July 26, 2002
Final Version

Phase One PCB TMDL For Old Little Tallahatchie River, Yazoo Basin, Panola County, Mississippi

Prepared By

Mississippi Department of Environmental Quality
Office of Pollution Control
TMDL/WLA Section/Water Quality Assessment Branch

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MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

FOREWARD

This report has been prepared in accordance with the schedule contained within the federal consent decree dated December 22, 1998. The report contains one or more Total Maximum Daily Loads (TMDLs) for waterbody segments found on Mississippi's 1996 Section 303(d) List of Impaired Waterbodies. Because of the accelerated schedule required by the consent decree, many of these TMDLs have been prepared out of sequence with the State's rotating basin approach. The implementation of the TMDLs contained herein will be prioritized within Mississippi's rotating basin approach.

The amount and quality of the data on which this report is based are limited. As additional information becomes available, the TMDLs may be updated. Such additional information may include water quality and quantity data, changes in pollutant loadings, or changes in landuse within the watershed. In some cases, additional water quality data may indicate that no impairment exists.

Prefixes for fractions and multiples of SI units

Fraction	Prefix	Symbol	Multiple	Prefix	Symbol
10^{-1}	deci	d	10	deka	da
10^{-2}	centi	c	10^{2}	hecto	h
10^{-3}	milli	m	10^{3}	kilo	k
10^{-6}	micro	μ	10^{6}	mega	M
10^{-9}	nano	n	10^{9}	giga	G
10^{-12}	pico	p	10^{12}	tera	T
10^{-15}	femto	f	10^{15}	peta	P
10^{-18}	atto	a	10^{18}	exa	E

Conversion Factors

To convert from	To	Multiply by	To Convert from	To	Multiply by
Acres	Sq. miles	0.0015625	Days	Seconds	86400
Cubic feet	Cu. Meter	0.028316847	Feet	Meters	0.3048
Cubic feet	Gallons	7.4805195	Gallons	Cu feet	0.133680555
Cubic feet	Liters	28.316847	Hectares	Acres	2.4710538
cfs	Gal/min	448.83117	Miles	Meters	1609.344
cfs	MGD	.6463168	Mg/l	ppm	1
Cubic meters	Gallons	264.17205	μg/l * cfs	Gm/day	2.45

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EXECUTIVE SUMMARY

Old Little Tallahatchie River is located in Panola County near Batesville. This river flows out of Sardis Lake north east of Batesville and into the Coldwater River in Quitman County. The impaired segment of Old Little Tallahatchie Creek is located from U. S. Hwy 6 to the Panola County line and is made up of a series of oxbow lakes.

The river is impaired with polychlorinated biphenols (PCBs). There is a Tennessee Gas Pipeline Compressor Station located near Batesville. The use of PCBs at this compressor station was discontinued in 1974. During the time period that PCBs were in use at the compressor station, PCBs migrated to on-site sewer drains and open ditches and the Old Little Tallahatchie River.

Fish tissue samples from Lake Susie, an oxbow lake in the Old Little Tallahatchie River system, have shown concentrations of PCBs elevated above safe levels for consumption. This industrial pollution problem is currently being handled by MDEQ Hazardous Waste Division through a consent order with Tennessee Gas to abate the release of PCBs, determine the extent of contamination, and submit a plan for cleanup of this site.

The waterbody was listed as impaired on the 1996 Section 303(d) List of Impaired Waterbodies. This Phase One TMDL has been prepared to meet the requirements of the 1998 Consent Decree regarding TMDL work in Mississippi. The process that is underway with the Hazardous Waste Division of MDEQ will establish the ultimate cleanup.

This TMDL has been developed as a phased TMDL project due to the uncertainty of the type of cleanup activity that will be recommended through the consent order with Tennessee Gas. The TMDL and the consent order will work in conjunction to reach the best solution for implementing the cleanup of this site.

