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MARTIN MARIETTA

Preliminary Screening of Contaminants in Sediments

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ENVIRONMENTAL SCIENCES DIVISION
Publication No. 2400

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ENVIRONMENTAL SCIENCES DIVISION

PRELIMINARY SCREENING OF CONTAMINANTS IN SEDIMENTS

F. O. Hoffman, B. G. Blaylock, C. C. Travis[1],
K. L. Daniels[2], E. L. Etnier[1], K. E. Cowser[3],
and C. W. Weber[4]

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NOTICE This document contains information of a preliminary nature. It is subject to revision or correction and therefore does not represent a final report.

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TABLE OF CONTENTS

	Page
LIST OF TABLES	v
LIST OF FIGURES	v
ABSTRACT	vii
1. INTRODUCTION	1
2. SEDIMENT SAMPLES AND ANALYSIS	1
3. SCREENING METHODS	4
3.1 Derivation of Sediment-to-Aquatic Organism Screening Factors	18
3.2 Derivation of Allowable Daily Intakes	20
3.2.1 Radionuclides	25
3.2.2 Nonradioactive contaminants	25
4. RESULTS	27
5. DISCUSSION	36
6. RECOMMENDATIONS	37
7. REFERENCES	39
APPENDIX	43

LIST OF TABLES

Table		Page
I	List of sediment concentrations for each sampling station reported by TVA (1983) for organics, metals and cyanide, and radionuclides	5
II	Screening factors for sediment to fish	19
III	Allowable daily intakes (ADI) of organics, metals and cyanide, and radionuclides used for screening analysis	21
IV	Contaminants excluded by screening from all stations	28
V	Contaminants excluded by screening from only some stations	29
VI	A list of contaminants warranting further consideration (excluding New Hope Pond stations)	31
VII	Contaminants listed in Table VI whose measured concentrations in sediment exceed limits of detection	33
VIII	Contaminants listed in Table VII whose concentrations in sediment at any sampling location exceed sediment concentrations at either control locations PC-3 or CRM-24	34

LIST OF FIGURES

Figure		Page
1	Location of sediment and flood plain sampling stations on Poplar Creek, Bear Creek, and New Hope Pond	2
2	Location of sediment sampling stations on the Clinch River, lower Poplar Creek, Melton Hill Dam, and White Oak Lake	3

ABSTRACT

HOFFMAN, F. O., B. G. BLAYLOCK, C. C. TRAVIS, K. L. DANIELS, E. L. ETNIER, K. E. COWSER, and C. W. WEBER. 1984. Preliminary screening of contaminants in sediments. ORNL/TM-9370. Oak Ridge National Laboratory, Oak Ridge, Tennessee. pp.

A preliminary screening analysis was performed on reported concentrations of more than 130 contaminants in sediment collected from 18 different locations in the vicinity of the Oak Ridge Reservation. The intent of the analysis is to identify contaminants whose concentration in sediments is sufficient to warrant further study. The method used for screening employed highly conservative estimates of contaminant transport from sediment to aquatic organisms, the consumption of these organisms by humans, and comparison of the calculated daily ingestion of each contaminant with estimated allowable daily intakes. In this analysis, 44 different contaminants were eliminated from concern from at least one sampling station. Sediment concentrations for a majority of the contaminants that could not be screened out in this study were below reported limits of detection. Of the contaminants that were not screened out, 12 organic compounds, 11 metals, and 4 radionuclides were associated with detectable sediment concentrations. The acquisition and evaluation of additional sets of data will be required before more refined levels of screening can be applied to those contaminants that could not be immediately eliminated from concern.

1. INTRODUCTION

An interagency task force, identified as the Oak Ridge Task Force (ORTF), has been organized to investigate environmental contamination of the Oak Ridge Reservation. The Oak Ridge National Laboratory was requested by the Department of Energy, Oak Ridge Operations, as a member of the task force, to provide assistance in health impact assessment (Lenhard 1984). This report is the first documentation of assessment activities in which preliminary screening techniques are applied to sediment data to assist in identifying contaminants that may warrant further study.

2. SEDIMENT SAMPLES AND ANALYSIS

Sediment samples were collected previously in accordance with a sampling plan developed by the In-Stream Task Group of the ORTF (Turner 1983). Sampling locations were selected to distinguish between potential sources of contamination and background (control) sites. Those sites located on Bear Creek, New Hope Pond, East Fork Poplar Creek, and Poplar Creek are shown in Fig. 1, including the Poplar Creek control site (PC-3). Sampling locations on the Clinch River and on White Oak Lake, and control site CRM-24 on Melton Hill Reservoir are shown in Fig. 2.

Tennessee Valley Authority (TVA) analyzed sediment samples for more than 130 different compounds and elements, including organic materials, metals and cyanides, and radionuclides (Hibbitts 1983). Analyses of White Oak Lake samples were limited to nonradioactive

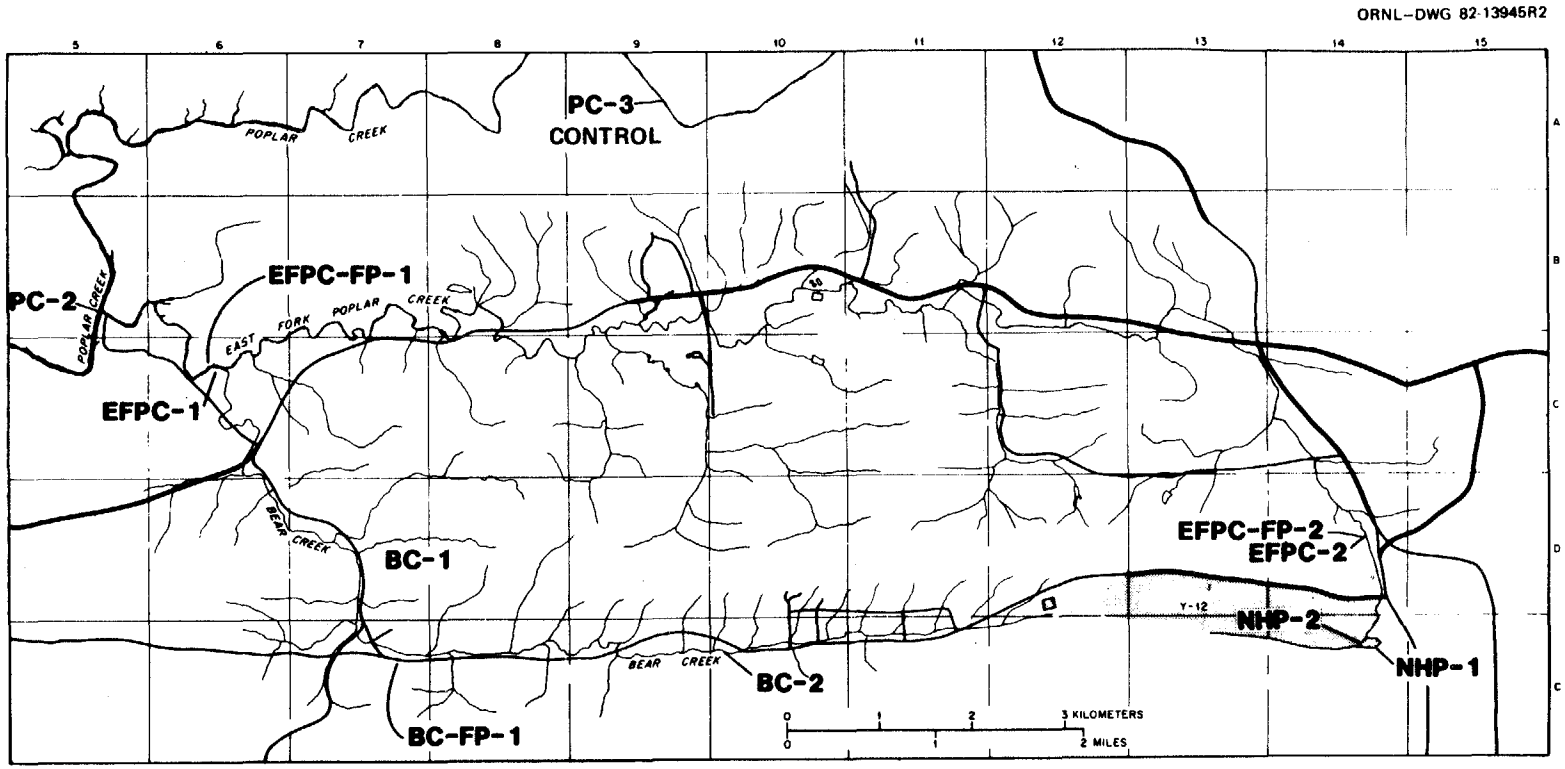

Fig. 1. Location of sediment and flood plain sampling stations on Poplar Creek, Bear Creek, and New Hope Pond:

PC-2 = Poplar Creek below East Fork confluence; PC-3 = Poplar Creek near mile 13 (control); BC-1 = Bear Creek upstream of the National Pollutant Discharge Elimination System (NPDES) station, mile 2.9; BC-2 = upstream of Bear Creek road crossing near mile 5; BC-FP1 = Bear Creek floodplain site upstream of NPDES station; NHP-1 = eastern end of New Hope Pond; NHP-2 = western end of New Hope Pond; EFPC-1 = East Fork Poplar Creek near mile 1.7; EFPC-2 = East Fork Poplar Creek near mile 13.5; EFPC-FP1 = East Fork Poplar Creek floodplain near mile 1.7; EFPC-FP2 = East Fork Poplar Creek floodplain near mile 13.5.

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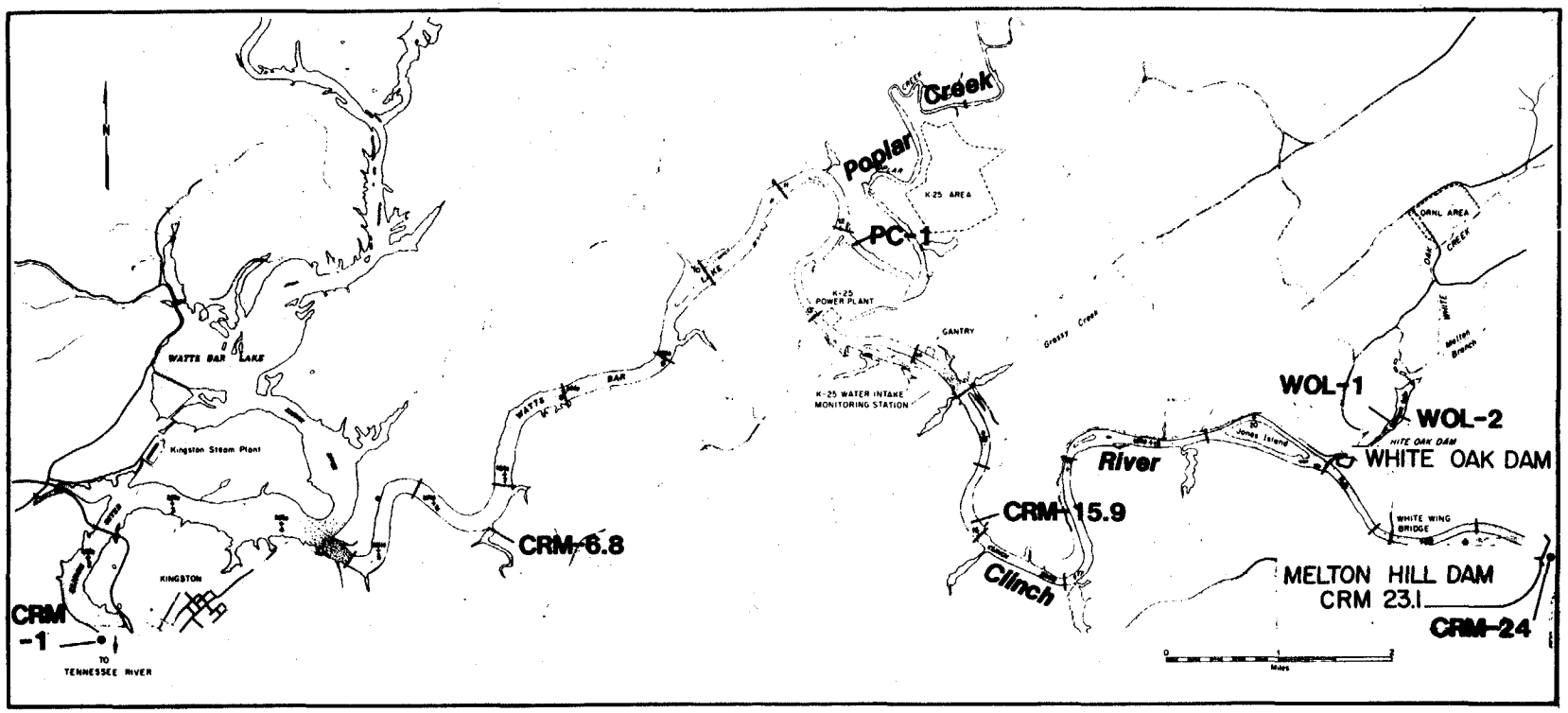

Fig. 2. Location of sediment sampling stations on the Clinch River, lower Poplar Creek, Melton Hill Dam, and White Oak Lake:

PC-1 = Poplar Creek near mouth; CRM-6.8 = mouth of Patterson Creek; CRM-15.9 = sandbar opposite former Clinch River Breeder Reactor Project site; CRM-24 = Melton Hill Lake above dam (control); WOL-1 = western end of White Oak Lake; WOL-2 = eastern end of White Oak Lake.

materials. Results of the analyses are listed in Table I*, with contaminants arranged by category and sampling location. Under each category the constituents are listed in alphabetical order. Measurements for organics and metals and cyanide are reported in micrograms per gram (dry weight) of sediment (parts per million), while radionuclides are reported in becquerels per kilogram (dry weight) of sediment.

