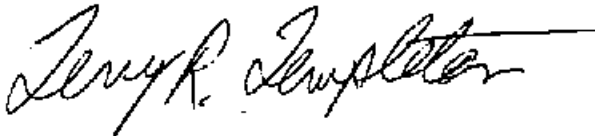
The Tennessee Division of Superfund, Memphis Field Office (MFO), on behalf of the Tennessee Department of Environment and Conservation (TDEC/DSF), collected split samples at selected DDMT locations. Results from these samples are enclosed for your review. Four (4) groundwater and seven (7) soil samples have been collected to date. Please transmit these results to the appropriate person(s) or contractor for inclusion in future reports, including the Final Remedial Investigation/Feasibility Study report.

The following list provides the TDEC/DSF sample number and date collected for the enclosed sample results.

<u>SAMPLE ID</u>	<u>DATE COLLECTED</u>	<u>MATRIX</u>
DD-GW-01	1/15/96	groundwater
DD-GW-02	2/12/96	groundwater
DD-GW-03	2/12/96	groundwater
DD-GW-04	2/14/96	groundwater
DD-SL-01	12/16/96	soil
DD-SL-02	1/21/97	soil
DD-SL-03	1/21/97	soil
DD-SL-04	1/21/97	soil
DD-SL-05	1/22/97	soil
DD-SL-06	1/22/97	soil
DD-SL-07	1/23/97	soil

Should you have any questions concerning these results please don't hesitate to call me at (901) 368-7957.

Very truly yours,



Terry R. Templeton, P.G.
Project Manager
TDEC/DSF-MFO

Enclosure

- c: TDEC/DSF, NCO - file (with enclosure)
TDEC/DSF, MFO - file (without enclosure-originals in file)
Dann Spariosu (with enclosure)
United States Environmental Protection Agency
Region 4, Waste Management Division
100 Alabama Street, SW
Atlanta, GA 30303

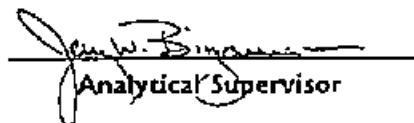
STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES

630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300

SENT HWM - PA/SI, MFO
TO: SUITE E-645, PERIMETER PARK
2510 MOUNT MORIAH
MEMPHIS, TN 38115
TERRY R. TEMPLETON
(901)543-6695

Lab ID: 9601076
Sampling Agency: HWM_11_MFO
Billing Code: 327.38-11

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Definition of Data Qualifiers

- U- Analyte requested but not detected
- J- Estimated value--result is less than sample quantitation limit but greater than zero
- B- Analyte in blank as well as sample
- E- Analyte concentration exceeds the calibration range of instrument
- N- Uncertainty in result other than "J" flag
- X,Y,Z- Other flags used to define results as needed

Printed: January 22, 1996

Site No./ID: 79-736/DDMT
 Sample ID: WELL "O"/MW-40
 Field No.: DD-GW-01
 Collected: 01/15/96 10:55:00 By TRT
 County: 79
 Matrix: WATER

Lab Number: 9601076-01B
 Branch Lab No.: J6010055
 Received: 01/18/96 08:30:00 By LJE
 Sampling Agency: HWM_11_MFO
 Billing Code: 327.38-11

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHO
VOLATILES-SW-846 WATERS						8260A
ACETONE	U	PPB	5.0	01/19/96	HMG	
BENZENE	U	PPB	0.50	01/19/96	HMG	
BROMOBENZENE	U	PPB	0.50	01/19/96	HMG	
BROMOCHLOROMETHANE	U	PPB	0.50	01/19/96	HMG	
BROMODICHLOROMETHANE	U	PPB	0.50	01/19/96	HMG	
BROMOFORM	U	PPB	0.50	01/19/96	HMG	
BROMOMETHANE	U	PPB	1.0	01/19/96	HMG	
2-BUTANONE (MEK)	U	PPB	5.0	01/19/96	HMG	
CARBON TETRACHLORIDE	U	PPB	0.50	01/19/96	HMG	
CHLOROBENZENE	1.2	PPB	0.50	01/19/96	HMG	
CHLOROETHANE	U	PPB	1.0	01/19/96	HMG	
CHLOROFORM	U	PPB	0.50	01/19/96	HMG	
CHLOROMETHANE	U	PPB	1.0	01/19/96	HMG	
DIBROMOCHLOROMETHANE	U	PPB	0.50	01/19/96	HMG	
DIBROMOMETHANE	U	PPB	0.50	01/19/96	HMG	
1,2-DICHLOROBENZENE	U	PPB	0.50	01/19/96	HMG	
1,3-DICHLOROBENZENE	U	PPB	0.50	01/19/96	HMG	
1,4-DICHLOROBENZENE	U	PPB	0.50	01/19/96	HMG	
DICHLORODIFLUOROMETHANE	U	PPB	1.0	01/19/96	HMG	
1,1-DICHLOROETHANE	0.9	PPB	0.50	01/19/96	HMG	
1,2-DICHLOROETHANE	U	PPB	0.50	01/19/96	HMG	
1,1-DICHLOROETHENE	0.5	PPB	0.50	01/19/96	HMG	
CIS-1,2-DICHLOROETHENE	10.2	PPB	0.50	01/19/96	HMG	
TRANS-1,2-DICHLOROETHENE	U	PPB	0.50	01/19/96	HMG	
1,2-DICHLOROPROPANE	U	PPB	0.50	01/19/96	HMG	
CIS-1,3-DICHLOROPROPENE	U	PPB	0.50	01/19/96	HMG	
TRANS-1,3-DICHLOROPROPENE	U	PPB	0.50	01/19/96	HMG	
ETHYLBENZENE	U	PPB	0.50	01/19/96	HMG	
METHYLENE CHLORIDE	0.5	PPB	0.50	01/19/96	HMG	
4-METHYL-2-PENTANONE (MIBK)	U	PPB	5.0	01/19/96	HMG	
STYRENE	U	PPB	0.50	01/19/96	HMG	
1,1,1,2-TETRACHLOROETHANE	U	PPB	0.50	01/19/96	HMG	
1,1,2,2-TETRACHLOROETHANE	U	PPB	0.50	01/19/96	HMG	
TETRACHLOROETHENE	U	PPB	0.50	01/19/96	HMG	
TOLUENE	U	PPB	0.50	01/19/96	HMG	
1,2,4-TRICHLOROBENZENE	U	PPB	0.50	01/19/96	HMG	
1,1,1-TRICHLOROETHANE	U	PPB	0.50	01/19/96	HMG	
1,1,2-TRICHLOROETHANE	U	PPB	0.50	01/19/96	HMG	
TRICHLOROETHENE	U	PPB	0.50	01/19/96	HMG	
TRICHLORODIFLUOROMETHANE	U	PPB	1.0	01/19/96	HMG	
VINYL CHLORIDE	U	PPB	1.0	01/19/96	HMG	
p-XYLENE	U	PPB	0.50	01/19/96	HMG	
m & p XYLENE	U	PPB	0.50	01/19/96	HMG	

*-Water, uG/L; Sediment, uG/kg

Printed: January 22, 1996

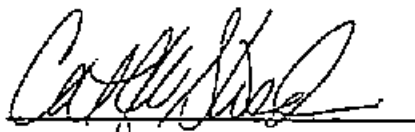
STATE OF TENNESSEE
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TO: SUITE E-645, PERIMETER PARK
2510 MOUNT MORIAH
MEMPHIS, TN 38115
TERRY R. TEMPLETON
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Lab ID: 9601076
Sampling Agency: HWM_11_MFO
Billing Code: 327.38-11

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Analytical Supervisor**Definition of Data Qualifiers**

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Printed: January 31, 1996

Site No./ID: 79-736/DDMT
 Sample ID: WELL "O"/MW-40
 Field No.: DD-GW-01
 Collected: 01/15/96 10:55:00 By TRT
 County: 79
 Matrix: WATER

Lab Number: 9601076-01A
 Branch Lab No.: J6010055
 Received: 01/18/96 08:30:00 By LJB
 Sampling Agency: HWM 11 MFO
 Billing Code: 327.38-11

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
EXTRACTABLES - WATER						MS
BUTYL BENZYL PHTHALATE	U	PPB	2.0	01/23/96	MAC	
BIS(2-ETHYLHEXYL)PHTHALATE	? B 14.2	PPB	0	01/23/96	MAC	
DI-n-BUTYL PHTHALATE	? J 0.79	PPB	2.0	01/23/96	MAC	
DI-n-OCTYL PHTHALATE	U	PPB	5.0	01/23/96	MAC	
DIETHYL PHTHALATE	U	PPB	0.50	01/23/96	MAC	
DIMETHYL PHTHALATE	U	PPB	0.50	01/23/96	MAC	
n-NITROSODIMETHYLAMINE	U	PPB	2.0	01/23/96	MAC	
n-NITROSODIPHENYLAMINE	U	PPB	1.0	01/23/96	MAC	
n-NITROSO-di-n-PROPYLAMINE	U	PPB	2.0	01/23/96	MAC	
ISOPHORONE	U	PPB	0.50	01/23/96	MAC	
NITROBENZENE	U	PPB	2.0	01/23/96	MAC	
2,4-DINITROTOLUENE	U	PPB	5.0	01/23/96	MAC	
2,6-DINITROTOLUENE	U	PPB	5.0	01/23/96	MAC	
ACENAPHTHENE	U	PPB	0.50	01/23/96	MAC	
ACENAPHTHYLENE	U	PPB	0.50	01/23/96	MAC	
ANTHRACENE	U	PPB	0.50	01/23/96	MAC	
BENZO(a)ANTHRACENE	U	PPB	0.50	01/23/96	MAC	
BENZO(a)PYRENE	U	PPB	0.50	01/23/96	MAC	
BENZO(b)FLUORANTHENE	U	PPB	0.50	01/23/96	MAC	
BENZO(g,h,i)PERYLENE	U	PPB	2.0	01/23/96	MAC	
BENZO(k)FLUORANTHENE	U	PPB	0.50	01/23/96	MAC	
DIBENZO(a,h)ANTHRACENE	U	PPB	2.0	01/23/96	MAC	
FLUORANTHENE	U	PPB	0.50	01/23/96	MAC	
FLUORENE	U	PPB	0.50	01/23/96	MAC	
INDENO(1,2,3-cd)PYRENE	U	PPB	2.0	01/23/96	MAC	
NAPHTHALENE	U	PPB	0.50	01/23/96	MAC	
PHENANTHRENE	U	PPB	0.50	01/23/96	MAC	
PYRENE	U	PPB	0.50	01/23/96	MAC	
CHRYSENE	U	PPB	0.50	01/23/96	MAC	
BIS(2-CHLOROETHYL)ETHER	U	PPB	0.50	01/23/96	MAC	
BIS(2-CHLOROETHOXY)METHANE	U	PPB	0.50	01/23/96	MAC	
BIS(2-CHLOROISOPROPYL)ETHER	U	PPB	1.0	01/23/96	MAC	
4-BROMOPHENYLPHENYL ETHER	U	PPB	2.0	01/23/96	MAC	
4-CHLOROPHENYLPHENYL ETHER	U	PPB	1.0	01/23/96	MAC	
HEXACHLOROXYCLOPENTADIENE	U	PPB	5.0	01/23/96	MAC	
HEXACHLOROBUTADIENE	U	PPB	1.0	01/23/96	MAC	
HEXACHLOROBENZENE	U	PPB	1.0	01/23/96	MAC	
HEXACHLOROETHANE	U	PPB	1.0	01/23/96	MAC	
1,2,4-TRICHLOROBENZENE	U	PPB	0.50	01/23/96	MAC	
2-CHLORONAPHTHALENE	U	PPB	0.50	01/23/96	MAC	
4-CHLORO-3-METHYLPHENOL	U	PPB	5.0	01/23/96	MAC	
2-CHLOROPHENOL	U	PPB	1.0	01/23/96	MAC	
2,4-DICHLOROPHENOL	U	PPB	2.0	01/23/96	MAC	
2,4-DIMETHYLPHENOL	U	PPB	1.0	01/23/96	MAC	
2,4-DINITROPHENOL	U	PPB	10	01/23/96	MAC	
2-METHYL-4,6-DINITROPHENOL	U	PPB	10	01/23/96	MAC	
2-NITROPHENOL	U	PPB	5.0	01/23/96	MAC	
4-NITROPHENOL	U	PPB	5.0	01/23/96	MAC	
PENTACHLOROPHENOL	U	PPB	5.0	01/23/96	MAC	
PHENOL	U	PPB	0.50	01/23/96	MAC	
2,4,6-TRICHLOROPHENOL	U	PPB	5.0	01/23/96	MAC	
PESTICIDES/PCBs WATER						8081
HEXACHLOROBENZENE	U	PPB	0.02	01/23/96	MP	
ALDRIN	U	PPB	0.04	01/23/96	MP	
alpha-BHC	U	PPB	0.05	01/23/96	MP	
beta-BHC	U	PPB	0.07	01/23/96	MP	
delta-BHC	U	PPB	0.22	01/23/96	MP	
gamma-BHC (LINDANE)	U	PPB	0.05	01/23/96	MP	
alpha-CHLORDANE	U	PPB	0.04	01/23/96	MP	
gamma-CHLORDANE	U	PPB	0.05	01/23/96	MP	
TECHNICAL CHLORDANE	U	PPB	0.4	01/23/96	MP	
p,p-DDD	U	PPB	0.08	01/23/96	MP	
p,p-DDE	U	PPB	0.04	01/23/96	MP	
p,p-DDT	U	PPB	0.07	01/23/96	MP	
DIELDRIN	U	PPB	0.04	01/23/96	MP	
ENDOSULFAN I	U	PPB	0.04	01/23/96	MP	
ENDOSULFAN II	U	PPB	0.17	01/23/96	MP	
ENDOSULFAN SULFATE	U	PPB	0.08	01/23/96	MP	
ENDRIN	U	PPB	0.14	01/23/96	MP	
ENDRIN ALBUYNE	U	PPB	0.07	01/23/96	MP	

