CHEMICAL DATA FOR BOTTOM SEDIMENT, LAKE WATER, BOTTOM-SEDIMENT PORE WATER, AND FISH IN MOUNTAIN CREEK LAKE, DALLAS, TEXAS, 1994–96

By S.A. Jones, P.C. Van Metre, J. Bruce Moring, C.L. Braun, J.T. Wilson, and B.J. Mahler

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VERTICAL DATUM, ABBREVIATIONS, AND ACRONYMS

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Abbreviations:

cm, centimeter

°C, degree Celsius

g, gram

in., inch

L, liter

m, meter

µg/g, microgram per gram

µg/kg, microgram per kilogram

mL, milliliter

mm, millimeter

Acronyms:

DCE, dichloroethylene

DI, deionized

E/A&H, EnSafe/Allen & Hoshall

GC, gas chromatograph

GC/MS, gas chromatography/mass spectrometry

GPC, gel permeation chromatography

GPS, global positioning system

ICP-AES, inductively coupled plasma-atomic emission spectrometry

NAS, Naval Air Station

NAWQA, National Water-Quality Assessment

NWIRP, Naval Weapons Industrial Reserve Plant

NWQL, National Water-Quality Laboratory

PAH, polycyclic aromatic hydrocarbon

PCB, polychlorinated biphenyl

PCE, tetrachloroethylene

PCN, polychlorinated napthalene

SOUTHDIV, Southern Division Naval Facilities Engineering Command

SVOC, semivolatile organic compound

SWMU, solid-waste-management unit

TCE, trichloroethylene

USEPA, U.S. Environmental Protection Agency

USGS, U.S. Geological Survey

VC, vinyl chloride

VOC, volatile organic compound

Chemical Data for Bottom Sediment, Lake Water, Bottom-Sediment Pore Water, and Fish in Mountain Creek Lake, Dallas, Texas, 1994–96

By S.A. Jones, P.C. Van Metre, J. Bruce Moring, C.L. Braun, J.T. Wilson, *and* B.J. Mahler

Abstract

Mountain Creek Lake is a reservoir adjacent to two U.S. Department of the Navy facilities, the Naval Weapons Industrial Reserve Plant and the Naval Air Station in Dallas, Texas. A Resource Conservation and Recovery Act Facility Investigation found ground-water plumes containing chlorinated solvents on both facilities. These findings led to a U.S. Geological Survey study of Mountain Creek Lake adjacent to both facilities between June 1994 and August 1996. Bottom sediments, lake water, bottom-sediment pore water, and fish were collected for chemical analysis.

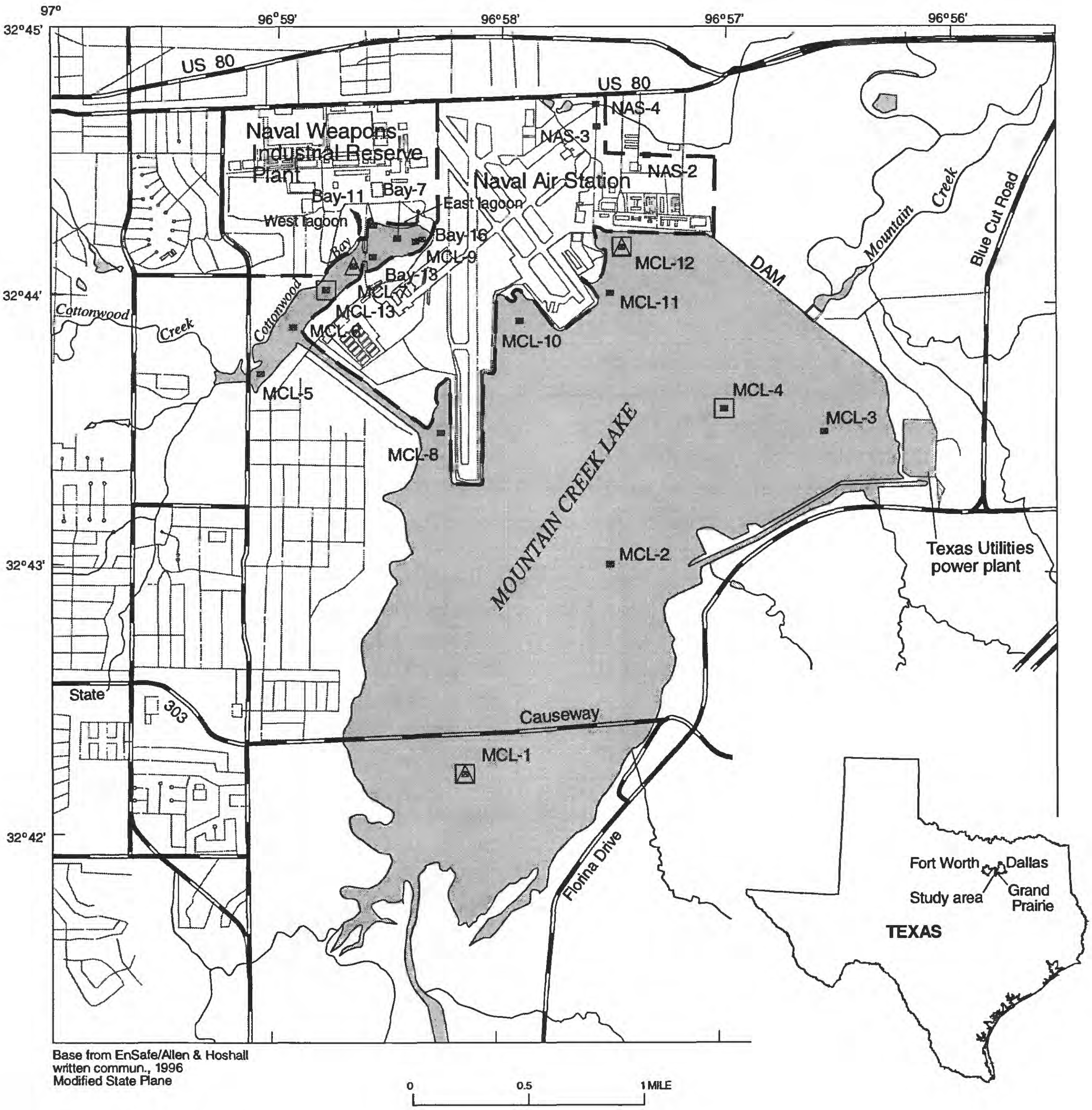
INTRODUCTION

Mountain Creek Lake, a reservoir on Mountain Creek in Dallas, Texas, has two U.S. Department of the Navy facilities on its northwest shore (fig. 1). A Resource Conservation and Recovery Act Facility Investigation is being conducted by the Southern Division Naval Facilities Engineering Command (SOUTHDIV) at the Naval Weapons Industrial Reserve Plant (NWIRP) in Dallas. A base closure is underway at the adjacent Naval Air Station (NAS). Monitoring and evaluation of potential contamination sites at the NWIRP and NAS by a private consulting firm indicated the possibility of on-site and off-site contamination (Jeffrey James, EnSafe/Allen & Hoshall, written commun., 1994, 1996, and 1997). Concern for off-site contamination led SOUTHDIV to request that the U.S. Geological Survey (USGS) determine if selected chemical constituents could be detected in Mountain Creek Lake and adjacent streams. In June 1994, the USGS began the collection and chemical analysis of lacustrine bottom sediments, lake water, bottom-sediment pore water, and fish in Mountain Creek Lake, and bottom sediment from streams near the lake. Stormwater was monitored in a related study being conducted by the USGS. Results from sampling in 1994 and early 1995 (Phase I) led to an expanded second phase of study beginning in June 1995 (Phase II). Phase II was designed to refine the occurrence and distribution information collected in Phase I.

Two potential contaminant pathways from the Navy facilities to Mountain Creek Lake are ground-water discharge to the lake and stormwater runoff into the lake. The major constituents of concern in ground water are volatile organic compounds (VOCs)—especially trichloroethylene (TCE) and its degradation products dichloroethylene (DCE) and vinyl chloride (VC)—and chromium. A consultant to the Navy, EnSafe/Allen & Hoshall (E/A&H), mapped plumes of TCE and chromium in shallow ground water that extend to the lake shore along the northeastern part of Cottonwood Bay (fig. 2). TCE also has been detected in water samples from the two lagoons that receive stormwater runoff from the NWIRP and discharge to the lake. Semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals have been detected in sediments in the two lagoons on the NWIRP site, and SVOC and PCB soil contamination sites have been identified on the NAS (Jeffrey James, EnSafe/Allen & Hoshall, written commun., 1994, 1996, and 1997).

Purpose and Scope

The purpose of this report is to present chemical data from the analysis of lacustrine bottom sediments, lake water, bottom-sediment pore water, and fish in Mountain Creek Lake, and bottom sediment from several small streams near the Navy facilities. Bottom-sediment samples were collected and analyzed for VOCs, SVOCs, pesticides, PCBs, polychlorinated naphthalenes (PCNs), carbon, major and trace



EXPLANATION

— — **Boundary of Naval Weapons Industrial Reserve Plant and Naval Air Station**

MCL-1 **Site ID**

▪ **Sediment sampling site**

□ **Lake-water sampling site**

△ **Fish sampling site**

Figure 1. Location of sediment, lake-water, and fish sampling sites for Phase I of the Mountain Creek Lake study, Dallas, Texas.

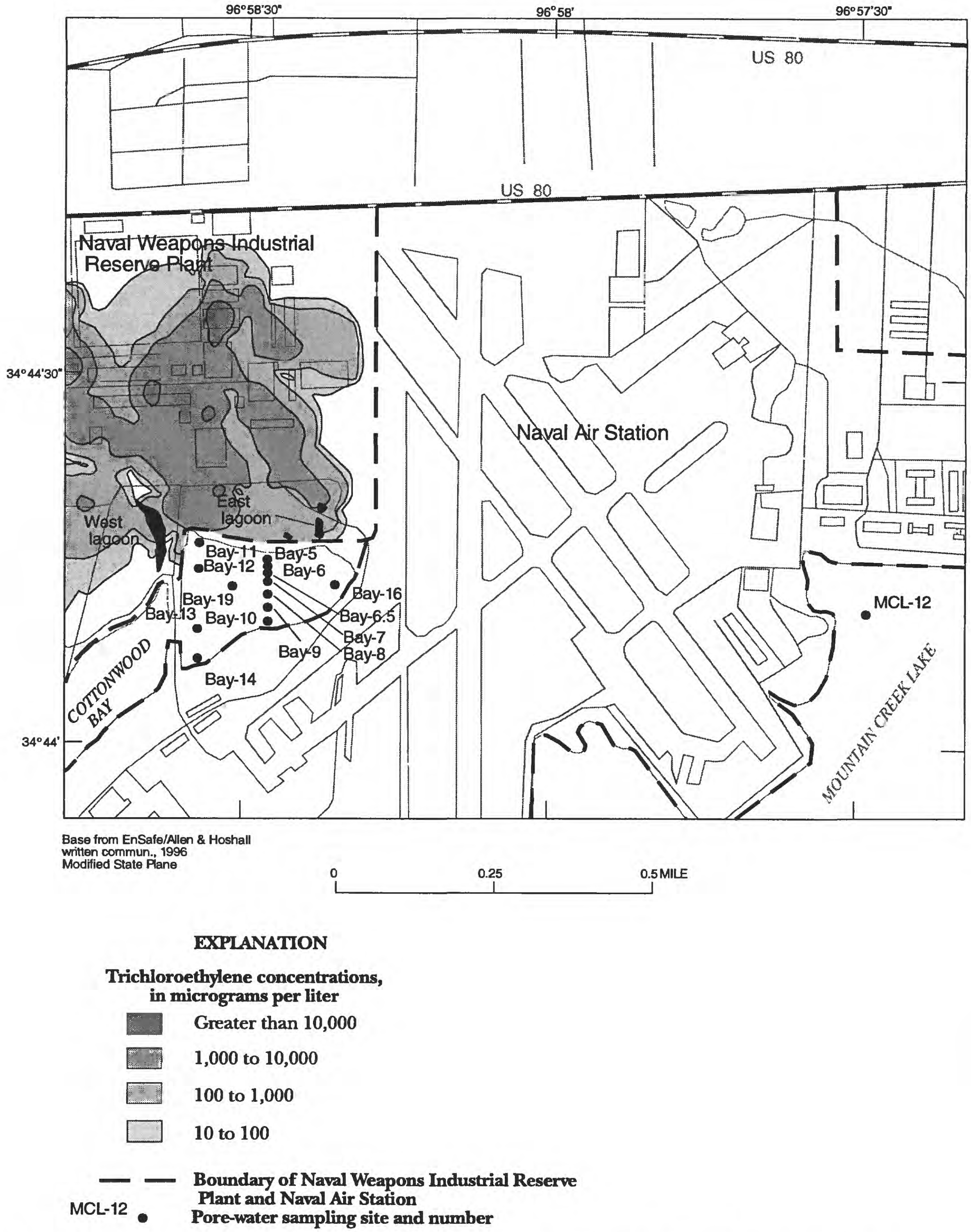


Figure 2. Location of pore-water sampling sites for Phase I of the Mountain Creek Lake study, and trichloroethylene concentrations as mapped by EnSafe/Allen & Hoshall at the Naval Weapons Industrial Reserve Plant, Dallas, Texas (Jeffrey James, EnSafe/Allen & Hoshall, written commun., 1996).

elements, grain size, cesium-137, and polycyclic aromatic hydrocarbons (PAHs) during 1994, 1995, and 1996. Lake-water samples were collected and analyzed for VOCs, selected pesticides, field properties, nutrients, carbon, and major and trace elements during October 1994. Bottom-sediment pore-water samples were collected and analyzed for VOCs and major and trace elements in 1994 and 1995. Fish samples were collected and analyzed for pesticides, PCBs, major and trace elements, VOCs, and SVOCs during 1994 and 1995. Not all constituents were analyzed for every site or for every sample.

Study Area

The study area is located in the cities of Dallas and Grand Prairie in north-central Texas (fig. 1). Mountain Creek Lake is south of the NWIRP and NAS (fig. 1) and is owned and operated by Texas Utilities. The dam on Mountain Creek was built in 1928 and serves as a source of cooling water for the Texas Utilities power plant. The 314-acre NWIRP facility began operation in 1941 and has manufactured military and commercial aircraft since that time. The facility is government-owned, and the contract operator is Northrup Grumman. The 837-acre NAS facility began operation in 1928 as Hensley Field. The projected base closure date is the end of 1998.

Acknowledgments

The authors acknowledge the cooperation and assistance of E/A&H with this project. E/A&H provided their on-site facilities for USGS use. The cooperation of personnel from the NAS and from Northrup Grumman, the contract operator at the NWIRP, also is acknowledged.

SITE SELECTION

Phase I

Seventeen lake sites in Mountain Creek Lake (including Cottonwood Bay) and 3 stream sites in the Mountain Creek drainage were selected for bottom-sediment sampling; 4 sites were selected for lake-water sampling; 10 sites were selected for bottom-sediment pore-water sampling; and 3 sites were selected for fish sampling during Phase I (table 1). Sampling locations were recorded in the field using a hand-held global positioning system (GPS) and were described relative to nearby landmarks.

Bottom Sediment

The 17 lake bottom-sediment sites sampled during Phase I were selected to broadly cover the entire lake with a bias to closer spacing of sites near the Navy facilities (fig. 1, table 1; MCL–1 through MCL–13, Bay–7, 11, 13, 16). The selection of each site was based on reconnaissance sediment-core sampling and on an understanding of sedimentation processes in reservoirs. Fine-grained sediments generally carry the vast majority of hydrophobic contaminants (constituents that tend to sorb to sediments), including trace elements, PAHs (a subgroup of SVOCs), and PCBs (Bradford and Horowitz, 1982). These sediments are widely dispersed in lakes and reservoirs and typically are transported into deeper, calmer waters before final deposition on the lake bottom. In Mountain Creek Lake, fine-grained sediments generally were 20 meters (m) or more from shore and in about 1-m-deep or deeper water. These areas of fine-grained sediment deposition were sampled during Phase I because hydrophobic contaminants commonly are present in the fine-grained sediments, rather than in the coarser sands and gravels near shore. Reconnaissance coring was done prior to collection of samples for chemical analysis to determine if fine-grained sediment was present at the proposed sampling site.

Nine of the lake sites were located in Cottonwood Bay between the NAS and the NWIRP (MCL–5, 6, 7, 9, 13, Bay–7, 11, 13, 16), and 4 sites were located in the main body of the lake near the NAS (MCL–8, 10, 11, 12). These 13 sites were located near potential contamination sources identified on the NWIRP and NAS facilities or near major stormwater outfalls from the facilities to the lake. The four remaining lake sites were located in the main body of the lake—3 sites in the pre-reservoir channel of Mountain Creek from near where the creek flows into the lake to near the dam (MCL–1, 2, 4), and 1 site near the shore opposite from the NAS near the Texas Utilities power plant (MCL–3). The 17 lake sites were located to provide a reconnaissance-level description of the extent of any contamination in bottom sediment and to determine background sediment chemistry for the lake.

Samples of deeper, older sediments also were collected at four sites in the lake (MCL–4, 7, Bay–11, 13). These consisted of vertically discrete samples collected by gravity core. Deeper sediment-core samples can provide information on historical changes in chemical concentrations (Van Metre and Callender, 1997). The

Table 1. Summary of samples collected and constituent groups analyzed during Phase I of the Mountain Creek Lake study, Dallas, Texas

[Page number of data in "Chemical Data" section. VOCs, volatile organic compounds; SVOCs, semivolatile organic compounds; PCBs, polychlorinated biphenyls; PCNs, polychlorinated naphthalenes]

Bottom-sediment samples

Site ID and type	Station number	Date	VOCs	SVOCs	Pesticides, PCBs, PCNs, carbon	Major and trace elements	Grain size	Cesium-137
MCL–1 box core	324210096581601	06–28–94		I–7—I–11	I–16	I–25—I–26	I–29	
		10–05–94			I–17		I–29	
MCL–2 box core	324301096572401	06–28–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–3 box core	324330096563301	06–28–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–4 gravity core	324341096570501	06–28–94		I–4—I–6	I–14	I–19—I–24	I–27	
box core		06–28–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–5 box core	324346096590601	06–29–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–6 box core	324343096590601	06–29–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–7 gravity core	324411096584201	06–29–94		I–4—I–6	I–14	I–19—I–24	I–28	
box core		06–29–94		I–7—I–11	I–16	I–25—I–26	I–29	
		10–05–94			I–17		I–29	
MCL–8 box core	324326096581701	06–29–94		I–7—I–11	I–16	I–25—I–26	I–29	
		11–04–94			I–17			
MCL–9 box core	324413096582701	06–30–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–10 box core	324356096575201	06–30–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–11 box core	324402096573101	06–30–94		I–7—I–11	I–16	I–25—I–26	I–29	
MCL–12 box core	324411096572901	06–30–94		I–7—I–11	I–16	I–25—I–26	I–29	
		10–05–94			I–17		I–29	
MCL–13 box core	324400096585101	11–04–94		I–7—I–11	I–17	I–25—I–26		
Bay–7 gravity core	324413096582801	01–24–95	I–2—I–3					
box core		11–02–94		I–7—I–11	I–17	I–25—I–26		
Bay–11 gravity core	324416996583401	01–24–95	I–2—I–3					
box core		11–02–94		I–7—I–11				
Bay–13 gravity core	324409096583401	01–23–95	I–2—I–3	I–4—I–6	I–14—I–15	I–19—I–24	I–28	I–30
Bay–16 box core	324413096582101	11–02–94		I–7—I–11	I–17	I–25—I–26		
NAS–2 streambed	324432096572301	10–05–94		I–12—I–13	I–18		I–29	
NAS–3 streambed	324436096573501	10–05–94		I–12—I–13	I–18		I–29	
NAS–4 streambed	324444096573701	10–06–94		I–12—I–13	I–18		I–29	

Lake-water samples

Site ID	Date	VOCs	Pesti-cides	Properties, nutrients, carbon, major and trace elements
MCL–1	10–12–94	I–31	I–32	I–33—I–34
MCL–4	10–12–94	I–31	I–32	I–33—I–34
MCL–12	10–12–94	I–31	I–32	I–33—I–34
MCL–13	10–12–94	I–31	I–32	I–33—I–34

Bottom-sediment pore-water samples

Site ID	Station number	Date	VOCs	Major and trace elements
MCL–12	324411096572901	01–24–95	I–35—I–39	I–40
Bay 6.5	324414096582802	11–03–94	I–35—I–39	
Bay 7	324413096582801	11–03–94	I–35—I–39	I–40
Bay 8	324412096582801	11–03–94	I–35—I–39	
Bay 11	324416096583401	11–03–94	I–35—I–39	I–40
Bay 12	324414096583401	11–02–94	I–35—I–39	
Bay 13	324409096583401	11–02–94	I–35—I–39	I–40
Bay 14	324407096583401	11–02–94	I–35—I–39	
Bay 16	324413096582101	11–03–94	I–35—I–39	
Bay 19	324413096583101	11–03–94	I–35—I–39	

Table 1. Summary of samples collected and constituent groups analyzed during Phase I of the Mountain Creek Lake study, Dallas, Texas—Continued

Fish-tissues samples

Site ID	Date	Pesticides, PCBs	Major and trace elements
MCL–1	September 1994	I–41	I–42
MCL–7	September 1994	I–41	I–42
MCL–12	September 1994	I–41	I–42

number of samples collected down gravity cores varied depending on core lithology and potential contamination history. At each sampling site, 2 to 13 vertically discrete samples were analyzed for organic constituents and 2 to 36 vertically discrete samples were analyzed for trace elements.

Streambed sediments were collected at three sites near the NAS property line to determine chemical characteristics of bottom sediments in streams draining the facility (NAS–2, 3, 4). All three drainages contain possible contamination sources identified on the facility, and all three drain to Mountain Creek downstream from Mountain Creek Lake.

Lake Water

Lake-water samples were collected at four sites, MCL–1, 4, 12, and 13 (fig. 1, table 1). The sites were located to measure water quality in areas where contamination was expected (MCL–12 and MCL–13), in the main body of the lake (MCL–4), and at the background site (MCL–1). Sites were co-located with sediment- and fish-sampling sites (MCL–1, MCL–12) to provide information on all three media at these locations.

Bottom-Sediment Pore Water

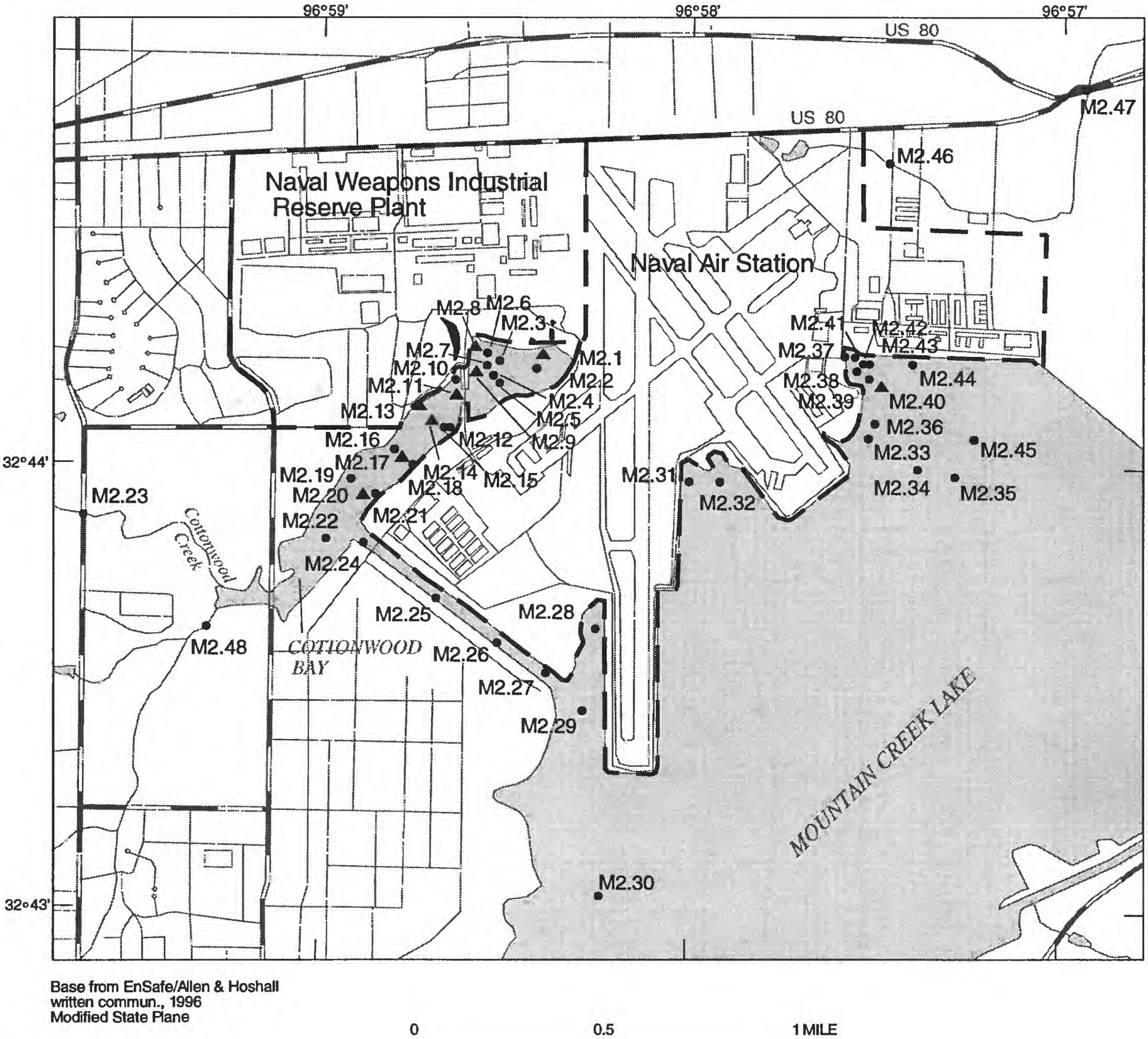
Thirteen sites in the northeastern end of Cottonwood Bay were identified for field screening of VOCs in pore water (fig. 2; Bay–5 to Bay–14, Bay–16, 19). These sites were selected on the basis of ground-water plume maps provided by E/A&H and on hypothesized flowpaths of shallow ground water into the lake. A transect of sites, BAY–5 through BAY–10, is located normal to the lake shoreline and in the center of where the plume contacts the lake. Sites in the prereservoir stream channel and to the south of the channel near the NAS shore also were included. Bulk sediment samples collected at the 13 sites were screened in the field using a field gas chromatograph (GC) for the presence of tetrachloroethylene (PCE), TCE, DCE, benzene, toluene, and m-xylene. Samples were collected for laboratory analysis of VOCs at 9 of those sites (Bay–6.5, 7, 8, 11, 12, 13, 14, 16, 19), and samples were collected for major and trace element analysis at 3 sites (Bay–7, 11, 13) (table 1). Sites and depths where pore-water samples were extracted for laboratory analysis were selected in the field on the basis of results of field screening. A tenth site, in the body of the lake near the NAS shore (MCL–12), also was sampled for laboratory analysis of VOCs and major and trace elements in pore water (table 1).

Fish

Fish from three sites were sampled to make an initial assessment of contaminants in fish tissues (fig. 1, table 1; MCL–1, 7, 12). Fish and other aquatic organisms bioaccumulate hydrophobic organic compounds because of the high lipid solubility of these compounds. Fish sampling sites overlap or are immediately adjacent to bottom-sediment and lake-water sampling sites. This overlap can help define the distribution of contaminants among media and aid in the identification of the sources and fate of potential contaminants. Two of these sites (MCL–7, 12) were selected to measure potential contamination near the Navy facilities. The third site (MCL–1) was selected to describe background conditions in the lake; however, because of their mobility, fish from all parts of the lake could be affected by localized contaminants.

Phase II

Forty-four lake sites in Mountain Creek Lake and 4 stream sites were sampled for bottom sediments (fig. 3), and 11 fish-collection areas were identified for collection of fish (fig. 4) during Phase II to better define



EXPLANATION

— — **Boundary of Naval Weapons Industrial Reserve Plant and Naval Air Station**

M2.2 ● **Sediment sampling site and ID—** 1 sample at this site

M2.1 ▲ **Sediment sampling site and ID—** More than 1 sample at this site

Figure 3. Location of sediment sampling sites for Phase II of the Mountain Creek Lake study, Dallas, Texas.

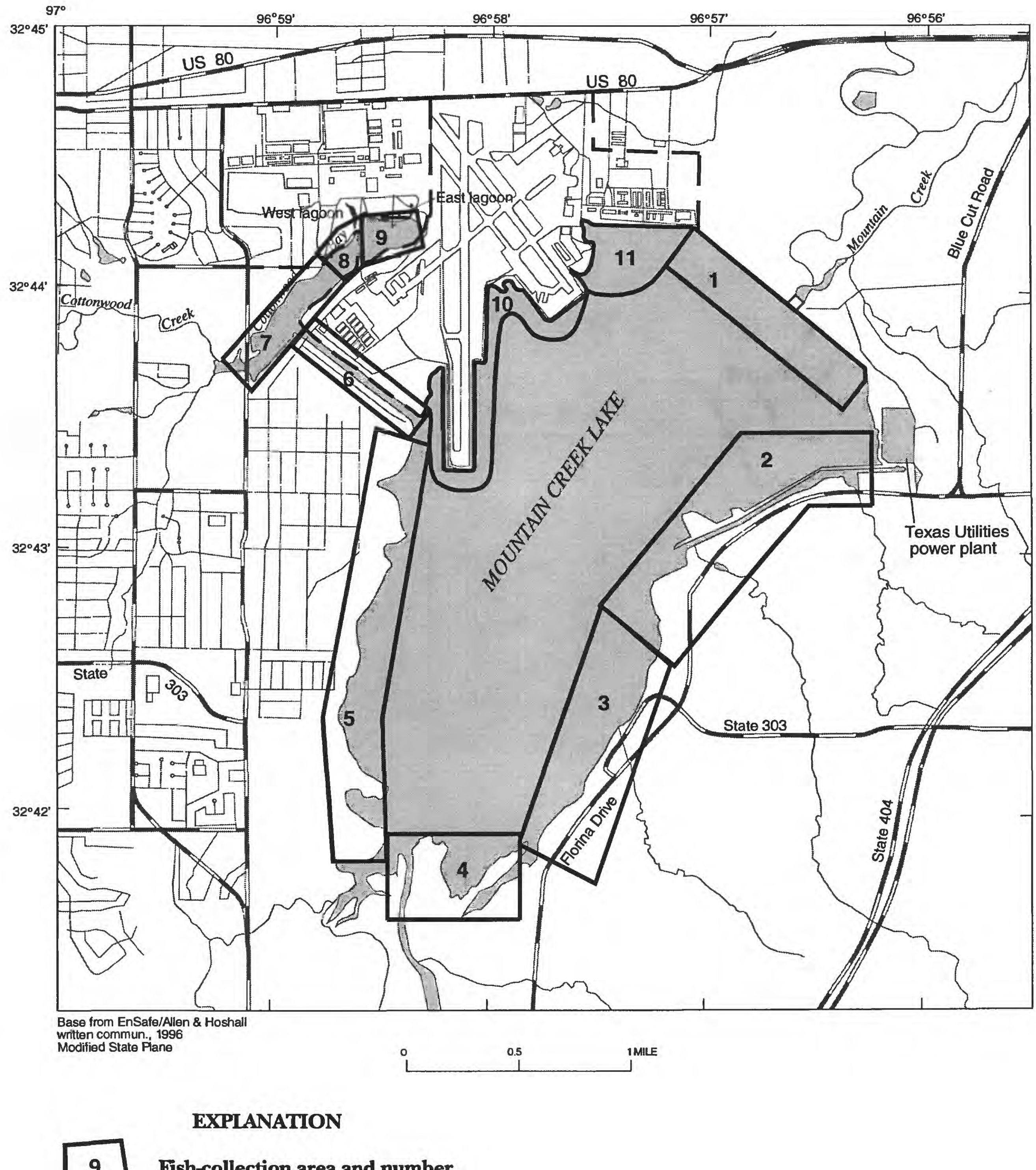


Figure 4. Location of fish-collection areas for Phase II of the Mountain Creek Lake study, Dallas, Texas.

the extent of contamination in the lake and nearby streams. Phase II samples were collected between June 1995 and August 1996. Sites were located using a GPS with a reported accuracy of 1 m.

Bottom Sediment

The 44 lake sites sampled during Phase II (fig. 3, table 2) were designed to map in more detail the distribution of contaminants in areas where contamination was found during Phase I and to identify outfalls that were potential sources of bottom-sediment contamination. Samples were collected from the top 3 centimeters (cm) of sediment at all 44 sites. At eight locations in the bay (M2.1, M2.8, M2.9, M2.11, M2.13, M2.14, M2.17, M2.20), one or two deeper layers of sediment also were collected using the box corer. At M2.40, multiple samples of deeper sediments were collected using the gravity corer.

Twenty-nine sites were sampled in Cottonwood Bay (M2.1 through M2.22), the canal connecting Cottonwood Bay and the main body of Mountain Creek Lake (M2.24 through M2.27), and along the southern shoreline of the NAS near the runway (M2.28 through M2.30). Cottonwood Bay was sampled to obtain the spatial distribution of contaminants and to provide data to estimate the mass of contaminated sediment present. Cottonwood Bay sites (M2.1 through M2.22) were distributed throughout the bay and included sites adjacent to major stormwater outfalls and solid-waste-management units (SWMUs) that could potentially contribute contaminants to the lake. The canal and runway sites were used to determine if PAHs, detected at MCL–8 during Phase I, were being moved by currents from the bay through the canal and into the main lake, or if there was a source of PAHs along the north shore of the canal or the inlet just west of the runway. The site south of MCL–8 (M2.30) was sampled to determine the spread of PAHs into the lake.

Nine samples were collected at sites along the east side of the NAS, between near-shore sites where relatively larger concentrations of some contaminants were found during Phase I, and in the middle of the lake, where relatively smaller concentrations were found (M2.31 through M2.36, M2.40, M2.44, M2.45).

Six sites were sampled in the inlet near the east side of the NAS in shallow, near-shore areas (M2.37, M2.38, M2.39, M2.41, M2.42, M2.43). The data from Phase I were used to test two assumptions. The first assumption is that contaminants are associated predominantly with fine-grained sediments. The second assumption is that contaminant concentrations in areas of fine-grained sediments have relatively large lateral correlation scales, and therefore, a single-point sample is representative of a larger area. These assumptions are based on a conceptual model of how hydrophobic contaminants sorb onto sediments and how sediments are deposited. Concentrations of trace elements and hydrophobic organic contaminants (including PCBs and PAHs) have been shown to be strongly correlated with grain size and percent organic carbon of sediments, respectively (Horowitz and Elrick, 1987; Smith and others, 1988). Fine-grained sediments transported to the lake (generally during storms) are expected to disperse and be deposited as the water velocity decreases. Fine-grained sediments deposited in shallow, near-shore areas are subject to resuspension by wave action and periodic lowering of lake levels. Resuspended sediments are deposited and resuspended until they finally are deposited in deeper waters with less turbulence where they generally remain for long periods of time. Therefore, contaminant concentrations are expected to be relatively small in shallow, near-shore sediments that are predominantly sand. Concentrations in horizontal layers of fine-grained sediments in deeper waters are expected to be relatively larger and uniform over distances of tens of meters.

In addition to the 44 lake sites, 4 streambed sites were sampled during Phase II (M2.23, M2.46, M2.47, M2.48). Sediment contamination was found in samples from streambeds draining the northeast part of the NAS during Phase I. To investigate off-site transport, two sites downstream from the contaminated areas were sampled in Phase II (M2.46, M2.47). The site locations were chosen downstream of Phase I sites on the basis of a reconnaissance of the stream channels. Samples also were collected from the north and south branches of Cottonwood Creek west of the bay (M2.23 and M2.48) to assess chemistry of sediments entering the bay from Cottonwood Creek drainage, a mixed land-use area of Grand Prairie that includes some commercial and residential development.

Fish

Selection of areas for collection of fish samples (fig. 4) was based on both the results of a fishing-behavior survey that indicated primary recreational fishing locations and species caught, and the need to represent the entire range in expected contaminant

Table 2. Summary of samples collected and constituent groups analyzed during Phase II of the Mountain Creek Lake study, Dallas, Texas

[Page number of data in "Chemical Data" section. PAHs, polycyclic aromatic hydrocarbons; PCBs, polychlorinated biphenyls; PCNs, polychlorinated naphthalenes; VOCs, volatile organic compounds; SVOCs, semivolatile organic compounds]

Bottom-sediment samples

Site ID and type	Station number	Date	PAHs	Pesticides, PCBs, PCNs	Major and trace elements, carbon	Grain size	Cesium-137
M2.1 box core	324415096582405	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.2 box core	324413096582505	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.3 box core	324414096583105	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.4 box core	324412096583205	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.5 box core	324411096583105	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.6 box core	324414096583305	07–11–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.7 box core	324412096583205	07–11–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.8 box core	324416096583505	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.9 box core	324414096583405	07–10–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.10 box core	324411096584001	05–16–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.11 box core	324411096584205	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.12 box core	324406096583901	05–17–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.13 box core	324408096584405	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.14 box core	324406096584205	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.15 box core	324405096584005	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.16 box core	324402096584805	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.17 box core	324402096584805	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.18 box core	324400096584505	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.19 box core	324358096585505	06–20–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.20 box core	324356096585305	06–20–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.21 box core	324356096585105	06–19–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.22 box core	324350096585905	06–20–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.23 streambed	324399096597201	08–19–96	II–16	II–21			
M2.24 box core	324350096585301	05–16–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.25 box core	324342096584101	05–17–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.26 box core	324336096583101	05–16–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.27 box core	324332096582401	05–16–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.28 box core	324338096581505	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.29 box core	324327096581705	06–17–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.30 box core	324302096581405	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.31 box core	322358096580005	06–17–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.32 box core	324358096575505	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.33 box core	324404096573105	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.34 box core	324400096572305	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.35 box core	324400096571701	05–14–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.36 box core	324406096573005	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.37 box core	324414096573301	05–15–96	II–6—II–15	II–18—II–20	II–23—II–26	II–27—II–28	
M2.38 box core	324414096573201	05–15–96	II–6—II–15	II–18—II–20	II–23—II–26	II–27—II–28	
M2.39 box core	324412096573105	06–18–96	II–6—II–15	II–18—II–20	II–23—II–26	II–27—II–28	
M2.40 gravity core	324411096572901	05–15–96	II–2—II–5	II–17	II–22	II–27	II–29
box core		05–15–96			II–23—II–26		
M2.41 box core	324415096582401	05–15–96	II–6—II–15	II–18—II–20	II–23—II–26		
M2.42 box core	324415096573401	05–15–96	II–6—II–15	II–18—II–20	II–23—II–26	II–27—II–28	
M2.43 box core	324415096573201	05–15–96	II–6—II–15	II–18—II–20	II–23—II–26	II–27—II–28	
M2.44 box core	324414096572405	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.45 box core	324404096571405	06–18–96	II–6—II–15	II–19—II–20	II–23—II–26	II–27—II–28	
M2.46 streambed	324470096574501	08–20–96	II–16	II–21			
M2.47 streambed	324485096569901	08–20–96	II–16	II–21			
M2.48 streambed	324372096594501	08–19–96	II–16	II–21			

Table 2. Summary of samples collected and constituent groups analyzed during Phase II of the Mountain Creek Lake study, Dallas, Texas—Continued

Fish-tissues samples

Fish-collection area	Date	VOCs	SVOCs	Pesticides, PCBs	Major and trace elements
1	June–August 1995				
2	June–August 1995	II–30—II–31	II–32—II–33	II–34—II–39	II–40—II–43
3	June–August 1995				
4	June–August 1995			II–34—II–39	II–40—II–43
5	June–August 1995				
6	June–August 1995				
7	June–August 1995	II–30—II–31	II–32—II–33	II–34—II–39	II–40—II–43
8	June–August 1995	II–30—II–31	II–32—II–33	II–34—II–39	II–40—II–43
9	June–August 1995			II–34—II–39	II–40—II–43
10	June–August 1995	II–30—II–31	II–32—II–33	II–34—II–39	II–40—II–43
11	June–August 1995			II–34—II–39	II–40—II–43

concentrations. Most areas of collection overlap sites where surficial bottom-sediment samples were collected. Within selected collection areas, sampling efforts were focused on suitable habitats for the target taxa such as emergent or submergent macrophyte (aquatic plant) beds, undercut banks, and physical structures such as old tires and woody or concrete debris. Fish were collected at 7 of the 11 fish-collection areas identified (2, 4, 7, 8, 9, 10, 11).

COLLECTION METHODS

Most of the data included in this report were collected using methods of the USGS National Water-Quality Assessment (NAWQA) Program. Descriptions of methods used to collect bottom-sediment, lake-water, bottom-sediment pore-water, and fish samples are given below.

Bottom Sediment

Two types of sediment samplers were used during this investigation: box corers and gravity corers. At sites where surficial samples were collected by box core, a gravity core was collected to determine the thickness and character of lacustrine sediments. The gravity core was collected by free-falling the core barrel into the bottom sediment. The core was extruded and described on site. Each core penetrated the prereservoir land surface, providing an approximate date marker of 1928. The core description included color, texture, presence of biota and detrital matter, and identification of the boundary between lacustrine sediment and prereservoir sediment.

Box cores were collected using a 15- by 15- by 20-cm Wildco box corer (fig. 5) (Van Metre and Callender, 1997). The sampler was lowered very gently by rope or by cable from a winch into the lacustrine sediments, then immediately raised to avoid pushing sediment up through the top screen of the sampler. The top 3 cm of the sample were extruded by sliding the plexiglass liner down onto a piston, which pushed the sample up into an empty liner. A plexiglass plate was used to horizontally slice off the sample, which was then homogenized and placed into sample containers for shipment to the laboratory. The box corer provided more material for analysis for an equivalent thickness of sediments and collected a less disturbed sample of surficial sediments than the gravity corer. Sampling the top 3 cm provided consistency and comparability among samples from different locations. One or two deeper intervals, usually 3 to 9 cm and 9 to 15 cm, were sampled from box cores at eight sites in the bay during Phase II. These samples were collected from the same box-core sample used for the 0- to 3-cm interval.

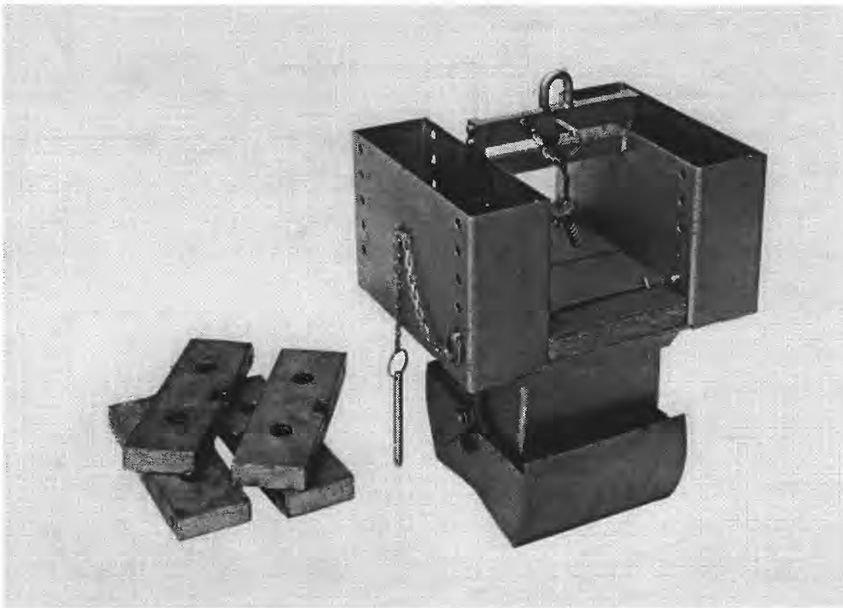


Figure 5. Wildco box corer used for collecting box cores from surficial lake-bottom sediments. Photograph provided by Betty A. Phillips, Wildco Wildlife Supply Co., Saginaw, Mich.