INTRODUCTION

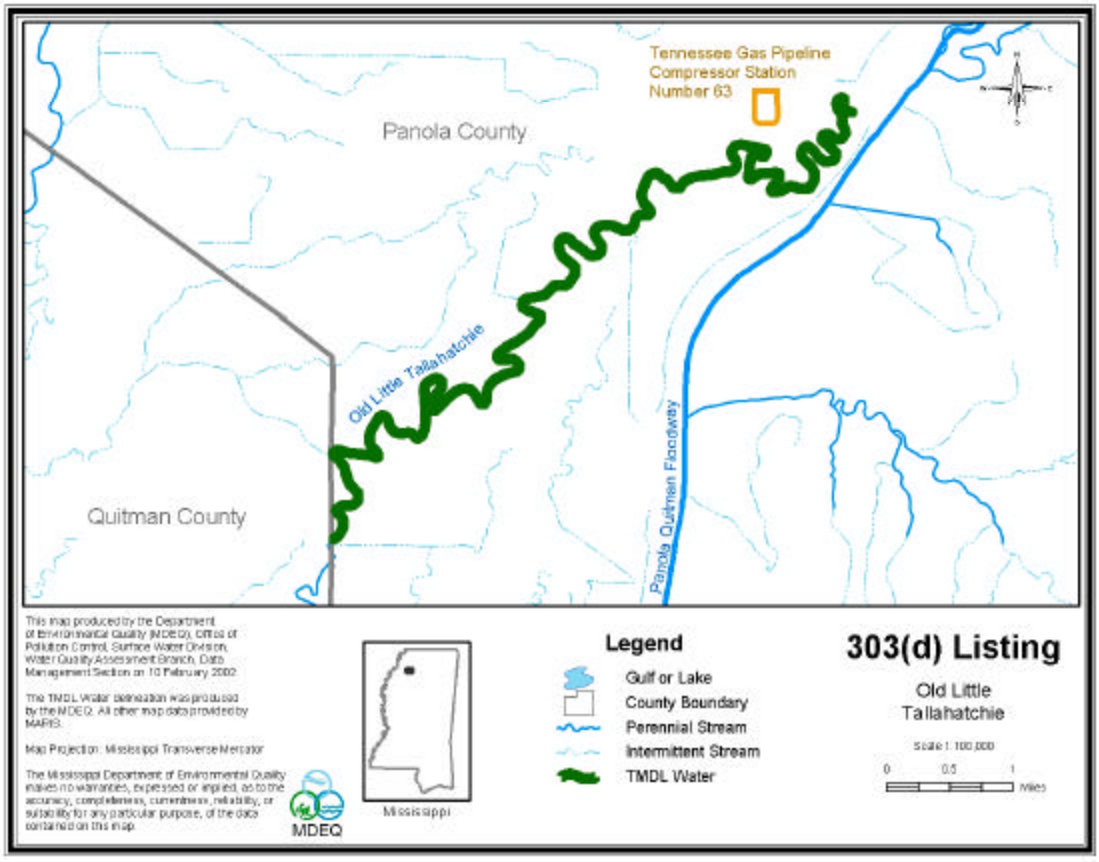
Section 303(d) of the Clean Water Act (CWA) and the Environmental Protection Agency's (EPA) Water Quality Planning and Management Regulations [Title 40 of the Code of Federal Regulation (40 CFR), Part 130] require the State to identify those waters within its boundaries not meeting water quality standards. Total maximum daily loads (TMDLs) for all pollutants violating or causing violation of applicable water quality standards are established for each identified water. Such loads are established at levels necessary to restore the appplicable water quality standards with seasonal variations and a margin of safety. The TMDL process establishes the allowable loadings of pollutants or other quantifiable parameters for a waterbody, based on the relationship between pollution sources and in-stream water quality conditions, so that states can establish water-quality based controls to reduce pollution from both point and nonpoint sources and restore and maintain the quality of their water resources.

Old Little Tallahatchie River was listed on the 1996 Section 303d List of Waterbodies for priority organics due to a fish consumption advisory. PCBs were the polltuant cause for the 1996 listing. Old Little Tallahatchie is currently listed on the 1998 303d List of Waterbodies for PCBs due to a fish consumption advisory. This was issued because fish tissue samples exceeded the EPA action level for total PCBs of 2 mg/kg. The impaired segment is shown in Figure 1.