The direct use of measured contaminant levels in sediments to determine the need for additional study is not possible because of the absence of health criteria or established standards for maximum permissible sediment concentrations in freshwater systems. Simplifying but conservatively biased assumptions are thus necessary to initially screen out those contaminants whose sediment concentrations are sufficiently below levels that could be interpreted as being of concern for protection of human health. A second major difficulty in working with the sediment data is the limited sensitivity of some of the chemical analysis techniques; for example, only 88 (4%) of 2166 organic analyses resulted in values greater than or equal to the detection limit.

3. SCREENING METHODS

Screening techniques involve the use of conservatively biased calculational procedures that are not likely to underestimate the actual exposure of humans to a given contaminant. Individual contaminants can

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*Note: The tables in this report have been produced by computer. Accuracy beyond two significant digits is not justified.

TABLE I. LIST OF SEDIMENT CONCENTRATIONS FOR EACH SAMPLING STATION REPORTED BY TVA (1983) FOR ORGANICS, METALS AND CYANIDE, AND RADIONUCLIDES[a]

CONTAMINANT	SAMPLING STATIONS								
	NHP-1	NHP-2	EFPC-1	EFPC-2	EFPC-FP-1	EFPC-FP-2	PC-1	PC-2	PC-3
	ORGANICS (μg/g)								
ACENAPHTHALENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ACENAPHTHENE	1.90	2.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ACROLEIN	<0.08	<0.08	<0.07	<0.08	<0.06	<0.07	<0.07	<0.07	<0.06
ACRYLONITRILE	<0.08	<0.08	<0.07	<0.08	<0.06	<0.07	<0.07	<0.07	<0.06
ALDRIN	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ALPHA-BHC	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ALPHA-ENDOSULFAN	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ANTHRACENE[b]	<1.00	14.00	<0.50	4.10	<0.50	7.20	0.58	<0.50	1.20
BENZENE	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BENZIDINE	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
BENZO(A)ANTHRACENE	4.50	3.90	<0.50	1.80	<0.50	1.80	<0.50	<0.50	<0.50
BENZO(A)PYRENE	<1.00	<1.00	<0.50	<0.50	<0.50	2.80	<0.50	<0.50	<0.50
BENZO(GHI)PERYLENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BENZO(K)FLUORANTHENE	<1.00	<1.00	<0.50	<0.50	<0.50	1.30	<0.50	<0.50	<0.50
BETA-BHC	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BETA-ENDOSULFAN	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BIS(CHLOROMETHYL)ETHER	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BIS(2-CHLOROETHOXY)METHANE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BIS(2-CHLOROETHYL)ETHER	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BIS(2-CHLOROISOPROPYL)ETHER	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BIS(2-ETHYLHEXYL)PHTHALATE	57.00	53.00	7.40	9.50	1.30	2.50	1.40	1.30	1.40
BROMOFORM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BUTYLBENZYLPHTHALATE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
CARBON TETRACHLORIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLORDANE	<5.00	<5.00	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
CHLOROBENZENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLORODIBROMOMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLOROFORM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHRYSENE	10.00	2.00	<0.50	4.60	<0.50	6.60	<0.50	<0.50	<0.50
DELTA-BHC	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DI-N-BUTYLPHTHALATE	1.40	1.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DI-N-OCTYLPHTHALATE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DIBENZO(A,H)ANTHRACENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DICHLOROBROMOMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DICHLORODIFLUOROMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DIELDRIN	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
DIETHYLPHTHALATE	<5.00	<5.00	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
DIMETHYLPHTHALATE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ENDOSULFAN SULFATE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ENDRIN	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ENDRIN ALDEHYDE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETHYLBENZENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Table I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	NHP-1	NHP-2	EFPC-1	EFPC-2	EFPC-FP-1	EFPC-FP-2	PC-1	PC-2	PC-3
	ORGANICS (μg/g)								
FLUORANTHENE	8.70	24.00	1.60	13.00	0.99	28.00	1.40	1.50	0.69
FLUORENE	1.80	1.80	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
GAMMA-BHC	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HEPTACHLOR	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HEPTACHLOR EPOXIDE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HEXACHLOROBENZENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HEXACHLOROBUTADIENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HEXACHLOROCYCLOPENTADIENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
HEXACHLOROETHANE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
INDENO(1,2,3-CD)PYRENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ISOPHORONE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
METHYL BROMIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
METHYL CHLORIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
METHYLENE CHLORIDE	0.13	0.07	0.04	0.18	0.03	0.05	0.04	0.02	0.02
N-NITROSODI-N-PROPYLAMINE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
N-NITROSODIMETHYLAMINE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
N-NITROSODIPHENYLAMINE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
NAPHTHALENE	<1.00	2.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.20
NITROBENZENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
P-CHLORO-M-CRESOL	16.00	14.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
PCB-1016	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PCB-1221	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PCB-1232	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PCB-1242	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PCB-1248	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PCB-1254	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PCB-1260	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
PENTACHLOROPHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
PHENANTHRENE[D]	<1.00	14.00	<0.50	4.10	<0.50	7.20	0.58	<0.50	1.20
PHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
PHENOLS (TOTAL)	120.00	82.00	1.60	0.80	<0.20	<0.20	<0.20	1.50	<0.20
PYRENE	7.80	15.00	1.30	10.00	0.79	25.00	1.40	1.20	0.75
TETRACHLOROETHYLENE	<0.01	0.02	<0.01	0.07	<0.01	0.15	<0.01	<0.01	<0.01
TOLUENE	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TOXAPHENE	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
TRICHLOROETHYLENE	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
TRICHLOROFLUOROMETHANE	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
VINYL CHLORIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-DICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-DICHLOROETHYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,1-TRICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-TRICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-TETRACHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DICHLOROBENZENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	NHP-1	NHP-2	EFPC-1	EFPC-2	EFPC-FP-1	EFPC-FP-2	PC-1	PC-2	PC-3
	ORGANICS (μg/g)								
1,2-DICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DICHLOROPROPANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DICHLOROPROPYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DIPHENYLHYDRAZINE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-TRANS-DICHLOROETHYLENE	0.16	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,4-TRICHLOROBENZENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-DICHLOROBENZENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-DICHLOROBENZENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-CHLOROETHYLVINYL ETHER	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-CHLORONAPHTHALENE	1.80	12.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-CHLOROPHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2-DINITROPHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-DICHLOROPHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-DIMETHYLPHENOL	59.00	14.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,4-DINITROPHENOL	<10.00	<10.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
2,4-DINITROTOLUENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,4,6-TRICHLOROPHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
2,6-DINITROTOLUENE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3,3-DICHLOROBENZIDINE	<4.00	<4.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
3,4-BENZOFLUORANTHENE	<1.00	<1.00	<0.50	<0.50	<0.50	1.40	<0.50	<0.50	<0.50
4-BROMOPHENYL PHENYL ETHER	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-CHLOROPHENYL PHENYL ETHER	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4-NITROPHENOL	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,4-DDD	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,4-DDE	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,4-DDT	<1.00	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,6-DINITRO-O-CRESOL	<5.00	<5.00	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50

TABLE I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	BC-1	BC-2	BC-FP-1	CRM-1	CRM-6.8	CRM-15.9	CRM-24	WOL-1	WOL-2
	ORGANICS (μg/g)								
ACENAPHTHALENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ACENAPHTHENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ACROLEIN	<0.08	<0.07	<0.06	<0.07	<0.07	<0.06	<0.08	<0.09	<0.09
ACRYLONITRILE	<0.08	<0.07	<0.06	<0.07	<0.07	<0.06	<0.08	<0.09	<0.09
ALDRIN	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ALPHA-BHC	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ALPHA-ENDOSULFAN	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ANTHRACENE[b]	<0.50	<0.50	<0.50	0.51	<0.50	<0.50	<0.50	<0.91	<0.95
BENZENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BENZIDINE	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
BENZO(A)ANTHRACENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BENZO(A)PYRENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BENZO(GHI)PERYLENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BENZO(K)FLUORANTHENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BETA-BHC	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BETA-ENDOSULFAN	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BIS(CHLOROMETHYL)ETHER	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BIS(2-CHLOROETHOXY)METHANE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BIS(2-CHLOROETHYL)ETHER	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BIS(2-CHLOROISOPROPYL)ETHER	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
BIS(2-ETHYLHEXYL)PHTHALATE	4.70	1.60	1.40	0.96	2.30	<0.50	2.20	<0.91	<0.95
BROMOFORM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BUTYLBENZYLPHTHALATE	1.30	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
CARBON TETRACHLORIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLORDANE	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<4.60	<4.80
CHLOROBENZENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLORODIBROMOMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHLOROFORM	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
CHRYSENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
DELTA-BHC	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
DI-N-BUTYLPHTHALATE	0.60	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
DI-N-OCTYLPHTHALATE	2.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
DIBENZO(A,H)ANTHRACENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
DICHLOROBROMOMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DICHLORODIFLUOROMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DIELDRIN	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
DIETHYLPHTHALATE	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<4.60	<4.80
DIMETHYLPHTHALATE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ENDOSULFAN SULFATE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ENDRIN	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ENDRIN ALDEHYDE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ETHYLBENZENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	BC-1	BC-2	BC-FP-1	CRM-1	CRM-6.8	CRM-15.9	CRM-24	WOL-1	WOL-2
	ORGANICS (μg/g)								
FLUORANTHENE	0.60	0.91	0.81	1.00	<0.50	<0.50	0.59	<0.91	<0.95
FLUORENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
GAMMA-BHC	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
HEPTACHLOR	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
HEPTACHLOR EPOXIDE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.05	<0.50	<0.91	<0.95
HEXACHLOROBENZENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
HEXACHLOROBUTADIENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
HEXACHLOROCYCLOPENTADIENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
HEXACHLOROETHANE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
INDENO(1,2,3-CD)PYRENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
ISOPHORONE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
METHYL BROMIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
METHYL CHLORIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
METHYLENE CHLORIDE	0.06	0.05	0.02	0.17	0.09	0.13	0.10	<0.01	<0.01
N-NITROSODI-N-PROPYLAMINE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
N-NITROSODIMETHYLAMINE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
N-NITROSODIPHENYLAMINE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
NAPHTHALENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
NITROBENZENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
P-CHLORO-M-CRESOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
PCB-1016	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PCB-1221	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PCB-1232	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PCB-1242	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PCB-1248	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PCB-1254	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PCB-1260	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
PENTACHLOROPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
PHENANTHRENE[b]	<0.50	<0.50	<0.50	0.51	<0.50	<0.50	<0.50	<0.91	<0.95
PHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
PHENOLS (TOTAL)	<0.20	3.20	2.30	0.30	0.40	0.30	0.30	<0.40	0.70
PYRENE	0.62	0.77	0.52	0.82	<0.50	<0.50	<0.50	<0.91	<0.95
TETRACHLOROETHYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TOLUENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TOXAPHENE	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
TRICHLOROETHYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TRICHLOROFLUOROMETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VINYL CHLORIDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-DICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1-DICHLOROETHYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,1-TRICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2-TRICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,1,2,2-TETRACHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DICHLOROBENZENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95

TABLE I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	BC-1	BC-2	BC-FP-1	CRM-1	CRM-6.8	CRM-15.9	CRM-24	WOL-1	WOL-2
	ORGANICS (μg/g)								
1,2-DICHLOROETHANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DICHLOROPROPANE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DICHLOROPROPYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-DIPHENYLHYDRAZINE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
1,2-TRANS-DICHLOROETHYLENE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,4-TRICHLOROBENZENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
1,3-DICHLOROBENZENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
1,4-DICHLOROBENZENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2-CHLOROETHYLVINYL ETHER	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
2-CHLORONAPHTHALENE	0.52	0.55	<0.50	<0.50	0.61	<0.50	<0.50	<0.91	<0.95
2-CHLOROPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2-DINITROPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2,4-DICHLOROPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2,4-DIMETHYLPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2,4-DINITROPHENOL	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<9.10	<9.50
2,4-DINITROTOLUENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2,4,6-TRICHLOROPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
2,6-DINITROTOLUENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
3,3-DICHLOROBENZIDINE	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<3.60	<3.80
3,4-BENZOFLUORANTHENE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4-BROMOPHENYL PHENYL ETHER	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4-CHLOROPHENYL PHENYL ETHER	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4-NITROPHENOL	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4,4-DDD	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4,4-DDE	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4,4-DDT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.91	<0.95
4,6-DINITRO-O-CRESOL	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<4.60	<4.80