Gravity cores were collected using a 3-m-long, 6.5-cm-diameter, Benthos gravity corer (fig. 6). Core liners for the Benthos gravity corer were used only once and came from the manufacturer individually wrapped. They are made of macrolon polycarbonate plastic. Cores were collected by inserting a liner into the sample barrel and free falling the sample barrel from a boom on the boat into the lacustrine sediments. A winch was used to raise the sampler back onto the boat where the liner was removed, capped, labeled, and stored vertically until it could be returned to shore for subsampling. The cores were subsampled as soon as possible after collection. The approach for subsampling a core is to vertically extrude the sample, using a piston that fits snugly inside the core liner and is mounted in a wooden stand. Samples of the desired vertical interval are then sliced off with a thin stainless steel plate. The sample is transferred to an appropriate container for shipment to the laboratory.

Pesticide, PCB, SVOC, and organic carbon samples were collected in 500-milliliter (mL) baked-glass wide-mouth jars. Inorganic samples, including trace elements and cesium-137, were collected in 125-mL acid-washed Nalgene jars. Grain-size samples were collected in sealable plastic bags.

Bulk-sediment (sediment and pore-water) samples for VOC analysis were collected by removing bulk sediment from the middle of each vertically extruded subsample from a gravity core and transferring it to a vial for field screening or laboratory analysis. The transfer was done using a plastic syringe with an open mouth. The center of the 5-cm core sample was plugged using the syringe. The syringe was then inserted into the vial, and the sample extruded. The vial was filled in this manner to prevent head space in the sample container.

Streambed sediments were collected following the methods of Ward and Harr (1990). The surficial material from the streambed was collected and composited, then wet sieved in the field using native water. The less-than-0.063-millimeter (mm) fraction (silt and clay) was retained for inorganics analyses. The less-than-2-mm fraction was retained for organics analyses. Wet sieving provides better comparability among samples because smaller grain size corresponds to a greater specific surface area, to which many trace contaminants adsorb.

Lake Water

Prior to sample collection, a vertical profile of temperature, pH, specific conductance, and dissolved oxygen was made. Field properties were measured at 0.6-m intervals by lowering a tube to the desired depth and pumping water to the surface. Because no thermocline or oxycline was indicated by the field properties, one depth-integrated sample was collected at each site. Depth-integrated lake-water samples were

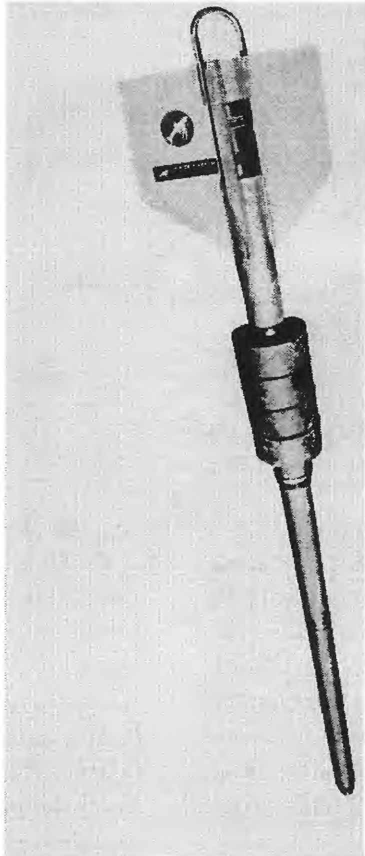


Figure 6. Benthos gravity corer used for collecting long cores from lake sediments. Photograph provided by Peter Zentz, Benthos, Inc., North Falmouth, Mass.

collected using a D–77 sampler (fig. 7). The D–77 sampler is epoxy coated to prevent trace element contamination of the sample. Approximately 3 liters (L) of water can be collected each time the sampler is lowered into the lake; when lowered and raised at a constant rate, the sampler collects a depth-integrated sample. Sample-processing procedures (compositing, filtering, and treating samples) were done following USGS protocols (Ward and Harr, 1990).

Bottom-Sediment Pore Water

Bottom-sediment pore-water samples were collected for field screening and laboratory analysis. The 0- to 5-cm subsample and two or three additional subsamples from gravity cores of bottom sediments were field screened for VOCs using a portable GC. The GC was calibrated with laboratory-prepared standards of PCE, TCE, cis-1,2-DCE, benzene, toluene, and m-xylene. Selected intervals were chosen from the cores based on hydrocarbon odors or distinctive colors. Ten mL of sediment from the middle of each interval was transferred to a 40-mL VOC analysis vial and mixed with 10 mL of organic-free deionized (DI) water. The vial was shaken for 1 minute and allowed to stand for 1 minute. Headspace air was removed by syringe and injected into the GC for analysis. In addition, pore water squeezed from selected core intervals was placed into vials and shaken for 1 minute. A headspace sample from the pore water then was injected into the GC for analysis.

Samples for laboratory analysis were collected at various depth intervals from 10 cores. The samples were transferred to an RG core squeezer (fig. 8), covered with a latex liner and capped. The sample was then compressed with nitrogen gas to squeeze the pore water out of the sediment. The pore water was recovered from an outlet port on the bottom of the squeezer using a glass syringe and transferred to a 20-mL vial. The vials

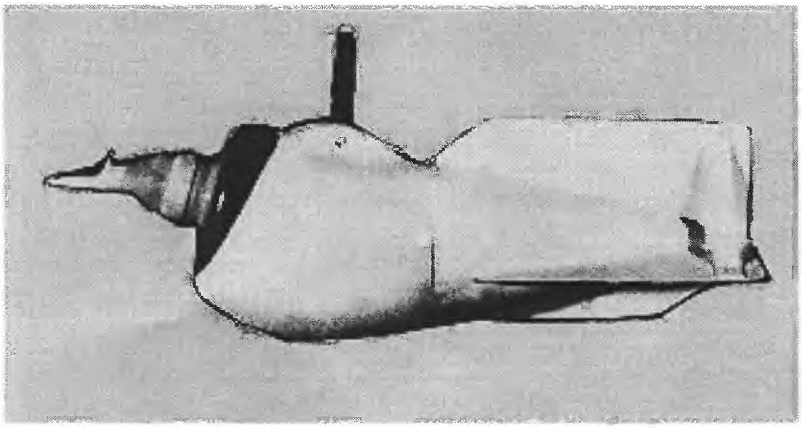


Figure 7. D-77 sampler used for collecting lake water.

were filled with a measured amount of organic-free distilled water to exclude any head space, capped, and chilled to 4 degrees Celsius (°C) for shipment to the laboratory. At some sites a second core was collected, and pore-water samples were removed for the analysis of trace elements. Pore-water sampling for trace elements was similar to that for VOCs except organic-free water was not added, acid-rinsed poly containers were used, and the samples were acidified to pH of 2 with nitric acid (HNO_3).

Fish Tissues

In Phase I, three composite samples of four or five fish each for whole-body common carp (*Cyprinus carpio*) and largemouth bass (*Micropterus salmoides*) fillets were collected and analyzed. In Phase II, individual fish were collected and analyzed. Phase II samples included largemouth bass, common carp, and channel catfish (*Ictalurus punctatus*), and sample types included fillets with skin off, fillets with skin on, and eviscerated whole fish.

In September 1994 (Phase I), fish were collected using an electrofishing boat. The boat generates a direct current that attracts fish to a deployed anode array (fig. 9) where the fish are netted. Collected fish were placed in an on-board, aerated holding tank that contained water from the site.

During Phase I, 23 common carp and 29 largemouth bass were collected. Carp were collected for whole-body analysis of pesticides and PCBs. The fish were individually weighed (nearest gram), measured for total and standard lengths, rinsed with DI, double-wrapped in heavy-duty aluminum foil, and frozen on site with dry ice. Individual whole fish were composited at the laboratory prior to analysis. Each sample was a composite of four or five fish. Fillet samples were collected as whole, skinless fillets excised from the left side of each largemouth bass after the fish had been weighed, measured, and rinsed with DI water (Crawford and Luoma, 1994). Individual fillets were double-wrapped in aluminum foil and frozen on dry ice. Fillet samples were composited at the laboratory. Each sample was a composite of fillets from five fish.

Liver tissues were collected from each bass and carp and analyzed for major and trace elements. Fish collected for liver tissues were individually weighed, measured, and rinsed with DI water. From 3 to 5 grams (g) of liver tissue were excised from each fish from lobe(s) opposite the gall bladder, with a minimum of 10 g (wet weight) required for a composite sample. Samples were frozen on site with dry ice pending shipment to the laboratory for analysis.

Phase II sampling was completed during June, July, and August 1995 using an electrofishing boat and gill nets. Collection efforts targeted a piscivorous species (largemouth bass), a facultative omnivore (channel catfish), and a bottom-feeding omnivore (common carp). Gill nets were deployed if a target taxon, particularly channel catfish, could not be collected by electrofishing. Gill nets were deployed overnight in fish-collection areas 2, 7, and 10 (fig. 4).

Phase II sampling included three types (or media) of tissue: fillets with skin on, fillets with skin off, and eviscerated (gutted) whole fish (table 3). Numbers of fish, tissues type, and groups of constituents analyzed are summarized in table 3. The target sample size of 10 fish of each species and tissues type (table 3) was

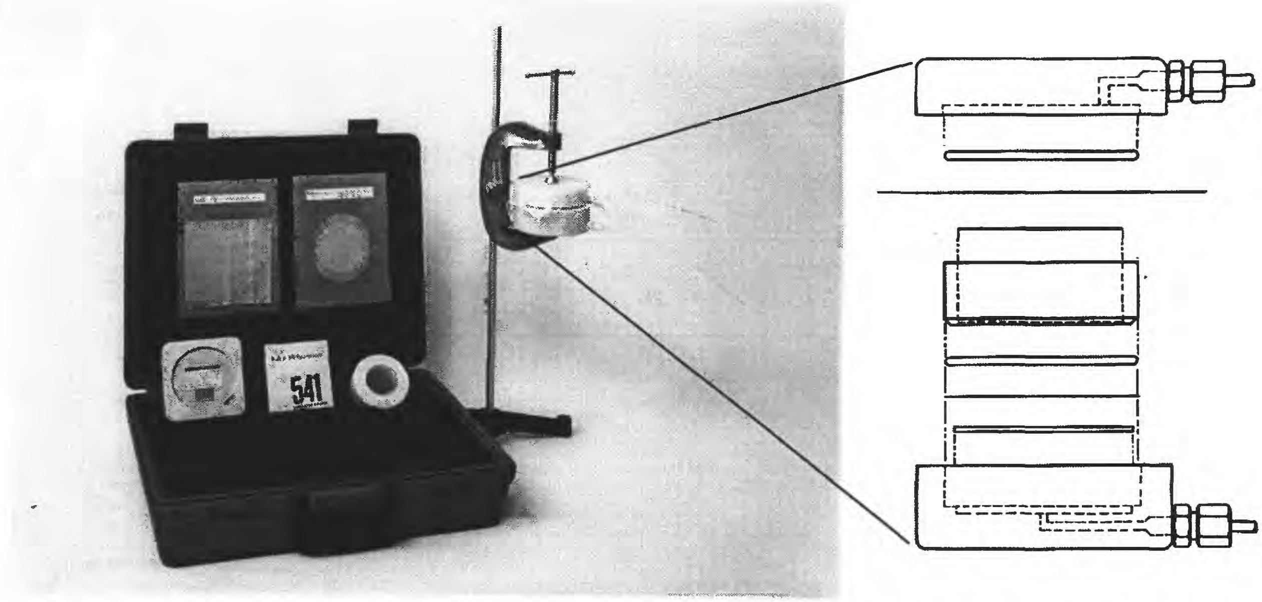


Figure 8. RG core squeezer used for collecting pore water from bottom-sediment cores. Photograph provided by Betty A. Phillips, Wildco Wildlife Supply Co., Saginaw, Mich.

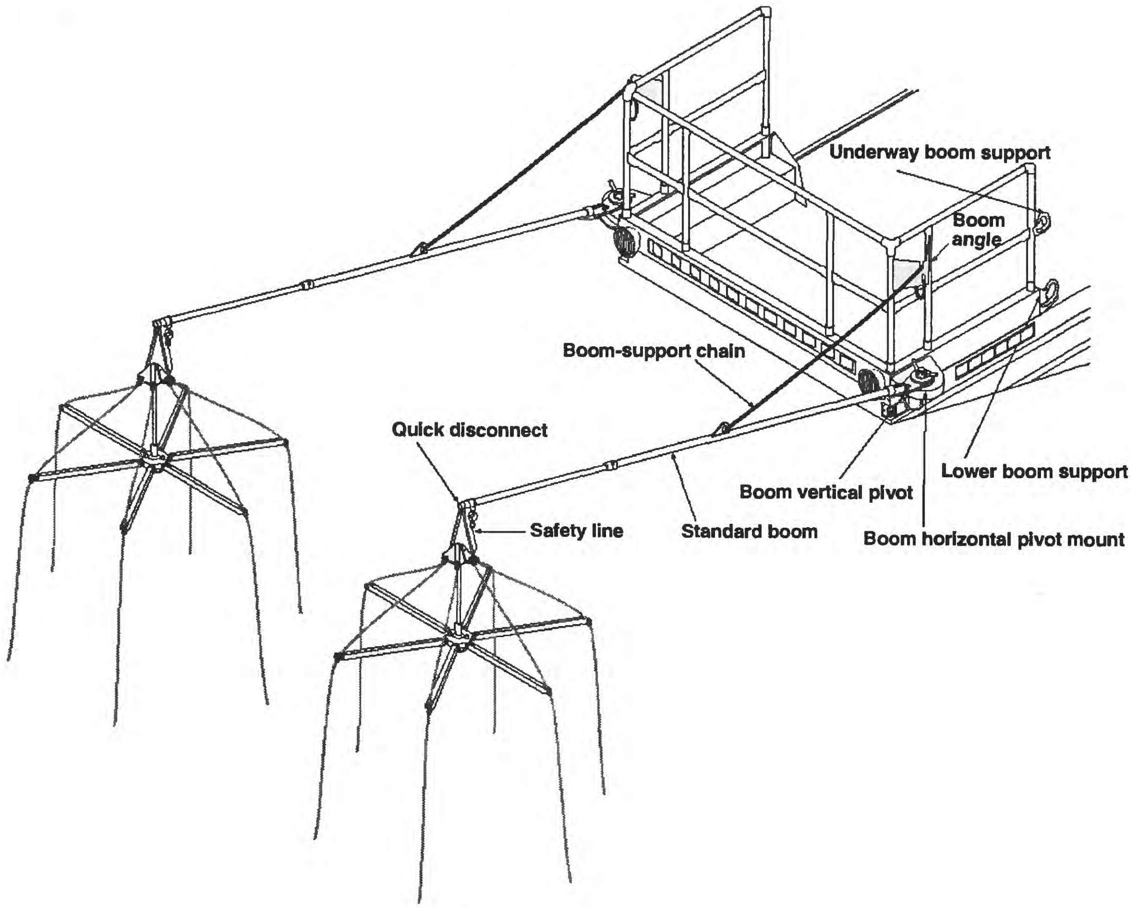


Figure 9. Anode array on electrofishing boat.

Table 3. Species, size range, sample type, and constituent groups analyzed for fish collected during Phase II of the Mountain Creek Lake study, Dallas, Texas

[mm, millimeters; VOCs, volatile organic compounds; SVOCs, semivolatile organic compounds; PCBs, polychlorinated biphenyls; –, not applicable]

Species	Size range (total length in mm)	Sample type					
		Fillet (skin off)[1]			Fillet (skin on)[1]	Eviscerated whole fish	
		VOCs, SVOCs	Pesticides, PCBs	Major and trace elements	Pesticides, PCBs	Pesticides, PCBs	Major and trace elements
Largemouth bass	304–352	–	13	10	10	–	–
Channel catfish	327–570 (fillets) 240–523 (whole)	5	10	15	10	9	11
Common carp	420–496	–	10	9	–	–	–

[1] Fillets (skin off) and fillets (skin on) were from opposites sides of the same fish.

achieved with the exception of the collection of only 9 whole-body, eviscerated, channel catfish for analysis of organic compounds. Size ranges for largemouth bass (304 to 352 mm) and common carp (420 to 496 mm) were within 25 percent of maximum size as planned. The initial set of bass tissues submitted for analysis were from fish less than the 16-inch (in.), or 400-mm, Texas size restriction. Three additional bass greater than 16 in. were submitted for analysis for pesticides and major and trace elements on the basis of a recommendation from the Texas Department of Health (Kirk Wiles, Texas Department of Health, oral commun., 1996). Difficulties experienced in collecting channel catfish precluded meeting size restrictions across all tissue sample types.

Collected fish were held in aerated holding tanks containing native water until sample preparation. Each fish was sacrificed, individually weighed, sexed if possible, measured for standard and total length, and rinsed with DI water. The left-side fillet (skin-off) was removed from the fish, weighed, and subsampled for trace element and organic analyses, and the remaining sample was double-wrapped in aluminum foil. The 10- to 20-g subsample for trace element analysis was placed in a Nalgene jar. The 3- to 5-g subsample for VOC analysis was placed in an amber VOC vial and frozen on site in dry ice. Subsamples for SVOCs, pesticides, and PCBs were placed in glass containers. The right-side fillet (skin-on) from the same fish was excised, weighed, and placed in a glass container for pesticide and PCB analysis. For eviscerated whole fish, an incision was made from just below the opercula to the anus, and all internal organs were removed. Each eviscerated fish was rinsed with DI water and double-wrapped in aluminum foil. All tissues samples were individually labeled with a unique sample identification number and frozen on site with dry ice pending shipment to the laboratory for analysis.

ANALYTICAL METHODS

Chemical results are listed in the "Chemical Data" section at the end of this report. Concentrations are reported three ways: less-than values, estimated values, or actual sample values. Less-than values indicate that the constituent was not detected above a specified concentration. Less-than values are based on the method reporting level, which is defined as the lowest concentration of a constituent that can be identified and quantitated within known statistical limits. The method reporting level may be raised due to high concentrations of target or non-target constituents. Estimated values are concentrations that are less than the method reporting level but greater than the method detection limit. These concentrations are identified as estimated values because of the uncertainty associated with concentrations less than the method reporting level. Estimated values are typically outside of the calibration range of the method.

Bottom Sediment

Grain-size analyses were done at the USGS sediment laboratory in Iowa City, Iowa, using the sieve and pipet methods (Carol Anderson, U.S. Geological

Survey, written commun., 1993). All chemical analyses for Phase I were done at the USGS National Water-Quality Laboratory (NWQL) in Arvada, Colo. Phase II organic sample analyses were done at the NWQL, and trace element analyses were done at a USGS National Research Program laboratory in Reston, Va. Phase I pesticide and PCB analyses were done by gas chromatography/electron capture detection (Wershaw and others, 1987). Phase I analyses for SVOCs were done following the methods of Foreman and others (1994). Phase II analyses for PAHs were done following Foreman and others (1994), and pesticide and PCB analyses were done on organic-solvent extracts using the extraction procedures described by Foreman and others (1994) and the quantification procedures described by Wershaw and others (1987). Phase I major and trace element concentrations were determined on concentrated-acid digests (nitric-hydrofluoric-perchloric acids) using inductively coupled plasma-atomic emission spectrometry (ICP-AES). Phase II analyses included ICP-AES and determination of chromium, lead, and zinc by graphite-furnace atomic adsorption; mercury by cold vapor; and selenium by hydride generation (Lichte and others, 1987; Fishman, 1993).

Lake Water

All chemical analyses were done by the NWQL using the procedures described in Fishman and Friedman (1989) and Fishman (1993). Major element concentrations were determined by colorimetric analysis, trace element concentrations were determined using ICP, and organic carbon concentrations were determined with a carbon analyzer. Pesticide concentrations were determined by gas chromatography/mass spectrometry (GC/MS) and by high pressure liquid chromatography. VOC analyses were done using GC/MS.

Bottom-Sediment Pore Water

All chemical analyses were done by the NWQL. VOC analyses were done using GC/MS, similar to U.S. Environmental Protection Agency (USEPA) method 524.2 (Donna Rose, U.S. Geological Survey, written commun., 1995). Major element concentrations were determined by colorimetric analysis, and trace element concentrations were determined using ICP (Fishman and Friedman, 1989).

Fish Tissues

All samples were prepared and analyzed by the NWQL. Composite samples (Phase I) and individual fish samples (Phase II) analyzed for pesticides and PCBs were first homogenized to form a single composite sample or homogenate. A10-g homogenate subsample was extracted with organic solvents and gel permeation chromatography (GPC) procedures to concentrate and remove lipids from the extract. Percent lipid was determined for each sample to allow for normalization of data as needed. Prepared extracts were analyzed by gas chromatography/electron capture detection (Lieker, 1994), and concentrations of individual compounds were quantified at a reporting level of 5.0 micrograms per kilogram (µg/kg) wet weight. PCBs and chlordane compounds were reported as aroclors 1242, 1254, and 1260, and as technical chlordane, respectively.

Liver tissues and fillets subsampled for trace element analysis were prepared by oven drying to a constant weight, dissolution of the sample by acid digestion and the addition of hydrogen peroxide (H_2O_2), and filtration of remaining insoluble materials (U.S. Geological Survey, 1993). Concentrations of trace elements were determined in the acid-digested biological material (Fishman and Friedman, 1989; Faires, 1993). Whole-body, eviscerated samples were homogenized using a stainless steel grinder, and a 20-g subsample split was retained for trace element analysis following the procedures described above. Reagent blanks, consisting of preweighed Whatman™ cellulose paper, were processed through the grinder to determine possible contamination from the grinding procedure.

VOCs were analyzed using a method similar to the method recommended by the USEPA for analysis of VOCs in fish tissues (Easley and others, 1981). Ten mL of organic-free water was added to each VOC subsample in a 3/4-in.-diameter glass test tube and then spiked with a surrogate solution. The sample was then sonified with a sonic disrupter for 2 minutes in an ice bath and then loaded into a Tekmar™ 2016 autosampler. The sampler is outfitted with a modified purge needle. The sample was heated to 70 °C for 2 minutes prior to the purge cycle. The sample was desorbed into the GC, which is temperature programmed from -20 to 160 °C, and analyzed by electron impact mass spectrometry in the full scan mode.

Quality-Control Samples

Selected laboratory quality-control sample results for Phase I and II of this study are listed in the "Chemical Data" section of this report. Replicate samples are listed in the data tables and identified by footnote. Trace element laboratory quality-control information for Phase I analyses was not reported for individual samples, but method quality-assurance information is available (Arbogast, 1990).

SUMMARY

A Resource Conservation and Recovery Act Facility Investigation conducted by a private consultant to the U.S. Navy found ground-water plumes containing chlorinated solvents on the NWIRP and on the NAS. Metals, SVOCs, and PCBs were found in soil and sediment samples from sites on both facilities, including sites with surface drainage to the lake. These findings led to a USGS study of potential contamination in Mountain Creek Lake adjacent to both facilities. This report describes sampling and analytical methods and presents chemical data from the USGS study of Mountain Creek Lake during June 1994–August 1996.

The Mountain Creek Lake study was designed to determine if contaminants from the Navy facilities have migrated, or continue to migrate, to the lake. To determine if any of the contaminants found at the facilities had migrated to the lake, samples of lacustrine bottom sediments and streambed sediments, lake water, bottom-sediment pore water, and fish were collected. Bottom-sediment samples were collected at 68 sites (20 Phase I and 48 Phase II) and analyzed for selected constituents and properties including VOCs, SVOCs, pesticides, PCBs, PCNs, carbon, major and trace elements, grain size, cesium-137, and PAHs during 1994, 1995, and 1996. Lake-water samples were collected from four sites and analyzed for VOCs, selected pesticides, field properties, nutrients, carbon, and major and trace elements in October 1994. Bottom-sediment pore-water samples were collected from 10 sites and analyzed for VOCs and major and trace elements in 1994 and 1995. Fish samples were collected from 3 sites during 1994 and from 7 collection areas during 1995. Selected fish-tissue analyses were done on 6 composite samples (Phase I) and 62 samples (Phase II) for VOCs, SVOCs, pesticides, PCBs, and major and trace elements. Not all constituents were analyzed at every site or for every sample.

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CHEMICAL DATA

PHASE I SAMPLING RESULTS

BOTTOM SEDIMENT

Volatile Organic Compounds

Gravity cores—Volatile organic compounds in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than; --, no data]

Site ID	Date	Depth (cm)	Benzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Chlorotoluene	4-Chlorotoluene	Isopropylbenzene	Bromobenzene
Bay–7	01–24–95	0–5	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
		10–15	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
		25–30	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Bay–11	01–24–95	95–100	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
		137–142	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Bay–13	01–24–95	76–81	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
		81–86	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
		179–184	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20

Site ID	Chlorobenzene	o-Xylene	Ethyl benzene	p-Isopropyltoluene	Toluene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	tert-Butylbenzene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2-Dibromoethane	1,2-Dichloroethane
Bay–7	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Bay–11	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Bay–13	<20	<20	<20	<20	<20	[1]13.6	<20	[1]16.5	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<20	<20	<20	72	<20	67	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20

Site ID	Chloroethane	m- and p-Xylene	1,1-Dichloroethylene	Vinyl chloride	cis-1,2-Dichloroethylene	Tetrachloroethylene	trans-1,2-Dichloroethylene	Trichloroethylene	Hexachlorobutadlene	Bromomethane	Bromochloromethane	Dibromochloromethane	Chloromethane	Dibromomethane	Bromodichloromethane	Methylene chloride
Bay–7	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Bay–11	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Bay–13	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
	<20	<20	<50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20

Gravity cores—Volatile organic compounds in bottom sediment—Continued

Site ID	Di-chloro-di-fluoro-methane	Carbon-tetra-chlo-ride	Bromo-form	Chloro-form	Tri-chloro-fluoro-meth-ane	Methyl-tert-butyl-ether	Naph-tha-lene	1,2,3-Tri-chloro-pro-pane	1,2-Di-bromo-3-chloro-pro-pane	1,2-Di-chloro-pro-pane
Bay–7	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
Bay–11	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
Bay–13	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20
	<20	<20	<20	<20	<50	<20	<20	<20	<50	<20

Site ID	1,3-Di-chloro-pro-pane	2,2-Di-chloro-pro-pane	1,1-Di-chloro-pro-pene	cis-1,3-Di-chloro-pro-pene	trans-1,3-Di chloro-pro-pene	Styrene	1,1,2-Tri-fluoro-ethane	n-Propyl-benzene	1,2,3,4-Tetra-methyl-ben-zene	1,2,3,5-Tetra-methyl-ben-zene	1,2,3-Tri-methyl-ben-zene
Bay–7	<20	<20	<20	<20	<20	<20	<50	<20	--	--	--
	<20	<20	<20	<20	<20	<20	<50	<20	--	--	--
	<20	<20	<20	<20	<20	<20	<50	<20	--	--	--
Bay–11	<20	<20	<20	<20	<20	<20	<50	<20	153	98	--
	<20	<20	<20	<20	<20	<20	<50	<20	--	--	--
Bay–13	<20	<20	<20	<20	<20	<20	<50	<20	163	96	--
	<20	<20	<20	<20	<20	<20	<50	<20	720	470	[1]23
	<20	<20	<20	<20	<20	<20	<50	<20	--	--	--

[1] Estimated.

Semivolatile Organic Compounds

Gravity cores—Semivolatile organic compounds in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than; --, no data]

Site ID	Date	Depth (cm)	Benzene, hexachloro-	Phthalate, dibutyl-	Phthalate, dioctyl	Phthalate, diethyl-	Phthalate, dimethyl-	Pyrene	Pyrene, 1-methyl-	Benzo [a] pyrene	Indeno [1,2,3-c,d] pyrene	2,2'-Biquinoline	Quinoline	Phenanthridine
MCL–4	06–28–94	10–20	<100	73	<100	20	15	27	<100	<100	82	94	<100	<100
		30–40	<100	80	<100	19	14	21	<100	<100	76	120	<100	<100
		50–60	<100	69	<100	17	15	<100	<100	<100	<100	<100	<100	<100
		80–90	<100	65	<100	17	14	<100	<100	<100	<100	<100	<100	<100
MCL–7	06–29–94	14–25	<2,000	1,100	<2,000	<2,000	<2,000	7,900	370	3,900	3,600	<2,000	<2,000	<2,000
		39–50	<2,000	260	<2,000	<2,000	<2,000	4,200	260	1,400	1,400	<2,000	<2,000	210
Bay–13	01–23–95	0–12	<1,200	680	1,200	200	460	2,800	1,200	2,100	2,200	1,200	<1,200	630
		51–58	<1,500	1,500	<1,500	<1,500	<1,500	4,100	<1,500	2,700	<1,500	<1,500	<1,500	880
		58–84	<1,900	1,200	<1,900	<1,900	<1,900	2,200	1,600	2,300	<1,900	<1,900	<1,900	<1,900
		95–112	<2,200	1,500	<2,200	<2,200	<2,200	3,400	2,100	2,900	[1]2,300	<2,200	<2,200	1,300
		112–124	<710	470	<710	160	<710	850	<710	880	[1]610	<710	<710	400
		144–148	<670	630	<670	220	<670	630	<670	<670	<670	<670	<670	540
		148–160	<1,000	670	<1,000	<1,000	320	640	<1,000	<1,000	<1,000	<1,000	<1,000	590

Site ID	Isoquinoline	Toluene, 2,4-dinitro-	Toluene, 2,6-dinitro-	Benzo[k] fluoranthene	9H-Fluorene, 1-methyl-	9H-Fluorene	Isophorone	Methane, bis(2-chloroethoxy)	Naphthalene	Naphthalene, 1,2-dimethyl-	Naphthalene, 1,6-dimethyl-	Naphthalene, 2,3,6-trimethyl-	Naphthalene, 2,6-dimethyl-	Naphthalene, 2-chloro-
MCL–4	<100	<100	<1,000	<100	<100	<100	<100	<100	<100	<100	18	<100	75	<100
	<100	<100	<1,000	<100	<100	<100	<100	<100	<100	<100	<100	<100	40	<100
	<100	<100	<1,000	<100	<100	<100	<100	<100	<100	<100	<100	<100	25	<100
	<100	<100	<1,000	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
MCL–7	<2,000	<2,000	<2,000	4,200	200	330	<2,000	<2,000	<2,000	93	<2,000	340	1,400	<2,000
	<2,000	<2,000	<20,000	1,700	690	580	<2,000	<2,000	<2,000	8,700	9,800	2,800	11,000	<2,000
Bay–13	<1,200	<1,200	<1,200	1,900	<1,200	320	<1,200	<1,200	<1,200	<1,200	<1,200	<1,200	440	<1,200
	<1,500	<1,500	<1,500	2,700	<1,500	520	<1,500	<1,500	<1,500	<1,500	710	<1,500	920	<1,500
	<1,900	<1,900	<1,900	1,800	<1,900	490	<1,900	<1,900	<1,900	<1,900	710	<1,900	880	<1,900
	<2,200	<2,200	<2,200	2,400	<2,200	860	<2,200	<2,200	<2,200	<2,200	3,500	1,100	4,300	<2,200
	<710	<710	<710	640	<710	240	<710	<710	<710	<710	1,000	170	850	<710
	430	<670	<670	<670	<670	<670	<670	<670	<670	<670	390	<670	370	<670
	<1,000	<1,000	<1,000	<1,000	<1,000	260	<1,000	<1,000	<1,000	<1,000	400	<1,000	410	<1,000

Gravity cores—Semivolatile organic compounds in bottom sediment—Continued

Site ID	Benzo [g,h,i] perylene	Phenan-threne	Phenan-threne, 1-methyl-	Phenan-threne, 4,5-methyl-ene-	Phenol	3,5-Xylenol	M-cresol, 4-Chloro-	Phenol, M-nitro-	Phenol, C8-alkyl-	Phthal-ate, bis(2-ethyl-hexyl)	Phthal-ate, butyl-benzyl-	Acenaph-thylene	Acenaph-thene
MCL–4	<100	<100	<100	<100	32	<100	<100	--	<100	150	96	<100	<100
	<100	<100	<100	20	110	<100	<100	[1]390	<100	150	100	<100	<100
	<100	<100	<100	<100	93	<100	<100	--	<100	120	94	<100	<100
	<100	<100	<100	<100	120	<100	<100	--	<100	120	89	<100	<100
MCL–7	2,700	4,300	600	940	290	<2,000	<2,000	--	<2,000	[1]20,000	<2,000	<2,000	430
	1,100	3,600	820	790	190	<2,000	<2,000	--	<2,000	[1]4,000	<2,000	600	490
Bay–13	1,600	880	470	620	290	<1,200	<1,200	--	<1,200	4,900	1,100	460	430
	1,900	1,500	710	980	<1,500	<1,500	<1,500	--	<1,500	27,000	1,500	<1,500	<1,500
	1,500	650	750	900	410	<1,900	<1,900	--	<1,900	24,000	1,900	<1,900	<1,900
	2,100	1,600	1,100	1,400	<2,200	<2,200	<2,200	--	<2,200	9,200	<2,200	<2,200	<2,200
	610	260	330	440	<710	<710	<710	--	<710	1,100	<710	<710	<710
	660	180	450	470	220	<670	<670	--	<670	1,100	940	<670	<670
	<1,000	190	490	470	230	<1,000	<1,000	--	<1,000	[1]1,300	<1,000	<1,000	<1,000

Site ID	Acridine	Di-n-propyl-amine, n-nitroso-	Diphenyl-amine, n-nitroso-	Anthra-cene	Anthra-cene, 2-methyl-	Benz[a] anthra-cene	9,10-Anthra-quinone	Benzene, 1,2,4-tri-chloro-	Benzene o-di-chloro-	Benzene, m-di-chloro-	Benzene, p-di-chloro-	Azo-benzene	Benzene, nitro-	Benzene, pentachlo-ronitro-
MCL–4	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
MCL–7	390	<2,000	<2,000	900	740	5,000	670	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
	750	<2,000	1,400	590	210	1,500	470	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000
Bay–13	580	<1,200	<1,200	550	1,100	2,200	920	<1,200	<1,200	<1,200	<1,200	610	<1,200	<1,200
	920	<1,500	<1,500	830	1,300	3,100	<1,500	<1,500	<1,500	<1,500	<1,500	<1,500	<1,500	<1,500
	1,000	<1,900	<1,900	660	1,500	1,900	<1,900	<1,900	<1,900	<1,900	<1,900	<1,900	<1,900	<1,900
	1,300	<2,200	<2,200	980	2,000	2,700	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200
	400	<710	650	290	660	660	<710	<710	<710	<710	<710	<710	<710	<710
	<670	<670	670	300	800	730	<670	<670	<670	<670	<670	<670	<670	<670
	640	<1,000	700	320	870	760	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000

Gravity cores—Semivolatile organic compounds in bottom sediment—Continued

Site ID	Carba-zole	Chry-sene	P-cresol	Thio-phene, dibenzo-	4-Bromo-phenyl-phenol ether	4-Chloro-phenyl-phenol ether	Benzo [b] fluor-anthene	Penta-chloro-anisole	Di-benzo [a,h] anthra-cene	Fluor-anthene	Phenol, 2-chloro-	Benzo[c] cinno-line	Naptha-lene, 2-ethyl-
MCL–4	<100	17	<100	<100	<100	<100	14	<100	<100	23	<100	<100	<100
	<100	18	<100	<100	<100	<100	<100	<100	<100	19	<100	<100	13
	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
MCL–7	390	6,100	<2,000	140	<2,000	<2,000	4,700	<2,000	780	12,000	<2,000	<2,000	160
	260	3,300	<2,000	140	<2,000	<2,000	1,900	<2,000	310	5,200	<2,000	<2,000	1,300
Bay–13	860	2,100	520	180	<1,200	<1,200	<1,200	<1,200	1,400	2,900	<1,200	<1,200	400
	980	3,400	<1,500	<1,500	<1,500	<1,500	3,200	<1,500	<1,500	5,100	<1,500	<1,500	<1,500
	<1,900	1,500	<1,900	<1,900	<1,900	<1,900	2,200	<1,900	<1,900	1,700	<1,900	<1,900	<1,900
	<2,200	2,200	<2,200	<2,200	<2,200	<2,200	3,000	<2,200	<2,200	3,100	<2,200	<2,200	<2,200
	470	510	<710	130	<710	<710	890	<710	<710	670	<710	<710	<710
	<670	350	<670	<670	<670	<670	<670	<670	<670	340	<670	<670	<670
	<1,000	300	<1,000	190	<1,000	<1,000	<1,000	<1,000	<1,000	310	<1,000	<1,000	280

[1] Estimated.

Box cores—Semivolatile organic compounds in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments. All samples are based on dry weight; results are in micrograms per kilogram. <, less than.]

Site ID	Date	Benzene, hexachloro-	Phthalate, dibutyl-	Phthalate, dioctyl-	Phthalate, diethyl-	Phthalate, 1,2-dimethyl-	Pyrene	Pyrene, 1-methyl-	Benzo [a] pyrene	Indeno [1,2,3-c,d] pyrene	2,2'-Biquinoline	Quinoline	Phenanthridine
MCL–1	06–28–94	<150	[1]170	<150	40	25	25	<150	<150	<150	<150	<150	<150
MCL–2	06–28–94	<250	200	<250	68	32	65	<250	180	190	<250	<250	<250
MCL–3	06–28–94	<250	210	<250	51	34	75	<250	34	200	<250	<250	<250
MCL–4	06–28–94	<250	[1]290	<250	56	40	88	<250	34	220	<250	<250	<250
MCL–5	06–29–94	<150	[1]250	[1]300	41	23	670	35	370	490	<150	<150	<150
MCL–6	06–29–94	<150	[1]210	[1]200	43	47	1,600	100	710	1,000	<160	<150	19
MCL–7	06–29–94	<100	180	<1,000	19	150	4,200	200	2,200	1,900	<1,000	<100	83
MCL–7[2]	06–29–94	<200	[1]360	[1]290	44	150	[1]4,400	[1]380	[1]2,000	[1]2,500	<200	<200	<200
MCL–8	06–29–94	<130	91	[1]210	23	23	1,500	86	830	860	<130	<130	17
MCL–8[2]	06–29–94	<150	140	[1]220	30	26	1,600	110	920	1,000	<150	<150	23
MCL–9	06–30–94	<250	190	<250	45	94	2,500	250	1,500	1,300	<250	<250	<250
MCL–10	06–30–94	<250	130	<250	39	<250	160	<250	80	230	400	<250	<250
MCL–11	06–30–94	<100	69	[1]510	20	17	580	21	370	450	<100	<100	<100
MCL–12	06–30–94	<100	85	<100	36	18	330	17	210	280	<100	<100	<100
MCL–13	11–04–94	<50	<50	<50	<50	56	2,400	120	1,500	1,400	<50	<50	<50
Bay–7	11–02–94	<50	96	<50	<50	56	2,600	130	1,400	1,500	<50	<50	<50
Bay–16	11–02–94	<50	75	<50	<50	<50	3,500	140	1,700	1,400	<50	<50	<50

Box cores—Semivolatile organic compounds in bottom sediment—Continued

Site ID	Isoquino-line	Toluene, 2,4-di-nitro-	Toluene, 2,6-di-nitro-	Benzo [k]fluor-anthene	9H-Fluo-rene, 1-methyl-	9H-Fluo-rene	Isophor-one	Meth-ane, bis(2-chloro-ethoxy)	Naph-thalene	Napthal-ene, 1,2-di-methyl-	Napthal-ene, 1,6-di-methyl-	Napthal-ene, 2,3,6-tri-methyl-	Napthal-ene, 2,6-di-methyl-	Napthal-ene, 2-chloro-
MCL–1	<150	<150	<1,500	<150	<150	<150	<150	<150	<150	<150	<150	<150	32	<150
MCL–2	<250	<250	<2,500	52	<250	<250	<250	<250	<250	<250	<250	<250	51	<250
MCL–3	<250	<250	<2,500	61	<250	<250	<250	<250	<250	<250	29	<250	57	<250
MCL–4	<250	<250	<2,500	53	<250	<250	<250	<250	<250	<250	51	<250	150	<250
MCL–5	<150	<150	<1,500	310	<150	30	<150	<150	<150	<150	<150	<150	37	<150
MCL–6	<150	<150	<1,500	980	<150	36	<150	<150	<150	<150	21	<150	43	<150
MCL–7	<100	<100	<1,000	2,100	<100	78	<100	<100	12	14	26	24	82	<100
MCL–7[2]	<200	<200	<2,000	[1]2,400	<200	91	<200	<200	<200	<200	<200	46	96	<200
MCL–8	<130	<130	<1,300	880	<130	33	<130	<130	<130	<130	21	24	66	<130
MCL–8[2]	<150	<150	<1,500	960	<150	42	<150	<150	<150	<150	26	<150	75	<150
MCL–9	<250	<250	<2,500	1,600	<250	53	<250	<250	<250	<250	43	<250	300	<250
MCL–10	<250	<250	<2,500	82	<250	<250	<250	<250	<250	<250	<250	<250	70	<250
MCL–11	<100	<100	<1,000	320	<100	19	<100	<100	<100	<100	16	<100	53	<100
MCL–12	<100	<100	<1,000	210	<100	18	<100	<100	<100	<100	18	<100	40	<100
MCL–13	<50	<50	<500	2,200	<50	86	<50	<50	[1]34	<50	<50	<50	120	<50
Bay–7	<50	<50	<500	1,900	<50	82	<50	<50	[1]33	<50	<50	<50	230	<50
Bay–16	<50	<50	<500	2,100	<50	120	<50	<50	[1]44	<50	<50	<50	190	<50

Box cores—Semivolatile organic compounds in bottom sediment—Continued

Site ID	Benzo [g,h,i] perylene	Phenan-threne	Phenan-threne, 1-methyl-	Phenan-threne, 4,5-methyl-ene-	Phenol	3,5-Xylenol	M-cresol, 4-Chloro-	Phenol, M-nitro-	Phenol, C8-alkyl-	Phthalate, bis(2-ethyl-hexyl)	Phthalate, butyl-benzyl-	Acenaph-thylene	Acenaph-thene	Acri-dine
MCL–1	<150	<150	<150	<150	45	<150	<150	--	<150	[1]440	[1]240	<150	<150	<150
MCL–2	<250	<250	<250	<250	43	<250	<250	--	<250	[1]350	220	<250	<250	<250
MCL–3	37	<250	<250	<250	35	<250	<250	--	<250	[1]460	[1]270	<250	<250	<250
MCL–4	43	<250	<250	<250	63	<250	<250	--	<250	[1]470	[1]270	<250	<250	<250
MCL–5	310	200	27	76	48	<150	<150	--	<150	[1]2,000	[1]270	47	<150	52
MCL–6	790	430	58	140	31	<150	<150	--	<150	[1]2,000	[1]230	65	26	71
MCL–7	1,700	1,900	170	320	56	<100	<100	--	<100	[1]3,700	230	97	170	120
MCL–7[2]	[1]1,800	[1]1,700	[1]440	[1]330	61	<200	<200	--	<200	[1]2,400	[1]310	120	140	<200
MCL–8	620	500	57	130	46	<130	<130	--	<130	1,400	180	49	27	57
MCL–8	590	580	63	150	51	<150	<150	--	<150	[1]1,600	180	56	31	60
MCL–9	770	780	210	200	59	<250	<250	--	<250	[1]1,400	<250	120	57	<250
MCL–10	74	<250	<250	39	39	<250	<250	--	<250	350	200	<250	<250	<250
MCL–11	220	180	17	58	36	<100	<100	--	<100	1,100	120	39	<100	31
MCL–12	120	110	15	39	40	<100	<100	--	<100	[1]650	140	41	<100	26
MCL–13	880	1,100	120	200	110	<50	<50	--	<50	3,200	250	[1]46	98	<50
Bay–7	900	1,100	97	200	120	<50	<50	--	<50	2,200	160	62	95	<50
Bay–16	860	1,600	140	260	130	<50	<50	--	<50	2,300	200	68	150	[1]47

Box cores—Semivolatile organic compounds in bottom sediment—Continued

Site ID	Di-n-pro-pyla-mine, n-nitroso-	Diphen-ylamine, n-nitroso-	Anthra-cene	Anthra-cene, 2-methyl-	Benz[a]anthra-cene	9,10-Anthra-quinone	Benzene, 1,2,4-tri-chloro-	Ben-zene, o-di-chloro-	Ben-zene, m-di-chloro-	Ben-zene, p-di-chloro-	Azo-benzene	Ben-zene, nitro-	Ben-zene, penta-chloro-nitro-	Carba-zole
MCL–1	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150	<150
MCL–2	<250	<250	<250	<250	35	<250	<250	<250	<250	<250	<250	<250	<250	<250
MCL–3	<250	<250	<250	<250	42	<250	<250	<250	<250	<250	<250	<250	<250	<250
MCL–4	<250	<250	<250	<250	45	<250	<250	<250	<250	<250	<250	<250	<250	<250
MCL–5	<150	<150	44	50	350	110	<150	<150	<150	<150	<150	<150	<150	55
MCL–6	<150	<150	110	65	730	190	<150	<150	<150	<150	<150	<150	<15	100
MCL–7	<100	<100	380	210	2,600	450	<100	<100	<100	<100	<100	<100	<1,000	320
MCL–7[2]	<200	<200	[1]510	[1]690	[1]3,300	[1]410	<200	<200	<200	<200	<200	<200	<200	[1]370
MCL–8	<130	<130	100	56	800	170	<130	<130	<130	<130	<130	<130	<130	99
MCL–8[2]	<150	<150	120	63	960	180	<150	<150	<150	<150	<150	<150	<150	100
MCL–9	<250	<250	160	<250	930	250	<250	<250	<250	<250	<250	<250	<250	180
MCL–10	<250	<250	<250	82	74	<250	<250	<250	<250	<250	<250	<250	<250	<250
MCL–11	<100	<100	48	41	320	79	<100	<100	<100	<100	<100	<100	<100	45
MCL–12	<100	<100	37	41	180	61	<100	<100	<100	<100	<100	<100	<100	38
MCL–13	<50	<50	270	74	1,400	330	<50	<50	<50	<50	<50	<50	<50	230
Bay–7	<50	<50	280	59	1,600	290	<50	<50	<50	<50	<50	<50	<50	220
Bay–16	<50	<50	410	74	2,100	410	<50	<50	<50	<50	<50	<50	<50	290

Box cores—Semivolatile organic compounds in bottom sediment—Continued

Site ID	Chry-sene	P-cresol	Thiophene, dibenzo-	4-Bromo-phenyl-phenol ether	4-Chloro-phenyl-phenol ether	Benzo[b] fluor-anthene	Penta-chloro-anisole	Di-benzo [a,h] anthra-cene	Fluor-anthene	Phenol, 2-chloro-	Benzo[c] cinno-line	Naptha-lene, 2-ethyl-
MCL–1	24	<150	<150	<150	<150	<150	<150	<150	37	<150	<150	<150
MCL–2	50	<250	<250	<250	<250	43	<250	<250	91	<250	<250	<250
MCL–3	63	<250	<250	<250	<250	53	<250	<250	94	<250	<250	<250
MCL–4	64	<250	<250	<250	<250	52	<250	<250	110	<250	<250	<250
MCL–5	560	22	<150	<150	<150	490	<150	110	740	<150	<150	<150
MCL–6	1,400	28	31	<150	<150	1,000	<150	330	1,800	<150	<150	<150
MCL–7	3,400	44	84	<100	<1,000	2,700	<100	410	5,100	<100	<1,000	<100
MCL–7[2]	[1]3,200	37	93	<200	<200	[1]3,000	<200	[1]920	[1]5,300	<200	<200	<200
MCL–8	1,100	21	31	<130	<130	850	<130	220	1,700	<120	<130	<130
MCL–8[2]	1,300	28	35	<150	<150	1,000	<150	300	1,800	<150	<150	<150
MCL–9	2,200	<250	48	<250	<250	1,600	<250	420	3,000	<250	<250	<250
MCL–10	100	<250	<250	<250	<250	110	<250	<250	180	<250	<250	<250
MCL–11	460	<100	<100	<100	<100	430	<100	130	690	<100	<100	<100
MCL–12	270	<100	<100	<100	<100	230	<100	62	400	<100	<100	<100
MCL–13	1,700	<50	61	<50	<50	2,000	<50	420	3,300	<50	<50	<50
Bay–7	1,800	71	55	<50	<50	2,000	<50	470	3,600	<50	<50	<50
Bay–16	2,200	94	78	<50	<50	2,200	<50	<50	4,800	<50	<50	<50

[1] Estimated.
[2] Replicate.