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Site No./ID: 79-736/DDMT
 Sample ID: WELL "O"/MN-40
 Field No.: DD-GW-01
 Collected: 01/15/96 10:55:00 By TRT
 County: 79
 Matrix: WATER

Lab Number: 9601076-01A
 Branch Lab No.: J6010055
 Received: 01/18/96 08:30:00 By LJE
 Sampling Agency: HWM 11 MFO
 Billing Code: 327.38-11

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
PESTICIDES/PCBs WATER						8081
HEPTACHLOR	U	PPB	0.02	01/23/96	MP	
HEPTACHLOR EPOXIDE	U	PPB	0.03	01/23/96	MP	
TOXAPHENE	U	PPB	1.5	01/23/96	MP	
METHOXYCHLOR	U	PPB	0.18	01/23/96	MP	
PCB 1016/1242	U	PPB	3.1	01/23/96	MP	
PCB 1221	U	PPB	3.4	01/23/96	MP	
PCB 1232	U	PPB	3.8	01/23/96	MP	
PCB 1248	U	PPB	1.3	01/23/96	MP	
PCB 1254	U	PPB	1.3	01/23/96	MP	
PCB 1260	U	PPB	1.2	01/23/96	MP	
PCB 1262	U	PPB	1.2	01/23/96	MP	

*-Water, uG/L; Sediment, uG/KG

Printed: January 31, 1996

STATE OF TENNESSEE - ENVIRONMENTAL LABORATORIES

Sample Source 79-736 / DDMT
 ID Site No. 410000 "0"
 County AL Field No. 00-644-021
 Site No. 00-644 Depth 1 ft
 Collected: 08/15/96 Time 10:55 By 282
 Contact: Henry
 Signature of Sampler [Signature]
 Sent Reporting 282
 Date Rec'd 08/15/96
 Location Memphis, TN

Sampling Agency
☐ APC ☐ DOT
☐ DWS ☐ GW
☐ SWM ☐ UST
☒ EEP ☐ PASI
☒ SF ☐ WPC
 other (specify):

Sample Type
☒ Water
☐ Wastewater
☐ Air
 Other:

Sample Priority
☒ Emergency
☐ Legal
☐ Routine
☐ Ambient

Date Priority needed:
03-15-96

Billing Code (required)
327.38-0

Field Comments: MW-AD

For lab use only
 Laboratory Number 96-01-0055
 Date received 96-01-16
 Time received 1400 by HC
 Date reported 2-14-96 by RM
 Reviewed by [Signature]
 Reviewed by

INORGANIC ANALYSIS, LIQUIDS

Code	Field Tests Only	Units	Value
00094	conductivity	umho	
00300	dissolved oxygen	mg/L	
00061	flow	CFS	
00410	pH	Units	
00545	residue, settleable	ml/L	
00077	Secchi disc	M	
00070	temperature	°C	
00160	chlorine, residual	mg/L	
Microbiology			
01616	coliform, fecal	col./100 mL	
31501	coliform, total	col./100 mL	
31679	strep, fecal	col./100 mL	
Physical Characteristics			
00081	color, apparent	PCU	
00080	color, true	PCU	
	flash point	°C	
00403	pH, lab	Units	
00515	residue, dissolved	mg/L	
00545	residue, settleable	ml/L	
00530	residue, suspended	mg/L	
00500	residue, total	mg/L	
00095	specific cond. 25°C	umho	
00070	turbidity	NTU	
Organics			
00310	BOD, 5-day, 20°C	mg/L	
00335	COD (flow)	mg/L	
00340	COD (high)	mg/L	
	formaldehyde	ug	

Code	Organics	Units	Value
38260	MBAS	mg/L	
00550	oil and grease	mg/L	
	Hydrocarbons, total	mg/L	
32730	phenols	ug/L	
00690	TOC	mg/L	
Non-metallic Inorganics			
70508	acidity, as CaCO ₃	mg/L	
00410	alkalinity, total, as CaCO ₃	mg/L	
00415	alkalinity, phen, as CaCO ₃	mg/L	
01022	boron	ug/L	
00940	chloride	mg/L	
00060	chlorine, residual	mg/L	
01052	chromium, hexavalent	ug/L	
00720	cyanide	mg/L	
00290	dissolved oxygen	mg/L	
00950	fluoride	mg/L	
00900	hardness, total, as CaCO ₃	mg/L	
82395	hardness, Ca, as CaCO ₃	mg/L	
00635	nitrogen, total kjeldahl	mg/L	
00610	nitrogen, ammonia	mg/L	
00605	nitrogen, total organic	mg/L	
00630	nitrogen, NO ₃ & NO ₂	mg/L	
00615	nitrogen, nitrite	mg/L	
00620	nitrogen, nitrate	mg/L	
70507	orthophosphate, total	mg/L	
00666	phosphate, dissolved	mg/L	
00665	phosphate, total	mg/L	
00955	silica	mg/L	
00945	sulfate	mg/L	
00745	sulfide, total	mg/L	

Code	Metals	Units	Value
01105	aluminum, Al	ug/L	393
01097	antimony, Sb	ug/L	<1
01002	arsenic, As	ug/L	1
01007	barium, Ba	ug/L	128
01012	beryllium, Be	ug/L	<3
01027	cadmium, Cd	ug/L	<1
00910	calcium, Ca	mg/L	48.2
01034	chromium, Cr	ug/L	<10
01037	cobalt, Co	ug/L	<15
01042	copper, Cu	ug/L	<5
01045	iron, Fe	ug/L	1370
01051	lead, Pb	ug/L	1
00927	magnesium, Mg	mg/L	26.5
01055	manganese, Mn	ug/L	1070 DL
01067	mercury, Hg	ug/L	20.2
01067	nickel, Ni	ug/L	5
00937	potassium, K	mg/L	5.05
01147	selenium, Se	ug/L	<5
01077	silver, Ag	ug/L	1
00929	sodium, Na	mg/L	1070 DL
01059	thallium, Tl	ug/L	<2
01102	tin, Sn	ug/L	
01152	titanium, Ti	ug/L	
01092	zinc, Zn	ug/L	37
	VANADIA	ug/L	<1

Lab comments: Manganese, Mn 1080 ug/L
Single was detected twice. This is the best result.
However, the precision was out of limit (Single was <1 ug/L and
duplicate was 2 ug/L) (2)
 * please check tests desired

RDA NO. 1527

1.1. Feb 17

PH-3012 LAD (REV 8/92)

STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES**630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300**

SENT **HWM-STATE SUPERFUND, MFO**
TO: **SUITE E-645, PERIMETER PARK**
2510 MOUNT MORIAH
MEMPHIS, TN 38115
TERRY TEMPLETON
(901)543-6695

Lab ID: 9602044
Sampling Agency: **HWM_05_MFO**
Billing Code: 327.38-05

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Definition of Data Qualifiers

- U- Analyte requested but not detected
- J- Estimated value--result is less than sample quantitation limit but greater than zero
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- X,Y,Z- Other flags used to define results as needed

Printed: February 16, 1996

251 10

ID: 79-731/DDMT

MW-4

DD-GW-02

Collected: 02/12/96 11:05:00 By T T

County: 79

Matrix: WATER

Lab Number: 9602044-01A

Branch Lab No.:

Received: 02/14/96 08:30:00 By LJB

Sampling Agency: HWM 05 MFO

Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
VOLATILES-SW-846 WATERS						8260A
ACETONE	U	PPB	5.0	02/14/96	CS	
BENZENE	U	PPB	0.50	02/14/96	CS	
BROMOBENZENE	U	PPB	0.50	02/14/96	CS	
BROMOCHLOROMETHANE	U	PPB	0.50	02/14/96	CS	
BROMODICHLOROMETHANE	U	PPB	0.50	02/14/96	CS	
BROMOFORM	U	PPB	0.50	02/14/96	CS	
BROMOMETHANE	U	PPB	1.0	02/14/96	CS	
2-BUTANONE (MEK)	U	PPB	5.0	02/14/96	CS	
CARBON TETRACHLORIDE	U	PPB	0.50	02/14/96	CS	
CHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
CHLOROETHANE	U	PPB	1.0	02/14/96	CS	
CHLOROFORM	U	PPB	0.50	02/14/96	CS	
CHLOROMETHANE	U	PPB	1.0	02/14/96	CS	
DIBROMOCHLOROMETHANE	U	PPB	0.50	02/14/96	CS	
DISBROMOMETHANE	U	PPB	0.50	02/14/96	CS	
1,2-DICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
1,3-DICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
1,4-DICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
DICHLORODIFLUOROMETHANE	U	PPB	1.0	02/14/96	CS	
1,1-DICHLOROETHANE	U	PPB	0.50	02/14/96	CS	
1,2-DICHLOROETHANE	U	PPB	0.50	02/14/96	CS	
1,1-DICHLOROETHENE	U	PPB	0.50	02/14/96	CS	
CIS-1,2-DICHLOROETHENE	U	PPB	0.50	02/14/96	CS	
TRANS-1,2-DICHLOROETHENE	U	PPB	0.50	02/14/96	CS	
1,2-DICHLOROPROPANE	U	PPB	0.50	02/14/96	CS	
CIS-1,3-DICHLOROPROPENE	U	PPB	0.50	02/14/96	CS	
TRANS-1,3-DICHLOROPROPENE	U	PPB	0.50	02/14/96	CS	
ETHYLBENZENE	U	PPB	0.50	02/14/96	CS	
METHYLENE CHLORIDE	U	PPB	0.50	02/14/96	CS	
4-METHYL-2-PENTANONE (MIBK)	U	PPB	5.0	02/14/96	CS	
STYRENE	U	PPB	0.50	02/14/96	CS	
1,1,1,2-TETRACHLOROETHANE	U	PPB	0.50	02/14/96	CS	
1,1,2,2-TETRACHLOROETHANE	U	PPB	0.50	02/14/96	CS	
TETRACHLOROETHENE	12 ✓	PPB	0.50	02/14/96	CS	
TOLUENE	U	PPB	0.50	02/14/96	CS	
1,2,4-TRICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
1,1,1-TRICHLOROETHANE	U	PPB	0.50	02/14/96	CS	
1,1,2-TRICHLOROETHANE	U	PPB	0.50	02/14/96	CS	
TRICHLOROETHENE	0.4	PPB	0.50	02/14/96	CS	
TRICHLOROFLUOROMETHANE	U	PPB	1.0	02/14/96	CS	
VINYL CHLORIDE	U	PPB	1.0	02/14/96	CS	
o-XYLENE	U	PPB	0.50	02/14/96	CS	
m & p XYLENE	U	PPB	0.50	02/14/96	CS	