TABLE I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	NHP-1	NHP-2	EFPC-1	EFPC-2	EFPC-FP-1	EFPC-FP-2	PC-1	PC-2	PC-3
	METALS AND CYANIDE (μg/g)								
ANTIMONY	1.00	1.50	0.20	0.40	0.20	0.40	0.50	0.30	0.20
ARSENIC	48.00	50.00	4.60	12.00	5.80	12.00	35.00	10.00	6.80
BERYLLIUM	5.70	5.20	0.40	1.20	0.80	1.00	1.60	0.90	0.60
CADMIUM	22.00	15.00	2.50	10.00	3.90	10.00	1.90	<1.00	1.10
CHROMIUM	360.00	390.00	35.00	65.00	40.00	32.00	51.00	32.00	12.00
COPPER	550.00	410.00	51.00	140.00	38.00	180.00	59.00	60.00	12.00
LEAD	200.00	220.00	36.00	71.00	39.00	50.00	28.00	30.00	19.00
MERCURY	170.00	160.00	19.00	240.00	21.00	690.00	42.00	2.40	0.12
NICKEL	240.00	150.00	<5.00	92.00	11.00	42.00	35.00	5.00	40.00
SELENIUM	3.00	1.40	0.52	1.00	0.80	0.44	1.10	0.52	0.68
SILVER	8.00	14.00	2.00	5.00	<1.00	2.00	<1.00	<1.00	<1.00
THALLIUM	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ZINC	1200.00	1000.00	97.00	370.00	88.00	100.00	110.00	87.00	100.00
CYANIDE	<2.00	<2.00	0.40	0.40	0.40	<0.30	<0.30	<0.30	<0.30

TABLE I. (CONTINUED)

CONTAMINANT	SAMPLING STATIONS								
	BC-1	BC-2	BC-FP-1	CRM-1	CRM-6.8	CRM-15.9	CRM-24	WOL-1	WOL-2
	METALS AND CYANIDE (μg/g)								
ANTIMONY	0.20	<0.20	<0.20	0.30	0.30	0.20	0.30	<0.40	<0.40
ARSENIC	5.60	6.00	5.80	17.00	11.00	6.60	15.00	6.40	6.40
BERYLLIUM	2.30	1.50	0.60	1.50	1.10	0.90	1.60	1.10	1.40
CADMIUM	8.20	9.10	2.50	1.60	1.40	1.10	<1.00	3.40	2.50
CHROMIUM	35.00	35.00	16.00	53.00	52.00	17.00	27.00	180.00	280.00
COPPER	21.00	17.00	9.00	40.00	27.00	13.00	54.00	31.00	43.00
LEAD	20.00	18.00	25.00	36.00	31.00	26.00	46.00	100.00	110.00
MERCURY	0.77	0.58	0.25	18.00	9.00	0.12	0.15	3.00	5.90
NICKEL	40.00	28.00	<5.00	25.00	13.00	<5.00	11.00	26.00	28.00
SELENIUM	0.56	0.44	0.44	1.90	0.88	<0.40	2.00	<0.40	<0.40
SILVER	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	6.90	11.00
THALLIUM	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
ZINC	75.00	53.00	44.00	140.00	96.00	84.00	150.00	120.00	180.00
CYANIDE	0.40	0.70	0.70	<0.30	<0.30	<0.30	0.40	<0.50	0.80

TABLE I. (CONTINUED)

CONTAMINANT	NHP-1	2xSD	NHP-2	2xSD	EFPC-1	2xSD	EFPC-2	2xSD	EFPC-FP-1	2xSD	EFPC-FP-2	2xSD
	SAMPLING STATIONS											
	RADIONUCLIDES[c] (Bq/Kg)											
Sr-90	9.0	7.0	1.9	3.5	<8.00	--	5.9	7.6	<8.00		4.60	5.80
Tc-99	240.0	56.0	250.0	51.0	170.00	56.00	15.0	29.0	88.00	43.00	17.00	32.00
Th-228	1400.0	80.0	470.0	44.0	72.00	7.00	120.0	18.0	57.00	7.00	52.00	5.00
Th-230	350.0	32.0	120.0	22.0	90.00	8.00	180.0	18.0	65.00	7.00	350.00	18.00
Th-232	1100.0	80.0	160.0	22.0	19.00	4.00	52.0	9.0	26.00	4.00	30.00	4.00
U-234	8800.0	800.0	10000.0	740.0	390.00	8.00	1500.0	270.0	590.00	84.00	660.00	90.00
U-235	680.0	140.0	540.0	96.0	15.00	8.00	180.0	54.0	57.00	18.00	46.00	14.00
U-238	8800.0	160.0	8100.0	740.0	130.00	28.00	990.0	180.0	800.00	110.00	730.00	90.00
Pu-238	27.0	2.0	35.0	1.0	0.21	0.08	1.8	0.4	0.44	0.16	0.45	0.15
Pu-239	6.2	0.7	3.9	1.0	0.62	0.20	2.7	0.4	0.82	0.21	2.80	0.40
Np-237	11.0	2.0	10.0	1.0	<7.00	--	<4.0	--	<3.00	--	<4.00	--
Cs-137	74.0	9.0	43.0	4.0	440.00	37.00	150.0	9.0	34.00	7.00	63.00	9.00

TABLE I. (CONTINUED)

CONTAMINANT	PC-1	2xSD	PC-2	2xSD	PC-3	2xSD	BC-1	2xSD	BC-2	2xSD	BC-FP-1	2xSD
	SAMPLING STATIONS											
	RADIONUCLIDES[c] (Bq/Kg)											
Sr-90	8.90	8.40	<5.000	--	<9.000	--	7.600	8.700	<5.000	--	6.60	7.50
Tc-99	95.00	48.00	<34.000	--	<27.000	--	240.000	64.000	170.000	57.000	32.00	37.00
Th-228	24.00	2.00	17.000	1.000	37.000	3.000	36.000	3.000	28.000	2.000	22.00	2.00
Th-230	120.00	4.00	12.000	1.000	23.000	2.000	11.000	1.000	9.000	1.300	10.00	1.00
Th-232	22.00	2.00	15.000	1.000	35.000	3.000	25.000	2.000	17.000	2.000	17.00	2.00
U-234	300.00	38.00	15.000	1.000	220.000	18.000	1500.000	200.000	260.000	19.000	170.00	29.00
U-235	21.00	4.00	1.300	0.300	13.000	2.000	150.000	18.000	22.000	3.000	30.00	5.00
U-238	160.00	19.00	12.000	1.000	210.000	18.000	3500.000	460.000	530.000	38.000	300.00	38.00
Pu-238	0.42	0.14	<0.020	--	<0.020	--	0.026	0.018	0.077	0.055	<0.03	--
Pu-239	7.70	0.80	0.062	0.042	0.045	0.034	<0.040	--	0.120	0.090	0.28	0.12
Np-237	<1.00	--	<0.500	--	<0.400	--	17.000	1.000	11.000	1.000	<1.00	--
Cs-137	470.00	38.00	3.300	0.600	2.200	0.700	6.900	2.100	5.300	1.700	22.00	4.00

TABLE I. (CONTINUED)

CONTAMINANT	CRM-1	2xSD	CRM-6.8	2xSD	CRM-15.9	2xSD	CRM-24	2xSD
	SAMPLING STATIONS							
	RADIONUCLIDES[c] (Bq/Kg)							
Sr-90	17.00	11.0	25.00	12.00	3.600	6.900	2.10	6.50
Tc-99	19.00	33.0	200.00	57.00	<28.000	--	<28.00	--
Th-228	29.00	2.0	26.00	2.00	22.000	2.000	27.00	3.00
Th-230	32.00	2.0	28.00	2.00	14.000	2.000	18.00	3.00
Th-232	28.00	2.0	23.00	2.00	19.000	2.000	26.00	3.00
U-234	58.00	7.0	45.00	5.00	10.000	1.000	20.00	4.00
U-235	11.00	2.0	5.70	1.20	0.600	0.230	7.60	1.80
U-238	50.00	6.0	37.00	5.00	7.700	0.900	13.00	3.00
Pu-238	1.20	0.4	0.85	0.23	0.027	0.024	0.09	0.07
Pu-239	14.00	2.0	11.00	1.00	<0.020	--	0.54	0.17
Np-237	<0.10	--	<1.00	--	<0.100	--	<1.00	--
Cs-137	1600.00	92.0	1200.00	92.00	<0.700	--	47.00	4.00

2xSD INDICATES COUNTING STATISTIC

SITE DESCRIPTIONS

[a]NHP-1 = EASTERN END OF NEW HOPE POND
NHP-2 = WESTERN END OF NEW HOPE POND
EFPC-1 = EAST FORK POPLAR CREEK NEAR MILE 1.7
EFPC-2 = EAST FORK POPLAR CREEK NEAR MILE 13.5
EFPC-FP-1 = EAST FORK POPLAR CREEK FLOODPLAIN NEAR MILE 1.7
EFPC-FP-2 = EAST FORK POPLAR CREEK FLOODPLAIN NEAR MILE 13.5
CRM-1 = WATTS BAR LAKE NEAR KINGSTON
CRM-15.9 = SANDBAR OPPOSITE CRBR SITE
WOL-1 = WESTERN END OF WHITE OAK LAKE
PC-1 = POPLAR CREEK NEAR MOUTH
PC-2 = POPLAR CREEK BELOW EAST FORK CONFLUENCE
PC-3 = POPLAR CREEK NEAR MILE 13 (CONTROL)
BC-1 = BEAR CREEK UPSTREAM NPDES STATION MILE 2.9
BC-2 = UPSTREAM BEAR CREEK ROAD CROSSING NEAR MILE 5
BC-FP-1 = BEAR CREEK FLOODPLAIN SITE UPSTREAM NPDES STATION
CRM-6.8 = MOUTH OF PATTERSON CREEK
CRM-24 = MELTON HILL LAKE ABOVE DAM (CONTROL)
WOL-2 = EASTERN END OF WHITE OAK LAKE

[b]Indistinguishable isometric pairs.

[c]2 x SD indicates counting statistic.

be screened out and thus given a low priority for further consideration if calculated exposures do not approach or exceed specified limits or established health standards. Individual contaminants that are calculated to approach or exceed these limits are designated as potential pollutants which warrant further analysis and investigation.

The specific techniques employed herein to screen the sediment concentrations reported by TVA (Table I) involve the use of

1. conservatively biased estimates of the transfer of contaminants from sediment to the edible tissues of aquatic organisms,
2. an assumed daily rate of ingestion of these organisms by humans, and
3. an estimate of an allowable daily intake (ADI) of the contaminant by members of the general population.

The screening model is described as follows:

$$SLI(p) = CS(p) \times SF(p) \times I \quad , \qquad (1)$$

where

SLI(p) = screening level of intake calculated for contaminant p (μg/d or Bq/d) ingested,

CS(p) = concentration of contaminant p in sediment (μg/g or Bq/kg, dry weight),*

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*Sediment concentrations of radionuclides are given in units of becquerels per kilogram; all other contaminants are reported in units of micrograms per gram.

SF(p) = a screening factor for conservatively estimating the concentration of contaminant p in aquatic organisms resulting from a concentration of contaminant p in sediment (unitless),

I = assumed daily rate of intake of aquatic organisms by humans (kg/d for radionuclides and g/d for all other contaminants, fresh weight). For the purposes of this study, humans are assumed to eat an average of 20 g (fresh weight) of aquatic organisms per day. All these organisms are assumed to come from the same locations where sediment samples have been taken.

Many of the contaminant concentrations reported in sediment are below the limits of detection. These limits of detection were achieved, using, when available, methodologies approved by the Environmental Protection Agency (EPA). For the purposes of this study, contaminant concentrations that are less than the limits of detection are conservatively set equal to the detection limit.

The criterion for screening is based on the ratio between the calculated value of SLI and the ADI for contaminant p [SLI(p)/ADI(p)]. When this screening ratio is less than unity, the contaminant is designated as having a low priority for further consideration. When this ratio is equal to or greater than unity, the contaminant is designated as one that warrants further investigation.

3.1. DERIVATION OF SEDIMENT-TO-AQUATIC ORGANISM SCREENING FACTORS

The screening factors (SF) selected for estimating the relationship between the concentration of an individual contaminant (P) in sediment and its subsequent equilibrium concentration in the edible tissues of aquatic organisms are listed in Table II. Each factor is designed to overestimate the transfer of contaminants from sediment to aquatic organisms. When possible, values of SF are based on experimental data. In those cases where experimental data were not available, additional conservatism has been included in the recommended SF values. Empirical data have been used most extensively for deriving values of SF for radionuclides. Thus, for radionuclides, values of SF are given as a function of chemical element.

The highest SF value, 100, has been assigned to ^{99}Tc (Table II). This value is based on a water/sediment distribution coefficient, K_d, of 1 (mL/g), assumed because of the high water solubility of the pertechnetate anion, and on a water-to-aquatic organism concentration factor of 100 (L/kg) (Blaylock et al. 1982). For other radionuclides, values of SF have been conservatively derived after reviewing data obtained from samples of sediment and freshwater aquatic organisms taken in the vicinity of the Oak Ridge Reservation (Nelson 1969, Kolehmainen 1972, Trabalka 1983).