Streambed—Semivolatile organic compounds in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. <, less than; --, no data]

Site ID	Date	Benzene, hexachloro-	Phthalate, dibutyl-	Phthalate, dioctyl-	Phthalate, diethyl-	Phthalate, dimethyl-	Pyrene	Pyrene, 1-methyl-	Benzo [a] pyrene	Indeno [1,2,3-c,d] pyrene	2,2'-Biquinoline	Quinoline	Phenanthridine
NAS–2	10–05–94	<50	110	640	<50	<50	2,900	120	1,300	1,200	<50	<50	<50
NAS–3	10–05–94	<50	<50	<50	<50	<50	26,000	1,800	7,900	7,100	340	<50	320
NAS–4	10–06–94	<50	[1]31	<50	[1]11	<50	680	[1]16	360	410	<50	<50	<50

Site ID	Isoquinoline	Toluene, 2,4-dinitro-	Toluene, 2,6-dinitro-	Benzo [k]fluoranthene	9H-Fluorene, 1-methyl-	9H-Fluorene	Isophorone	Methane, bis(2-chloroethoxy)	Naphthalene	Napthalene, 1,2-dimethyl-	Napthalene, 1,6-dimethyl-	Napthalene, 2,3,6-trimethyl-	Napthalene, 2,6-dimethyl-	Napthalene, 2-chloro-
NAS–2	<50	<50	<500	1,900	<50	190	1,200	<50	98	150	<50	470	<50	<50
NAS–3	[1]28	<50	<500	11,000	300	800	52	<50	92	110	83	650	94	<50
NAS–4	<50	<50	<500	440	<50	[1]10	<50	<50	<50	<50	<50	<50	[1]18	<50

Site ID	Benzo [g,h,i] perylene	Phenanthrene	Phenanthrene, 1-methyl-	Phenanthrene, 4,5-methylene-	Phenol	3,5-Xylenol	M-cresol, 4-Chloro-	Phenol, M-nitro-	Phenol, C8-alkyl-	Phthalate, bis(2-ethylhexyl)	Phthalate, butylbenzyl-	Acenaphthylene	Acenaphthene	Acridine
NAS–2	1,100	2,100	150	280	180	<50	<50	--	<50	4,000	270	<50	120	140
NAS–3	3,700	11,000	1,600	2,400	<50	<50	<50	--	<50	510	<50	140	690	960
NAS–4	320	250	[1]18	[1]31	[1]21	<50	<50	--	<50	350	110	[1]28	<50	[1]39

Streambed—Semivolatile organic compounds in streambed sediment—Continued

Site ID	Di-n-propylamine, n-nitroso-	Diphenylamine, n-nitroso-	Anthracene	Anthracene, 2-methyl-	Benz[a]anthracene	9,10-Anthraquinone	Benzene, 1,2,4-trichloro-	Benzene, o-dichloro-	Benzene, m-dichloro-	Benzene, p-dichloro-	Benzene, azo-	Benzene, nitro-	Benzene, pentachloronitro-	Carbazole
NAS–2	<50	<50	270	51	1,600	730	<50	<50	<50	<50	<50	<50	<50	350
NAS–3	<50	<50	5,300	1,300	14,000	1,400	<50	<50	<50	<50	<50	<50	<50	1,800
NAS–4	<50	<50	64	[1]10	320	130	<50	<50	<50	<50	<50	<50	<50	69

Site ID	Chrysene	P-cresol	Thiophene, dibenzo-	4-Bromophenylphenol ether	4-Chlorophenylphenol ether	Benzo[b]fluoranthene	Pentachloroanisole	Dibenzo[a,h]anthracene	Fluoranthene	Phenol, 2-chloro-	Benzo[c]cinnoline	Napthalene, 2-ethyl-
NAS–2	2,100	<50	140	<50	<50	1,800	<50	460	4,000	<50	<50	<50
NAS–3	16,000	<50	520	<50	<50	10,000	<50	3,100	36,000	<50	<50	[1]26
NAS–4	430	<50	[1]13	<50	<50	390	<50	96	860	<50	<50	<50

[1] Estimated.

Pesticides, Polychlorinated Biphenyl, Polychlorinated Naphthalene, and Carbon

Gravity cores (schedule 1325)—Pesticides, polychlorinated biphenyl, and polychlorinated naphthalene in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than]

Site ID	Date	Depth (cm)	Al-drin	Lin-dane	Total chlor-dane	p,p'-DDD	p,p'-DDE	p,p'-DDT	Diel-drin	Endo-sulfan	En-drin	Toxa-phene	Hepta-chlor	Hepta-chlor epoxide	Meth-oxy-chlor	Mirex	Per-thane	PCB	PCN
MCL–4	06–28–94	0–10	<0.2	<0.2	<2.0	<0.2	0.3	<0.2	<0.4	<0.2	<0.2	<20	<0.2	<0.2	<0.7	<0.2	<2.0	3	<2.0
		10–20	<.2	<.2	<2.0	<.2	.4	<.2	<.4	<.2	<.2	<20	<.2	<.2	<.4	<.2	<2.0	3	<2.0
		20–30	<.1	<.1	<1.0	.2	1.1	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	4	<1.0
		30–40	<.1	<.1	<1.0	.5	1.8	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	5	<1.0
		40–50	<.1	<.1	<1.0	1.3	4.2	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	11	<1.0
		50–60	<.1	<.1	<1.0	2.5	3.4	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	4	<1.0
		60–70	<.1	<.1	<1.0	3.3	2.1	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	4	<1.0
		70–80	<.1	<.1	<1.0	1.0	.4	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	2	<1.0
		80–90	<.3	<.1	<1.0	.9	.4	<.1	<.4	<.1	<.1	<10	<.1	<.1	<.8	<.1	<1.0	2	<1.0
		90–100	<.1	<.1	<1.0	.4	<.1	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	<1	<1.0
		100–110	<.1	<.1	<1.0	<.1	<.1	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.4	<.1	<1.0	<1	<1.0
		110–120	<.1	<.1	<1.0	<.1	<.1	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.4	<.1	<1.0	<1	<1.0
		120–128	<.1	<.1	<1.0	<.1	<.1	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.4	<.1	<1.0	<1	<1.0
MCL–7	06–29–94	14–25	<.3	<.3	7.0	2.5	4.5	<.3	3.3	<.3	<.8	30	<.3	<.3	<.6	<.6	<3.0	2,000	<3.0
		39–50	<.1	<.1	9.0	3.1	7.7	.2	.9	<.1	<.1	<10	<.1	<.1	<.2	<.1	<1.0	670	<1.0

Gravity core (schedule 2501)—Pesticides, polychlorinated biphenyl, and carbon in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram unless otherwise noted. cm, centimeters; <, less than; g/kg, grams per kilogram]

Site ID	Date	Depth (cm)	Aldrin	cis-Chlor-dane	trans-Chlor-dane	Chloro-neb	DCPA	o,p'-DDD	p,p'-DDD	o,p'-DDE	p,p'-DDE	o,p'-DDT	p,p'-DDT	Diel-drin	Endo-sulfan	En-drin	alpha-BHC	beta-BHC	Lin-dane
Bay–13	01–23–95	0–12	<2.0	<2.0	<2.0	<10.0	<10.0	<2.0	<2.0	<2.0	<3.50	<4.0	<4.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0
		51–58	<12.0	<4.0	<4.0	<20.0	<20.0	<4.0	<4.0	<4.0	[1]38.0	<8.0	<8.0	<4.0	<4.0	<8.0	<4.0	<4.0	<4.0
		58–84	<10.0	<4.0	<4.0	<20.0	<20.0	<4.0	<4.0	<4.0	37.0	<16.0	<8.0	<4.0	<4.0	<8.0	<4.0	<5.0	<4.0
		95–112	<5.0	<5.0	<51.0	<25.0	<25.0	<5.0	<5.0	<8.0	9.90	<10.0	<10.0	<5.0	<8.0	<10.0	<5.0	<5.0	<5.0
		112–124	<1.0	<1.0	<1.0	<5.0	<5.0	<1.4	<1.0	<1.0	5.20	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
		144–148	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	[1]4.70	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
		148–160	<2.0	<2.0	<2.0	<10.0	<10.0	<2.0	<2.0	<2.0	[1]2.80	<4.0	<4.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0

Gravity core (schedule 2501)—Pesticides, polychlorinated biphenyl, and carbon in bottom sediment—Continued

Site ID	Hepta-chlor	Hepta-chlor epox-ide	Hexa-chloro-ben-zene	Iso-drin	o,p'-Meth-oxy-chlor	p,p'-Meth-oxy-chlor	Mirex	cis-Nona-chlor	trans-Nona-chlor
Bay–13	<2.0	<2.0	<1,200	<16.0	<10.0	<10.0	<2.0	<2.0	<2.0
	<6.0	<4.0	<1,500	<26.0	<20.0	<20.0	<4.0	<4.0	<4.0
	<5.0	<4.0	<1,900	<55.0	<20.0	<20.0	<6.0	<4.0	<4.00
	<20.0	<5.0	<2,200	<6.0	<25.0	<25.0	<9.0	<5.0	<5.0
	<1.0	<1.0	<710	<100	<5.0	<5.0	<3.5	<1.0	<1.0
	<1.0	<1.0	<670	<10.0	<5.0	<5.0	<5.0	<1.0	<1.0
	<2.0	<2.0	<1,000	<2.0	<10.0	<10.0	<4.0	<2.0	<2.0

Site ID	Oxy-Chlor-dane	PCB	Penta-chloro-anisole	cis-Per-meth-rin	trans-Per-meth-rin	Toxa-phene	Car-bon, inor-ganic (g/kg)	Car-bon, or-ganic (g/kg)	Carbon, inor-ganic + or-ganic (g/kg)
Bay–13	<2.0	300	<1,200	<13.0	<10.0	<400	26.0	38.0	64.0
	<4.0	3,500	<1,500	<20.0	<50.0	<800	19.0	46.0	65.0
	4.0	2,100	<1,900	<36.0	<46.0	<800	19.0	40.0	59.0
	<5.0	4,000	<2,200	<25.0	<25.0	<1,000	17.0	53.0	70.0
	<2.3	740	<710	<5.0	<5.0	<200	16.0	26.0	42.0
	<1.0	690	<670	<5.0	<5.0	<200	12.0	26.0	38.0
	<2.0	770	<1,000	<10.0	<10.0	<400	13.0	24.0	37.0

[1] Estimated.

Box cores (schedule 1325)—Pesticides, polychlorinated biphenyl, polychlorinated naphthalene, and carbon in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments. All samples are based on dry weight; results are in micrograms per kilogram unless otherwise noted. <, less than; g/kg, grams per kilogram]

Site ID	Date	Al-drin	Lin-dane	Chlor-dane	DDD	DDE	DDT	Diel-drin	Endo-sulfan	En-drin	Toxa-phene	Hepta-chlor	Hepta-chlor epoxide	Meth-oxy-chlor
MCL–1	06–28–94	<0.1	<0.1	<1.0	0.3	0.8	<0.1	0.2	<0.1	<0.1	<10	<0.1	<0.1	<0.2
MCL–2	06–28–94	<.2	<.2	<2.0	<.2	.4	<.2	<.4	<.2	<.2	<20	<.2	<.2	<.4
MCL–3	06–28–94	<.3	<.3	1.0	<.3	.4	<.3	<.6	<.3	<.3	<30	<.3	<.3	<.6
MCL–4	06–28–94	<.2	<.2	<2.0	<.2	.4	<.2	<.4	<.2	<.2	<20	<.2	<.2	<.4
MCL–5	06–29–94	<.1	<.1	5.0	.5	.3	<.1	.6	<.1	<.1	<10	<.1	<.1	<.2
MCL–6	06–29–94	<.1	<.1	16	1.8	1.1	.1	1.7	<.1	<.1	<10	<.1	<.1	<.2
MCL–7	06–29–94	<.2	<.2	8.0	.9	1.7	<.2	2.4	<.2	<.2	<20	<.2	<.2	<.4
MCL–7[1]	06–29–94	<.2	<.2	7.0	.8	.5	<.2	.8	<.2	<.2	<20	<.2	<.2	<.4
MCL–8	06–29–94	<.1	<.1	5.0	.7	.4	<.1	.5	<.1	<.1	<10	<.1	<.1	<.4
MCL–8[1]	06–29–94	<.1	<.1	5.1	.7	.4	<.1	.5	<.1	<.1	<10	<.1	<.1	<.2
MCL–9	06–30–94	<.2	<.2	3.0	.5	.5	<.2	.5	<.2	<.2	<20	<.2	<.2	<.4
MCL–10	06–30–94	<.2	<.2	<2.0	<.2	.4	<.2	<.4	<.2	<.2	<20	<.2	<.2	<.4
MCL–11	06–30–94	<.1	<.1	6.0	.4	.9	<.1	<.2	<.1	<.1	<10	<.1	<.1	<.2
MCL–12	06–30–94	<.1	<.1	7.0	5.6	2.3	<.1	.2	<.1	<.1	<10	<.1	<.1	<.2

Site ID	Mirex	Perthane	PCB	PCN	Organic carbon (g/kg)	Organic + Inorganic carbon (g/kg)
MCL–1	<0.1	<1.0	2	<1.0	21	33
MCL–2	<.2	<2.0	3	<2.0	20	37
MCL–3	<.3	<3.0	3	<3.0	21	37
MCL–4	<.2	<2.0	2	<2.0	21	38
MCL–5	<.1	<1.0	6	<1.0	24	49
MCL–6	<.1	<1.0	20	<1.0	28	51
MCL–7	<.2	<2.0	110	<2.0	33	58
MCL–7[1]	<.2	<2.0	36	<2.0	37	59
MCL–8	<.1	<1.0	6	<1.0	24	41
MCL–8[1]	<.1	<1.0	7	<1.0	21	39
MCL–9	<.2	<2.0	31	<2.0	38	66
MCL–10	<.2	<2.0	7	<2.0	20	37
MCL–11	<.1	<1.0	14	<1.0	12	26
MCL–12	<.1	<1.0	99	<1.0	14	23

[1] Replicate

Box cores (schedule 2501)—Pesticides, polychlorinated biphenyl, and carbon in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments. All samples are based on dry weight; results are in micrograms per kilogram unless otherwise noted. <, less than; D–U, delete due to interferences; g/kg, grams per kilogram]

Site ID	Date	Al-drin	cis-Chlor-dane	trans-Chlor-dane	Chlo-ro-neb	DCPA	o,p'-DDD	p,p'-DDD	o,p'-DDE	p,p'-DDE	o,p'-DDT	p,p'-DDT	Diel-drin	Endo-sul-fan	En-drin	alpha-BHC	beta-BHC	Lin-dane
MCL–1	10–05–94	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	2.0	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
MCL–7	10–05–94	<1.0	4.8	5.7	<5.0	<10	<10	<10	<10	3.1	<20	<20	<10	<10	<20	<1.0	<1.0	<1.0
MCL–8	11–04–94	<1.0	1.8	2.1	<5.0	<5.0	<1.0	<1.0	<1.0	1.4	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
MCL–12	10–05–94	<1.0	<1.0	<1.0	<5.0	<5.0	<1.0	14	<1.0	1.1	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
MCL–13	11–04–94	<1.0	2.5	3.3	<5.0	<5.0	<1.0	<1.0	<1.0	2.2	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
Bay–7	11–02–94	<1.0	1.4	1.6	<5.0	<5.0	<1.0	<1.0	<1.0	1.7	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
Bay–16	11–02–94	<1.0	1.1	2.0	<5.0	<5.0	<1.0	<1.0	<1.0	1.6	<2.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0

Site ID	Hepta-chlor	Hepta-chlor epox-ide	Hexa-chloro-ben-zene	Iso-drin	o,p'-Meth-oxy-chlor	p,p'-Meth-oxy-chlor	Mirex	cis-Nona-chlor	trans-Nona-chlor	Oxy-chlor-dane	PCB	Penta-chloro-ani-sole	cis-Per-meth-rin	trans-Per-meth-rin	Toxa-phene	Car-bon, inor-ganic (g/kg)	Car-bon, or-ganic (g/kg)	Car-bon, inor-ganic + or-ganic (g/kg)
MCL–1	<1.0	<1.0	<50.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<50	<50	<5.0	<5.0	<200	16.0	17.0	33.0
MCL–7	<1.0	<10	<50.0	<1.0	D–U	D–U	<2.0	<10	[1]3.8	<10	800	<50	D–U	D–U	D–U	18.0	34.0	52.0
MCL–8	<1.0	<1.0	<50.0	<1.0	<5.0	<5.0	<1.0	<1.0	1.7	<1.0	<50	<50	<5.0	<5.0	<200	17.0	21.0	38.0
MCL–12	<1.0	<1.0	<50.0	<1.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	64	<50	<5.0	<5.0	<200	12.0	17.0	29.0
MCL–13	<1.0	<1.0	<50.0	<1.0	<20	<12	<1.0	1.4	1.7	<1.0	220	<50	D–U	D–U	<200	29.0	33.0	62.0
Bay–7	<1.0	<1.0	<50.0	<1.0	<9.0	<7.0	<1.0	1.0	<1.0	<1.0	210	<50	D–U	D–U	<200	26.0	38.0	64.0
Bay–16	<2.0	<1.0	<50.0	<1.0	<11	<5.0	<1.0	<1.0	<1.0	<1.0	190	<50	D–U	D–U	<200	23.0	36.0	59.0

[1] Estimated.

Streambed (schedule 2501)—Pesticides, polychlorinated biphenyl, and carbon in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram unless otherwise noted. <, less than; g/kg, grams per kilogram; --, no data]

Site ID	Date	Aldrin	cis-Chlordane	trans-Chlordane	Chloroneb	DCPA	o,p'-DDD	p,p'-DDD	o,p'-DDE	p,p'-DDE	o,p'-DDT	p,p'-DDT	Dieldrin	Endosulfan	Endrin	alpha-BHC	beta-BHC	Lindane
NAS–2	10–05–94	<1.0	15.0	16.0	<9.0	<5.0	<1.0	<1.0	<1.0	<1.0	<2.0	<2.40	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
NAS–3	10–05–94	<1.0	8.4	7.4	<5.0	<10.0	<10.0	<10.0	<12.0	2.2	<20.0	<20.0	<10.0	<10.0	<20.0	<1.0	<1.0	<1.0
NAS–4	10–06–94	<1.0	3.1	3.7	<5.0	<5.0	1.80	4.70	<1.0	8.7	4.40	11.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0

Site ID	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Isodrin	o,p'-Methoxychlor	p,p'-Methoxychlor	Mirex	cis-Nonachlor	trans-Nonachlor	Oxychlordane	PCB	Pentachloroanisole	cis-Permethrin	trans-Permethrin	Toxaphene	Carbon, inorganic (g/kg)	Carbon, organic (g/kg)	Carbon, inorganic + organic (g/kg)
NAS–2	<2.0	<3.20	<50.0	<1.0	<9.0	<5.0	<1.0	4.1	10.0	<2.0	<50	<50	--	--	<200	15.0	21.0	36.0
NAS–3	<1.0	<10.0	<50.0	<1.0	--	--	<2.0	<10.0	[1]5.2	<10.0	3,200	<50	--	--	--	12.0	12.0	24.0
NAS–4	<1.0	<1.0	<50.0	<1.0	<5.0	<5.0	<1.0	<1.0	2.2	<1.0	<50	<50	<5.0	<5.0	<200	7.9	16.0	24.0

[1] Estimated.

Major and Trace Elements

Gravity cores (schedule 404)—Major and trace elements in bottom sediment

[All samples are based on dry weight; results are in micrograms per gram unless otherwise noted. cm, centimeters; <, less than; --, no data]

Depth (cm)	Aluminum (percent)	Calcium (percent)	Iron (per-cent)	Potas-sium (per-cent)	Magne-sium (percent)	Sodium (per-cent)	Phos-phorus (percent)	Tita-nium (per-cent)	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Cerium
MCL–4 (06–28–94)														
0–4	8.4	6.6	4.1	1.3	0.88	0.20	0.07	0.41	20	280	3	<10	<2	80
4–8	8.6	6.8	4.1	1.3	.90	.21	.07	.42	16	290	3	<10	<2	84
8–12	9.5	6.2	4.4	1.3	.95	.11	.07	.43	11	300	3	<10	<2	80
12–16	9.1	5.8	4.4	1.3	.95	.20	.07	.46	10	300	3	<10	<2	84
16–20	9.2	5.9	4.5	1.3	.95	.11	.07	.43	18	290	3	<10	<2	76
20–24	9.5	5.9	4.3	1.3	.95	.11	.07	.44	15	290	3	<10	<2	78
24–28	9.3	5.3	4.4	1.3	.96	.21	.07	.44	18	290	3	<10	<2	80
28–32	9.5	5.0	4.7	1.3	.96	.10	.07	.45	16	290	3	<10	<2	76
32–36	9.4	5.0	4.5	1.3	.98	.11	.07	.49	15	300	3	<10	<2	79
36–40	9.4	4.8	4.5	1.3	.97	.21	.07	.49	16	300	3	<10	<2	83
40–44	9.5	4.9	4.5	1.2	.95	.11	.08	.46	18	290	3	<10	<2	79
44–48	9.8	4.9	4.5	1.3	.99	.11	.08	.48	18	310	3	<10	<2	80
48–52	9.5	4.5	4.5	1.3	.97	.22	.07	.46	17	300	3	<10	<2	83
52–56	9.3	4.9	4.4	1.3	.96	.21	.07	.46	14	300	3	<10	<2	82
56–60	9.5	5.6	4.4	1.3	.97	.12	.07	.45	10	300	3	<10	<2	80
60–64	9.5	4.5	4.5	1.3	.97	.20	.07	.47	13	300	3	<10	<2	82
64–68	9.4	4.5	4.4	1.3	.95	.20	.07	.49	14	300	3	<10	<2	82
68–72	9.5	5.2	4.3	1.3	.97	.13	.07	.47	12	310	3	<10	<2	85
72–76	9.3	5.1	4.3	1.3	.95	.22	.07	.45	16	310	3	<10	<2	82
76–80	9.8	4.9	4.5	1.3	.98	.11	.07	.46	13	300	3	<10	<2	80
80–84	9.4	4.6	4.3	1.1	.95	.11	.06	.47	16	290	3	<10	<2	78
84–88	8.7	5.5	4.7	1.3	.93	.22	.06	--	13	300	2	<10	<2	82
88–92	10	4.8	4.4	1.3	.99	.11	.06	.48	<10	300	3	<10	<2	82
92–96	9.7	4.5	4.4	1.3	.97	.11	.07	.47	16	300	3	<10	<2	81
96–100	9.5	5.0	4.2	1.2	.96	.11	.06	.48	13	290	3	<10	<2	76
100–104	9.0	5.5	4.5	1.2	.93	.12	.06	.45	13	290	2	<10	<2	77
104–108	9.5	4.9	4.4	1.3	.97	.12	.07	.47	14	290	3	<10	<2	79
108–112	9.0	5.1	4.1	1.3	.94	.22	.06	.45	12	300	3	<10	<2	84
112–116	9.2	5.2	4.2	1.1	.94	.11	.06	.47	14	280	3	<10	<2	74
116–120	9.0	5.4	4.2	1.3	.93	.14	.06	.44	10	300	2	<10	<2	77
120–124	8.8	5.2	4.1	1.2	.92	.20	.06	.46	19	290	3	<10	<2	80
124–128	8.9	5.6	4.3	1.3	.95	.14	.06	.44	13	290	2	<10	<2	77
128–132	9.3	4.8	4.8	1.3	.96	.12	.07	.47	11	300	3	<10	<2	79
132–136	9.0	5.2	4.3	1.3	.93	.13	.07	.44	13	290	3	<10	<2	77
136–139	8.0	5.4	3.8	1.3	.84	.17	.08	.46	11	290	2	<10	<2	80
139–142	8.1	5.4	4.0	1.3	.85	.16	.07	.43	14	290	2	<10	<2	78

Gravity cores (schedule 404)—Major and trace elements in bottom sediment—Continued

Depth (cm)	Aluminum (percent)	Calcium (percent)	Iron (percent)	Potassium (percent)	Magnesium (percent)	Sodium (percent)	Phosphorus (percent)	Titanium (percent)	Arsenic	Barium	Beryllium	Bismuth	Cadmium	Cerium
MCL–7 (06–29–94)														
14–25	6.4	8.8	3.3	0.88	0.67	0.14	0.21	0.30	14	320	2	<10	52	63
39–50	6.2	7.6	3.4	.92	.70	.17	.21	.29	11	450	2	<10	94	64
Bay–13 (01–23–95)														
0–5	6.3	11	3.7	.95	.71	.12	.08	.34	19	250	2	<10	6.0	76
5–10	6.3	11	3.6	.92	.71	.11	.08	.31	18	240	2	<10	6.0	73
10–15	6.4	11	3.7	.95	.72	.12	.08	.34	15	250	2	<10	7.0	75
15–20	6.4	11	3.6	.93	.71	.11	.09	.33	13	250	2	<10	9.0	74
20–25	6.9	8.0	3.8	.99	.77	.13	.30	.34	16	370	2	<10	72	71
25–30	6.2	12	3.5	.91	.71	.12	.11	.33	13	260	2	<10	18	70
30–35	6.1	12	3.3	.90	.70	.12	.12	.32	14	270	2	<10	25	69
35–40	6.0	12	3.3	.90	.69	.12	.17	.31	13	290	2	<10	36	68
40–45	6.2	10	3.7	.91	.72	.13	.26	.31	14	330	2	<10	75	67
50–55	6.8	8.2	3.9	.99	.78	.14	.29	.35	14	360	2	<10	84	74
55–60	6.6	8.0	3.7	.95	.76	.13	.27	.33	12	340	2	<10	110	70
60–65	6.8	7.6	3.8	.98	.78	.13	.27	.34	16	370	2	<10	100	71
65–70	6.9	8.1	3.9	1.0	.79	.14	.29	.36	14	370	2	<10	110	73
70–75	7.0	7.0	3.8	.99	.77	.14	.25	.39	16	350	2	<10	83	74
75–80	6.8	6.5	3.9	1.0	.78	.16	.27	.36	16	380	2	<10	99	72
80–85	6.6	6.5	3.9	.99	.73	.17	.29	.33	14	410	2	<10	130	80
85–90	6.7	7.5	4.0	.93	.75	.15	.25	.33	18	360	2	<10	150	68
90–95	7.2	7.5	4.0	.94	.81	.14	.13	.38	14	300	2	<10	69	72
95–100	7.4	6.8	3.8	.95	.81	.15	.12	.41	15	320	2	<10	29	76
100–105	7.4	6.6	4.0	1.0	.81	.16	.13	.41	14	330	2	<10	26	80
105–110	7.3	6.6	4.0	1.0	.79	.15	.13	.41	14	350	2	<10	28	79
110–115	7.5	6.2	3.9	1.1	.81	.15	.14	.41	14	360	2	<10	30	79
115–120	7.5	5.7	4.1	1.1	.81	.15	.19	.40	16	390	2	<10	40	80
120–125	7.5	5.7	4.2	1.1	.81	.16	.2	.40	15	370	2	<10	57	82
125–130	7.3	6.9	4.2	1.1	.78	.17	.14	.42	12	330	2	<10	37	84
130–135	6.0	7.8	3.2	.85	.69	.14	.08	.35	14	260	2	<10	34	74

Gravity cores (schedule 404)—Major and trace elements in bottom sediment—Continued

Depth (cm)	Chromium	Cobalt	Copper	Europium	Gallium	Gold	Holmium	Lanthanum	Lead	Lithium	Manganese	Molybdenum	Neodymium
MCL-4—Continued													
0–4	110	14	64	<2	20	<8	<4	50	27	59	620	<2	34
4–8	110	15	66	<2	21	<8	<4	51	28	61	500	<2	37
8–12	110	15	63	<2	21	<8	<4	49	26	61	430	<2	33
12–16	120	14	57	<2	22	<8	<4	52	30	63	430	<2	37
16–20	120	15	51	<2	22	<8	<4	48	25	60	420	<2	32
20–24	130	14	52	<2	21	<8	<4	49	25	61	420	2	32
24–28	130	13	52	<2	22	<8	<4	53	27	63	400	2	38
28–32	130	15	47	<2	23	<8	<4	49	21	62	390	<2	34
32–36	140	14	53	<2	23	<8	<4	50	25	63	400	<2	34
36–40	130	14	55	<2	23	<8	<4	54	28	63	370	<2	39
40–44	140	14	46	<2	23	<8	<4	50	25	63	370	<2	34
44–48	140	15	46	<2	23	<8	<4	51	22	64	380	<2	36
48–52	130	14	40	<2	23	<8	<4	54	26	63	370	<2	38
52–56	--	14	51	<2	23	<8	<4	54	24	63	370	<2	38
56–60	150	15	48	<2	23	<8	<4	50	21	63	380	<2	34
60–64	140	14	43	<2	23	<8	<4	54	20	65	350	<2	39
64–68	120	13	38	<2	23	<8	<4	55	21	63	350	<2	40
68–72	150	15	47	<2	22	<8	<4	52	22	64	350	<2	36
72–76	130	14	48	<2	23	<8	<4	54	20	64	330	<2	37
76–80	120	14	47	<2	23	<8	<4	52	19	63	300	<2	36
80–84	130	13	35	<2	22	<8	<4	51	17	60	260	<2	35
84–88	100	13	29	<2	22	<8	<4	53	19	57	910	<2	38
88–92	120	14	39	<2	23	<8	<4	52	18	65	300	<2	36
92–96	120	14	34	<2	23	<8	<4	52	20	62	240	<2	36
96–100	120	14	33	<2	21	<8	<4	51	17	60	320	<2	36
100–104	110	13	30	<2	22	<8	<4	50	14	57	620	<2	35
104–108	130	13	32	<2	23	<8	<4	51	16	62	340	<2	37
108–112	120	14	33	<2	22	<8	<4	54	18	61	270	<2	40
112–116	110	13	34	<2	21	<8	<4	50	14	58	270	<2	36
116–120	110	13	30	<2	22	<8	<4	50	13	58	420	<2	37
120–124	100	13	31	<2	21	<8	<4	54	15	--	380	<2	39
124–128	110	13	30	<2	21	<8	<4	50	15	57	480	<2	34
128–132	110	14	32	<2	22	<8	<4	51	15	60	550	<2	34
132–136	110	13	32	<2	22	<8	<4	50	17	58	380	<2	34
136–139	100	15	28	<2	19	<8	<4	49	13	53	460	<2	33
139–142	100	14	29	<2	19	<8	<4	49	15	53	450	<2	35

Gravity cores (schedule 404)—Major and trace elements in bottom sediment—Continued

Depth (cm)	Chromium	Cobalt	Copper	Europium	Gallium	Gold	Holmium	Lanthanum	Lead	Lithium	Manganese	Molybdenum	Neodymium
MCL–7—Continued													
14–25	2,900	14	140	<2	16	<8	<4	39	140	41	500	2	27
39–50	2,600	14	130	<2	14	<8	<4	38	190	40	470	3	27
Bay–13—Continued													
0–5	350	15	53	<2	16	<8	<4	44	82	42	740	3	31
5–10	360	16	56	<2	16	<8	<4	43	85	41	700	3	29
10–15	420	15	56	<2	16	<8	<4	44	91	42	650	3	29
15–20	550	15	62	<2	15	<8	<4	44	110	42	570	4	31
20–25	4,300	14	180	<2	18	<8	<4	45	160	48	560	<2	31
25–30	1,100	15	73	<2	15	<8	<4	42	150	42	520	2	30
30–35	1,500	15	93	<2	15	<8	<4	42	170	41	500	<2	28
35–40	2,200	13	110	<2	16	<8	<4	41	170	41	520	<2	29
40–45	3,600	14	160	<2	16	<8	<4	41	190	43	570	2	29
50–55	4,000	14	180	<2	19	<8	<4	46	160	48	590	<2	33
55–60	2,900	13	200	<2	17	<8	<4	45	130	46	550	<2	32
60–65	3,400	13	150	<2	17	<8	<4	46	130	48	540	<2	32
65–70	4,100	14	130	<2	19	<8	<4	46	130	49	590	<2	33
70–75	3,000	13	99	<2	18	<8	<4	47	120	49	560	3	33
75–80	3,800	15	130	<2	18	<8	<4	45	190	47	570	4	32
80–85	4,400	15	130	<2	18	<8	<4	51	240	45	570	2	36
85–90	4,400	14	110	<2	18	<8	<4	46	190	46	530	5	33
90–95	1,400	13	62	<2	19	<8	<4	47	110	47	440	4	32
95–100	660	13	59	<2	19	<8	<4	50	86	48	420	3	34
100–105	620	15	59	<2	19	<8	<4	51	78	49	560	2	36
105–110	1,000	14	47	<2	19	<8	<4	51	78	48	640	3	36
110–115	1,500	13	44	<2	19	<8	<4	51	77	49	450	2	37
115–120	2,000	13	49	<2	20	<8	<4	51	86	50	430	2	37
120–125	2,000	15	50	<2	21	<8	<4	51	85	50	420	3	36
125–130	990	15	41	<2	19	<8	<4	51	61	50	770	<2	36
130–135	390	14	36	<2	16	<8	<4	46	36	40	360	5	33

Gravity cores (schedule 404)—Major and trace elements in bottom sediment—Continued

Depth (cm)	Nickel	Niobium	Scandium	Silver	Strontium	Tantalum	Thorium	Tin	Uranium	Vanadium	Yttrium	Ytterbium	Zinc
MCL–4—Continued													
0–4	52	37	16	<2	250	<40	13	<5	<100	180	18	2	120
4–8	55	37	16	<4	260	<40	12	<5	<100	190	18	2	120
8–12	55	40	17	<2	260	<40	14	<5	<100	190	19	2	130
12–16	58	41	17	<4	250	<40	14	<5	<100	200	20	2	120
16–20	57	39	17	<2	250	<40	14	<5	<100	200	19	2	120
20–24	57	40	17	<2	250	<40	15	<5	<100	200	19	2	120
24–28	61	41	17	<4	230	<40	13	<5	<100	210	20	2	120
28–32	60	41	17	<2	220	<40	15	<5	<100	210	19	2	120
32–36	58	43	18	<2	220	<40	15	<5	<100	200	21	2	120
36–40	59	42	17	<4	210	<40	15	<5	<100	210	21	2	120
40–44	60	41	17	<2	210	<40	15	<5	<100	210	20	2	120
44–48	62	41	18	<2	210	<40	15	<5	<100	210	20	3	120
48–52	61	40	17	<4	200	<40	15	<5	<100	210	20	2	120
52–56	59	41	17	<4	210	<40	15	<5	<100	200	20	2	120
56–60	57	39	18	<2	220	<40	14	<5	<100	200	20	2	120
60–64	60	42	18	<4	200	<40	15	<5	<100	210	20	2	120
64–68	61	42	17	<4	200	<40	14	<5	<100	210	22	2	110
68–72	55	43	18	<2	220	<40	15	<5	<100	190	20	2	110
72–76	57	42	17	<4	220	<40	13	<5	<100	190	20	2	110
76–80	58	41	18	<2	210	<40	15	<5	<100	200	21	2	110
80–84	60	39	16	<2	200	<40	15	<5	<100	210	22	2	120
84–88	50	41	16	<4	200	<40	13	<5	<100	170	19	2	96
88–92	58	42	18	<2	220	<40	16	<5	<100	210	21	2	110
92–96	57	41	17	<2	210	<40	16	<5	<100	200	21	2	110
96–100	56	42	17	<2	210	<40	14	<5	<100	200	21	2	110
100–104	51	41	17	<2	210	<40	14	<5	<100	180	21	2	100
104–108	55	42	17	<2	210	<40	15	<5	<100	200	21	2	110
108–112	54	40	17	<4	210	<40	15	<5	<100	190	20	2	100
112–116	57	40	17	<2	200	<40	15	<5	<100	200	21	2	100
116–120	50	41	17	<2	210	<40	13	<5	<100	180	20	3	100
120–124	53	39	16	<4	200	<40	14	<5	<100	190	21	2	99
124–128	51	40	17	<2	210	<40	14	<5	<100	180	20	2	100
128–132	82	41	17	<2	210	<40	13	<5	<100	200	20	2	110
132–136	53	38	16	<2	210	<40	14	<5	<100	190	20	2	100
136–139	48	37	15	<2	220	<40	13	<5	<100	170	20	2	95
139–142	49	37	15	<2	220	<40	13	<5	<100	170	20	2	98

Gravity cores (schedule 404)—Major and trace elements in bottom sediment—Continued

Depth (cm)	Nickel	Niobium	Scandium	Silver	Strontium	Tantalum	Thorium	Tin	Uranium	Vanadium	Yttrium	Ytterbium	Zinc
MCL–7—Continued													
14–25	100	24	10	48	360	<40	10	<5	<100	140	19	2	400
39–50	53	23	10	40	310	<40	11	9	<100	130	18	2	850
Bay–13—Continued													
0–5	55	32	11	6.0	310	<40	11	<5	<100	180	19	2	350
5–10	55	29	11	6.0	310	<40	10	<5	<100	170	18	2	340
10–15	58	30	11	7.0	310	<40	11	<5	<100	180	19	2	340
15–20	57	30	11	9.0	330	<40	10	<5	<100	170	19	2	320
20–25	110	31	12	26	380	<40	13	<5	<100	150	22	2	450
25–30	61	30	10	18	380	<40	9	<5	<100	160	19	2	320
30–35	62	31	10	24	420	<40	10	<5	<100	150	19	2	330
35–40	66	29	10	14	470	<40	10	<5	<100	140	19	2	350
40–45	91	28	11	10	470	<40	8	<5	<100	140	20	2	430
50–55	130	33	12	19	380	<40	12	<5	<100	150	22	2	440
55–60	130	30	12	26	360	<40	12	<5	<100	150	21	2	420
60–65	130	31	12	25	360	<40	11	<5	<100	150	22	2	450
65–70	84	32	12	23	380	<40	11	<5	<100	160	22	3	470
70–75	59	36	13	9.0	330	<40	11	<5	<100	160	22	2	410
75–80	57	32	12	9.0	310	<40	11	<5	<100	160	22	2	700
80–85	53	30	12	16	320	<40	11	<5	<100	140	22	2	960
85–90	66	30	12	9.0	360	<40	11	<5	<100	160	22	2	810
90–95	61	34	12	7.0	270	<40	11	<5	<100	190	22	2	310
95–100	58	35	13	5.0	240	<40	12	<5	<100	190	23	3	260
100–105	58	38	13	7.0	230	<40	13	<5	<100	180	23	2	270
105–110	57	37	13	10	230	<40	11	<5	<100	180	23	3	300
110–115	53	38	13	19	220	<40	13	<5	<100	180	24	3	360
115–120	53	38	13	32	210	<40	13	<5	<100	180	24	3	510
120–125	52	38	13	35	220	<40	13	<5	<100	170	24	3	510
125–130	49	38	13	18	230	<40	12	<5	<100	160	22	3	270
130–135	49	31	10	5.0	240	<40	11	<5	<100	160	20	2	160

Box cores—Major and trace elements in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments. All samples are based on dry weight; results are in micrograms per gram unless otherwise noted. <, less than]

Site ID	Date	Aluminum (percent)	Calcium (percent)	Iron (percent)	Potassium (percent)	Magnesium (percent)	Sodium (percent)	Phosphorus (percent)	Titanium (percent)	Arsenic	Barium	Beryllium	Bismuth	Cadmium
MCL–1	06–28–94	7.5	5.7	3.8	1.2	0.78	0.18	0.07	0.41	15	270	2	<10	<2
MCL–2	06–28–94	8.2	6.9	4.0	1.3	.85	.15	.08	.40	17	280	2	<10	<2
MCL–3	06–28–94	8.8	7.2	4.3	1.4	.93	.14	.08	.43	24	290	2	<10	<2
MCL–4	06–28–94	8.6	7.2	4.2	1.3	.91	.11	.08	.40	22	270	2	<10	<2
MCL–5	06–29–94	7.1	8.7	3.9	.84	.76	.11	.07	.35	14	260	2	<10	<2
MCL–6	06–29–94	6.1	9.8	3.0	.85	.66	.14	.07	.29	15	240	2	<10	2
MCL–7	06–29–94	6.1	9.9	3.2	.86	.66	.13	.08	.28	17	230	2	<10	6
MCL–7[1]	06–29–94	6.2	10	3.2	.86	.67	.13	.08	.28	16	240	2	<10	6
MCL–8	06–29–94	6.3	7.0	3.4	1.0	.67	.16	.07	.33	12	250	2	<10	<2
MCL–9	06–30–94	6.5	10.0	3.4	.86	.68	.11	.08	.27	13	240	2	<10	5
MCL–10	06–30–94	8.4	7.2	4.0	1.3	.87	.14	.08	.40	18	280	2	<10	<2
MCL–11	06–30–94	4.4	5.8	2.7	.78	.48	.14	.05	.23	16	200	1	<10	<2
MCL–12	06–30–94	4.6	4.2	2.9	.77	.50	.14	.05	.26	15	200	1	<10	<2
MCL–13	11–04–94	6.4	10	3.3	.91	.64	.12	.07	.33	26	240	3	<10	<2.0
Bay–7	11–02–94	6.2	10	3.4	.93	.62	.12	.08	.33	29	230	2	<10	2.0
Bay–16	11–02–94	5.3	8.7	3.1	.84	.53	.12	.07	.29	32	210	2	<10	2.0

Site ID	Cerium	Chromium	Cobalt	Copper	Europium	Gallium	Gold	Holmium	Lanthanum	Lead	Lithium	Manganese	Molybdenum	Neodymium	Nickel	Niobium	Scandium	Silver
MCL–1	77	96	16	37	<2	18	<8	<4	47	20	50	500	<2	34	48	36	14	<2
MCL–2	78	110	14	63	<2	20	<8	<4	47	20	55	560	<2	31	47	38	16	<2
MCL–3	80	120	15	63	<2	20	<8	<4	49	23	60	700	<2	32	53	39	16	<2
MCL–4	78	110	14	64	<2	21	<8	<4	47	24	58	680	<2	31	52	37	16	<2
MCL–5	70	83	13	33	<2	17	<8	<4	42	26	42	1,000	5	28	56	27	11	<2
MCL–6	70	130	14	38	<2	15	<8	<4	39	44	37	560	3	27	50	22	10	<2
MCL–7	66	310	17	64	<2	14	<8	<4	37	77	38	600	3	25	57	23	10	6
MCL–7[1]	65	300	16	62	<2	14	<8	<4	37	75	38	610	4	24	57	23	10	7
MCL–8	74	80	15	30	<2	15	<8	<4	43	26	43	560	<2	29	46	30	11	<2
MCL–9	64	360	13	50	<2	15	<8	<4	37	62	39	640	<2	24	47	24	11	4
MCL–10	79	100	15	51	<2	20	<8	<4	48	22	56	550	<2	32	49	38	15	<2
MCL–11	56	69	14	34	<2	10	<8	<4	33	24	31	380	<2	23	31	10	<2	<2
MCL–12	52	75	14	32	<2	10	<8	<4	31	29	34	350	<2	20	32	14	9	<2
MCL–13	79	210	15	62	<2	13	<8	<4	41	61	41	620	6	27	54	22	10	<2.0
Bay–7	77	360	13	57	<2	14	<8	<4	40	66	41	650	4	25	49	20	10	<2.0
Bay–16	69	350	13	52	<2	11	<8	<4	37	61	36	550	3	24	46	17	9	<2.0

Box cores—Major and trace elements in bottom sediment—Continued

Site ID	Strontium	Tantalum	Thorium	Tin	Uranium	Vanadium	Yttrium	Ytterbium	Zinc
MCL–1	230	<40	14	<5	<100	160	19	2	100
MCL–2	250	<40	14	<5	<100	170	18	2	120
MCL–3	280	<40	13	<5	<100	180	18	3	130
MCL–4	270	<40	13	<5	<100	180	18	3	130
MCL–5	230	<40	12	<5	<100	200	20	2	130
MCL–6	260	<40	11	<5	<100	170	17	2	170
MCL–7	290	<40	11	<5	<100	160	16	2	360
MCL–7[1]	290	<40	10	<5	<100	160	16	2	360
MCL–8	220	<40	13	<5	<100	150	17	2	120
MCL–9	310	<40	11	<5	<100	160	16	2	300
MCL–10	250	<40	14	<5	<100	170	18	2	120
MCL–11	200	<40	9	<5	<100	91	13	2	110
MCL–12	160	<40	8	<5	<100	93	12	1	100
MCL–13	280	<40	11	<5	<100	170	21	2	270
Bay–7	320	<40	10	<5	<100	160	20	2	290
Bay–16	280	<40	9	<5	<100	140	18	2	280

[1] Replicate.