PROBLEM DEFINITION

Mississippi's 1998 Section 303(d) list identified Old Little Tallahatchie River near Batesville, MS as impaired for the use of fish consumption due to elevated levels of PCB in fish tissue samples. The source of PCBs to Old Little Tallahatchie River is a Tennessee Gas Pipeline Compressor Station that used PCBs prior to 1974. Tennessee Gas has a consent order with MDEQ to abate the release of PCBs, determine the extent of contamination, and submit a plan for cleanup of the station. This Phase One TMDL will establish the concentration of PCB that can be transported into Old Little Tallahatchie River without exceeding the water quality standards in the waterbody.

Figure 1: 303d Listed Segment



TARGET IDENTIFICATION

This Phase One TMDL is being proposed for Old Little Tallahatchie River for PCB in fish tissue because concentrations above safe consumption levels set by the State of Mississippi were detected. The appropriate target concentrations for PCBs will be used to establish the endpoints for this Phase One TMDL.

The Mississippi water quality standard for PCBs is 0.2 µg/l (fresh water acute aquatic life), 0.014 µg/l (fresh water chronic aquatic life), 0.000045 µg/l (human health organisms only), and 0.000044 µg/l (human health water and organisms). The applicable numeric target for the Old Little Tallahatchie River Phase One TMDL for PCBs is the more protective criterion of 0.000044 µg/l.

SITE DESCRIPTION

Old Little Tallahatchie River flows in a southwestern direction from Sardis Lake to its confluence with the Coldwater River in Quitman County. The portion of the Old Little Tallahatchie River that is impaired is an intermittent stream channel that connects several oxbow lakes. These lakes are collectively identified as the Old Little Tallahatchie River and are used for recreational fishing. The impaired segment begins at U. S. Highway 6 west of Batesville and ends at the Panola County line. The Tennessee Gas Pipeline Compressor Station is located on U. S. Highway 6 and has a drainage ditch that flows into Lake Susie, an oxbow lake in the Old Little Tallahatchie River system. A map of the site is shown in Figure 2. An aerial photograph taken in 1995 of the Compressor Station and Lake Susie is shown in Figure 3.