For the toxic metals, it was assumed that the metal showing the greatest transfer from sediment to aquatic organisms would be mercury. Since inorganic mercury is converted to methylmercury in aquatic ecosystems and methylmercury is highly accumulated by aquatic biota (Huckabee et al. 1979), it is unlikely that this extent of bioaccumulation will be exceeded by other metals. A review of data on

Table II. Screening factors for sediment to fish

Pollutant	Screening factor	Reference
Organics	10	Connor (1984); Kenaga and Goring (1980); J. Falco, EPA (1984)
Metals	10	S. G. Hildebrand et al. (1980); Loar et al. (1981); Van Winkle et al. (1984); Mathis and Cummings (1973)
Radionuclides		
Cesium	0.1	Nelson (1969); Kolehmainen (1972); Blaylock et al. (1982); Trabalka (1983)
Neptunium	0.01	
Plutonium	0.01	
Strontium	1	
Technetium	100	
Thorium	0.01	
Uranium	0.01	

mercury concentrations in fish and sediment in the North Fork of the Holston River produced concentration ratios that ranged from 0.08 to 2.0 for two species of fish (Hildebrand et al. 1980). In addition, data on the East Fork of Poplar Creek and Bear Creek (Van Winkle et al. 1984) ranged from 0.04 to 4.3. In the absence of readily available empirical data on the transfer of other toxic metals from sediment to aquatic organisms, an SF value of 10 was selected for the purposes of preliminary screening. A downward revision of this factor is expected, given the future opportunity to review and critically evaluate the scientific literature for each element.

For the organic compounds, few data are directly amenable for predicting the behavior of these substances in natural aquatic environments. These data exhibit variability that can span several orders of magnitude. The SF of 10 for organic compounds is based on empirical data reviewed by Connor (1984) for nonmarine systems with flushing times of less than 100 d and on discussions with experts within EPA. These experts have suggested that an SF of 10 should be sufficiently conservative for initial screening and that competing chemical processes will most probably produce a ratio of pollutant concentration in the edible tissue of aquatic organisms to that in the sediment which is less than 1 (Falco 1984).

3.2. DERIVIATION OF ALLOWABLE DAILY INTAKES

Values of ADI specified for this screening exercise are listed in Table III; the derivation of these values is explained below.

TABLE III. ALLOWABLE DAILY INTAKES (ADI) OF ORGANICS, METALS AND CYANIDE, AND RADIONUCLIDES USED FOR SCREENING ANALYSIS

CONTAMINANT	ALLOWABLE DAILY INTAKE
ORGANICS (UG/D)	
ACENAPHTHENE	40
ACENAPHTHALENE	0.025
ACROLEIN	113
ACRYLONITRILE	0.34
ALDRIN	0.004
ALPHA-BHC	0.27
ALPHA-ENDOSULFAN	280
ANTHRACENE	0.025
BENZIDINE	0.0049
BENZENE	32
BENZO(A)ANTHRACENE	0.025
BENZO(A)PYRENE	0.025
BENZO(GHI)PERYLENE	0.025
BENZO(K)FLUORANTHENE	0.025
BETA-BHC	0.46
BETA-ENDOSULFAN	280
BIS(CHLOROMETHYL)ETHER	0.00005
BIS(2-CHLOROETHOXY)METHANE	--
BIS(2-CHLOROETHYL)ETHER	1
BIS(2-CHLOROISOPROPYL)ETHER	45.8
BIS(2-ETHYLHEXYL)PHTHALATE	42000
BROMOFORM	4
BUTYLBENZYLPHTHALATE	1000
CARBON TETRACHLORIDE	8.6
CHLORDANE	0.13
CHLOROBENZENE	40
CHLORODIBROMOMETHANE	4
CHLOROETHANE	929000
CHLOROFORM	4.75
CHRYSENE	0.025
DELTA-BHC	0.35
DI-N-BUTYLPHTHALATE	12600
DI-N-OCTYLPHTHALATE	1000
DIBENZO(AH)ANTHRACENE	0.025
DICHLOROBROMOMETHANE	4
DICHLORODIFLUOROMETHANE	6000
DIELDRIN	0.0038
DIETHYLPHTHALATE	438000
DIMETHYLPHTHALATE	710000
ENDOSULFAN SULFATE	280
ENDRIN	37.5
ENDRIN ALDEHYDE	70
ETHYLBENZENE	1600
FLUORENE	0.025
FLUORANTHENE	100

TABLE III. (CONTINUED)

CONTAMINANT	ALLOWABLE DAILY INTAKE
ORGANICS (UG/D)	
GAMMA-BHC	.9
HEPTACHLOR	0.023
HEPTACHLOR EPOXIDE	0.186
HEXACHLOROBENZENE	0.3
HEXACHLOROBUTADIENE	14.1
HEXACHLOROCYCLOPENTADIENE	2.1
HEXACHLOROETHANE	47
INDENO(1,2,3-CD)PYRENE	0.025
ISOPHORONE	1050
METHYL BROMIDE	4
METHYL CHLORIDE	4
METHYLENE CHLORIDE	4
N-NITROSODIPHENYLAMINE	140
N-NITROSODI-N-PROPYLAMINE	0.0185
N-NITROSODIMETHYLAMINE	0.05
NAPHTHALENE	448
NITROBENZENE	60
P-CHLORO-M-CRESOL	7900
PCB-1016	0.22
PCB-1221	0.22
PCB-1232	0.22
PCB-1242	0.22
PCB-1248	0.22
PCB-1254	0.22
PCB-1260	0.22
PENTACHLOROPHENOL	2100
PHENANTHRENE	0.025
PHENOL	7000
PHENOLS (TOTAL)	6800
PYRENE	0.025
TETRACHLOROETHYLENE	8.1
TOLUENE	29500
TOXAPHENE	0.16
TRICHLOROETHYLENE	57
TRICHLOROFLUOROMETHANE	64000
VINYL CHLORIDE	1052
1,1-DICHLOROETHANE	289000
1,1-DICHLOROETHYLENE	2.768
1,1,1-TRICHLOROETHANE	37500
1,1,2-TRICHLOROETHANE	5.7
1,1,2,2-TETRACHLOROETHANE	4.2
1,2-DICHLOROBENZENE	1316
1,2-DICHLOROETHANE	14.6
1,2-DICHLOROPROPANE	420

TABLE III. (CONTINUED)

CONTAMINANT	ALLOWABLE DAILY INTAKE
ORGANICS (UG/D)	
1,2-DICHLOROPROPYLENE	1.3
1,2-DIPHENYLHYDRAZINE	1
1,2-TRANS-DICHLOROETHYLENE	0.67
1,2,4-TRICHLOROBENZENE	26
1,3-DICHLOROBENZENE	1316
1,4-DICHLOROBENZENE	1316
2-CHLOROETHYLVINYL ETHER	--
2-CHLORONAPHTHALENE	--
2-CHLOROPHENOL	0.6
2-NITROPHENOL	140
2,4-DICHLOROPHENOL	1.00
2,4-DIMETHYLPHENOL	--
2,4-DINITROPHENOL	140
2,4-DINITROTOLUENE	1.6
2,4,6-TRICHLOROPHENOL	35.4
2,6-DINITROTOLUENE	1.6
3,3-DICHLOROBENZIDINE	0.065
3,4-BENZOFLUORANTHENE	0.025
4-BROMOPHENYL PHENYL ETHER	--
4-CHLOROPHENYL PHENYL ETHER	--
4-NITROPHENOL	140
4,4-DDD	0.72
4,4-DDE	0.72
4,4-DDT	0.72
4,6-DINITRO-O-CRESOL	27.4

TABLE III. (CONTINUED)

CONTAMINANT	ALLOWABLE DAILY INTAKE
METALS AND CYANIDE (UG/D)	
ANTIMONY	294
ARSENIC	0.04
BERYLLIUM	0.2
CADMIUM	57.4
CHROMIUM	100
COPPER	2000
CYANIDE	410
LEAD	100
MERCURY	23.5
NICKEL	294
SELENIUM	23
SILVER	16
THALLIUM	12.56
ZINC	10000
RADIONUCLIDES (BQ/D)	
CS-137	2
NP-237	0.0025
PU-238	0.25
PU-239	0.23
SR-90	0.7
TC-99	70
TH-228	0.25
TH-230	0.18
TH-232	0.04
U-234	0.36
U-235	0.38
U-238	0.4

3.2.1. Radionuclides

For radionuclides, values of the allowable daily intake (ADI) were determined by calculating the daily intake of a radionuclide (measured in becquerels per day) that would result in a maximum effective dose-equivalent of 10 millirems per year. The current standard for protection of the general public from the effects of ionizing radiation is 500 millirems for maximally exposed individuals (Federal Radiation Council 1960). The Uranium Fuel Cycle Standard promulgated by the EPA is 25 millirems (40 CFR Part 190) (CFR 1981). The relationship between a daily intake of a given radionuclide and the subsequent effective dose-equivalent has been published by Killough and Eckerman (1983). Their estimates are based on data presented in ICRP Publication 30 for "reference man" (ICRP 1979).

3.2.2. Nonradioactive contaminants

For noncarcinogenic toxic chemicals, the safe level of exposure is the intake of a toxicant (measured in micrograms per day) that is not anticipated to result in any adverse effects after chronic exposure to the general human population, including sensitive subgroups. This concept is also applied to the intake of chemicals exhibiting thresholds for taste or odor. These sensory thresholds are generally lower than levels of acceptable risk for human health.

For carcinogenic chemicals, there is no accepted threshold limit. In developing water quality criteria for priority pollutants, EPA utilized the intake associated with a specific risk over a human lifetime (usually 10^{-5}) to establish acceptable levels of exposure to

carcinogens. For the present screening exercise, we use the term ADI to represent an "allowable daily intake" for both carcinogens and noncarcinogens.

In establishing water quality criteria for the priority pollutants, EPA used the following relationship:

$$C_w = ADI/[I_w + (I_f \times BCF)] \quad ,$$

where

C_w = water quality criteria level (μg/L);

ADI = EPA-established value for an "acceptable daily intake" (μg/d);

I_w = EPA-assumed value for the daily water consumption (2 L/d);

I_f = EPA-assumed value for the daily fish consumption (or intake) (0.0187 kg/d), and

BCF = EPA-assumed value of the water-to-fish bioconcentration factor (L/kg).

A review of water quality criteria documents appears in Sitting (1980). The above equation was applied to BCF and C_w values reported by EPA in its water quality criteria document (Sitting 1980) to derive ADIs for all but six nonradioactive contaminants. These six contaminants were bis(2-chloroethoxy)methane, 2-chloroethylvinyl ether, 2-chloronapthalene, 2,4-dimethylphenol, 4-bromophenyl phenyl ether, and 4-chlorophenyl phenyl ether.

To date, there are no animal or human data from which to estimate ADI values for these substances. Therefore, these six contaminants have automatically been identified as warranting further consideration for future analysis and screening.

4. RESULTS

The results of this preliminary screening analysis are given in Tables IV through VIII (pages 28-34) and Tables A-1 through A-III (Appendix, pages 45-84). Tables IV and V list the contaminants associated with calculated SLI/ADI ratios that are less than one. These are the contaminants screened out by our analysis and given a low priority for further consideration within the context of a health risk analysis. Of these contaminants, forty-four were screened out from every sampling station (Table IV). Fifteen additional contaminants were screened out from at least one sampling station (Table V).

The contaminants warranting additional study are identified in Table VI. This table includes contaminants having calculated SLI/ADI ratios equal to or greater than one for all sampling stations, with the exception of New Hope Pond stations NHP-1 and NHP-2. These stations were excluded because public access to New Hope Pond is prohibited. Among the contaminants listed in Table VI are: sixty-six organic substances, twelve toxic metals, and four radionuclides. Most of the organic substances, however, are associated with sediment concentrations that were below detection limits.

Table VII includes only those contaminants listed in Table VI whose measured concentrations in sediment exceeded the limits of detection at one or more sampling location. Including contaminants whose reported concentrations were above the limits of detection reduces the number of organic substances from sixty-six to twelve. The number of toxic metals is reduced from twelve to eleven. In Table VII, there is no change in the radionuclides initially listed in Table VI.