Grain Size

Gravity cores—Grain size in bottom sediment

[cm, centimeters; sieve size, 0.062 millimeter; pipet size, 0.004 millimeter]

Site ID	Date	Depth (cm)	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
MCL–4	06–28–94	0–4	99.8	94.6
		4–8	99.4	95.0
		8–12	99.9	97.1
		12–16	99.9	97.5
		16–20	99.6	100.5
		20–24	100.0	96.6
		24–28	99.9	97.9
		28–32	99.9	96.2
		32–36	99.9	95.7
		36–40	100.0	94.4
		40–44	99.9	97.6
		44–48	99.9	95.8
		48–52	99.9	97.2
		52–56	99.9	96.2
		56–60	99.9	96.5
		60–64	99.9	96.1
		64–68	99.9	96.2
		68–72	99.9	96.0
		72–76	99.9	95.2
		76–80	99.9	96.0
		80–84	99.9	96.6
		84–88	99.9	91.1
		88–92	99.9	97.7
		92–96	99.9	95.0
		96–100	99.9	92.6
		100–104	100.0	90.5
		104–108	100.0	92.1
		108–112	100.0	92.6
		112–116	100.0	79.9
		116–120	100.0	86.9
		120–124	99.9	83.5
		124–128	100.0	92.8
		128–132	99.9	96.2
		132–136	99.6	88.7
		136–139	96.4	77.2
		139–142	99.5	91.3

Gravity cores—Grain size in bottom sediment—Continued

Site ID	Date	Depth (cm)	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
MCL–7	06–28–94	14–25	98.2	61.5
		39–50	98.7	63.3
Bay–13	01–23–95	0–5	98.1	81.2
		5–10	98.8	78.1
		10–15	98.2	74.4
		15–20	98.0	74.6
		15–20[1]	98.0	78.8
		20–25	98.1	55.8
		25–30	97.3	84.1
		30–35	96.7	67.6
		35–40	95.7	68.0
		40–45	95.9	74.8
		45–50	97.9	79.0
		50–55	96.4	67.5
		55–60	96.7	80.8
		60–65	97.6	79.6
		65–70	97.6	75.8
		70–75	99.0	86.5
		75–80	98.0	75.4
		80–85	97.1	82.6
		85–90	98.4	87.7
		90–95	97.8	79.1
		95–100	98.5	86.0
		100–105	98.7	80.8
		105–110	99.0	87.7
		110–115	97.8	79.1
		115–120	98.2	82.1
		120–125	98.5	86.7
		125–130	95.5	75.5
		130–135	78.0	64.8

[1] Replicate.

Box cores—Grain size in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments. sieve size, 0.062 millimeter; pipet size, 0.004 millimeter]

Site ID	Date	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
MCL–1	06–28–94	99.0	77.1
	10–05–94	99.7	79.9
MCL–2	06–28–94	99.7	86.9
MCL–3	06–28–94	100.0	90.9
MCL–4	06–28–94	100.0	95.0
MCL–5	06–29–94	97.7	84.5
MCL–6	06–29–94	97.2	71.3
MCL–7	06–29–94	97.2	70.9
	10–05–94	76.3	35.5
MCL–8	06–29–94	90.4	61.6
MCL–9	06–30–94	98.0	81.3
MCL–10	06–30–94	99.7	88.5
MCL–11	06–30–94	76.1	37.9
MCL–12	06–30–94	72.0	44.7
MCL–12	10–05–94	91.0	57.8

Streambed—Grain size in bottom sediment

[sieve size, 0.062 millimeter; pipet size, 0.004 millimeter]

Site ID	Date	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
NAS–2	10–05–94	44.3	27.7
NAS–3	10–05–94	95.9	13.5
NAS–4	10–65–94	51.7	31.6

Cesium-137

Gravity core—Cesium-137 in bottom sediment

[cm, centimeters; pCi/g, picoCuries per gram; 2s, two standard deviations]

Site ID	Date	Depth (cm)	Cesium-137 (pCi/g)	Counting uncertainty (2s)
Bay–13	01–23–95	0–7	0.169	0.0548
		7–14	.219	.0570
		14–21	.335	.0815
		21–28	.391	.0921
		28–35	.461	.0856
		35–42	.605	.0978
		42–49	.943	.119
		49–56	1.52	.189
		56–63	1.89	.217
		63–70	2.12	.242
		70–77	1.14	.134
		77–84	1.10	.166
		84–91	1.18	.158
		91–98	.174	.0813
		98–105	.0205	.0328
		105–112	-.0133	.0326
		112–119	.0248	.0321
		119–126	-.0180	.0347
		126–133	-.0109	.0359
		133–140	.0666	.0356
		140–147	-.00957	.0373
		147–154	-.0444	.0398
		154–161	.0361	.0339

LAKE WATER

Volatile Organic Compounds

Volatile organic compounds in lake water

[In micrograms per liter unless otherwise noted. mg/L, milligrams per liter; <, less than; --, no data]

Site ID	Date	Oil and grease, total recoverable (mg/L)	Benzene, total	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Chlorotoluene	1,4-Chlorotoluene	Isopropylbenzene	Bromobenzene
MCL–1	10–12–94	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MCL–4	10–12–94	<1	.4	<.2	<.2	.3	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–12	10–12–94	<1	.9	<.2	<.2	1.7	<.2	.5	<.2	<.2	<.2	<.2	<.2	<.2
MCL–13	10–12–94	<1	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2

Site ID	Chlorobenzene	Xylene, total	Ethylbenzene	p-Isopropyltoluene	Toluene, total	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	tert-Butylbenzene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2-Dibromoethane	1,2-Dichloroethane	Chloroethane
MCL–1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MCL–4	<.2	1.6	.3	<.2	1.0	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–12	<.2	4.7	.9	<.2	2.7	<.2	.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–13	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2

Site ID	Freon-113	1,1-Dichloroethylene	Vinyl chloride	cis-1,2-Dichloroethylene	Tetrachloroethylene	trans-1,2-Dichloroethylene	Trichloroethylene	Hexachlorobutadiene	Methylbromide	Bromochloromethane	Dichlorobromomethane	Methylchloride	Dibromomethane	Chlorodibromomethane	Methylene chloride	Dichlorodifluoromethane
MCL–1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MCL–4	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–12	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–13	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<.2

Site ID	Carbontetrachloride	Bromoform	Chloroform	Trichlorofluoromethane	Methyltertbutylether	Naphthalene	1,2,3-Trichloropropane	Dibromochloropropane	1,2-Dichloropropane	1,3-Dichloropropane	2,2-Dichloropropane	1,1-Dichloropropene	cis 1,3-Dichloropropene	trans-1,3-Di chloropropene	Styrene, total
MCL–1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MCL–4	<.2	<.2	<.2	<.2	.9	<.2	<.2	<1.0	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–12	<.2	<.2	<.2	<.2	2.3	.8	<.2	<1.0	<.2	<.2	<.2	<.2	<.2	<.2	<.2
MCL–13	<.2	<.2	<.2	<.2	<.2	<.2	<.2	<1.0	<.2	<.2	<.2	<.2	<.2	<.2	<.2

Pesticides in lake water

[In micrograms per liter. <, less than]

Site ID	Date	Ala-chlor	Des-ethyl-atra-zine	Atra-zine	Methyl-azin-phos	Ben-flur-alin	Butyl-ate	Car-baryl	Carbo-furan	Chlor-pyrifos	Cyana-zine	Aceto-chlor	DCPA	p,p'-DDE	Di-azinon
MCL–1	10–12–94	<0.002	[1]0.07	0.42	<0.001	<0.002	<0.002	<0.003	<0.003	<0.004	<0.004	<0.002	<0.002	<0.006	0.03
MCL–4	10–12–94	<.002	[1].10	.52	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.002	<.006	.02
MCL–12	10–12–94	<.002	[1].08	.48	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	<.002	<.006	.01
MCL–13	10–12–94	<.002	[1].02	.18	<.001	<.002	<.002	<.003	<.003	<.004	<.004	<.002	[1].002	<.006	.06

Site ID	Diel-drin	Di-ethyl aniline	Di-meth-oate	Disul-foton	EPTC	Ethal-flur-alin	Etho-prop	Fonofos	alpha-HCH	gamma-HCH	Lin-uron	Mala-thion	Meto-lachlor	Metri-buzin	Mol-inate	Naprop-amide	Para-thion
MCL–1	<0.001	<0.003	--	<0.017	<0.002	<0.004	<0.003	<0.003	<0.002	<0.002	<0.002	<0.005	<0.002	<0.004	<0.004	<0.003	<0.004
MCL–4	<.001	<.003	--	<.017	<.002	<.004	<.003	<.003	<.002	<.002	<.002	<.005	<.002	<.004	<.004	<.003	<.004
MCL–12	<.001	<.003	--	<.017	<.002	<.004	<.003	<.003	<.002	<.002	<.002	<.005	<.002	<.004	<.004	<.003	<.004
MCL–13	<.001	<.003	--	<.017	<.002	<.004	<.003	<.003	<.002	<.002	<.002	<.005	<.002	<.004	<.004	<.003	<.004

Site ID	Methyl-para-thion	Peb-ulate	Pendi-meth-alin	cis-Per-methrin	Phorate	Pron-amide	Pro-meton	Prop-chlor	Pro-panil	Pro-pargite	Si-ma-zine	Tebu-thiuron	Ter-bacil	Ter-bufos	Thio-bencarb	Trial-late	Tri-flur-alin
MCL–1	<0.006	<0.004	<0.004	<0.005	<0.002	<0.003	0.02	<0.007	<0.004	<0.013	0.11	[1]0.01	<0.007	<0.013	<0.002	<0.001	<0.002
MCL–4	<.006	<.004	<.004	<.005	<.002	<.003	.02	<.007	<.004	<.013	.12	.02	<.007	<.013	<.002	<.001	<.002
MCL–12	<.006	<.004	<.004	<.005	<.002	<.003	.02	<.007	<.004	<.013	.10	.02	<.007	<.013	<.002	<.001	<.002
MCL–13	<.006	<.004	<.004	<.005	<.002	<.003	.02	<.007	<.004	<.013	.30	.02	<.007	<.013	<.002	<.001	<.002

[1] Estimated.

Properties, Nutrients, Carbon, and Major and Trace Elements

Laboratory measured field properties, nutrients, carbon, and major and trace elements in lake water

[µS/cm, microsiemens per centimeter at 25 °C; mg/L, milligrams per liter; $CaCO_3$, calcium carbonate; µg/L, micrograms per liter; <, less than; --, no data]

Site ID	Date	pH, whole water, lab (standard units)	Specific conductance, lab (µS/cm)	Alkalinity, lab (mg/L as $CaCO_3$)	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Chloride, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Silica, dissolved (mg/L)
MCL–1	10–12–94	8.4	476	84	48	5.5	38	8.5	0.4	24	110	4.8
MCL–4	10–12–94	8.1	474	82	47	5.6	38	7.8	.5	23	110	5.1
MCL–12	10–12–94	8.0	476	82	46	5.4	36	8.3	.4	23	110	4.9
MCL–13	10–12–94	8.6	310	77	37	2.5	19	4.2	.3	13	54	3.8

Site ID	Nitrogen, nitrite, dissolved (mg/L as N)	Nitrogen, nitrite + nitrate, dissolved (mg/L as N)	Nitrogen, ammonia, dissolved (mg/L as N)	Nitrogen, ammonia + organic, dissolved (mg/L as N)	Nitrogen, ammonia + organic, total (mg/L as N)	Phosphorus, ortho, dissolved (mg/L as P)	Phosphorus, dissolved (mg/L as P)	Total phosphorus (mg/L as P)	Total suspended organic carbon (mg/L)	Dissolved organic carbon (mg/L)	Barium, dissolved (µg/L)	Beryllium, dissolved (µg/L)
MCL–1	<0.01	<0.05	<0.015	0.3	0.8	<0.01	<0.01	0.06	1.8	8.1	46	<0.5
MCL–4	<.01	<.05	<.015	.3	.7	<.01	<.01	.03	2.5	4.7	44	<.5
MCL–12	<.01	<.05	.020	.3	.8	<.01	<.01	.04	2.8	5.3	44	<.5
MCL–13	.01	<.05	<.015	.3	.7	<.01	<.01	.06	3.6	44	--	--

Site ID	Cadmium, dissolved (µg/L)	Chromium, dissolved (µg/L)	Cobalt, dissolved (µg/L)	Copper, dissolved (µg/L)	Iron, dissolved (µg/L)	Lead, dissolved (µg/L)	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Molybdenum, dissolved (µg/L)	Nickel, dissolved (µg/L)	Silver, dissolved (µg/L)	Strontium, dissolved (µg/L)	Vanadium, dissolved (µg/L)	Zinc, dissolved (µg/L)
MCL–1	<1	<5	<3	<10	8	<10	11	<1	<10	<10	<1	540	<6	<3
MCL–4	<1	<5	<3	<10	7	<10	12	<1	10	<10	<1	540	<6	<3
MCL–12	<1	<5	<3	<10	6	<10	12	<1	<10	<10	<1	540	<6	6
MCL–13	--	--	--	--	37	--	--	<1	--	--	--	--	--	--

Field measured properties in lake water

[ft, feet; °C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 °C; mg/L, milligrams per liter]

Site ID	Date	Time	Depth from lske surfsce (ft)	pH (stand-ard units)	Temperature (°C)	Conductivity (µS/cm)	Dissolved oxygen (mg/L)
MCL–4	10–12–94	1248	2	8.2	20.5	458	7.7
		1250	4	8.2	20.5	459	7.7
		1253	6	8.2	20.4	457	7.6
		1256	8	8.2	20.2	459	7.6
		1259	10	8.3	20.0	456	7.8
		1302	12	8.2	20.0	458	7.6
		1305	14	8.1	20.2	456	7.6
MCL–12	10–12–94	1204	1	8.2	20.6	458	7.6
		1206	3	8.1	20.5	458	7.5
		1209	5	8.0	20.3	455	7.3

BOTTOM-SEDIMENT PORE WATER

Volatile Organic Compounds

Volatile organic compounds in bottom-sediment pore water

[In micrograms per liter. cm, centimeters; <, less than]

Site ID	Date	Depth (cm)	Di-bromo-methane	Di-chloro-bromo-methane	Carbon-tetra-chloride	1,2-Di-chloro-ethane	Bromo-form	Chloro-dibromo-methane	Chloro-form	Toluene	Benzene	Chloro-benzene
MCL–12	01–24–95	0–3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	3.9	<0.3	<0.3
		38–41	<.7	<.7	<.7	<.7	<.7	<.7	<.7	4.1	<.7	<.7
Bay–6.5	11–03–94	0–5	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
		25–30	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
		31–35	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–7	11–03–94	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<.7
		17–22	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<.7
		24–29	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16
Bay–8	11–03–94	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
		25–30	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7
		40–45	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bay–11	11–02–94	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].5	<.7	<.7
		55–60	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–12	11–02–94	50–55	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
		95–100	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	[1].5	<1.1	<1.1
Bay–13	11–02–94	45–50	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
		70–75	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bay–14	11–02–94	45–50	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<.7
		85–90	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16
Bay–16	11–03–94	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<.7
		25–30	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].4	<.7	<.7
		40–45	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	[1].4	<1.0	<1.0
Bay–19	11–03–94	0–5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
		20–25	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].4	<.7	<.7
		30–35	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].5	<.7	<.7

Volatile organic compounds in bottom-sediment pore water—Continued

Site ID	Depth (cm)	Chloro-ethane	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methyl-ene chloride	Tetra-chloro-ethylene	Trichloro-fluoro-methane	1,1-Di-chloro-ethane	1,1-Di-chloro-ethyl-ene	1,1,1-Tri-chloro-ethane	1,1,2-Tri-chloro-ethane	1,1,2,2-Tetra-chloro-ethane	1,2-Di-chloro-benzene
MCL–12	0–3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	[1]0.3	<0.3	<0.3	<.3
	38–41	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].6	<.7	<.7	<.7
Bay–6.5	0–5	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	25–30	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	31–35	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–7	0–5	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	17–22	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	24–29	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16
Bay–8	0–5	<.7	<.7	<.7	<.7	[1].4	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	25–30	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7
	40–45	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bay–11	0–5	<.7	<.7	<.7	<.7	[1].5	<.7	<.7	<.7	<.7	[1].4	<.7	<.7	<.7
	55–60	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–12	50–55	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	95–100	<1.1	<1.1	<1.1	<1.1	.9	<1.1	<1.1	<1.1	<1.1	[1].8	<1.1	<1.1	<1.1
Bay–13	45–50	<1.4	<1.4	<1.4	<1.4	[1]1.0	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
	70–75	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bay–14	45–50	<.7	<.7	<.7	<.7	[1].4	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7
	85–90	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16
Bay–16	0–5	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	25–30	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7
	40–45	<1.0	<1.0	<1.0	<1.0	[1].5	<1.0	<1.0	<1.0	<1.0	[1].3	<1.0	<1.0	<1.0
Bay–19	0–5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	20–25	<.7	<.7	<.7	<.7	[1].4	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7
	30–35	<.7	<.7	<.7	<.7	[1].4	<.7	<.7	<.7	<.7	[1].3	<.7	<.7	<.7

Volatile organic compounds in bottom-sediment pore water—Continued

Site ID	Depth (cm)	1,2-Di-chloro-propane	trans-1,2-Di-chloro-ethylene	1,2,4-Trichloro-benzene	1,3-Di-chloro-benzene	1,4-Di-chloro-benzene	2-Chloro-ethyl vinyl ether	Dichloro-difluoro-methane	Naphtha-lene	trans-1,3-Di-chloro-propene	cis 1,3-Di-chloro-propene	Vinyl chloride	Tri-chloro-ethylene	Hexa-chloro-but-adiene
MCL–12	0–3	<0.3	<0.3	<0.3	<0.3	<0.3	<1.7	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	38–41	<.7	<.7	<.7	<.7	<.7	<3.6	<.7	<.7	<.7	<.7	<.7	<.7	<.7
Bay–6.5	0–5	<8.0	<8.0	<8.0	<8.0	<8.0	<40	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	25–30	<8.0	<8.0	<8.0	<8.0	<8.0	<40	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	31–35	<8.0	<8.0	<8.0	<8.0	<8.0	<40	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–7	0–5	<.7	<.7	<.7	<.7	1.3	<3.4	<.7	.9	<.7	<.7	<.7	<.7	<.7
	17–22	<.7	<.7	<.7	<.7	1.0	<3.4	<.7	.9	<.7	<.7	<.7	<.7	<.7
	24–29	<16	<16	<16	<16	<16	<80	<16	<16	<16	<16	<16	<16	<16
Bay–8	0–5	<.7	<.7	<.7	<.7	1.0	<3.4	<.7	.9	<.7	<.7	<.7	<.7	<.7
	25–30	<5.7	<5.7	<5.7	<5.7	<5.7	<29	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7
	40–45	<10	<10	<10	<10	<10	<50	<10	<10	<10	<10	<10	<10	<10
Bay–11	0–5	<.7	<.7	<.7	<.7	2.1	<3.4	<.7	[1].2	<.7	<.7	<.7	<.7	<.7
	55–60	<8.0	<8.0	<8.0	<8.0	<8.0	<40	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–12	50–55	<4.0	<4.0	<4.0	<4.0	[1]2.2	<20	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	95–100	<1.1	<1.1	<1.1	<1.1	2.2	<5.7	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Bay–13	45–50	<1.4	<1.4	<1.4	<1.4	[1].8	<6.8	<1.4	[1].7	<1.4	<1.4	<1.4	<1.4	<1.4
	70–75	<4.0	<4.0	<4.0	<4.0	[1]1.9	<20	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bay–14	45–50	<.7	<.7	<.7	<.7	1.2	<3.4	<.7	.8	<.7	<.7	<.7	<.7	<.7
	85–90	<16	<16	<16	<16	<16	<80	<16	<16	<16	<16	<16	<16	<16
Bay–16	0–5	<.7	<.7	<.7	<.7	2.3	<3.4	<.7	[1].2	<.7	<.7	<.7	<.7	<.7
	25–30	<.7	<.7	<.7	<.7	2.3	<3.4	<.7	[1].2	<.7	<.7	<.7	<.7	<.7
	40–45	<1.0	<1.0	<1.0	<1.0	2.1	<4.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bay–19	0–5	<4.0	<4.0	<4.0	<4.0	[1]1.8	<20	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	20–25	<.7	<.7	<.7	<.7	2.4	<3.4	<.7	[1].2	<.7	<.7	<.7	<.7	<.7
	30–35	<.7	<.7	<.7	<.7	2.5	<3.4	<.7	[1].2	<.7	<.7	<.7	<.7	<.7

Volatile organic compounds in bottom-sediment pore water—Continued

Site ID	Depth (cm)	cis-1,2-Dichloro-ethylene	Styrene	1,1-Di-chloro-propene	2,2-Di-chloro-propane	1,3-Di-chloro-propane	1,2,4-Tri-methyl-benzene	Iso-propyl-benzene	n-Propyl-benzene	1,3,5-Tri-methyl-benzene	1,2-Chloro-toluene	1,4-Chloro-toluene	Bromo-chloro-methane
MCL–12	0–3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	38–41	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
Bay–6.5	0–5	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	25–30	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
	31–35	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–7	0–5	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	17–22	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	24–29	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16
Bay–8	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	25–30	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7
	40–45	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bay–11	0–5	<.7	.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	55–60	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Bay–12	50–55	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	95–100	<1.1	[1].7	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Bay–13	45–50	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<.3	<1.4	<1.4	<1.4
	70–75	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bay–14	45–50	<.7	[1].3	<.7	<.7	<.7	<.8	<.7	<.7	<.7	<.7	<.7	<.7
	85–90	<16	<16	<16	<16	<16	<16	<16	<16	<4.0	<16	<16	<16
Bay–16	0–5	[1].2	.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	25–30	<.7	.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7
	40–45	<1.0	[1].7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bay–19	0–5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
	20–25	<.7	.3	<.7	<.7	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7
	30–35	<.7	.8	<.7	<.7	<.7	[1].3	<.7	<.7	<.7	<.7	<.7	<.7

Volatile organic compounds in bottom-sediment pore water—Continued

Site ID	Depth (cm)	n-Butyl-benzene	sec Butyl-benzene	tert-Butyl-benzene	p-Iso-propyl-toluene	1,2,3-Tri-chloro-propane	1,1,1,2-Tetra-chloro-ethane	1,2,3-Tri-chloro-benzene	1,2-Di-bromo-ethane	Freon-113	Methyl-tert-butyl-ether	Xylene	Bromo-benzene	Di-bromo-chloro-propane
MCL–12	0–3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	[1]0.2	0.8	<0.3	<1.7
	38–41	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	.8	<.7	<3.6
Bay–6.5	0–5	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<40
	25–30	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<40
	31–35	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<40
Bay–7	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<3.4
	17–22	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<3.4
	24–29	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<80
Bay–8	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<3.4
	25–30	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<29
	40–45	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<50
Bay–11	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<3.4
	55–60	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<40
Bay–12	50–55	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<20
	95–100	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<5.7
Bay–13	45–50	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<6.8
	70–75	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<20
Bay–14	45–50	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<3.4
	85–90	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<16	<80
Bay–16	0–5	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<3.4
	25–30	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].3	<.7	<3.4
	40–45	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.9
Bay–19	0–5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<20
	20–25	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.2	<.7	<3.4
	30–35	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	<.7	[1].4	<.7	<3.4

[1] Estimated.

Major and Trace Elements

Major and trace elements (schedule 1430) in bottom-sediment pore water

[cm, centimeters; mg/L, milligrams per liter; µg/L, micrograms per liter; <, less than]

Site ID	Date	Depth (cm)	Calcium, dis- solved (mg/L)	Magne- sium, dis- solved (mg/L)	Sodium, dis- solved (mg/L)	Silica, dis- solved (mg/L)	Barium, dis- solved (µg/L)	Beryl- lium, dis- solved (µg/L)	Cad- mium, dis- solved (µg/L)	Chro- mium, dis- solved (µg/L)	Cobalt, dis- solved (µg/L)	Copper, dis- solved (µg/L)
MCL–12	1–26–95	0–3	67	6.1	34	12	57	<.5	<1.0	<5.0	4.0	<10
		38–41	90	13	260	10	86	<.5	<1.0	<5.0	4.0	<10
Bay–7	1–24–95	0–3	90	4.8	47	13	95	<.5	1.0	<5.0	<3.0	<10
		15–18	200	16	280	36	170	<.5	<1.0	7.0	<3.0	<10
		43–46	230	15	430	15	77	<1.5	<3	<15	10	<30
Bay–11	1–24–95	0–3	87	4.8	36	11	86	<.5	2.0	<5.0	<3.0	<10
		95–98	160	16	120	29	180	<.5	2.0	6.0	29	10
		137–140	110	11	99	12	170	<.5	<1.0	<5.0	23	<10
Bay–13	1–24–95	0–5	83	5.0	32	20	91	<.5	1.0	<5.0	16	<10
		76–81	150	16	110	37	170	<.5	<1.0	8.0	12	<10
		179–82	94	9.6	150	13	140	<.5	2.0	<5.0	15	<10

Site ID	Iron, dis- solved (µg/L)	Lead, dis- solved (µg/L)	Lith- ium, dis- solved (µg/L)	Manga- nese, dis- solved (µg/L)	Molyb- denum, dis- solved (µg/L)	Nickel, dis- solved (µg/L)	Silver, dis- solved (µg/L)	Stron- tium, dis- solved (µg/L)	Vana- dium, dis- solved (µg/L)	Zinc, dis- solved (µg/L)
MCL–12	890	<10	14	930	10	<10	<1.0	580	<6	140
	630	10	11	390	20	<10	<1.0	820	<6	150
Bay–7	630	<10	12	1,500	20	<10	<1.0	750	<6	82
	210	20	17	470	<10	<10	<1.0	1,800	<6	65
	4,300	<30	23	360	<30	<30	<3.0	1,300	<18	250
Bay–11	1,200	<10	13	1,100	10	<10	<1.0	730	<6	63
	10,000	20	20	2,300	20	<10	<1.0	1,500	<6	170
	7,700	<10	9	440	10	<10	<1.0	920	<6	200
Bay–13	7,000	20	11	2,700	<10	<10	17	700	<6	150
	4,500	20	30	1,800	10	<10	<1.0	1,700	<6	140
	5,900	20	8	190	20	<10	<1.0	790	<6	170

FISH TISSUES

Pesticides and Polychlorinated Biphenyls

Pesticides and polychlorinated biphenyls in fish tissues

[Samples collected September 1994. All samples are based on wet weight; results are in micrograms per kilogram. <, less than]

Site ID and sample type	Hepta-chlor	Al-drin	En-drin	Diel-drin	DCPA	Hepta-chlor epox-ide	Oxy-chlor-dane	trans-Chlor-dane	cis-Chlor-dane	trans-Non-achlor	cis-Non-achlor	o,p'-DDE	p,p'-DDE
MCL–1 whole fish	<5	<5	<5	<5	<5	<5	<5	5.2	8.2	13	8.3	<5	140
bass fillets	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.1
MCL–7 whole fish	<5	<5	<5	<5	<5	<5	<5	15	18	20	12	<5	29
bass fillets	<5	<5	<5	<5	<5	<5	<5	<5	<5	10	6.1	<5	9
MCL–12 whole fish	<5	<5	<5	<5	<5	<5	<5	15	23	23	12	8.9	81
bass fillets	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	14

Site ID and sample type	o,p'-DDD	p,p'-DDD	o,p'-DDT	p,p'-DDT	o,p'-Meth-oxy-chlor	p,p'-Meth-oxy-chlor	Mirex	Toxa-phene	Hexa-chloro-benzene	Penta-chloro-anisole	alpha-HCH	beta-HCH	gamma-HCH	delta-HCH	Gross PCBs
MCL–1 whole fish	<5	13	<5	<5	<5	<5	<5	<200	<5	<5	<5	<5	<5	<5	590
bass fillets	<5	<5	<5	<5	<5	<5	<5	<200	<5	<5	<5	<5	<5	<5	63
MCL–7 whole fish	<5	5.7	<5	<5	<5	<5	<5	<200	<5	<5	<5	<5	<5	<5	1,600
bass fillets	<5	<5	<5	<5	<5	<5	<5	<200	<5	<5	<5	<5	<5	<5	580
MCL–12 whole fish	<5	65	<5	<5	<5	<5	<5	<200	<5	<5	<5	<5	<5	<5	4,200
bass fillets	<5	<5	<5	<5	<5	<5	<5	<200	<5	<5	<5	<5	<5	<5	300

Major and Trace Elements

Major and trace elements in fish tissues

[Samples collected September 1994. All samples are based on wet weight; results are in micrograms per gram. <, less than; --, no data]

Site ID and sample type	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese
MCL–1 carp liver	320	<0.2	0.7	1.9	<0.2	1.1	1.4	0.7	0.4	91	2,400	0.4	13
bass liver	<1	<.2	1.4	<.1	<.2	1	<.2	<.5	.6	16	720	<.2	9.5
MCL–7 carp liver	--	--	--	--	--	--	--	--	--	--	--	--	--
bass liver	<1	<.2	.5	<.1	<.2	.8	.5	<.5	.5	25	910	<.2	8.7
MCL–12 carp liver	1.4	<.2	.3	<.1	<.2	.3	.3	<.5	<.2	36	480	<.2	.8
bass liver	<1	<.2	.8	<.1	<.2	.8	.2	.5	.6	25	930	<.2	8.0

Site ID and sample type	Uranium	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Vanadium	Zinc
MCL–1 carp liver	<0.2	<0.1	1.3	0.6	4.5	0.3	6.4	2.4	620
bass liver	<.2	<.1	1.1	.3	5.3	<.2	.6	.2	99
MCL–7 carp liver	--	--	--	--	--	--	--	--	--
bass liver	<.2	<.1	1.1	.2	5.6	.3	1.4	.6	85
MCL–12 carp liver	<.2	<.1	.2	<.2	1	<.2	.2	.2	290
bass liver	<.2	<.1	1.1	.2	5.1	<.2	.9	.2	100

Laboratory quality-control sample results for Phase I—Volatile organic compounds (schedule 8111) in bottom sediment

[Batch no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than]

Compound	Batch no. J950206[1]		Batch no. J950207[2]	
	Blank (µg/kg)	Percent recovery reagent spike	Blank (µg/kg)	Percent recovery reagent spike
Dichlorodifluoromethane	<0.2	91	<0.2	77
Chloromethane	<.2	97	<.2	96
Vinyl chloride	<.2	92	<.2	89
Bromomethane	<.2	114	<.2	101
Chloroethane	<.2	78	<.2	82
Trichlorofluoromethane	<.2	63	<.2	58
1,1-Dichloroethylene	<.2	26	<.2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	<.2	82	<.2	39
Methylene chloride	<.2	88	<.2	86
trans-1,2-Dichloroethylene	<.2	87	<.2	87
Methyl-tert-butyl ether	<.2	97	<.2	94
1,1-Dichloroethane	<.2	88	<.2	95
2,2-Dichloropropane	<.2	99	<.2	83
cis-1,2-Dichloroethylene	<.2	92	<.2	91
Bromochloromethane	<.2	92	<.2	91
Chloroform	<.2	93	<.2	96
1,1,1-Trichloroethane	<.2	105	<.2	102
1,1-Dichloropropene	<.2	104	<.2	105
Carbon tetrachloride	<.2	107	<.2	98
Benzene	<.2	98	<.2	103
1,2-Dichloroethane	<.2	89	<.2	102
Trichloroethylene	<.2	104	<.2	114
1,2-Dichloropropane	<.2	96	<.2	105
Dibromomethane	<.2	101	<.2	99
Bromodichloromethane	<.2	98	<.2	94
cis-1,3-Dichloropropene	<.2	94	<.2	94
Toluene	<.2	101	<.2	98
trans-1,3-Dichloropropene	<.2	116	<.2	115
1,1,2-Trichloroethane	<.2	92	<.2	100
Tetrachloroethylene	<.2	103	<.2	97

Laboratory quality-control sample results for Phase I—Volatile organic compounds (schedule 8111) in bottom sediment—Continued

Compound	Batch no. j950206[1] Blank (µg/kg)	Batch no. j950206[1] Percent recovery reagent spike	Batch no. j950207[2] Blank (µg/kg)	Batch no. j950207[2] Percent recovery reagent spike
1,3-Dichloropropane	<0.2	88	<0.2	101
Dibromochloromethane	<.2	91	<.2	82
1,2-Dibromoethane	<.2	93	<.2	94
Chlorobenzene	<.2	94	<.2	95
1,1,1,2-Tetrachloroethane	<.2	91	<.2	88
Ethylbenzene	<.2	95	<.2	101
m- and p-Xylene	<.2	101	<.2	106
o-Xylene	<.2	100	<.2	107
Styrene	<.2	94	<.2	98
Bromoform	<.2	94	<.2	77
Isopropylbenzene	<.2	98	<.2	102
Bromobenzene	<.2	99	<.2	98
1,1,2,2-Tetrachloroethane	<.2	91	<.2	88
1,2,3-Trichloropropane	<.2	85	<.2	95
n-Propylbenzene	<.2	100	<.2	104
2-Chlorotoluene	<.2	105	<.2	104
4-Chlorotoluene	<.2	99	<.2	98
1,3,5-Trimethylbenzene	<.2	99	<.2	101
tert-Butylbenzene	<.2	99	<.2	102
1,2,4-Trimethylbenzene	<.2	99	<.2	101
sec-Butylbenzene	<.2	101	<.2	103
1,3-Dichlorobenzene	<.2	101	<.2	100
p-Isopropyltoluene	<.2	100	<.2	102
1,4-Dichlorobenzene	<.2	99	<.2	98
1,2-Dichlorobenzene	<.2	102	<.2	101
n-Butylbenzene	<.2	101	<.2	105
1,2-Dibromo-3-chloropropane	<.2	90	<.2	88
1,2,4-Trichlorobenzene	<.2	110	<.2	102
Hexachlorobutadiene	<.2	110	<.2	102
Naphthalene	<.2	100	<.2	104
1,2,3-Trichlorobenzene	<.2	107	<.2	103

[1] Bay–7 (0–5, 10–15, 25–30).

[2] Bay–11 (95–100, 137–142), Bay–13 (76–81, 81–86, 179–184).

Laboratory quality-control sample results for Phase I—Semivolatile organic compounds in bottom sediment

[Batch no. refers to specific environmental samples listed in footnote.]

Compound	Batch no. 2502Z94192[1] Percent recovery spike
Benzene, hexachloro-	65
Phthalate, dibutyl-	86
Phthalate, dioctyl-	85
Phthalate, diethyl-	72
Phthalate, dimethyl-	72
Pyrene	72
Pyrene, 1-methyl-	65
Benzo[a]pyrene	60
Indeno[1,2,3-c,d]pyrene	62
2,2'-Biquinoline	43
Quinoline	71
Phenanthridine	67
Isoquinoline	62
Toluene, 2,4-dinitro-	76
Toluene, 2,6-dinitro-	74
Benzo[k]fluoranthene	72
9H-Fluorene, 1-methyl-	66
9H-Fluorene	61
Isophorone	67
Methane, bis(2-chloroethoxy)	73
Naphthalene	72
Naphthalene, 1,2-dimethyl-	65
Naphthalene 1,6-dimethyl-	67
Naphthalene 2,3,6-trimethyl-	63
Naphthalene 2,6-dimethyl-	69
Naphthalene, 2-chloro-	76
Benzo[g,h,i]perylene	64
Phenanthrene	69
Phenanthrene, 1-methyl-	73
Phenanthrene, 4,5-methylene-	66
Phenol	64
3,5-Xylenol	66
M-cresol, 4-Chloro-	66
Phenol, M-nitro-	73
Phenol, C8-alkyl-	41

Laboratory quality-control sample results for Phase I—Semivolatile organic compounds in bottom sediment—Continued

Compound	Batch no. 2502Z94192[1] Percent recovery spike
Phthalate, bis(2-ethyl-hexyl)	86
Phthalate, butylbenzyl-	75
Acenaphthylene	64
Acenaphthene	63
Acridine	63
Di-n-propylamine, n-nitroso-	50
Diphenylamine, n-nitroso-	68
Anthracene	66
Anthracene, 2-methyl-	66
Benz[a]anthracene	71
9,10-Anthraquinone	68
Benzene, 1,2,4-trichloro-	61
Benzene, o-dichloro-	55
Benzene, m-dichloro-	50
Benzene, p-dichloro-	65
Azobenzene	65
Benzene, nitro-	64
Benzene, pentachloronitro-	68
Carbazole	69
Chrysene	70
P-cresol	68
Thiophene, dibenzo-	67
4-Bromophenylphenol ether	65
4-Chlorophenylphenol ether	65
Benzo[b]fluoranthene	62
Pentachloroanisole	62
Dibenzo[a,h]anthracene	64
Fluoranthene	70
Phenol, 2-chloro-	61
Benzo[c]cinnoline	71
Napthalene, 2-ethyl-	74

[1]MCL–1, MCL–2, MCL–5, MCL–8, MCL–8 replicate, MCL–9, MCL–10, MCL–11, MCL–12. Blank was ruined during preparation.

Laboratory quality-control sample results for Phase I—Pesticides, polychlorinated biphenyls, and polychlorinated naphthalenes (schedule 1325) in bottom sediment

[Set no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than; NS, not spiked; SPR, surrogate percent recovery]

Compound	Set no. 952[1]		Set no. 973[2]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	
Lindane	<0.1	69.50	<0.1	92.19	43–114
Heptachlor	<.1	59.95	<.1	90.33	43–114
Aldrin	<.1	67.00	<.1	86.05	40–104
Heptachlor epoxide	<.1	63.00	<.1	83.30	41–107
Chlordane	<1.0	NS	<1.0	NS	NS
Endosulfan I	<.1	77.45	<.1	72.20	37–97
Dieldrin	<.1	77.45	<.1	76.98	40–107
DDE	<.1	71.10	<.1	99.60	45–120
Endrin	<.1	53.05	<.1	63.28	42–110
Perthane	<1.0	89.50	<1.0	100.34	60–159
DDD	<.1	77.00	<.1	100.20	48–126
DDT	<.1	63.50	<.1	88.52	42–111
Methoxyclor	<.1	75.50	<.1	95.81	47–124
Mirex	<.1	56.50	<.1	92.35	37–99
Toxaphene	<10	NS	<10	NS	NS
Gross PCBs	<1	NS	<1	NS	NS
Gross PCNs	<1	NS	<1	NS	NS
Isodrin (SPR)	91.80	96.55	93.35	96.75	36–145

[1] MCL–3, MCL–6, MCL–7 (0–3, 0–3 replicate, 14–25).

[2] MCL–1, MCL–2, MCL–4, MCL–5, MCL–7 (39–50), MCL–8, MCL–8 replicate, MCL–9, MCL–10, MCL–11, MCL–12.

Laboratory quality-control sample results for Phase I—Pesticides and polychlorinated biphenyls (schedule 2501) in bottom sediment

[Set no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than; D–U, matrix interference; NS, not spiked]

Compound	Set no. 95019[1]	
	Blank (µg/kg)	Percent recovery spike
Chlorneb	<5.0	73
alpha-HCH	<1.0	77
Hexachlorobenzene	<1.0	76
Pentachloroanisole	<1.0	78
beta-HCH	<1.0	79
gamma-HCH	<1.0	74
Heptachlor	<1.0	82
Aldrin	<1.0	80
DCPA	<5.0	92
Isodrin	<1.0	81
Heptachlor epoxide	<1.0	81
Oxychlordane	<1.0	80
trans-Chlordane	<1.0	81
Endosulfan I	<1.0	D–U
o,p'-DDE	<1.0	D–U
cis-Chlordane	<1.0	83
trans-Nonachlor	<1.0	82
Dieldrin	<1.0	80
p,p'-DDE	<2.0	84
o,p'-DDD	<1.0	82
Endrin	<2.0	89
cis-Nonachlor	<1.0	80
p,p'-DDD	<1.0	96
o,p'-DDT	<2.0	85
p,p'-DDT	<2.0	81
o,p'-Methoxychlor	<5.0	85
p,p'-Methoxychlor	<5.0	82
Mirex	<1.0	84
cis-Permethrin	<5.0	87
trans-Permethrin	<5.0	74
PCBs, total	<50	NS
Toxaphene	<200	NS

[1] MCL–1, MCL–7, MCL–8, MCL–12, MCL–13, Bay–7, Bay–16, NAS–2, NAS–3, NAS–4.