* -Water, uG/L; Sediment, uG/kg

Printed: February 16, 1996

STATE OF TENNESSEE - ENVIRONMENTAL LABORATORIES

Sample Source 79-736/DONT
 I.D./Site No. 1111 Field No. DD-64-012
 County Shelby Depth 11A
 Stream Mile 11A Time 11:05 By DD
 Collected: Date 11/19/96
 Contact Hazard unknown
 Signature of Sampler Shelby R. Mitchell
 Send Report to T.R. Hepler
DEC 1997
Memphis, TN

Sampling Agency
 APC DOT
 DWS GW
 SWM UST
 EBP PASI
 SP WPC
 other (specify):
cc 105
 Billing Code (required)
327.38

Sample Type
☒ Water
☐ Wastewater
☐ Air
 Other _____

Sample Priority
☐ Emergency
☒ Legal
☐ Routine
☐ Ambient
 Date Priority needed:
11/19/96
 Field Comments:
11A 105

INORGANIC ANALYSIS, LIQUIDS

For lab use only
 Laboratory Number 16.02.0033
 Date received 9.6.03.13
 Time received 1310 by SLC
 Date reported 3-14-96 by RN
 Reviewed by R. Mitchell
 Reviewed by _____

Code	* Field Tests Only	Units	Value	Code	* Value	Units	Value	Code	* Value	Units	Value	Code	* Value	Units	Value	Code	* Value	Units	Value
00094	conductivity	umho		38260	MBAS	mg/L		01097	Aluminum, Al	ug/L		01097	Antimony, Sb	ug/L		01097	Artenic, As	ug/L	
00300	dissolved oxygen	mg/L		00550	oil and grease	mg/L		01002	Barium, Ba	ug/L		01002	Beryllium, Be	ug/L		01002	Cadmium, Cd	ug/L	
00061	flow	CTS		32730	phenols	ug/L		01007	Calcium, Ca	mg/L		01007	Chromium, Cr	ug/L		01007	Cobalt, Co	ug/L	
00400	pH	Units		00690	TOC	mg/L		01012	Copper, Cu	ug/L		01012	Iron, Fe	ug/L		01012	Lead, Pb	ug/L	
00545	residue, settleable	ml/L						01027	Magnesium, Mg	mg/L		01027	Manganese, Mn	ug/L		01027	Mercury, Hg	ug/L	
00077	Secchi disc	M						00910	Nickel, Ni	ug/L		00910	Potassium, K	mg/L		00910	Selenium, Se	ug/L	
00010	temperature	°C						01034	Silver, Ag	ug/L		01034	Sodium, Na	mg/L		01034	Thallium, Tl	ug/L	
00060	chlorine, residual	mg/L						01037	Titanium, Ti	ug/L		01037	Zinc, Zn	ug/L		01037			
								01042	Non-metallic Inorganics			01042				01042			
									acidity, as CaCO ₃	mg/L									
									alkalinity, total, as CaCO ₃	mg/L									
									alkalinity, phen., as CaCO ₃	mg/L									
									boron	ug/L									
									chloride	mg/L									
									chlorine, residual	mg/L									
									chromium, hexavalent	ug/L									
									cyanide	mg/L									
									dissolved oxygen	mg/L									
									fluoride	mg/L									
									hardness, total, as CaCO ₃	mg/L									
									hardness, Ca, as CaCO ₃	mg/L									
									nitrogen, total kjeldahl	mg/L									
									nitrogen, ammonia	mg/L									
									nitrogen, total organic	mg/L									
									nitrogen, NO ₃ & NO ₂	mg/L									
									nitrogen, nitrite	mg/L									
									nitrogen, nitrate	mg/L									
									orthophosphate, total	mg/L									
									phosphate, dissolved	mg/L									
									phosphate, total	mg/L									
									silica	mg/L									
									sulfate	mg/L									
									sulfide, total	mg/L									

Lab comments: 01054 Chromium, Cr ug/L = 157 234
 * Reported twice. Due to high solid content, the precision was
 not of Point (Limit was 1, and the difference between Sample
 and Duplicate was 3). PL RDA NO. 1527 and 11-
 * please check tests desired
 some is above 100 ug/L
 equal to 170 ug/L

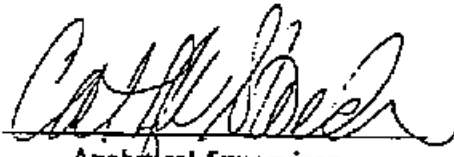
STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES

630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300

SENT HWM-STATE SUPERFUND, MFO
TO: SUITE E-645, PERIMETER PARK
2510 MOUNT MORIAH
MEMPHIS, TN 38115
TERRY TEMPLETON
(901)543-6695

Lab ID: 9602044
Sampling Agency: HWM_05_MFO
Billing Code: 327.38-05

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor**Definition of Data Qualifiers**

- Analyte requested but not detected
- Estimated value--result is less than sample quantitation limit but greater than zero
- Analyte in blank as well as sample
- Analyte concentration exceeds the calibration range of instrument
- Uncertainty in result other than "J" flag
- ,Y,Z- Other flags used to define results as needed

Printed: March 8, 1996

Site No./ID: 79-731/DDMT
 Sample ID: MW-4
 Field No.: DD-GW-02
 Collected: 02/12/96 11:05:00 By T T
 County: 79
 Matrix: WATER

Lab Number: 9602044-01B
 Branch Lab No.:
 Received: 02/14/96 08:30:00 By LJB
 Sampling Agency: HWM_05_MFO
 Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
						MS
EXTRACTABLES - WATER	ND	4.51	PPB	02/26/96	MAC	
BUTYL BENZYL PHTHALATE	B	6.98	PPB	02/26/96	MAC	
BIS(2-ETHYLHEXYL)PHTHALATE		14.1	PPB	02/26/96	MAC	
DI-n-BUTYL PHTHALATE		U	PPB	02/26/96	MAC	
DI-n-OCTYL PHTHALATE		U	PPB	02/26/96	MAC	
DIETHYL PHTHALATE		U	PPB	02/26/96	MAC	
DIMETHYL PHTHALATE		U	PPB	02/26/96	MAC	
n-NITROSODIMETHYLAMINE		U	PPB	02/26/96	MAC	
n-NITROSODIPHENYLAMINE		U	PPB	02/26/96	MAC	
n-NITROSO-di-n-PROPYLAMINE		U	PPB	02/26/96	MAC	
ISOPHORONE		U	PPB	02/26/96	MAC	
NITROBENZENE		U	PPB	02/26/96	MAC	
2,4-DINITROTOLUENE		U	PPB	02/26/96	MAC	
2,6-DINITROTOLUENE		U	PPB	02/26/96	MAC	
ACENAPTHENE		U	PPB	02/26/96	MAC	
ACENAPHTHYLENE		U	PPB	02/26/96	MAC	
ANTHRACENE		U	PPB	02/26/96	MAC	
BENZO(a)ANTHRACENE		U	PPB	02/26/96	MAC	
BENZO(a)PYRENE		U	PPB	02/26/96	MAC	
BENZO(b)FLUORANTHENE		U	PPB	02/26/96	MAC	
BENZO(ghi)PERYLENE		U	PPB	02/26/96	MAC	
BENZO(k)FLUORANTHENE		U	PPB	02/26/96	MAC	
DIBENZO(a,h)ANTHRACENE		U	PPB	02/26/96	MAC	
FLUORANTHENE		U	PPB	02/26/96	MAC	
FLUORENE		U	PPB	02/26/96	MAC	
INDENO(1,2,3-cd)PYRENE		U	PPB	02/26/96	MAC	
NAPHTHALENE		U	PPB	02/26/96	MAC	
PHENANTHRENE		U	PPB	02/26/96	MAC	
PYRENE		U	PPB	02/26/96	MAC	
CHRYSENE		U	PPB	02/26/96	MAC	
BIS(2-CHLOROETHYL)ETHER		U	PPB	02/26/96	MAC	
BIS(2-CHLOROETHOXY)METHANE		U	PPB	02/26/96	MAC	
BIS(2-CHLOROISOPROPYL)ETHER		U	PPB	02/26/96	MAC	
4-BROMOPHENYLPHENYL ETHER		U	PPB	02/26/96	MAC	
4-CHLOROPHENYLPHENYL ETHER		U	PPB	02/26/96	MAC	
HEXACHLOROCYCLOPENTADIENE		U	PPB	02/26/96	MAC	
HEXACHLOROBUTADIENE		U	PPB	02/26/96	MAC	
HEXACHLOROBENZENE		U	PPB	02/26/96	MAC	
HEXACHLOROETHANE		U	PPB	02/26/96	MAC	
1,2,4-TRICHLOROBENZENE		U	PPB	02/26/96	MAC	
2-CHLORONAPHTHALENE		U	PPB	02/26/96	MAC	
4-CHLORO-3-METHYLPHENOL		U	PPB	02/26/96	MAC	
2-CHLOROPHENOL		U	PPB	02/26/96	MAC	
2,4-DICHLOROPHENOL		U	PPB	02/26/96	MAC	
2,4-DIMETHYLPHENOL		U	PPB	02/26/96	MAC	
2,4-DINITROPHENOL		U	PPB	02/26/96	MAC	
2-METHYL-4,6-DINITROPHENOL		U	PPB	02/26/96	MAC	
2-NITROPHENOL		U	PPB	02/26/96	MAC	
4-NITROPHENOL		U	PPB	02/26/96	MAC	
PENTACHLOROPHENOL		U	PPB	02/26/96	MAC	
PHENOL		U	PPB	02/26/96	MAC	
2,4,6-TRICHLOROPHENOL		U	PPB	02/26/96	MAC	
PESTICIDES/PCBs WATER	U		PPB	02/22/96	AK	
HEXACHLOROBENZENE	U		PPB	02/22/96	AK	
ALDRIN	U		PPB	02/22/96	AK	
alpha-BHC	U		PPB	02/22/96	AK	
beta-BHC	U		PPB	02/22/96	AK	
delta-BHC	U		PPB	02/22/96	AK	
gamma-BHC (LINDANE)	U		PPB	02/22/96	AK	
alpha-CHLORDANE	U		PPB	02/22/96	AK	
gamma-CHLORDANE	U		PPB	02/22/96	AK	
TECHNICAL CHLORDANE	U		PPB	02/22/96	AK	
p,p-DDD	U		PPB	02/22/96	AK	
p,p-DDE	U		PPB	02/22/96	AK	
p,p-DDT	U		PPB	02/22/96	AK	
DIELDRIN	U		PPB	02/22/96	AK	
ENDOSULFAN I	U		PPB	02/22/96	AK	
ENDOSULFAN II	U		PPB	02/22/96	AK	
ENDOSULFAN SULFATE	U		PPB	02/22/96	AK	
ENDRIN	U		PPB	02/22/96	AK	