TABLE IV. CONTAMINANTS EXCLUDED BY SCREENING FROM ALL STATIONS

ORGANICS	METALS AND CYANIDE
ACROLEIN	CYANIDE
ALPHA-ENDOSULFAN	
BENZENE	
BETA-ENDOSULFAN	
BIS(2-ETHYLHEXYL)PHTHALATE	RADIONUCLIDES
BROMOFORM	
BUTYLBENZYLPHTHALATE	SR-90
CARBON TETRACHLORIDE	TH-230
CHLOROBENZENE	U-235
CHLORODIBROMOMETHANE	PU-238
CHLOROETHANE	PU-239
CHLOROFORM	
DI-N-BUTYLPHTHALATE	
DI-N-OCTYLPHTHALATE	
DICHLOROBROMOMETHANE	
DICHLORODIFLUOROMETHANE	
DIETHYLPHTHALATE	
DIMETHYLPHTHALATE	
ENDOSULFAN SULFATE	
ETHYLBENZENE	
ISOPHORONE	
METHYL BROMIDE	
METHYL CHLORIDE	
P-CHLORO-M-CRESOL	
PENTACHLOROPHENOL	
PHENOL	
TOLUENE	
TRICHLOROETHYLENE	
TRICHLOROFLUOROMETHANE	
1,1-DICHLOROETHANE	
1,1-DICHLOROETHYLENE	
1,1,1-TRICHLOROETHANE	
1,1,2-TRICHLOROETHANE	
1,1,2,2-TETRACHLOROETHANE	
1,2-DICHLOROBENZENE	
1,2-DICHLOROETHANE	
1,2-DICHLOROPROPANE	
1,3-DICHLOROBENZENE	
1,4-DICHLOROBENZENE	

TABLE V. CONTAMINANTS EXCLUDED BY SCREENING FROM ONLY SOME STATIONS

CONTAMINANT	STATIONS EXCLUDED
ORGANICS	
METHYLENE CHLORIDE	WOL-1, WOL-2
N-NITROSODIPHENYLAMINE	BC-FP-1, BC-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3
NAPHTHALENE	BC-FP-1, BC-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, NHP-1, PC-1, PC-2, PC-3, WOL-1, WOL-2
PHENOLS (TOTAL)	BC-FP-1, BC-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3, WOL-1, WOL-2
TETRACHLOROETHYLENE	BC-FP-1,BC-1,BC-2,CRM-1,CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-1 NHP-1, NHP-2, PC-1, PC-3, WOL-1, WOL-2
1,2-DICHLOROPROPYLENE	BC-FP-1, CRM-15.9, EFPC-FP-1, PC-3
2-NITROPHENOL	BC-FP-1, BC-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3
4-NITROPHENOL	BC-FP-1, BC-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3

TABLE V. (CONTINUED)

CONTAMINANT	STATIONS EXCLUDED
METALS AND CYANIDE	
ANTIMONY	BC-FP-1, BC-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24 EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, NHP-1, PC-1, PC-2, PC-3, WOL-1, WOL-2
COPPER	BC-FP-1
ZINC	BC-FP-1
RADIONUCLIDES	
TC-99	BC-FP-1, CRM-1, CRM-15.9, CRM-24, EFPC-FP-2, EFPC-2 PC-2, PC-3
U-238	BC-FP-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3
NP-237	BC-FP-1, BC-2, CRM-1, CRM-6.8, CRM-15.9, CRM-24, EFPC-FP-1, EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3
CS-137	BC-FP-1, BC-1, BC-2, CRM-15.9, CRM-24, EFPC-FP-1 EFPC-FP-2, EFPC-1, EFPC-2, PC-1, PC-2, PC-3

TABLE VI. A LIST OF CONTAMINANTS WARRANTING FURTHER CONSIDERATION (EXCLUDING NEW HOPE POND STATIONS)

ORGANICS

ACENAPHTHALENE
ACENAPHTHENE
ACRYLONITRILE
ALDRIN
ALPHA-BHC
ANTHRACENE
BENZIDINE
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
BENZO(GHI)PERYLENE
BENZO(K)FLUORANTHENE
BETA-BHC
BIS(2-CHLOROETHYL)ETHER
BIS(2-CHLOROISOPROPYL)ETHER
BIS(CHLOROMETHYL)ETHER
CHLORDANE
CHRYSENE
DELTA-BHC
DIBENZO(AH)ANTHRACENE
DIELDRIN
ENDRIN
ENDRIN ALDEHYDE
FLUORANTHENE
FLUORENE
GAMMA-BHC
HEPTACHLOR
HEPTACHLOR EPOXIDE
HEXACHLOROBENZENE
HEXACHLOROBUTADIENE
HEXACHLOROCYCLOPENTADIENE
HEXACHLOROETHANE
INDENO(1,2,3-CD)PYRENE
METHYLENE CHLORIDE
N-NITROSODI-N-PROPYLAMINE
N-NITROSODIMETHYLAMINE
N-NITROSODIPHENYLAMINE
NITROBENZENE
PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254

TABLE VI. (CONTINUED)

ORGANICS

PCB-1260
PHENANTHRENE
PYRENE
TETRACHLOROETHYLENE
TOXAPHENE
1,2,4-TRICHLOROBENZENE
1,2-DICHLOROPROPYLENE
1,2-DIPHENYLHYDRAZINE
1,2-TRANS-DICHLOROETHYLENE
2,4,6-TRICHLOROPHENOL
2,4-DICHLOROPHENOL
2,4-DINITROPHENOL
2,4-DINITROTOLUENE
2,6-DINITROTOLUENE
2-CHLOROPHENOL
2-NITROPHENOL
3,3-DICHLOROBENZIDINE
3,4-BENZOFLUORANTHENE
4,4-DDD
4,4-DDE
4,4-DDT
4,6-DINITRO-O-CRESOL
4-NITROPHENOL

METALS AND CYANIDE

ARSENIC
BERYLLIUM
CADMIUM
CHROMIUM
COPPER
LEAD
MERCURY
NICKEL
SELENIUM
SILVER
THALLIUM
ZINC

RADIONUCLIDES

CS-137
NP-237
TC-99
U-238

TABLE VII. CONTAMINANTS LISTED IN TABLE VI WHOSE MEASURED CONCENTRATIONS IN SEDIMENT EXCEED LIMITS OF DETECTION

ORGANICS

ACENAPHTHALENE
ANTHRACENE
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
BENZO(K)FLUORANTHENE
CHRYSENE
FLUORANTHENE
METHYLENE CHLORIDE
PHENANTHRENE
PYRENE
TETRACHLOROETHYLENE
3,4-BENZOFLUORANTHENE

METALS AND CYANIDE

ARSENIC
BERYLLIUM
CADMIUM
CHROMIUM
COPPER
LEAD
MERCURY
NICKEL
SELENIUM
SILVER
ZINC

RADIONUCLIDES

CS-137
NP-237
TC-99
U-238

TABLE VIII. CONTAMINANTS LISTED IN TABLE VII WHOSE CONCENTRATIONS IN SEDIMENT AT ANY SAMPLING LOCATION EXCEED SEDIMENT CONCENTRATIONS AT EITHER CONTROL LOCATIONS PC-3 OR CRM-24

ORGANICS

ACENAPHTHALENE
ANTHRACENE
BENZO(A)ANTHRACENE
BENZO(A)PYRENE
BENZO(A)FLUORANTHENE
CHRYSENE
FLUORANTHENE
METHYLENE CHLORIDE
PHENANTHRENE
PYRENE
TETRACHLOROETHYLENE
3,4-BENZOFLUORANTHENE

METALS AND CYANIDE

ARSENIC
BERYLLIUM
CADMIUM
CHROMIUM
COPPER
LEAD
MERCURY
NICKEL
SELENIUM
SILVER
ZINC

RADIONUCLIDES

CS-137
NP-237
TC-99
U-238

Table VIII lists contaminants whose concentration in sediment are greater than the limits of detection at one or more sampling station and whose sediment concentrations exceed those reported for either control stations PC-3 or CRM-24. The results given in Table VIII are identical to the results presented in Table VII. Thus, in at least one sampling location, the sediment concentrations of the contaminants listed in Table VII exceed those reported for either one or both of the two control stations.

A complete listing of the sediment concentrations, SLI values, ADI values, and SLI/ADI ratios for each contaminant and sampling station is included in the Appendix to this report. A complete listing for organic compounds is given in Table A-I. The results for the toxic metals and the radionuclides are presented in Tables A-II and A-III, respectively. Because of the high levels of conservatism required by this preliminary screening analysis, SLI/ADI ratios greater than 1 may be revised to values less than 1 as additional data become available and the accuracy of the screening analysis is improved. <u>We emphasize that under no circumstances should the SLI/ADI ratios listed in Tables A-I through A-III be interpreted as a potential violation of acceptable standards established for the protection of human health, nor should these ratios be used in any way to infer the concentration of the contaminant in fish from these locations</u>. Screening ratios that equal or exceed unity are only intended to serve as a tool to indicate the need for further consideration of the contaminants.

5. DISCUSSION

This preliminary screening analysis has been successful in rapidly identifying contaminants analyzed in sediment that should not be of concern for the protection of human health. Although a large number (66) of organic compounds are associated with SLI/ADI ratios that exceed unity, more than 80% of these compounds were not present in sediment at any location at levels above the limits of detection. Their placement in Table VI is most likely the direct result of setting sediment concentrations equal to the detection limits whenever reported concentrations failed to exceed these limits. For the vast majority of organic compounds, actual concentrations in sediment are probably much less than the concentrations assumed herein for the purposes of screening.

The primary pathway of exposure considered in this analysis has been the transfer of contaminants in sediment to aquatic organisms and the subsequent ingestion of these contaminants by members of the public. In general, for those contaminants with SLI/ADI ratios less than one, the multiple levels of conservatism that have been applied for preliminary screening should also be sufficient to exclude from concern all other potential exposure pathways.

The radionuclides are an exception to this generalization. The values of SF used for the radionuclides are based on data obtained in the environs of the Oak Ridge Reservation. Because of the availability

of regional-specific information, the level of conservatism applied to estimate radionuclide transfer from sediment to fish is not as great as it is for the toxic metals and organic pollutants. Therefore, specific analyses will be required to screen for exposures to radionuclides from ingestion of water, vegetables, milk, meat, eggs, and from inhalation of resuspended material in air. These analyses are currently under way and will be the subject of a future report.

6. RECOMMENDATIONS

1. We expect that the number of contaminants identified as warranting further consideration (Table VI) could be reduced substantially if improved screening calculations were based on measured concentrations in food sources rather than on concentrations in sediment. We therefore recommend that consideration be given to measure of these contaminants in (a) aquatic organisms, (b) water obtained from contaminated streams and (c) terrestrial foodstuffs grown or produced on soils derived from contaminated sediment.
2. The limits of detection for many of the organic compounds reported in Table I are greater than the concentrations in sediment that would result in screening ratios (SLI/ADI) that exceed one. Because of the lack of sufficient sensitivity associated with the present limits of detection, a large number of pollutants for which less-than-detectable values have been reported are designated in Table VI as contaminants warranting further consideration. In these cases, we recommend a reexamination of the analytical procedures used to detect these contaminants to determine if substantial improvement in the limits of detection is practicable.

3. The EPA is currently in the process of reviewing and updating ADI values. We recommend that the ADIs applied in this preliminary analysis be reevaluated to determine if current data allow for reduction in the conservatism used in their derivation. First priority for this reevaluation should be given to the contaminants listed in Table VII.
4. In the absence of site-specific concentrations in environmental media other than sediment (i.e., recommendation 1), a more extensive evaluation of the literature than has been possible during this preliminary screening effort should be conducted to improve the accuracy of the screening methodology. Future screening analyses should also address other pathways of exposure in addition to the ingestion of contaminated aquatic organisms. Additional exposure pathways of potential importance are: (a) the direct ingestion of contaminated water, (b) the inhalation of resuspended surface soil consisting of dredged contaminated sediment, (c) the direct ingestion of this soil, and (d) the ingestion of animal and vegetable food products produced on such contaminated soil. Priority should be given to the contaminants listed in Table VII.

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APPENDIX

TABLE A-1. ORGANIC COMPOUNDS WARRANTING FURTHER CONSIDERATION: LISTED FOR EACH SAMPLING STATION FROM HIGHEST TO LOWEST SLI/ADI RATIO

STATION=BC-FP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
BIS(CHLOROMETHYL)ETHER	<0.006	1.2	0.00005	<24000
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
PYRENE	0.52	104.0	0.025	4160
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74

TABLE A-I. (CONTINUED)

STATION=BC-FP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.06	12.0	0.34	<35
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
FLUORANTHENE	0.81	162.0	100	2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.006	1.2	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
METHYLENE CHLORIDE	0.023	4.6	4	1

STATION=BC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.008	1.6	0.00005	<32000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PYRENE	0.62	124.0	0.025	4960
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000

TABLE A-1. (CONTINUED)

STATION=BC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4;6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.08	16.0	0.34	<47
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
METHYLENE CHLORIDE	0.06	12.0	4	3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.008	1.6	0.67	<2
FLUORANTHENE	0.6	120.0	100	1
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.008	1.6	1.3	<1

TABLE A-I. (CONTINUED)

STATION=BC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
TOXAPHENE	<5	1000.0	0.16	<6250
PYRENE	0.77	154.0	0.025	6160
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74

TABLE A-I. (CONTINUED)

STATION=BC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.07	14.0	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
METHYLENE CHLORIDE	0.05	10.0	4	3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
FLUORANTHENE	0.91	182.0	100	2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1

STATION=CRM-1.0

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
PYRENE	0.82	164.0	0.025	6560
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ANTHRACENE	0.51	102.0	0.025	4080
PHENANTHRENE	0.51	102.0	0.025	4080

TABLE A-1. (CONTINUED)

STATION=CRM-1.0

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.07	14.0	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
METHYLENE CHLORIDE	0.17	34.0	4	9
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
FLUORANTHENE	1	200.0	100	2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1

TABLE A-1. (CONTINUED)

STATION=CRM-15.9

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
BIS(CHLOROMETHYL)ETHER	<0.006	1.2	0.00005	<24000
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74

TABLE A-1. (CONTINUED)

STATION=CRM-15.9

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.06	12.0	0.34	<35
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
METHYLENE CHLORIDE	0.13	26.0	4	7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.006	1.2	0.67	<2
FLUORANTHENE	<0.5	100.0	100	<1
ENDRIN ALDEHYDE	<0.5	100.0	70	<1

STATION=CRM-24

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.008	1.6	0.00005	<32000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000

TABLE A-1. (CONTINUED)

STATION=CRM-24

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.08	16.0	0.34	<47
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
METHYLENE CHLORIDE	0.1	20.0	4	5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.008	1.6	0.67	<2
FLUORANTHENE	0.59	118.0	100	1
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.008	1.6	1.3	<1

TABLE A-I. (CONTINUED)