Figure 2: Site Description

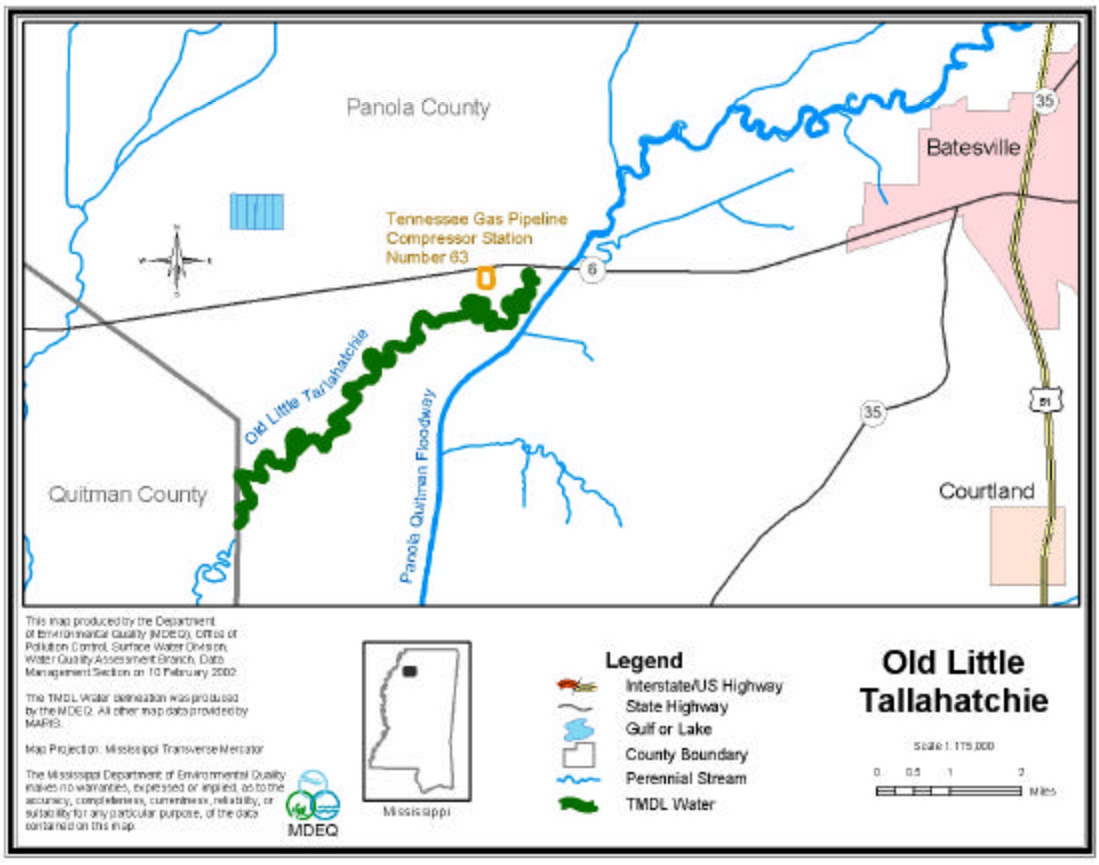
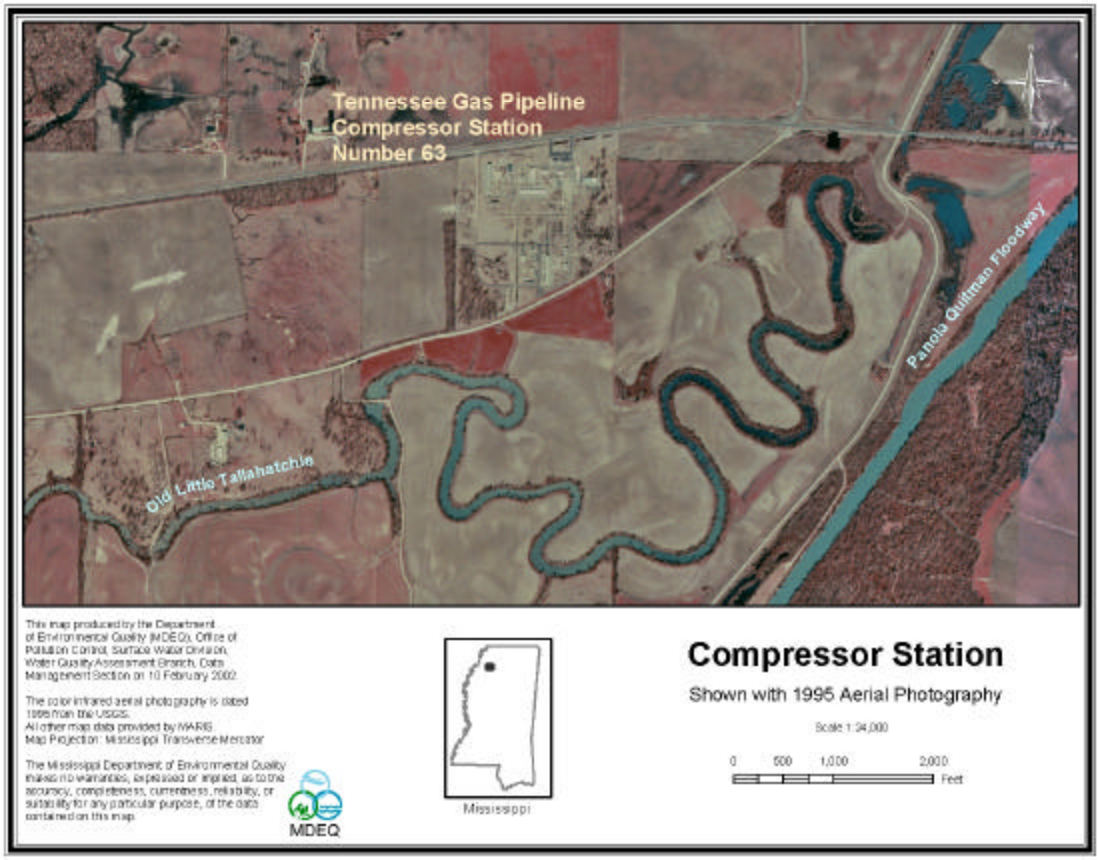