8081

251 14

Site No./ID: 79-731/DDMT
 Sample ID: MW-4
 Field No.: DD-GW-02
 Collected: 02/12/96 11:05:00 By T T
 County: 79
 Matrix: WATER

Lab Number: 9602044-01B
 Branch Lab No.:
 Received: 02/14/96 08:30:00 By LJB
 Sampling Agency: HWM 05 MFO
 Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
PESTICIDES/PCBs WATER						8081
HEPTACHLOR	U	PPB	0.02	02/22/96	AK	
HEPTACHLOR EPOXIDE	U	PPB	0.03	02/22/96	AK	
TOXAPHENE	U	PPB	1.4	02/22/96	AK	
METHOXYCHLOR	U	PPB	0.18	02/22/96	AK	
PCB 1016/1242	U	PPB	3.1	02/22/96	AK	
PCB 1221	U	PPB	3.5	02/22/96	AK	
PCB 1232	U	PPB	3.9	02/22/96	AK	
PCB 1248	U	PPB	2.6	02/22/96	AK	
PCB 1254	U	PPB	1.8	02/22/96	AK	
PCB 1260	U	PPB	1.2	02/22/96	AK	
PCB 1262	U	PPB	1.1	02/22/96	AK	

*-Water, uG/L; Sediment, uG/kg

Printed: March 8, 1996

Site No./ID: 79-731/DDMT
 Sample ID: MW-7
 Field No.: DD-GW-03
 Collected: 02/12/96 11:45:00 By T T
 County: 79
 Matrix: WATER

Lab Number: 9602044-02B
 Branch Lab No.:
 Received: 02/14/96 08:30:00 By LJB
 Sampling Agency: HWM 05 MFO
 Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
EXTRACTABLES - WATER						MS
BUTYL BENZYL PHTHALATE	U	PPB	2.0	02/26/96	MAC	
BIS(2-ETHYLHEXYL)PHTHALATE	J.B 2.06	PPB	5.0	02/26/96	MAC	
DI-n-BUTYL PHTHALATE	U	PPB	2.0	02/26/96	MAC	
DI-n-OCTYL PHTHALATE	U	PPB	5.0	02/26/96	MAC	
DIETHYL PHTHALATE	U	PPB	0.50	02/26/96	MAC	
DIMETHYL PHTHALATE	U	PPB	0.50	02/26/96	MAC	
n-NITROSODIMETHYLAMINE	U	PPB	2.0	02/26/96	MAC	
n-NITROSODIPHENYLAMINE	U	PPB	1.0	02/26/96	MAC	
n-NITROSO-di-n-PROPYLAMINE	U	PPB	2.0	02/26/96	MAC	
ISOPHORONE	U	PPB	0.50	02/26/96	MAC	
NITROBENZENE	U	PPB	2.0	02/26/96	MAC	
2,4-DINITROTOLUENE	U	PPB	5.0	02/26/96	MAC	
2,6-DINITROTOLUENE	U	PPB	5.0	02/26/96	MAC	
ACENAPTHENE	U	PPB	0.50	02/26/96	MAC	
ACENAPHTHYLENE	U	PPB	0.50	02/26/96	MAC	
ANTHRACENE	U	PPB	0.50	02/26/96	MAC	
BENZO(a)ANTHRACENE	U	PPB	0.50	02/26/96	MAC	
BENZO(a)PYRENE	U	PPB	0.50	02/26/96	MAC	
BENZO(b)FLUORANTHENE	U	PPB	0.50	02/26/96	MAC	
BENZO(ghi)PERYLENE	U	PPB	2.0	02/26/96	MAC	
BENZO(k)FLUORANTHENE	U	PPB	0.50	02/26/96	MAC	
DIBENZO(a,h)ANTHRACENE	U	PPB	2.0	02/26/96	MAC	
FLUORANTHENE	U	PPB	0.50	02/26/96	MAC	
FLUORENE	U	PPB	0.50	02/26/96	MAC	
INDENO(1,2,3-cd)PYRENE	U	PPB	2.0	02/26/96	MAC	
NAPHTHALENE	U	PPB	0.50	02/26/96	MAC	
PHENANTHRENE	U	PPB	0.50	02/26/96	MAC	
PYRENE	U	PPB	0.50	02/26/96	MAC	
CHRYSENE	U	PPB	0.50	02/26/96	MAC	
BIS(2-CHLOROETHYL)ETHER	U	PPB	0.50	02/26/96	MAC	
BIS(2-CHLOROETHOXYMETHANE	U	PPB	0.50	02/26/96	MAC	
BIS(2-CHLOROISOPROPYL)ETHER	U	PPB	1.0	02/26/96	MAC	
4-BROMOPHENYLPHENYL ETHER	U	PPB	2.0	02/26/96	MAC	
4-CHLOROPHENYLPHENYL ETHER	U	PPB	1.0	02/26/96	MAC	
HEXACHLOROCYCLOPENTADIENE	U	PPB	5.0	02/26/96	MAC	
HEXACHLOROBUTADIENE	U	PPB	1.0	02/26/96	MAC	
HEXACHLOROBENZENE	U	PPB	1.0	02/26/96	MAC	
HEXACHLOROETHANE	U	PPB	1.0	02/26/96	MAC	
1,2,4-TRICHLOROBENZENE	U	PPB	0.50	02/26/96	MAC	
2-CHLORONAPHTHALENE	U	PPB	0.50	02/26/96	MAC	
4-CHLORO-3-METHYLPHENOL	U	PPB	10	02/26/96	MAC	
2-CHLOROPHENOL	U	PPB	1.0	02/26/96	MAC	
2,4-DICHLOROPHENOL	U	PPB	2.0	02/26/96	MAC	
2,4-DIMETHYLPHENOL	U	PPB	1.0	02/26/96	MAC	
2,4-DINITROPHENOL	U	PPB	10	02/26/96	MAC	
2-METHYL-4,6-DINITROPHENOL	U	PPB	10	02/26/96	MAC	
2-NITROPHENOL	U	PPB	5.0	02/26/96	MAC	
4-NITROPHENOL	U	PPB	5.0	02/26/96	MAC	
PENTACHLOROPHENOL	U	PPB	5.0	02/26/96	MAC	
PHENOL	U	PPB	0.50	02/26/96	MAC	
2,4,6-TRICHLOROPHENOL	U	PPB	5.0	02/26/96	MAC	
PESTICIDES/PCBs WATER						8081
HEXACHLOROBENZENE	U	PPB	0.02	02/22/96	AK	
ALDRIN	U	PPB	0.02	02/22/96	AK	
alpha-BHC	U	PPB	0.02	02/22/96	AK	
beta-BHC	U	PPB	0.07	02/22/96	AK	
delta-BHC	U	PPB	0.05	02/22/96	AK	
gamma-BHC (LINDANE)	U	PPB	0.02	02/22/96	AK	
alpha-CHLORDANE	U	PPB	0.02	02/22/96	AK	
gamma-CHLORDANE	U	PPB	0.02	02/22/96	AK	
TECHNICAL CHLORDANE	U	PPB	0.3	02/22/96	AK	
p,p-DDD	U	PPB	0.04	02/22/96	AK	
p,p-DDE	U	PPB	0.04	02/22/96	AK	
p,p-DDT	U	PPB	0.03	02/22/96	AK	
DIELDRIN	U	PPB	0.01	02/22/96	AK	
ENDOSULFAN I	U	PPB	0.04	02/22/96	AK	
ENDOSULFAN II	U	PPB	0.04	02/22/96	AK	
ENDOSULFAN SULFATE	U	PPB	0.04	02/22/96	AK	
	U	PPB	0.03	02/22/96	AK	

Site No./ID: 79-731/DDMT
 Sample ID: MW-7
 Field No.: DD-GW-03
 Collected: 02/12/96 11:45:00 By T T
 County: 79
 Matrix: WATER

Lab Number: 9602044-02B
 Branch Lab No.:
 Received: 02/14/96 08:30:00 By LJB
 Sampling Agency: HWM_05_MFO
 Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
PESTICIDES/PCBs WATER						8081
HEPTACHLOR	U	PPB	0.02	02/22/96	AK	
HEPTACHLOR EPOXIDE	U	PPB	0.03	02/22/96	AK	
TOXAPHENE	U	PPB	1.4	02/22/96	AK	
METHOXYCHLOR	U	PPB	0.18	02/22/96	AK	
PCB 1016/1242	U	PPB	3.1	02/22/96	AK	
PCB 1221	U	PPB	3.5	02/22/96	AK	
PCB 1232	U	PPB	3.9	02/22/96	AK	
PCB 1248	U	PPB	2.6	02/22/96	AK	
PCB 1254	U	PPB	1.8	02/22/96	AK	
PCB 1260	U	PPB	1.2	02/22/96	AK	
PCB 1262	U	PPB	1.1	02/22/96	AK	

*-Water, uG/L; Sediment, uG/kG

Printed: March 8, 1996

Site No./ID: 79-731/DDMT
 Sample ID: MW-7
 Field No.: DD-GW-03
 Collected: 02/12/96 11:45:00 By T T
 County: 79
 Matrix: WATER

Lab Number: 9602044-02A
 Branch Lab No.:
 Received: 02/14/96 08:30:00 By LJB
 Sampling Agency: HWM_05_MFO
 Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
VOLATILES-SW-846 WATERS						8260A
ACETONE	U	PPB	5.0	02/14/96	CS	
BENZENE	U	PPB	0.50	02/14/96	CS	
BROMOBENZENE	U	PPB	0.50	02/14/96	CS	
BROMOCHLOROMETHANE	U	PPB	0.50	02/14/96	CS	
BROMODICHLOROMETHANE	U	PPB	0.50	02/14/96	CS	
BROMOFORM	U	PPB	0.50	02/14/96	CS	
BROMOMETHANE	U	PPB	1.0	02/14/96	CS	
2-BUTANONE (MEK)	U	PPB	5.0	02/14/96	CS	
CARBON TETRACHLORIDE	U	PPB	0.50	02/14/96	CS	
CHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
CHLOROETHANE	U	PPB	1.0	02/14/96	CS	
CHLOROFORM	U 7.1	PPB	0.50	02/14/96	CS	
CHLOROMETHANE	U	PPB	1.0	02/14/96	CS	
DIBROMOCHLOROMETHANE	U	PPB	0.50	02/14/96	CS	
DIBROMOMETHANE	U	PPB	0.50	02/14/96	CS	
1,2-DICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
1,3-DICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
1,4-DICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
DICHLORODIFLUOROMETHANE	U	PPB	1.0	02/14/96	CS	
1,1-DICHLOROETHANE	U 2.8	PPB	0.50	02/14/96	CS	
1,2-DICHLOROETHANE	U 1.1	PPB	0.50	02/14/96	CS	
1,1-DICHLOROETHENE	U 7.1	PPB	0.50	02/14/96	CS	
CIS-1,2-DICHLOROETHENE	U 0.2	PPB	0.50	02/14/96	CS	
TRANS-1,2-DICHLOROETHENE	U	PPB	0.50	02/14/96	CS	
1,2-DICHLOROPROPANE	U	PPB	0.50	02/14/96	CS	
CIS-1,3-DICHLOROPROPENE	U	PPB	0.50	02/14/96	CS	
TRANS-1,3-DICHLOROPROPENE	U	PPB	0.50	02/14/96	CS	
ETHYLBENZENE	U	PPB	0.50	02/14/96	CS	
METHYLENE CHLORIDE	U 7.4	PPB	0.50	02/14/96	CS	
4-METHYL-2-PENTANONE (MIBK)	U	PPB	5.0	02/14/96	CS	
STYRENE	U	PPB	0.50	02/14/96	CS	
1,1,1,2-TETRACHLOROETHANE	U	PPB	0.50	02/14/96	CS	
1,1,1,2-TETRACHLOROETHANE	U	PPB	0.50	02/14/96	CS	
TETRACHLOROETHENE	U 1.55	PPB	0.50	02/14/96	CS	
TOLUENE	U	PPB	0.50	02/14/96	CS	
1,2,4-TRICHLOROBENZENE	U	PPB	0.50	02/14/96	CS	
1,1,1-TRICHLOROETHANE	U 2.7	PPB	0.50	02/14/96	CS	
1,1,2-TRICHLOROETHANE	U	PPB	0.50	02/14/96	CS	
TRICHLOROETHENE	U 3.1	PPB	0.50	02/14/96	CS	
TRICHLOROFLUOROMETHANE	U	PPB	1.0	02/14/96	CS	
VINYL CHLORIDE	U	PPB	1.0	02/14/96	CS	
o-XYLENE	U	PPB	0.50	02/14/96	CS	
m & p XYLENE	U	PPB	0.50	02/14/96	CS	