STATION=CRM-6.8

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74

TABLE A-1. (CONTINUED)

STATION=CRM-6.8

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.07	14.0	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
METHYLENE CHLORIDE	0.09	18.0	4	5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
FLUORANTHENE	<0.5	100.0	100	<1
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1

STATION=EFPC-FP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
ANTHRACENE	7.2	1440.0	0.025	57600
PHENANTHRENE	7.2	1440.0	0.025	57600
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
BIS(CHLOROMETHYL)ETHER	<0.006	1.2	0.00005	<24000
BENZO(A)PYRENE	2.8	560.0	0.025	22400
3,4-BENZOFLUORANTHENE	1.4	280.0	0.025	11200
BENZO(K)FLUORANTHENE	1.3	260.0	0.025	10400
PYRENE	0.79	158.0	0.025	6320
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545

TABLE A-I. (CONTINUED)

STATION=EFPC-FP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4;6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.06	12.0	0.34	<35
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
FLUORANTHENE	0.99	198.0	100	2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
METHYLENE CHLORIDE	0.03	6.0	4	2
1,2-TRANS-DICHLOROETHYLENE	<0.006	1.2	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1

TABLE A-1. (CONTINUED)

STATION=EFPC-FP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
PYRENE	25	5000.0	0.025	200000
CHRYSENE	6.6	1320.0	0.025	52800
ANTHRACENE	5.5	1100.0	0.025	44000
PHENANTHRENE	5.5	1100.0	0.025	44000
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
BENZO(A)ANTHRACENE	1.8	360.0	0.025	14400
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	0.54	108.0	0.025	4320
BENZO(A)PYRENE	0.5	100.0	0.025	4000
3,4-BENZOFLUORANTHENE	0.5	100.0	0.025	4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	0.5	100.0	0.025	4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74

TABLE A-1. (CONTINUED)

STATION=EFPC-FP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
FLUORANTHENE	28	5600.0	100	56
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.07	14.0	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
TETRACHLOROETHYLENE	0.15	30.0	8.1	4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
METHYLENE CHLORIDE	0.046	9.2	4	2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1

STATION=EFPC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
PYRENE	1.3	260.0	0.025	10400
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000

TABLE A-I. (CONTINUED)

STATION=EFPC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
PHENANTHRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.07	14.0	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
FLUORANTHENE	1.6	320.0	100	3
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
METHYLENE CHLORIDE	0.04	8.0	4	2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1

TABLE A-1. (CONTINUED)

STATION=EFPC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1

STATION=EFPC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
PYRENE	10	2000.0	0.025	80000
CHRYSENE	4.6	920.0	0.025	36800
ANTHRACENE	4.1	820.0	0.025	32800
PHENANTHRENE	4.1	820.0	0.025	32800
BIS(CHLOROMETHYL)ETHER	<0.008	1.6	0.00005	<32000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
BENZO(A)ANTHRACENE	1.8	360.0	0.025	14400
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286

TABLE A-1. (CONTINUED)

STATION=EFPC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.08	16.0	0.34	<47
FLUORANTHENE	13	2600.0	100	26
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
METHYLENE CHLORIDE	0.18	36.0	4	9
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
TETRACHLOROETHYLENE	0.068	13.6	8.1	2
1,2-TRANS-DICHLOROETHYLENE	<0.008	1.6	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.008	1.6	1.3	<1

STATION=NHP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<10	2000.0	0.0049	<408163
CHRYSENE	10	2000.0	0.025	80000
PYRENE	7.8	1560.0	0.025	62400
DIELDRIN	<1	200.0	0.0038	<52632
ALDRIN	<1	200.0	0.004	<50000
BIS(CHLOROMETHYL)ETHER	0.011	2.2	0.00005	44000
BENZO(A)ANTHRACENE	4.5	900.0	0.025	36000
FLUORENE	1.8	360.0	0.025	14400

TABLE A-1. (CONTINUED)

STATION=NHP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
TOXAPHENE	<10	2000	0.16	<12500
3,3-DICHLOROBENZIDINE	<4	800	0.065	<12308
N-NITROSODI-N-PROPYLAMINE	<1	200	0.0185	<10811
PCB-1242	<10	2000	0.22	<9091
PCB-1254	<10	2000	0.22	<9091
PCB-1221	<10	2000	0.22	<9091
PCB-1232	<10	2000	0.22	<9091
PCB-1248	<10	2000	0.22	<9091
PCB-1260	<10	2000	0.22	<9091
PCB-1016	<10	2000	0.22	<9091
HEPTACHLOR	<1	200	0.023	<8696
ACENAPHTHALENE	<1	200	0.025	<8000
ANTHRACENE	<1	200	0.025	<8000
BENZO(A)PYRENE	<1	200	0.025	<8000
3,4-BENZOFLUORANTHENE	<1	200	0.025	<8000
BENZO(GHI)PERYLENE	<1	200	0.025	<8000
BENZO(K)FLUORANTHENE	<1	200	0.025	<8000
DIBENZO(AH)ANTHRACENE	<1	200	0.025	<8000
INDENO(1,2,3-CD)PYRENE	<1	200	0.025	<8000
PHENANTHRENE	<1	200	0.025	<8000
CHLORDANE	<5	1000	0.13	<7692
N-NITROSODIMETHYLAMINE	<1	200	0.05	<4000
HEPTACHLOR EPOXIDE	<1	200	0.186	<1075
2,4,6-TRICHLOROPHENOL	<1	200	0.2	<1000
ALPHA-BHC	<1	200	0.27	<741
HEXACHLOROBENZENE	<1	200	0.3	<667
DELTA-BHC	<1	200	0.35	<571
BETA-BHC	<1	200	0.46	<435
2-CHLOROPHENOL	<1	200	0.6	<333
4,4-DDT	<1	200	0.72	<278
4,4-DDE	<1	200	0.72	<278
4,4-DDD	<1	200	0.72	<278
GAMMA-BHC	<1	200	0.9	<222
BIS(2-CHLOROETHYL)ETHER	<1	200	1	<200
1,2-DIPHENYLHYDRAZINE	<1	200	1	<200
2,4-DICHLOROPHENOL	<1	200	1.35	<148
2,4-DINITROTOLUENE	<1	200	1.6	<125
2,6-DINITROTOLUENE	<1	200	1.6	<125
HEXACHLOROCYCLOPENTADIENE	<1	200	2.1	<95
1,2-TRANS-DICHLOROETHYLENE	0.16	32	0.67	48
ACRYLONITRILE	<0.08	16	0.34	<47
4,6-DINITRO-O-CRESOL	<5	1000	27.4	<36
ACENAPHTHENE	1.9	380	20	19
FLUORANTHENE	8.7	1740	100	17

TABLE A-I. (CONTINUED)

STATION=NHP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROPHENOL	<10	2000.0	140	<14
HEXACHLOROBUTADIENE	<1	200.0	14.1	<14
1,2,4-TRICHLOROBENZENE	<1	200.0	26	<8
METHYLENE CHLORIDE	0.13	26.0	4	7
ENDRIN	<1	200.0	37.5	<5
BIS(2-CHLOROISOPROPYL)ETHER	<1	200.0	45.8	<4
HEXACHLOROETHANE	<1	200.0	47	<4
PHENOLS (TOTAL)	120	24000.0	6800	4
NITROBENZENE	<1	200.0	60	<3
ENDRIN ALDEHYDE	<1	200.0	70	<3
2-NITROPHENOL	<1	200.0	140	<1
4-NITROPHENOL	<1	200.0	140	<1
N-NITROSODIPHENYLAMINE	<1	200.0	140	<1
1,2-DICHLOROPROPYLENE	<0.008	1.6	1.3	<1

STATION=NHP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<10	2000	0.0049	<408163
PYRENE	15	3000	0.025	120000
ANTHRACENE	14	2800	0.025	112000
PHENANTHRENE	14	2800	0.025	112000
DIELDRIN	<1	200	0.0038	<52632
ALDRIN	<1	200	0.004	<50000
BIS(CHLOROMETHYL)ETHER	0.01	2	0.00005	40000
BENZO(A)ANTHRACENE	3.9	780	0.025	31200
CHRYSENE	2	400	0.025	16000
FLUORENE	1.8	360	0.025	14400
TOXAPHENE	<10	2000	0.16	<12500
3,3-DICHLOROBENZIDINE	<4	800	0.065	<12308
N-NITROSODI-N-PROPYLAMINE	<1	200	0.0185	<10811
PCB-1242	<10	2000	0.22	<9091
PCB-1254	<10	2000	0.22	<9091
PCB-1221	<10	2000	0.22	<9091
PCB-1232	<10	2000	0.22	<9091
PCB-1248	<10	2000	0.22	<9091
PCB-1260	<10	2000	0.22	<9091
PCB-1016	<10	2000	0.22	<9091
HEPTACHLOR	<1	200	0.023	<8696
ACENAPHTHALENE	<1	200	0.025	<8000

TABLE A-1. (CONTINUED)

STATION=NHP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZO(A)PYRENE	<1	200.0	0.025	<8000
3,4-BENZOFLUORANTHENE	<1	200.0	0.025	<8000
BENZO(GHI)PERYLENE	<1	200.0	0.025	<8000
BENZO(K)FLUORANTHENE	<1	200.0	0.025	<8000
DIBENZO(AH)ANTHRACENE	<1	200.0	0.025	<8000
INDENO(1,2,3-CD)PYRENE	<1	200.0	0.025	<8000
CHLORDANE	<5	1000.0	0.13	<7692
N-NITROSODIMETHYLAMINE	<1	200.0	0.05	<4000
HEPTACHLOR EPOXIDE	<1	200.0	0.186	<1075
2,4,6-TRICHLOROPHENOL	<1	200.0	0.2	<1000
ALPHA-BHC	<1	200.0	0.27	<741
HEXACHLOROBENZENE	<1	200.0	0.3	<667
DELTA-BHC	<1	200.0	0.35	<571
BETA-BHC	<1	200.0	0.46	<435
2-CHLOROPHENOL	<1	200.0	0.6	<333
4,4-DDT	<1	200.0	0.72	<278
4,4-DDE	<1	200.0	0.72	<278
4,4-DDD	<1	200.0	0.72	<278
GAMMA-BHC	<1	200.0	0.9	<222
BIS(2-CHLOROETHYL)ETHER	<1	200.0	1	<200
1,2-DIPHENYLHYDRAZINE	<1	200.0	1	<200
2,4-DICHLOROPHENOL	<1	200.0	1.35	<148
2,4-DINITROTOLUENE	<1	200.0	1.6	<125
2,6-DINITROTOLUENE	<1	200.0	1.6	<125
HEXACHLOROCYCLOPENTADIENE	<1	200.0	2.1	<95
FLUORANTHENE	24	4800.0	100	48
ACRYLONITRILE	<0.08	16.0	0.34	<47
4,6-DINITRO-O-CRESOL	<5	1000.0	27.4	<36
ACENAPHTHENE	2	400.0	20	20
2,4-DINITROPHENOL	<10	2000.0	140	<14
HEXACHLOROBUTADIENE	<1	200.0	14.1	<14
1,2,4-TRICHLOROBENZENE	<1	200.0	26	<8
ENDRIN	<1	200.0	37.5	<5
BIS(2-CHLOROISOPROPYL)ETHER	<1	200.0	45.8	<4
HEXACHLOROETHANE	<1	200.0	47	<4
NITROBENZENE	<1	200.0	60	<3
ENDRIN ALDEHYDE	<1	200.0	70	<3
METHYLENE CHLORIDE	0.066	13.2	4	3
1,2-TRANS-DICHLOROETHYLENE	0.01	2.0	0.67	3
PHENOLS (TOTAL)	82	16400.0	6800	2
2-NITROPHENOL	<1	200.0	140	<1
4-NITROPHENOL	<1	200.0	140	<1
NAPHTHALENE	2.4	480.0	448	1
N-NITROSODIPHENYLAMINE	<1	200.0	140	<1

TABLE A-1. (CONTINUED)

STATION=NHP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
1,2-DICHLOROPROPYLENE	<0.008	1.6	1.3	<1

STATION=PC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
PYRENE	1.4	280.0	0.025	11200
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
ANTHRACENE	0.58	116.0	0.025	4640
PHENANTHRENE	0.58	116.0	0.025	4640
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286

TABLE A-1. (CONTINUED)

STATION=PC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.07	14.0	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
FLUORANTHENE	1.4	280.0	100	3
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
METHYLENE CHLORIDE	0.04	8.0	4	2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1

STATION=PC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
BIS(CHLOROMETHYL)ETHER	<0.007	1.4	0.00005	<28000
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
PYRENE	1.2	240.0	0.025	9600
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545

TABLE A-I. (CONTINUED)