Figure 3: Compressor Station and Lake Susie



BACKGROUND

The primary source of PCBs is the Tennessee Gas Pipeline Compressor Station. The station used engines to maintain pressure in the gas pipeline. These gas compressor engines were started using compressed air from a series of air storage bottles. The air compressors that supply the air storage bottles used a lubricating oil that, prior to 1974, contained PCBs. Small amounts of this oil were entrained in the air stream that supplied the air bottles. Condensate containing PCBs then accumulated in the bottom of the air bottles. In the past, this condensate was discharged directly to the ground surface with no containment. Over the years, PCBs have migrated to on-site sewer drains and open ditches and the Old Little Tallahatchie River. This contamination is currently being investigated by the MDEQ Hazardous Waste Division. The station is not currently listed in the EPA Hazardous Waste Data Management system as a generator of hazardous waste. Tennessee Gas has a consent order with MDEQ to abate the release of PCBs, determine the extent of contamination, and submit a plan for cleanup of the station.

AVAILABLE MONITORING DATA

Fish tissue samples were taken by MDEQ in October of 1988. Species collected in the sampling event included carp, buffalo, yellow bullhead, crappie, and bluegill. Fish tissue samples were also collected in the spring of 2002. The MDEQ fish tissue data are given in Appendix A. Woodward Clyde Consultants, a consulting firm contracted by Tennessee Gas, has also collected fish tissue samples.

THE TMDL APPROACH

This Phase One TMDL was calculated using a mass balance approach. The flow through Old Little Tallahatchie River was estimated since no data were available. Also, data do not exist to determine the current loading of PCBs into the river from the Tennessee Gas Pipeline Compressor Station. Therefore, the load reduction needed from the site cannot be determined at this time. It is assumed that all loading of PCBs is due to the compressor station, and existing loadings will be determined in the near future through the consent order between Tennessee Gas and MDEQ and the Phase Two TMDL.

FLOW ANALYSIS

The flows used the analysis were estimated because there are no flow monitoring data for the Old Little Tallahatchie River. The Old Little Tallahatchie River is no longer active and is made up of a series of ox-bow lakes. Based on this information the 7Q10 flow was estimated to be zero.

TOTAL MAXIMUM DAILY LOAD

The TMDL is the total amount of a pollutant that can be assimilated by the receiving waterbody while achieving the water quality target that is protective of the designated use. In this case, the impaired use is fish consumption. The TMDL calculation will assume that the consent order will result in the best remedy for the pollution problem in Old Little Tallahatchie River.

CRITICAL CONDITION DETERMINATION

Critical conditions for Old Little Tallahatchie River are difficult to determine due to the lack of data. The critical condition used in the TMDL calculation considers an estimated 7Q10 flow and no pollutant degradation.

SEASONAL VARIATION

This TMDL determination does not consider seasonal influences on PCB concentrations in Old Little Tallahatchie River. It is not expected that changes in water temperature of light regimes would significantly affect the water column or fish tissue concentrations.

MARGIN OF SAFETY

The two types of MOS development are to implicitly incorporate the MOS using conservative model assumptions or to explicitly specify a portion of the total TMDL as the MOS. For this study, the MOS is incorporated explicitly by selecting the instream target concentration at 0.0000352 µg/l. This is based on a 20% reduction in the water quality standard of 0.000044 µg/l

TMDL DETERMINATION

The TMDL calculation will utilize the conservation of mass principle, where the load can be calculated by using the following relationship:

Concentration = Load / Flow

Rearranging this equation, the maximum load can be calculated as follows:

Load = Concentration(Water Quality Target) * Flow

This TMDL is calculated based on the following equation where WLA is the wasteload allocation (the load from the point sources), the LA is the load allocation (the load from nonpoint sources), and MOS is the margin of safety:

TMDL = WLA + LA + MOS

WLA = NPDES Permitted Facilites

LA = Surface Runoff

MOS = explicit

Currently, there are no facilities permitted to discharge PCBs into Old Little Tallahatchie River, so the WLA component is zero. Based on a 7Q10 flow of zero, the TMDL is zero and given in Table 1.

Table 1 TMDL for PCBs in Old Little Tallahatchie River

WLA	0 µg/day
LA	0 µg/day
MOS	0 µg/day
Total TMDL	0 µg/day

ALLOCATION OF RESPONSIBILITY AND RECOMMENDATIONS

This Phase One TMDL does not attempt to quantify the level of contamination in the Old Little Tallahatchie River or at the Tennessee Gas Pipeline Compressor Station. It also does not attempt to determine the current loading of PCBs that are entering Old Little Tallahatchie River. It is assumed that all loadings of PCBs are due to the Tennessee Gas Pipeline Compressor Station, and existing loadings will be determined through the consent order between Tennessee Gas and MDEQ. Therefore, the load reduction needed cannot be determined at this time. However, MDEQ Hazardous Waste Division will be investigating and monitoring this Tennessee Gas Pipeline Compressor Station as part of the remediation activities.

ABBREVIATIONS

7Q10.....Seven-Day Average Low Stream Flow with a Ten-Year Occurrence Period

CWA .....Clean Water Act

EPA .....Environmental Protection Agency

LA.....Load Allocation

MDEQ.....Mississippi Department of Environmental Quality

MOS.....Margin of Safety

WLA.....Waste Load Allocation

REFERENCES

MDEQ. 1994. *Wastewater Regulations for National Pollutant Discharge Elimination System (NPDES) Permits, Underground Injection Control (UIC) Permits, State Permits, Water Quality Based Effluent Limitations and Water Quality Certification.* Office of Pollution Control.

MDEQ. 1995. *State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters*. Office of Pollution Control.

MDEQ. 1998. *Mississippi List of Waterbodies, Pursuant to Section 303(d) of the Clean Water Act*. Office of Pollution Control.

MDEQ. 1998. *Mississippi 1998 Water Quality Assessment, Pursuant to Section 305(b) of the Clean Water Act*. Office of Pollution Control.

APPENDIX A

The following pages are copies of the MDEQ fish tissue data from Lake Susie. They include the MDEQ 1988 data and the MDEQ 2002 data.

Table 1. Levels of PCBs in fish sampled near the Tennessee Pipeline Compressor Station, Batesville.

Species	Common Name	# In Sample	Avg. length (mm)	Avg. wt. (g)	Total PCB*
Cyprinus carpio	Carp	5	616	4164	85.5
Ictobius bubalus	Smallmouth buffalo	5	476	2539	90.5
Ictaluris natalis	Yellow bullhead	1	295	422	17.2
Poxomis annularis	White crappie	4	214	247	30.0
Lepomis Macrochirus	Bluegill	5	182	143	3.0

*As Aroclor 1254

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MISSISSIPPI DEPT. OF ENVIRONMENTAL QUALITY
OFFICE OF POLLUTION CONTROL BIOLOGY LABORATORY
TISSUE SAMPLING DATA SHEET

COLLECTION SITE: LAKE SUSIE — (X) ELECTROFISHING ( ) SEINE
COUNTY: PANOLA — ( ) TRAMMEL NET ( ) HOOK &LINE
DATE: 02/11/02 — ( ) GILL NET ( )
SAMPLERS: AG / JW

TAG #	OPC #	SPECIES	WHOLE FISH L (mm)	WHOLE FISH W (g)	FILLET WEIGHT L	FILLET WEIGHT R
	SF02011	MICROPTERUS SALMOIDES	324	551		
		" "	337	600		
		" "	340	620		
	SF02012	POMOXIS NIGROMACULATUS	300	457		
		" "	265	347		
	SF02013	ICTIOBUS BUBALUS	490	2470		
		" "	459	2209		
		" "	470	2109		
		" "	474	2095		
	SF02014	ICTIOBUS CYANELLUS	504	2160		
		" "	492	2243		
		" "	502	2510		
		JW JW				
		JW JW				
	SF02015	AMEIURUS MELAS	327	572		
		" "	348	631		
	SF02016	ICTIOBUS CYANELLUS	587	3369		
		" "	550	3049		

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control Laboratory
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To: AL GIBSON	Date Collected: 02/11/02 Time collected: 14:12 Sample Collector: AG.JU
Sample ID: AA11752 Facility Name: LAKE SUSIE Site ID: SF02011 Location ID: Sampling Loc: Discharge No. Permit No: Other No: Lat: 34 17 12.7 Long: 90 04 25.4 County: 107 Sample Level: QA Type:	To Lab: SV Sample Type: FISH Received By: LYNETTE COBB Date Received: 03/18/02 Time Received: 1350 Project: 3700 Study: Reporting Date: 04/22/02