*-Water, uG/L; Sediment, uG/kg

Printed: February 16, 1996

STATE OF TENNESSEE - ENVIRONMENTAL LABORATORIES

Sample Source 78-736 / DMW
 I.D./Site No. DMW
 County Shelby Field No. 02-00-03
 Stream Mile N/A Depth N/A
 Collected: Date 2/12/96 Time 11:45 By DAJ
 Contact Hazard hazardous
 Signature of Sampler L.R. Samplelton
 Send Report to Terry Templeton
TOE-DSF/DFE
Memphis, TN

Sampling Agency
☒ APC ☐ DOT
☐ DWS ☐ GW
☐ SWM ☐ UST
☐ EEP ☐ PASI
☒ SF ☐ WPC
 other (specify):
cc: OS
 Billing Code (required)
322.38

Sample Type
☒ Water
☐ Wastewater
☐ Air
 Other: _____

Sample Priority
☒ Emergency
☐ Routine
☐ Ambient
 Date Priority needed:
3/15/96

Field Comments: _____

Code	Field Tests Only	Units	Value
00094	conductivity	umho	
00300	dissolved oxygen	mg/L	
00061	flow	CFS	
00400	pH	Units	
00545	residue, settleable	ml/L	
00077	Secchi disc	M	
00010	temperature	°C	
50060	chlorine, residual	mg/L	
Microbiology			
01616	coliform, fecal	col./100 mL	
31501	coliform, total	col./100 mL	
31679	strep., fecal	col./100 mL	
Physical Characteristics			
00081	color, apparent	PCoU	
00080	color, true	PCoU	
	flash point	°C	
00403	pH, lab	Units	
00515	residue, dissolved	mg/L	
00545	residue, settleable	ml/L	
00530	residue, suspended	mg/L	
00500	residue, total	mg/L	
00095	specific cond. 25°C	umho	
00070	turbidity	NTU	
Organics			
00310	BOD, 5-day, 20°C	mg/L	
00335	COD (low)	mg/L	
00340	COD (high)	mg/L	
	formaldehyde	µg	

Code	Organics	Units	Value
38260	MBAS	mg/L	
00550	oil and grease	mg/L	
32730	Hydrocarbons, total	mg/L	
	phenols	µg/L	
00690	TOC	mg/L	
Non-metallic Inorganics			
70508	acidity, as CaCO ₃	mg/L	
00410	alkalinity, total, as CaCO ₃	mg/L	
00415	alkalinity, phen., as CaCO ₃	mg/L	
01022	Boron	ug/L	
00940	chloride	mg/L	
50060	chlorine, residual	mg/L	
01032	chromium, hexavalent	ug/L	
00720	cyanide	mg/L	
00290	dissolved oxygen	mg/L	
00950	fluoride	mg/L	
00910	hardness, total, as CaCO ₃	mg/L	
82395	hardness, Ca, as CaCO ₃	mg/L	
00635	nitrogen, total kjeldahl	mg/L	
00610	nitrogen, ammonia	mg/L	
00605	nitrogen, total organic	mg/L	
00630	nitrogen, NO ₃ & NO ₂	mg/L	
00615	nitrogen, nitrite	mg/L	
00620	nitrogen, nitrate	mg/L	
70507	orthophosphate, total	mg/L	
00666	phosphate, dissolved	mg/L	
00665	phosphate, total	mg/L	
00955	silica	mg/L	
00945	sulfate	mg/L	
00745	sulfide, total	mg/L	

Code	Metals	Units	Value
01105	Aluminum, Al	µg/L	2000
01097	Antimony, Sb	µg/L	<1
01002	Arsenic, As	µg/L	<1
01007	Barium, Ba	µg/L	120
01012	Beryllium, Be	µg/L	<3
01027	Cadmium, Cd	µg/L	<1
00910	Calcium, Ca	mg/L	16.1
01034	Chromium, Cr	µg/L	<15
01037	Cobalt, Co	µg/L	<15
01042	Copper, Cu	µg/L	<5
01045	Iron, Fe	µg/L	8030
01051	Lead, Pb	µg/L	8
00927	Magnesium, Mg	µg/L	8.20
01055	Manganese, Mn	µg/L	51
71900	Mercury, Hg	µg/L	<0.2
01067	Nickel, Ni	µg/L	12
00937	Potassium, K	mg/L	1.00
01147	Selenium, Se	µg/L	<5
01077	Silver, Ag	µg/L	<1
00929	Sodium, Na	mg/L	22.6
01059	Thallium, Tl	µg/L	<2
01102	Tin, Sn	µg/L	
01152	Titanium, Ti	µg/L	
01092	Zinc, Zn	µg/L	155.400
	Vanadium	µg/L	9

Lab comments: Magnesium, Mg mg/L 8.2
 Chromium, Cr µg/L <10

INORGANIC ANALYSIS, LIQUIDS

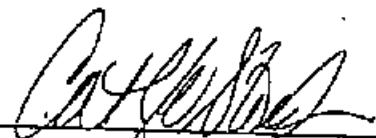
For lab use only

Laboratory Number 16-02-0024Date received 9-02-13Time received 13:10 by SLCDate reported 3-14-96 by SLCReviewed by L. MitchellReviewed by L. Mitchell

Code * Metals Units Value
 01105 Aluminum, Al µg/L 2000
 01097 Antimony, Sb µg/L <1
 01002 Arsenic, As µg/L <1
 01007 Barium, Ba µg/L 120
 01012 Beryllium, Be µg/L <3
 01027 Cadmium, Cd µg/L <1
 00910 Calcium, Ca mg/L 16.1
 01034 Chromium, Cr µg/L <15
 01037 Cobalt, Co µg/L <15
 01042 Copper, Cu µg/L <5
 01045 Iron, Fe µg/L 8030
 01051 Lead, Pb µg/L 8
 00927 Magnesium, Mg µg/L 8.20
 01055 Manganese, Mn µg/L 51
 71900 Mercury, Hg µg/L <0.2
 01067 Nickel, Ni µg/L 12
 00937 Potassium, K mg/L 1.00
 01147 Selenium, Se µg/L <5
 01077 Silver, Ag µg/L <1
 00929 Sodium, Na mg/L 22.6
 01059 Thallium, Tl µg/L <2
 01102 Tin, Sn µg/L
 01152 Titanium, Ti µg/L
 01092 Zinc, Zn µg/L 155.400
 Vanadium µg/L 9

STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300RECEIVED
MAR 22 1996
CAPS FIELD OFFICESENT HWM-STATE SUPERFUND, MFO
TO: SUITE E-645, PERIMETER PARK
2510 MOUNT MORIAH
MEMPHIS, TN 38115
TERRY TEMPLETON
(901)543-6695Lab ID: 9602053
Sampling Agency: HWM_05_MFO
Billing Code: 327.38-05

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical SupervisorDefinition of Data Qualifiers

Analyte requested but not detected
Estimated value--result is less than sample quantitation limit but greater than zero
Analyte in blank as well as sample
Analyte concentration exceeds the calibration range of instrument
Uncertainty in result other than "J" flag
Z- Other flags used to define results as needed

Printed: March 13, 1996

Site No./ID: 79-736/DDMT
 Sample ID: MONITORING WELL "U" (MW-55)
 Field No.: DD-GW-04
 Collected: 02/14/96 09:05:00 By TRT
 County: 79
 Matrix: WATER

Lab Number: 9602053-01B
 Branch Lab No.:
 Received: 02/15/96 08:30:00 By LJB
 Sampling Agency: HWM 05 MPO
 Billing Code: 327.38-05