STATION=PC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
PCB-1254	<5	1000	0.22	<4545
PCB-1221	<5	1000	0.22	<4545
PCB-1232	<5	1000	0.22	<4545
PCB-1248	<5	1000	0.22	<4545
PCB-1260	<5	1000	0.22	<4545
PCB-1016	<5	1000	0.22	<4545
HEPTACHLOR	<0.5	100	0.023	<4348
ACENAPHTHALENE	<0.5	100	0.025	<4000
ANTHRACENE	<0.5	100	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100	0.025	<4000
BENZO(A)PYRENE	<0.5	100	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100	0.025	<4000
CHRYSENE	<0.5	100	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100	0.025	<4000
FLUORENE	<0.5	100	0.025	<4000
INDENO(1,2,3-CD)PYRENE	<0.5	100	0.025	<4000
PHENANTHRENE	<0.5	100	0.025	<4000
CHLORDANE	<2.5	500	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100	0.2	<500
ALPHA-BHC	<0.5	100	0.27	<370
HEXACHLOROBENZENE	<0.5	100	0.3	<333
DELTA-BHC	<0.5	100	0.35	<286
BETA-BHC	<0.5	100	0.46	<217
2-CHLOROPHENOL	<0.5	100	0.6	<167
4,4-DDT	<0.5	100	0.72	<139
4,4-DDE	<0.5	100	0.72	<139
4,4-DDD	<0.5	100	0.72	<139
GAMMA-BHC	<0.5	100	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100	1	<100
2,4-DICHLOROPHENOL	<0.5	100	1.35	<74
2,4-DINITROTOLUENE	<0.5	100	1.6	<63
2,6-DINITROTOLUENE	<0.5	100	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100	2.1	<48
ACRYLONITRILE	<0.07	14	0.34	<41
4,6-DINITRO-O-CRESOL	<2.5	500	27.4	<18
2,4-DINITROPHENOL	<5	1000	140	<7
HEXACHLOROBUTADIENE	<0.5	100	14.1	<7
ACENAPHTHENE	<0.5	100	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100	26	<4

TABLE A-1. (CONTINUED)

STATION=PC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
FLUORANTHENE	1.5	300.0	100	3
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.007	1.4	0.67	<2
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
1,2-DICHLOROPROPYLENE	<0.007	1.4	1.3	<1
METHYLENE CHLORIDE	0.025	5.0	4	1

STATION=PC-3

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<5	1000.0	0.0049	<204082
DIELDRIN	<0.5	100.0	0.0038	<26316
ALDRIN	<0.5	100.0	0.004	<25000
BIS(CHLOROMETHYL)ETHER	<0.006	1.2	0.00005	<24000
ANTHRACENE	1.2	240.0	0.025	9600
PHENANTHRENE	1.2	240.0	0.025	9600
TOXAPHENE	<5	1000.0	0.16	<6250
3,3-DICHLOROBENZIDINE	<2	400.0	0.065	<6154
PYRENE	0.75	150.0	0.025	6000
N-NITROSODI-N-PROPYLAMINE	<0.5	100.0	0.0185	<5405
PCB-1242	<5	1000.0	0.22	<4545
PCB-1254	<5	1000.0	0.22	<4545
PCB-1221	<5	1000.0	0.22	<4545
PCB-1232	<5	1000.0	0.22	<4545
PCB-1248	<5	1000.0	0.22	<4545
PCB-1260	<5	1000.0	0.22	<4545
PCB-1016	<5	1000.0	0.22	<4545
HEPTACHLOR	<0.5	100.0	0.023	<4348
ACENAPHTHALENE	<0.5	100.0	0.025	<4000
BENZO(A)ANTHRACENE	<0.5	100.0	0.025	<4000
BENZO(A)PYRENE	<0.5	100.0	0.025	<4000
3,4-BENZOFLUORANTHENE	<0.5	100.0	0.025	<4000
BENZO(GHI)PERYLENE	<0.5	100.0	0.025	<4000
BENZO(K)FLUORANTHENE	<0.5	100.0	0.025	<4000
CHRYSENE	<0.5	100.0	0.025	<4000
DIBENZO(AH)ANTHRACENE	<0.5	100.0	0.025	<4000
FLUORENE	<0.5	100.0	0.025	<4000

TABLE A-1. (CONTINUED)

STATION=PC-3

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
INDENO(1,2,3-CD)PYRENE	<0.5	100.0	0.025	<4000
CHLORDANE	<2.5	500.0	0.13	<3846
N-NITROSODIMETHYLAMINE	<0.5	100.0	0.05	<2000
HEPTACHLOR EPOXIDE	<0.5	100.0	0.186	<538
2,4,6-TRICHLOROPHENOL	<0.5	100.0	0.2	<500
ALPHA-BHC	<0.5	100.0	0.27	<370
HEXACHLOROBENZENE	<0.5	100.0	0.3	<333
DELTA-BHC	<0.5	100.0	0.35	<286
BETA-BHC	<0.5	100.0	0.46	<217
2-CHLOROPHENOL	<0.5	100.0	0.6	<167
4,4-DDT	<0.5	100.0	0.72	<139
4,4-DDE	<0.5	100.0	0.72	<139
4,4-DDD	<0.5	100.0	0.72	<139
GAMMA-BHC	<0.5	100.0	0.9	<111
BIS(2-CHLOROETHYL)ETHER	<0.5	100.0	1	<100
1,2-DIPHENYLHYDRAZINE	<0.5	100.0	1	<100
2,4-DICHLOROPHENOL	<0.5	100.0	1.35	<74
2,4-DINITROTOLUENE	<0.5	100.0	1.6	<63
2,6-DINITROTOLUENE	<0.5	100.0	1.6	<63
HEXACHLOROCYCLOPENTADIENE	<0.5	100.0	2.1	<48
ACRYLONITRILE	<0.06	12.0	0.34	<35
4,6-DINITRO-O-CRESOL	<2.5	500.0	27.4	<18
2,4-DINITROPHENOL	<5	1000.0	140	<7
HEXACHLOROBUTADIENE	<0.5	100.0	14.1	<7
ACENAPHTHENE	<0.5	100.0	20	<5
1,2,4-TRICHLOROBENZENE	<0.5	100.0	26	<4
ENDRIN	<0.5	100.0	37.5	<3
BIS(2-CHLOROISOPROPYL)ETHER	<0.5	100.0	45.8	<2
HEXACHLOROETHANE	<0.5	100.0	47	<2
NITROBENZENE	<0.5	100.0	60	<2
1,2-TRANS-DICHLOROETHYLENE	<0.006	1.2	0.67	<2
FLUORANTHENE	0.69	138.0	100	1
ENDRIN ALDEHYDE	<0.5	100.0	70	<1
METHYLENE CHLORIDE	0.025	5.0	4	1

TABLE A-1. (CONTINUED)

STATION=WOL-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<9.1	1820.0	0.0049	<371429
DIELDRIN	<0.91	182.0	0.0038	<47895
ALDRIN	<0.91	182.0	0.004	<45500
BIS(CHLOROMETHYL)ETHER	<0.009	1.8	0.00005	<36000
TOXAPHENE	<9.1	1820.0	0.16	<11375
3,3-DICHLOROBENZIDINE	<3.64	728.0	0.065	<11200
N-NITROSODI-N-PROPYLAMINE	<0.91	182.0	0.0185	<9838
PCB-1242	<9.1	1820.0	0.22	<8273
PCB-1254	<9.1	1820.0	0.22	<8273
PCB-1221	<9.1	1820.0	0.22	<8273
PCB-1232	<9.1	1820.0	0.22	<8273
PCB-1248	<9.1	1820.0	0.22	<8273
PCB-1260	<9.1	1820.0	0.22	<8273
PCB-1016	<9.1	1820.0	0.22	<8273
HEPTACHLOR	<0.91	182.0	0.023	<7913
ACENAPHTHALENE	<0.91	182.0	0.025	<7280
ANTHRACENE	<0.91	182.0	0.025	<7280
BENZO(A)ANTHRACENE	<0.91	182.0	0.025	<7280
BENZO(A)PYRENE	<0.91	182.0	0.025	<7280
3,4-BENZOFLUORANTHENE	<0.91	182.0	0.025	<7280
BENZO(GHI)PERYLENE	<0.91	182.0	0.025	<7280
BENZO(K)FLUORANTHENE	<0.91	182.0	0.025	<7280
CHRYSENE	<0.91	182.0	0.025	<7280
DIBENZO(AH)ANTHRACENE	<0.91	182.0	0.025	<7280
FLUORENE	<0.91	182.0	0.025	<7280
INDENO(1,2,3-CD)PYRENE	<0.91	182.0	0.025	<7280
PHENANTHRENE	<0.91	182.0	0.025	<7280
PYRENE	<0.91	182.0	0.025	<7280
CHLORDANE	<4.55	910.0	0.13	<7000
N-NITROSODIMETHYLAMINE	<0.91	182.0	0.05	<3640
HEPTACHLOR EPOXIDE	<0.91	182.0	0.186	<978
2,4,6-TRICHLOROPHENOL	<0.91	182.0	0.2	<910
ALPHA-BHC	<0.91	182.0	0.27	<674
HEXACHLOROBENZENE	<0.91	182.0	0.3	<607
DELTA-BHC	<0.91	182.0	0.35	<520
BETA-BHC	<0.91	182.0	0.46	<396
2-CHLOROPHENOL	<0.91	182.0	0.6	<303
4,4-DDT	<0.91	182.0	0.72	<253
4,4-DDE	<0.91	182.0	0.72	<253
4,4-DDD	<0.91	182.0	0.72	<253
GAMMA-BHC	<0.91	182.0	0.9	<202
BIS(2-CHLOROETHYL)ETHER	<0.91	182.0	1	<182
1,2-DIPHENYLHYDRAZINE	<0.91	182.0	1	<182
2,4-DICHLOROPHENOL	<0.91	182.0	1.35	<135

TABLE A-I. (CONTINUED)

STATION=WOL-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2,4-DINITROTOLUENE	<0.91	182.0	1.6	<114
2,6-DINITROTOLUENE	<0.91	182.0	1.6	<114
HEXACHLOROCYCLOPENTADIENE	<0.91	182.0	2.1	<87
ACRYLONITRILE	<0.09	18.0	0.34	<53
4,6-DINITRO-O-CRESOL	<4.55	910.0	27.4	<33
2,4-DINITROPHENOL	<9.1	1820.0	140	<13
HEXACHLOROBUTADIENE	<0.91	182.0	14.1	<13
ACENAPHTHENE	<0.91	182.0	20	<9
1,2,4-TRICHLOROBENZENE	<0.91	182.0	26	<7
ENDRIN	<0.91	182.0	37.5	<5
BIS(2-CHLOROISOPROPYL)ETHER	<0.91	182.0	45.8	<4
HEXACHLOROETHANE	<0.91	182.0	47	<4
NITROBENZENE	<0.91	182.0	60	<3
ENDRIN ALDEHYDE	<0.91	182.0	70	<3
1,2-TRANS-DICHLOROETHYLENE	<0.009	1.8	0.67	<3
FLUORANTHENE	<0.91	182.0	100	<2
2-NITROPHENOL	<0.91	182.0	140	<1
4-NITROPHENOL	<0.91	182.0	140	<1
N-NITROSODIPHENYLAMINE	<0.91	182.0	140	<1
1,2-DICHLOROPROPYLENE	<0.009	1.8	1.3	<1

STATION=WOL-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
BENZIDINE	<9.5	1900.0	0.0049	<387755
DIELDRIN	<0.95	190.0	0.0038	<50000
ALDRIN	<0.95	190.0	0.004	<47500
BIS(CHLOROMETHYL)ETHER	<0.009	1.8	0.00005	<36000
TOXAPHENE	<9.5	1900.0	0.16	<11875
3,3-DICHLOROBENZIDINE	<3.8	760.0	0.065	<11692
N-NITROSODI-N-PROPYLAMINE	<0.95	190.0	0.0185	<10270
PCB-1242	<9.5	1900.0	0.22	<8636
PCB-1254	<9.5	1900.0	0.22	<8636
PCB-1221	<9.5	1900.0	0.22	<8636
PCB-1232	<9.5	1900.0	0.22	<8636
PCB-1248	<9.5	1900.0	0.22	<8636
PCB-1260	<9.5	1900.0	0.22	<8636
PCB-1016	<9.5	1900.0	0.22	<8636
HEPTACHLOR	<0.95	190.0	0.023	<8261
ACENAPHTHALENE	<0.95	190.0	0.025	<7600

TABLE A-I. (CONTINUED)