ANALYTE	EPA METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
ORGANICS							
Arochlor 1016	EPA8082	Not detected	ug/kg	36	DS	03/20/02	04/18/02
Arochlor 1221	EPA8082	Not detected	ug/kg	670	DS	03/20/02	04/18/02
Arochlor 1232	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1242	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1248	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1254	EPA8082	Not detected	ug/kg	67	DS	03/20/02	04/18/02
Arochlor 1260	EPA8082	Not detected	ug/kg	67	DS	03/20/02	04/18/02
z DCB	EPA8082	44%	ug/kg	31-132	DS	03/20/02	04/18/02
z TCMX	EPA8082	41%	ug/kg	38-134	DS	03/20/02	04/18/02

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/kg: micrograms/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

SAMPLE COMMENTS:

Approved By: Gwendolyn J Brady

Sample ID: AA11752

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Office of Pollution Control Laboratory
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To: AL GIBSON	Date Collected: 02/11/02 Time collected: 14:12 Sample Collector: AG.JU
Sample ID: AA11753 Facility Name: LAKE SUSIE Site ID: SF02012 Location ID: Sampling Loc: Discharge No. Permit No: Other No: Lat: Long: County: 107 Sample Level: QA Type:	To Lab: SV Sample Type: FISH Received By: LYNETTE COBB Date Received: 03/18/02 Time Received: 1350 Project: 3700 Study: Reporting Date: 04/22/02

ANALYTE	EPA METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
ORGANICS							
Arochlor 1016	EPA8082	Not detected	ug/kg	36	DS	03/20/02	04/18/02
Arochlor 1221	EPA8082	Not detected	ug/kg	670	DS	03/20/02	04/18/02
Arochlor 1232	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1242	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1248	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1254	EPA8082	Not detected	ug/kg	67	DS	03/20/02	04/18/02
Arochlor 1260	EPA8082	Not detected	ug/kg	67	DS	03/20/02	04/18/02
z DCB	EPA8082	74%	ug/kg	31-132	DS	03/20/02	04/18/02
z TCMX	EPA8082	79%	ug/kg	38-134	DS	03/20/02	04/18/02

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z: surrogate

SAMPLE COMMENTS:

Approved By: Timothy J. Bailey

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control Laboratory
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To: AL GIBSON	Date Collected: 02/11/02 Time collected: 14:12 Sample Collector: AG.JU
Sample ID: AA11754 Facility Name: LAKE SUSIE Site ID: SF02013 Location ID: Sampling Loc: Discharge No. Permit No: Other No: Lat: Long: County: 107 Sample Level: QA Type:	To Lab: SV Sample Type: FISH Received By: LYNETTE COBB Date Received: 03/18/02 Time Received: 1350 Project: 3700 Study: Reporting Date: 04/22/02

ANALYTE	EPA METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
ORGANICS							
Arochlor 1016	EPA8082	Not detected	ug/kg	36	DS	03/20/02	04/18/02
Arochlor 1221	EPA8082	Not detected	ug/kg	670	DS	03/20/02	04/18/02
Arochlor 1232	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1242	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1248	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1254	EPA8082	88.1	ug/kg	67	DS	03/20/02	04/18/02
Arochlor 1260	EPA8082	TRACE (20.5)	ug/kg	67	DS	03/20/02	04/18/02
z DCB	EPA8082	61%	ug/kg	31-132	DS	03/20/02	04/18/02
z TCMX	EPA8082	53%	ug/kg	38-134	DS	03/20/02	04/18/02

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z: surrogate

SAMPLE COMMENTS:

Approved By: Gwendolyn J. Bray

Sample ID: AA11754

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Office of Pollution Control Laboratory
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To: AL GIBSON	Date Collected: 02/11/02 Time collected: 14:12 Sample Collector: AG.JU
Sample ID: AA11755 Facility Name: LAKE SUSIE Site ID: SF02014 Location ID: Sampling Loc: Discharge No. Permit No: Other No: Lat: Long: County: 107 Sample Level: QA Type:	To Lab: SV Sample Type: FISH Received By: LYNETTE COBB Date Received: 03/18/02 Time Received: 1350 Project: 3700 Study: Reporting Date: 04/22/02

ANALYTE	EPA METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
ORGANICS							
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Arochlor 1232	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1242	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1248	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1254	EPA8082	TRACE (9.70)	ug/kg	67	DS	03/20/02	04/18/02
Arochlor 1260	EPA8082	Not detected	ug/kg	67	DS	03/20/02	04/18/02
z DCB	EPA8082	61%	ug/kg	31-132	DS	03/20/02	04/18/02
z TCMX	EPA8082	58%	ug/kg	38-134	DS	03/20/02	04/18/02

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SAMPLE COMMENTS:

Approved By: Gwendolyn J Brady

Sample ID: AA11755

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1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To: AL GIBSON	Date Collected: 02/11/02 Time collected: 14:12 Sample Collector: AG.JU
Sample ID: AA11756 Facility Name: LAKE SUSIE Site ID: SF02015 Location ID: Sampling Loc: Discharge No. Permit No: Other No: Lat: Long: County: 107 Sample Level: QA Type:	To Lab: SV Sample Type: FISH Received By: LYNETTE COBB Date Received: 03/18/02 Time Received: 1350 Project: 3700 Study: Reporting Date: 04/22/02

ANALYTE	EPA METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
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Arochlor 1242	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1248	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1254	EPA8082	TRACE (8.21)	ug/kg	67	DS	03/20/02	04/18/02
Arochlor 1260	EPA8082	Not detected	ug/kg	67	DS	03/20/02	04/18/02
z DCB	EPA8082	77%	ug/kg	31-132	DS	03/20/02	04/18/02
z TCMX	EPA8082	75%	ug/kg	38-134	DS	03/20/02	04/18/02

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
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>: greater than
z: surrogate

SAMPLE COMMENTS:

Approved By: Gwendolyn J Brady

Sample ID: AA11756

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MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Office of Pollution Control Laboratory
1542 Old Whitfield Road
Pearl, MS 39208
601-664-3900

MONITORING REPORT

To: AL GIBSON	Date Collected: 02/11/02 Time collected: 14:12 Sample Collector: AG.JU
Sample ID: AA11757 Facility Name: LAKE SUSIE Site ID: SF02016 Location ID: Sampling Loc: Discharge No. Permit No: Other No: Lat: Long: County: 107 Sample Level: QA Type:	To Lab: SV Sample Type: FISH Received By: LYNETTE COBB Date Received: 03/18/02 Time Received: 1350 Project: 3700 Study: Reporting Date: 04/22/02

ANALYTE	EPA METHOD	RESULT	UNIT	MDL	ANALYST	ANALYSIS START DATE	ANALYSIS END DATE
ORGANICS							
Arochlor 1016	EPA8082	Not detected	ug/kg	36	DS	03/20/02	04/18/02
Arochlor 1221	EPA8082	Not detected	ug/kg	670	DS	03/20/02	04/18/02
Arochlor 1232	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1242	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1248	EPA8082	Not detected	ug/kg	34	DS	03/20/02	04/18/02
Arochlor 1254	EPA8082	79.6	ug/kg	67	DS	03/20/02	04/18/02
Arochlor 1260	EPA8082	TRACE (24.4)	ug/kg	67	DS	03/20/02	04/18/02
z DCB	EPA8082	79%	ug/kg	31-132	DS	03/20/02	04/18/02
z TCMX	EPA8082	75%	ug/kg	38-134	DS	03/20/02	04/18/02

ug/L: micrograms/Liter
mg/L: milligrams/Liter
mg/kg: milligrams/kilogram
ug/kg: micrograms/kilogram
ug/g: micrograms/gram
ppm: parts per million
ppb: parts per billion

<: less than
MCL: Maximum Contaminant Level
MDL: Method Detection Limit
LSPC: result less than lower specification
USPC: result greater than upper specification
TIE: Tentatively Identified or Estimated
>: greater than
z: surrogate

SAMPLE COMMENTS:

Approved By: Timothy J Bradley