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TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
EXTRACTABLES - WATER						
BUTYL BENZYL PHTHALATE	4.99	PPB	-	02/27/96	MAC	MS
BIS(2-ETHYLHEXYL)PHTHALATE	5.17	PPB	-	02/27/96	MAC	
DI-n-BUTYL PHTHALATE	73.0	PPB	-	02/27/96	MAC	
DI-n-OCTYL PHTHALATE	U	PPB	1.0	02/27/96	MAC	
DIETHYL PHTHALATE	U	PPB	0.50	02/27/96	MAC	
DIMETHYL PHTHALATE	U	PPB	0.50	02/27/96	MAC	
n-NITROSODIMETHYLAMINE	U	PPB	2.0	02/27/96	MAC	
n-NITROSODIPHENYLAMINE	U	PPB	1.0	02/27/96	MAC	
n-NITROSO-di-n-PROPYLAMINE	U	PPB	1.0	02/27/96	MAC	
ISOPHORONE	U	PPB	0.50	02/27/96	MAC	
NITROBENZENE	U	PPB	1.0	02/27/96	MAC	
2,4-DINITROTOLUENE	U	PPB	2.0	02/27/96	MAC	
2,6-DINITROTOLUENE	U	PPB	2.0	02/27/96	MAC	
ACENAPTHENE	U	PPB	0.50	02/27/96	MAC	
ACENAPHTHYLENE	U	PPB	0.50	02/27/96	MAC	
ANTHRACENE	U	PPB	0.50	02/27/96	MAC	
BENZO(a)ANTHRACENE	U	PPB	0.50	02/27/96	MAC	
BENZO(a)PYRENE	U	PPB	0.50	02/27/96	MAC	
BENZO(b)FLUORANTHENE	U	PPB	0.50	02/27/96	MAC	
BENZO(g,h,i)PERYLENE	U	PPB	2.0	02/27/96	MAC	
BENZO(k)FLUORANTHENE	U	PPB	0.50	02/27/96	MAC	
DIBENZO(a,h)ANTHRACENE	U	PPB	2.0	02/27/96	MAC	
FLUORANTHENE	U	PPB	0.50	02/27/96	MAC	
FLUORENE	U	PPB	0.50	02/27/96	MAC	
INDENO(1,2,3-cd)PYRENE	U	PPB	2.0	02/27/96	MAC	
NAPHTHALENE	U	PPB	0.50	02/27/96	MAC	
PHENANTHRENE	U	PPB	0.50	02/27/96	MAC	
PYRENE	U	PPB	0.50	02/27/96	MAC	
CHRYSENE	U	PPB	0.50	02/27/96	MAC	
BIS(2-CHLOROETHYL)ETHER	U	PPB	0.50	02/27/96	MAC	
BIS(2-CHLOROETHOXY)METHANE	U	PPB	1.0	02/27/96	MAC	
BIS(2-CHLOROISOPROPYL)ETHER	U	PPB	1.0	02/27/96	MAC	
4-BROMOPHENYLPHENYL ETHER	U	PPB	2.0	02/27/96	MAC	
4-CHLOROPHENYLPHENYL ETHER	U	PPB	1.0	02/27/96	MAC	
HEXACHLOROCYCLOPENTADIENE	U	PPB	2.0	02/27/96	MAC	
HEXACHLOROBUTADIENE	U	PPB	1.0	02/27/96	MAC	
HEXACHLOROBENZENE	U	PPB	1.0	02/27/96	MAC	
HEXACHLOROETHANE	U	PPB	2.0	02/27/96	MAC	
1,2,4-TRICHLOROBENZENE	U	PPB	1.0	02/27/96	MAC	
2-CHLORONAPHTHALENE	U	PPB	0.50	02/27/96	MAC	
4-CHLORO-3-METHYLPHENOL	U	PPB	1.0	02/27/96	MAC	
2-CHLOROPHENOL	U	PPB	1.0	02/27/96	MAC	
2,4-DICHLOROPHENOL	U	PPB	1.0	02/27/96	MAC	
2,4-DIMETHYLPHENOL	U	PPB	1.0	02/27/96	MAC	
2,4-DINITROPHENOL	U	PPB	10	02/27/96	MAC	
2-METHYL-4,6-DINITROPHENOL	U	PPB	5.0	02/27/96	MAC	
2-NITROPHENOL	U	PPB	2.0	02/27/96	MAC	
4-NITROPHENOL	U	PPB	5.0	02/27/96	MAC	
PENTACHLOROPHENOL	U	PPB	2.0	02/27/96	MAC	
PHENOL	U	PPB	0.50	02/27/96	MAC	
2,4,6-TRICHLOROPHENOL	U	PPB	1.0	02/27/96	MAC	
PESTICIDES/PCBs WATER						
HEXACHLOROBENZENE	U	PPB	0.02	02/23/96	AK	8081
ALDRIN	U	PPB	0.02	02/23/96	AK	
alpha-BHC	U	PPB	0.02	02/23/96	AK	
beta-BHC	U	PPB	0.07	02/23/96	AK	
delta-BHC	U	PPB	0.05	02/23/96	AK	
gamma-BHC (LINDANE)	U	PPB	0.02	02/23/96	AK	
alpha-CHLORDANE	U	PPB	0.02	02/23/96	AK	
gamma-CHLORDANE	U	PPB	0.03	02/23/96	AK	
TECHNICAL CHLORDANE	U	PPB	0.3	02/23/96	AK	
p,p-DDD	U	PPB	0.04	02/23/96	AK	
p,p-DDE	U	PPB	0.04	02/23/96	AK	
p,p-DDT	U	PPB	0.03	02/23/96	AK	
DIELDRIN	U	PPB	0.01	02/23/96	AK	
ENDOSULFAN I	U	PPB	0.04	02/23/96	AK	
ENDOSULFAN II	U	PPB	0.04	02/23/96	AK	
ENDOSULFAN SULFATE	U	PPB	0.04	02/23/96	AK	
ENDRIN	U	PPB	0.03	02/23/96	AK	

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Site No./ID: 79-736/DDMT
 Sample ID: MONITORING WELL "U" (MW-55)
 Field No.: DD-GW-04
 Collected: 02/14/96 09:05:00 By TRT
 County: 79
 Matrix: WATER

Lab Number: 9602053-01B
 Branch Lab No.:
 Received: 02/15/96 08:30:00 By LJB
 Sampling Agency: HWM 05 MFO
 Billing Code: 327.38-05

TEST	RESULT	+UNITS	LIMIT	ANALYZED	BY	METHOD
PESTICIDES/PCBs WATER						8081
HEPTACHLOR	U	PPB	0.02	02/23/96	AK	
HEPTACHLOR EPOXIDE	U	PPB	0.03	02/23/96	AK	
TOXAPHENE	U	PPB	1.4	02/23/96	AK	
METHOXYCHLOR	U	PPB	0.18	02/23/96	AK	
PCB 1016/1242	U	PPB	3.1	02/23/96	AK	
PCB 1221	U	PPB	3.5	02/23/96	AK	
PCB 1232	U	PPB	3.9	02/23/96	AK	
PCB 1248	U	PPB	2.6	02/23/96	AK	
PCB 1254	U	PPB	1.8	02/23/96	AK	
PCB 1260	U	PPB	1.2	02/23/96	AK	
PCB 1262	U	PPB	1.1	02/23/96	AK	

*-Water, uG/L; Sediment, uG/kg

Printed: March 13, 1996

Site No./ID: 79-736/DDMT
 Sample ID: MONITORING WELL "U" (MW-55)
 Field No.: DD-GW-04
 Collected: 02/14/96 09:05:00 By TRT
 County: 79
 Matrix: WATER

Lab Number: 9602053-01A
 Branch Lab No.:
 Received: 02/15/96 08:30:00 By LJB
 Sampling Agency: HWM 05 MFO
 Billing Code: 327.38-05

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
VOLATILES-SW-846 WATERS						8260A
ACETONE	U	PPB	5.0	02/15/96	HMG	
BENZENE	U	PPB	0.50	02/15/96	HMG	
BROMOBENZENE	U	PPB	0.50	02/15/96	HMG	
BROMOCHLOROMETHANE	U	PPB	0.50	02/15/96	HMG	
BROMODICHLOROMETHANE	U	PPB	0.50	02/15/96	HMG	
BROMOFORM	U	PPB	0.50	02/15/96	HMG	
BROMOMETHANE	U	PPB	1.0	02/15/96	HMG	
2-BUTANONE (MEK)	U	PPB	5.0	02/15/96	HMG	
CARBON TETRACHLORIDE	U	PPB	0.50	02/15/96	HMG	
CHLOROBENZENE	U	PPB	0.50	02/15/96	HMG	
CHLOROETHANE	U	PPB	1.0	02/15/96	HMG	
CHLOROFORM	U	PPB	0.50	02/15/96	HMG	
CHLOROMETHANE	U	PPB	1.0	02/15/96	HMG	
DIBROMOCHLOROMETHANE	U	PPB	0.50	02/15/96	HMG	
DIBROMOMETHANE	U	PPB	0.50	02/15/96	HMG	
1,2-DICHLOROBENZENE	U	PPB	0.50	02/15/96	HMG	
1,3-DICHLOROBENZENE	U	PPB	0.50	02/15/96	HMG	
1,4-DICHLOROBENZENE	U	PPB	0.50	02/15/96	HMG	
DICHLORODIFLUOROMETHANE	U	PPB	1.0	02/15/96	HMG	
1,1-DICHLOROETHANE	U	PPB	0.50	02/15/96	HMG	
1,2-DICHLOROETHANE	U	PPB	0.50	02/15/96	HMG	
1,1-DICHLOROETHENE	U	PPB	0.50	02/15/96	HMG	
CIS-1,2-DICHLOROETHENE	U	PPB	0.50	02/15/96	HMG	
TRANS-1,2-DICHLOROETHENE	U	PPB	0.50	02/15/96	HMG	
1,2-DICHLOROPROPANE	U	PPB	0.50	02/15/96	HMG	
CIS-1,3-DICHLOROPROPENE	U	PPB	0.50	02/15/96	HMG	
TRANS-1,3-DICHLOROPROPENE	U	PPB	0.50	02/15/96	HMG	
ETHYLBENZENE	U	PPB	0.50	02/15/96	HMG	
METHYLENE CHLORIDE	U	PPB	0.50	02/15/96	HMG	
4-METHYL-2-PENTANONE (MIBK)	U	PPB	5.0	02/15/96	HMG	
STYRENE	U	PPB	0.50	02/15/96	HMG	
1,1,1,2-TETRACHLOROETHANE	U	PPB	0.50	02/15/96	HMG	
1,1,2,2-TETRACHLOROETHANE	U	PPB	0.50	02/15/96	HMG	
TETRACHLOROETHENE	U	PPB	0.50	02/15/96	HMG	
TOLUENE	U	PPB	0.50	02/15/96	HMG	
1,2,4-TRICHLOROBENZENE	U	PPB	0.50	02/15/96	HMG	
1,1,1-TRICHLOROETHANE	U	PPB	0.50	02/15/96	HMG	
1,1,2-TRICHLOROETHANE	U	PPB	0.50	02/15/96	HMG	
TRICHLOROETHENE	U	PPB	0.50	02/15/96	HMG	
TRICHLOROFLUOROMETHANE	U	PPB	1.0	02/15/96	HMG	
VINYL CHLORIDE	U	PPB	1.0	02/15/96	HMG	
p-XYLENE	U	PPB	0.50	02/15/96	HMG	
m & p XYLENE	U	PPB	0.50	02/15/96	HMG	

*-Water, uG/L; Sediment, uG/kg

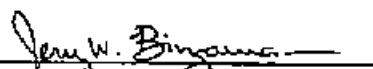
Printed: February 16, 1996

STATE OF TENNESSEE
ENVIRONMENTAL LABORATORIES**630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300**

SENT **HWM-STATE SUPERFUND, MFO**
TO: **SUITE E-645, PERIMETER PARK**
2510 MOUNT MORIAH
MEMPHIS, TN 38115
TERRY TEMPLETON
(901)543-6695

Lab ID: **9602053**
Sampling Agency: **HWM_05_MFO**
Billing Code: **327.38-05**

**This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.**


Analytical Supervisor

Definition of Data Qualifiers

- U- Analyte requested but not detected
- J- Estimated value--result is less than sample quantitation
limit but greater than zero
- B- Analyte in blank as well as sample
- E- Analyte concentration exceeds the calibration range of instrument
- N- Uncertainty in result other than "J" flag
- X,Y,Z- Other flags used to define results as needed

Printed: February 16, 1996

STATE OF TENNESSEE - ENVIRONMENTAL LABORATORIES

INORGANIC ANALYSIS, LIQUIDS

Sample Source 77-736 (DOT)
 I.D./Site No. Montgomery well #1 (MW-55)
 County Shelby Field No. DD-64-04
 Stream Mile N/A Depth N/A
 Collected: Date 2/14/96 Time 9:05 By 202
 Contact Hazard unhazardous
 Signature of Sampler every sample
 Send Report to T.R. Temple
700 E. 10th St.
Memphis, TN

Sampling Agency
 APC DOT
 DWS GW
 SWM UST
 BEP PAST
 LSF WPC
 other (specify):
CC 105
 Billing Code (required)
32-738

Sample Type
 Water
 Wastewater
 Air
 Other _____

Sample Priority
 Emergency
 Legal
 Routine
 Ambient
 Date Priority needed:
3/15/96

For lab use only
 Laboratory Number Me-02-0040
 Date received 96-02-14
 Time received 1315 by SC
 Date reported 3-14-96 by RM
 Reviewed by R. Mitchell
 Reviewed by _____

Code	Field Tests Only	Units	Value
00094	conductivity	umho	
00300	dissolved oxygen	mg/L	
00061	flow	CFS	
00400	pH	Units	
00545	residue, settleable	ml/L	
00077	Secchi disc	M	
00010	temperature	°C	
00060	chlorine, residual	mg/L	