STATION=WOL-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ANTHRACENE	<0.95	190.0	0.025	<7600
BENZO(A)ANTHRACENE	<0.95	190.0	0.025	<7600
BENZO(A)PYRENE	<0.95	190.0	0.025	<7600
3,4-BENZOFLUORANTHENE	<0.95	190.0	0.025	<7600
BENZO(GHI)PERYLENE	<0.95	190.0	0.025	<7600
BENZO(K)FLUORANTHENE	<0.95	190.0	0.025	<7600
CHRYSENE	<0.95	190.0	0.025	<7600
DIBENZO(AH)ANTHRACENE	<0.95	190.0	0.025	<7600
FLUORENE	<0.95	190.0	0.025	<7600
INDENO(1,2,3-CD)PYRENE	<0.95	190.0	0.025	<7600
PHENANTHRENE	<0.95	190.0	0.025	<7600
PYRENE	<0.95	190.0	0.025	<7600
CHLORDANE	<4.75	950.0	0.13	<7308
N-NITROSODIMETHYLAMINE	<0.95	190.0	0.05	<3800
HEPTACHLOR EPOXIDE	<0.95	190.0	0.186	<1022
2,4,6-TRICHLOROPHENOL	<0.95	190.0	0.2	<950
ALPHA-BHC	<0.95	190.0	0.27	<704
HEXACHLOROBENZENE	<0.95	190.0	0.3	<633
DELTA-BHC	<0.95	190.0	0.35	<543
BETA-BHC	<0.95	190.0	0.46	<413
2-CHLOROPHENOL	<0.95	190.0	0.6	<317
4,4-DDT	<0.95	190.0	0.72	<264
4,4-DDE	<0.95	190.0	0.72	<264
4,4-DDD	<0.95	190.0	0.72	<264
GAMMA-BHC	<0.95	190.0	0.9	<211
BIS(2-CHLOROETHYL)ETHER	<0.95	190.0	1	<190
1,2-DIPHENYLHYDRAZINE	<0.95	190.0	1	<190
2,4-DICHLOROPHENOL	<0.95	190.0	1.35	<141
2,4-DINITROTOLUENE	<0.95	190.0	1.6	<119
2,6-DINITROTOLUENE	<0.95	190.0	1.6	<119
HEXACHLOROCYCLOPENTADIENE	<0.95	190.0	2.1	<90
ACRYLONITRILE	<0.09	18.0	0.34	<53
4,6-DINITRO-O-CRESOL	<4.75	950.0	27.4	<35
2,4-DINITROPHENOL	<9.5	1900.0	140	<14
HEXACHLOROBUTADIENE	<0.95	190.0	14.1	<13
ACENAPHTHENE	<0.95	190.0	20	<10
1,2,4-TRICHLOROBENZENE	<0.95	190.0	26	<7
ENDRIN	<0.95	190.0	37.5	<5
BIS(2-CHLOROISOPROPYL)ETHER	<0.95	190.0	45.8	<4
HEXACHLOROETHANE	<0.95	190.0	47	<4
NITROBENZENE	<0.95	190.0	60	<3
ENDRIN ALDEHYDE	<0.95	190.0	70	<3
1,2-TRANS-DICHLOROETHYLENE	<0.009	1.8	0.67	<3
FLUORANTHENE	<0.95	190.0	100	<2

TABLE A-1. (CONTINUED)

STATION=WOL-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
2-NITROPHENOL	<0.95	190.0	140	<1
4-NITROPHENOL	<0.95	190.0	140	<1
N-NITROSODIPHENYLAMINE	<0.95	190.0	140	<1
1,2-DICHLOROPROPYLENE	<0.009	1.8	1.3	<1

TABLE A-11. METALS AND CYANIDE WARRANTING FURTHER CONSIDERATION: LISTED FOR EACH SAMPLING STATION FROM HIGHEST TO LOWEST SLI/ADI RATIO

STATION=BC-FP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	5.8	1160	0.04	29000
BERYLLIUM	0.6	120	0.2	600
THALLIUM	<5	1000	12.56	<80
LEAD	25	5000	100	50
CHROMIUM	16	3200	100	32
SILVER	<1	200	16	<13
CADMIUM	2.5	500	57.4	9
SELENIUM	0.44	88	23	4
NICKEL	<5	1000	294	<3
MERCURY	0.25	50	23.5	2

STATION=BC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	5.6	1120	0.04	28000
BERYLLIUM	2.3	460	0.2	2300
THALLIUM	<5	1000	12.56	<80
CHROMIUM	35	7000	100	70
LEAD	20	4000	100	40
CADMIUM	8.2	1640	57.4	29
NICKEL	40	8000	294	27
SILVER	<1	200	16	<13
MERCURY	0.77	154	23.5	7
SELENIUM	0.56	112	23	5
COPPER	21	4200	2000	2
ZINC	75	15000	10000	2

TABLE A-11. (CONTINUED)

STATION=BC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	6	1200	0.04	30000
BERYLLIUM	1.5	300	0.2	1500
THALLIUM	<5	1000	12.56	<80
CHROMIUM	35	7000	100	70
LEAD	18	3600	100	36
CADMIUM	9.1	1820	57.4	32
NICKEL	28	5600	294	19
SILVER	<1	200	16	<13
MERCURY	0.58	116	23.5	5
SELENIUM	0.44	88	23	4
COPPER	17	3400	2000	2
ZINC	53	10600	10000	1

STATION=CRM-1.0

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	17	3400	0.04	85000
BERYLLIUM	1.5	300	0.2	1500
MERCURY	18	3600	23.5	153
CHROMIUM	53	10600	100	106
THALLIUM	<5	1000	12.56	<80
LEAD	36	7200	100	72
NICKEL	25	5000	294	17
SELENIUM	1.9	380	23	17
SILVER	<1	200	16	<13
CADMIUM	1.6	320	57.4	6
COPPER	40	8000	2000	4
ZINC	140	28000	10000	3

TABLE A-11. (CONTINUED)

STATION=CRM-15.9

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	6.6	1320	0.04	33000
BERYLLIUM	0.9	180	0.2	900
THALLIUM	<5	1000	12.56	<80
LEAD	26	5200	100	52
CHROMIUM	17	3400	100	34
SILVER	<1	200	16	<13
CADMIUM	1.1	220	57.4	4
NICKEL	<5	1000	294	<3
SELENIUM	<0.4	80	23	<3
ZINC	84	16800	10000	2
COPPER	13	2600	2000	1
MERCURY	0.12	24	23.5	1

STATION=CRM-24

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	15	3000	0.04	75000
BERYLLIUM	1.6	320	0.2	1600
LEAD	46	9200	100	92
THALLIUM	<5	1000	12.56	<80
CHROMIUM	27	5400	100	54
SELENIUM	2	400	23	17
SILVER	<1	200	16	<13
NICKEL	11	2200	294	7
COPPER	54	10800	2000	5
CADMIUM	<1	200	57.4	<3
ZINC	150	30000	10000	3
MERCURY	0.15	30	23.5	1

TABLE A-11. (CONTINUED)

STATION=CRM-6.8

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	11	2200	0.04	55000
BERYLLIUM	1.1	220	0.2	1100
CHROMIUM	52	10400	100	104
THALLIUM	<5	1000	12.56	<80
MERCURY	9	1800	23.5	77
LEAD	31	6200	100	62
SILVER	<1	200	16	<13
NICKEL	13	2600	294	9
SELENIUM	0.88	176	23	8
CADMIUM	1.4	280	57.4	5
COPPER	27	5400	2000	3
ZINC	96	19200	10000	2

STATION=EFPC-FP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	5.8	1160	0.04	29000
BERYLLIUM	0.8	160	0.2	800
MERCURY	21	4200	23.5	179
CHROMIUM	40	8000	100	80
THALLIUM	<5	1000	12.56	<80
LEAD	39	7800	100	78
CADMIUM	3.9	780	57.4	14
SILVER	<1	200	16	<13
NICKEL	11	2200	294	7
SELENIUM	0.8	160	23	7
COPPER	38	7600	2000	4
ZINC	88	17600	10000	2

TABLE A-11. (CONTINUED)

STATION=EFPC-FP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	12	2400	0.04	60000
MERCURY	690	138000	23.5	5872
BERYLLIUM	1	200	0.2	1000
LEAD	50	10000	100	100
THALLIUM	<5	1000	12.56	<80
CHROMIUM	32	6400	100	64
CADMIUM	10	2000	57.4	35
NICKEL	42	8400	294	29
SILVER	2	400	16	25
COPPER	180	36000	2000	18
SELENIUM	0.44	88	23	4
ZINC	100	20000	10000	2

STATION=EFPC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	4.6	920	0.04	23000
BERYLLIUM	0.4	80	0.2	400
MERCURY	19	3800	23.5	162
THALLIUM	<5	1000	12.56	<80
LEAD	36	7200	100	72
CHROMIUM	35	7000	100	70
SILVER	2	400	16	25
CADMIUM	2.5	500	57.4	9
COPPER	51	10200	2000	5
SELENIUM	0.52	104	23	5
NICKEL	<5	1000	294	<3
ZINC	97	19400	10000	2

TABLE A-11. (CONTINUED)

STATION=EFPC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	12	2400	0.04	60000
MERCURY	240	48000	23.5	2043
BERYLLIUM	1.2	240	0.2	1200
LEAD	71	14200	100	142
CHROMIUM	65	13000	100	130
THALLIUM	<5	1000	12.56	<80
NICKEL	92	18400	294	63
SILVER	5	1000	16	63
CADMIUM	10	2000	57.4	35
COPPER	140	28000	2000	14
SELENIUM	1	200	23	9
ZINC	370	74000	10000	7

STATION=NHP-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	48	9600	0.04	240000
BERYLLIUM	5.7	1140	0.2	5700
MERCURY	170	34000	23.5	1447
CHROMIUM	360	72000	100	720
LEAD	200	40000	100	400
NICKEL	240	48000	294	163
SILVER	8	1600	16	100
THALLIUM	<5	1000	12.56	<80
CADMIUM	22	4400	57.4	77
COPPER	550	110000	2000	55
SELENIUM	3	600	23	26
ZINC	1200	240000	10000	24

TABLE A-11. (CONTINUED)

STATION=NHP-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	50	10000	0.04	250000
BERYLLIUM	5.2	1040	0.2	5200
MERCURY	160	32000	23.5	1362
CHROMIUM	390	78000	100	780
LEAD	220	44000	100	440
SILVER	14	2800	16	175
NICKEL	150	30000	294	102
THALLIUM	<5	1000	12.56	<80
CADMIUM	15	3000	57.4	52
COPPER	410	82000	2000	41
ZINC	1000	200000	10000	20
SELENIUM	1.4	280	23	12
ANTIMONY	1.5	300	294	1

STATION=PC-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	35	7000	0.04	175000
BERYLLIUM	1.6	320	0.2	1600
MERCURY	42	8400	23.5	357
CHROMIUM	51	10200	100	102
THALLIUM	<5	1000	12.56	<80
LEAD	28	5600	100	56
NICKEL	35	7000	294	24
SILVER	<1	200	16	<13
SELENIUM	1.1	220	23	10
CADMIUM	1.9	380	57.4	7
COPPER	59	11800	2000	6
ZINC	110	22000	10000	2

TABLE A-11. (CONTINUED)

STATION=PC-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	10	2000	0.04	50000
BERYLLIUM	0.9	180	0.2	900
THALLIUM	<5	1000	12.56	<80
CHROMIUM	32	6400	100	64
LEAD	30	6000	100	60
MERCURY	2.4	480	23.5	20
SILVER	<1	200	16	<13
COPPER	60	12000	2000	6
SELENIUM	0.52	104	23	5
CADMIUM	<1	200	57.4	<3
NICKEL	5	1000	294	3
ZINC	87	17400	10000	2

STATION=PC-3

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	6.8	1360	0.04	34000
BERYLLIUM	0.6	120	0.2	600
THALLIUM	<5	1000	12.56	<80
LEAD	19	3800	100	38
NICKEL	40	8000	294	27
CHROMIUM	12	2400	100	24
SILVER	<1	200	16	<13
SELENIUM	0.68	136	23	6
CADMIUM	1.1	220	57.4	4
ZINC	100	20000	10000	2
COPPER	12	2400	2000	1
MERCURY	0.12	24	23.5	1

TABLE A-11. (CONTINUED)

STATION=WOL-1

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	6.4	1280	0.04	32000
BERYLLIUM	1.1	220	0.2	1100
CHROMIUM	180	36000	100	360
LEAD	100	20000	100	200
SILVER	6.9	1380	16	86
THALLIUM	<5	1000	12.56	<80
MERCURY	3	600	23.5	26
NICKEL	26	5200	294	18
CADMIUM	3.4	680	57.4	12
COPPER	31	6200	2000	3
SELENIUM	<0.4	80	23	<3
ZINC	120	24000	10000	2

STATION=WOL-2

COMPOUND	SEDIMENT CONCENTRATION (UG/G)	SLI (UG/D)	ADI (UG/D)	RATIO
ARSENIC	6.4	1280	0.04	32000
BERYLLIUM	1.4	280	0.2	1400
CHROMIUM	290	58000	100	580
LEAD	110	22000	100	220
SILVER	11	2200	16	138
THALLIUM	<5	1000	12.56	<80
MERCURY	5.9	1180	23.5	50
NICKEL	28	5600	294	19
CADMIUM	2.5	500	57.4	9
COPPER	43	8600	2000	4
ZINC	180	36000	10000	4
SELENIUM	<0.4	80	23	<3

TABLE A-III. RADIONUCLIDES WARRANTING FURTHER CONSIDERATION: LISTED FOR EACH SAMPLING STATION FROM HIGHEST TO LOWEST SLI/ADI RATIO

STATION=BC-1

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	240	480.000	70	7
U-238	3500	0.700	0.4	2
NP-237	17	0.003	0.0025	1

STATION=BC-2

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	170	340	70	5

STATION=CRM-1.0

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
CS-137	1600	3.2	2	2

STATION=CRM-6.8

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	200	400.0	70	6
CS-137	1200	2.4	2	1

STATION=EFPC-FP-1

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	88	176	70	3

TABLE A-III. (CONTINUED)

STATION=EFPC-1

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	170	340	70	5

STATION=NHP-1

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	240	480.00	70	7
TH-232	1100	0.22	0.04	6
U-234	8800	1.76	0.36	5
U-238	8800	1.76	0.4	4
TH-228	1400	0.28	0.25	1

STATION=NHP-2

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	250	500.00	70	7
U-234	10000	2.00	0.36	6
U-238	8100	1.62	0.4	4

STATION=PC-1

RADIONUCLIDE	SEDIMENT CONCENTRATION (BQ/KG)	SLI (BQ/D)	ADI (BQ/D)	RATIO
TC-99	95	190	70	3

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