Laboratory quality-control sample results for Phase I—Volatile organic compounds (schedule 2090) in lake water

[Batch no. refers to specific environmental samples listed in footnote. µg/L, micrograms per liter; <, less than]

Compound	Batch no. j941019[1]		Percent recovery spike limits
	Blank (µg/L)	Percent recovery spike	
Dichlorodifluoromethane	<0.20	73	60–140
Chloromethane	<.20	72	60–140
Vinyl chloride	<.20	81	60–140
Bromomethane	<.20	100	60–140
Chloroethane	<.20	98	60–140
Trichlorofluoromethane	<.20	74	60–140
1,1-Dichloroethylene	<.20	86	60–140
Methylene chloride	<.20	96	60–140
trans-1,2-Dichloroethylene	<.20	98	60–140
Methyl-tert-butyl ether	<.20	98	60–140
1,1-Dichloroethane	<.20	93	60–140
2,2-Dichloropropane	<.20	91	60–140
Bromochloromethane	<.20	100	60–140
cis-1,2-Dichloroethylene	<.20	94	60–140
Chloroform	<.20	98	60–140
1,1,1-Trichloroethane	<.20	102	60–140
Carbon tetrachloride	<.20	102	60–140
1,1-Dichloropropene	<.20	103	60–140
Benzene	<.20	100	60–140
1,2-Dichloroethane	<.20	102	60–140
Trichloroethylene	<.20	103	60–140
1,2-Dichloropropane	<.20	99	60–140
Bromodichloromethane	<.20	92	60–140
Dibromomethane	<.20	101	60–140
cis-1,3-Dichloropropene	<.20	128	60–140
Toluene	<.20	115	60–140
trans-1,3-Dichloropropene	<.20	129	60–140
1,1,2-Trichloroethane	<.20	111	60–140
Tetrachloroethylene	<.20	100	60–140
1,3-Dichloropropane	<.20	112	60–140
Dibromochloromethane	<.20	102	60–140
1,2-Dibromoethane	<.20	105	60–140
Chlorobenzene	<.20	106	60–140
1,1,1,2-Tetrachloroethane	<.20	107	60–140
Ethylbenzene	<.20	110	60–140

Laboratory quality-control sample results for Phase I—Volatile organic compounds (schedule 2090) in lake water—Continued

Compound	Batch no. j941019[1]		Percent recovery spike limits
	Blank (µg/L)	Percent recovery spike	
Xylenes, total	<0.20	112	60–140
Styrene	<.20	106	60–140
Bromoform	<.20	102	60–140
Isopropylbenzene	<.20	106	60–140
1,1,2,2-Tetrachloroethane	<.20	109	60–140
Bromobenzene	<.20	105	60–140
1,2,3-Trichloropropane	<.20	98	60–140
n-Propylbenzene	<.20	102	60–140
2-Chlorotoluene	<.20	98	60–140
tert-Butylbenzene	<.20	103	60–140
1,2,4-Trimethylbenzene	<.20	107	60–140
sec-Butylbenzene	<.20	106	60–140
p-Isopropyltoluene	<.20	107	60–140
1,3-Dichlorobenzene (meta)	<.20	99	60–140
1,4-Dichlorobenzene (para)	<.20	103	60–140
n-Butylbenzene	<.20	107	60–140
1,2-Dichlorobenzene (ortho)	<.20	101	60–140
1,2-Dibromo-3-chloropropane	<1.00	109	60–140
1,2,4-Trichlorobenzene	<.20	109	60–140
Hexachlorobutadiene	.13	105	60–140
Naphthalene	<.20	108	60–140
1,2,3-Trichlorobenzene	<.20	109	60–140
4-Chlorotoluene	<.20	105	60–140
Trichlorotrifluoroethane	<.20	88	60–140
1,3,5-Trimethylbenzene	<.20	108	60–140

[1] MCL–1, MCL–4, MCL–12, MCL–13.

Laboratory quality-control sample results for Phase I—Volatile organic compounds (schedule 1380) in bottom-sediment pore water

[Batch no. refers to specific environmental samples listed in footnote. µg/L, micrograms per liter; <, less than]

Compound	Batch no. j941110[1]		Batch no. j941118[2]		Percent recovery spike limits
	Blank (µg/L)	Percent recovery spike	Blank (µg/L)	Percent recovery spike	
Dichlorodifluoromethane	<0.20	163	<0.20	151	60–140
Chloromethane	<.20	143	<.20	137	60–140
Vinyl chloride	<.20	132	<.20	121	60–140
Bromomethane	<.20	111	<.20	130	60–140
Chloroethane	<.20	135	<.20	124	60–140
Trichlorofluoromethane	<.20	104	<.20	88	60–140
1,1-Dichloroethylene	<.20	104	<.20	99	60–140
Methylene chloride	<.20	107	<.20	98	60–140
trans-1,2-Dichloroethylene	<.20	105	<.20	98	60–140
Methyl-tert-butyl ether	<.20	113	<.20	107	60–140
1,1-Dichloroethane	<.20	107	<.20	99	60–140
2,2-Dichloropropane	<.20	105	<.20	99	60–140
Bromochloromethane	<.20	110	<.20	102	60–140
cis-1,2-Dichloroethylene	<.20	102	<.20	97	60–140
Chloroform	<.20	111	<.20	105	60–140
1,1,1-Trichloroethane	<.20	110	<.20	104	60–140
Carbon tetrachloride	<.20	106	<.20	100	60–140
1,1-Dichloropropene	<.20	115	<.20	109	60–140
Benzene	<.20	112	<.20	106	60–140
1,2-Dichloroethane	<.20	114	<.20	107	60–140
Trichloroethylene	<.20	106	<.20	100	60–140
1,2-Dichloropropane	<.20	115	<.20	105	60–140
Bromodichloromethane	<.20	112	<1.00	100	60–140
Dibromomethane	<.20	112	<.20	104	60–140
2-Chloroethyl vinyl ether	<1.00	116	<.20	110	60–140
cis-1,3-Dichloropropene	<.20	116	<.20	105	60–140
Toluene	<.20	109	<.20	105	60–140
trans-1,3-Dichloropropene	<.20	121	<.20	113	60–140
1,1,2-Trichloroethane	<.20	118	<.20	110	60–140
Tetrachloroethylene	<.20	111	<.20	105	60–140

Laboratory quality-control sample results for Phase I—Volatile organic compounds (schedule 1380) in bottom-sediment pore water

[Batch no. refers to specific environmental samples listed in footnote. µg/L, micrograms per liter; <, less than]

Compound	Batch no. j941110[1]		Batch no. j941118[2]		Percent recovery spike limits
	Blank (µg/L)	Percent recovery spike	Blank (µg/L)	Percent recovery spike	
1,3-Dichloropropane	<0.20	122	<0.20	112	60–140
Dibromochloromethane	<.20	121	<.20	103	60–140
1,2-Dibromoethane	<.20	123	<.20	115	60–140
Chlorobenzene	<.20	115	<.20	106	60–140
1,1,1,2-Tetrachloroethane	<.20	124	<.20	111	60–140
Ethylbenzene	<.20	115	<.20	106	60–140
Xylenes, total	<.20	119	<.20	107	60–140
Styrene	<.20	123	<.20	111	60–140
Bromoform	<.20	127	<.20	102	60–140
Isopropylbenzene	<.20	113	<.20	100	60–140
1,1,2,2-Tetrachloroethane	<.20	123	<.20	117	60–140
Bromobenzene	<.20	119	<.20	108	60–140
1,2,3-Trichloropropane	<.20	121	<.20	117	60–140
n-Propylbenzene	<.20	113	<.20	100	60–140
2-Chlorotoluene	<.20	112	<.20	102	60–140
tert-Butylbenzene	<.20	114	<.20	98	60–140
1,2,4-Trimethylbenzene	<.20	119	<.20	105	60–140
sec-Butylbenzene	<.20	111	<.20	95	60–140
p-Isopropyltoluene	<.20	116	<.20	100	60–140
1,3-Dichlorobenzene (meta)	<.20	111	<.20	99	60–140
1,4-Dichlorobenzene (para)	<.20	112	<.20	98	60–140
n-Butylbenzene	<.20	114	<.20	96	60–140
1,2-Dichlorobenzene (ortho)	<.20	114	<.20	101	60–140
1,2-Dibromo-3-chloropropane	<1.00	128	<1.00	112	60–140
1,2,4-Trichlorobenzene	<.20	119	<.20	102	60–140
Hexachlorobutadiene	<.20	105	<.20	90	60–140
Naphthalene	<.20	123	<.20	96	60–140
1,2,3-Trichlorobenzene	<.20	118	<.20	99	60–140
4-Chlorotoluene	<.20	113	<.20	101	60–140
Trichlorotrifluoroethane	<.20	101	<.20	98	60–140
1,3,5-Trimethylbenzene	<.20	116	<.20	104	60–140
Acrolein	<20.0	116	<20.0	125	60–140
Acrylonitrile	<20.0	104	<20.0	125	60–140

[1] Bay–7 (0–5, 17–22), Bay–8 (0–5), Bay–11 (0–5), Bay–12 (95–100), Bay–13 (45–50), Bay–14 (45–50), Bay–16 (25–30, 40–45), Bay–19 (20–25, 30–35).

[2] Bay–6.5 (0–5, 25–30, 31–35), Bay–7 (24–29), Bay–8 (25–30), Bay–11 (55–60), Bay–12 (50–55), Bay–13 (70–75), Bay–14 (85–90), Bay–16 (0–5), Bay–19 (0–5).

Laboratory quality-control sample results for Phase I—Pesticides and polychlorinated biphenyls in fish tissues

[Set no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than; D–U, matrix interference; --, no data; SPR, surrogate percent recovery]

Compound	Set no. 276.01[1]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	
alpha-HCH	<5.0	48	27–103
Hexachlorobenzene	<5.0	45	26–122
Pentachloroanisole	<5.0	45	25–122
beta-HCH	<5.0	79	38–134
gamma-HCH	<5.0	66	26–117
delta-HCH	<5.0	82	16–139
Heptachlor	<5.0	66	33–120
Aldrin	<5.0	63	32–121
DCPA	<5.0	95	34–146
Heptachlor epoxide	<5.0	82	45–136
Oxychlordane	<5.0	82	43–137
trans-Chlordane	<5.0	84	34–136
cis-Chlordane	<5.0	86	36–132
o,p'-DDE	<5.0	87	22–130
trans-Nonachlor	<5.0	86	44–129
Dieldrin	<5.0	78	32–143
p,p'-DDE	<5.0	95	39–135
o,p'-DDD	<5.0	96	45–123
Endrin	<5.0	92	36–159
cis-Nonachlor	<5.0	95	39–146
o,p'-DDT	<5.0	93	44–136
p,p'-DDD	<5.0	D–U	4–173
p,p'-DDT	<5.0	90	35–140
o,p'-Methoxychlor	<5.0	95	34–148
p,p'-Methoxychlor	<5.0	93	36–146
Mirex	<5.0	95	47–126
Toxaphene	<200	--	--
Total PCBs	<50	--	--
alpha-d6-HCH (SPR)	32	42	5–124
3, 5-Dichlorobiphenyl (SPR)	9	20	6–110

[1] MCL–7 and MCL–12.

PHASE II SAMPLING RESULTS

BOTTOM SEDIMENT

Polycyclic Aromatic Hydrocarbons

Gravity core—Polycyclic aromatic hydrocarbons in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than]

Depth (cm)	Phenol	P-cresol	C8-Alkylphenol	Naphthalene	C1-128 Isomers	2-Ethylnaphthalene	2,6-Dimethylnaphthalene	1,6-Dimethylnaphthalene	C2-128 Isomers	Acenaphthylene	1,2-Dimethylnaphthalene	Acenaphthene	C3-128 Isomers	2,3,6-Trimethylnaphthalene	9H-Fluorene	C4-128 Isomers
M2.40 (05–15–96)																
0–5	11.4	8.1	[1]5.6	[1]1.9	52.6	[1]0.44	59.5	7.0	98.4	[1]4.4	<10	[1]2.6	11.7	[1]1.0	5.2	<10
5–10	16.1	21.9	<100	[1]2.6	18.1	<10	154	12.5	177	[1]5.5	[1]2.5	[1]2.9	[1]9.1	[1]1.5	[1]6.1	[1]4.2
10–15	[1]7.7	[1]5.1	<100	[1]2.1	10.6	<10	74.1	[1]8.5	92	[1]3.2	[1].96	[1]2.2	10.5	[1].90	[1]5.1	[1].60
15–20	6.5	5.8	[1]2.9	[1]1.1	34.7	<10	53.0	5.8	76.2	[1]3.4	<10	[1]1.9	9.4	[1].72	[1]4.5	<10
20–25	16.7	[1]2.4	<100	[1]1.7	[1]9.1	<10	56.8	[1]6.5	65	[1]2.0	[1].97	[1]1.7	[1]6.8	[1].76	[1]4.2	[1]7.0
25–30	10.5	[1]4.4	[1]2.4	[1]1.2	30.4	[1].41	56.8	5.2	76.8	[1]2.2	[1].88	[1]2.5	15.3	[1].86	[1]3.7	16.6
30–35	9.6	[1]2.5	[1]2.5	[1]2.1	25.8	<10	40.4	[1]3.9	63.0	[1]2.2	[1].87	[1]2.2	22.2	[1]2.0	[1]2.7	19.2
35–40	36.8	[1]1.9	<100	[1]2.5	12.9	<10	31.8	<10	48	6.7	[1]1.1	[1]3.4	19.8	[1]4.0	[1]1.7	25.2
40–45	[1]6.3	[1]4.2	<10	[1]1.7	19.8	[1].53	29.3	[1]5.9	96.2	<10	[1]5.3	[1]3.0	30.0	6.0	[1]2.6	60.4
45–50	[1]7.3	[1]5.1	<10	[1]1.1	23.1	<10	14.5	10.9	104	<10	<10	[1]4.4	63.5	14.3	<10	131
50–55	[1]7.9	[1]7.8	<10	[1]1.8	32.7	<10	36.0	<10	262	26.8	106	9.8	167	41.2	<10	988
55–60	[1]4.8	[1]2.7	<10	[1].77	17.4	<10	12.4	15.1	118	<10	<10	[1]3.5	83.2	13.6	[1]3.6	326
55–60[2]	[1]4.2	[1]3.8	<10	[1].94	22.8	<10	15.7	[1]6.0	134	[1]7.4	<10	[1]3.4	73.8	15.3	[1]4.4	358
60–65	5.2	[1]3.8	<10	[1]1.3	20.1	[1]1.0	19.7	7.3	185	<10	[1]3.6	[1]2.6	57.2	9.5	[1]3.8	52.3
65–70	5.2	[1]4.0	[1]2.3	[1]1.3	20.2	[1].53	16.4	[1]2.2	28.4	[1]1.1	<10	[1]1.0	13.5	[1].98	[1]3.3	21.5
70–75	[1]6.9	[1]2.8	[1]1.6	[1].76	16.3	[1].30	[1]6.9	[1]1.6	13.1	[1].35	[1].10	<10	[1]3.9	[1].18	[1]2.8	[1]7.8

Gravity core—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Depth (cm)	1-Meth-yl-9H-fluo-rene	C1-166 Iso-mers	Di-benzo-thi-phene	Phe-nan-threne	An-thra-cene	Acri-dine	Phe-nan-thri-dine	9H-Car-ba-zols	C5-128 Iso-mers	C2-166 Iso-mers	2-Meth-ylan-thra-cene	4,5-Meth-ylene-phe-nan threne	C1-178 Iso-mers	1-Meth-yl-phe-nan-threne	C3-166 Iso-mers
M2.40—Continued															
0–5	[1]1.6	17.1	[1]3.4	46.9	16.6	7.7	<10	14.1	<10	<10	[1]4.5	13.5	35.5	5.2	<10
5–10	[1]1.9	11.7	[1]5.3	38.7	15.0	[1]6.1	12.6	16.0	[1]3.4	19.1	[1]3.0	13.9	36.7	[1]3.9	<10
10–15	[1]1.7	[1]8.6	[1]4.6	26.4	11.6	[1]4.4	[1]7.3	[1]8.6	<10	10.9	[1]2.4	12.7	28.3	[1]4.3	<10
15–20	[1]1.3	10.5	[1]3.0	22.8	12.9	5.3	<10	7.1	<10	[1].64	[1]3.3	13.0	22.0	[1]4.2	<10
20–25	[1]2.2	[1]7.2	[1]3.7	18.9	[1]8.1	[1]3.6	[1]5.1	[1]5.7	<10	[1]2.0	[1]2.2	10.8	20.9	[1]3.3	[1]1.9
25–30	[1]2.1	11.0	[1]4.2	25.0	11.5	6.6	<10	6.4	<10	<10	[1]3.8	12.1	22.7	[1]3.6	<10
30–35	[1]1.9	10.1	[1]3.2	17.7	10.0	5.2	6.8	5.5	<10	<10	[1]3.7	10.6	20.8	[1]2.9	<10
35–40	[1]4.0	13.5	[1]4.1	11.8	[1]7.7	[1]8.3	[1]6.4	[1]3.4	<10	[1]9.0	[1]3.2	10.2	18.2	[1]3.6	[1]8.6
40–45	[1]4.2	18.0	[1]2.6	11.0	12.7	[1]9.1	<10	[1]4.4	27.7	16.1	10.2	10.2	27.9	[1]2.0	<10
45–50	[1]5.6	27.9	[1]3.8	12.7	16.6	11.6	<10	[1]4.0	29.2	17.8	17.0	12.1	41.8	[1]2.5	<10
50–55	11.6	51.2	8.5	32.7	32.4	22.2	<10	[1]7.2	206	54.6	31.7	22.2	91.4	9.3	36.6
55–60	[1]4.1	17.8	[1]2.6	14.6	[1]6.4	[1]6.3	<10	[1]3.3	31.7	13.1	[1]5.1	9.8	34.0	[1]5.6	10.5
55–60[2]	[1]4.8	18.1	[1]2.7	17.7	[1]7.6	[1]9.0	<10	[1]4.2	<10	15.6	[1]5.1	11.3	35.9	[1]6.3	<10
60–65	[1]3.1	13.9	[1]2.2	12.0	7.0	[1]3.2	<10	[1]3.1	<10	8.2	[1]4.6	10.2	24.2	[1]3.1	<10
65–70	[1]1.6	12.4	[1]1.9	11.0	[1]4.9	[1]4.0	<10	[1]2.8	<10	[1]4.2	[1]2.2	7.1	14.3	[1]2.4	<10
70–75	[1].84	9.9	[1].91	[1]4.8	[1]2.7	[1]2.6	<10	[1]1.6	<10	[1]2.1	[1]1.2	[1]3.0	[1]7.0	[1]1.3	[1]3.9

Gravity core—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Depth (cm)	C2-178 Iso-mers	Fluo-ran-thene	Pyrene	C3-178 Iso-mers	C4-178 Iso-mers	1-Meth-yl-py-rene	C1-202 Iso-mers	C2-202 Iso-mers	C5-178 Iso-mers	Benzo [a] an-thra-cene	Chry-sene	C3-202 Iso-mers	C1-228 Iso-mers	C4-202 Iso-mers	C5-202 Iso-mers	C2-228 Iso-mers	Benzo [b] fluo-ran-thene
M2.40—Continued																	
0–5	32.1	165	136	19.7	<10	8.4	94.7	70.4	<10	74.1	94.0	39.4	42.2	22.8	<10	19.0	115
5–10	34.8	198	173	10.4	<10	[1]7.3	96.2	22.0	<10	77.3	101	<10	<10	<10	<10	<10	89.0
10–15	24.0	159	136	17.5	<10	10	80.9	49.2	<10	60.7	73.1	<10	10.1	[1]7.3	<10	[1]3.2	79.4
15–20	25.3	106	93.7	15.6	10.5	5.5	70.4	53.3	<10	51.3	59.9	25.7	32.0	<10	<10	14.7	71.4
20–25	21.1	86.2	78.8	11.5	<10	[1]4.5	56.6	17.0	<10	37.0	43.5	[1]1.9	<10	[1]2.6	<10	[1]2.2	50.3
25–30	30.1	76.3	71.2	35.7	20.7	8.4	69.4	59.0	<10	37.0	43.3	41.2	28.6	<10	<10	25.3	50.1
30–35	36.7	59.7	57.6	42.9	27.7	8.1	62.9	63.4	8.4	31.3	36.8	40.8	32.7	<10	<10	29.9	41.1
35–40	25.4	43.0	48.7	28.3	<10	[1]4.7	45.2	11.3	<10	18.8	23.4	<10	<10	<10	<10	[1]2.0	25.4
40–45	36.4	42.3	49.5	32.9	27.3	[1]6.9	52.9	45.5	<10	20.9	24.7	26.8	15.7	<10	<10	15.9	35.8
45–50	63.4	49.1	57.8	55.3	32.2	10.5	65.9	61.1	<10	22.5	28.5	47.2	20.0	20.7	<10	17.9	31.3
50–55	185	114	142	177	115	38.8	228	198	<10	57.2	70.0	191	65.0	<10	<10	62.8	90.4
55–60	70.5	42.9	56.4	70.0	48.1	19.4	101	74.0	<10	20.0	25.3	63.3	29.8	<10	<10	32.8	25.4
55–60[2]	70.0	49.2	59.2	63.7	42.4	14.4	85.4	69.2	<10	20.2	27.2	37.1	28.6	24.3	<10	16.7	30.7
60–65	36.8	34.8	38.4	34.4	20.4	[1]3.9	40.0	29.1	<10	16.2	22.2	19.7	14.8	<10	<10	6.4	20.7
65–70	17.5	25.2	25.5	19.2	13.8	[1]2.9	30.9	23.4	<10	13.8	15.5	18.7	12.2	<10	<10	7.0	18.1
70–75	[1]7.6	10.6	[1]8.9	[1]5.6	[1]5.2	[1]1.1	12.6	[1]9.5	<10	[1]4.0	[1]5.7	[1]3.9	[1]4.5	<10	<10	[1]3.2	[1]5.5

Gravity core—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Depth (cm)	Benzo [k] fluo-ran-thene	Benzo [e] py-rene	Benzo [a] py-rene	Pery-lene	C1-252 Iso-mers	C3-228 Iso-mers	C2-252 Iso-mers	C4-228 Iso-mers	Benzo [g,h,i] pery-lene	Indeno [1,2,3-c,d] py-rene	Dibenzo [a,h] anthra-cene	C3-252 Iso-mers	C4-252 Iso-mers	C5-228 Iso-mers	C5-252 Iso-mers	Coro-nene
M2.40—Continued																
0–5	95.4	79.5	96.0	220	<10	<10	[1]1.1	<10	80.4	116	23.5	[1]1.4	<10	<10	<10	18.4
5–10	110	90.2	105	[1]290	38.0	<10	<10	<10	89.0	110	37.4	<10	<10	<10	<10	22.3
10–15	98.8	67.6	76.3	[1]366	22.9	<10	[1]4.8	<10	74.6	83.7	28.2	[1]2.0	<10	<10	<10	17.6
15–20	58.1	51.5	67.4	389	37.7	<10	<10	[1]2.8	56.2	78.2	23.1	<10	[1]23	<10	<10	16.0
20–25	62.2	55.0	36.4	[1]620	[1]6.2	<10	<10	<10	37.5	45.5	14.5	<10	<10	<10	<10	9.6
25–30	37.2	35.0	42.9	786	55.9	<10	28.8	<10	37.8	51.6	13.1	9.7	<10	<10	<10	8.9
30–35	38.4	31.0	40.1	744	53.6	<10	25.9	<10	34.6	45.7	13.5	<10	<10	<10	<10	10.0
35–40	38.1	40.6	24.4	[1]1,000	[1]3.1	<10	[1]1.0	<10	23.1	27.1	11.0	<10	<10	<10	<10	[1]6.0
40–45	21.9	22.8	28.9	752	<10	<10	<10	<10	25.6	33.1	10.2	<10	<10	<10	<10	[1]8.4
45–50	29.8	25.0	29.8	662	30.9	<10	12.9	<10	27.0	35.2	[1]9.9	<10	<10	<10	<10	[1]8.6
50–55	59.7	62.8	74.0	986	64.6	<10	39.2	<10	67.1	82.2	[1]17.2	10.1	<10	<10	<10	[1]19.6
55–60	23.6	20.6	23.8	447	33.0	<10	20.3	<10	21.7	<10	10	14.5	<10	<10	<10	[1]6.9
55–60[2]	28.4	21.3	25.3	531	26.6	<10	10.7	<10	22.5	28.4	[1]6.6	<10	<10	<10	<10	[1]6.4
60–65	19.8	15.6	19.6	698	13.0	<10	<10	<10	16.5	20.2	7.4	<10	<10	<10	<10	5.5
65–70	10.9	11.0	14.6	650	<10	<10	<10	<10	11.1	15.0	5.7	<10	<10	<10	<10	5.3
70–75	[1]3.6	[1]3.3	[1]5.5	302	[1]5.8	<10	<10	[1]0.32	[1]4.2	[1]5.0	[1]2.4	<10	<10	<10	<10	[1]1.6

[1] Estimated.
[2] Replicate.

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments unless otherwise noted. All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than; D–U, delete due to interferences]

Site ID and depth (cm)	Date	Phenol	P-cresol	C8-Alkyl-phenol	Naph-tha-lene	C1-128 Iso-mers	2-Ethyl-naph-tha-lene	2,6-Di-methyl-naph-tha-lene	1,6-Di-methyl naph-tha-lene	C2-128 Iso-mers	Ace-naph-thy-lene	1,2-Di-methyl naph-tha-lene
M2.1	07–10–96	32.2	42.0	[1]27.4	244	890	40.6	149	183	704	88.2	37.1
M2.1[2]	07–10–96	31.6	49.8	[1]27.9	408	1,280	117	262	132	1,040	91.4	[1]15.8
M2.1 (3–8)	07–10–96	36.5	217	13.2	331	1,650	52.4	143	176	756	72.3	34.0
M2.2	07–10–96	58.8	13.4	[1]9.5	13.9	100	[1]2.4	137	14.7	435	44.8	[1]2.1
M2.3	07–10–96	58.5	16.4	[1]9.1	17	111	[1]1.68	219	23.9	467	47.4	19.4
M2.4	07–10–96	74.4	46.7	11.6	15.3	130	<5	151	13.4	416	38.3	<5
M2.5	07–10–96	63.0	78.0	12.2	13.9	115	<5	122	12.3	316	27.2	<5
M2.6	07–11–96	60.1	96.8	11.5	15.1	135	<5	143	16.2	387	34.9	<5
M2.7	07–11–96	44.6	16.0	[1]7.06	10.1	75.5	<10	152	11.2	291	31.9	[1]1.8
M2.8	07–10–96	22.0	[1]8.6	[1]3.11	16.3	82.2	[1]1.9	59.7	16.8	131	30.2	[1]3
M2.8 (3–9)	07–10–96	24.7	106	<5	21.5	192	<5	85.7	16.2	197	28.4	<5
M2.8 (3–9)[2]	07–10–96	29.0	130	6.2	29.1	212	<5	78.5	23.7	202	35.5	<5
M2.8 (9–19.5)	07–10–96	20.7	286	9.0	18.9	167	<5	73.5	21.3	89.9	32.6	<5
M2.9	07–10–96	60.6	76.1	8.8	15.7	122	<5	135	12.9	378	26.3	<5
M2.9 (3–9)	07–10–96	44.0	219	6.2	16.2	126	<5	98.4	15.6	301	41.1	<5
M2.9 (9–18.8)	07–10–96	25.2	48.2	5.7	23.8	192	<5	102	17	324	30.4	<5
M2.10	05–16–96	81.4	[1]54.1	<50	61.8	61.9	<5	41.9	14.4	117	73.2	39
M2.11	06–19–96	45.0	26.8	[1]9.6	43.5	286	5.1	112	21.2	256	51.9	[1]4.2
M2.11 (3–9)	06–19–96	37.4	20.6	[1]8.6	23.1	184	[1]4.1	105	24.4	238	34.4	[1]4.4
M2.11 (3–9)[2]	06–19–96	35.8	20.2	[1]8.8	27.5	141	[1]3.3	120	19.1	271	40.1	14.2
M2.11 (9–14.5)	06–19–96	20.2	15.7	<100	21.5	46.2	[1]3.2	111	22.7	178	29.0	22.6
M2.12	05–17–96	92.4	[1]67.8	<50	22.6	108	<5	111	11.3	184	35.6	29.4
M2.13	06–19–96	31.8	14.0	[1]7.2	22.4	183	[1]4.1	116	26.7	239	39.4	[1]4.4
M2.13 (3–9)	06–19–96	31.4	15.3	[1]6.6	18.8	178	[1]3.6	95.7	23.3	181	27.1	[1]4.1
M2.13 (3–9)[2]	06–19–96	15.2	11.2	[1]5.4	17.0	93.4	[1]2.5	101	16.0	210	32.0	[1]2.9
M2.13 (9–13.5)	06–19–96	12.6	13.2	[1]7.0	17.9	162	[1]3.2	68.7	23.2	161	38.2	[1]3.6
M2.14	06–19–96	25.5	5.8	<100	20.2	42.0	<10	264	52.4	359	57.6	16.8
M2.14 (3–9)	06–19–96	27.8	12.6	[1]5.9	13.7	88.7	[1]1.47	112	17.5	202	29.5	[1]1.6
M2.14 (3–9)[2]	06–19–96	24.3	11.5	[1]6.0	12.2	111	<10	101	17.4	178	26.1	[1]2.0
M2.14 (9–17)	06–19–96	19.7	<10	<100	12.8	28.4	<10	107	42.9	249	19.9	18.9
M2.15	06–19–96	48.6	34.0	[1].9	17.5	59.9	<10	124	15.3	225	35.9	[1]2.6
M2.16	06–19–96	17.2	[1]7.8	<100	[1]9.5	31.1	<10	138	13.3	183	21.1	[1]9.0
M2.17	06–19–96	21.1	13.7	[1]6.8	10.4	115	[1]1.4	105	7.9	172	30.2	[1]1.7
M2.17 (3–9)	06–19–96	25.1	16.3	[1]5.8	10.4	101	[1]1.9	152	9.9	220	23.3	[1]1.6
M2.17 (3–9)[2]	06–19–96	23.0	10.4	[1]3.9	[1]9.5	98.3	[1]1.6	71.9	13.1	174	14.6	[1]1.5

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	Date	Phenol	P-cresol	C8-Alkyl-phenol	Naphthalene	C1-128 Isomers	2-Ethyl-naphthalene	2,6-Dimethyl-naphthalene	1,6-Dimethyl naphthalene	C2-128 Isomers	Acenaphthylene	1,2-Dimethyl naphthalene
M2.17 (9–14.5)	06–19–96	13.9	8.8	[1]4.3	6.6	82.0	[1]1.2	70.1	11.1	133	20.5	[1]1.6
M2.18	06–19–96	31.4	16.3	[1]1.1	13.2	37.3	<10	137	13.6	194	34.1	19.6
M2.19	06–20–96	9.4	[1]4.9	<50	5.7	16.3	[1].3	49.9	[1]2.1	69	12.7	[1]0.7
M2.20	06–20–96	20.8	10.4	[1]5.1	10.7	99.1	[1]2.2	119	18.2	189	28.9	[1]2.1
M2.20 (3–9)	06–20–96	18.3	[1]9.0	[1]4.5	[1]7.7	82.7	[1]1.1	82.4	[1]9.1	158	18.2	[1]1.3
M2.20 (3–9)[2]	06–20–96	17.0	10.8	[1]4.3	[1]7.4	52.9	[1]1.2	77.3	[1]7.8	156	22.0	[1]1.3
M2.20 (9–14)	06–20–96	[1]2.6	<50	<50	[1]2.7	<50	<50	<50	<50	<50	<50	<50
M2.21	06–19–96	30.5	26.4	[1].8	[1]9.9	43.5	<10	118	[1]8.2	169	25.0	[1].9
M2.22	06–20–96	15.9	11.6	<100	28.3	79.6	[1]2.4	88.3	13.9	164	26.5	[1]2.6
M2.24	05–16–96	53.8	[1]35.1	<50	25.7	171	<5	133	21.0	154	36.1	10.5
M2.25	05–17–96	33.4	[1]32.3	<50	23.8	101	<5	83.9	12.9	97.1	22.1	8.3
M2.26	05–16–96	36.9	<5	<50	19.7	93.1	<5	33.5	15.3	111	18.2	8.4
M2.27	05–16–96	20.9	<5	<50	9.7	52.2	<5	79.8	9.1	72.3	<5	<5
M2.28	06–18–96	8.1	[1]1.8	<50	[1]1.5	19.3	<5	33.7	[1]2.6	39	[1]2.1	<5
M2.29	06–17–96	7.1	[1]3.2	<50	[1]3.9	13.4	[1].4	65.5	6.2	81	6.7	[1]1.6
M2.30	06–18–96	25.3	39.0	<100	[1]3.1	37.6	<10	85.1	[1]6.4	104	[1]4.3	[1].07
M2.31	06–17–96	[1]8.3	[1]2.1	<100	[1]1.8	[1]7.3	<10	62.1	[1]2.5	73	[1]3.0	[1].54
M2.32	06–18–96	24.7	35.0	[1].80	[1]1.8	19.8	<10	92.8	[1]7.9	105	[1]3.2	<10
M2.33	06–18–96	23.0	23.6	<100	[1]1.8	35.0	<10	120	[1]9.7	136	[1]3.0	<10
M2.34	06–18–96	10.9	[1]3.3	[1].67	[1]1.2	10.1	<10	117	[1]4.7	148	[1]2.3	[1]1
M2.35	05–14–96	17.1	<5	<50	[1]1.8	11.9	<5	12.7	10.6	86.5	<5	<5
M2.36	06–18–96	13.6	[1]2.5	<100	[1]1.8	23.4	<10	101	[1]6.7	118	[1]2.4	[1]1.5
M2.37	05–15–96	18.4	[1]9.7	<50	7.9	66.2	<5	72.4	8.5	67.2	24.7	<5
M2.38	05–15–96	21.2	[1]8.6	<50	5.0	46.8	<5	77.3	8.5	89.5	11	16.2
M2.39	06–18–96	9.1	11.1	<50	[1]4.9	13.0	[1].62	52.8	[1]4.1	66.7	16.2	[1]5.0
M2.41	05–15–96	14.2	50.5	<50	20.6	197	13	99.2	46.4	154	15	7.5
M2.42	05–15–96	8.9	[1]14.9	<50	13.4	81	<5	22.9	14.8	51.2	33.3	10.5
M2.43	05–15–96	<5	<5	<50	<5	<5	<5	<5	<5	<5	<5	<5
M2.44	06–18–96	[1]1.6	[1].81	<50	[1].31	[1]2.8	<5	5.5	<5	[1]7.0	<5	<5
M2.45	06–18–96	10.5	[1]2.4	<100	[1].96	10.1	<10	115	[1]4.1	141	[1]2.2	[1]1.1

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	Ace-naph-thene	C3-128 Iso-mers	2,3,6-Tri-methyl-naph-thalene	9H-Fluorene	C4-128 Iso-mers	1-Methyl-9H-fluo-rene	C1-166 Isomers	Di-benzo-thiphene	Phe-nanthrene	Anthra-cene	Acri-dine	Phenan-thridine	9H-Carba-zols	C5-128 Iso-mers	C2-166 Iso-mers
M2.1	1,120	416	49.9	1,020	753	149	644	524	14,500	3,500	411	587	2,220	<750	257
M2.1[1]	1,580	588	64.0	1,590	894	113	1,020	815	22,900	4,880	694	784	3,230	1,230	336
M2.1 (3–8)	1,550	482	61.1	[1]2,140	238	112	712	[1]2,290	22,200	5,350	400	500	3,420	<5	264
M2.2	59.5	76.4	[1]7.7	45.7	97.4	8.3	20.6	43.0	930	221	<10	<10	194	69.3	[1]6.7
M2.3	74.1	76.1	5.5	43.6	85.4	<10	37.9	45.9	909	226	<10	<10	196	<10	<10
M2.4	61.8	49.9	<5	34.8	25.3	<5	28.2	[1]79.7	1,020	245	74.6	42.7	173	<5	<5
M2.5	53.4	49.0	5.5	31.8	15.6	<5	<5	[1]72.2	956	233	67.6	42.5	159	<5	<5
M2.6	71.7	56.2	7.3	43.0	<5	6.9	20.25	[1]85.0	1,160	288	67.2	<5	246	<5	<5
M2.7	47.7	73.2	[1]4.2	31.8	68.4	<10	74.1	27.9	599	143	[1]9.27	32.2	157	57.3	[1]8.6
M2.8	103	65.1	6.3	70.4	99.7	14	54.7	64.8	1,250	320	41.1	63.8	269	28.2	48.0
M2.8 (3–9)	127	80.5	9	82.6	63.4	11	66.0	[1]151	2,140	513	75.3	102	304	43.4	93.3
M2.8 (3–9)[2]	138	83.3	10.7	91.6	29.5	20	63.6	[1]153	1,330	514	75.4	100	300	<5	<5
M2.8 (9–19.5)	128	74.6	9.3	84.8	46.5	21	66.5	[1]143	1,330	499	86.0	106	286	<5	<5
M2.9	69.7	59.4	6.1	41.0	21.8	<5	18.8	[1]86.6	1,160	281	71.0	53.6	202	<5	<5
M2.9 (3–9)	75.7	58.7	5.78	41.4	22.4	5.8	28.3	[1]89.9	1,200	295	74.1	53.7	181	<5	<5
M2.9 (9–18.8)	86.5	70.9	9.4	50.3	30.6	5.3	39.2	[1]108	574	339	91.6	55.6	186	<5	<5
M2.10	16	49.6	10.4	45.8	<5	13	25.1	10.6	124	44.6	<5	<5	81.8	<5	<5
M2.11	130	176	8.6	86.9	138	9.3	58.7	73.2	1,300	439	14.6	20.0	238	7.3	<5
M2.11 (3–9)	84.8	98.4	[1]9.6	60.3	82.1	13	<60	54.0	1,160	252	66.9	49.3	241	69.4	37.1
M2.11 (3–9)[2]	121	93.6	8.1	84.9	47.3	15	51.8	71.7	1,470	353	10.0	<10	326	135	<10
M2.11 (9–14.5)	103	68.3	9.1	82.8	[1]32.5	<100	[1]60.8	75.5	1,507	310	71.7	48.5	263	<10	[1]37.5
M2.12	89	43.9	<5	54.8	<5	<5	18.1	63.2	941	502	<5	<5	211	<5	<5
M2.13	110	142	10.3	74.1	<5	12	62.1	64.8	1,260	243	16.9	22.9	154	<5	58.0
M2.13 (3–9)	85.7	69.7	[1]9.4	61.2	69.2	13	53.1	55.3	1,180	292	53.9	49.7	241	50.1	49.9
M2.13 (3–9)[2]	96.4	88.2	7.5	70.2	70.1	13	47.5	54.0	1,200	287	14.7	9.1	243	111	38.0
M2.13 (9–13.5)	122	131	10.8	77.8	61.5	12	57.4	68.6	1,080	311	<5	<5	223	<5	<5
M2.14	59.6	66.7	7.0	[1]7.0	19.5	[1]6.9	23.0	52.9	848	172	86.0	44.4	184	<10	50.7
M2.14 (3–9)	56.9	47.1	[1]4.1	43.4	41.8	[1]5.3	40.5	41.3	626	146	<10	<10	131	26.3	10.8
M2.14 (3–9)[2]	45.5	45.0	[1]5.5	37.7	29.1	[1]8.7	38.2	31.3	554	251	<10	<10	142	20.7	10.9
M2.14 (9–17)	61.6	51.6	14.3	[1]6.3	<10	[1]5.7	[1]16.8	43.2	730	151	[1]92.4	<10	151	<10	[1]70.7
M2.15	85.8	31.3	[1]8.4	67.8	17.1	[1]8.0	29.7	34.8	1,090	419	118	41.3	222	<10	[1]128
M2.16	31.9	30.5	[1]3.4	29.9	26.0	[1]6.7	17.0	31.5	436	96.4	21.6	43.6	95.9	[1]2.3	<10
M2.17	33.3	79.1	[1]3.8	30.9	64.8	5.6	32.2	28.4	285	136	12.0	[1]3.7	93.3	81.9	<5
M2.17 (3–9)	34.0	57.7	[1]6.5	32.8	61.0	[1]7.3	36.6	25.5	517	245	15.5	<10	151	23.1	[1]5.2
M2.17 (3–9)[2]	29.9	39.7	[1]3.5	27.5	44.5	[1]5.8	23.5	25.6	371	159	<10	<10	97.0	<50	21.0

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	Acenaphthene	C3-128 Isomers	2,3,6-Trimethylnaphthalene	9H-Fluorene	C4-128 Isomers	1-Methyl-9H-fluorene	C1-166 Isomers	Dibenzothiphene	Phenanthrene	Anthracene	Acridine	Phenanthridine	9H-Carbazols	C5-128 Isomers	C2-166 Isomers
M2.17 (9–14.5)	26.0	61.0	[1]3.4	23.8	46.5	5.3	31.0	20.2	217	82.8	15.0	7.5	57.7	<5	<5
M2.18	59.1	28.1	[1]7.3	43.8	18.5	[1]6.3	20.8	43.8	649	394	<10	50.4	160	<10	[1]18
M2.19	14.6	9.1	[1]2.4	17.4	[1]3.8	[1]4.0	7.1	17.0	249	58.5	19.8	10.2	52.8	<5	<5
M2.20	32.6	104	[1]4.8	32.0	71.2	<5	32.7	29.8	386	62.6	<5	<5	82.9	<5	<5
M2.20 (3–9)	25.7	42.9	[1]4.1	27.2	96.7	[1]7.4	34.7	24.6	417	115	45.9	19.8	94.0	81.3	25.0
M2.20 (3–9)[2]	28.0	48.6	[1]5.2	27.9	41.8	[1]4.8	33.5	26.4	414	103	30.2	[1]5.6	84.0	65.5	28.2
M2.20 (9–14)	[1]36.5	<50	<50	<50	<50	<50	<50	[1]43.3	436	101	[1]46.2	<50	53.9	<50	[1]21.8
M2.21	33.8	26.1	[1]4.5	31.0	[1]7.3	[1]8.2	19.2	32.1	596	122	35	31	116	[1]2.3	[1]39
M2.22	86.4	48.1	[1]6.4	92.0	35.5	13.1	37.1	79.0	1,240	237	49.9	62.0	227	<10	<10
M2.24	83.2	52.3	12.3	144	<5	9.6	38.4	37.2	906	223	<5	<5	125	<5	<5
M2.25	75.1	27.0	<5	71.4	<5	<5	20.5	59.9	1,130	245	34.5	<5	178	21.3	12.8
M2.26	60.0	24.8	<5	54.6	<5	<5	<5	47.5	844	162	21.7	<5	132	<5	<5
M2.27	24.7	21.0	<5	22.5	<5	<5	10.9	20.8	322	66.7	14.8	12.8	56.2	<5	<5
M2.28	[1]3.2	[1]1.0	[1].5	[1]4.5	<5	[1]1.6	[1]1.7	[1]4.7	49.4	12.5	5.2	5.1	12.8	<5	[1]4.0
M2.29	10.2	8.8	[1]1.6	12.2	<5	[1]3.1	7.7	12.1	147	35.4	10.1	6.6	31.5	<5	<5
M2.30	[1]5.4	13.2	[1]1.3	[1]8.4	[1]2.7	[1]3.5	[1]8.4	[1]9.0	80.9	23.6	[1]8.7	14.5	22.2	<10	10.0
M2.31	[1]1.6	[1]2.3	[1].96	[1]3.3	[1]2.4	[1].95	[1]5.0	[1]2.5	24.6	[1]9.8	[1]2.5	[1]6.6	[1]7.4	[1]1.3	<10
M2.32	[1]2.4	<10	[1]1.0	[1]4.8	<10	[1]2.4	[1]2.6	[1]4.2	38.9	12.4	[1]3.4	12.5	12.4	<10	[1]8.8
M2.33	[1]2.1	[1]4.5	[1]1.1	[1]5.1	<10	[1]2.0	[1]9.5	[1]3.7	36.0	12.5	[1]3.3	15.2	12.3	<10	12.4
M2.34	[1]1.1	[1]7.4	[1]1.1	[1]3.2	[1]1.5	[1].73	[1]3.2	[1]2.4	22.0	[1]9.6	[1]2.9	[1]2.4	[1]7.9	[1]24	<10
M2.35	<5	<5	<5	<5	<5	<5	<5	<5	27.7	<5	<5	<5	<5	<5	<5
M2.36	[1]1.6	[1]5.2	[1].92	[1]3.6	<10	[1]1.9	[1]7.4	[1]3.2	30.8	10.4	[1]3.3	14.9	10.9	<10	11.5
M2.37	15.9	25.0	6.0	14.7	19.2	<5	18.1	17.7	258	64.2	23.8	20.2	72.5	<5	9.0
M2.38	<5	23.4	[1]4.2	7.0	12.0	<5	13.4	7.9	95.3	30.2	9.8	<5	28.0	8.4	<5
M2.39	12.8	20.5	[1]3.0	16.1	[1]4.7	[1]4.6	14.0	12.3	184	58.9	12.3	10.7	49.5	6.5	[1]2.3
M2.41	49.9	137	20.5	47.2	64.4	10.4	31.2	41.6	544	87.7	13.7	<5	114	89	30.2
M2.42	58.6	46.3	7.8	39.4	27.9	6.1	20.5	34.5	504	125	[1]23.2	<5	96.5	<5	11.1
M2.43	<5	<5	<5	<5	<5	<5	<5	<5	7.2	<5	<5	<5	<5	<5	<5
M2.44	<5	<5	<5	[1].21	<5	<5	<5	[1].14	[1]1.5	[1].64	[1].53	[1].17	[1].80	<5	<5
M2.45	[1]1.2	[1]1.5	[1].74	[1]3.2	<10	[1].91	[1]3.0	[1]2.7	23.8	[1]9.4	[1]4.2	[1]3.0	[1]8.6	<10	<10

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	2-Methylanthracene	4,5-Methylenephenanthrene	C1-178 Isomers	1-Methylphenanthrene	C3-166 Isomers	C2-178 Isomers	Fluoranthene	Pyrene	C3-178 Isomers	C4-178 Isomers	1-Methylpyrene	C1-202 Isomers	C2-202 Isomers	C5-178 Isomers
M2.1	875	2,000	6,390	1,030	[1]47.3	3,630	29,200	22,300	1,340	497	892	13,000	7,490	<70
M2.1[2]	1,020	2,660	7,980	1,230	<50	4,230	37,000	27,900	1,580	575	970	14,300	8,940	<50
M2.1 (3–8)	684	2,700	7,280	1,290	149	3,870	33,800	27,000	1,000	225	628	18,500	5,290	<5
M2.2	<10	[1]1.72	<10	<10	<10	<10	2,570	2,060	10.0	<10	100	1,120	574	<10
M2.4	50.9	157	484	98.4	<5	368	1,940	1,300	134	<5	149	1,720	737	<5
M2.5	48.2	144	452	85.6	<5	344	1,770	1,290	139	<5	139	1,570	738	<5
M2.6	54.4	166	514	103	<5	371	2,080	1,580	134	<5	154	1,740	721	<5
M2.7	33.8	[1]3.8	350	101	<10	228	1,820	1,470	74.6	<10	151	954	598	<10
M2.8	66.8	216	716	115	<10	454	3,080	2,400	119	<10	148	1,440	1,210	<10
M2.8 (3–9)	106	294	900	191	<5	616	3,840	2,900	252	<5	230	2,690	1,200	<5
M2.8 (3–9)[2]	104	281	852	172	<5	564	3,690	2,770	227	56.4	217	2,450	1,070	<5
M2.8 (9–19.5)	107	292	900	190	<5	659	4,050	3,080	286	84.4	229	2,800	1,240	<5
M2.9	53.9	175	548	111	<5	421	2,120	1,510	177	<5	166	1,850	752	<5
M2.9 (3–9)	60.3	181	570	116	<5	447	2,460	1,750	197	<5	167	1,980	819	<5
M2.9 (9–18.8)	67.7	224	647	141	<5	554	2,920	2,120	275	105	190	2,260	948	<5
M2.10	115	11.8	329	162	<5	238	175	[1]33.1	<5	<5	111	424	544	<5
M2.11	97.0	186	620	172	<5	301	3,900	3,020	17.4	<5	186	1,300	770	<5
M2.11 (3–9)	77.4	232	668	121	<10	467	3,950	3,120	157	<100	215	1,610	1,010	<50
M2.11 (3–9)[2]	<10	35.1	764	139	<10	491	3,780	2,940	246	<10	176	1,850	1,310	<10
M2.11 (9–14.5)	338	182	668	326	D–U	[1]515	3,930	3,220	[1]349	<10	[1]121	[1]1,570	[1]714	<10
M2.12	379	64.5	637	343	<5	328	3,760	3,010	90.9	<5	19.1	451	402	<5
M2.13	67.5	148	468	71.3	<5	345	3,580	2,850	11.8	<5	151	1,220	722	<5
M2.13 (3–9)	78.0	231	679	129	<10	502	3,830	2,920	214	<40	122	1,470	1,040	<20
M2.13 (3–9)[2]	62.7	197	307	120	<10	378	2,950	2,280	198	<10	120	1,380	1,030	<10
M2.13 (9–13.5)	60.2	208	620	165	<5	394	3,010	2,380	128	<5	213	1,270	890	<5
M2.14	259	12.0	472	263	D–U	325	2,570	2,110	388	<10	[1]327	1,290	D–U	<10
M2.14 (3–9)	31.1	59.7	362	95.0	<10	250	1,820	1,450	16.7	<10	152	975	568	<10
M2.14 (3–9)[2]	206	153	415	121	<10	252	2,570	2,110	97.4	<100	138	1,010	588	<40
M2.14 (9–17)	241	[1]10.8	425	218	[1]80.8	[1]326	2,350	1,980	[1]316	<10	[1]237	[1]1,080	[1]85.8	<10
M2.15	346	224	[1]582	215	<100	[1]337	4,010	3,330	[1]309	<100	230	[1]1,430	[1]450	<10
M2.16	19.4	98.6	221	35.4	<10	180	1,390	1,160	126	[1]5.0	55.0	676	92.4	<10
M2.17	25.5	48.8	237	47.8	<5	171	1,740	1,380	12.3	<5	105	672	417	<5
M2.17 (3–9)	213	195	454	146	<10	289	2,980	2,440	50.0	<10	155	1,270	516	<10
M2.17 (3–9)[2]	103	123	291	96.1	<10	204	1,900	1,590	91.6	<60	138	838	444	<40

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	2-Meth-ylan-thra-cene	4,5-Methyl-ene-phenan-threne	C1-178 Iso-mers	1-Methyl-phe-nan-threne	C3-166 Iso-mers	C2-178 Iso-mers	Fluoran-thene	Pyrene	C3-178 Iso-mers	C4-178 Iso-mers	1-Meth-yl-pyrene	C1-202 Iso-mers	C2-202 Iso-mers	C5-178 Iso-mers
M2.17 (9–14.5)	14.7	81.0	178	43.2	<5	151	1,200	972	10.7	<5	69.8	158	<5	<5
M2.18	250	88.0	[1]473	255	<100	[1]316	2,280	1,800	[1]268	<10	155	[1]1,190	[1]197	<10
M2.19	12.6	49.6	120	20.6	<5	90.6	697	563	19.2	<5	21.9	377	65.1	<5
M2.20	<5	90.0	<5	<5	<5	[1]3.3	1,600	1,310	<5	<5	65.4	628	412	<5
M2.20 (3–9)	23.4	139	255	47.6	<10	215	1,720	1,250	132	45.1	68.0	782	502	<10
M2.20 (3–9)[2]	13.2	105	234	48.4	<10	199	1,400	1,140	190	18.5	71.5	706	460	<10
M2.20 (9–14)	[1]24.3	103	212	[1]43.8	<50	242	1,340	1,090	152	60.6	76.0	911	314	<50
M2.21	149	104	[1]293	75.0	<100	[1]186	2,200	1,850	[1]199	<10	159	[1]824	[1]379	<10
M2.22	38.8	200	456	86.4	<10	313	2,430	1,880	152	28.1	86.9	1,070	118	<10
M2.24	51.5	63.9	517	92.1	<5	296	1,960	215	99.0	<5	44.1	869	611	<5
M2.25	42.7	147	333	60.7	<5	172	2,510	1,930	102	<5	73.5	132	10.9	<5
M2.26	25.9	116	206	59.8	<5	127	1,740	1,320	68.2	11.4	74.1	545	302	<5
M2.27	12.2	48.9	127	18.2	32.9	66.7	725	585	--	<5	21.7	270	190	<5
M2.28	[1]2.5	13.1	32.7	5.7	<5	27.8	203	173	13.5	<5	11.0	89	<5	<5
M2.29	5.2	30.2	73.2	11.9	<5	57.9	461	393	16.6	<5	20.7	233	87.6	<5
M2.30	[1]4.2	23.2	58.8	[1]7.5	<10	53.0	337	291	31.9	<10	18.1	161	48.9	<10
M2.31	[1]2.8	[1]9.8	23.6	[1]3.3	[1].20	22.4	134	117	15.2	[1]1.8	[1]9.4	88	[1]3.4	<10
M2.32	[1]2.6	13.7	38.3	[1]4.8	<10	30.5	201	169	20.1	<10	14.3	106	78	<10
M2.33	[1]2.5	12.8	34.6	[1]4.1	<10	27.8	186	163	14.8	<10	[1]8.8	94	30	<10
M2.34	[1]1.7	[1]8.7	20.0	[1]3.4	<10	22.3	128	107	[1]4.4	<10	[1]6.1	73	33	<10
M2.35	<5	<5	23.9	<5	<5	19.9	126	117	14.4	<5	<5	62	<5	<5
M2.36	[1]1.9	[1]9.7	28.0	[1]4.6	<10	22.3	158	134	14.8	<10	[1]7.2	77	25.7	<10
M2.37	14.8	43.2	173	26.7	<5	135	832	707	65.4	15.4	30.4	406	163	<5
M2.38	6.4	21.9	68.2	9.2	<5	47.4	325	277	28.0	<5	12.1	165	92.8	<5
M2.39	13.8	32.5	112	15.0	<5	97.8	500	428	48.5	[1]3.3	29.5	325	62.9	<5
M2.41	20.0	87.7	353	52.4	<5	305	1,320	1,220	139	50.5	51.7	630	482	<5
M2.42	32.7	78.4	340	49.5	<5	304	1,290	1,240	163	49.0	175	1,230	830	<5
M2.43	<5	<5	6.9	<5	<5	<5	30.1	25.2	<5	<5	<5	16	<5	<5
M2.44	[1].20	[1].54	[1].67	[1].30	<5	<5	8.7	6.8	<5	<5	[1].39	[1]5.0	<5	<5
M2.45	[1]1.7	[1]8.1	20.0	[1]2.6	<10	21.2	122	108	[1]7.7	<10	[1]5.5	69	<10	<10

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	Benzo [a] an-thra-cene	Chry-sene	C3-202 Iso-mers	C1-228 Iso-mers	C4-202 Iso-mers	C5-202 Iso-mers	C2-228 Iso-mers	Benzo [b] fluo-ran-thene	Benzo [k] fluo-ran-thene	Benzo [e] pyrene	Benzo [a] pyrene	Perylene	C1-252 Iso-mers	C3-228 Iso-mers
M2.1	16,500	15,800	3,920	6,320	1,900	<600	2,250	13,000	7,410	6,750	11,100	2,270	7,110	<450
M2.1[2]	18,100	18,400	4,530	6,600	1,230	454	1,560	17,200	10,200	8,460	13,300	2,790	7,980	<500
M2.1 (3–8)	17,600	18,300	4,220	6,830	1,250	359	1,060	20,700	9,600	8,060	14,400	3,030	8,080	206
M2.2	1,460	1,640	290	374	121	21.8	154	1,690	1,500	1,270	1,520	458	757	<10
M2.3	1,500	1,690	635	736	149	29.9	305	1,780	1,250	1,340	1,570	464	916	135
M2.4	1,450	1,730	742	801	301	63.2	141	2,150	1,590	1,310	1,600	524	1,250	96
M2.5	1,370	1,620	700	778	200	<5	138	2,200	1,590	1,250	1,540	512	1,190	159
M2.6	1,510	1,740	743	870	278	<5	114	2,060	1,350	1,370	1,720	563	235	102
M2.7	996	1,100	368	543	139	21.4	135	1,330	934	886	1,050	325	770	24
M2.8	1,730	1,830	839	1,050	220	<10	352	1,550	1,460	1,100	1,470	423	969	<10
M2.8 (3–9)	2,220	2,370	1,040	1,080	191	123	149	1,760	375	696	728	8	1,560	124
M2.8 (3–9)[2]	2,200	2,360	913	274	385	82.5	<5	2,120	2,000	1,500	1,960	580	1,520	25
M2.8 (9–19.5)	2,360	2,530	1,070	1,460	408	148	513	2,780	2,030	1,650	2,170	672	1,700	158
M2.9	1,440	1,680	783	834	232	<5	116	1,850	1,400	1,290	1,570	492	1,200	109
M2.9 (3–9)	1,670	1,980	834	918	351	<5	162	2,030	1,740	1,390	1,820	587	1,370	<5
M2.9 (9–18.8)	1,850	2,200	941	1,060	308	<300	190	2,310	1,890	1,560	1,950	722	1,650	152
M2.10	29	132	165	<5	85	<5	108	[1]901	<5	<5	<5	<5	207	<5
M2.11	846	2,960	<5	767	<5	<5	73	1,100	2,480	1,360	1,090	366	1,170	<5
M2.11 (3–9)	558	1,260	<500	544	<40	<10	<240	2,410	2,200	2,170	1,950	504	990	<70
M2.11 (3–9)[2]	2,010	2,310	892	1,450	647	<250	640	2,350	1,710	1,600	1,980	566	1,600	<160
M2.11 (9–14.5)	1,880	2,220	D–U	[1]161	<10	<10	[1]96	1,890	2,810	[1]1,810	2,120	[1]563	<10	[1]39
M2.12	666	2,630	51.2	96.7	<5	<5	52	2,040	1,930	[1]1,270	1,280	[1]395	857	<5
M2.13	436	2,390	<5	160	<5	<5	290	1,530	1,730	1,300	1,000	316	938	<5
M2.13 (3–9)	1,740	2,060	743	973	193	<100	170	1,700	2,160	1,680	1,980	443	910	<100
M2.13 (3–9)[2]	1,590	1,750	649	888	183	<10	375	1,640	1,650	1,240	1,500	444	998	<10
M2.13 (9–13.5)	403	2,370	<5	844	<5	<5	240	2,140	2,680	1,700	1,500	398	848	<5
M2.14	1,240	1,550	D–U	D–U	<10	<10	[1]75	2,060	1,720	[1]2,210	1,440	[1]1,570	<10	<10
M2.14 (3–9)	960	1,100	253	632	161	63.1	178	1,250	1,080	859	1,010	311	804	30
M2.14 (3–9)[2]	441	690	161	674	172	<75	218	1,540	1,750	1,220	1,060	378	819	<200
M2.14 (9–17)	1,140	1,400	D–U	D–U	<10	<10	[1]22	1,270	1,700	[1]987	1,240	[1]376	<10	[1]26
M2.15	1,590	1,530	[1]98	[1]184	<100	<10	[1]62	2,000	1,930	[1]1,650	2,030	[1]432	<10	<10
M2.16	504	898	15.9	<10	61	<10	[1]8	808	1,510	[1]569	1,200	[1]222	100	<10
M2.17	281	1,310	<5	73.2	<5	<5	35	968	722	603	497	217	457	57
M2.17 (3–9)	377	1,530	<1,000	497	164	<10	243	1,770	2,350	1,170	891	296	800	<10
M2.17 (3–9)[2]	214	800	174	478	229	<10	206	1,060	900	924	775	297	582	40

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	Benzo [a] anthracene	Chrysene	C3-202 Isomers	C1-228 Isomers	C4-202 Isomers	C5-202 Isomers	C2-228 Isomers	Benzo [b] fluoranthene	Benzo [k] fluoranthene	Benzo [e] pyrene	Benzo [a] pyrene	Perylene	C1-252 Isomers	C3-228 Isomers
M2.17 (9–14.5)	405	625	<5	358	<5	<5	146	735	788	419	470	180	366	<5
M2.18	1,130	1,980	[1]72	<100	<10	<10	<100	1,970	2,440	[1]890	1,650	[1]1,250	<10	<100
M2.19	286	441	14	<5	<5	<5	<5	344	563	[1]268	434	[1]104	121	<5
M2.20	154	1,560	<5	<5	<5	<5	<5	697	990	796	410	138	<5	<5
M2.20 (3–9)	689	837	166	431	113	<10	<30	881	908	755	896	276	563	<100
M2.20 (3–9)[2]	<10	<10	194	470	73	<10	145	1,200	682	703	852	281	399	<80
M2.20 (9–14)	572	702	149	383	52.5	<50	61	796	600	546	643	286	540	<50
M2.21	927	1,220	[1]57	[1]148	<10	<10	[1]39	973	1,130	[1]1,060	1,080	[1]332	<10	<10
M2.22	943	1,590	50	291	48	<10	173	1,050	2,260	[1]783	1,430	[1]263	508	[1]7.3
M2.24	773	757	216	52	<5	<5	54	763	1,110	<5	<5	<5	412	24
M2.25	860	1,140	21	99	<5	<5	48	1,860	2,760	[1]614	825	[1]654	312	<5
M2.26	667	900	<5	77	<5	<5	69	879	1,740	[1]551	780	<5	<5	15
M2.27	305	393	28	29	19	<5	10	462	333	[1]276	296	[1]160	167	<5
M2.28	86	104	[1]4.3	24	[1]1.2	<5	6.7	96	111	85	106	[1]98	9.6	<5
M2.29	207	261	8.2	<5	<5	<5	<5	257	424	[1]180	260	[1]158	80	<5
M2.30	143	184	[1]3.2	42	18	<10	[1]3.5	188	224	[1]144	172	[1]261	[1]10	<10
M2.31	62	76	<10	<10	[1]3.6	<10	7.5	88	80	76	83	113	54	<10
M2.32	81	100	[1]6.0	25	[1]6.7	<10	[1]1.5	96	108	92	114	[1]210	[1]6.2	<10
M2.33	77	94	13	15	[1]9.0	<10	[1]2.4	109	98	88	112	[1]213	20	<10
M2.34	52	64	37	<10	23	<10	<10	56	75	58	69	186	31	<10
M2.35	55	69	<5	<5	<5	<5	<5	100	67	68	71	[1]238	23	<5
M2.36	69	83	[1]2	<10	[1].91	<10	[1]1.8	71	107	74	97	[1]187	[1]7.7	<10
M2.37	309	526	44	39	<5	<5	17	640	640	[1]382	546	[1]193	172	<5
M2.38	129	195	33	<5	<5	<5	<5	218	276	[1]158	154	[1]191	<5	<5
M2.39	233	314	65	<5	17	<5	36	320	542	[1]236	364	[1]158	148	[1]3.8
M2.41	499	729	48	90	31	<5	32	736	630	[1]397	458	[1]118	180	<5
M2.42	642	944	340	70	208	<5	48	1,090	2,200	<5	1,090	[1]618	606	25
M2.43	13	20	<5	<5	<5	<5	<5	18	15	15	17	18	<5	<5
M2.44	[1]2.7	[1]4.2	<5	<5	<5	<5	<5	[1]4.8	[1]4.7	[1]3.0	[1]3.8	25	<5	<5
M2.45	49	63	[1]2.5	<10	[1]6.7	<10	<10	64	98	57	68	[1]184	36	<10

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	C2-252 Isomers	C4-228 Isomers	Benzo [g,h,i] perylene	Indeno [1,2,3-c,d] pyrene	Dibenzo [a,h] anthra-cene	C3-252 Iso-mers	C4-252 Iso-mers	C5-228 Iso-mers	C5-252 Iso-mers	Coronene
M2.1	<4,000	<1,400	4,420	6,210	1,490	<900	574	<400	59.7	[1]926
M2.1[2]	3,670	<1,200	6,010	8,180	1,760	1,200	<400	[1]7.56	<50	[1]1,290
M2.1 (3–8)	3,290	580	6,640	8,720	3,060	876	21.3	<5	<5	960
M2.2	367	30.1	977	1,240	305	82.6	26.8	15.7	<10	[1]40.6
M2.3	429	37.0	1,020	1,310	307	80.6	29.4	17.4	<10	[1]54.3
M2.4	711	25.8	1,210	1,590	414	114	<5	[1]4.29	<5	249
M2.5	694	50.6	1,140	1,490	388	104	<5	<5	<5	213
M2.6	115	173	1,480	1,590	357	128	<5	<5	<5	308
M2.7	337	25.6	703	855	209	76.6	20.1	11.3	<10	[1]40.8
M2.8	549	<10	918	1,190	278	106	29.8	30.4	<10	[1]56.6
M2.8 (3–9)	958	74.2	267	88.4	327	201	77.5	<5	<5	303
M2.8 (3–9)[2]	879	29.6	1,350	1,690	394	131	<5	<5	<5	242
M2.8 (9–19.5)	1,050	64.6	1,430	1,890	521	181	<5	<5	<5	251
M2.9	726	55.8	1,190	1,540	375	128	<5	[1]4.77	<5	259
M2.9 (3–9)	756	67.9	1,270	1,710	271	119	<5	5.61	<5	231
M2.9 (9–18.8)	843	270	1,440	1,840	448	152	<350	<450	<150	258
M2.10	184	<5	9.6	<5	35.3	23.4	<5	<5	<5	<5
M2.11	417	<5	1,160	1,560	524	<5	<5	<5	<5	[1]75.8
M2.11 (3–9)	428	43.3	[1]569	[1]854	[1]380	<100	63.4	48.6	<40	[1]56.1
M2.11 (3–9)[2]	992	<200	1,380	1,750	463	185	78.7	12.8	<10	[1]308
M2.11 (9–14.5)	<10	<10	1,080	1,100	337	<10	<10	<10	<10	[1]332
M2.12	265	<5	378	1,900	463	<5	<5	<5	<5	[1]50.0
M2.13	452	<5	1,180	1,460	513	<5	<5	<5	<5	[1]80.2
M2.13 (3–9)	375	<130	[1]505	[1]779	[1]359	70.5	42.8	79.0	<20	[1]52.8
M2.13 (3–9)[2]	571	40.5	1,020	1,290	367	<10	63.3	<10	<10	[1]102
M2.13 (9–13.5)	508	<5	654	1,050	421	<5	<5	<5	<5	[1]75.7
M2.14	<10	<10	[1]877	[1]813	[1]337	<10	<10	<10	<10	50.2
M2.14 (3–9)	437	34.6	710	857	217	59.5	44.9	14.0	<10	[1]87.2
M2.14 (3–9)[2]	297	<200	[1]430	[1]630	[1]275	<120	<50	<100	<30	[1]40.4
M2.14 (9–17)	<10	<10	[1]767	[1]742	[1]308	<10	<10	<10	<10	115
M2.15	<10	<10	1,280	1,210	471	<10	<10	<10	<10	[1]272
M2.16	<10	<10	626	618	225	<10	<10	<10	<10	157
M2.17	203	<5	545	823	248	<5	<5	<5	<5	[1]41.7
M2.17 (3–9)	321	<10	[1]482	[1]658	[1]244	108	53.1	9.6	<10	[1]50.2
M2.17 (3–9)[2]	258	<60	[1]390	[1]579	[1]222	<50	20.8	55.9	[1]5.1	[1]50.6

Box cores—Polycyclic aromatic hydrocarbons in bottom sediment—Continued

Site ID and depth (cm)	C2-252 Isomers	C4-228 Isomers	Benzo [g,h,i] perylene	Indeno [1,2,3-c,d] pyrene	Dibenzo [a,h] anthra-cene	C3-252 Iso-mers	C4-252 Iso-mers	C5-228 Iso-mers	C5-252 Iso-mers	Coronene
M2.17 (9–14.5)	189	<5	561	701	236	57.2	<5	<5	<5	[1]47.2
M2.18	<10	<10	972	1,120	411	<10	<10	<10	<10	73.0
M2.19	<5	<5	[1]171	[1]175	71.6	<5	<5	<5	<5	45.6
M2.20	<5	<5	908	1,110	257	<5	<5	<5	<5	[1]60.9
M2.20 (3–9)	237	<100	[1]358	[1]513	[1]215	51.2	31.9	36.4	<10	[1]36.5
M2.20 (3–9)[2]	233	29.8	616	783	252	<10	19.2	<10	<10	[1]43.3
M2.20 (9–14)	289	<50	522	742	173	59.1	<50	<50	<50	128
M2.21	<10	<10	844	823	327	<10	<10	<10	<10	[1]203
M2.22	234	<10	646	649	249	<10	<10	<10	<10	[1]218
M2.24	276	26.4	32.4	58.9	143	96.0	<5	22.0	<5	<5
M2.25	186	<5	183	548	183	<5	<5	<5	<5	<5
M2.26	<5	<5	117	493	185	<5	<5	<5	<5	[1]14.2
M2.27	79.9	9.3	86.1	209	74.3	<5	<5	<5	<5	<5
M2.28	<5	<5	82.6	107	40.8	<5	<5	<5	<5	20.1
M2.29	<5	<5	[1]108	[1]117	72.2	<5	<5	<5	<5	55.7
M2.30	<10	<10	101	113	61.0	<10	<10	<10	<10	31.4
M2.31	<10	<10	74.6	73.7	17.1	10	<10	<10	<10	18.4
M2.32	<10	<10	77.5	93.6	34.8	<10	<10	<10	<10	16.1
M2.33	<10	<10	83.7	111	35.1	<10	<10	<10	<10	18.8
M2.34	<10	<10	60.4	69.0	21.8	<10	<10	<10	<10	16.3
M2.35	<5	<5	56.6	59.3	23.6	<5	<5	<5	<5	[1]11.3
M2.36	<10	<10	74.7	91.3	32.6	<10	<10	<10	<10	17.2
M2.37	<5	<5	294	352	192	<5	<5	<5	<5	[1]26.6
M2.38	<5	<5	78.4	100	40.9	<5	<5	<5	<5	[1]10
M2.39	<5	<5	[1]155	[1]146	79.6	<5	<5	<5	<5	71.8
M2.41	113	17.9	167	214	75.4	<5	<5	<5	<5	[1]17.0
M2.42	293	<5	519	628	207	53.7	<5	<5	<5	[1]50.3
M2.43	<5	<5	14.4	13.7	<5	<5	<5	<5	<5	[1]4.9
M2.44	<5	<5	[1].19	[1]3.2	[1]1.0	<5	<5	<5	<5	[1].49
M2.45	<10	<10	61.0	67.8	20.2	<10	<10	<10	<10	16.6

[1] Estimated.
[2] Replicate.

Streambed—Polycyclic aromatic hydrocarbons in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. <, not detected]

Site ID	Date	Phenol	P-cresol	C8-Alkyl-phenol	Naph-tha-lene	C1-128 Iso mers	2-Ethyl-naph-thalene	2,6-Di-methyl-naph-thalene	1,6-Di-methyl naph-thalene	C2-128 Iso-mers	Ace-naph-thylene	1,2-Di-methyl-naph-tha-lene
M2.23	08–19–96	7.3	[1]51.8	<5	13.1	71.1	[1]1.4	5.6	[1]3.0	23.8	22.4	[1]1.2
M2.46	08–20–96	5.2	[1]13.8	<5	8.9	80.4	[1]1.29	15.4	[1]3.8	32.8	24.8	[1]1.1
M2.47	08–20–96	18.6	175	<50	26.8	279	10.0	135	26.5	285	32.2	28.9
M2.48	08–19–96	[1]3.0	[1]9.8	<5	<5	<5	<5	<5	<5	[1]2.6	[1].48	<5

Site ID	Ace-naph-thene	C3-128 Iso-mers	2,3,6-Tri-methyl-naph-thalene	9H-Fluo-rene	C4-128 Iso-mers	1-Methyl-9H-fluo-rene	C1-166 Iso-mers	Di-benzo thi-phene	Phe-nan-threne	Anthra-cene	Acri-dine	Phe-nan-thri-dine	9H-Carba-zols	C5-128 Iso-mers	C2-166 Iso-mers
M2.23	45.8	17.4	[1]2.31	[1]81.3	12.6	7.14	30.3	73.3	1,030	162	145	31.1	202	57.8	9.14
M2.46	13.0	14.1	[1]1.8	[1]15.3	<5	[1]3.3	9.6	21.9	299	56.8	38.7	20.3	86.5	<5	<5
M2.47	53.3	130	14.3	73.6	96.9	13.9	43.8	39.5	556	174	34.3	13.2	90.7	31	26.5
M2.48	<5	<5	<5	<5	<5	<5	<5	<5	[1]1.1	[1].80	[1].93	<5	[1].98	<5	<5

Site ID	2-Methyl-anthra-cene	4,5-Methylene-phenan-threne	C1-178 Iso-mers	1-Methyl-phenan-threne	C3-166 Iso-mers	C2-178 Iso-mers	Fluo-ran-thene	Pyrene	C3-178 Iso-mers	C4-178 Iso-mers	1-Meth-yl-pyrene	C1-202 Iso-mers	C2-202 Iso-mers	C5-178 Iso-mers
M2.23	27.9	166	335	59.9	<5	191	2,620	2,080	70.2	23.0	68.4	946	320	<5
M2.46	10.5	47.8	156	27.6	<5	121	788	650	45.7	<5	23.6	325	147	<5
M2.47	25.8	107	262	42.6	15.0	254	1,080	882	17.4	[1]1.4	44.7	592	223	[1]3.5
M2.48	[1].43	[1]1.1	[1]1.8	[1].30	<5	[1]1.9	[1]3.2	[1]3.3	<5	<5	[1].37	[1]2.7	<5	<5

Site ID	Benzo[a] anthra-cene	Chrysene	C3-202 Iso-mers	C1-228 Iso-mers	C4-202 Iso-mers	C5-202 Iso-mers	C2-228 Iso-mers	Benzo[b] fluo-ran-thene	Benzo[k] fluo-ran-thene	Benzo[e] pyrene	Benzo[a] pyrene	Perylene	C1-252 Iso-mers	C3-228 Iso-mers
M2.23	1,160	1,770	142	423	131	<5	89.1	1,740	1,100	1,090	1,320	260	570	40.3
M2.46	276	450	82	161	39	7.5	21	412	348	279	319	75	168	<5
M2.47	594	737	94	324	61	16	145	683	538	472	647	158	307	<5
M2.48	[1]1.3	[1]2.4	<5	<5	<5	<5	<5	[1]1.7	[1]1.3	[1]1.5	[1]2.9	6.1	<5	<5

Site ID	C2-252 Iso-mers	C4-228 Iso-mers	Benzo [g,h,I] perylene	Indeno [1,2,3-c,d] pyrene	Dibenzo [a,h] anthra-cene	C3-252 Iso-mers	C4-252 Iso-mers	C5-228 Iso-mers	C5-252 Iso-mers	Coronene
M2.23	298	<5	[1]633	[1]984	[1]290	38.9	35.8	<5	<5	[1]87.6
M2.46	119	12.4	230	294	66.0	22.6	13.2	<5	<5	[1]38.4
M2.47	159	<5	[1]286	[1]364	[1]139	31.9	<5	<5	<5	[1]40.8
M2.48	<5	<5	[1]5.94	[1]1.31	<5	<5	<5	<5	<5	[1]1.73

[1] Estimated.

Gravity core—Pesticides, polychlorinated biphenyls, and polychlorinated naphthalenes in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, not detected]

Depth (cm)	Lindane	Hepta-chlor	Aldrin	Heptachlor epoxide	Chlor-dane	Endo-sulfan I	Diel-drin	p,p'-DDE	Endrin	Per-thane	p,p'-DDD	p,p'-DDT	p,p'-Meth-oxychlor
M2.40 (05–15–96)													
0–5	<0.1	<0.1	<0.2	<0.1	3.1	<0.1	0.15	1.1	<0.2	<1.0	0.8	0.16	<3.8
5–10	<.1	<.1	<.2	<.01	4.8	<.1	.26	1.9	<.1	<1.0	.69	[1].32	<7.0
10–15	<.1	<.1	<.3	<.4	3.2	<.1	.18	1.8	<.1	<1.0	1.4	<.2	<6.0
15–20	<.1	<.1	<.2	<.1	2.0	<.1	.21	2.0	<.2	<1.0	1.6	.24	<2.2
20–25	<.2	<.1	<.2	<.3	1.2	<.1	<.1	4.2	<.1	<1.0	.93	<.1	<.3
25–30	<.2	<.1	<.1	<.1	1.1	<.1	.16	5.4	<.2	<1.0	2.4	.18	<1.8
30–35	<.1	<.1	<.2	<.1	<1.0	<.1	.16	8.9	<.2	<1.0	2.8	.24	<1.6
35–40	<.1	<.1	<.3	<.1	<1.0	<.1	<.2	15	<.1	<1.0	5.2	.49	<.1
40–45	<.1	<.1	<.2	<.1	<1.0	<.1	.24	14	<.2	<1.0	5.6	.35	<1.6
45–50	<.1	<.1	<.2	<.1	<1.0	<.1	.51	16	<.1	<1.0	5.1	.28	<.1
50–55	<.1	<.1	<.1	<.1	<1.0	<.1	.14	2.1	<.1	<1.0	3.1	.16	<1.6
55–60	<.1	<.1	<.2	<.1	<1.0	<.1	.16	5.5	<.1	<1.0	5.8	.14	<1.6
55–60[2]	<.1	<.1	<.1	<.1	<1.0	<.1	.22	4.4	<.1	<1.0	4.2	.15	<1.6
60–65	<.1	<.1	<.1	<.1	<1.0	<.1	.33	8.9	<.1	<1.0	5.0	.18	<1.6
65–70	<.1	<.1	<.2	<.1	<1.0	<.1	<.1	1.0	<.1	<1.0	2.4	<.1	<1.6
70–75	<.1	<.1	<.1	<.1	<1.0	<.1	<.1	.32	<.1	<1.0	.21	<.1	<1.6

Depth (cm)	Mirex	Toxa-phene	PCB Aroclor 1242	PCB Aroclor 1254	PCB Aroclor 1260	Gross PCNs	Isodrin recovery (percent)
M2.40—Continued							
0–5	<0.1	<10	2.0	5.5	25	<1	61
5–10	<.1	<10	4.3	14	47	<1	78
10–15	<.1	<10	3.2	14	53	<1	62
15–20	<.1	<10	2.8	9.8	51	<1	70
20–25	<.1	<10	9.5	16	49	<1	54
25–30	<.1	<10	6.3	9.6	25	<1	43
30–35	<.1	<10	8.0	14	52	<1	56
35–40	<.1	<10	2.7	28	170	<1	66
40–45	<.1	<10	5.2	16	135	<1	59
45–50	<.1	<10	8.1	24	200	<1	63
50–55	<.1	<10	2.2	5.1	7.3	<1	48
55–60	<.1	<10	5.1	22	150	<1	51
55–60[2]	<.1	<10	4.4	17	124	<1	51
60–65	<1.0	<10	<1.0	31	360	<1	43
65–70	<.1	<10	1.3	2.7	6.4	<1	64
70–75	<.1	<10	<1	1.1	2.9	<1	81

[1] Estimated.
[2] Replicate.

Box cores—Pesticides and polychlorinated naphthalenes in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments. All samples are based on dry weight; results are in micrograms per kilogram. <, less than]

Site ID	Date	Lin-dane	Hepta-chlor	Aldrin	Hepta-chlor epoxide	Chlor-dane	Endo-sulfan I	Dieldrin	p,p'-DDE	Endrin	Per-thane
M2.37	05–15–96	<0.1	<0.1	<0.2	<0.2	16	<0.1	0.22	2.1	<0.2	<1.0
M2.38	05–15–96	<.1	<.1	<.2	<.2	11	<.1	.24	1.9	<.2	<1.0
M2.39	06–18–96	<.1	<.2	<.3	<.1	22	<.1	.38	6.35	<.2	<1.0
M2.41	05–15–96	<.1	<.1	<.2	<.1	7.6	<.1	.55	1.1	<.1	<1.0
M2.42	05–15–96	<.1	<.1	<.1	<.1	6.1	<.1	.35	1.7	<.1	<1.0
M2.43	05–15–96	<.1	<.1	<.1	<.1	<.1	<.1	<.1	.21	<.1	<1.0

Site ID	p,p'-DDD	p,p'-DDT	p,p'-Meth-oxy-chlor	Mirex	Toxa-phene	Gross PCNs	Isodrin recovery (percent)
M2.37	2.9	0.27	<6.1	<.1	<10	<1	61
M2.38	2.2	3.5	<2.6	<.1	<10	<1	70
M2.39	11	.69	<5.7	<.1	<10	<1	62
M2.41	1.4	.72	<7.2	<.1	<10	<1	67
M2.42	1.8	.15	<7.3	<.1	<10	<1	58
M2.43	.15	<.1	<.8	<.1	<10	<1	64

Box cores—Polychlorinated biphenyls in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments unless otherwise noted. All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than]

Site ID and depth (cm)	Date	PCB Aroclor 1242	PCB Aroclor 1254	PCB Aroclor 1260
M2.1	07–10–96	4.6	67	100
M2.1[1]	07–10–96	4.2	96	180
M2.1 (3–8)	07–10–96	2.0	44	110
M2.2	07–10–96	6.8	87	190
M2.3	07–10–96	7.6	92	200
M2.4	07–10–96	3.4	87	270
M2.5	07–10–96	7.4	74	240
M2.6	07–11–96	3.5	80	240
M2.7	07–11–96	3.8	84	180
M2.8	07–10–96	2.8	49	93
M2.8 (3–9)	07–10–96	2.7	37	100
M2.8 (3–9)[1]	07–10–96	2.2	45	130
M2.8 (9–19.5)	07–10–96	3.6	55	160
M2.9	07–10–96	3.2	65	200
M2.9 (3–9)	07–10–96	3.5	49	160
M2.9 (9–18.8)	07–10–96	3.3	140	420
M2.10	05–16–96	9.7	240	260
M2.11	06–19–96	4.8	110	220
M2.11 (3–9)	06–19–96	6.3	140	240
M2.11 (3–9)[1]	06–19–96	8.7	160	250
M2.11 (9–14.5)	06–19–96	6.4	110	220
M2.12	05–17–96	6.6	140	208
M2.13	06–19–96	4.2	84	140
M2.13 (3–9)	06–19–96	4.0	88	180
M2.13 (3–9)[1]	06–19–96	5.5	86	140
M2.13 (9–13.5)	06–19–96	3.4	30	93
M2.14	06–19–96	4.2	75	170
M2.14 (3–9)	06–19–96	6.5	120	180
M2.14 (3–9)[1]	06–19–96	3.8	130	230
M2.14 (9–17)	06–19–96	5.8	82	160
M2.15	06–19–96	8.6	160	250
M2.16	06–19–96	4.2	32	62
M2.17	06–19–96	4.5	34	100
M2.17 (3–9)	06–19–96	5.9	100	200
M2.17 (3–9)[1]	06–19–96	3.8	84	150
M2.17 (9–14.5)	06–19–96	3.5	28	77
M2.18	06–19–96	8.8	200	280
M2.19	06–20–96	1.9	12	24
M2.20	06–20–96	4.0	39	130
M2.20 (3–9)	06–20–96	4.6	90	120

Box cores—Polychlorinated biphenyls in bottom sediment—Continued

Site ID and depth (cm)	Date	PCB Aroclor 1242	PCB Aroclor 1254	PCB Aroclor 1260
M2.20 (3–9)[1]	06–20–96	5.7	39	70
M2.20 (9–14)	06–20–96	3.7	21	83
M2.21	06–19–96	7.6	31	180
M2.22	06–20–96	5.4	16	27
M2.24	05–16–96	5.6	17	27
M2.25	05–17–96	4.0	10	14
M2.26	05–16–96	3.2	8.5	12
M2.27	05–16–96	1.9	5.3	7.4
M2.28	06–18–96	1.2	5.9	6.5
M2.29	06–17–96	1.7	6.4	7.9
M2.30	06–18–96	2.3	8.7	12
M2.31	06–17–96	1.6	17	205
M2.32	06–18–96	2.2	17	99
M2.33	06–18–96	2.1	10	25
M2.34	06–18–96	2.0	4.3	12
M2.35	05–14–96	1.8	3.4	11
M2.36	06–18–96	2.1	9.7	22
M2.37	05–15–96	10	23	92
M2.38	05–15–96	4.9	13	88
M2.39	06–18–96	5.4	35	360
M2.41	05–15–96	2.2	6.1	13
M2.42	05–15–96	6.6	14	680
M2.43	05–15–96	<1	<1	2.6
M2.44	06–18–96	<1	<1	1.5
M2.45	06–18–96	2.3	5.2	15

[1] Replicate.

Streambed—Pesticides, polychlorinated biphenyls, and polychlorinated naphthalenes in bottom sediment

[All samples are based on dry weight; results are in micrograms per kilogram. cm, centimeters; <, less than]

Site ID	Date	Lin-dane	Hepta-chlor	Aldrin	Hepta-chlor epoxide	Chlor-dane	Endo-sulfan I	Dieldrin	p,p'-DDE	Endrin	Per-thane
M2.23	08-19-96	<0.1	0.19	<0.12	0.17	36.0	<0.1	1.10	0.55	<0.1	<1.0
M2.46	08-20-96	<.1	<.1	<.1	<.15	12	<.1	.54	.89	<.13	<1.0
M2.46[1]	08-20-96	<.1	<.1	<.1	<.14	11	<.1	.97	.87	<.1	<1.0
M2.47	08-20-96	<.1	<.1	<.1	<.13	14	<.1	.53	2.1	<.12	<1.0
M2.48	08-19-96	<.1	<.1	<.1	<.1	<1.0	<.1	<.1	.16	<.1	<1.0

Site ID	p,p'-DDD	p,p'-DDT	p,p'-Meth-oxy-chlor	Mirex	Toxa-phene	PCB Aroclor 1242	PCB Aroclor 1254	PCB Aroclor 1260	Gross PCNs	Isodrin recovery (percent)
M2.23	0.23	0.55	<16	<0.1	<10	1.7	2.3	1.8	<1	57
M2.46	3.0	1.60	<8	<.1	<10	<1.0	3.9	8.8	<1	80
M2.46[1]	2.6	.57	<6.0	<.1	<10	<1.0	3.8	8.3	<1	89
M2.47	1.2	.25	<10	<.1	<10	1.6	6.5	2.5	<1	64
M2.48	<.1	<.1	<.8	<.1	<10	<1	<1	<1	<1	71

[1]Replicate.

Major and Trace Elements and Carbon

Gravity core—Major and trace elements and carbon in bottom sediment

[All samples are based on dry weight; results are in micrograms per gram unless otherwise noted. cm, centimeters; <, less than]

Depth (cm)	Aluminum (percent)	Calcium (percent)	Iron (percent)	Potassium (percent)	Magnesium (percent)	Sodium (percent)	Phosphorus (percent)	Titanium (percent)	Arsenic	Barium	Beryllium	Cerium	Chromium	Cobalt	Copper
M2.40 (05–15–96)															
0–4	7.00	4.48	3.67	1.12	0.64	0.16	0.062	0.40	17.9	280	<3.0	81.2	130	10.0	56.7
4–8	6.92	4.33	3.62	1.17	.62	.16	.055	.39	13.2	275	<3.0	82.0	143	10.9	56.2
8–12	6.88	4.56	3.64	1.13	.62	.16	.054	.39	14.4	275	<3.0	80.0	137	11.6	56.0
12–16	6.99	4.40	3.62	1.12	.61	.16	.054	.39	11.6	273	<3.0	78.7	134	11.9	60.3
12–16[1]	6.93	4.70	4.00	1.09	.62	.15	.059	.41	12.8	274	<3.0	82.7	132	17.0	58.3
16–20	6.93	4.18	3.46	1.12	.60	.17	.055	.39	15.8	270	<3.0	77.7	140	12.3	56.6
20–24	7.41	4.25	3.72	1.18	.67	.15	.057	.41	12.3	277	<3.0	82.0	128	11.9	57.0
24–28	7.96	4.05	3.87	1.20	.73	.16	.061	.43	15.0	283	<3.0	81.5	156	10.9	63.2
28–32	8.75	4.38	4.15	1.24	.79	.17	.064	.46	17.0	304	<3.0	86.3	190	10.5	65.8
32–36	7.98	4.10	4.06	1.14	.74	.17	.063	.44	14.6	288	<3.0	79.9	176	10.9	59.1
36–40	6.62	3.08	3.71	.98	.63	.17	.054	.39	13.2	262	<3.0	65.9	157	10.7	47.6
40–44	6.08	2.54	3.69	.94	.57	.19	.047	.37	13.4	258	<3.0	72.5	158	13.9	45.3
44–48	5.88	2.76	4.18	.93	.56	.20	.047	.36	11.4	258	<3.0	74.5	124	11.6	39.5
48–52	5.87	2.65	3.73	.88	.58	.26	.063	.37	9.6	264	<3.0	74.5	127	14.2	31.1
52–56	5.26	4.03	3.39	.80	.55	.21	.034	.32	8.3	286	<3.0	84.6	123	17.9	26.9
56–60	5.45	2.54	3.36	.84	.59	.25	.037	.36	6.8	306	<3.0	92.4	111	20.7	28.7

Gravity core—Major and trace elements and carbon in bottom sediment—Continued

Depth (cm)	Lead	Lithium	Manganese	Mercury	Nickel	Scandium	Strontium	Vanadium	Zinc	Total carbon (percent)	Inorganic carbon (percent)	Organic carbon (percent)
M2.40—Continued												
0–4	30.2	42.3	604	0.058	30.7	11.3	186	108	107	3.08	1.25	1.83
4–8	29.7	43.4	519	.055	29.9	11.3	180	107	102	2.93	1.21	1.72
8–12	29.8	43.4	387	.053	31.9	11.2	181	108	108	2.83	1.49	1.34
12–16	30.8	41.9	411	.053	37.2	11.1	180	107	107	2.78	1.21	1.57
12–16[1]	32.4	42.0	416	.051	35.1	11.2	181	111	108	2.66	1.17	1.49
16–20	29.7	41.6	370	.052	29.6	11.0	177	103	100	2.61	1.23	1.38
20–24	32.6	46.3	361	.053	32.1	12.1	185	166	102	2.55	1.22	1.33
24–28	35.7	48.2	343	.054	34.6	13.0	180	129	102	2.35	1.37	.98
28–32	37.5	51.0	397	.053	37.3	13.9	194	138	115	2.50	1.11	1.39
32–36	36.3	48.0	381	.048	38.6	12.9	181	129	109	2.36	1.10	1.26
36–40	31.4	39.5	327	.046	32.3	10.9	146	108	95.6	1.92	.78	1.14
40–44	28.2	37.9	320	.036	29.8	10.6	132	97	87.0	1.80	.79	1.01
44–48	26.4	36.9	353	.037	27.8	10.3	128	97	80.0	1.41	.78	.63
48–52	25.7	35.9	370	.026	26.2	10.4	130	86	71.8	1.26	.71	.55
52–56	21.9	33.1	441	<.02	26.0	9.4	134	75	68.9	2.02	.87	1.15
56–60	23.2	36.2	462	<.02	29.8	10.0	131	79	69.0	1.14	1.03	.11

[1] Replicate.

Box cores—Major and trace elements and carbon in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments unless otherwise noted. All samples are based on dry weight; results are in micrograms per gram unless otherwise noted. cm, centimeters; <, less than; --, no data]

Site ID and depth (cm)	Date	Aluminum (percent)	Calcium (percent)	Iron (percent)	Potassium (percent)	Magnesium (percent)	Sodium (percent)	Phosphorus (percent)	Titanium (percent)	Arsenic	Barium	Beryllium	Cerium	Cobalt
M2.1	07–10–96	1.73	4.45	1.23	0.45	0.18	0.06	0.042	0.19	8.8	101	<2.0	--	8.5
M2.1 (3–8)	07–10–96	1.39	3.81	1.50	.42	.14	.05	.040	.16	7.8	96	<2.0	--	7.3
M2.1 (3–8)[1]	07–10–96	1.45	4.23	1.53	.43	.15	.05	.048	.17	8.4	92	<2.0	--	8.7
M2.2	07–10–96	6.92	9.54	3.89	1.00	.63	.13	.082	.38	15.2	210	<2.0	--	12.3
M2.3	07–10–96	6.35	8.51	3.85	1.01	.63	.12	.081	.38	16.0	207	<2.0	--	11.9
M2.4	07–10–96	5.77	8.49	3.93	1.00	.65	.12	.081	.38	16.4	224	<2.0	--	12.0
M2.5	07–10–96	7.25	10.22	3.99	1.02	.67	.12	.083	.38	15.6	236	<2.0	--	12.1
M2.6	07–11–96	4.48	6.65	3.63	.85	.60	.11	.076	.38	15.6	209	3.2	--	16.8
M2.7	07–11–96	6.94	9.88	4.24	1.15	.67	.12	.089	.41	15.2	220	5.2	--	18.0
M2.7[1]	07–10–96	7.18	9.77	4.30	1.13	.69	.12	.088	.40	15.6	227	4.0	--	19.8
M2.8	07–10–96	3.13	4.97	1.99	.75	.33	.09	.060	.29	10.8	150	3.4	--	13.1
M2.8 (3–9)	07–10–96	2.83	4.51	1.83	.76	.31	.08	.058	.27	10.8	128	2.0	--	11.7
M2.8 (9–19.5)	07–10–96	2.51	4.04	1.59	.66	.25	.08	.052	.25	11.2	132	<2.0	--	11.3
M2.9	07–10–96	5.95	8.88	4.79	1.08	.73	.13	.093	.44	14.8	224	3.0	--	15.2
M2.9 (3–9)	07–10–96	2.80	5.38	4.04	.98	.62	.10	.080	.38	14.4	192	<2.0	--	13.1
M2.9 (9–18.8)	07–10–96	6.84	9.07	3.63	.95	.62	.11	.084	.37	14.4	204	<2.0	--	11.6
M2.10	05–16–96	4.75	7.22	2.98	.71	.46	.12	.074	.29	20.5	213	<3.0	69.2	19.8
M2.11	06–19–96	6.05	8.33	3.23	.87	.57	.11	.068	.36	18.8	217	<2.0	--	12.1
M2.11 (3–9)	06–19–96	6.63	8.84	3.34	.94	.61	.12	.072	.38	18.8	231	<2.0	--	12.7
M2.11 (9–14.5)	06–19–96	6.61	8.86	3.29	.88	.58	.12	.072	.37	20.0	229	<2.0	--	13.7
M2.12	05–17–96	5.61	7.05	3.42	.82	.56	.14	.082	.33	19.0	236	<3.0	76.1	17.4
M2.13	06–19–96	7.32	9.65	3.94	1.01	.69	.14	.082	.44	18.4	247	<2.0	--	14.9
M2.13 (3–9)	06–19–96	6.85	9.19	3.57	.94	.64	.13	.078	.41	17.6	256	<2.0	--	14.5
M2.13 (9–13.5)	06–19–96	6.51	8.28	3.41	.93	.59	.13	.077	.40	17.2	204	<2.0	--	14.1
M2.14	06–19–96	7.61	10.3	3.94	1.00	.72	.12	.079	.42	18.8	282	<2.0	--	14.1
M2.14 (3–9)	06–19–96	9.62	11.7	4.10	1.15	.84	.14	.096	.49	18.4	282	2.8	--	16.1
M2.14 (9–17)	06–19–96	9.29	12.0	4.24	1.08	.87	.14	.097	.50	18.4	289	<2.0	--	14.9
M2.14 (9–17)[1]	06–19–96	10.00	12.2	4.18	1.17	.87	.14	.100	.50	17.8	311	2.0	--	16.3
M2.15	06–19–96	8.67	11.0	4.47	1.11	.78	.15	.090	.47	17.4	269	<2.0	--	15.2
M2.16	06–19–96	8.81	11.4	4.38	1.10	.78	.15	.090	.48	15.6	293	<2.0	--	14.5
M2.17	06–19–96	10.2	13.1	4.85	1.19	.88	.16	.097	.51	16.0	334	2.7	--	14.8
M2.17 (3–9)	06–19–96	7.37	9.36	3.66	.98	.67	.12	.074	.40	15.6	240	<2.0	--	14.7
M2.17 (9–14.5)	06–19–96	8.28	10.2	4.04	1.06	.74	.13	.084	.44	16.0	236	<2.0	--	13.7
M2.18	06–19–96	8.98	11.3	4.60	1.14	.79	.16	.095	.49	17.2	298	2.6	--	18.3
M2.19	06–20–96	3.23	5.31	1.93	.66	.33	.09	.052	.29	10.0	118	<2.0	--	9.7
M2.20	06–20–96	7.48	10.4	3.78	1.01	.68	.14	.077	.43	14.0	264	<2.0	--	13.6
M2.20 (3–9)	06–20–96	7.52	9.83	3.63	.97	.66	.14	.076	.43	14.0	244	<2.0	--	13.1
M2.20 (9–14)	06–20–96	7.41	9.99	3.51	.98	.65	.13	.073	.43	20.4	260	<2.0	--	12.4
M2.21	06–19–96	8.72	11.6	4.43	1.10	.77	.15	.092	.48	18.4	287	<2.0	--	15.5
M2.22	06–20–96	8.57	13.7	4.51	1.08	.79	.20	.096	.50	23.6	296	<2.0	--	17.3

Box cores—Major and trace elements and carbon in bottom sediment—Continued

Site ID and depth (cm)	Date	Aluminum (percent)	Calcium (percent)	Iron (percent)	Potassium (percent)	Magnesium (percent)	Sodium (percent)	Phosphorus (percent)	Titanium (percent)	Arsenic	Barium	Beryllium	Cerium	Cobalt
M2.24	05–16–96	5.41	7.21	2.95	0.75	0.53	0.15	0.11	0.32	15.1	226	<3.0	75.1	11.9
M2.25	05–17–96	4.84	6.90	2.89	.75	.47	.11	.098	.27	14.4	196	<3.0	77.3	14.4
M2.26	05–17–96	7.80	6.34	4.14	1.33	.72	.14	.081	.43	15.7	295	<3.0	93.6	13.0
M2.26[1]	05–17–96	7.87	6.45	4.09	1.36	.72	.14	.085	.41	15.6	295	<3.0	94.6	11.6
M2.27	05–16–96	7.80	5.20	4.32	1.39	.70	.16	.076	.45	15.8	314	<3.0	91.2	12.6
M2.28	05–16–96	7.36	4.23	4.53	1.38	.52	.28	.081	.56	11.6	267	<2.0	--	15.3
M2.29	06–18–96	11.11	7.45	4.89	1.69	.87	.24	.098	.65	9.6	382	<2.0	--	17.7
M2.30	06–17–96	8.93	6.81	4.37	1.32	.75	.15	.077	.51	21.6	246	<2.0	--	13.6
M2.31	06–18–96	6.64	6.97	3.80	1.20	.58	.17	.088	.41	18.4	170	<2.0	--	17.2
M2.32	06–17–96	12.37	9.28	6.24	1.78	1.05	.18	.112	.58	19.3	424	<2.0	--	20
M2.33	06–18–96	12.9	9.16	5.52	1.75	1.10	.20	.109	.64	18.4	400	<2.0	--	18.7
M2.33[1]	06–18–96	12.9	9.03	5.39	1.94	1.09	.19	.105	.63	17.5	400	3.0	--	18.7
M2.34	06–18–96	10.3	7.64	4.52	1.31	.78	.14	.092	.55	16.8	300	3.0	--	14.9
M2.35	05–14–96	8.36	6.01	4.35	1.29	.77	.12	.080	.42	16.2	283	<3.0	89.2	10.5
M2.36	06–18–96	8.81	6.62	4.49	1.25	.70	.15	.077	.49	11.2	276	<2.0	--	13.3
M2.37	05–15–96	4.78	3.17	3.20	.89	.44	.14	.063	.32	13.6	223	<3.0	69.0	13.2
M2.38	05–15–96	4.81	3.31	2.98	.82	.43	.14	.055	.32	13.0	214	<3.0	61.1	15.8
M2.39	06–18–96	3.12	3.04	2.04	.71	.32	.11	.043	.28	20.0	137	<2.0	--	10.6
M2.40	05–15–96	7.12	4.92	4.06	1.16	.65	.15	.062	.41	16.2	279	<3.0	84.4	12.8
M2.40 (3–6)	05–15–96	6.99	4.64	4.00	1.09	.63	.15	.059	.40	17.7	273	<3.0	79.6	11.9
M2.40 (6–9)	05–15–96	6.55	4.39	3.73	1.01	.59	.15	.060	.38	14.2	260	<3.0	75.8	11.9
M2.40 (6–9)[1]	05–15–96	6.52	4.30	3.72	1.00	.58	.14	.056	.38	14.0	258	<3.0	72.8	10.9
M2.41	05–15–96	4.85	8.83	3.33	.73	.48	.12	.061	.32	10.5	215	<3.0	75.0	15.6
M2.41[1]	05–15–96	4.94	7.07	3.39	.80	.51	.13	.060	.32	11.5	211	<3.0	77.0	13.7
M2.42	05–15–96	.49	.87	.39	.20	.051	.024	.027	.079	7.1	86.9	<3.0	18.8	4.6
M2.43	05–15–96	.80	1.88	.78	.26	.09	.034	.031	.097	7.4	74.8	<3.0	25.1	4.6
M2.44	06–18–96	1.28	.68	1.47	.30	.12	.03	.023	.17	17.2	82	<2.0	--	5.3
M2.45	06–18–96	9.93	7.13	4.27	1.33	.79	.14	.110	.52	18.4	291	2.2	--	14.0

Box cores—Major and trace elements and carbon in bottom sediment—Continued

Site ID and depth (cm)	Chromium	Copper	Mercury	Lithium	Manganese	Lead	Nickel	Scandium	Strontium	Selenium	Vanadium	Zinc	Total carbon (percent)	Inorganic carbon (percent)	Organic carbon (percent)
M2.1	196	15.6	0.055	13.8	264	69.9	57.6	3.4	155	0.5	49	170	2.66	1.25	1.41
M2.1 (3–8)	200	15.2	.052	11.6	185	57.8	31.0	2.4	117	--	37	153	2.42	1.19	1.23
M2.1 (3–8)[1]	210	16.0	.076	12.8	292	56.9	35.2	3.0	151	--	44	173	2.26	1.14	1.12
M2.2	250	59.7	.17	36.6	642	93.7	48.8	10.2	334	--	155	388	6.45	2.70	3.75
M2.3	240	59.0	.17	37.6	642	94.9	49.2	8.0	286	--	153	358	6.42	2.75	3.67
M2.4	255	63.8	.17	38.4	658	89.7	49.8	7.4	320	--	162	354	6.53	2.85	3.68
M2.5	256	60.8	.16	39.6	676	88.9	51.0	10.8	354	--	162	364	6.60	2.82	3.78
M2.6	258	60.0	.16	39.4	636	96.5	48.4	3.0	206	1	149	324	6.46	2.71	3.75
M2.7	238	68.0	.22	39.6	1,176	95.7	108.8	7.2	352	--	175	396	6.67	2.81	3.86
M2.7[1]	239	70.0	.18	39.8	1,144	96.8	107.4	10.4	316	--	154	370	6.68	2.83	3.85
M2.8	230	44.5	.10	21.4	378	75.4	53.0	5.4	177	--	84	238	3.35	1.24	2.11
M2.8 (3–9)	239	35.5	.12	19.6	338	79.7	47.8	5.2	156	--	80	222	3.09	1.20	1.89
M2.8 (9–19.5)	249	35.2	.13	18.2	284	74.1	49.6	4.4	138	--	61	202	2.84	1.04	1.80
M2.9	237	71.5	.18	44.0	784	102	58.2	7.4	334	1	188	404	6.72	2.69	4.03
M2.9 (3–9)	257	58.3	.17	35.0	604	103	53.0	3.0	218	--	157	348	6.11	2.54	3.57
M2.9 (9–18.8)	348	65.7	.28	38.6	542	117	52.8	9.8	326	--	156	330	5.89	2.52	3.37
M2.10	326	71.5	.42	26.9	539	41.9	45.8	7.1	223	.9	100	341	5.44	2.23	3.21
M2.11	172	59.8	.23	33.8	614	87.2	48.8	7.6	280	--	141	348	5.77	2.54	3.23
M2.11 (3–9)	197	65.5	.20	37.2	620	94.1	53.0	9.6	298	--	158	370	5.83	2.57	3.26
M2.11 (9–14.5)	275	69.7	.26	35.4	586	108	61.4	9.6	294	--	151	398	5.92	2.44	3.48
M2.12	248	64.8	.29	32.1	614	40.3	43.6	8.6	240	--	124	278	5.46	2.47	2.99
M2.13	181	69.0	.16	40.6	754	73.8	58.4	11.0	316	.8	182	334	5.24	2.28	2.96
M2.13 (3–9)	160	61.2	.19	39.0	638	74.2	53.2	10.6	306	--	159	322	4.85	2.24	2.61
M2.13 (9–13.5)	165	59.7	.16	36.8	634	75.8	55.4	8.6	266	--	159	312	5.01	2.17	2.84
M2.14	164	68.2	.14	42.4	740	81.2	55.0	10.2	310	--	183	346	5.98	2.73	3.25
M2.14 (3–9)	217	88.3	.15	49.8	844	89.4	69.0	12.0	350	--	222	428	6.15	2.73	3.42
M2.14 (9–17)	215	75.8	.19	46.0	796	95.4	70.8	11.2	350	1	198	380	5.73	2.64	3.09
M2.14 (9–17)[1]	249	83.5	.18	50.0	834	93.8	72.2	12.6	388		238	434	5.77	2.73	3.04
M2.15	220	81.7	.21	44.4	807	76.2	63.4	12.6	368		198	448	5.93	2.59	3.34
M2.16	167	65.7	.11	46.0	796	74.3	60.0	12.2	338	--	204	296	5.57	2.61	2.96
M2.17	181	72.4	.11	51.7	859	84.6	67.4	16.1	400	--	225	340	5.67	2.63	3.04
M2.17 (3–9)	139	55.0	.11	37.6	642	86.6	53.2	8.8	278	--	171	256	5.44	2.66	2.78
M2.17 (9–14.5)	171	65.0	.12	43.2	690	87.5	61.0	11.0	296	--	202	284	5.42	2.80	2.62
M2.18	228	80.2	.22	47.6	784	104	65.6	12.0	356	.9	206	420	5.77	2.60	3.17
M2.19	88	56.2	.072	23.4	354	46.9	31.0	5.6	173	--	85	127	3.07	1.60	1.47
M2.20	147	59.8	.10	40.0	656	69.7	54.2	10.4	320	--	168	254	5.26	2.50	2.76
M2.20 (3–9)	132	59.7	.16	40.0	628	64.5	51.6	10.2	300	--	173	244	5.10	2.54	2.56
M2.20 (9–14)	149	57.0	.098	40.0	620	67.4	52.2	10.2	288	.9	179	244	5.05	2.61	2.44
M2.21	185	70.2	.12	46.0	824	60.8	63.0	12.0	360	--	198	332	5.56	2.53	3.03
M2.22	137	65.3	.057	44.0	974	37.1	69.0	12.2	402	.9	214	264	5.51	2.76	2.75

Box cores—Major and trace elements and carbon in bottom sediment—Continued

Site ID and depth (cm)	Chro-mium	Cop-per	Mercury	Lith-ium	Manga-nese	Lead	Nickel	Scan-dium	Stron-tium	Sele-nium	Vana-dium	Zinc	Total carbon (percent)	Inorganic carbon (percent)	Organic carbon (percent)
M2.24	151	42.3	0.069	30.7	563	29.8	35.9	7.9	219	--	120	148	4.89	2.46	2.43
M2.25	149	32.1	.057	28.0	524	23.3	31.6	7.5	229	--	100	105	4.07	2.14	1.93
M2.26	157	47.4	.063	50.0	668	35.1	37.1	12.0	207	--	139	158	3.88	1.84	2.04
M2.26[1]	155	47.3	.058	48.9	663	33.9	36.0	12.0	208	--	137	128	3.88	1.88	2.00
M2.27	158	46.8	.058	51.7	639	33.1	34.1	12.4	193	0.7	124	111	3.20	1.53	1.67
M2.28	126	55.2	<.040	53.0	470	39.8	43.4	10.4	183	.6	143	136	2.33	1.12	1.21
M2.29	148	71.5	.042	69.2	750	22.8	60.4	15.4	296	.7	206	186	3.32	1.59	1.73
M2.30	114	63.9	<.040	52.1	611	32.9	49.7	12.7	247	.7	169	152	3.57	1.78	1.79
M2.31	79	54.2	.056	41.2	558	30.7	43.8	10.0	274	.6	129	168	4.02	1.92	2.10
M2.32	159	92	<.04	84	1,000	24	62.5	17.6	365	--	211	278	3.53	1.64	1.89
M2.33	145	95.5	.044	73.6	1,020	22.8	68.6	18.2	382	.7	232	214	3.76	1.72	2.04
M2.33[1]	146	93.2	.052	73.4	1,000	19.3	66.6	17.8	356	--	228	206	5.51	--	--
M2.34	140	85.7	.052	65.0	826	17.4	59.6	14.8	274	.7	200	182	3.83	1.78	2.05
M2.35	157	71.4	.057	51.3	657	35.7	38.9	13.3	228	--	135	121	3.72	1.70	2.02
M2.36	124	68.5	.044	54.4	742	18.6	47.6	13.0	164	--	153	168	3.67	1.76	1.91
M2.37	108	39.8	.046	31.7	336	28.9	25.5	8.2	131	.5	76	114	2.44	.84	1.60
M2.38	96.7	46.7	.042	30.6	358	25.7	24.9	8.1	135	.5	77	100	2.30	.87	1.43
M2.39	100	44.4	[2].42&.44	24.5	252	32.1	24.8	5.8	125	--	64	110	2.76	.91	1.85
M2.40	142	58.3	.060	43.7	594	34.1	34.3	11.6	187	--	114	123	2.95	1.32	1.63
M2.40 (3–6)	141	56.3	.057	42.2	597	30.8	32.0	11.5	181	--	109	102	3.01	1.29	1.72
M2.40 (6–9)	147	53.2	.054	38.8	467	30.4	30.6	10.7	170	--	105	99.7	2.67	1.15	1.52
M2.40 (6–9)[1]	143	52.0	.052	39.0	458	28.9	30.3	10.5	169	--	102	93.9	2.67	1.14	1.53
M2.41	113	24.8	.043	25.1	503	24.9	24.5	7.0	139	--	74	113	4.25	3.52	.73
M2.41[1]	105	26.7	.041	19.2	502	29.7	27.1	6.1	153	--	80	89.0	5.76	5.06	.70
M2.42	21.2	14.1	<.02	5.5	58.0	10.1	4.7	<1.0	40.4	--	8.5	53.4	.83	.26	.57
M2.43	32.6	5.0	<.02	8.5	161	8.7	8.2	1.9	44.4	--	15	36.1	.59	.31	.28
M2.44	56	8.8	<.040	12.8	220	10.4	13.0	2.4	32	--	33	29.6	.46	.13	.33
M2.45	107	79.2	.060	60.6	843	20.3	55.2	14.2	275	.7	189	163	3.90	1.77	2.13

[1] Replicate.

[2] Sample analyzed twice.

Grain Size

Gravity core—Grain size in bottom sediment

[cm, centimeters; sieve size, 0.062 millimeter; pipet size, 0.004 millimeter]

Depth (cm)	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
M2.40 (05–15–96)		
0–4	96.9	71.3
4–8	95.8	72.0
8–12	96.0	63.5
12–16	94.9	63.6
16–20	94.7	65.7
20–24	96.9	80.6
24–28	97.5	71.7
28–32	98.2	83.5
32–36	95.0	76.9
36–40	86.2	61.1
40–44	80.5	51.5
44–48	78.5	50.3
48–52	64.9	44.8

Box cores—Grain size in bottom sediment

[Samples collected from top 3 centimeters of lacustrine sediments unless otherwise noted. cm, centimeters; sieve size, 0.062 millimeter; pipet size, 0.004 millimeter]

Site ID and depth (cm)	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
M2.1	29.0	17.4
M2.1 (3–8)	20.2	11.9
M2.2	96.3	67.7
M2.3	97.4	79.3
M2.4	98.3	76.0
M2.5	98.3	73.3
M2.6	96.8	76.8
M2.7	98.3	75.4
M2.8	58.6	33.1
M2.8 (3–9)	55.8	32.8
M2.8 (9–19.5)	49.4	29.0
M2.9	97.0	77.9
M2.9 (3–9)	97.4	77.9
M2.9 (9–18.8)	96.6	75.0
M2.10	87.2	51.0

Box cores—Grain size in bottom sediment—Continued

Site ID and depth (cm)	Sieve analysis (percent silt and clay)	Pipet analysis (percent clay)
M2.11	96.4	74.7
M2.11 (3–9)	95.9	67.7
M2.11 (9–14.5)	94.6	75.5
M2.11 (9–14.5)[1]	94.6	71.5
M2.12	97.1	70.5
M2.13	90.3	63.5
M2.13 (3–9)	89.2	62.5
M2.13 (9–13.5)	86.6	62.7
M2.14	98.7	73.6
M2.14 (3–9)	98.8	72.9
M2.14 (9–17)	98.6	80.0
M2.15	98.2	77.8
M2.16	98.9	76.8
M2.17	98.9	79.2
M2.17 (3–9)	98.8	77.5
M2.17 (9–14.5)	98.8	81.2
M2.18	97.8	76.0
M2.19	47.1	28.2
M2.20	96.3	70.3
M2.20 (3–9)	97.0	69.1
M2.20 (9–14)	97.1	70.5
M2.21	93.7	63.2
M2.22	91.5	59.3
M2.24	93.1	61.2
M2.25	57.4	42.7
M2.26	97.7	81.5
M2.27	98.9	78.3
M2.28	95.2	55.0
M2.28[1]	95.2	55.8
M2.29	99.3	77.3
M2.30	96.5	58.3
M2.31	68.9	41.3
M2.32	98.3	77.7
M2.33	99.3	70.5
M2.34	99.8	85.5
M2.35	99.9	91.7
M2.36	99.1	83.6
M2.37	72.6	42.2
M2.38	76.0	43.0
M2.39	51.4	28.1
M2.42	4.0	2.5
M2.43	7.4	4.2
M2.44	16.0	9.8
M2.45	99.7	92.9

[1]Replicate.

Gravity core—Cesium-137 in bottom sediment

[cm, centimeters; pCi/g, picoCuries per gram; ls, one standard deviation]

Depth (cm)	Cesium-137 (pCi/g)	Counting uncertainty (1s)
M2.40 (05–15–96)		
0–4	0.135	0.024
4–8	.074	.01
8–12	.083	.014
12–16	.111	.014
12–16[1]	.089	.01
20–24	.167	.013
24–28	.262	.014
28–32	.313	.021
32–36	.396	.023
36–40	.456	.024
40–44	.569	.02
44–48	.239	.014
48–52	.021	.009

[1] Replicate.

FISH TISSUES

Volatile Organic Compounds

Volatile organic compounds in fish tissues

[Samples collected 06–29–95 to 08–09–95. All samples are based on wet weight; results are in micrograms per kilogram. Five channel catfish skin-off fillet subsamples (minimum 1 gram). mm, millimeters; <, less than]

Species	Sample ID	Fish-collection area no.	Total length (mm)	Dichloro-difluoro-methane	Chloro-methane	Vinyl chloride	Bromo-methane	Chloro-ethane	Trichloro-fluoro-methane	1,1-Di-chloro-ethyl-ene	Carbon disulfide	Acetone	Methylene chloride
Channel catfish	189	10	362	<15	<25	<15	<15	<15	<15	<15	<50	[1]560	<15
Channel catfish	205	2	341	<15	<25	<15	<15	<15	<15	<15	<50	<300	<15
Channel catfish	193	10	372	<15	<25	<15	<15	<15	<15	<15	<50	[1]850	<15
Channel catfish	177	8	386	<15	<25	<15	<15	<15	<15	<15	<50	[1]500	<15
Channel catfish	216	7	370	<15	<25	<15	<15	<15	<15	<15	<50	1,000	<15

Sample ID	Acrylo-nitrile	trans-1,2-Dichloro-ethylene	Methyl-tert-butyl ether	1,1-Di-chloro-ethane	2,2-Di-chloro-propane	cis-1,2-Dichloro-ethylene	2-Buta-nanone	Bromo-chloro-methane	Tetra-hydro-furan	Chloro-form)	1,1,1-Tri-chloro-ethane	Carbon tetra-chloride	1,1-Di-chloro-propene	Ben-zene	1,2-Di-chloro-ethane
189	<30	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15
205	<30	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15
193	<30	<15	<15	<15	<15	<15	[1]180	<15	<50	<15	<15	<15	<15	[1]2.8	<15
177	<30	<15	<15	<15	<15	<15	[1]88	<15	<50	<15	<15	<15	<15	[1]2.3	<15
216	<30	<15	<15	<15	<15	<15	[1]220	<15	<50	<15	<15	<15	<15	[1]6.9	<15

Sample ID	Tri-chloro-ethane	1,2-Di-chloro-propane	Di-bromo-methane	Methyl meth-acrylate	Bromo-dichloro-methane	2-Chloro-ethyl vinyl ether	cis-1,3-Dichloro-propene	4-Methyl-2-penta-none	Ethyl-ben-zene	m- and p-Xylene	o-Xylene	Styrene	Bromo-form	Isopro-pyl-benzene
189	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15
205	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15
193	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15
177	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15
216	<15	<15	<15	<15	<15	<100	<15	<50	<15	<15	<15	<15	<15	<15

Sample ID	Bromo-ben-zene	1,1,2,2-Tetra-chloro-ethane	1,2,3-Tri-chloro-propane	n-Propyl-benzene	2-Chloro-toluene	4-Chloro-toluene	1,3,5-Tri-methyl-benzene	tert-Butyl-benzene	1,2,4-Tri-methyl-benzene	sec-Butyl-benzene	1,3-Di-chloro-benzene	p-Iso-propyl-toluene
189	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
205	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
193	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
177	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
216	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15

Volatile organic compounds in fish tissues—Continued

Sample ID	1,4-Di-chloro-benzene	1,2-Di-chloro-benzene	n-Butyl-benzene	1,2-Dibromo-3-chloro-propane	1,2,3-Tri-chloro-benzene	1,2,4-Tri-chloro-benzene	Hexa-chloro-butadiene	Naph-tha-lene
189	<15	<15	<15	<15	<15	<15	<15	<15
205	<15	<15	<15	<15	<15	<15	<15	<15
193	<15	<15	<15	<15	<15	<15	<15	<15
177	<15	<15	<15	<15	<15	<15	<15	<15
216	<15	<15	<15	<15	<15	<15	<15	<15

[1]Estimated.

Semivolatile Organic Compounds

Semivolatile organic compounds in fish tissues

[Samples collected 06–29–95 to 08–09–95. All samples are based on wet weight; results are in micrograms per kilogram except as noted. mm, millimeters; MD, method deleted]

Species	Sample ID	Fish-collection area no.	Total length (mm)	Phenol	bis(2-Chloroethyl) ether	2-Chlorophenol	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	bis(2-Chloroisopropyl) ether	Hexachloroethane	n-Nitroso-di-n-propylamine	p-Cresol	Nitrobenzene
Channel catfish	191	10	320	77	<50	<50	<50	<50	<50	MD	MD	<50	<50	<50
Channel catfish	218	7	370	[1]44.9	<50	<50	<50	<50	<50	MD	MD	<50	<50	<50
Channel catfish	195	10	372	62.1	<50	<50	<50	<50	<50	MD	MD	<50	<50	<50
Channel catfish	179	8	386	158	<50	<50	<50	<50	<50	MD	MD	<50	<50	<50
Channel catfish	229	2	327	61.4	<50	<50	<50	<50	<50	MD	MD	<50	<50	<50

Sample ID	Isophorone	2-Nitrophenol	C8-Alkylphenol	bis(2-Chloroethoxy) methane	2,4-Dichlorophenol	3,5-Dimethylphenol	1,2,4-Trichlorobenzene	Naphthalene	2,4,6-Trimethylphenol	Hexachlorobutadiene	Quinoline	Isoquinoline	4-Chloro-3-methylphenol	Hexachlorocyclopentadiene	2,4,6-Trichlorophenol
191	<50	MD	<50	<50	MD	<50	<50	<50	MD	MD	<50	<50	<50	MD	MD
218	<50	MD	<50	<50	MD	<50	<50	<50	MD	MD	<50	<50	<50	MD	MD
195	<50	MD	<50	<50	MD	<50	<50	<50	MD	MD	<50	<50	<50	MD	MD
179	<50	MD	<50	<50	MD	<50	<50	<50	MD	MD	<50	<50	<50	MD	MD
229	<50	MD	<50	<50	MD	<50	<50	<50	MD	MD	<50	<50	<50	MD	MD

Sample ID	2,3,5,6-Tetramethylphenol	2-Chloronaphthalene	2-Ethylnaphthalene	2,6-Dimethylnaphthalene	1,6-Dimethylnaphthalene	Acenaphthylene	1,2-Dimethylnaphthalene	Dimethylphthalate	2,6-Dinitrotoluene	Acenaphthene	2,4-Dinitrophenol	2,4-Dinitrotoluene	4-Nitrophenol	2,3,6-Trimethylnaphthalene	9H-Fluorene	4-Chlorophenylphenol ether
191	MD	<50	<50	<50	<50	<50	<50	<50	<50	<50	MD	<50	MD	<50	[1]13.6	<50
218	MD	<50	<50	<50	<50	<50	<50	[1]14.1	<50	<50	MD	<50	MD	<50	[1]14.0	<50
195	MD	<50	<50	<50	<50	<50	<50	<50	<50	<50	MD	<50	MD	<50	[1]13.5	<50
179	MD	<50	<50	<50	<50	<50	<50	<50	<50	<50	MD	<50	MD	<50	[1]15.0	<50
229	MD	<50	<50	<50	<50	<50	<50	<50	<50	<50	MD	<50	MD	<50	<50	<50

Sample ID	Diethylphthalate	4,6-Dinitro-2-methylphenol	Acridine	Phenanthridine	9H-Carbazol	2-Methylanthracene	Benzo[c] cinnoline	4,5-Methylenephenanthrene	1-Methylphenanthrene	Di-n-butylphthalate	Anthraquinone	Fluoranthene	Pyrene
191	[1]12.6	MD	<50	<50	<50	<50	<50	<50	<50	[1]58.9	<50	[1]36.1	<50
218	[1]12.7	MD	<50	<50	<50	<50	<50	[1]19.8	<50	[1]74.2	<50	[1]38.5	[1]31.6
195	[1]11.1	MD	<50	<50	<50	<50	<50	[1]18.7	<50	[1]52.7	<50	[1]35.5	[1]29.2
179	[1]13.0	MD	<50	<50	<50	<50	<50	[1]2.2	<50	[1]73.5	<50	[1]39.0	[1]31.6
229	[1]12.1	MD	<50	<50	<50	<50	<50	<50	<50	[1]59.6	<50	<50	<50

Semivolatile organic compounds in fish tissue—Continued

Sample ID	1-Methyl-pyrene	Butyl-benzyl-phthal-ate	Benzo[a] anthra-cene	Chry-sene	bis(2-Ethyl-hexyl) phthal-ate	2,2'-Bi-quino-line	Di-n-octyl-phthal-ate	Benzo [b] fluoran-thene	Benzo [k] fluora-thene	Benzo [a] pyrene	Indeno [1,2,3-c,d] pyrene	Di-benzo [a,h] anthra-cene	Benzo [g,h,i] peryl-ene	Surrogate recovery		
														Nitroben-zene-d5 (percent)	2-Fluoro-biphenyl (percent)	Ter-phenyl-d14 (percent)
191	<50	<50	<50	<50	[1]379	<50	[1]133	<50	<50	<50	<50	<50	<50	67.81	49.88	72.43
218	<50	[1]78.2	<50	<50	[1]108	<50	[1]283	<50	<50	<50	<50	<50	<50	73.33	53.17	72.11
195	<50	<50	<50	<50	[1]1,710	<50	[1]129	<50	<50	<50	<50	<50	<50	64.04	46.45	71.68
179	<50	[1]76.8	<50	<50	[1]103	<50	[1]988	<50	<50	<50	<50	<50	<50	59.02	49.12	71.58
229	<50	269	<50	<50	[1]200	<50	[1]227	<50	<50	<50	<50	<50	<50	67.62	52.87	74.78

[1]Estimated.

Pesticides and Polychlorinated Biphenyls

Pesticides and polychlorinated biphenyls in fish tissues

[Samples collected 06–29–95 to 08–09–95. All samples are based on wet weight; results are in micrograms per kilogram unless otherwise noted. mm, millimeters; fsf, fillet skin off; <, less than; fso, fillet skin on; wbe, whole body eviscerated]

Species	Sample ID	Sample type	Fish-collection area no.	Total length (mm)	Tech chlordane	PCB 1242	PCB 1254	PCB 1260	alpha-HCH	Hexachlorobenzene	Pentachloroanisole	beta-HCH	gamma-HCH	delta-HCH
Largemouth bass	15	fsf	4	420	110	<5	22	50	<5	<5	<5	<5	<5	<5
Largemouth bass	23	fsf	4	315	<5	<15	<15	19	<5	<5	<5	<5	<5	<5
Largemouth bass	43	fsf	8	310	7.4	<15	100	110	<5	<5	<5	<5	<5	<5
Largemouth bass	51	fsf	8	327	5.6	<15	29	56	<5	<5	<5	<5	<5	<5
Largemouth bass	59	fsf	9	425	<8	<5	40	420	<5	<5	<5	<5	<5	<5
Largemouth bass	63	fsf	9	304	7.7	<15	38	150	<5	<5	<5	<5	<5	<5
Largemouth bass	87	fsf	11	352	9.9	<15	76	240	<5	<5	<5	<5	<5	<5
Largemouth bass	95	fsf	11	343	6.2	<10	12	35	<5	<5	<5	<5	<5	<5
Largemouth bass	99	fsf	11	320	8	<10	13	37	<5	<5	<5	<5	<5	<5
Largemouth bass	107	fsf	2	350	6.8	<10	<10	17	<5	<5	<5	<5	<5	<5
Largemouth bass	111	fsf	2	325	6.3	<10	10	23	<5	<5	<5	5	<5	<5
Largemouth bass	143	fsf	10	415	<11	<5	10	35	<5	<5	<5	<5	<5	<5
Largemouth bass	147	fsf	10	313	6.2	<10	<10	22	<5	<5	<5	<5	<5	<5
Largemouth bass	24	fso	4	315	<5	<15	<15	17	<5	<5	<5	<5	<5	<5
Largemouth bass	44	fso	8	310	14	<15	35	130	<5	<5	<5	<5	<5	<5
Largemouth bass	52	fso	8	327	5.5	<10	27	53	<5	<5	<5	<5	<5	<5
Largemouth bass	64	fso	9	304	5.8	<10	30	110	<5	<5	<5	<5	<5	<5
Largemouth bass	88	fso	11	352	14	19	100	370	<5	<5	<5	<5	<5	<5
Largemouth bass	96	fso	11	343	8.2	<10	19	58	<5	<5	<5	<5	<5	<5
Largemouth bass	100	fso	11	320	21	<10	38	120	<5	<5	<5	<5	<5	<5
Largemouth bass	108	fso	2	350	<5	<10	<10	15	<5	<5	<5	<5	<5	<5
Largemouth bass	112	fso	2	325	5.1	<10	8.6	38	<5	<5	<5	<5	<5	<5
Largemouth bass	148	fso	10	313	7.6	<10	<10	25	<5	<5	<5	<5	<5	<5
Common carp	4	fsf	4	490	13	<15	15	72	<5	<5	<5	<5	<5	<5
Common carp	75	fsf	8	430	<5	<15	65	110	<5	<5	<5	<5	<5	<5
Common carp	83	fsf	9	445	24	<15	110	320	<5	<5	<5	<5	<5	<5
Common carp	123	fsf	11	435	26	14	52	107	<5	<5	<5	<5	<5	<5
Common carp	127	fsf	11	474	42	31	77	630	<5	<5	<5	<5	<5	<5
Common carp	131	fsf	10	470	41	30	470	1,670	<6	<5	<5	<5	<5	<5
Common carp	135	fsf	10	420	26	22	52	220	<5	<5	<5	<5	<5	<5
Common carp	139	fsf	10	455	21	<10	51	400	<5	<5	<5	<5	<5	<5
Common carp	163	fsf	10	460	12	<15	<15	51	<5	<5	<5	<5	<5	<5
Common carp	167	fsf	2	435	6.9	<15	<15	<15	<5	<5	<5	<5	<5	<5
Channel catfish	34	fsf	4	570	130	11	93	780	<5	<5	<5	<5	<5	<5
Channel catfish	38	fsf	4	510	64	<5	46	180	<5	<5	<5	<5	<5	<5

Pesticides and polychlorinated biphenyls in fish tissues—Continued

Species	Sample ID	Sample type	Fish-collection area no.	Total length (mm)	Tech chlordane	PCB 1242	PCB 1254	PCB 1260	alpha-HCH	Hexachlorobenzene	Pentachloroanisole	beta-HCH	gamma-HCH	delta-HCH
Channel catfish	179	fsf	8	386	87	32	50	120	<5	<5	<5	<5	<5	<5
Channel catfish	191	fsf	10	362	30	15	29	120	<5	<5	<5	<5	<5	<5
Channel catfish	195	fsf	10	372	96	<15	24	97	<5	<5	<5	<5	<5	<5
Channel catfish	199	fsf	2	395	12	<15	17	55	<5	<5	<5	<5	<5	<5
Channel catfish	207	fsf	2	341	9.7	<15	<10	25	<5	<5	<5	<5	<5	<5
Channel catfish	218	fsf	7	370	41	5	23	54	<5	<5	<5	<5	<5	<5
Channel catfish	229	fsf	11	354	47	11	60	103	<5	<5	<5	<5	<5	<5
Channel catfish	233	fsf	2	380	29	<5	18	46	<5	<5	<5	<5	<5	<5
Channel catfish	35	fso	4	570	57	<15	55	190	<5	<5	<5	<5	<5	<5
Channel catfish	39	fso	4	510	580	33	410	1,700	<5	<5	<5	<5	<5	<5
Channel catfish	180	fso	8	386	45	21	24	79	<5	<5	<5	<5	<5	<5
Channel catfish	192	fso	10	362	12	<15	<15	47	<5	<5	<5	<5	<5	<5
Channel catfish	196	fso	10	372	120	<15	29	99	<5	<5	<5	<5	<5	<5
Channel catfish	200	fso	2	395	16	<15	21	73	<5	<5	<5	<5	<5	<5
Channel catfish	208	fso	2	341	11	<15	<15	34	<5	<5	<5	<5	<5	<5
Channel catfish	219	fso	7	370	20	<5	15	56	<5	<5	<5	<5	<5	<5
Channel catfish	230	fso	11	354	26	6	37	96	<5	<5	<5	<5	<5	<5
Channel catfish	234	fso	2	380	9.8	<5	9.8	47	<5	<5	<5	<5	<5	<5
Channel catfish	40	wbe	4	470	220	<5	74	1,000	<5	<5	<5	<5	<5	<5
Channel catfish	210	wbe	10	316	17	<15	44	91	<5	<5	<5	<5	<5	<5
Channel catfish	224	wbe	8	423	74	9.1	64	740	<5	<5	<5	<5	<5	<5
Channel catfish	225	wbe	7	420	160	12	118	630	<5	<5	<5	<5	<5	<5
Channel catfish	226	wbe	7	490	130	<5	92	840	<5	<5	<5	<5	<5	<5
Channel catfish	235	wbe	2	505	207	9.7	140	860	<5	<5	<5	<5	<5	<5
Channel catfish	236	wbe	2	505	31	<5	27	81	<5	<5	<5	<5	<5	<5
Channel catfish	249	wbe	7	333	170	12	120	180	<5	<5	<5	<5	<5	<5
Channel catfish	250	wbe	7	523	290	14	420	2,200	<5	<5	<5	<5	<5	<5

Pesticides and polychlorinated biphenyls in fish tissues—Continued

Sample ID	Hepta-chlor	Al-drin	DCPA	Hepta-chlor epox-ide	oxy-Chlor-dane	trans-Chlor-dane	cis-Chlor-dane	o,p'-DDE	trans-Non-achlor	Diel-drin	p,p'-DDE	o,p-'-DDD
15	<5	<5	<5	<5	<5	7.6	12	<5	12	9.8	10	<5
23	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	[1]8.9	<5
43	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.3	<5
51	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
59	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
63	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7.6	<5
87	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7.6	<5
95	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
99	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
107	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
111	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
143	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
147	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	5.4	<5
24	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	[1]10	<5
44	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	[1]8.5	<5
52	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
64	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.1	<5
88	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	12	<5
96	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	7.6	<5
100	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5
108	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
112	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	8.1	<5
148	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.2	<5
4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	47	<5
75	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	6.5	<5
83	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	[1]15	<5
123	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.5	<5
127	<5	<5	<5	<5	<5	<5	6	<5	11	<5	65	<5
131	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	18	<5
135	<5	<5	<5	<5	<5	<5	<5	<5	5.1	<5	[1]14	<5
139	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	10	<5
163	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	[1]8.7	<5
167	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	[1]19	<5
34	<5	<5	<5	<5	<5	<5	8.8	<5	14	5.2	150	<5
38	<5	<5	<5	<5	<5	<5	5.9	<5	9.9	<5	58	<5

Pesticides and polychlorinated biphenyls in fish tissues—Continued

Sample ID	Hepta-chlor	Al-drin	DCPA	Hepta-chlor epox-ide	oxy-Chlor-dane	trans-Chlor-dane	cis-Chlor-dane	o,p'-DDE	trans-Non-achlor	Diel-drin	p,p'-DDE	o,p-'-DDD
179	<5	<5	<5	<5	<5	7.4	13	<5	16	<5	30	<5
191	<5	<5	<5	<5	<5	<5	<5	<5	5.2	<5	23	<5
195	<5	<5	<5	<5	<5	5	13	<5	23	40	22	<5
199	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	13	<5
207	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	18	<5
218	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	11	<5
229	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	15	<5
233	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.3	<5
35	<5	<5	<5	<5	<5	<5	7.4	<5	12	5.2	46	<5
39	<5	<5	<5	6.9	9.4	28	43	<5	80	12	75	<5
180	<5	<5	<5	<5	<5	<5	6.5	<5	8.2	<5	18	<5
192	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.5	<5
196	<5	<5	<5	<5	<5	6.1	15	<5	28	47	22	<5
200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	17	<5
208	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	22	<5
219	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.3	<5
230	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	9.6	<5
234	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	8.2	<5
40	<5	<5	<5	<5	<5	7.2	16	<5	30	12	160	<5
210	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	23	<5
224	<5	<5	<5	<5	<5	<5	6.4	<5	10	<5	25	<5
225	<5	<5	<5	<5	<5	8	12	<5	16	<5	54	<5
226	<5	<5	<5	<5	<5	5	9.5	17	<5	<5	110	<5
235	<5	<5	<5	<5	<5	9.2	16	<5	30	<5	134	<5
236	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	22	<5
249	<5	<5	<5	<5	<5	12	14	<5	27	<5	33	<5
250	<5	<5	<5	<5	<5	14	22	<5	32	5.2	60	<5

Pesticides and polychlorinated biphenyls in fish tissues—Continued

Sample ID	En-drin	cis-Non-achlor	o,p'-DDT	p,p'-DDD	p,p'-DDT	o,p'-Meth-oxy-chlor	p,p'-Meth-oxy-chlor	Mirex	Toxa-phene	Surrogate recovery (percent)		Lipid (per-cent)
										alpha-d6-HCH	3,5-Dichloro-biphenyl	
15	<5	<5	<5	10	<5	<5	<5	<5	<200	81	78	1.8
23	<5	<5	<5	<5	<5	<5	<5	<5	<200	106	45	.25
43	<5	<5	<5	<5	<5	<5	<5	<5	<200	88	33	.35
51	<5	<5	<5	<5	<5	<5	<5	<5	<200	100	61	.44
59	<5	<5	<10	<5	<10	<5	<5	<5	<200	97	83	.6
63	<5	<5	<5	<5	<5	<5	<5	<5	<200	99	63	.49
87	<5	<5	<5	<5	<5	<5	<5	<5	<200	101	53	.35
95	<5	<5	<5	<5	<5	<5	<5	<5	<200	106	46	.4
99	<5	<5	<5	<5	<5	<5	<5	<5	<200	88	48	.6
107	<5	<5	<5	<5	<5	<5	<5	<5	<200	117	43	.5
111	<5	<5	<5	<5	<5	<5	<5	<5	<200	98	42	.5
143	<5	<5	<10	<5	<10	<5	<5	<5	<200	93	77	.6
147	<5	<5	<5	<5	<5	<5	<5	<5	<200	104	52	.38
24	<5	<5	<5	<5	<5	<5	<5	<5	<200	109	35	.35
44	<5	<5	<5	<5	<5	<5	<5	<5	<200	104	43	.6
52	<5	<5	<5	<5	<5	<5	<5	<5	<200	95	54	.53
64	<5	<5	<5	<5	<5	<5	<5	<5	<200	85	69	.3
88	<5	<5	<5	<5	<5	<5	<5	<5	<200	96	59	.44
96	<5	<5	<5	<5	<5	<5	<5	<5	<200	110	68	.65
100	<5	<5	<5	<5	<5	<5	<5	<5	<200	101	69	1.4
108	<5	<5	<5	<5	<5	<5	<5	<5	<200	104	67	.45
112	<5	<5	<5	<5	<5	<5	<5	<5	<200	96	52	.5
148	<5	<5	<5	<5	<5	<5	<5	<5	<200	118	75	.44
4	<5	<5	<5	[1]7.5	<5	<5	<5	<5	<200	114	48	1.85
75	<5	<5	<5	<5	<5	<5	<5	<5	<200	106	53	.75
83	<5	<5	<5	<5	<5	<5	<5	<5	<200	123	51	1.2
123	<5	<5	<5	<5	<5	<5	<5	<5	<200	84	59	1.9
127	<5	17	<5	<15	<5	<5	<5	<5	<200	106	54	2.2
131	<5	5.7	<5	<5	<5	<5	<5	<8	<200	80	63	3.5
135	<5	<5	<5	<5	<5	<5	<5	<5	<200	72	41	1.2
139	<5	<5	<5	<5	<5	<5	<5	<5	<200	101	54	1
163	<5	<5	<5	<5	<5	<5	<5	<5	<200	123	38	.85
167	<5	<5	<5	<5	<5	<5	<5	<5	<200	104	47	.45
34	<5	6.5	<5	<5	<5	<5	<5	<5	<200	94	100	8.8
38	<5	6.7	<5	<5	<10	<5	<10	<5	<200	106	81	1.7

Pesticides and polychlorinated biphenyls in fish tissues—Continued

Sample ID	En-drin	cis-Non-achlor	o,p'-DDT	p,p'-DDD	p,p'-DDT	o,p'-Meth-oxy-chlor	p,p'-Meth-oxy-chlor	Mirex	Toxa-phene	Surrogate recovery (percent)		Lipid (per-cent)
										alpha-d6-HCH	3,5-Dichloro-biphenyl	
179	<5	8.8	<5	<5	<5	<5	<5	<5	<200	102	51	3.5
191	<5	[1]5.2	<5	<5	<5	<5	<5	<5	<200	106	53	2.8
195	<5	8	<5	<5	<5	<5	<5	<5	<200	98	52	2.6
199	<5	<5	<5	<5	<5	<5	<5	<5	<200	92	57	3
207	<5	<5	<5	<5	<5	<5	<5	<5	<200	106	52	2
218	<5	<5	<5	<5	<5	<5	<5	<5	<200	97	88	2.4
229	<5	<5	<5	<5	<5	<5	<5	<5	<200	106	104	3.1
233	<5	<5	<5	<5	<5	<5	<5	<5	<200	104	90	2.2
35	<5	[1]11	<5	<5	<5	<5	<5	<5	<200	105	64	4.6
39	<5	25	<5	<5	<10	<5	<10	<5	<200	107	78	5.9
180	<5	<5	<5	<5	<5	<5	<5	<5	<200	98	55	2
192	<5	<5	<5	<5	<5	<5	<5	<5	<200	101	55	1.2
196	<5	12	<5	<5	<5	<5	<5	<5	<200	88	36	3.4
200	<5	<5	<5	<5	<5	<5	<5	<5	<200	97	48	3.8
208	<5	<5	<5	<5	<5	<5	<5	<5	<200	105	54	2
219	<5	<5	<5	<5	<10	<5	<10	<5	<200	103	76	1.6
230	<5	<5	<5	<5	<10	<5	<10	<5	<200	94	73	2
234	<5	<5	<5	<5	<10	<5	<10	<5	<200	108	88	1.4
40	<5	14	<5	<5	<10	<5	<10	<5	<200	108	72	4.6
210	<5	<5	<5	<5	<5	<5	<5	<5	<200	118	49	1
224	<5	<5	<5	<5	<10	<5	<10	<5	<200	85	63	3.15
225	<5	6.7	<5	<5	<10	<5	<10	<5	<200	117	83	5.6
226	<5	8.4	<5	<5	<10	<5	<10	<5	<200	100	76	3.7
235	<5	<5	<5	<5	<5	<5	<5	<5	<200	110	95	4.3
236	<5	<5	<5	<5	<10	<5	<10	<5	<200	114	86	3.75
249	<5	7.6	<5	<5	<10	<5	<10	<5	<200	76	82	4.5
250	<5	18	<5	5.1	<10	<5	<10	<5	<200	112	63	4.45

[1] Estimated.

Major and Trace Elements

Major and trace elements in fish tissues

[Samples collected 06–29–95 to 08–09–95. All samples are based on wet weight; results are in micrograms per gram unless otherwise noted. mm, millimeters; fm, metal subsample from left side of fillet; <, less than; wbe, whole body, eviscerated]

Species	Sample ID	Sample type	Fish-collection area no.	Total length (mm)	Aluminum	Barium	Boron	Chromium	Copper	Iron	Manganese	Strontium	Zinc	Antimony	Arsenic	Beryllium
Channel catfish	33	fm	4	570	<1	<0.1	0.8	<0.5	<0.5	7.2	0.2	0.6	17	<0.2	<0.2	<0.2
Channel catfish	37	fm	4	510	<1	<.1	1.3	.6	1	13	.5	.6	36	<.3	<.3	<.3
Channel catfish	178	fm	8	386	<1	.1	1.3	.5	.9	16	1.2	1.3	32	<.3	<.3	<.3
Channel catfish	182	fm	11	327	1.3	<.1	2.7	.8	.6	12	.5	1.3	31	<.5	<.5	<.5
Channel catfish	190	fm	10	362	<1	<.1	2.6	.7	1	18	.6	1	27	<.5	<.5	<.5
Channel catfish	194	fm	10	372	7.8	.4	2	1	.9	29	1.4	21	34	<.4	<.4	<.4
Channel catfish	198	fm	2	395	<1	<.1	2.1	.6	.8	8.5	.3	.8	31	<.4	<.4	<.4
Channel catfish	202	fm	2	336	<1	<.1	2.5	1	1	13	.5	.8	30	<.5	<.5	<.5
Channel catfish	206	fm	2	341	<1	.1	2.7	.7	1.1	12	.4	1.9	44	<.5	<.5	<.5
Channel catfish	228	fm	11	354	1.4	<.1	1.9	.6	.6	12	.6	2.9	35	<.5	<.5	<.5
Channel catfish	232	fm	2	380	<1	<.1	1.7	<.5	.8	8.1	.5	.6	28	<.4	<.4	<.4
Channel catfish	238	fm	7	387	<1	<.1	1.5	.7	1	14	.4	.9	35	<.6	<.6	<.6
Channel catfish	242	fm	7	373	<1	<.1	2	.6	.7	7.8	.4	.6	35	<.4	<.4	<.4
Channel catfish	246	fm	10	345	<1	<.1	1.2	.7	.7	8.8	.5	.7	38	<.5	<.5	<.5
Channel catfish	186	fm	11	456	<1	<.1	1.9	1.1	.9	18	.6	2.5	27	<.4	<.4	<.4
Channel catfish	209	wbe	2	327	<1	.5	.9	1	1	34	1.9	39	48	<.2	<.2	<.2
Channel catfish	210	wbe	10	316	<1	1	1.5	1.3	1.4	68	2.8	46	110	<.3	.3	<.3
Channel catfish	211	wbe	2	240	6.3	.4	1.3	2.1	1.2	120	2.7	26	62	<.3	<.3	<.3
Channel catfish	217	wbe	7	370	<1	<.1	1.4	<.5	.8	5.9	.4	.5	29	<.4	<.4	<.4
Channel catfish	224	wbe	8	423	<1	.5	.8	1.2	.9	32	2.5	41	73	<.3	<.3	<.3
Channel catfish	225	wbe	7	420	<1	.3	1.3	.7	.8	23	1	23	40	<.4	<.4	<.4
Channel catfish	226	wbe	7	490	<1	<.1	1.2	.6	1.1	14	.4	.7	57	<.3	<.3	<.3
Channel catfish	236	wbe	11	322	<1	.4	.6	.9	.8	34	1.9	37	68	<.3	<.3	<.3
Channel catfish	249	wbe	7	333	<1	.5	.8	1.1	.9	37	2.3	45	61	<.3	<.3	<.3
Channel catfish	250	wbe	7	523	<1	1.1	1.9	1.3	.9	30	3.2	65	56	<.3	<.3	<.3
Channel catfish	251	wbe	10	523	<1	.9	1.3	7.5	.7	100	3.1	60	63	<.3	<.3	<.3
Common carp	2	fm	4	490	<1	.6	2.1	<.5	.9	42	1.1	7.5	33	<.4	<.4	<.4
Common carp	82	fm	9	445	<1	.4	1.2	.7	1	55	.8	5.5	49	<.2	<.2	<.2
Common carp	122	fm	11	435	<1	.2	.6	<.5	.8	22	.9	3.9	46	<.2	.6	<.2
Common carp	126	fm	11	474	<1	.5	.7	.6	1.2	61	.9	7.2	27	<.2	.2	<.2
Common carp	130	fm	10	470	<1	.4	.7	.6	.8	31	.8	3.6	44	<.2	.5	<.2
Common carp	134	fm	10	420	<1	.3	.9	.7	.9	68	.9	5.1	44	<.2	<.2	<.2
Common carp	138	fm	10	455	<1	.6	1	.8	1.1	55	1.2	7.1	25	<.2	<.2	<.2
Common carp	162	fm	10	460	<1	.5	1.2	.8	1.3	59	.9	5.6	23	<.2	<.2	<.2
Common carp	166	fm	2	435	<1	.5	1	.9	1.3	40	1.4	6.9	22	<.2	<.2	<.2

Major and trace elements in fish tissues

Species	Sample ID	Sample type	Fish-collection area no.	Total length (mm)	Aluminum	Barium	Boron	Chromium	Copper	Iron	Manganese	Strontium	Zinc	Antimony	Arsenic	Beryllium
Largemouth bass	22	fm	4	315	<1	0.2	1.9	0.7	0.6	12	0.5	1.7	29	<0.5	0.6	<0.5
Largemouth bass	42	fm	8	310	<1	<.1	1.6	.7	<.5	12	.4	.5	27	<.5	<.5	<.5
Largemouth bass	50	fm	8	327	<1	<.1	2	.9	.5	13	.5	.4	31	<.5	.6	<.5
Largemouth bass	62	fm	9	304	<1	<.1	1.2	.9	.6	12	.7	.4	46	<.5	<.5	<.5
Largemouth bass	86	fm	11	352	<1	<.1	1.4	1.4	.6	12	.3	1.2	23	<.3	.3	<.3
Largemouth bass	94	fm	11	343	<1	.1	1.1	.6	.5	8.4	.4	1.2	22	<.3	<.3	<.3
Largemouth bass	98	fm	11	320	<1	<.1	1.6	.7	.6	7.7	.4	1.1	25	<.4	<.4	<.4
Largemouth bass	106	fm	2	350	<1	<.1	1.6	<.5	.6	9.1	.3	.7	24	<.2	.4	<.2
Largemouth bass	110	fm	2	325	<1	<.1	.9	.6	.6	13	.4	2	27	<.3	.4	<.3
Largemouth bass	146	fm	10	313	<1	<.1	1.4	.7	.5	9.8	.4	1	29	<.3	.5	<.3

Major and trace elements in fish tissues—Continued

Sample ID	Cadmium	Cobalt	Lead	Molybdenum	Nickel	Selenium	Silver	Uranium	Vanadium	Mercury	Water (percent)
33	<0.2	<0.2	<0.2	0.3	<0.2	0.7	<0.2	<0.2	<0.2	<0.1	82
37	<.3	<.3	<.3	.4	<.3	1.9	<.3	<.3	<.3	.4	74
178	<.3	<.3	<.3	<.3	<.3	1.8	<.3	<.3	<.3	.1	80
182	<.5	<.5	<.5	<.5	<.5	.9	<.5	<.5	<.5	.1	79
190	<.5	<.5	<.5	.7	.5	1.5	<.5	<.5	<.5	.2	82
194	<.4	<.4	<.4	.6	.5	1.1	<.4	<.4	<.4	.2	79
198	<.4	<.4	<.4	.5	<.4	1.6	<.4	<.4	<.4	.1	79
202	<.5	<.5	<.5	<.5	<.5	2	<.5	<.5	<.5	.3	79
206	<.5	<.5	<.5	.7	<.5	<.5	<.5	<.5	<.5	.2	81
228	<.5	<.5	<.5	.7	<.5	1	<.5	<.5	<.5	<.1	79
232	<.4	<.4	<.4	.6	.4	1.2	<.4	<.4	<.4	.1	79
238	<.6	<.6	<.6	<.6	<.6	1	<.6	<.6	<.6	<.1	80
242	<.4	<.4	<.4	.4	<.4	1.7	<.4	<.4	<.4	<.1	79
246	<.5	<.5	<.5	<.5	<.5	1.4	<.5	<.5	<.5	.1	77
186	<.4	<.4	<.4	<.4	<.4	.8	<.4	<.4	<.4	.1	80
209	<.2	<.2	<.2	<.2	.5	.6	<.2	<.2	.2	<.1	77
210	<.3	<.3	<.3	.3	1.4	1.7	<.3	<.3	.3	.2	83
211	<.3	<.3	<.3	.7	.5	2.4	<.3	<.3	<.3	<.1	80
217	<.4	<.4	<.4	<.4	<.4	1.7	<.4	<.4	<.4	<.1	81
224	<.3	<.3	<.3	<.3	.8	1.5	<.3	<.3	<.3	.1	78
225	<.4	<.4	<.4	<.4	.5	1.5	<.4	<.4	<.4	.2	78
226	<.3	<.3	<.3	<.3	<.3	1.1	<.3	<.3	<.3	.3	77
236	<.3	<.3	<.3	<.3	.6	2.2	<.3	<.3	<.3	<.1	79
249	<.3	<.3	<.3	<.3	.6	1.7	<.3	<.3	.3	<.1	79
250	<.3	<.3	<.3	<.3	1.2	1	<.3	<.3	.3	.1	77
251	<.3	<.3	<.3	.7	1	1.4	<.3	<.3	.7	.1	78
2	<.4	<.4	<.4	<.4	<.4	4.3	<.4	<.4	<.4	.3	81
82	<.2	<.2	<.2	<.2	.4	2.3	<.2	<.2	<.2	.3	80
122	<.2	<.2	<.2	<.2	<.2	2.1	<.2	<.2	<.2	<.1	76
126	<.2	<.2	<.2	<.2	.3	2.7	<.2	<.2	<.2	.2	78
130	<.2	<.2	<.2	<.2	.2	1.5	<.2	<.2	<.2	<.1	75
134	<.2	<.2	.2	<.2	.3	2.3	<.2	<.2	<.2	<.1	77
138	<.2	<.2	.2	<.2	.4	2.8	<.2	<.2	<.2	.2	78
162	<.2	<.2	<.2	<.2	.3	2.1	<.2	<.2	<.2	.2	79
166	<.2	<.2	<.2	<.2	.5	1.9	<.2	<.2	<.2	.5	80

Major and trace elements in fish tissues—Continued

Sample ID	Cadmium	Cobalt	Lead	Molybdenum	Nickel	Selenium	Silver	Uranium	Vanadium	Mercury	Water (percent)
22	<0.5	<0.5	<0.5	<0.5	<0.5	2	<0.5	<0.5	<0.5	0.1	80
42	<.5	<.5	<.5	<.5	<.5	2	<.5	<.5	<.5	<.1	80
50	<.5	<.5	<.5	<.5	<.5	2	<.5	<.5	<.5	<.1	80
62	<.5	<.5	<.5	<.5	<.5	1.7	<.5	<.5	<.5	.2	80
86	<.3	<.3	<.3	<.3	.6	1.8	<.3	<.3	<.3	.2	80
94	<.3	<.3	<.3	<.3	<.3	1.3	<.3	<.3	<.3	.1	79
98	<.4	<.4	<.4	<.4	<.4	1.9	<.4	<.4	<.4	<.1	79
106	<.2	<.2	<.2	<.2	<.2	1.9	<.2	<.2	<.2	<.1	79
110	<.3	<.3	<.3	<.3	<.3	1.4	<.3	<.3	<.3	<.1	79
146	<.3	<.3	<.3	<.3	<.3	2.2	<.3	<.3	<.3	.1	80

QUALITY CONTROL

Laboratory quality-control sample results for Phase II—Polycyclic aromatic hydrocarbons (lab code 8375) in bottom sediment

[Batch no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; E, estimated; <, less than; NA; not applicable, not all isomers were available to spike; SPR, surrogate percent recovery]

Compound	Batch no. 8022H96200[1]		Batch no. 8022H96205[2]	Batch no. 8022H96165[3]		Batch no 8022H96179[4]		Batch no. 8022H96178[5]		Batch no 8022H96180[6]		Batch no. 8022H96241[7]		Batch no. 8022H96206[8]
	Blank (µg/kg)	Percent recovery spike	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)
Phenol	E3.4	90.26	50.80	<5	84.70	E0.53	49.93	E1.1	60.68	E1.2	66.06	E2.47	65.62	<5
p-cresol	<5	65.33	29.74	<5	69.17	<5	39.72	<5	35.62	<5	48.06	<5	87.54	<5
C8-Alkylphenol	<5	30.58	E9.20	<50	NA	<50	E1.61	<50	NA	<50	48.05	<5	E38.67	<5
Naphthalene	E.21	59.00	46.35	<5	82.42	E.26	58.31	E.052	64.03	E.52	61.72	<5	58.66	<5
C1-128 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	E.85	NA	<5	NA	<5
2-Ethylnaphthalene	<5	65.81	52.42	<5	87.10	<5	56.04	<5	63.62	<5	69.27	<5	67.99	<5
2, 6-Dimethylnaphthalene	<5	64.37	44.01	<5	85.79	<5	49.91	<5	59.60	<5	70.77	<5	67.46	<5
1, 6-Dimethylnaphthalene	<5	64.37	54.36	<5	79.21	<5	52.93	<5	61.16	<5	69.23	<5	68.37	<5
C2-128 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Acenaphthylene	<5	49.84	55.63	<5	73.78	<5	59.41	<5	61.26	<5	62.89	<5	66.43	<5
1, 2-Dimethylnaphthalene	<5	64.61	56.08	<5	87.80	<5	55.98	<5	62.07	<5	68.68	<5	70.35	<5
Acenaphthene	<5	51.37	57.87	<5	78.39	<5	56.40	<5	65.95	<5	66.35	<5	72.01	<5
C3-128 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
2, 3, 6-Trimethylnaphthalene	<5	65.73	63.32	<5	85.09	<5	60.05	<5	65.88	<5	66.70	<5	69.75	<5
9H-Fluorene	<5	53.17	65.52	<5	78.77	<5	58.19	<5	63.52	<5	65.02	<5	77.57	<5
C4-128 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
1-Methyl-9H-fluorene	<5	53.84	69.38	<5	84.61	<5	66.79	<5	68.59	<5	62.93	<5	79.87	<5
C1-166 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Dibenzothiphene	<5	55.10	73.57	<5	86.54	<5	69.57	<5	74.21	<5	66.37	<5	86.08	<5
Phenanthrene	<5	66.18	72.77	<5	87.60	<5	50.45	<5	63.98	<5	67.47	<5	79.05	<5
Anthracene	<5	67.27	67.13	<5	85.46	<5	60.81	<5	62.62	<5	63.79	<5	73.86	<5
Acridine	<5	15.64	47.24	<5	91.52	<5	56.86	<5	66.87	<5	63.58	<5	24.65	<5
Phenanthridine	<5	73.23	73.14	<5	90.89	<5	57.54	<5	72.23	<5	64.37	<5	77.16	<5
9H-Carbazols	<5	72.59	75.62	<5	84.63	<5	68.96	<5	77.76	<5	64.86	<5	76.73	<5
C5-128 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C2-166 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
2-Methylanthracene	<5	62.01	62.74	<5	83.30	<5	57.31	<5	65.28	<5	61.32	<5	73.92	<5
4, 5-Methylenephenanthrene	<5	69.22	70.55	<5	79.72	<5	67.60	<5	67.43	<5	64.83	<5	78.69	<5
C1-178 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
1-Methylphenanthrene	<5	74.50	73.02	<5	78.62	<5	63.08	<5	67.24	<5	64.40	<5	76.53	<5
C3-166 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C2-178 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Fluoranthene	E.012	71.54	78.25	<5	92.25	E.029	70.72	<5	76.55	<5	68.09	<5	84.02	<5
Pyrene	<5	72.64	77.97	<5	97.49	E.19	72.82	<5	77.16	<5	67.36	<5	83.79	<5
C3-178 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5

Laboratory quality-control sample results for Phase II—Polycyclic aromatic hydrocarbons (lab code 8375) in bottom sediment—Continued

Compound	Batch no. 8022H96200[1]		Batch no. 8022H96205[2]	Batch no. 8022H96165[3]		Batch no 8022H96179[4]		Batch no. 8022H96178[5]		Batch no 8022H96180[6]		Batch no. 8022H96241[7]		Batch no. 8022H96206[8]
	Blank (µg/kg)	Percent recovery spike	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)
C4-178 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
1-Methylpyrene	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C1-202 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C2-202 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C5-178 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Benz[a]anthracene	<5	73.74	76.27	<5	89.39	<5	63.69	<5	73.45	<5	72.23	<5	83.81	<5
Chrysene	<5	73.72	76.94	<5	87.45	<5	74.04	<5	78.14	<5	71.15	<5	85.19	<5
C3-202 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C1-228 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C4-202 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C5-202 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C2-228 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Benzo[b]fluoranthene	<5	70.94	80.94	<5	84.58	<5	56.14	<5	66.33	<5	78.27	<5	87.68	<5
Benzo[k]fluoranthene	<5	73.88	76.18	<5	85.92	<5	57.39	<5	70.91	<5	82.86	<5	99.90	<5
Benzo[e]pyrene	<5	75.43	79.50	<5	85.62	<5	64.19	<5	75.04	<5	75.99	<5	92.76	<5
Benzo[a]pyrene	<5	70.23	69.87	<5	80.23	<5	64.62	<5	74.76	<5	67.16	<5	82.23	<5
Perylene	<5	68.46	73.04	<5	80.47	<5	58.73	<5	66.59	<5	65.84	<5	78.23	<5
C1-252 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C3-228 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C2-252 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C4-228 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Benzo[g,h,i]perylene	<5	61.48	69.43	<5	71.71	<5	59.37	<5	59.35	E.11	58.43	<5	73.71	<5
Indeno[1,2,3-c,d]pyrene	<5	78.16	77.07	<5	82.83	<5	66.56	<5	81.90	<5	70.13	<5	84.25	<5
Dibenzo[a,h]anthrcene	<5	73.61	76.48	<5	90.88	<5	75.82	<5	73.01	<5	66.46	<5	86.06	<5
C3-252 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C4-252 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C5-228 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
C5-252 Isomers	<5	NA	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5	NA	<5
Coronene	<5	24.50	30.19	<5	54.18	<5	16.43	<5	26.37	<5	25.08	<5	26.19	<5
Nitrobenzene-d5 (SPR)	46.01	55.21	47.88	65.43	67.73	36.49	41.65	57.09	50.48	17.06	50.02	57.13	59.02	62.28
2-Fluorobiphenyl (SPR)	67.01	62.04	53.91	77.53	84.61	40.06	46.78	57.05	52.48	15.55	64.21	55.93	66.29	62.09
Terphenyl-d14 (SPR)	78.67	74.26	75.33	63.97	66.83	67.08	68.69	77.22	73.15	18.39	66.11	72.18	77.87	74.63

[1] M2.11 (3–9), M2.13 (3–9), M2.14 (3–9 replicate), M2.17 (3–9, 3–9 replicate), M2.20 (3–9).

[2] M2.1 (0–3, 0–3 replicate, 3–8), M2.2, M2.3, M2.4, M2.5, M2.6, M2.7, M2.8 (0–3, 3–9, 3–9 replicate, 9–19.5), M2.9 (0–3, 3–9, 9–18.8), M2.11 (3–9 replicate), M2.13 (3–9 replicate), M2.14 (3–9), M2.20 (3–9 replicate, 9–14). Method blank was ruined during preparation.

[3] M2.10, M2.12, M2.24, M2.25, M2.26, M2.27, M2.35, M2.37, M2.38, M2.40 (0–5, 15–20, 25–30, 30–35, 40–45, 45–50, 50–55, 55–60, 55–60 replicate, 60–65, 65–70, 70–75), M2.41, M2.42, M2.43.

M2.11 (9–14.5), M2.14 (0–3, 9–17), M2.16, M2.19, M2.22, M2.29, M2.31, M2.34, M2.39, M2.44, M2.45.

[4] M2.11 (9–14.5), M2.14 (0–3, 9–17), M2.16, M2.19, M2.22, M2.29, M2.31, M2.34, M2.39, M2.44, M2.45.

[5] M2.15, M2.18, M2.21, M2.28, M2.30, M2.32, M2.33, M2.36, M2.40 (5–10, 10–15, 20–25, 35–40).

[6] M2.11, M2.13 (0–3, 9–13.5), M2.17 (0–3, 9–14.5), M2.20 (0–3).

[7] M2.23, M2.46, M2.47, M2.48.

[8] M2.1 (3–8), M2.4, M2.5, M2.6, M2.8 (3–9, 3–9 replicate, 9–19.5), M2.9 (0–3, 3–9, 9–18.8), M2.20 (9–14). Spike was ruined during preparation.

Laboratory quality-control sample results for Phase II—Pesticides, polychlorinated biphenyls, and polychlorinated naphthalenes (lab code 8374) in bottom sediment

[Set no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than; --, no data; NS, not spiked; D–R, ruined in preparation; SPR, surrogate percent recovery]

Compound	Set no. 3257[1]		Set no. 3345[2]		Set no. 3377[3]		Set no. 3395[4]		Set no. 3459[5]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	
Lindane	<0.1	49.80	<0.1	59	<0.1	58.00	<0.1	64.70	<0.1	49.80	38–102
Heptachlor	<.1	49.70	<.1	76	<.1	64.10	<.1	72.20	<.1	49.70	35–114
Aldrin	<.1	55.30	<.1	75	<.1	59.80	<.1	85.60	<.1	55.30	52–101
Heptachlor epoxide	<.1	56.70	<.1	84	<.1	73.00	<.1	74.70	<.1	56.70	52–106
Chlordane	--	--	--	--	--	--	--	--	--	--	NS
Endosulfan I	<.1	51.10	<.1	75	<.1	67.00	<.1	70.90	<.1	51.10	39–100
Dieldrin	<.1	45.90	<.1	66	<.1	62.50	<.1	65.10	<.1	45.90	52–100
p,p'–DDE	<.1	58.70	<.1	88	<.1	76.90	<.1	81.60	<.1	58.70	52–111
Endrin	<.1	48.40	<.1	79	<.1	58.90	<.1	80.90	<.1	48.40	10–157
Perthane	<1.0	54.60	<1.0	83	<1.0	79.80	<1.0	74.80	<1.0	54.60	32–140
p,p'–DDD	<.1	57.70	<.1	86	<.1	77.20	<.1	82.40	<.1	57.70	60–119
p,p'–DDT	<.1	62.50	<.1	95	<.1	83.70	<.1	88.10	<.1	62.50	50–131
p,p'-Methoxyclor	<.1	81.80	<.1	101	<.1	78.00	<.1	71.30	<.1	81.80	14–196
Mirex	<.1	57.70	<.1	91	<.1	73.90	<.1	80.90	<.1	57.70	57–100
Toxaphene	--	--	--	--	--	--	--	--	--	--	NS
PCB Aroclor 1242	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	NS
PCB Aroclor 1254	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	NS
PCB Aroclor 1260	<1	NS	<1	NS	<1	NS	<1	NS	<1	NS	NS
Gross PCNs											NS
Isodrin (SPR)	49.1	53.4	118	69	45.3	53.4	D–R	83.6	49.1	53.4	42–112

Laboratory quality-control sample results for Phase II—Pesticides, polychlorinated biphenyls, and polychlorinated naphthalenes (lab code 8374) in bottom sediment—Continued

Compound	Set no. 3691[6]		Set no. 3490[7]		Set no. 3793[8]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	Blank[9] (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	
Lindane	<0.1	79	D–R	66	<0.1	57	38–102
Heptachlor	<.1	82	D–R	57	<.1	103	35–114
Aldrin	<.1	86	D–R	67	<.1	147	52–101
Heptachlor epoxide	<.1	104	D–R	80	<.1	190	52–106
Chlordane	<1.0	NS	D–R	NS	<1	NS	NS
Endosulfan I	<.1	89	D–R	70	<.1	67	39–100
Dieldrin	<.1	114	D–R	68	<.1	164	52–100
p,p'–DDE	<.1	81	D–R	73	<.1	186	52–111
Endrin	<.1	76	D–R	44	<.1	124	10–157
Perthane	<1.0	113	D–R	80	<1	61	32–140
p,p'–DDD	<.1	113	D–R	87	<.1	133	60–119
p,p'–DDT	<.1	101	D–R	79	<.1	158	50–131
p,p'-Methoxyclor	<.1	134	D–R	88	<.1	58	14–196
Mirex	<.1	85	D–R	68	<.1	67	57–100
Toxaphene	<10	NS	D–R	NS	<10	NS	NS
PCB Aroclor 1242	<1	NS	D–R	NS	<1	NS	NS
PCB Aroclor 1254	<1	NS	D–R	NS	<1	NS	NS
PCB Aroclor 1260	<1	NS	D–R	NS	<1	NS	NS
Gross PCNs	<1	NS	D–R	NS	<1	NS	NS
Isodrin (SPR)	89	106	D–R	68	75	69	41–109

[1] M2.10, M2.12, M2.24, M2.25, M2.26, M2.27, M2.35.
[2] M2.15, M2.18, M2.21, M2.28, M2.30, M2.32, M2.33, M2.36.
[3] M2.11 (9–14.5), M2.14 (0–3, 9–17), M2.16, M2.19, M2.22, M2.29, M2.31, M2.34, M2.44, M2.45.
[4] M2.11 (0–3), M2.13 (9–13.5), M2.17 (0–3, 9–14.5), M2.20 (0–3).
[5] M2.11 (3–9), M2.13 (3–9), M2.14 (3–9 replicate), M2.17 (3–9, 3–9 replicate), M2.20 (3–9).
[6] M2.1 (3–8), M2.4, M2.5, M2.6, M2.8 (3–9, 3–9 replicate, 9–19.5), M2.9 (0–3, 3–9, 9–18.8), M2.20 (9–14).
[7] M2.1 (0–3, 0–3 replicate), M2.2, M2.3, M2.7, M2.8 (0–3), M2.11 (3–9 replicate), M2.13 (0–3, 3–9 replicate), M2.14 (3–9), M2.20 (3–9 replicate).
[8] M2.23, M2.46, M2.46 replicate, M2.47, M2.48.
[9] Blank was ruined during preparation.

Laboratory quality-control sample results for Phase II—Pesticides, polychlorinated biphenyls, and polychlorinated naphthalenes (lab code 8375) in bottom sediment

[Set no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than; NS, not spiked; SPR, surrogate percent recovery]

Compound	Set no. 3258[1]		Set no. 3297[2]		Set no. 3346[3]		Set no. 3378[4]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	
Lindane	<0.1	49.80	<0.1	69.90	<0.1	59	<0.1	58.00	38–102
Heptachlor	<.1	49.70	<.1	75.90	<.1	76	<.1	64.10	35–114
Aldrin	<.1	55.30	<.1	73.50	<.1	75	<.1	59.80	52–101
Heptachlor epoxide	<.1	56.70	<.1	84.40	<.1	84	<.1	73.00	52–106
Chlordane	<1.0	NS	<1.0	NS	<1.0	NS	<1.0	NS	NS
Endosulfan I	<.1	51.10	<.1	72.30	<.1	75	<.1	67.00	39–100
Dieldrin	<.1	45.90	<.1	73.40	<.1	66	<.1	62.50	52–100
p,p'-DDE	<.1	58.70	<.1	64.50	<.1	88	<.1	76.90	52–111
Endrin	<.1	48.40	<.1	66.60	<.1	79	<.1	58.90	10–157
Perthane	<1.0	54.60	<1.0	94.10	<1.0	83	<1.0	79.80	32–140
p,p'-DDD	<.1	57.70	<.1	92.50	<.1	86	<.1	77.20	60–119
p,p'-DDT	<.1	62.50	<.1	102.00	<.1	95	<.1	83.70	50–131
p,p'-Methoxyclor	<.1	81.80	<.1	112.00	<.1	101	<.1	78.00	14–196
Mirex	<.1	57.70	<.1	78.50	<.1	91	<.1	73.90	57–100
Toxaphene	<10	NS	<10	NS	<10	NS	<10	NS	NS
PCB Aroclor 1242	<1	NS	<1	NS	<1	NS	<1	NS	NS
PCB Aroclor 1254	<1	NS	<1	NS	<1	NS	<1	NS	NS
PCB Aroclor 1260	<1	NS	<1	NS	<1	NS	<1	NS	NS
Gross PCNs	<1	NS	<1	NS	<1	NS	<1	NS	NS
Isodrin (SPR)	49.1	53.4	25.5	65.1	118	69	45.3	53.4	42–112

[1] M2.37, M2.38, M2.41, M2.42, M2.43.
[2] M2.40 (0–5, 15–20, 25–30, 30–35, 40–45, 45–50, 50–55, 55–60, 55–60 replicate, 60–65, 65–70, 70–75).
[3] M2.40 (5–10, 10–15, 20–25, 35–40, 55–60).
[4] M2.39.

Laboratory quality-control sample results for Phase II—Pesticides and polychlorinated biphenyls (lab code 2101) in fish tissues

[Set no. refers to specific environmental samples listed in footnote. µg/kg, micrograms per kilogram; <, less than; D–U, matrix interference; --, no data; SPR, surrogate percent recovery]

Compound	Set no. 95.283[1]		Set no. 95.271[2]		Set no. 95.291[3]		Set no. 95.262[4]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	
alpha-HCH	<5.0	86	<5.0	70	<5.0	74	<5.0	59	20–124
Hexachlorobenzene	<5.0	64	<5.0	48	<5.0	84	<5.0	51	0–141
Pentachloroanisole	<5.0	78	<5.0	54	<5.0	87	<5.0	52	0–135
beta-HCH	<5.0	105	<5.0	93	<5.0	87	<5.0	94	47–135
gamma-HCH	<5.0	96	<5.0	80	<5.0	84	<5.0	71	43–121
delta-HCH	<5.0	101	<5.0	87	<5.0	88	<5.0	77	62–130
Heptachlor	<5.0	90	<5.0	71	<5.0	84	<5.0	69	12–144
Aldrin	<5.0	92	<5.0	68	<5.0	87	<5.0	68	0–159
DCPA	<5.0	93	<5.0	97	<5.0	95	<5.0	97	63–137
Heptachlor epoxide	<5.0	103	<5.0	91	<5.0	92	<5.0	92	61–129
Oxychlordane	<5.0	94	<5.0	90	<5.0	88	<5.0	89	49–133
trans-Chlordane	<5.0	99	<5.0	91	<5.0	87	<5.0	92	65–121
cis-Chlordane	<5.0	98	<5.0	91	<5.0	85	<5.0	93	62–128
o,p'-DDE	<5.0	105	<5.0	94	<5.0	84	<5.0	94	61–129
trans-Nonachlor	<5.0	99	<5.0	90	<5.0	88	<5.0	94	66–120
Dieldrin	<5.0	96	<5.0	87	<5.0	90	<5.0	89	51–139
p,p'-DDE	<5.0	107	<5.0	97	<5.0	90	<5.0	102	53–143
o,p'-DDD	<5.0	103	<5.0	94	<5.0	95	<5.0	96	54–140
Endrin	<5.0	92	<5.0	95	<5.0	110	<5.0	114	49–167
cis-Nonachlor	<5.0	100	<5.0	96	<5.0	93	<5.0	97	65–125
o,p'-DDT	<5.0	101	<5.0	84	<5.0	86	<5.0	86	45–135
p,p'-DDD	<5.0	D–U	<5.0	80	<5.0	D–U	<5.0	80	46–158
p,p'-DDT	<5.0	106	<5.0	95	<5.0	86	<5.0	82	53–135
o,p'-Methoxychlor	<5.0	105	<5.0	92	<5.0	92	<5.0	93	48–150
p,p'-Methoxychlor	<5.0	114	<5.0	91	<5.0	93	<5.0	92	40–166
Mirex	<5.0	101	<5.0	107	<5.0	95	<5.0	105	44–162
Toxaphene	<200	--	<200	--	<200	--	<200	--	--
Total PCBs	<50	--	<50	--	<50	--	<50	--	--
alpha-d6-HCH (SPR)	92	69	76	84	105	42	83	64	33–127
3, 5-Dichlorobiphenyl (SPR)	61	45	31	53	96	20	49	43	0–131

Laboratory quality-control sample results for Phase II—Pesticides and polychlorinated biphenyls (lab code 2101) in fish tissues—Continued

Compound	Set no. 95.249[5]		Set no. 96.072[6]		Set no. 95.303[7]		Set no. 95.262[8]		Percent recovery spike limits
	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	Blank (µg/kg)	Percent recovery spike	
alpha-HCH	<5.0	84	<5.0	86	<5.0	89	<5.0	59	20–124
Hexachlorobenzene	<5.0	77	<5.0	82	<5.0	102	<5.0	51	0–141
Pentachloroanisole	<5.0	91	<5.0	88	<5.0	80	<5.0	52	0–135
beta-HCH	<5.0	89	<5.0	93	<5.0	86	<5.0	94	47–135
gamma-HCH	<5.0	85	<5.0	90	<5.0	91	<5.0	71	43–121
delta-HCH	<5.0	86	<5.0	90	<5.0	102	<5.0	77	62–130
Heptachlor	<5.0	88	<5.0	78	<5.0	86	<5.0	69	12–144
Aldrin	<5.0	74	<5.0	80	<5.0	101	<5.0	68	0–159
DCPA	<5.0	111	<5.0	93	<5.0	107	<5.0	97	63–137
Heptachlor epoxide	<5.0	92	<5.0	103	<5.0	93	<5.0	92	61–129
Oxychlordane	<5.0	90	<5.0	100	<5.0	93	<5.0	89	49–133
trans-Chlordane	<5.0	92	<5.0	95	<5.0	94	<5.0	92	65–121
cis-Chlordane	<5.0	94	<5.0	94	<5.0	94	<5.0	93	62–128
o,p'-DDE	<5.0	102	<5.0	90	<5.0	99	<5.0	94	61–129
trans-Nonachlor	<5.0	95	<5.0	96	<5.0	94	<5.0	94	66–120
Dieldrin	<5.0	87	<5.0	98	<5.0	70	<5.0	89	51–139
p,p'-DDE	<5.0	97	<5.0	84	<5.0	106	<5.0	102	53–143
o,p'-DDD	<5.0	96	<5.0	98	<5.0	94	<5.0	96	54–140
Endrin	<5.0	113	<5.0	94	<5.0	119	<5.0	114	49–167
cis-Nonachlor	<5.0	94	<5.0	96	<5.0	99	<5.0	97	65–125
o,p'-DDT	<5.0	90	<5.0	96	<5.0	94	<5.0	86	45–135
p,p'-DDD	<5.0	96	<5.0	96	<5.0	96	<5.0	80	46–158
p,p'-DDT	<5.0	88	<5.0	85	<5.0	93	<5.0	82	53–135
o,p'-Methoxychlor	<5.0	92	<5.0	95	<5.0	107	<5.0	93	48–150
p,p'-Methoxychlor	<5.0	96	<5.0	86	<5.0	102	<5.0	92	40–166
Mirex	<5.0	104	<5.0	86	<5.0	109	<5.0	105	44–162
Toxaphene	<200	--	<200	<200	<200	--	<200	--	--
Total PCBs	<50	--	<50	<50	<50	--	<50	--	--
alpha-d6-HCH (SPR)	69	83	77	87	93	93	83	65	33–127
3, 5-Dichlorobiphenyl (SPR)	33	49	68	68	49	49	49	32	0–131

[1] 38, 39, 40, 34, 30, 219, 224, 236, 249, 250, 225, 226.
[2] 199, 195, 179, 207, 191, 180, 196, 192, 200, 210, 397, 35.
[3] 34, 229, 233, 218, 235.
[4] 51, 52, 63, 64, 87, 112, 147, 148, 108, 100, 96, 88.
[5] 131, 99, 111, 107, 95, 139, 123.
[6] 15.
[7] 4, 24, 23, 43, 44, 75, 83, 127, 135, 163, 167.
[8] 88.