Code	Microbiology	Units	Value
01616	coliform, fecal	col./100 mL	
31501	coliform, total	col./100 mL	
31679	strep, fecal	col./100 mL	

Code	Physical Characteristics	Units	Value
00081	color, apparent	PtCoU	
00080	color, true	PtCoU	
00403	flash point	°C	
00515	pH, lab	Units	
00515	residue, dissolved	mg/L	
00545	residue, settleable	ml/L	
00530	residue, suspended	mg/L	
00500	residue, total	mg/L	
00095	specific cond. 25°C	umho	
00070	turbidity	NTU	

Code	Organics	Units	Value
00310	BOD, 5-day, 20°C	mg/L	
00335	COD (low)	mg/L	
00340	COD (high)	mg/L	
	formaldehyde	ug	

PH-2012 LAB (rev 8/92)

Code	Organics	Units	Value
38260	MBAS	mg/L	
00550	oil and grease	mg/L	
	Hydrocarbons, total	mg/L	
32730	phenols	ug/L	
00690	TOC	mg/L	

Non-metallic Inorganics

Code	Non-metallic Inorganics	Units	Value
70508	acidity, as CaCO ₃	mg/L	
00470	alkalinity, total, as CaCO ₃	mg/L	
00415	alkalinity, phen, as CaCO ₃	mg/L	
01022	boron	ug/L	
00940	chloride	mg/L	
50060	chlorine, residual	mg/L	
01032	chromium, hexavalent	ug/L	
00720	cyanide	mg/L	<u>0.02</u>
00290	dissolved oxygen	mg/L	
00950	fluoride	mg/L	
00900	hardness, total, as CaCO ₃	mg/L	
82395	hardness, Ca, as CaCO ₃	mg/L	
00635	nitrogen, total kjeldahl	mg/L	
00610	nitrogen, ammonia	mg/L	
00605	nitrogen, total organic	mg/L	
00630	nitrogen, NO ₃ & NO ₂	mg/L	
00615	nitrogen, nitrite	mg/L	
00620	nitrogen, nitrate	mg/L	
70507	orthophosphate, total	mg/L	
00666	phosphate, dissolved	mg/L	
00665	phosphate, total	mg/L	
00935	silica	mg/L	
00945	sulfate	mg/L	
00745	sulfide, total	mg/L	

Code	Metals	Units	Value
01105	Aluminum, Al	ug/L	<u>22,400</u>
01097	Antimony, Sb	ug/L	<u><1</u>
01002	Arsenic, As	ug/L	<u>6 *</u>
01007	Barium, Ba	ug/L	<u>533</u>
01012	Beryllium, Be	ug/L	<u><3</u>
01027	Cadmium, Cd	ug/L	<u><1</u>
00910	Calcium, Ca	mg/L	<u>17.8</u>
01034	Chromium, Cr	ug/L	<u>277</u>
01037	Cobalt, Co	ug/L	<u>7.8</u>
01042	Copper, Cu	ug/L	<u>2.5</u>
01045	Iron, Fe	ug/L	<u>59,800</u>
01051	Lead, Pb	ug/L	<u>2.2</u>
00927	Magnesium, Mg	ug/L	<u>8.5</u>
01055	Manganese, Mn	ug/L	<u>2,090</u>
71900	Mercury, Hg	ug/L	<u><0.2</u>
01067	Nickel, Ni	ug/L	<u>27</u>
00937	Potassium, K	mg/L	<u>3.96</u>
01147	Selenium, Se	ug/L	<u><5</u>
01077	Silver, Ag	ug/L	<u><1</u>
00929	Sodium, Na	mg/L	<u>24.2</u>
01059	Thallium, Tl	ug/L	<u><2</u>
01102	Tin, Sn	ug/L	
01152	Titanium, Ti	ug/L	
01092	Zinc, Zn	ug/L	<u>52</u>
	<u>Vanadium</u>	<u>ug/L</u>	<u>45</u>

Lab comments: * Digested since. The digestion spike was out of limit. However, post-digestion spike was within the limit. PLD concentration reported above is 15.0 ug/L.
 * please check tests desired
 RDA NO. 1327

251

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STATE OF TENNESSEE

ENVIRONMENTAL LABORATORIES

JACKSON LABORATORY
295 SUMMAR AVENUE
JACKSON, TN 38302-0849
PH: (901)423-6600

NASHVILLE LABORATORY
630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300

KNOXVILLE LABORATORY
1522 CHEROKEE TRAIL
KNOXVILLE, TN 37920
PH: (423)549-5201

SENT HWM- MEMPHIS FIELD OFFICE
TO: 2510 MOUNT MORIAH SUITE E-645
MEMPHIS, TN 38115

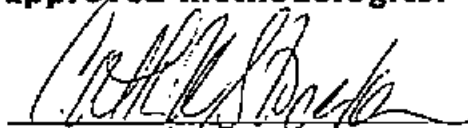
TERRY TEMPLETON
(901)543-6695

Lab ID: 9612283
Sampling Agency: HWM_81_MFO

Billing Code: 327.38-81



This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Definition of Data Qualifiers

- U- Analyte requested but not detected
- J- Estimated value--result is less than sample quantitation limit but greater than zero
- B- Analyte in blank as well as sample
- E- Analyte concentration exceeds the calibration range of instrument
- N- Uncertainty in result other than "J" flag
- X,Y,Z- Other flags used to define results as needed

Project/Site No.: 79-736
 Project Name: DDMT
 Description: SB-28A, 8-10 FT.
 Station No.: DD-SL-01
 Collected: 12/16/96 11:05:00 By TRT
 County: 79

Lab Number: 9612283-01C
 Matrix: SOIL
 Received: 12/17/96 14:00:00 By LWC
 Sampling Agency: HWM 81 MFO
 Priority: 01_14_97

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
EXTRACTABLES - SOIL						MS
BUTYL BENZYL PHTHALATE	U	PPB	48	01/08/97	CRS	
BIS(2-ETHYLHEXYL)PHTHALATE	53.6	PPB	-	01/08/97	CRS	
DI-n-BUTYL PHTHALATE	88.1	PPB	-	01/08/97	CRS	
DI-n-OCTYL PHTHALATE	U	PPB	96	01/08/97	CRS	
DIETHYL PHTHALATE	6 235	PPB	-	01/08/97	CRS	
DIMETHYL PHTHALATE	U	PPB	48	01/08/97	CRS	
n-NITROSODIMETHYLAMINE	U	PPB	480	01/08/97	CRS	
n-NITROSODIPHENYLAMINE	U	PPB	96	01/08/97	CRS	
n-NITROSO-n-PROPYLAMINE	U	PPB	96	01/08/97	CRS	
ISOPHORONE	U	PPB	48	01/08/97	CRS	
NITROBENZENE	U	PPB	96	01/08/97	CRS	
2,4-DINITROTOLUENE	U	PPB	190	01/08/97	CRS	
2,6-DINITROTOLUENE	U	PPB	190	01/08/97	CRS	
ACENAPHTHENE	U	PPB	48	01/08/97	CRS	
ACENAPHTHYLENE	U	PPB	48	01/08/97	CRS	
ANTHRACENE	U	PPB	48	01/08/97	CRS	
BENZO(a)ANTHRACENE	U	PPB	48	01/08/97	CRS	
BENZO(a)PYRENE	U	PPB	48	01/08/97	CRS	
BENZO(b)FLUORANTHENE	U	PPB	48	01/08/97	CRS	
BENZO(k)FLUORANTHENE	U	PPB	480	01/08/97	CRS	
BENZO(k)FLUORANTHENE	U	PPB	48	01/08/97	CRS	
DIBENZO(a,b)ANTHRACENE	U	PPB	480	01/08/97	CRS	
FLUORANTHENE	U	PPB	48	01/08/97	CRS	
FLUORENE	U	PPB	48	01/08/97	CRS	
INDENO(1,2,3-cd)PYRENE	U	PPB	480	01/08/97	CRS	
NAPHTHALENE	U	PPB	48	01/08/97	CRS	
PHENANTHRENE	U	PPB	48	01/08/97	CRS	
PYRENE	U	PPB	48	01/08/97	CRS	
CHRYSENE	U	PPB	48	01/08/97	CRS	
BIS(2-CHLOROETHYL)ETHER	U	PPB	96	01/08/97	CRS	
BIS(2-CHLOROETHOXY)METHANE	U	PPB	48	01/08/97	CRS	
BIS(2-CHLOROISOPROPYL)ETHER	U	PPB	96	01/08/97	CRS	
4-BROMOPHENYLPHENYL ETHER	U	PPB	190	01/08/97	CRS	
4-CHLOROPHENYLPHENYL ETHER	U	PPB	96	01/08/97	CRS	
HEXACHLOROCYCLOPENTADIENE	U	PPB	190	01/08/97	CRS	
HEXACHLOROBUTADIENE	U	PPB	190	01/08/97	CRS	
HEXACHLOROBENZENE	U	PPB	96	01/08/97	CRS	
HEXACHLOROETHANE	U	PPB	190	01/08/97	CRS	
1,2,4-TRICHLOROBENZENE	U	PPB	96	01/08/97	CRS	
2-CHLORONAPHTHALENE	U	PPB	48	01/08/97	CRS	
4-CHLORO-3-METHYLPHENOL	U	PPB	96	01/08/97	CRS	
2-CHLOROPHENOL	U	PPB	96	01/08/97	CRS	
2,4-DICHLOROPHENOL	U	PPB	96	01/08/97	CRS	
2,4-DIMETHYLPHENOL	U	PPB	96	01/08/97	CRS	
2,4-DINITROPHENOL	U	PPB	960	01/08/97	CRS	
2-METHYL-4,6-DINITROPHENOL	U	PPB	480	01/08/97	CRS	
2-NITROPHENOL	U	PPB	190	01/08/97	CRS	
4-NITROPHENOL	U	PPB	480	01/08/97	CRS	
PENTACHLOROPHENOL	U	PPB	180	01/08/97	CRS	
PHENOL	U	PPB	96	01/08/97	CRS	
2,4,6-TRICHLOROPHENOL	U	PPB	190	01/08/97	CRS	
2,4,5-TRICHLOROPHENOL	U	PPB	190	01/08/97	CRS	
O-CRESOL	U	PPB	96	01/08/97	CRS	
M- & P-CRESOL	U	PPB	96	01/08/97	CRS	
2-METHYLNAPHTHALENE	U	PPB	48	01/08/97	CRS	
BENZOIC ACID	U	PPB	960	01/08/97	CRS	
BENZYL ALCOHOL	U	PPB	190	01/08/97	CRS	
4-CHLOROANILINE	U	PPB	96	01/08/97	CRS	
DIBENZOFURAN	U	PPB	48	01/08/97	CRS	
3,3-DICHLOROBENZIDINE	U	PPB	190	01/08/97	CRS	
2-NITROANILINE	U	PPB	190	01/08/97	CRS	
3-NITROANILINE	U	PPB	190	01/08/97	CRS	
4-NITROANILINE	U	PPB	480	01/08/97	CRS	
PESTICIDES/PCBs SEDIMENTS						
HEXACHLOROBENZENE	U	PPB	2.0	01/07/97	CQL	
ALDRIN	U	PPB	2.6	01/07/97	CQL	
alpha-BHC	U	PPB	4.7	01/07/97	CQL	
beta-BHC	U	PPB	6.8	01/07/97	CQL	
delta-BHC	U	PPB	6.7	01/07/97	CQL	
gamma-BHC (LINDANE)	U	PPB	2.6	01/07/97	CQL	
alpha-CHLORDANE	U	PPB	3.6	01/07/97	CQL	
gamma-CHLORDANE	U	PPB	2.6	01/07/97	CQL	
TECHNICAL CHLORDANE	U	PPB	39	01/07/97	CQL	
- DDD	U	PPB	4.8	01/07/97	CQL	

Project/Site No.: 79-736
 Project Name: DDMT
 Description: SB-28A, 8-10 FT.
 Station No.: DD-SL-01
 Collected: 12/16/96 11:05:00 By TRT
 County: 79

Lab Number: 9612283-01C
 Matrix: SOIL
 Received: 12/17/96 14:00:00 By LWC
 Sampling Agency: HWM 81 MFO
 Priority: 01_14_97

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
PESTICIDES/PCBs SEDIMENTS						
ENDOSULFAN I	U	PPB	4.3	01/07/97	CQL	
ENDOSULFAN II	U	PPB	4.9	01/07/97	CQL	
ENDOSULFAN SULFATE	U	PPB	4.9	01/07/97	CQL	
ENDRIN	U	PPB	4.9	01/07/97	CQL	
ENDRIN ALDEHYDE	U	PPB	4.1	01/07/97	CQL	
ENDRIN KETONE	U	PPB	5.0	01/07/97	CQL	
HEPTACHLOR	U	PPB	3.2	01/07/97	CQL	
HEPTACHLOR EPOXIDE	U	PPB	3.4	01/07/97	CQL	
TOXAPHENE	U	PPB	290	01/07/97	CQL	
METHOXYCHLOR	U	PPB	19	01/07/97	CQL	
PCB 1016/1242	U	PPB	300	01/07/97	CQL	
PCB 1221	U	PPB	330	01/07/97	CQL	
PCB 1232	U	PPB	380	01/07/97	CQL	
PCB 1248	U	PPB	260	01/07/97	CQL	
PCB 1254	U	PPB	170	01/07/97	CQL	
PCB 1260	U	PPB	150	01/07/97	CQL	
PCB 1262	U	PPB	120	01/07/97	CQL	

*-Water, uG/L; Sediment, uG/KG

Printed: January 21, 1997



STATE OF TENNESSEE

ENVIRONMENTAL LABORATORIES

JACKSON LABORATORY
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JACKSON, TN 38302-0849
PH: (901)423-6600

NASHVILLE LABORATORY
630 BEN ALLEN ROAD
NASHVILLE, TN 37247-0801
PH: (615)262-6300

KNOXVILLE LABORATORY
1522 CHEROKEE TRAIL
KNOXVILLE, TN 37920
PH: (423)549-5201

SENT HWM- MEMPHIS FIELD OFFICE
TO: 2510 MOUNT MORIAH SUITE E-645
MEMPHIS, TN 38115

TERRY TEMPLETON
(901)543-6695

Lab ID: 9612283
Sampling Agency: HWM_81_MFO

Billing Code: 327.38-81



This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

Jay W. Engawa
Analytical Supervisor

Definition of Data Qualifiers

- U- Analyte requested but not detected
- J- Estimated value--result is less than sample quantitation limit but greater than zero
- B- Analyte in blank as well as sample
- E- Analyte concentration exceeds the calibration range of instrument
- N- Uncertainty in result other than "J" flag
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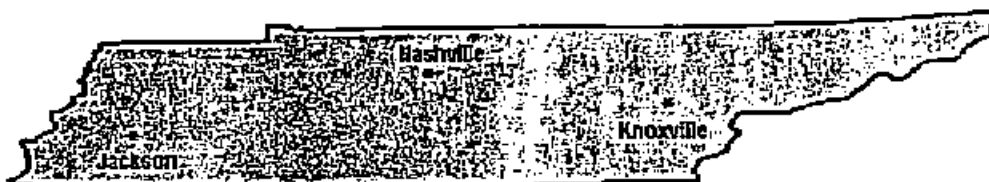
Project/Site No.: 79-736
 Project Name: DDMT
 Site Description: SB-28A, 8-10 FT.
 Station No.: DD-SL-01
 Collected: 12/16/96 11:05:00 By TRT
 County: 79

Lab Number: 9612283-01B
 Matrix: SOIL
 Received: 12/17/96 14:00:00 By LWC
 Sampling Agency: HMM 81 MPO
 Priority: 01_14_97

TEST	RESULT	*UNITS	LIMIT	ANALYZED	BY	METHOD
VOLATILES-TAL SEDIMENTS						8260A
ACETONE	U	PPB	25	12/20/96	HMG	
BENZENE	U	PPB	2.5	12/20/96	HMG	
BROMODICHLOROMETHANE	U	PPB	2.5	12/20/96	HMG	
BROMOFORM	U	PPB	2.5	12/20/96	HMG	
BROMOMETHANE	U	PPB	5.0	12/20/96	HMG	
2-BUTANONE (MEK)	U	PPB	25	12/20/96	HMG	
CARBON DISULFIDE	U	PPB	5.0	12/20/96	HMG	
CARBON TETRACHLORIDE	U	PPB	2.5	12/20/96	HMG	
VINYL ACETATE	U	PPB	5.0	12/20/96	HMG	
CHLOROBENZENE	U	PPB	2.5	12/20/96	HMG	
CHLOROETHANE	U	PPB	5.0	12/20/96	HMG	
CHLOROFORM	U	PPB	2.5	12/20/96	HMG	
CHLOROMETHANE	U	PPB	5.0	12/20/96	HMG	
DIBROMOCHLOROMETHANE	U	PPB	2.5	12/20/96	HMG	
1,1-DICHLOROETHANE	U	PPB	2.5	12/20/96	HMG	
1,2-DICHLOROETHANE	U	PPB	2.5	12/20/96	HMG	
1,1-DICHLOROETHENE	U	PPB	2.5	12/20/96	HMG	
CIS-1,2-DICHLOROETHENE	U	PPB	2.5	12/20/96	HMG	
TRANS-1,2-DICHLOROETHENE	U	PPB	2.5	12/20/96	HMG	
1,2-DICHLOROPROPANE	U	PPB	2.5	12/20/96	HMG	
CIS-1,3-DICHLOROPROPENE	U	PPB	2.5	12/20/96	HMG	
TRANS-1,3-DICHLOROPROPENE	U	PPB	2.5	12/20/96	HMG	
ETHYLBENZENE	U	PPB	2.5	12/20/96	HMG	
METHYLENE CHLORIDE	0.4	PPB	2.5	12/20/96	HMG	
4-METHYL-2-PENTANONE (MIBK)	U	PPB	25	12/20/96	HMG	
STYRENE	U	PPB	2.5	12/20/96	HMG	
2-HEXANONE	U	PPB	5.0	12/20/96	HMG	
1,1,2,2-TETRACHLOROETHANE	U	PPB	2.5	12/20/96	HMG	
TETRACHLOROETHENE	U	PPB	2.5	12/20/96	HMG	
TOLUENE	U	PPB	2.5	12/20/96	HMG	
1,1,1-TRICHLOROETHANE	U	PPB	2.5	12/20/96	HMG	
1,1,2-TRICHLOROETHANE	U	PPB	2.5	12/20/96	HMG	
TRICHLOROETHENE	U	PPB	2.5	12/20/96	HMG	
VINYL CHLORIDE	U	PPB	5.0	12/20/96	HMG	
p-XYLENE	U	PPB	2.5	12/20/96	HMG	
m&p-XYLENE	U	PPB	2.5	12/20/96	HMG	

*-Water, uG/L; Sediment, uG/kg

Printed: January 2, 1997



STATE OF TENNESSEE

ENVIRONMENTAL LABORATORIES

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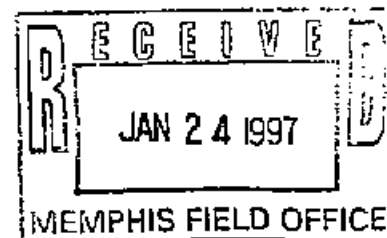
KNOXVILLE LABORATORY
1522 CHEROKEE TRAIL
KNOXVILLE, TN 37920
PH: (423)549-5201

SENT **HWM-NON SSF OVERSIGHT ASSIST.**
TO: **2500 MOUNT MORIAH SUITE E-645**
MEMPHIS, TN 38115

TERRY TEMPLETON
(901)543-6695

Lab ID: **9612283**
Sampling Agency: **HWM_81_MFO**

Billing Code: **327.38-81**



This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.

Rhonda Mitchell

Analytical Supervisor

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- X,Y,Z- Other flags used to define results as needed

Printed: January 23, 1997

Project/Site No.: 79-736
 Project Name: DDMT
 Description: SB-28A, 8-10 FT.
 Station No.: DD-SL-01
 Collected: 12/16/96 11:05:00 By TRT
 County: 79

Lab Number: 9612283-01
 Matrix: SOIL
 Received: 12/17/96 14:00:00 By LWC
 Sampling Agency: HWM_81_MFO
 Priority: 01_14_97

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
ALUMINUM	10800	mg/kg	10	01/09/97	MBT	EPA 202.1
ANTIMONY	0.9	mg/kg	0.4	01/21/97	AAJ	EPA 200.9
ARSENIC	21.8 ✓ 17.5	mg/kg	0.5	01/16/97	AAJ	EPA 200.9
BARIUM	10 ✗ 55	mg/kg	1	01/09/97	MBT	EPA 208.1
BERYLLIUM	U	mg/kg	0.3	01/09/97	MBT	EPA 210.1
CADMIUM	✓ U	mg/kg	1	01/10/97	MBT	EPA 213.1
CALCIUM	610	mg/kg	3	01/08/97	MBT	EPA 215.1
CHROMIUM	37.2 ✗ 12	mg/kg	1	01/10/97	MBT	EPA 218.1
COBALT	10	mg/kg	2	01/09/97	MBT	EPA 219.1
COPPER	39.3 ✗ 19	mg/kg	1	01/06/97	MBT	EPA 220.1
DIGESTION-METALS	12/31/96	COMPLETED		12/31/96	LWC	200.2
IRON	25600	mg/kg	5	01/07/97	MBT	EPA 236.1
LEAD	✓ 23	mg/kg	4	01/06/97	MBT	EPA 239.1
MAGNESIUM	2290	mg/kg	2	01/08/97	MBT	EPA 242.1
MANGANESE	741	mg/kg	1	01/06/97	MBT	EPA 243.1
MERCURY	U	mg/kg	0.1	01/13/97	DSL	EPA 245.5
METALS PREP-SOLIDS	12/18/96	COMPLETED		12/18/96	LWC	
NICKEL	20	mg/kg	3	01/07/97	MBT	EPA 249.1
PERCENT SOLIDS	78	%		01/02/97	LWC	
POTASSIUM	749	mg/kg	2	01/07/97	MBT	EPA 258.1
SELENIUM	U	mg/kg	0.5	01/21/97	AAJ	EPA 200.9
SILVER	U	mg/kg	2	01/09/97	MBT	EPA 272.1
SODIUM	76	mg/kg	3	01/07/97	MBT	EPA 273.1

Project/Site No.: 79-736
Project Name: DDMT
Description: SB-28A, 8-10 FT.
Station No.: DD-SL-01
Collected: 12/16/96 11:05:00 By TRT
County: 79

Lab Number: 9612283-01
Matrix: SOIL
Received: 12/17/96 14:00:00 By LWC
Sampling Agency: HWM 81 MFO
Priority: 01_14_97

TEST	RESULT	UNITS	LIMIT	ANALYZED	BY	METHOD
THALLIUM	U	mg/kg	0.2	01/23/97	AAJ	EPA 200.9
VANADIUM	37.2	mg/kg	0.1	01/22/97	AAJ	EPA 200.9
ZINC	19 61	mg/kg	2	01/07/97	MBT	EPA 289.1

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE