ASSESSMENT OF PCBs, SELECTED ORGANIC PESTICIDES AND MERCURY IN FISHES FROM NEW JERSEY: 1998-1999 MONITORING PROGRAM

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EXECUTIVE SUMMARY

Prior to this study, the most recent monitoring for organic contaminants and mercury in fish from New Jersey's coastal waters was in 1991. To assess the possible temporal and spatial changes in contamination since that time, and to provide more up-to-date and extensive monitoring data regarding contaminant levels in New Jersey fishes, this study was implemented in 1998. Over 300 samples were analyzed for polychlorinated biphenyls, organochlorine pesticides (e.g., DDT and its metabolites, and chlordanes) and mercury from locations extending from Raritan Bay to the Delaware River and its tributaries. Using the US Food and Drug's Action Limits (as well as state-promulgated guidelines), a cursory assessment of risk based on exceedances of these limits was made. Based on the number, species and locations of the exceedances of US FDA action limits for PCBs and chlordanes, the following regions of concern were designated: 1) the Camden area (Newton Lake, Strawbridge Ponds, Pennsauken River and Cooper River Lake), based largely on chlordane concentrations within common carp, 2) sections of the Delaware River and its tributaries (e.g., Raccoon Creek) based on PCB concentrations, mainly in American eel, and 3) Raritan Bay, based on higher than average concentration of PCBs in American eels (and white perch). Comparisons with historical data sets were made. For most species and regions, concentrations of PCBs and chlordanes have decreased markedly compared to evaluations made a decade ago. Changes in DDX are more equivocal, with some groups showing decreases, but with little evidence of change for other comparisons. The observed decreases could be due to environmental cleanup, pollution prevention programs, degradation, or changes in the bioavailability of contaminants.

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INTRODUCTION

Since 1975, the State of New Jersey (Department of Environmental Protection; NJ DEP) has conducted a fish tissue monitoring program for mercury and chlorinated hydrocarbons, including polychlorinated biphenyls (PCBs) and various pesticides (e.g., chlordanes, DDTs). The main objectives of this program are to determine ambient levels of contaminants in selected species, to evaluate any geographic variations, and to determine potential human health impacts. The monitoring has concentrated on contamination of finfish and shellfish of recreational or commercial importance (NJ DEP 1990; Kennish and Ruppel 1996; Hauge 1993; Horwitz et al. 1995).

Health advisories have been issued and are in effect, based upon this comprehensive monitoring program (Ruppel et al. 1994; NJ Fish and Wildlife Digest 2000). Different advisories are specified for high risk individuals (including children and women of reproductive age) and the general population. For example, based on organic contaminants, there are statewide advisories for American eel (*Anguilla rostrata*) and bluefish (*Pomatomus saltatrix*) over six pounds. The advisories recommend no consumption by high risk individuals and limited consumption (no more than once per week) for the general population. There are also local advisories based on contamination in individual drainages or waterbodies. For example, based on chlordane contamination, no consumption of fish or crustaceans from the Camden area is recommended. Other advisories include the restricted consumption of:

- striped bass (*Morone saxatilis*) in the Newark Bay area, the Raritan Bay area, the Hudson River, Northern coastal waters, and the Delaware River, Estuary and Bay;
- blue crab (*Callinectes sapidus*) from the Hudson River and Raritan Bay;
- white perch (*Morone americana*) and white catfish (*Ameiurus catus*) from Newark Bay area and parts of the Delaware River, Estuary and Bay;
- all finfish from the Delaware River between the Delaware/Pennsylvania border and the C and D Canal.

Restricted consumption of some predatory fish (mainly largemouth bass *Micropterus salmoides* and chain pickerel *Esox niger*) is recommended in fresh waters of the state based on mercury contamination. Consumption advisories are also in place for adjacent states in some adjoining waterways (e.g., the State of Delaware for the Delaware River), based on organic contaminants.

The most recent monitoring for organic contaminants (e.g., PCBs, DDT and its metabolites, and chlordanes) throughout the state and for mercury in coastal fish was in 1991. Significant changes in fish body burdens could have occurred due to environmental cleanup, pollution prevention programs, chemical degradation of contaminants, or changes in the bioavailability of

contaminants. To provide current information on concentrations of contaminants, a new study was implemented to analyze concentrations of PCBs, selected pesticides and mercury in fish species from areas under the current advisory and from selected areas with little or no current information. Fish were collected in 1998-1999 for this study. These data will be used to determine geographic and temporal variation of these compounds and to assess the human health risk and suitability for human consumption. The individual data from this study were reported to the State of New Jersey in July 2000. This report provides a summary of the current data with respect to spatial trends and differences among species, comparisons with results of previous New Jersey monitoring studies, and documentation of methods and quality assurance/quality control procedures.

The study design for the 1998-1999 monitoring is shown in Table 1, and sampling locations are shown in Figure 1. Analyses are based on individual fillet samples. Analyses focused on:

- striped bass and bluefish; bioaccumulation of some contaminants may be important for these large, predatory fish because of their longevity and trophic position;

- eels; bioaccumulation of contaminants can be important for eels, because of their high lipid content and diet, which includes benthic prey items;

- a range of freshwater fish species from the Camden area, which has been identified as an area of chlordane bioaccumulation in previous studies; species analyzed included benthic species (carp and bullheads), top predators (largemouth bass), important recreational species (sunfishes), and species with high lipid content (carp);

- a range of freshwater fish species from the Raritan-Passaic drainage, which has been identified as an area of concern for several contaminants in previous studies; analyses included a variety of freshwater fish from the river and several coastal species from the estuary;

- several specimens of snapping turtles were analyzed from different parts of the state. Bioaccumulation of mercury or other contaminants was identified as a potential issue in previous studies (ANSP 1994; Horwitz et al. 1995), and snapping turtles have been used for contaminant monitoring in other states (Bryan et al. 1987; Bonin et al. 1995). Snapping turtles are harvested for human consumption, so monitoring for possible human health risks is important.

Table 1. Study design for the 1998-1999 NJ Monitoring study.

Region Short	Station	Waterbody	Location	Amer. eel	Striped bass	Blue-fish	White perch	Catfish	Catfish species	Com-mon carp	Large-mouth bass	Sunfish	Sunfish species	Black crappie	Snap-ping turtle	TOTAL
AOC	AOC	Atlantic Ocean	Asbury park to Atlantic City		7	9										16
AON	AON	Atlantic Ocean	North of Asbury Park		10	9										19
AOS	AOS	Atlantic Ocean	Atlantic City to Cape May		6	8										14
Cam	CRE	Cooper River	at and just below Evans Pond					3	Amneb	5		2	Lemac			10
Cam	CRE*	Cooper River	"Hopkins Pond"					2	Amneb							2
Cam	CRL	Cooper River	Cooper River Lake					3	Amneb	5	3	3	Lemac			14
Cam	NEW	Newton Lake						3	Amneb	5	3	3	Lemac			14
Cam	PNR	Pennsauken River	Forked Landing	1				1	Amneb	5	3	1	Lemac		1	12
	PNR	Pennsauken River	Forked Landing					4	Amcat			2	Legib			6
Cam	STB	Strawbridge Ponds						4	Amneb	5	3	2	Lemac	1	1	16
	STB	Strawbridge Ponds						1	Icpun							1
Cam	STL	Stewart Lake						3	Amneb	5	3	2	Lemac	1	1	15
DB	DBL	Delaware Bay	Salem to Cape May		10	5										15
DBtr	CHR	Cohansey River	Greenwich and mouth	5												5
DBtr	MAS	Maskells Mill Lake													1	1
DBtr	MRR	Maurice River	Mauricetown, Port Norris	5												5
DR	DRD	Delaware River	National Park to Deepwater	6	2											8
DR	DRTA	Delaware River	Above Trenton	6	4											10
DR	DRTB	Delaware River	Trenton to just above National Park	5	7											12
DR	RC	Raccoon Creek		8	1											9
NCtr	NVR	Navesink River	Estuary	3												3
NCtr	SBR	Shrewsbury River	Estuary	7												7
NCtr	SKR	Shark River	Estuary	6												6
PBtr	CBB	Cranberry bog	near Vincentown												1	1
PBtr	MLR	Mullica River	Below dam at Batsto to Green Bank	6												6
PBtr	TR	Toms River	Toms River	6												6
Rar	POMP	Pompton Lake													1	1
Rar	PRE	Passaic River	Elmwood Park	4				3	Amneb	6	3	3	Leaur			19
Rar	PRP	Passaic River	Pompton							4	3	3	Leaur			10
Rar	RBM	Raritan Bay	At Rt. 1	4			5	1	Amnat							10
Rar	RBU	Raritan Bay	Raritan Bay upper		5	4										9
Rar	RRL	Raritan Bay	Raritan River lower			6	3									9
TOTAL				**72**	**52**	**41**	**8**	**28**	**0**	**40**	**21**	**21**	**0**	**2**	**6**	**291**

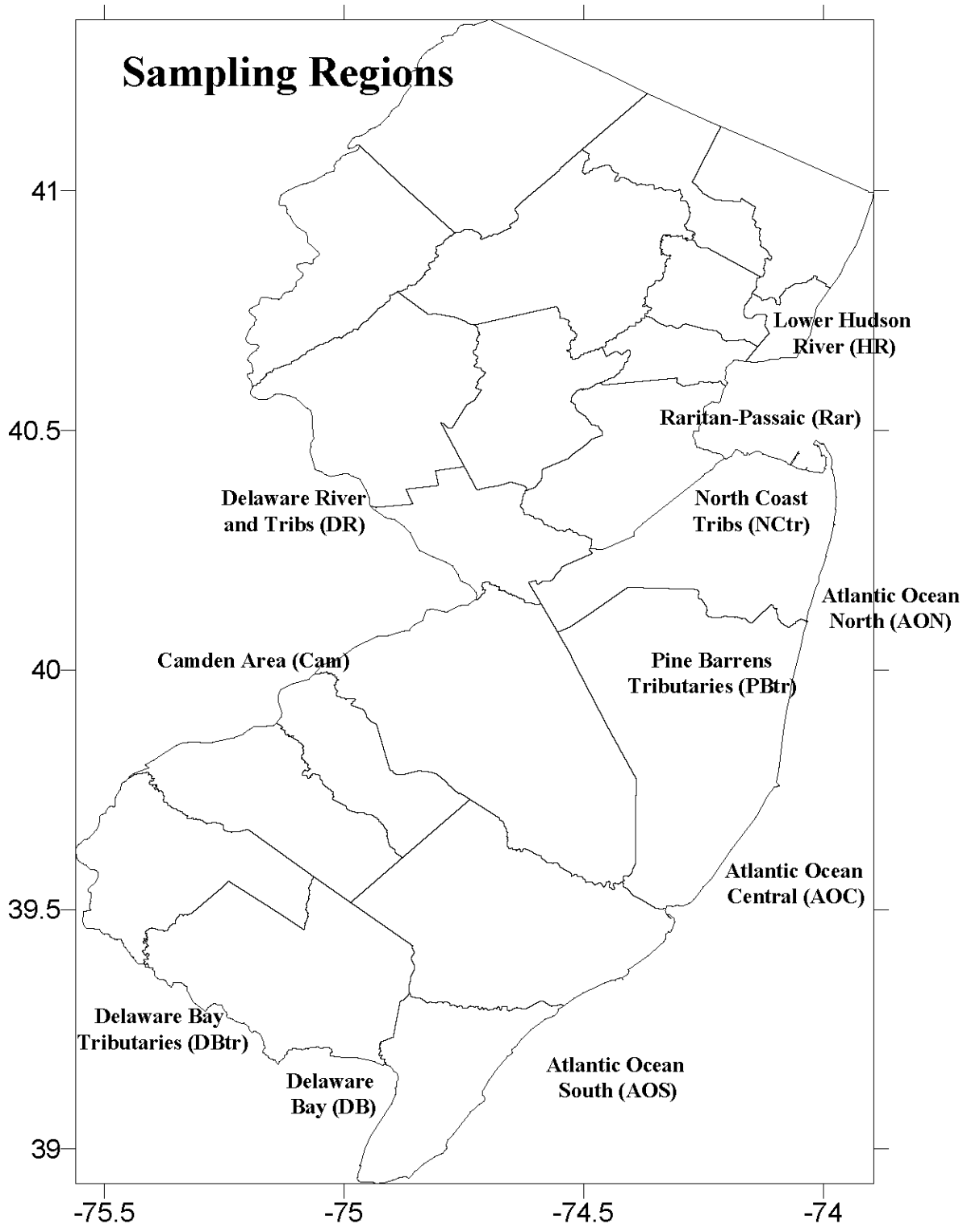

Figure 1. Sampling locations for the NJ Monitoring Study.

METHODS

Collections

Fish were collected by a variety of methods, as appropriate for the species and sampling locations. Boat electro-shocking was done in most of the freshwater sampling sites, including the Delaware River (for striped bass) and small lakes, ponds, impoundments and streams (for a variety of species, such as carp, bass, bullheads and eels). Baited traps and eel pots were used in a number of sites to collect eels and/or bullheads. Angling was done at the Atlantic Ocean sites to collect striped bass and bluefish, and in a few other sites. Gill nets were used in some freshwater ponds (e.g., Strawbridge Lakes) to collect a variety of species. In addition, some striped bass and bluefish were obtained from gill net catches of commercial fishermen and the New Jersey Department of Fish and Game. Snapping turtles were collected in hoop nets or by hand. Most specimens were obtained by staff of the Academy of Natural Sciences and/or New Jersey Department of Fish and Game. Some specimens were obtained from other researchers, commercial fishermen or anglers, where adequate sample handling (fish not gutted or filleted, held on ice, etc.) and documentation (place of capture) was assured.

Sample Handling and Preparation

Specimens were placed on ice as soon after capture as practical. Specimens were held in metal containers (typically stainless steel) until processing. Within 24 h of capture (usually less), specimens were wrapped in muffled aluminum foil sealed with freezer tape, and placed in freezers. Specimens were labeled with both internal and external tags. Specimens were held frozen until thawed for sample preparation. Samples were maintained with complete sample documentation (chain-of-custody forms, etc.) consistent with the QA/QC Plan.

Specimens were thawed prior to sample preparation. After thawing, specimens were examined to confirm identification, sample number and to check for anomalies, parasites, etc. Specimens were weighed (g) and measured (total length, cm). Fillet samples were taken with the skin removed. For snapping turtles, leg meat was dissected. The entire sample (fillet, pair of fillets, or turtle leg meat) was homogenized and the homogenate was split for the required analyses. Utensils and plates on which samples were processed were cleaned prior to use and between preparation of separate samples.

Chemical Analyses

Mercury

Strong acid digestions were performed using 10 ml nitric acid on approximately 1 g homogenized wet fish material in a CEM MDS 2100 microwave digestion system. Mercury analysis was subsequently accomplished on a Perkin Elmer Fimms 400 Cold Vapor AA.

Calibration blanks, inter-calibration verification samples, and instrument duplicates were analyzed to ensure instrument performance and accuracy. Quality assurance/quality control results are presented in Appendix I.

Polychlorinated Biphenyls and Organochlorine Pesticides

Homogenized fish samples were stored frozen until extraction. Samples were thawed and 2 g of the homogenate was subsampled using a stainless steel spatula. An additional 2- to 5-g subsample was taken for moisture analysis. Approximately 30 g of Na_2SO_4 (previously extracted with hexane using a Soxhlet extractor and dried) was added to the sub-sample to eliminate water. The dried sample was placed in a glass thimble and extracted using a Soxhlet extractor with approximately 200 ml dichloromethane (DCM) for a minimum of 18 hours. The extracts were sub-sampled for gravimetric lipid determination. For this, a known volume of extract was transferred to a pre-weighed aluminum pan. The solvent was evaporated at 110°C for at least 24 h. The residue remaining (lipid) was weighed and percent lipid was calculated.

Lipids were removed from sample extracts by gel permeation chromatography (GPC) using DCM as the mobile phase. The collected fraction containing analytes was concentrated by roto-evaporation and a N_2 stream. Solid-liquid chromatography using florisil was done as an additional clean-up step. Using this technique, PCBs (as well as heptachlor, nonachlors, and DDEs) were eluted from the chromatographic column containing Florisil using petroleum ether (F1 fraction). The remaining organochlorine pesticides were eluted using 50:50 petroleum ether and dichloromethane (F2 fraction).

Congener-specific PCBs and organochlorine pesticides (Table 2) were analyzed using a Hewlett Packard 5890 gas chromatograph equipped with a ^{63}Ni electron capture detector and a 5% phenylmethyl silicon capillary column. The identification and quantification of PCB congeners followed the '610 Method' (Mullin, 1985) in which the identities and concentrations of each congener in a mixed Aroclor standard (25:18:18 mixture of Aroclors 1232, 1248 and 1262) were determined by calibration with individual PCB congener standards. Congener identities in the sample extracts were based on their chromatographic retention times relative to the internal standards added. In cases where two or more congeners could not be chromatographically resolved, the combined concentrations were reported (Table 2). Organochlorine pesticides (OCPs) were identified and quantified based on comparisons (retention times and peak areas) with a known calibration standard prepared from individual compounds. A detailed description of the quality assurance/control procedures and results appears in Appendix I.

Data Reporting

Data are reported as quantified concentrations (typically ng/g wet weight) of single compounds or as groups of compounds. Unquantifiable data require decisions on data handling. There were three classes of non-quantifiable data:

Table 2. List of target organic analytes for the 1998-1999 NJ Monitoring study.

Organochlorine Pesticides	Polychlorinated Biphenyls*		
BHC (alpha, beta, gamma, delta)	1	40	137,176
Heptachlor	3	100	163,138
Heptachlor Epoxide	4,10	63	158
Chlordanes (gamma and alpha)	7	74	129,178
Nonachlors (cis[#] and trans)	6	70,76	187,182
Dieldrin	8,5	66,95	183
DDDs (o,p and p,p)	14	91	128
DDEs (o,p[+] and p,p)	19	56,60	185
DDTs (o,p and p,p)	12,13	101	174
Aldrin	18	99	177
Endosulfan I and II	17	83	202,171
Endrin	24,27	97	172,197
Oxychlordane	16,32	81,87	180
	29	85	193
	26	136	191
	25	77,110	199
	31,28	82	170,190
	33,21,53	151	198
	22	134,144	201
	45	107	203,196
	46	149	189
	52	118	208,195
	49	134	207
	48,47	131	194
	44	146	205
	37,42	132,153,105	206
	41,71	141	209
	64		

* PCB congeners appearing as pairs or triplets were coeluted and reported as sum.
+ o,p-DDE coelutes with PCB congeners 92,85
# Evidence for PCB coelution with cis-nonachlor

1) Non-detect (ND), i.e., there was no evidence of the substance being present.

2) Below detection limit (BDL), i.e., a signal for the substance was detected, but the concentration was below the detection limit, which is defined to provide a high level of confidence that the signal reflects actual presence.

3) Unquantifiable (UQ); for a few data, the signal indicated interference, etc. Thus, while a signal was detected, it is not considered to represent presence of the contaminant.

There are several ways of handling these data in calculating totals for groups of contaminants (e.g., total PCBs from the sum of congeners; sum of BHC components). For this report, four methods have been used for handling these non-quantifiable data:

1) Min. All three classes (ND, BDL and UQ) are set to 0.

2) Mid. ND and UQ are set to 0, and BDL is set to one-half the detection limit.

3) Max. ND and BDL are set equal to the detection limit. UQ is treated as 0 concentration.

4) Reg. FDA action levels (see below) typically specify how low concentrations are to be handled. Exceedances are based on the specified methods.

Methods 1) and 3) are expected to underestimate and overestimate total concentrations, respectively. They are used here to bracket estimates. Method 2) (mid) may either underestimate or overestimate concentrations depending on the distribution of concentrations, but this bias will only be important for very low concentrations of contaminants. In general, the patterns of concentrations among species, sites, etc. are very similar for the three methods. While precise values may vary among the methods, these differences only vary by a few per cent at the most. Detection limits are low relative to action levels, so that conclusions about exceedances of regulatory thresholds are not sensitive to the method used. Similarly, conclusions about spatial patterns of groups of contaminants (e.g., chlordanes, PCBs, DDT and metabolites) are not affected by the method used, since individual components (individual congeners, etc.) were well above detection limits for virtually all specimens. Therefore, if not specifically stated, the "mid" method is most frequently used to report concentrations in this report.

Six compounds comprise DDT and its metabolites (o,p' DDT and p,p' DDT, o,p' DDE, p,p' DDE, o,p' DDD and p,p' DDD). The sum of the concentrations of these six compounds (termed total DDX) was used as an indicator of DDX contamination. However, there was coelution of other contaminants (probably some PCBs) with both o,p' DDT and o,p' DDE. Consequently, the concentrations of these two analytes were overestimated. Moreover, the sum of all quantified forms ("total DDX" concentrations) should also be considered to be overestimated. To provide a more reliable value of DDX, this report includes the sum of the remaining DDX conformations which did not undergo analytical coelution with other matrix components. Only the min estimate of this sum (called pos min DDX) is presented. For risk assessment, total DDX may be more

appropriate, while pos min DDX may be more appropriate when detecting spatial patterns in DDX occurrences unaffected by other contaminants.

Two measures of chlordanes were used in this report. The sum of cis- and trans- chlordanes (called cis/trans chlordane) was used for temporal comparisons because these were used in previous studies (e.g., Kennish and Ruppel 1997). For regulatory assessment, concentrations of cis- and trans-nonachlor, and oxychlordane were included as well (this sum is termed "total chlordanes"). Note that chlordenes were not quantified in this study and subsequently cannot be included in this total. Chlordenes are expected to be a relatively small component of total chlordanes.

RESULTS

Overview of Data Set

The resulting contaminant concentrations for each sample (expressed in wet weight), in addition to the other acquired data such as lipid content, weight, length, etc., appear in Appendix II. Because of the enormous amount of information contained in this data set, an attempt to reduce its complexity was made.

Samples were first sorted by station and assigned an abbreviation and code (Table 3), facilitating an easier description of the results. Samples were then sorted according to species within each of these collection stations. Throughout the entire monitoring effort, a total of 15 different species were collected from a total of ten stations. The total number of individuals caught at each station are summarized in Table 4.

Table 3. Groupings of stations used to summarize spatial patterns in contaminants.

Region	Abbrev	Code	Station	Station Name	Specific Locations
Atlantic Ocean Central	AOC	C	AOC	Atlantic Ocean, Asbury Park to Atlantic City	Island Beach State Park
Atlantic Ocean north	AON	N	AON	Atlantic Ocean, North of Asbury Park	Near Sandy Hook Near Belmar
Atlantic Ocean south	AOS	S	AOS	Atlantic Ocean, Atlantic City to Cape May	At and near Cape May rips Out of Wildwood Crest
Delaware Bay tributaries	DBtr	M	MRR	Maurice River	Mauricetown, Port Norris
			CHR	Cohansey River	Near Greenwich
			MAS	Maskells Mill Lake	
Camden area	Cam	E	CRE	Cooper River at and just below Evans Pond	
			CRE*	Cooper River: Hopkins Pond	
			CRL	Cooper River Lake	
			NEW	Newton Lake	
			PNR	Pennsauken River	Forked Landing
			STL	Stewart Lake	
			STB	Strawbridge Ponds	

Table 3 (continued). Groupings of stations used to summarize spatial patterns in contaminants.

Region	Abbrev	Code	Station	Station Name	Specific Locations
Delaware Bay	DB	B	DBL	Delaware Bay, Salem to Cape May	
					Reeds Beach
					Bowers Beach
					Below Reedy Island
					Below Dennis Creek
Delaware River and tribs	DR	R			
			DRTB	Delaware River, Trenton to National Park	
					Trenton
					At Crosswick Creek
					At Philadelphia/Camden
					At Paulsboro
			DRTA	Delaware River, Above Trenton	
					Near Easton
					Near Raubsville
			RC	Raccoon Creek	
			DRD	Delaware River, Deepwater to National Park	
					Near Fort Mifflin
					Below National Park
					Pennsville
Hudson River	HR	U	HR	Hudson River, Lower	No samples in 1998-1999 program
North coast tributaries	NCtr	H			
			SBR	Shrewsbury River	Estuary
			NVR	Navesink River	Estuary, At Red Bank
			SKR	Shark River	Estuary
Pine Barrens tributaries	PBtr	P			
			TR	Toms River	Toms River
			MLR	Mullica River	below dam at Batsto, Green Bank, New Gretna
			CBB	Cranberry Bog near Vincentown	
Raritan-Passaic area	Rar	A			
			PRP	Passaic River at Pompton	
			PRE	Passaic River at Elmwood Park	
			POMP	Pompton Lake	
			RBU	Raritan Bay	At Perth Amboy
			RBM	Raritan Bay	At Route 1
			RBL	Raritan Bay	At Union Beach
			RRL	Raritan River lower	At Route 35

Table 4. Number of species collected for PCBs, OCPs and Hg or all three combined.

Location:	AOC	AON	AOS	Cam		DB	DBtr	DR	NCtr	PBtr	Rar			
Analytes: / Common Name	ALL	ALL	ALL	PCBs and OCPs	Hg	ALL	ALL	ALL	ALL	ALL	ALL	TOTAL	TOTAL	TOTAL
American eel				1	1		10	25	16[c]	11[d]	8	71	71	69
black crappie				2	1							2		1
bluefish	8	9	8			5					10	40	40	40
bluegill				13	3							13	13	3
brown bullhead				19	3						3	19	19	6
channel catfish				1	0							1	1	0
common carp				30	10						10	30	30	20
common snapping turtle				3	3		1			1	2	7	7	7
largemouth bass				15	6						6	21	21	12
pumpkinseed				2	3							2	2	3
redbreast sunfish											6	6	6	6
striped bass	7	9[a]	6[b]			10		14			5	51	50	52
white catfish				4	4							8	8	4
white perch											8	8	8	8
yellow bullhead											1[e]	1	1	0

[a] 9 specimens for PCBs and OCPs; 10 specimens for Hg.
[b] 6 specimens for PCBs and Hg; 5 specimens for OCPs.
[c] 16 specimens for PCBs and OCPs; 15 specimens for Hg.
[d] 11 specimens for PCBs and OCPs; 10 specimens for Hg.
[e] 1 specimen for PCBs and OCPs; 0 specimens for Hg.

Ranges and Means

To further facilitate easy recognition of regions and species of concern, means of contaminant concentrations were calculated for each species in each of the designated collection areas of Table 3. The following sub-sections summarize these observations according to analyte.

Mercury

For American eels, striped bass and bluefish, mean mercury concentrations ranged from 0.15 μg/g (eels from North coastal tributaries) to 0.72 μg/g (striped bass from the Atlantic Ocean in the southern part of the state) (Table 5). Mercury concentrations in American eels were not well related to length (Figure 2). Moreover, lipid content was not well correlated to mercury concentrations (Figure 3). Highest mercury concentrations were in eels from the Pine Barrens tributaries of the Mullica and Tom's River. Length was well related to mercury concentration for bluefish, with a number of exceptions from fish caught in Raritan and Delaware Bays that had higher concentrations than expected based on length (Figure 4). For striped bass, concentrations showed more scatter when compared to length, though a relationship was discernable (Fig. 5). For the remaining fish species, mean mercury concentrations ranged from 0.02 (Camden brown bullheads) to 0.44 (Raritan largemouth bass) (Table 5).

PCBs

Mean PCB concentrations in fish tissue ranged from 26 ng/g (Raritan yellow bullheads) to 1006 ng/g (Raritan American eels) (Table 6). Common carp from Raritan Bay and American eels from Delaware Bay also had high mean concentrations (978 and 921 ng/g, respectively). Snapping turtles from four sites had the lowest mean PCB concentrations (< 35 ng/g). For American eels and striped bass, PCB concentrations increased with increasing length and lipid (Figs. 6 and 7). In general, American eels from the Delaware River and its tributaries, and from Raritan Bay, had higher concentrations than those collected elsewhere. Upon lipid normalization of PCB concentrations, a substantial number of eels from Raritan Bay had elevated levels of PCBs which could not be explained by their lipid content or length (Fig. 8). This suggests that these eels may be utilizing habitats that contain elevated levels of PCBs. In these more contaminated areas, proximity to contamination (or habitat use) may play a larger role in determining PCB body burdens as opposed to such factors as lipid content and length.

Highest PCB concentrations in striped bass were observed in fish from the north and south coasts of New Jersey and Delaware Bay/River. Upon lipid normalization of t-PCB concentrations (Fig. 9), striped bass from Raritan Bay still had levels of PCBs that were higher than expected based on lipid content and length. For bluefish, PCB concentrations increased with lipid content (Fig. 10), however, the trend was not as pronounced as with other species because bluefish lipid content varied less widely. There was no discernable difference in concentrations among stations for bluefish. Furthermore, concentration was not clearly related to length, and differences in concentration may reflect annual variations in habitat use. Skinny, large fish were probably post-spawners and depuration of PCBs may take place during spawning.

Table 5. Mean Hg concentrations (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	NW	PBtr	Rar
striped bass	0.37	0.33	0.72		0.35		0.33				0.21
bluefish	0.43	0.46	0.57		0.42						0.20
American eel				0.30		0.20	0.17	0.15		0.45	0.21
black crappie				0.10							
bluegill				0.03							
brown bullhead				0.02							0.08
chain pickerel									0.31		
common carp				0.03							0.21
common snapping turtle				0.10		0.37				0.22	0.43
largemouth bass				0.17							0.44
pumpkinseed				0.16							
redbreast sunfish											0.25
white catfish				0.04							
white perch											0.2

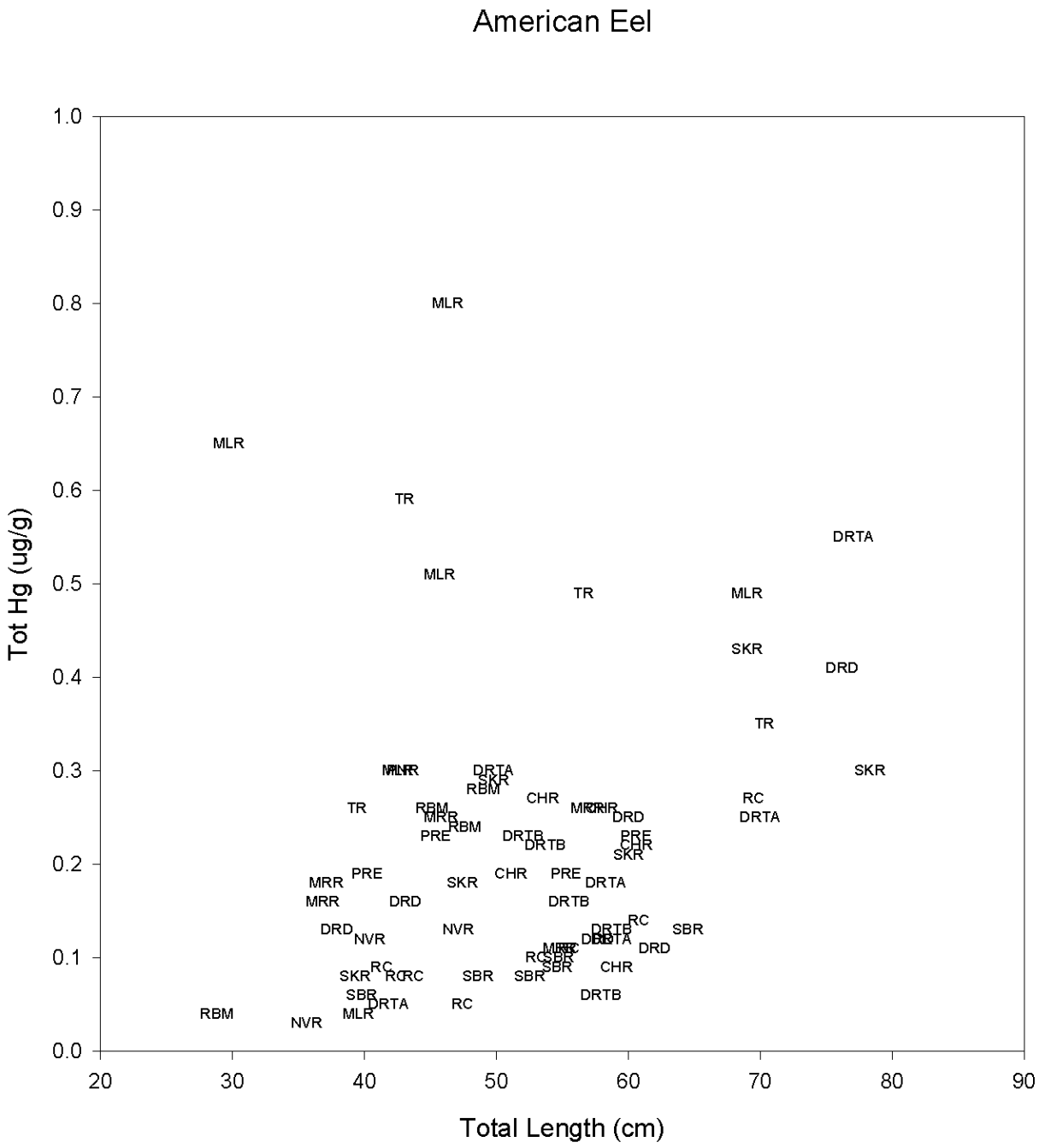

Figure 2. Relationship between Hg concentration (μg/g wet weight) and length (cm) for American eels.

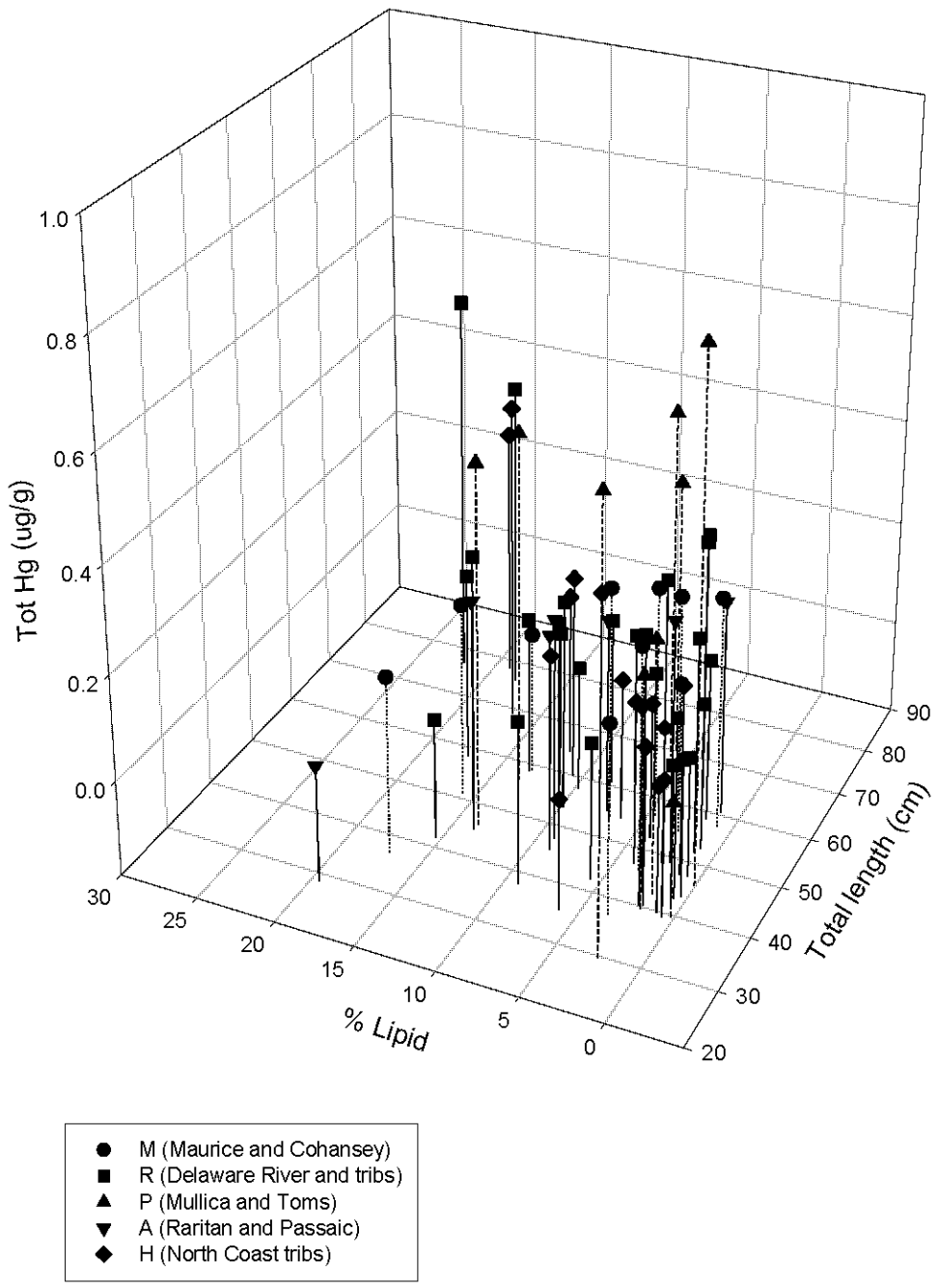

Figure 3. Relationship between Hg concentration (μg/g wet weight), lipid content (%wet weight), and length (cm) for American eels.

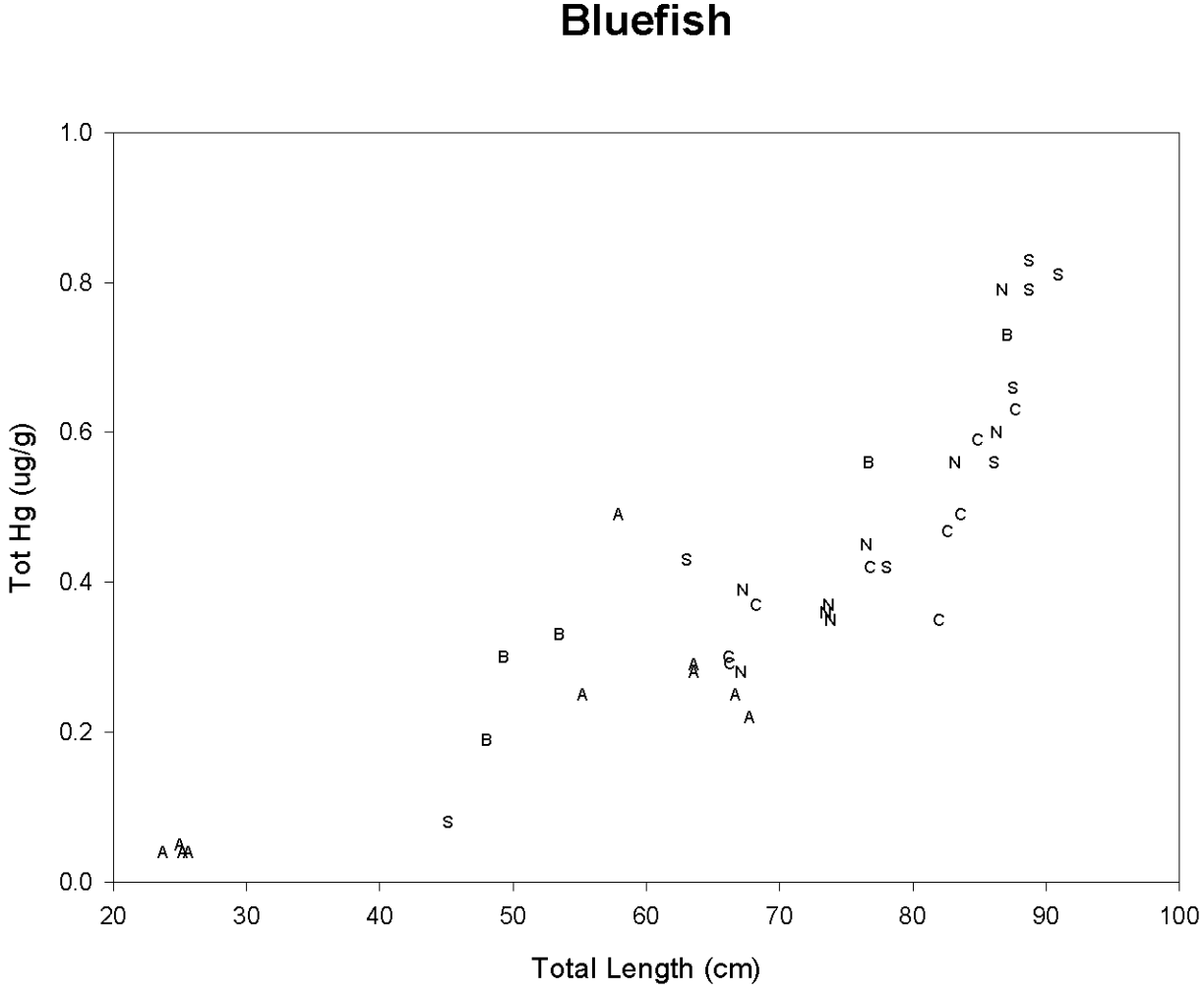

Figure 4. Relationship between Hg concentration (μg/g wet weight) and length (cm) for bluefish.

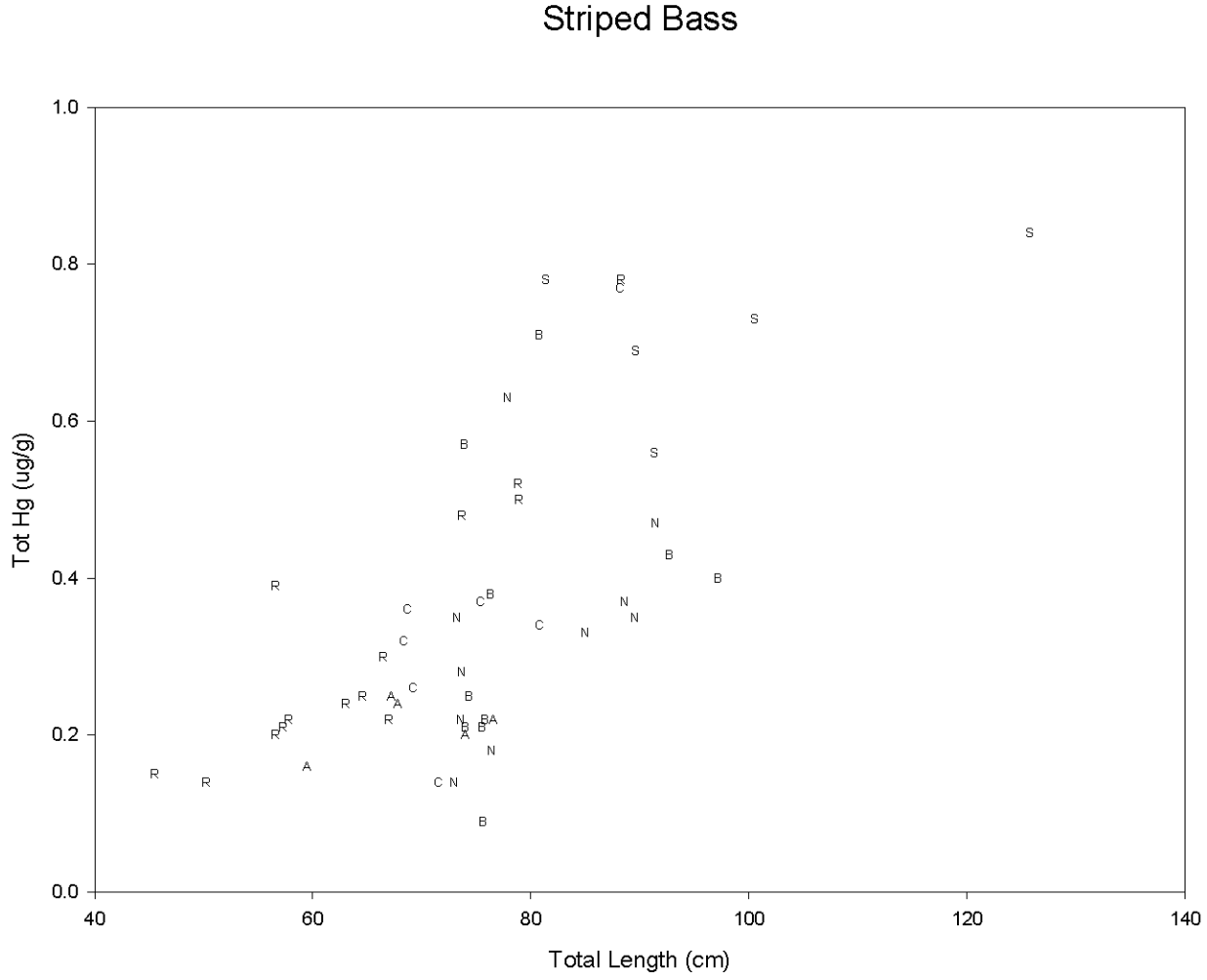

Figure 5. Relationship between Hg concentration (μg/g wet weight) and length (cm) for striped bass.

Table 6. Mean total PCB (mid) (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
striped bass	307	463	483		680		629			431
bluefish	646	562	657		703					366
American eel				369		114	921	321	141	1006
black crappie				37						
bluegill				62						
brown bullhead				45						112
channel catfish				302						
common carp				674						978
common snapping turtle				34		13			15	15
largemouth bass				361						123
pumpkinseed				143						
redbreast sunfish										60
white catfish				146						
white perch										893
yellow bullhead										26

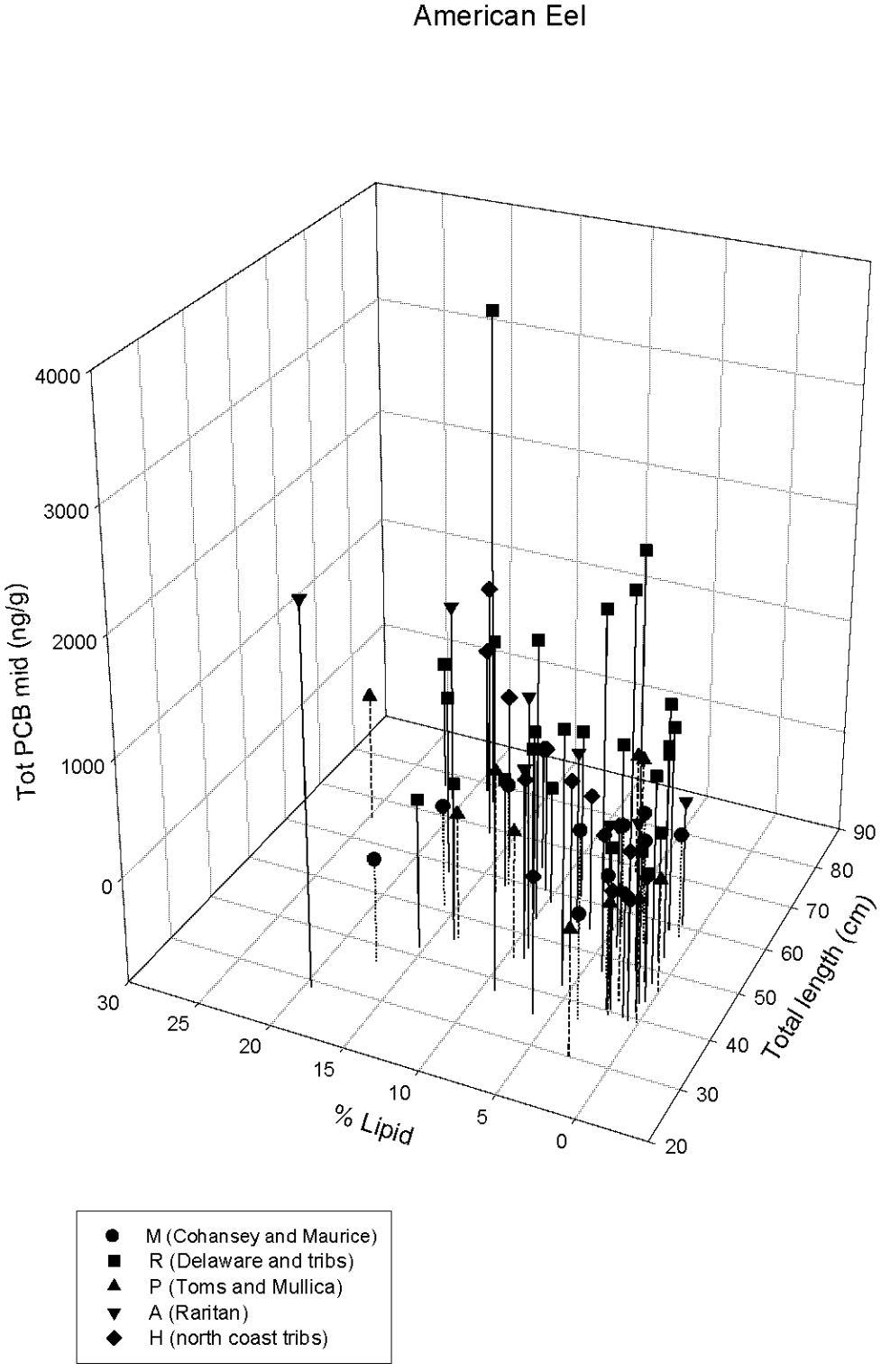

Figure 6. Relationship between PCB (mid) concentration (ng/g wet weight), lipid content (%wet weight), and length (cm) in the American eel.

Striped Bass by Station

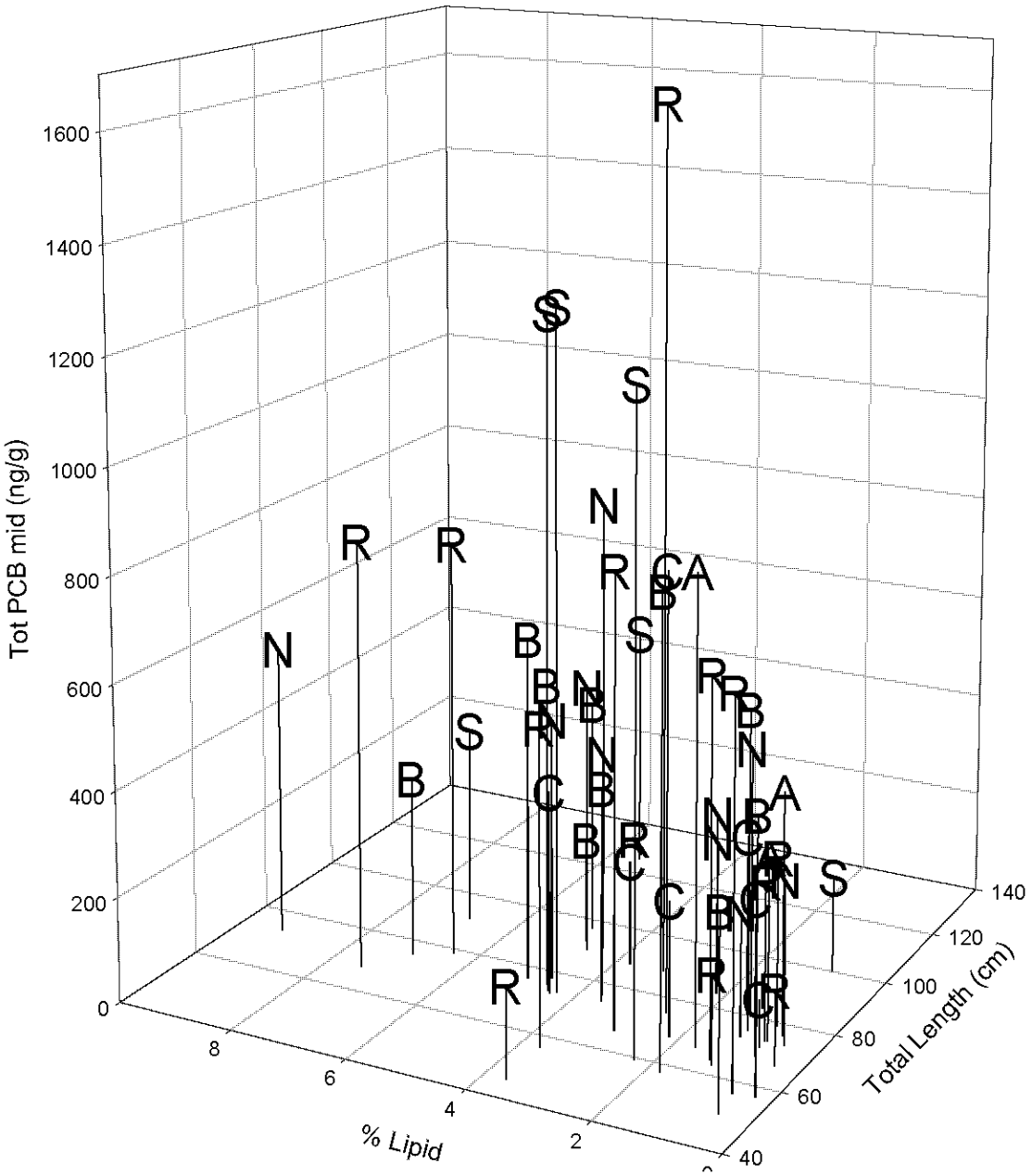

Figure 7. Relationship between total PCB concentration (ng/g wet weight), lipid content (%) and total length (cm) in striped bass.

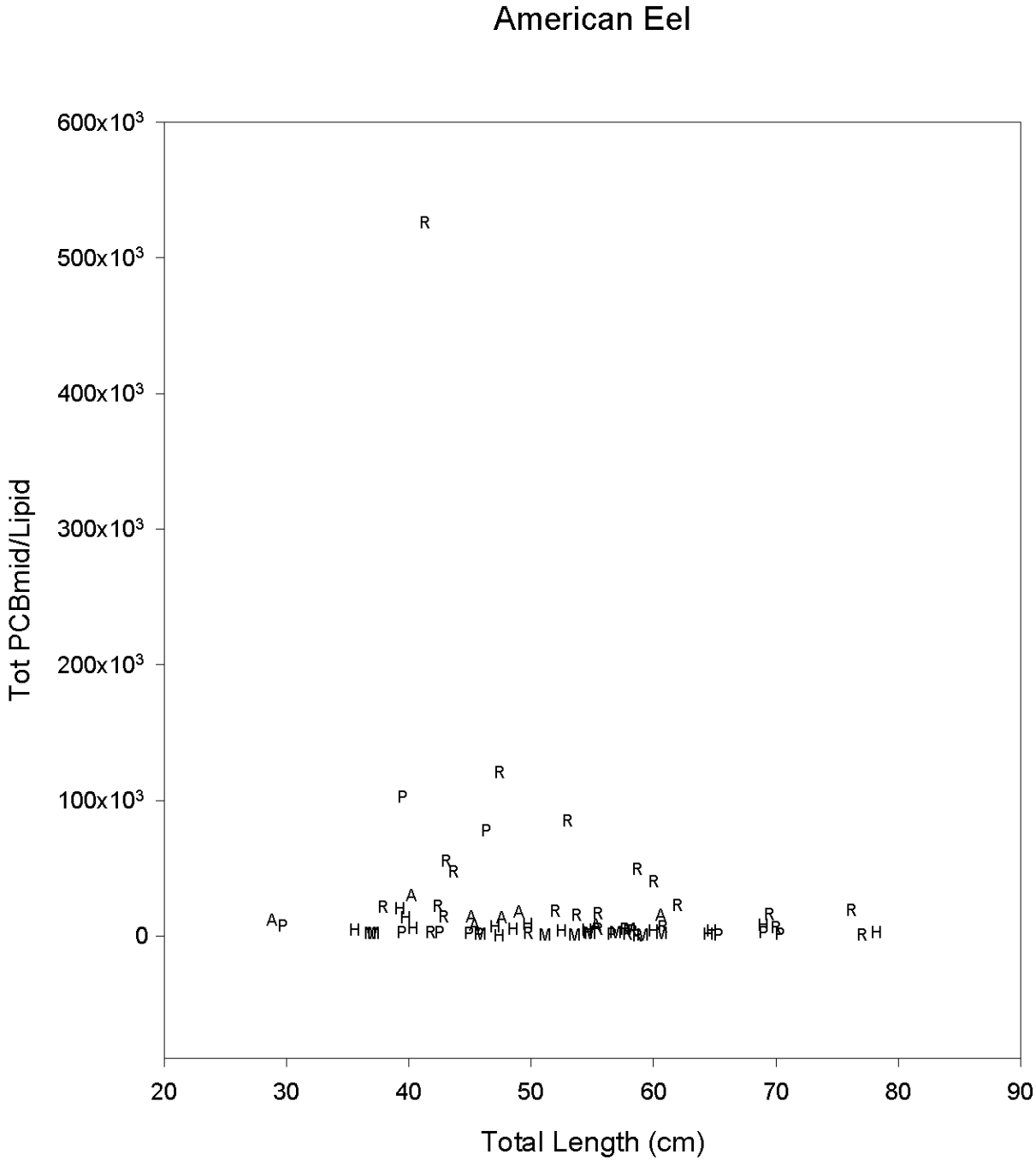

Figure 8. Relationship between total lipid normalized PCB (mid) concentration (ng/g wet weight) and total length (cm) in the American eel.

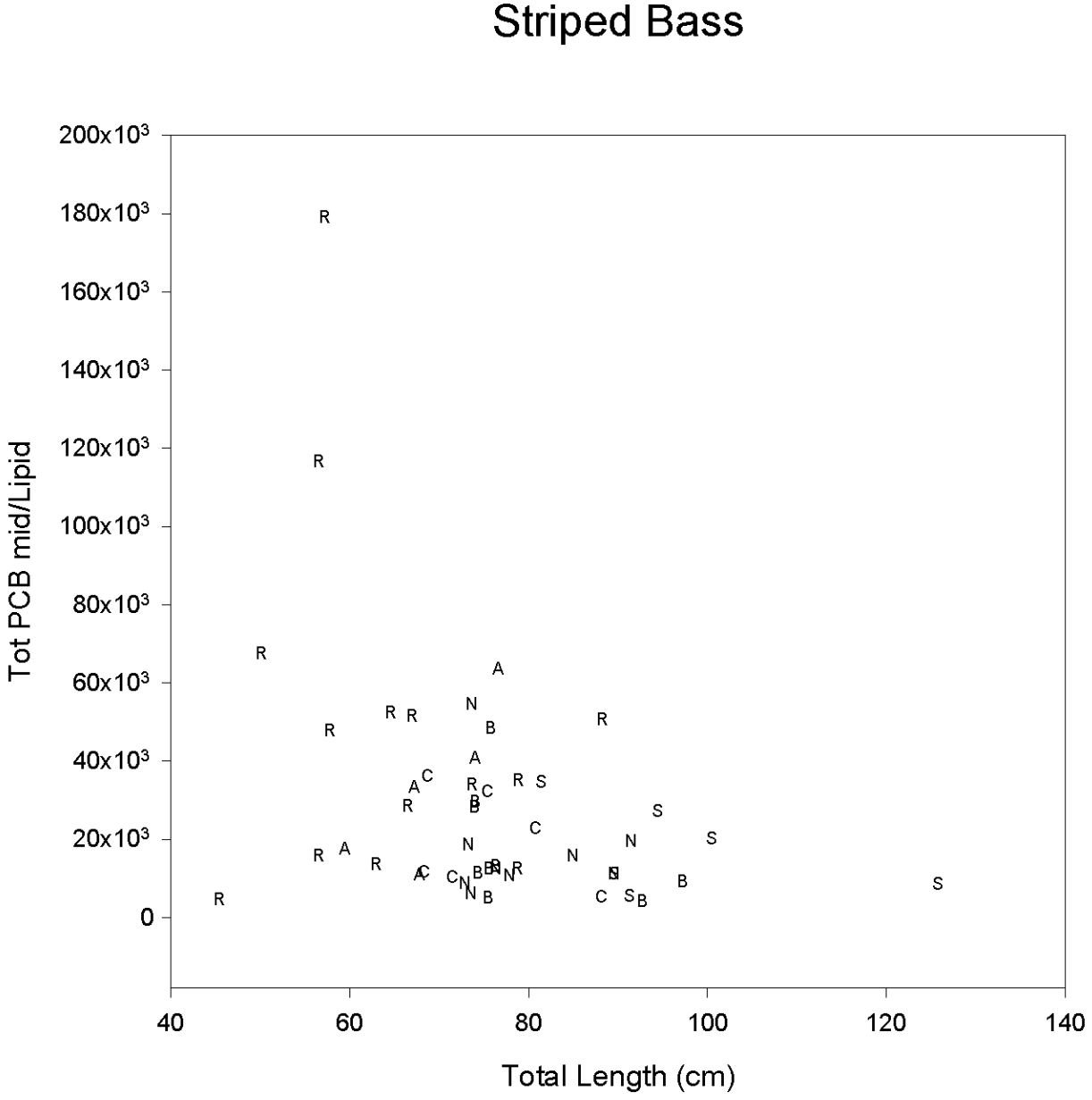

Figure 9. Relationship between total lipid normalized PCB (mid) concentration (ng/g wet weight) and total length (cm) in striped bass.

Bluefish

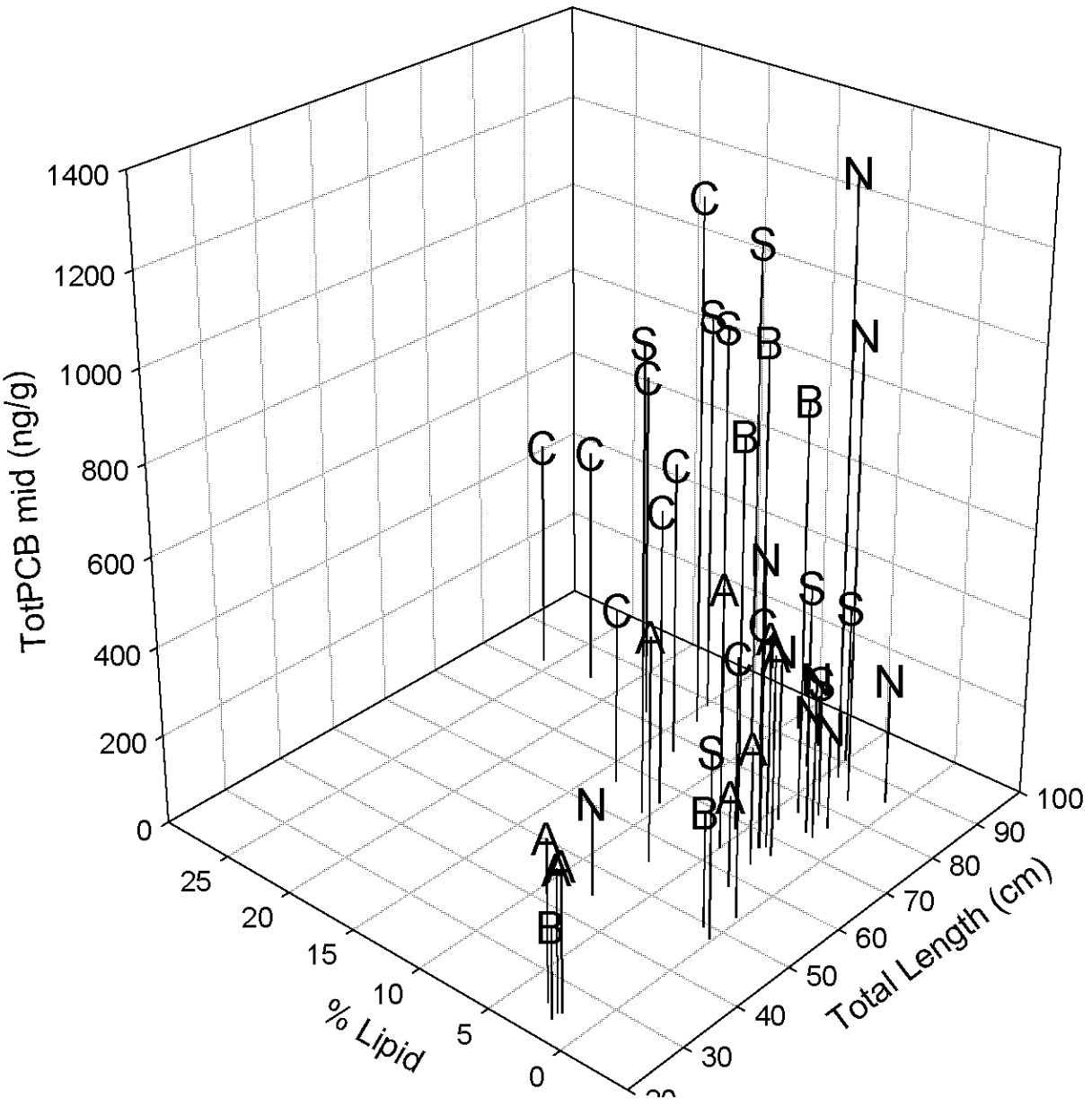

Figure 10. Relationship between total PCB (mid) concentration (ng/g wet weight), lipid content (%), and total length (cm) in bluefish.

Organochlorine Pesticides

The concentrations of most pesticides of concern (aldrin, dieldrin, chlordanes, nonachlor, DDXs, heptachlor and heptachlor epoxide), that is, those having associated action limits for fish consumption, were above detectable limits (Table 7). The exception was aldrin (and to a lesser degree lindane), which was rarely detected above detection limits.

In general, concentrations of heptachlor and heptachlor epoxide were low. Mean heptachlor and heptachlor epoxide concentrations in fish species ranged from 0.02 ng/g (eels from the Delaware Bay at Trenton) to 3.62 ng/g (white perch from the Raritan region) and 0.27 ng/g (Raritan yellow bullheads) to 10.72 ng/g (Raritan eels), respectively (Tables 8 and 9). Mean dieldrin concentrations ranged from 1.27 ng/g (north Atlantic Ocean striped bass) to 59.62 ng/g (Camden common carp) (Table 10). Snapping turtles had very low concentrations of these contaminants.

Mean chlordane values were calculated based on the FDA method which includes other forms of the pesticide (cis- and trans-nonachlor, oxychlodane) (Table 11) and a method which only reports the sum of the cis- and trans- forms of chlordane (Table 12). Mean values for 'chlordane' varied widely depending on the method of calculation (2 to 10 times larger for FDA method vs. simpler reporting method). Because the FDA method is helpful in evaluating exceedances of consumption guidelines, a discussion using this method follows. Mean total chlordane concentrations ranged from 3.66 ng/g (Raritan yellow bullheads) to 223.03 ng/g (Camden common carp) (Table 11). Chlordane concentrations were somewhat positively related to lipid (Fig. 11). In general, higher concentrations were found in common carp and in some American eels, striped bass, and white perch. Higher concentrations were predominantly from Camden stream and ponds; moderate values were from Raritan and Delaware rivers.

The mean concentration of DDXs (the sum of all quantifiable DDTs, DDEs and DDDs) in fish species ranged from 12 ng/g (Raritan yellow bullheads) to 785 ng/g (Camden common carp) (Table 13) using the 'max' method whereby NDs and BDLs (see Data Reporting section) are set equal to the detection limit. Of all analyzed species, common carp from the Camden area had the highest mean concentrations of those organochlorine pesticides of concern. There was a weak relationship between DDX concentrations and length/lipid. Higher concentrations were found in common carp, American eels and white perch and in Camden, Raritan and Delaware fish.

Mean "mid" BHC concentrations (the sum of alpha, beta, gamma BHCs, and lindane) ranged from 0.43 ng/g (Delaware Bay tributaries snapping turtles) to 32.49 ng/g (Camden common carp) (Table 14). There was a weak positive relationship with lipid content. In general, BHC concentrations were higher in common carp, American eels and white perch, and in those fish from Camden ponds, Raritan Bay and Delaware Bay.

Concentrations of endosulfan I, endosulfan II and endrin were very low in most fish, often only an order of magnitude above the detection limits. For the entire data set, mean concentrations of the three contaminants were 2.5, 2.8 and 1.0 ng/g (Appendix II).

Table 7. Total number of individual samples of each species analyzed and the number of those above analytical detection limits for organochlorine pesticides.

Region Short	Common Name	Total Anal.	BHC	Aldrin	Dieldrin	Chlor-dane	Nona-chlor	DDxAll	DDX-pos	Hepta-chlor epoxide	Hepta-chlor
AOC	bluefish	8	8	1	8	8	8	8	8	7	8
AOC	striped bass	7	6	0	6	7	7	7	7	6	7
AON	bluefish	9	8	1	9	9	9	9	9	8	7
AON	striped bass	9	9	1	9	9	9	9	9	9	9
AOS	bluefish	8	8	1	8	8	8	8	8	8	7
AOS	striped bass	6	5	0	5	5	5	5	5	5	4
Cam	American eel	1	1	0	1	1	1	1	1	1	1
Cam	black crappie	2	0	0	2	2	2	2	2	2	1
Cam	bluegill	13	9	0	12	12	13	12	12	12	5
Cam	brown bullhead	19	15	1	19	19	19	19	19	19	17
Cam	channel catfish	1	1	0	1	1	1	1	1	1	1
Cam	common carp	30	30	0	30	30	30	30	30	30	30
Cam	common snapping turtle	3	2	0	3	0	3	3	2	3	3
Cam	largemouth bass	15	15	1	15	15	15	15	15	15	12
Cam	pumpkinseed	2	2	0	2	2	2	2	2	2	2
Cam	white catfish	4	4	0	4	4	4	4	4	4	3
DB	bluefish	5	5	0	5	5	5	5	5	5	4
DB	striped bass	10	10	0	10	10	10	10	10	10	10
DBtr	American eel	10	8	0	10	10	9	10	10	10	1
DBtr	common snapping turtle	1	0	0	1	0	0	0	0	0	0
DR	American eel	25	22	2	25	25	25	25	25	25	22
DR	striped bass	14	13	0	14	14	14	14	14	14	14
NCtr	American eel	16	16	0	16	16	15	16	16	16	13
PBtr	American eel	11	8	0	11	10	11	11	11	11	6
PBtr	common snapping turtle	1	1	1	1	0	0	1	1	0	1
Rar	American eel	8	8	7	8	8	8	8	8	8	8
Rar	bluefish	10	10	2	10	10	10	10	10	10	10
Rar	brown bullhead	3	2	0	3	3	3	3	3	3	1
Rar	common carp	10	10	3	10	10	10	10	10	10	10
Rar	common snapping turtle	2	2	0	2	2	2	2	2	2	0
Rar	largemouth bass	6	6	0	6	6	6	6	6	6	5
Rar	redbreast sunfish	6	5	0	6	6	6	6	6	6	4
Rar	striped bass	5	5	0	5	5	5	5	5	5	5
Rar	white perch	8	8	2	8	8	8	8	8	8	8
Rar	yellow bullhead	1	1	0	1	1	1	1	1	1	0

Table 8. Mean heptachlor concentrations (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
striped bass	0.41	0.79	0.71		1.09		1.70			1.08
bluefish	0.56	0.35	0.57		0.49					0.60
American eel				0.21		0.02	0.51	0.37	0.22	1.46
black crappie				0.26						
bluegill				0.13						
brown bullhead				0.33						0.18
channel catfish				1.37						
common carp				2.49						2.49
common snapping turtle				0.41		0.00			0.42	0.00
largemouth bass				0.75						0.28
pumpkinseed				0.23						
redbreast sunfish										0.07
white catfish				0.29						
white perch										3.62
yellow bullhead										0.04

Table 9. Mean heptachlor epoxide concentrations (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
striped bass	0.53	0.94	0.85		0.95		2.21			2.56
bluefish	0.92	0.49	0.90		0.51					0.57
American eel				3.96		1.35	3.35	5.03	4.21	10.72
black crappie				0.37						
bluegill				0.61						
brown bullhead				1.16						1.52
channel catfish				2.89						
common carp				6.97						6.25
common snapping turtle				1.81		0.06			0.06	0.11
largemouth bass				1.95						1.14
pumpkinseed				1.02						
redbreast sunfish										0.84
white catfish				1.25						
white perch										3.43
yellow bullhead										0.27

Table 10. Mean dieldrin concentrations (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
striped bass	1.27	7.69	5.08		5.99		18.14			11.00
bluefish	11.37	6.33	12.05		2.61					4.28
American eel				23.90		7.58	32.11	10.27	15.19	45.73
black crappie				2.54						
bluegill				4.75						
brown bullhead				5.92						4.33
channel catfish				14.28						
common carp				59.62						17.39
common snapping turtle				2.93		0.18			0.20	1.20
largemouth bass				20.50						3.11
pumpkinseed				7.38						
redbreast sunfish										1.66
white catfish				7.84						
white perch										14.91
yellow bullhead										1.98

Table11. Mean total chlordane concentrations, including cis and trans nonachlor and oxychlordane (ng/g wet weight), for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
American eel				62.54		10.11	84.24	52.66	40.73	131.63
black crappie				7.90						
bluefish	48.20	38.34	44.56		51.14					24.27
bluegill				20.86						
brown bullhead				27.14						32.48
channel catfish				70.43						
common carp				223.03						168.20
common snapping turtle				4.59		0.00			0.00	3.60
largemouth bass				54.52						18.62
pumpkinseed				17.58						
redbreast sunfish										11.60
striped bass	21.53	26.54	33.30		48.74		50.14			26.18
white catfish				22.35						
white perch										77.06
yellow bullhead										3.66

Table 12. Mean total chlordane (cis and trans chlordane only - min values) (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
American eel				14.69		3.54	18.47	16.53	20.59	63.09
black crappie				1.89						
bluefish	13.45	6.58	10.10		5.56					8.05
bluegill				2.18						
brown bullhead				14.49						15.22
channel catfish				26.61						
common carp				110.66						55.49
common snapping turtle				0.00		0.00			0.00	0.68
largemouth bass				19.19						6.42
pumpkinseed				5.27						
redbreast sunfish										2.60
striped bass	1.97	8.41	9.34		8.26		15.62			13.70
white catfish				10.56						
white perch										43.81
yellow bullhead										1.45

All Species: C=carp; E=American eel; R=striped bass; B=bluefish; L=largemouth bass; S=pumpkinseed; R=redbreast sunfish; P=white perch; W=white catfish; X=black crappie)

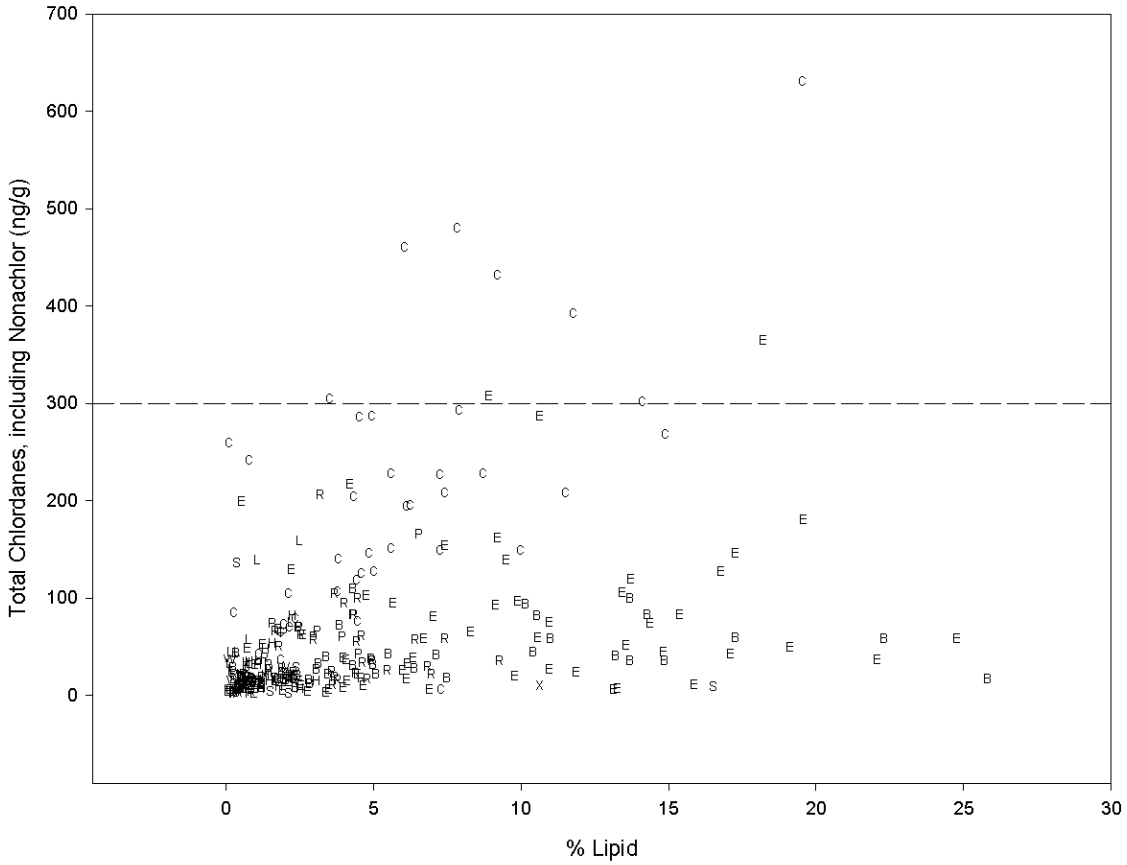

Figure 11. Relationship between sum of all chlordanes, including nonachlors (ng/g wet weight) and lipid content (%) in all species, by location.

Table 13. Mean DDX (max) concentrations (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
American eel				402		72	598	160	104	481
black crappie				21						
bluefish	156	111	147		101					92
bluegill				75						
brown bullhead				42						30
channel catfish				344						
common carp				785						249
common snapping turtle				4		3			3	17
largemouth bass				198						26
pumpkinseed				84						
redbreast sunfish										18
striped bass	51	130	162		202		339			106
white catfish				97						
white perch										386
yellow bullhead										12

Table 14. Mean total BHC (mid) concentrations (ng/g wet weight) for each species, by region.

Common Name	AOC	AON	AOS	Cam	DB	DBtr	DR	NCtr	PBtr	Rar
striped bass	2.17	11.99	7.41		7.04		7.87			3.81
bluefish	8.94	4.47	4.64		2.55					3.98
American eel				6.70		2.63	9.59	16.63	8.59	20.08
black crappie				0.82						
bluegill				3.52						
brown bullhead				5.58						2.58
channel catfish				6.01						
common carp				32.49						31.68
common snapping turtle				4.53		0.43			2.06	0.68
largemouth bass				10.36						5.60
pumpkinseed				6.90						
redbreast sunfish										3.08
white catfish				10.26						
white perch										32.21
yellow bullhead										4.9

Risk Assessment Based on Exceedances of FDA Action Levels

The FDA promulgates guidelines for the consumption of fish and fishery products by issuing action limits (Table 15). The primary purpose of these limits is to represent the point at or above which the administration will take legal action to remove products from the market. However, they are often used as a benchmark for the minimum concentration above which ingestion is not recommended.

Table 15. Summary of U.S. FDA's Action Limits for mercury, PCBs and pesticides.

Compound or Class	Action Level (ppm or ng/g wet)	Caveats
Mercury	1,000	Many states have adopted lower values (often 0.5 ppm)
Polychlorinated Biphenyls	2,000	"Tolerance Value"
Aldrin and Dieldrin	300	
Chlordane	300	Cis- and trans-chlordane, cis- and trans-nonachlor, oxychlordane, alpha-, beta-, and gamma-chlordene, and chlordene. Levels of individual components must be quantitated at 0.02 ppm or above and confirmed in order to be added into the "chlordane" total value
DDT, DDD and DDE	5,000	Individually or in combination. In adding amounts of DDT, DDE and DDD, do not count any of the three found below 0.2 ppm
Heptachlor and Heptachlor Epoxide	300	Individually or in combination. Do not count heptachlor or its metabolite if found at a level below 0.1 ppm.

Mercury

The action limit for total mercury in fish tissue is 1,000 ng/g. None of the fish or turtles analyzed from this study exceeded this limit. The State of New Jersey has developed separate concentration thresholds for high risk individuals and the general population. Different advisories (do not eat, eat no more than once a week, eat no more than once a month) are set for different concentrations. State action levels for high risk individuals vary from 0.08 mg/kg (eat no more than once a week) to 0.54 mg/kg (do not eat). State action levels for the general population vary from 0.34 mg/kg (eat no more than once a week) to 2.81 mg/kg (do not eat) (Ruppel et al. 1994).

The exceedances of mercury based on these various action and consumption guidelines are shown in Table 16.

Table 16. Mercury exceedances based on various consumption guidelines and action limits.

		High Risk Population				Total	General Population			
		No restr.	<1/week	<1/month	Do not eat	Number of	No restr.	<1/week	<1/month	Do not eat
Station	**Common Name**	**≤0.07**	**0.07-0.18**	**0.19-0.54**	**>0.54**	**Specimens**	**≤0.34**	**0.35-0.93**	**0.94-2.81**	**>2.81**
AOC	bluefish	0	0	7	2	**9**	2	7	0	0
AOC	striped bass	0	1	5	1	**7**	4	3	0	0
AON	bluefish	0	0	6	3	**9**	1	8	0	0
AON	striped bass	0	2	7	1	**10**	5	5	0	0
AOS	bluefish	0	1	2	5	**8**	1	7	0	0
AOS	striped bass	0	0	0	5	**5**	0	5	0	0
CHR	American eel	0	1	4	0	**5**	5	0	0	0
MAS	common snapping turtle	0	0	1	0	**1**	0	1	0	0
MRR	American eel	0	3	2	0	**5**	5	0	0	0
PNR	American eel	0	0	1	0	**1**	1	0	0	0
PNR	bluegill	1	0	0	0	**1**	1	0	0	0
PNR	common carp	5	0	0	0	**5**	5	0	0	0
PNR	common snapping turtle	0	0	1	0	**1**	1	0	0	0
PNR	largemouth bass	1	1	1	0	**3**	3	0	0	0
PNR	pumpkinseed	2	0	1	0	**3**	2	1	0	0
PNR	white catfish	4	0	0	0	**4**	4	0	0	0
STB	common snapping turtle	1	0	0	0	**1**	1	0	0	0
STL	black crappie	0	1	0	0	**1**	1	0	0	0
STL	bluegill	2	0	0	0	**2**	2	0	0	0
STL	brown bullhead	3	0	0	0	**3**	3	0	0	0
STL	common carp	4	1	0	0	**5**	5	0	0	0
STL	common snapping turtle	1	0	0	0	**1**	1	0	0	0
STL	largemouth bass	0	1	2	0	**3**	3	0	0	0
DBL	bluefish	0	0	3	2	**5**	3	2	0	0
DBL	striped bass	0	1	7	2	**10**	5	5	0	0
DRTA	American eel	1	2	2	1	**6**	5	1	0	0
DRTA	striped bass	0	1	2	1	**4**	1	3	0	0
RC	American eel	1	6	1	0	**8**	8	0	0	0
RC	striped bass	0	0	1	0	**1**	1	0	0	0
NVR	American eel	1	2	0	0	**3**	3	0	0	0
SBR	American eel	1	5	0	0	**6**	6	0	0	0
SKR	American eel	0	2	4	0	**6**	5	1	0	0
MLR	American eel	1	0	3	2	**6**	2	4	0	0
TR	American eel	0	0	3	1	**4**	1	3	0	0
POMP	common snapping turtle	0	0	1	0	**1**	0	1	0	0
PRE	American eel	0	0	4	0	**4**	4	0	0	0
PRE	brown bullhead	2	1	0	0	**3**	3	0	0	0
PRE	common carp	1	4	1	0	**6**	6	0	0	0
PRE	largemouth bass	0	0	1	2	**3**	1	2	0	0
PRE	redbreast sunfish	0	2	1	0	**3**	3	0	0	0
PRP	common carp	0	0	4	0	**4**	3	1	0	0

Table 16 (continued). Mercury exceedances based on various consumption guidelines and action limits.

		High Risk Population				Total	General Population			
		No restr.	<1/week	<1/month	Do not eat	Number of	No restr.	<1/week	<1/month	Do not eat
Station	Common Name	≤0.07	0.07-0.18	0.19-0.54	>0.54	Specimens	≤0.34	0.35-0.93	0.94-2.81	>2.81
PRP	largemouth bass	0	0	3	0	**3**	0	3	0	0
PRP	redbreast sunfish	0	0	3	0	**3**	2	1	0	0
RBM	American eel	1	0	3	0	**4**	4	0	0	0
RBM	white perch	0	4	1	0	**5**	5	0	0	0
RBU	bluefish	4	0	0	0	**4**	4	0	0	0
RBU	striped bass	0	1	4	0	**5**	5	0	0	0
RRL	bluefish	0	0	6	0	**6**	5	1	0	0
RRL	white perch	0	1	2	0	**3**	3	0	0	0

PCBs

Polychlorinated biphenyls (PCBs), globally ubiquitous despite their production ban in the mid 1970s, are of particular concern due to their bioaccumulative nature. Of all the individual fish analyzed for total PCBs, only seven exceeded the FDA limit of 2,000 ng/g (Table 17). These individuals included several American eels and common carp from the Delaware River, its tributaries (Racoon Creek, Pennsauken and Passaic Rivers) and Raritan Bay. A largemouth bass from Cooper River Lake and a white perch Raritan River also exceeded the threshold.

Dieldrin and Aldrin

Aldrin and dieldrin, both chlorinated cyclodiene insecticides, were popular pesticides for agricultural crops such as corn and cotton in the 1950s-1970. Aldrin breaks down into dieldrin in the environment. The Environmental Protection Agency banned all uses of dieldrin and aldrin in 1974 with the exception of termite control. In 1987, the agency banned all uses. Because dieldrin and aldrin are so closely related both in structure and toxicity, they are regulated together. The US FDA's action limit for aldrin and dieldrin in fish is 300 ng/g. Based on the concentrations determined in this monitoring study, none of the collected fish or turtles exceeded the action limit for dieldrin and aldrin (Table 17).

Chordane

In the U.S., chlordane was used as a pesticide on crops such as corn and citrus and on home lawns and gardens from 1948 to 1988. Chlordane is comprised of pure chlordane (cis and trans isomers) as well as many related chemicals (cis- and trans-nonachlor, oxychlordane, alpha-, beta- and gamma-chlordene, and chlordene). The US FDA has set an action limit of 300ng/g for chlordane in fish. Total clordane values were calculated based on the US FDA guidelines with the exception that no chlordenes were included in the sum. Of the 10 individual fish that exceeded the action limit for chlordane, 8 were common carp (from Cooper River, Strawbridge

Table 17. Species exceeding (numbers in **bold**) US FDA's action limits (PCBs, total heptachlor, chlordanes, and dieldrin + aldrin, and DDXs).

Sample ID	Serial Number	Analytical Number	Common Name	Water Body	LTL cm	TotPCB max	Adlrin Dieldrin	Chlordane Exc	DDX Exc	Hept Exc	Lipid%
F-2973	NJ98-DRDEP2	F-2973	American eel	Delaware River	76.2	**3451**	182	**365**	2572	27	18.19
F-3084	NJ98-RCEP9	F-3084	American eel	Raccoon Creek	41.3	**2844**	19	199	406	1	0.54
F-3173	NJ98-PNRBS1	F-3173	common carp	Pennsauken River	62.7	**2777**	202	**631**	3814	40	19.56
F-3197	NJ98-CRLBS1	F-3197	largemouth bass	Cooper River Lake	38.6	**2682**	71	140	158	2	1.05
F-3032	NJ98-RRUB4	F-3032	American eel	Raritan Bay	28.8	**2311**	71	181	1692	30	19.57
F-3225	NJ98-PREBS1	F-3225	common carp	Passaic River	51.7	**2238**	17	205	221	12	4.36
F-2859	NJ98-RRLCRT1	F-2859	white perch	Raritan River	27.1	**2010**	28	166	901	10	6.54
F-3178	NJ98-PNRBS1	F-3178	common carp	Pennsauken River	57.6	1296	172	**393**	2016	32	11.79
F-3202	NJ98-CRLBS1	F-3202	common carp	Cooper River Lake	48	1273	158	**481**	1258	30	7.84
F-3049	NJ98-CREBS1	F-3049	common carp	Cooper River	52.3	1053	42	**461**	1052	16	6.06
F-2937	NJ98-STBGN5	F-2937	common carp	Strawbridge Ponds	64.5	866	116	**359**	1060	34	14.12
F-2841	NJ98-PREBS1	F-2841	American eel	Passaic River	45.4	734	91	**308**	492	43	8.92
F-3220	NJ98-NEWBS1	F-3220	common carp	Newton Lake	61.3	616	94	**305**	956	18	3.52
F-3221	NJ98-NEWBS1	F-3221	common carp	Newton Lake	63	525	178	**432**	629	27	9.21
F-2939	NJ98-STBGN4	F-2939	common carp	Strawbridge Ponds	55.5	489	122	**322**	1522	30	0.11

Ponds, Newton Lake, and Pennsauken River) and the remaining were American eels from the Passaic River (Lake Dundee) and the Delaware River (near Ft. Mifflin) (Table 17).

Heptachlor and Heptachlor Epoxide

Heptachlor was used as an insecticide in the US from 1953 to 1974. The pesticide was commonly used to control termites as well as kill insects in seed grains and on crops but nearly all registered uses of pesticide were cancelled by 1974. Heptachlor epoxide is an oxidation product of heptachlor formed by many organisms including humans. Based on their toxicity, both heptachlor and heptachlor epoxide action limits in food were set by the US FDA. For fish, the two compounds, either individually or in combination, should not exceed 300 ng/g. For this study, concentrations for all collected species fell well below the action limit (Table 17).

DDXs

DDT (1,1,1-trichloro-2,2-bis-(p-chlorophenyl)ethane) was widely used to control insect pests on agricultural crops and those carrying infectious diseases. Technical DDT is primarily a mixture of three forms (p,p'-DDT, o,p'-DDT, and o,o'-DDT). In addition, DDE (1,1-dichloro-2,2-bis(p-chlorophenyl)ethylene), and DDD (1,1-dichloro-2, 2-bis(p-chlorophenyl) ethane), are found in small amounts as contaminants in technical DDT. DDD was also used to kill pests. DDT and DDD can no longer be used as a pesticide in the United States except in cases of public health emergency. However, its use continues in other countries. Because of its bioaccumulative nature and toxicity, the US FDA has set an action limit for DDXs (sum of DDTs, DDEs, and DDDs) at 5000 mg/g. Using the previously-described method of reporting DDXs (see *Data Reporting* section), none of the fish evaluated in this study exceeded the action limit (Table 17). The common carp from Pennsauken River that exceeded PCB and chlordane limits, had the highest concentrations of DDX (3,800 ng/g) of all fish sampled.

Organochlorine Pesticides of Concern Having No Action Limits

The are no federal action limits or consumption guidelines for foods containing benzene hexachlorides (alpha, beta, and delta BHC). Concentrations of BHCs were low except in a few instances (Appendix II).

Lindane, another compound having no FDA fish actions limits, is used as a insecticide and fumigant on a wide variety of crops and seeds and as a means to control insect-borne diseases. Technical lindane is primarily comprised of the gamma isomer of hexachlorocyclohexane (γ-HCH). Based on this study, lindane concentrations were low for most of those fish collected (Appendix II).

Endrin has been used as a pesticide to control insects and rodents. It is no longer produced or sold for general use in the US. To date, there are no federal action limits or consumption

guidelines for foods containing endrin. The concentrations of this contaminant were very low for all samples analyzed (Appendix II).

Alpha and beta forms of endosulfan (or I and II) make up the technical form of the insecticide endosulfan. The majority of applications of endosulfan were made to tobacco and cotton, though it was also used to control insects on grains, tea, fruit, and vegetables. Though the pesticide has not been produced in the US since 1982, it is still currently used on crops and is used to produce other chemicals. In this country, there are no federal action limits or consumption guidelines for foods containing endosulfan. The concentrations of the two forms of endosulfan were very low in all samples analyzed (Appendix II).

DISCUSSION

Regions and Species of Concern

One of the main objectives of this program was to determine potential human health impacts based on contaminant data encompassing a wide range of fish species and locations. Based on the number, species and locations of the exceedances of US FDA action limits for PCBs and chlordanes, the following regions of concern are designated.

1) The Camden area (Newton Lake, Strawbridge Ponds, Pennsuaken River and Cooper River Lake) based largely on chlordane concentrations within common carp;

2) Sections of the Delaware River and its tributaries (e.g., Raccoon Creek) based on PCB concentrations in primarily American eel;

3) Raritan Bay based on higher than average concentration of PCBs in American eels (and white perch).

Temporal Changes in Contaminant Concentrations in NJ Fish

Previous evaluations of concentration of organic contaminants (e.g., PCBs, DDT and its metabolites, and chlordanes) in coastal finfish were conducted in several periods between 1981 and 1991. These studies (Kennish et al. 1992; Kennish and Ruppel 1996, 1997) provide an historical benchmark to which the data of this monitoring study may be compared.

PCBs

Mean concentrations in species from different regions from different sampling periods (1981-82, 1986-87, and 1988-91) were compared to PCB concentrations evaluated in this study (Table 18). In all instances except one (eels from Delaware River/Bay in the late 1980s compared to this study), mean concentrations of PCBs decreased in all evaluated species in all NJ regions. Moreover, the number of individuals of each species exceeding the FDA limit of 2,000 ng/g (2 ppm) dropped significantly over the time period represented by these four data sets.

Though historical comparisons based on means are helpful in evaluating the temporal trends of contamination, several points should be kept in mind. Factors such as length, age, and exact location may vary between collection years or decades. For example, concentrations of PCBs in American eel in the Delaware Bay and River seemed to change only slightly between the 1986-87 collections compared to those made in this monitoring effort (Fig. 12). However, the earlier collections were comprised, on average, of smaller eels. The recent collections contained eels that were significantly larger but with similar concentrations, suggesting that concentrations in these fishes have in fact declined due to less contaminated habitats. Despite the larger sizes of

Table 18. Comparison of PCB concentrations evaluated in this study with data compiled from 1981-82, 1986-87, and 1988-91.

Scientific Name	NJDEP Region	Region	1981-82		1986-87			1988-1991			1998-99		
			Mean	N	Mean	N>2	N	Mean	N>2	N	Mean	N>2	N
Ameiurus nebulosus	Camden	Camden			600	0	8	1110	0	2	45	0	19
Ameiurus nebulosus	Northeast	Raritan-Passaic			1180	1	2				112	0	3
Anguilla rostrata	Camden	Camden			2320	4	7	1110	0	2	369	0	1
Anguilla rostrata	Delaware	Delaware River and tribs			990	1	9	600	0	4	921	2	25
Anguilla rostrata	Northeast	Raritan-Passaic	3209	20	1710	3	10	2030	4	7	1006	1	8
Cyprinus carpio	Camden	Camden			1470	3	13				674	1	30
Cyprinus carpio	Northeast	Raritan-Passaic			3200	3	4				978	1	10
Micropterus salmoides	Camden	Camden			560	0	5				361	1	15
Micropterus salmoides	Northeast	Raritan-Passaic			200	0	1				123	0	6
Morone americana	Northeast	Raritan-Passaic	2594	15	2060	1	6	1280	0	3	893	1	8
Morone saxatilis	North Coast	Atlantic Ocean north			2330	7	10	1640	6	18	463	0	9
Morone saxatilis	Northeast	Raritan-Passaic	3332	45	2140	6	16	1800	5	14	431	0	5
Morone saxatilis	South Coast	Atlantic Ocean south			1350	1	5	1130	3	17	483	0	6
Pomatomus saltatrix	North Coast	Atlantic Ocean north			930	0	24	950	1	6	562	0	9
Pomatomus saltatrix	Northeast	Raritan-Passaic			820	1	11	1480	2	6	366	0	10
Pomatomus saltatrix	South Coast	Atlantic Ocean south			830	1	29	910	1	8	657	0	8

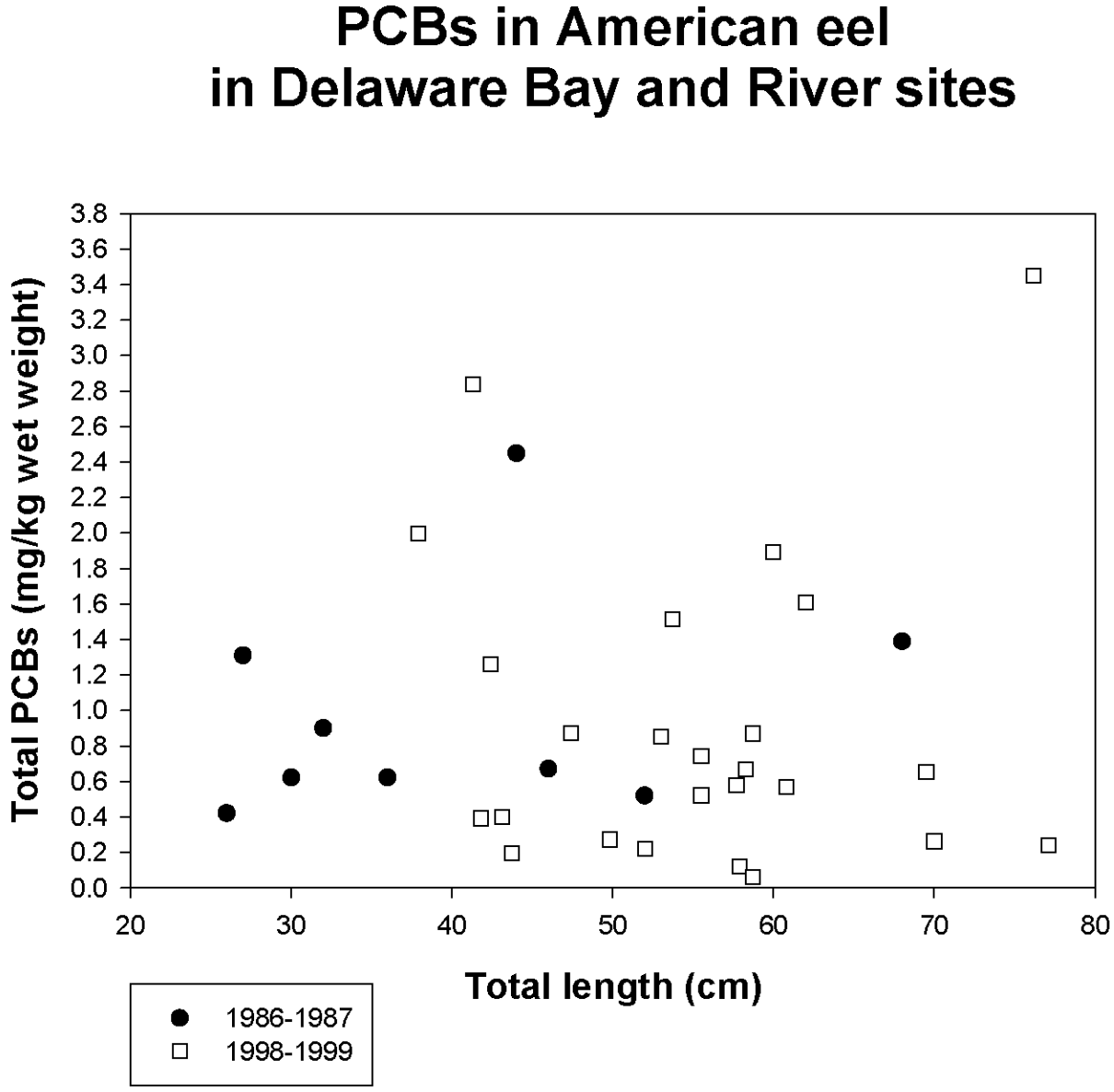

Figure 12. Relationship between total PCB concentrations and length for American eel from the Delaware Bay and River sites from 1986-87 and 1998-99.

eels in the recent study, 9 of the 25 specimens collected from the Delaware Bay and River in 1998-99 had concentrations below 0.42 ng/g, the minimum noted in 1986-87. The relatively large sample size in the recent survey increases assurance that observed differences are real.

Chlordane

Data from 1986-7 and 1988-91 were compared to chlordane (sum of cis and trans chlordane only) concentrations evaluated in this study (Table 19). At all sites, mean chlordane concentrations of species from each region decreased, usually markedly, over the past decade. Though mean chlordane concentrations in eels from the Northeastern sites were slightly lower in the more recent survey, a dramatic decline over the decade was not apparent. There was much overlap in concentrations between the two surveys, and there was no obvious relationship between concentrations and length for this location (Fig. 13).

Table 19. Comparison of previous data (from Kennish and Ruppel 1997) with current data. Data are sums of the cis- and trans-chlordane components as μg/kg wet weight. For the 1998-1999 data, nondetect values are set to 0, and values below detection limit are set to ½ the detection limit. Standard deviations (sd) are calculated on raw (untransformed) data, which may be non-normal.

		1986-7		1988-1991		1998-9			1986-87	1998-99
Scientific	**KRRegion**	**Mean**	**#**	**Mean**	**#**	**Mean**	**SD**	**#**	**Prop>300**	**Prop>300**
Ameiurus nebulosus	Camden	124	8	102	8	15	12	38	0.13	0
Ameiurus nebulosus	Northeast	73	2	53	1	15	18	6	0	0
Anguilla rostrata	Camden	630	7			15		1	0.57	0
Anguilla rostrata	Delaware	62	9			18	18	25	0	0
Anguilla rostrata	Northeast	73	10			63	44	8	0	0
Cyprinus carpio	Camden	260	13	275	1	111	80	60	0.31	0.017
Cyprinus carpio	Northeast	334	4	149	1	55	32	20	0	0
Micropterus salmoides	Camden	21	5	48	2	19	21	30	0	0
Micropterus salmoides	Northeast	13	1			6	5	6	0	0
Morone americana	Northeast	64	6			44	13	8	0	0
Morone saxatilis	North Coast	61	10			8	4	9	0	0
Morone saxatilis	Northeast	50	16			14	15	5	0	0
Morone saxatilis	South Coast	64	5			9	8	5	0	0
Pomatomus saltatrix	North Coast	37	24			7	4	9	0	0
Pomatomus saltatrix	Northeast	30	11			8	5	10	0	0
Pomatomus saltatrix	South Coast	33	29			10	9	8	0	0

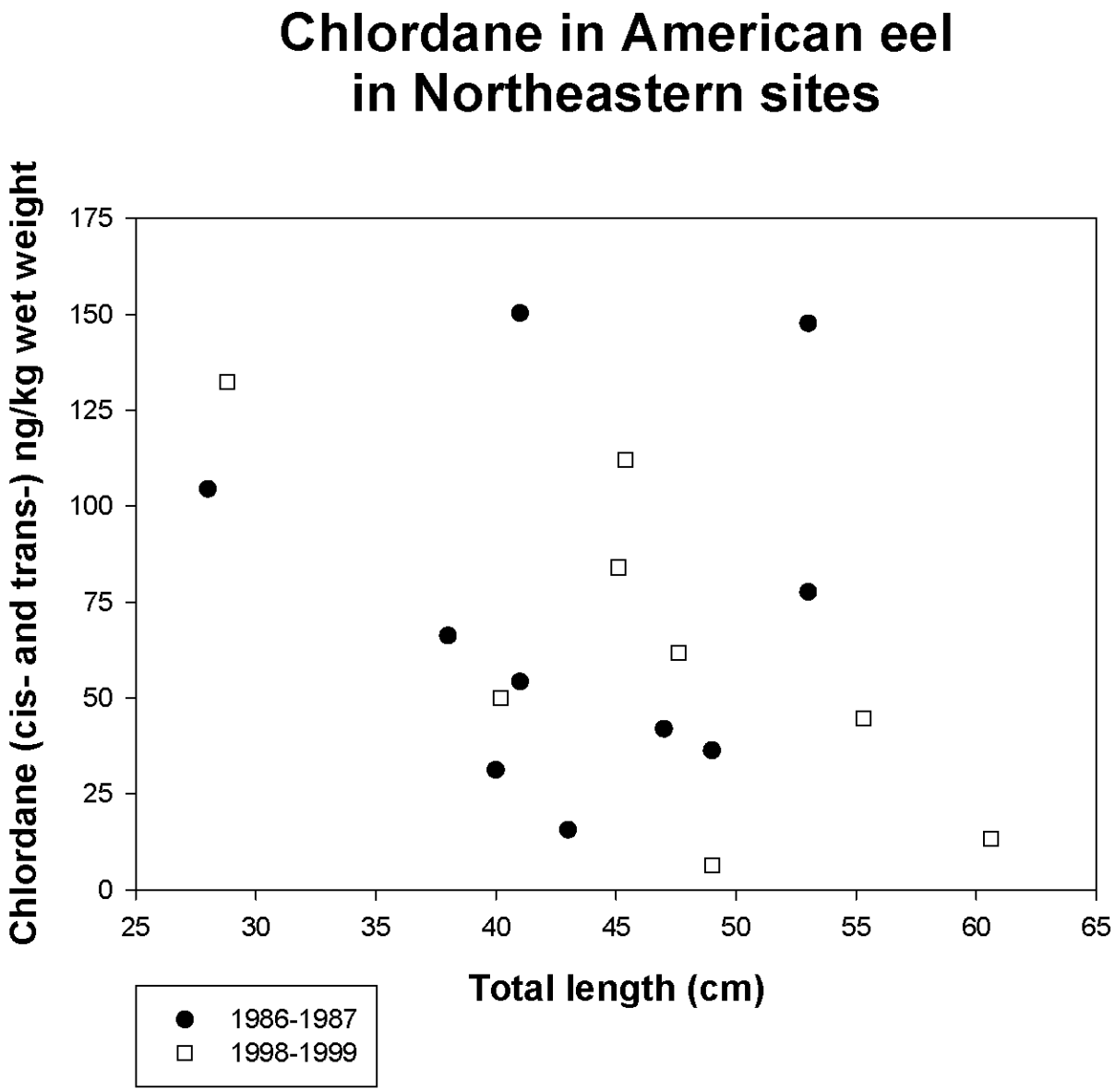

Figure 13. Relationship between chlordane concentrations and length for American eel from Northeastern sites from 1986087 and 1998-99.

DDXs

Data from 1986-87 were compared to DDX concentrations evaluated in this study (Table 20). For some groups, such as brown bullhead (*Ameiurus nebulosus*) and striped bass (*Morone saxatilis*), concentrations were lower in the recent survey. However, for most comparisons, concentrations remained similar to those evaluated a decade before. In some instances, concentrations were higher or lower at some sites; these differences may be due to small sample sizes or differences in fish length, age or lipid content.

Table 20. Comparison of DDX concentrations evaluated in this study with data compiled from 1986-87.

			1987-7		1998-9	
Scientific	**KRRegion**	**Region**	**Mean**	**#**	**Mean**	**#**
Ameiurus nebulosus	Camden	Camden	177	8	33	19
Ameiurus nebulosus	Northeast	Raritan-Passaic	193	2	19	3
Anguilla rostrata	Camden	Camden	1300	7	373	1
Anguilla rostrata	Delaware	Delaware River and tribs	412	9	554	25
Anguilla rostrata	Northeast	Raritan-Passaic	261	10	361	8
Cyprinus carpio	Camden	Camden	540	13	666	30
Cyprinus carpio	Northeast	Raritan-Passaic	425	4	179	10
Micropterus salmoides	Camden	Camden	74	5	163	15
Micropterus salmoides	Northeast	Raritan-Passaic	30	1	17	6
Morone americana	Northeast	Raritan-Passaic	193	6	263	8
Morone saxatilis	North Coast	Atlantic Ocean north	194	10	100	9
Morone saxatilis	Northeast	Raritan-Passaic	189	16	72	5
Morone saxatilis	South Coast	Atlantic Ocean south	193	5	135	6
Pomatomus saltatrix	North Coast	Atlantic Ocean north	104	24	91	9
Pomatomus saltatrix	Northeast	Raritan-Passaic	102	11	76	10
Pomatomus saltatrix	South Coast	Atlantic Ocean south	96	29	118	8

DDX concentrations in eels from Delaware Bay and River from 1986-87 were compared to concentrations determined in this study (Fig. 14). There was no relationship between concentration and length for these locations. Collections made for the recent study did capture eels that were longer, and presumably older. The highest DDX concentration was in a very large (76 cm) eel from the Delaware River at Deepwater. Because of the difference in lengths between the two collection efforts, it is difficult to definitively say that DDX concentrations in the environment have remained constant over time. For eels from Northeastern sites (Fig. 15), higher mean DDX concentrations were observed in the more recent monitoring. These eels were longer than those sampled in the earlier survey. However, there is much variability in the concentrations among fish from the recent survey, and relationships between length and DDX concentration are not clear. By normalizing to lipid content, concentrations were relatively

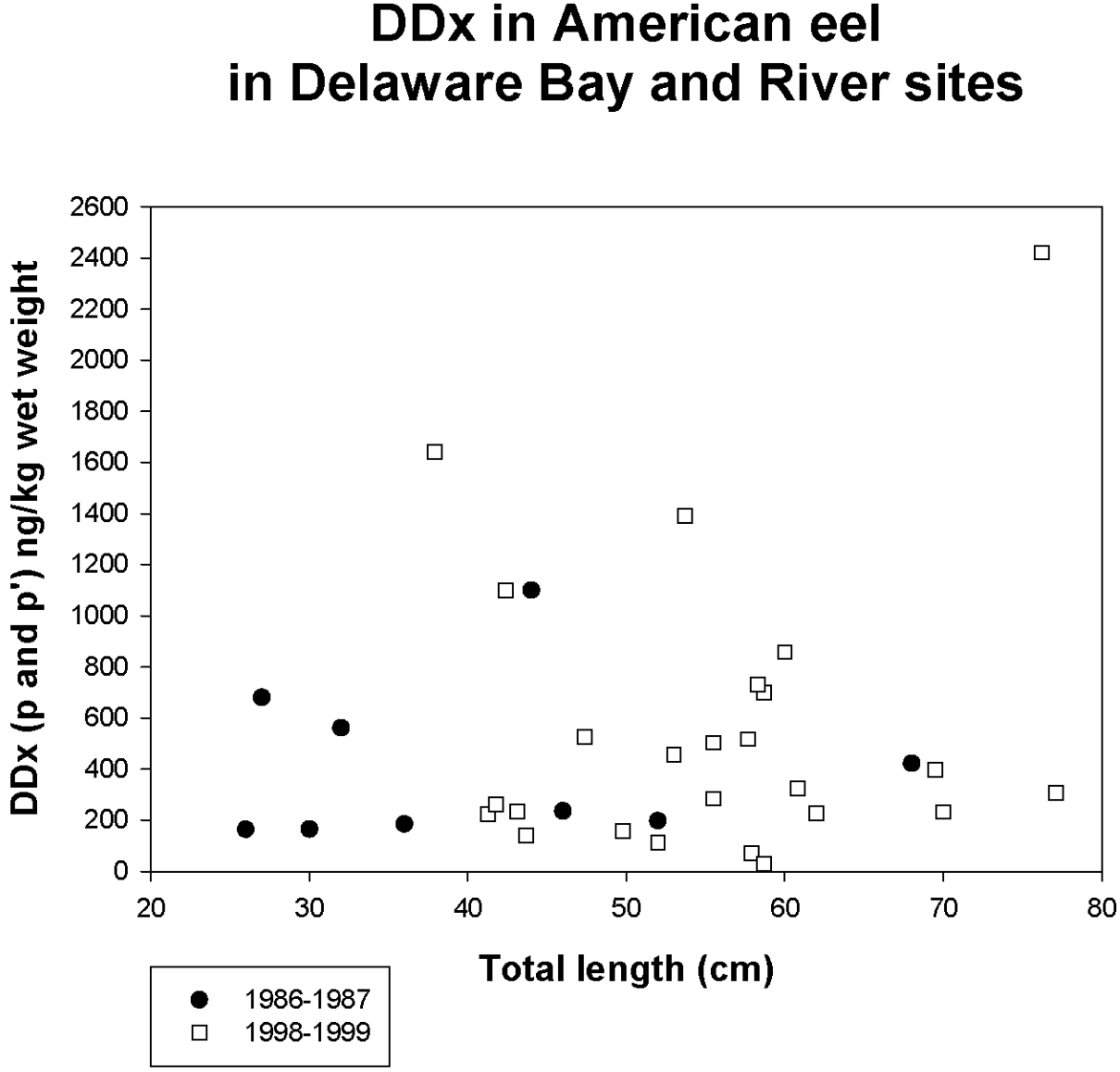

Figure 14. Relationship between DDX concentrations and length for American eel from Delaware Bay and River sites from 1986-86 and 1998-99.

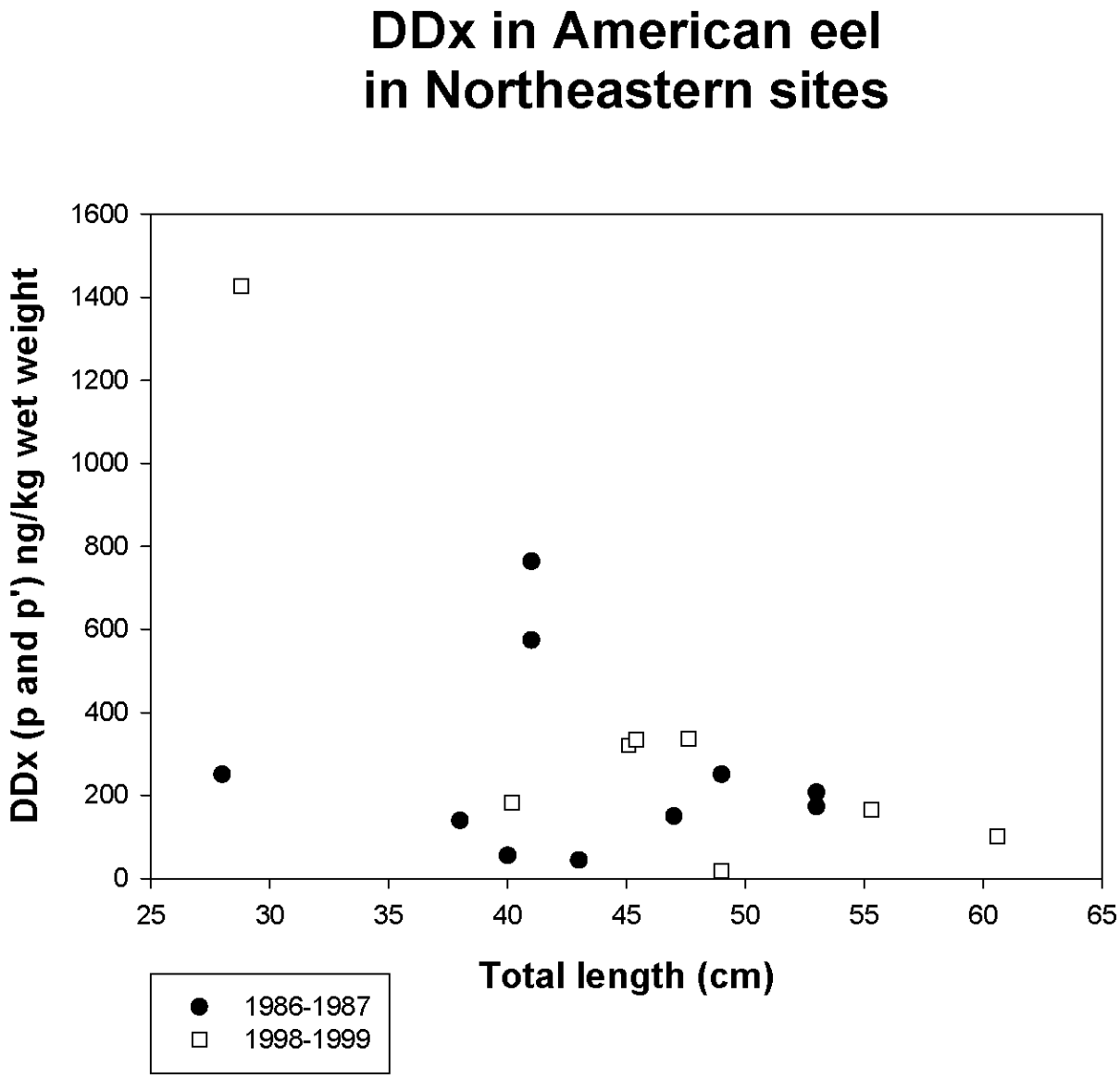

Figure 15. Relationship between DDX concentrations and length for American eel from Northeastern sites from 1986-87 and 1998-99.

invariant with respect to length and not clearly different between surveys (Fig. 16), with the exception of one eel from the 1986-87 survey having an extremely elevated DDX concentration.

Gaining Information by Comparing PCB Congener-Specific Patterns

Differences in Congener Patterns Among Species

The analysis of PCBs on a congener basis facilitates comparison of accumulation patterns of those fish of the same species but collected from different locations. For this comparison, fish of the same species were grouped according to the region in which they were collected. The average normalized congeneric patterns for striped bass collected from various regions showed remarkable similarity. However, a striking pattern shift was observed in those striped bass collected from oceanic waters (Fig. 17). As the collection region shifted from south waters (Cape May) to those in the north (Raritan Bay at Perth Amboy), congeneric patterns also shifted to a pattern that was dominated by more lighter chlorinated congeners. Most evident in this pattern shift were the decreasing dominance of coeluting congener groups *153+132+105* and *163+138* in the congener patterns with increasingly northward collections.

Ashley et al. (2000) found a similar gradient in striped bass patterns within the Hudson River estuary. Using otolith chemistry, lifetime migration behaviors were estimated. Congeneric patterns with higher proportions of di-, tri-, and tetrachlorbiphenyls were found in those striped bass residing in the upper reaches of the estuary while the converse was true for those fish spending more time in saline water or those undergoing annual migrations throughout the salinity gradient. Their research suggests that the historic PCB loading and resulting contamination in the upper reaches of the Hudson River imparts a unique signature to those fish using that habitat for most of their life.

The shift seen from in this data set may represent a congeneric pattern shift in striped bass to a pattern more characteristic of the Hudson River. Fish collected in the Raritan Bay region are likely to have migrated through the salinity gradient of the Hudson River. However, those striped bass caught further south most likely include fish that used the Delaware Bay (and possibly the Chesapeake Bay) during their annual migrations, with some Hudson River fish possibly present. Fish caught near Sandy Hook in early June could include Delaware and Chesapeake Bay fish moving north as well as Hudson River fish.

Though comparisons of congeneric patterns from striped bass caught in different locations may be interesting, teasing definitive information from it is marred by the fact that these fishes are migratory. Without the use of otolith analysis or telemetry, no knowledge of the habitat use may be gained. That is, though caught in one specific area, that congener pattern may represent the pattern of contamination characteristic of a region other than it capture zone.

It has been suggested that the American eel may be a sentinel species for local contamination due to its suspected limited home range, omnivorous diets, and high lipid content. In this is true,

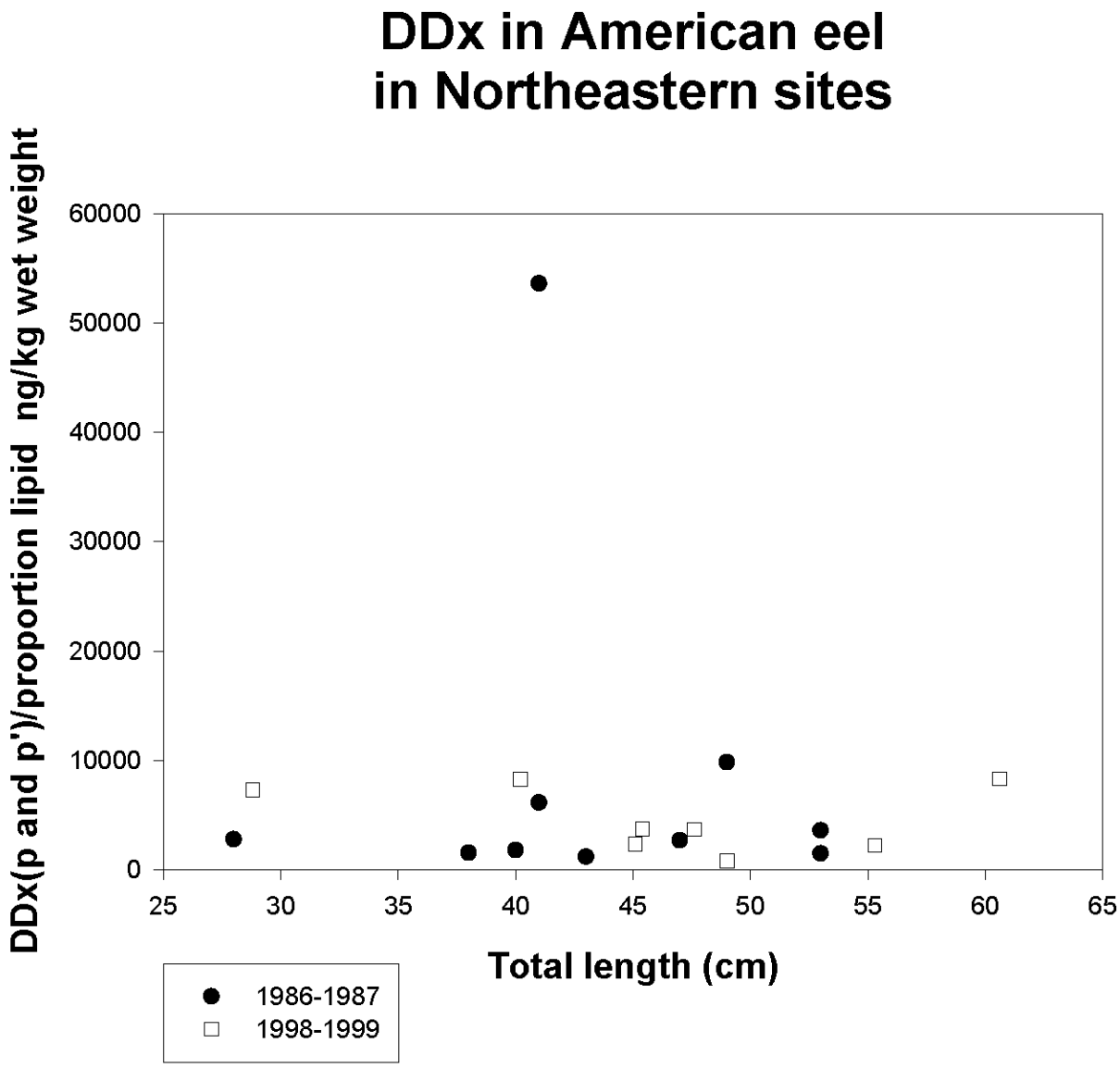

Figure 16. Relationship between lipid normalized DDX concentrations and length for American eel from Northeastern sites from 1986-87 and 1998-99.

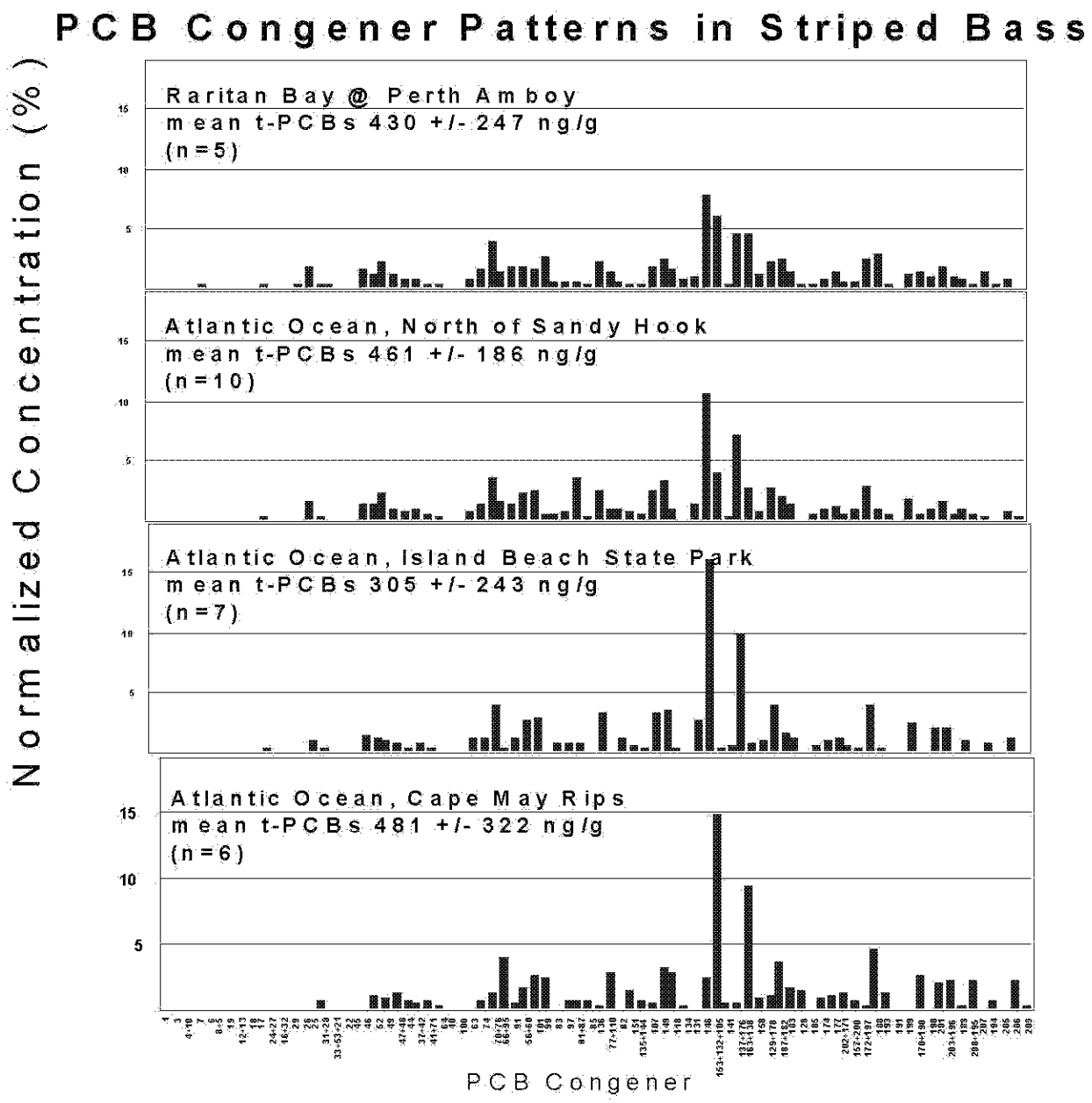

Figure 17. Normalized PCB congeneric patterns for striped bass collected from the Atlantic Ocean.

congeneric pattern differences between eels caught from different locations may be more useful than compared to those of striped bass when assessing the degree and extent (and possible source) of PCB contamination. Congeneric patterns in American eels collected from various locations were again remarkably similar (Fig. 18). However, those eels collected from Toms River had a distinctly different pattern from the other locales. The pattern was dominated by more lighter chlorinated congeners. Without further assessing the patterns in the sediment and prey items, information regarding the source of this accumulated pattern is difficult to assess.

Differences in Congener Patterns Between Species

The analysis of PCBs on a congener basis also facilitates comparison of accumulation patterns between species. Again PCB congeneric patterns were very similar between species. Three exceptions were observed. Patterns for brown bullhead, red breast sunfish, and white perch were visible different from other species and may be reflective of a diet based on items of lower trophic levels compared to other species like striped bass and American eel.

Comparison of Metabolite Ratios

Dearth and Hites (1991) calculated ratios of chlordane (sum of cis and trans chlordane and cis and trans nonachlor) to its primary metabolite, oxychlordane. They found an average ratio of 10 (though a large spread was observed) for fish while for humans, the ratio was much lower (~1). For this data set, the mean ratio was 6 (with an equally large spread of values being observed). There was no clear pattern of higher or lower ratios in certain species. The relatively high ratio indicates the inability of fish to metabolize the parent compounds of chlordane.

Using TEqs for Risk Assessment

For risk assessment, the use of TEqs (Toxic Equivalents) is often useful, although TEqs have not been incorporated into consumption advisories to date. This involves 'normalizing' the effects of certain PCB congeners to that of a benchmark contaminant, 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD), which by definition is given a TEq value of 1. The concentrations of non-ortho-PCBs (congeners 77, 81, 126 and 169) and mono-ortho-PCBs (105, 114, 118, 123, 156, 157, 167 and 189) are multiplied by their corresponding TEqs and a final "equivalents of TCDD" may be reported by summing all products.

Of the 12 non-ortho and mono-ortho-PCB congeners listed above, four were evaluated in this study (congeners 77, 105, 118 and 189). Congener 105, a mono-ortho-PCB, coeluted with congeners 153 and 132. Similarly, the non-ortho-substituted congener 77 coeluted with congener 110. Mono-ortho substituted congeners 118 and 189 were well-resolved using the clean-up procedures employed in this study. Though limiting, it would be imaginable to use these two congeners for risk assessment based on calculation of TEqs.

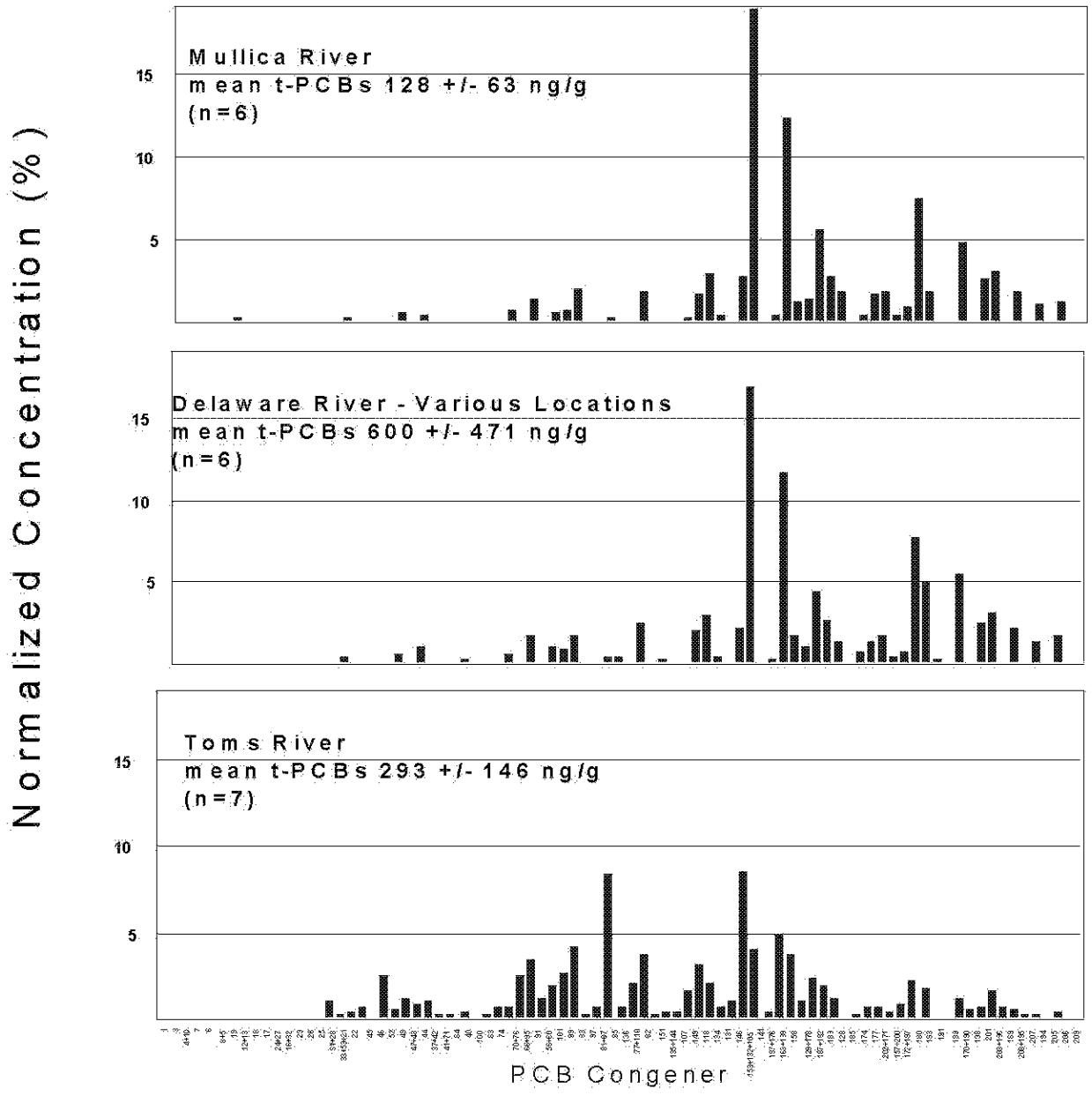

Figure 18. Normalized PCB congeneric patterns for American eel collected from various locations including Toms River.

CONCLUSIONS

From the evaluation of this extensive monitoring effort, and comparisons with historical data, the following conclusions may be stated:

1) Many of the common carp caught in the Camden area (Newton Lake, Strawbridge Ponds, Pennsauken River and Cooper River Lake) exceeded FDA action limits for consumption based on chlordane concentrations. This fact, in addition to the observed PCB action limit exceedances for Raritan Bay eels (and sections of the Delaware River), consumption guidelines should not be relaxed for fishes in these areas.

2) For most species and regions, concentrations of PCBs and chlordanes have markedly decreased compared to evaluations made a decade ago.

3) Changes in DDX are more equivocal, with some groups showing decreases, but with little evidence of change for other comparisons.

4) The observed decreases could be due to environmental cleanup, pollution prevention programs, degradation, or changes in the bioavailability of contaminants.

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Appendix I

Quality Assurance/Quality Control Summary

NJ Fish Tissue Analysis for the Evaluation of Spatial Trends and Human Health Impacts

Quality Assurance/Quality Control Summary

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This report summarizes the results of the chemical analyses (both mercury and organic analyses) performed to date with particular emphasis on the results of the quality assurance and control measures that were followed. This report will constitute a more detailed final summary report to be submitted by ANS after internal QA/QC review and completion of further analyses of additional fishes.

I. Mercury

a) Extractions and Analyses:

Strong acid digestions were performed using 10 ml nitric acid on approximately 1g homogenized wet fish material in a CEM MDS 2100 microwave digestion system. Mercury analysis was subsequently accomplished on a Perkin Elmer Fimms 400 Cold Vapor AA. Calibration blanks, intercalibration verification samples, and instrument duplicates were analyzed to ensure instrument performance and accuracy.

b) Analytical Quality Assurance:

Sample blanks, duplicates, spikes, and a National Research Counsel of Canada (NRC) Standard Reference Material (DORM-2, dogfish muscle) were digested with the samples to ensure adequate recoveries. Recoveries for NRC Dorm-2 were compared to the certified NRC values and were within 83-111% of the actual concentration for all samples digested. Inter-calibration verification samples were all 90-110% of the actual concentration. The relative percent differences (RPD) for instrument duplicates were below 6%, while RPDs for sample duplicates ranged from 0.1 to13%. Finally, sample spikes were analyzed and were typically within 80-120% of added concentrations.

II. Polychlorinated Biphenyls and Organochlorine Pesticides:

a) Extractions and Analyses:

Homogenized fish samples were stored frozen until extraction. Samples were thawed and 2 g of the homogenate was sub-sampled using a stainless steel spatula. An additional 2-5 g sub-sample was taken for moisture analysis. Approximately 30 g of Na_2SO_4 (previously extracted with hexane using a Soxhlet extractor and dried) was added to the sub-sample to eliminate water. The dried sample was placed in a glass thimble and extracted using a Soxhlet extractor with ca. 200 ml dichloromethane (DCM) for a minimum of 18 h. The extracts were sub-sampled for gravimetric lipid determination. For this, a known volume of extract was transferred to a pre-weighed aluminum pan. The solvent was evaporated at 110°C for at least 24 h. The residue remaining (lipid) was weighed and percent lipid was calculated.

Lipids were removed from sample extracts by gel permeation chromatography (GPC) using DCM as the mobile phase. The collected fraction containing analytes was concentrated by roto-evaporation and a N_2 stream. Solid-liquid chromatography using florisil was done as an additional clean-up step. Using this technique, PCBs (as well as heptachlor, nonachlors, and DDEs) were eluted from the chromatographic column containing Florisil using petroleum ether (F1 fraction). The remaining organochlorine pesticides were eluted using 50:50 petroleum ether and dichloromethane (F2 fraction).

Congener-specific PCBs and organochlorine pesticides (Table 1) were analyzed using a Hewlett Packard 5890 gas chromatograph equipped with a ^{63}Ni electron capture detector and a 5% phenylmethyl silicon capillary column. The identification and quantification of PCB congeners followed the '610 Method' (Mullin 1985) in which the identities and concentrations of each congener in a mixed Aroclor standard (25:18:18 mixture of Aroclors 1232, 1248 and 1262) were determined by calibration with individual PCB congener standards. Congener identities in the sample extracts were based on their chromatographic retention times relative to the internal standards added. In cases where two or more congeners could not be chromatographically resolved, the combined concentrations were reported (Table 1). Organochlorine pesticides (OCPs) were identified and quantified based on comparisons (retention times and peak areas) with a known calibration standard prepared from individual compounds.

b) Analytical Quality Assurance:

Surrogate Recoveries: Analyte loss through analytical manipulations was assessed by the addition of surrogate PCB congeners 14, 65 and 166 prior to extraction by Soxhlet apparatus. These surrogates were not industrially prepared and therefore are not present in the environment. Average recoveries of congeners 14, 65 and 166 were 96 ± 27%, 77 ± 18% and 86 ± 18%. Due to the relatively high surrogate recoveries and the low standard deviations, all reported values for PCB and OCP concentration in this study were not corrected for analyte loss.

Table 1. List of target organic analytes.

Organochlorine Pesticides	Polychlorinated Biphenyls*		
BHC (alpha, beta, gamma, delta)	1	40	137,176
Heptachlor	3	100	163,138
Heptachlor Epoxide	4,10	63	158
Chlordanes (gamma and alpha)	7	74	129,178
Nonachlors (cis[#] and trans)	6	70,76	187,182
Dieldrin	8,5	6695	183
DDDs (o,p and p,p)	14	91	128
DDEs (o,p[+] and p,p)	19	56,60	185
DDTs (o,p and p,p)	12,13	101	174
Aldrin	18	99	177
Endosulfan I and II	17	83	202,171
Endrin	2427	97	172,197
Oxychlordane	16,32	81,87	180
	29	85	193
	26	136	191
	25	77,110	199
	31,28	82	170,190
	33,21,53	151	198
	22	134144	201
	45	107	203,196
	46	149	189
	52	118	208,195
	49	134	207
	48,47	131	194
	44	146	205
	37,42	132,153,105	206
	41,71	141	209
	64		

* PCB congeners appearing as pairs or triplets were coeluted and reported as sum.
[+] o,p-DDE coelutes with PCB congeners 92,85
[#] Evidence for PCB coelution with cis-nonachlor

Detection Limits: Matrix blanks (~40) were generated to monitor possible laboratory contamination and to calculate the detection limits for PCBs and OCPs. Each matrix blank, consisting of approximately 30 g of clean Na_2SO_4, was analyzed using the same procedures as the samples. Average surrogate recoveries for these blanks were 81%, 73% and 80% for PCBs 14, 65 and 166, respectively. Chromatograms of most blanks were void of significant peaks suggesting that little contamination through laboratory exposure occurred.

The detection limit was estimated as three times the peak area of the signal produced in the matrix blank. The method detection may be reported on a mass per sample basis or, if extraction weights of sub-sampled fish remained relatively invariant as in this study (~2 g), a 'wet weight normalized' concentration may be reported. The matrix blank-based detection limits for PCBs and OCPs ranged from to 0.06 to 1.11 and 0.11 to 2.16 ng/g wet weight, respectively (Tables 2 and 3). Based on 31 matrix blanks, the detection limit for total PCBs (t-PCBs) was 24.2 ng/g wet weight.

Analytical Accuracy: A National Institute for Standards and Technology (NIST) standard reference material (SRM #1974a; Organics in Mussel Tissue) was used to periodically evaluate extraction efficiency and analytical accuracy (July 28, 1999 and January 27, 2000). The majority of determined concentrations fell below those values reported by NIST (Tables 4 and 5), denoting the partial loss of these semi-volatile analytes through analytical manipulations. For PCBs, recoveries ranged from 49 to 117% with most values falling short of those reported by NIST. Considering the average surrogate recovery for all three surrogates (14, 65 and 166) was 75% and that some discrepancies exist between which congeners are reported (*e.g.*, coeluting versus non-coeluting), PCB recoveries suggest a relatively high degree of accuracy in the ANS' ability to quantify PCBs.

NIST reports the concentrations of only five OCPs in their SRM 1974a as opposed to the 17 OCPs quantified in this study. Recoveries for p,p-DDE and trans-nonachlor from two separate analyses (January 27, 1999 and July 28, 2000) averaged 77 and 112%. Average recoveries for o,p-DDE and cis-nonachlor were very large (>400%). Values this high usually indicate one of two things: a problem with the concentration value assigned for that analyte in the calibration standard or a problem with the ability to resolve that analyte without interference (from PCB congeners or other unidentifiable compounds) using the analytical instrumentation.

To investigate the first issue, prepared standards were compared to a previously prepared and actively used mixed standard from a colleague's laboratory (Dr. Greg Foster, George Mason University, VA). By using our mixed pesticide standard as an unknown, concentrations were assigned using the 'Foster mixed standard' as the true calibration standard. Calculated concentrations of OCPs in our standard mixture compared very well to our originally assigned concentrations, providing confidence that the standards were indeed prepared accurately. The question then remained as to the resolving power of gas chromatography (with electron capture detector) to clearly and accurately differentiate closely coeluting compounds. To investigate this issue in more depth and to provide additional quality assurance, our laboratory was involved in NIST's Inter-laboratory Comparison exercise, a blind evaluation of NIST-issued fish tissue for PCBs and OCPs.

Table 2. Detection Limits for PCBs.

Congener	Det. Limit (ng/sample)	Det. Limit (ng/g wet)
1	0.76	0.38
3	1.68	0.84
4+10	0.48	0.24
7	0.14	0.07
6	0.29	0.15
8+5	0.56	0.28
14		
19	0.49	0.25
30		
12+13	0.90	0.45
18	0.68	0.34
17	0.52	0.26
24+27	0.24	0.12
16+32	0.74	0.37
29	0.36	0.18
26	0.50	0.25
25	1.73	0.86
31+28	2.20	1.10
33+53+21	1.12	0.56
heptachlor	0.16	0.08
22	1.54	0.77
45	0.33	0.17
46	0.47	0.23
52	0.67	0.33
49	0.48	0.24
47+48	2.11	1.06
65		
44	0.51	0.25
37+42	0.16	0.08
41+71	0.22	0.11
64	0.32	0.16
40	0.19	0.09
100	0.27	0.13
63	0.23	0.12
74	0.53	0.27
70+76	0.53	0.27
66+95	1.25	0.62
91	0.26	0.13
56+60	0.55	0.27
o,p DDE	0.56	0.28
101	0.45	0.22
99	0.47	0.24
trans-nonachlor	1.07	0.54
83	0.23	0.12
97	0.15	0.08
81+87	0.57	0.29
p,p DDE	2.23	1.11

Table 2 (continued). Detection Limits for PCBs.

Congener	Det. Limit (ng/sample)	Det. Limit (ng/g wet)
85	0.20	0.1
136	0.12	0.06
77+110	0.61	0.31
82	0.14	0.07
151	0.18	0.09
135+144	0.16	0.08
107	0.13	0.07
149	0.53	0.26
118	0.47	0.23
134	0.24	0.12
cis-nonachlor	2.00	1.00
131	0.14	0.07
146	0.56	0.28
153+132+105	2.30	1.15
141	0.24	0.12
137+176	0.73	0.36
163+138	1.36	0.68
158	0.46	0.23
129+178	0.38	0.19
166		
187+182	0.73	0.36
183	0.31	0.16
128	0.34	0.17
185	0.15	0.08
174	0.18	0.09
177	0.24	0.12
202+171	0.23	0.12
157+200	0.19	0.09
204		
172+197	0.15	0.07
180	0.76	0.38
193	0.56	0.28
191	0.18	0.09
199	0.14	0.07
170+190	0.46	0.23
198	0.15	0.08
201	0.34	0.17
203+196	0.46	0.23
189	0.22	0.11
208+195	0.28	0.14
207	0.18	0.09
194	0.54	0.27
205	0.25	0.12
206	0.36	0.18
209	0.16	0.08
sum PCBs	*48.38*	*24.19*
% Recovery		
14	Average Surr Rec	*81*
65		*73*
166		*80*

Table 3. Detection limits for organochlorine pesticides.

COMPOUND	Det. Limit (ng/sample)	Det. Limit (ng/g wet)
alpha BHC	0.53	0.26
beta BHC	4.31	2.16
lindane	0.45	0.23
delta BHC	1.20	0.60
aldrin	3.15	1.58
heptachlor epoxide	0.21	0.11
gamma chlordane	0.49	0.25
endosulfan I	0.38	0.19
alpha chlordane	0.55	0.28
dieldrin	0.27	0.14
o,p DDD	0.32	0.16
endrin	0.47	0.23
endosulfan II	0.46	0.23
p,p DDD	0.97	0.49
o,p DDT	0.55	0.27
p,p DDT	1.21	0.60

Table 4. Comparison of PCB and pesticide concentrations reported by the Academy of Natural Sciences and those from the NIST (Mussel Tissue SRM 1974a) - January 27, 2000.

COMPOUND	ANS -PCER		NIST SRM		Recovery
	Mean (n=4)	*Std*	*Mean*	*Std*	
PCB 18	3.35	1.12	3.70	1.20	90%
PCB 28/31	20.50	6.55	17.60	4.10	116%
PCB 52	8.70	1.84	13.10	1.30	66%
PCB 44	8.18	1.84	8.28	0.84	99%
PCB 66/95	22.71	13.98	21.04	2.40	108%
o,p DDE	3.40	0.80	0.70	0.15	486%
PCB 101	8.61	2.02	14.60	1.10	59%
trans-nonachlor	2.30	0.78	2.05	0.41	112%
p,p DDE	4.61	1.50	5.84	0.63	79%
PCB 118	7.29	1.82	14.90	0.40	49%
cis-nonachlor	3.80	1.30	0.78	0.10	487%
PCB 153+132+105	16.82	4.39	22.49		75%
PCB 138/163	11.76	2.76	15.20	1.10	77%
PCB 159/182/187	3.13	0.97	3.87	0.27	81%
PCB 128	1.71	0.61	2.50	0.39	68%
PCB 180	1.36	0.44	1.95	0.43	70%
PCB 170/190	0.63	0.23	0.63	0.12	99%

Table 5. Comparison of PCB and pesticide concentrations reported by the Academy of Natural Sciences and those from the NIST (Mussel Tissue SRM 1974a) - July 28, 1999.

COMPOUND	ANS -PCER		NIST SRM		Recovery
	Mean (n=6)	*Std*	*Mean*	*Std*	
PCB 52	8.28	1.09	13.10	1.30	63%
PCB 49	8.66	1.50	10.12	0.59	86%
PCB 44	7.07	0.86	8.28	0.84	85%
PCB 66/95	22.66	5.13	21.04	2.40	108%
PCB 101/90	7.97	0.71	14.60	1.10	55%
PCB 99	4.45	0.49	8.08	0.46	55%
trans-nonachlor	2.27	0.39	2.05	0.41	111%
p,p DDE	4.41	0.49	5.84	0.63	75%
o,p DDE	2.72	0.31	0.70	0.15	388%
PCB 77+110	10.71	1.21	14.50	1.00	74%
PCB 151	1.90	0.21	2.91	0.40	65%
PCB 149	6.52	0.67	9.98	0.27	65%
PCB 118	7.44	0.77	14.90	0.40	50%
cis-nonachlor	3.40	0.34	0.78	0.10	436%
PCB 153/132/105	18.56	1.89	22.59	1.25	82%
PCB 163/138	13.33	1.44	15.20	1.10	88%
PCB 187/182	3.07	0.36	3.87	0.27	79%
PCB 183	2.13	0.32	1.82	0.27	117%
PCB 128	1.96	0.28	2.50	0.39	79%
PCB 180	1.39	0.14	1.95	0.43	71%

The NIST Interlaboratory Comparison exercise is also helpful when assessing a laboratory's ability to accurately quantify OCPs. Often, the concentrations of only a few (or no) OCPs contained in an issued SRM are reported. For example, Environment Canada's carp tissue SRM reports no OCPs. For the NIST Inter-laboratory Comparison, over 30 labs submitted concentrations for OCPs in fish tissue. All but one of these labs used the same analytical technique (gas chromatography with an electron capture detector) as the one used in this investigation. Though the pooled concentrations for each OCP (or PCB congener) may not be considered a 'NIST certified' SRM value (and thus, recoveries were not calculated), they are helpful in indicating the closeness of one obtained concentration value (from one laboratory) to the average value (obtained from all laboratories).

The results of the NIST Inter-laboratory Comparison for PCBs (Table 6) once again reiterated ANS's ability to precisely and accurately quantify these chemicals. For those congeners in which ANS's values were significantly different than the pooled average of all the labs (e.g., congeners 8, 28, 101/90, and 195), quantification differences often can explain the discrepancies. For example, NIST reports congeners 101/90 whereas ANS reports only congener 101. When NIST assigns a value of 38.1±10.7 ng/g wet wgt to these coeluting congeners and ANS reports a value of 17.39±1.09 ng/g wet wgt, one must take note that the same congeners were not being evaluated. Other quantification differences were present and are explained in Table 6. Though both NIST and ANS report congener

Table 6. Comparison of polychlorinated biphenyl concentrations reported by the Academy of Natural Sciences and those from the NIST Interlaboratory Comparison effort (unknown fish) - April, 2000.

COMPOUND	ANS -PCER		NIST INTERLAB	
	Mean (n=9)	*Std*	*Mean*	*Std*
PCB 8 *	13.21	1.92	<2	
PCB 18	0.58	0.17	<2	
PCB 28 *	5.00	1.96	2.24	0.89
PCB 52	4.96	0.49	7.1	1.85
PCB 44	5.59	0.60	5.54	3.23
PCB 66/95	26.78	1.88	17.8	5.9
PCB 101/90 *	17.39	1.09	38.1	10.7
PCB 118	20.60	0.71	50.9	13.4
PCB 153 *	121.36	3.78	157	34
PCB 105 *			21.7	6.7
PCB 138/163/164 *	94.62	5.05	136	23
PCB 187/182	26.57	0.85	54.2	10
PCB 128	65.00	6.70	26.9	13.6
PCB 180	44.76	1.62	75	16.8
PCB 170/190	30.17	1.07	29.1	9
PCB 195 *	9.09	0.08	5.19	1.51
PCB 206	5.04	0.09	5.06	1.15
PCB 209	0.48	0.06	1.33	0.5
Total Reported PCBs	491.20		633.16	

*Congener 8 reported as 8+5
Congener 28 reported as 28+31
Congeners 101/90 reported as 101 only
Congener 153 reported as 132+105+153
Congeners138/163/164 reported as 138+163
Congener 195 reported as 195+208

128 as a non-coeluting peak, ANS's assigned concentration (65.0 ± 6.7 ng/g wet wgt) was 2.5 times larger than NIST's. Though this congener usually produces a single distinct peak, it is likely that a coeluting interference is responsible for this inflated concentration. By summing all the quantified congeners, a final comparison using *t*-PCBs may be made. NIST reports a *t*-PCB value of 632 ng/g wet wgt; ANS assigns 491 ng/g wet wgt. Differences on this scale are considered average and represent a good degree of accuracy.

The results of the NIST Inter-laboratory Comparison for OCPs (Table 7) also revealed that the ANS is on par with other labs in the ability to quantify this class of chemicals. For most of the OCPs, reported values were close to those values by NIST (based on a averaging values from over 30 labs). However, a large discrepancy between ANS and NIST o,p-DDE concentrations did exist. As with ANS's results from the NIST SRM evaluations (Tables 4 and 5), the reported o,p-DDE concentration was once again well above the range of expected values. This OCP elutes in the first fraction (F1)

Table 7. Comparison of organochlorine pesticide concentrations reported by the Academy of Natural Sciences and those from the NIST Interlaboratory Comparison (unknown fish) - April, 2000.

COMPOUND	ANS - PCER		NIST INTERLAB	
	Mean (n=9)	*Std*	*Mean*	*Std*
alpha-HCH (a-BHC)	5.5	2.0	5.2	1.1
hexachlorobenzene	not analyzed		6.6	1.6
gamma-HCH (g-BHC,lindane)	1.0	0.3	1.2	0.6
heptachlor	2.3	1.0	<1	
aldrin	2.4	0.5	<1	
heptachlor epoxide	5.8	0.3	5.1	1.2
oxychlordane	not analyzed		17.4	3.8
gamma-chlordane (trans-chlordane	5.6	0.2	8.0	2.5
2,4'-DDE	9.6	1.3	1.0	0.4
endosulfan I	0.2	3.2	<2	
cis-chlordane (alpha-chlordane)	10.6	3.2	30.7	11.1
trans-nonachlor	74.8	4.3	89.5	18.3
dieldrin	9.3	0.2	31.4	8.4
4,4'-DDE	473.3	31.7	332.0	68.0
2,4'-DDD	2.0	0.8	2.6	1.5
endrin	5.8	0.9	5.4	1.9
endosulfan II	5.3	0.9	<5	
4,4'-DDD	12.6	3.6	16.9	8.0
2,4'-DDT	75.1	24.2	23.0	11.2
cis-nonachlor	148.6	50.4	59.9	14.5
4,4'-DDT	24.0	8.7	41.1	16.7
mirex	not analyzed		6.1	1.9

of the florisil clean-up along with the PCBs. Coelution with PCBs (specifically congeners 92/84) takes place and is the likely cause of inflated concentrations of o,p-DDE compared to NIST published values. Thus, this OCP should be reported as "o,p-DDE + Congener 92/85". The value reported for cis-nonachlor was also well above that assigned by NIST (just as previously found with the NIST SRM evaluations). An interfering species may be coeluting with this OCP and caution should be taken when using reported values for cis-nonachlor. True values are likely half of reported values.

As part of the NIST Inter-laboratory Comparison exercises, an additional SRM was analyzed. Homogenized carp, supplied by Environment Canada, was analyzed (n=4). Only eight PCB congener (or coeluting congeners) concentrations are reported for this SRM (Table 8). Percent recoveries ranged from 37% (for congener 101/90) to 122% (for congeners 170/190). Recoveries increased with increasing degree of chlorination in agreement with the fact that the lighter molecular weight congeners (those that are more volatile) are more easily lost in the analytical procedure. Once again, recoveries in this range are considered to be normal and reflect our capability in accurately quantitating PCBs. As stated previously, no OCP concentrations are certified for this SRM.

Table 8. Comparison of polychlorinated biphenyl concentrations reported by the Academy of Natural Sciences and those from the Environment Canada (Carp) - April, 2000.

COMPOUND	ANS -PCER		Environment Canada		Recovery
	Mean (n=4)	*Std*	*Mean*	*Std*	
PCB 52	55.04	4.67	124	32	44%
PCB 101/90	45.50	3.70	124	37	37%
PCB 118	58.82	4.29	132	60	45%
PCB 153/105/132	83.68	6.25	137	63	61%
PCB 138/163/164	80.37	5.79	102	23	79%
PCB 187/182	21.62	1.60	36	16	60%
PCB 180	36.30	2.17	46	14	79%
PCB 170/190	26.76	1.78	22	8	122%

Analytical Precision: To assess precision of the organic contaminant analyses, sample duplicates of randomly selected samples were performed at a frequency of 10%. The mean RPD for t-PCBs was 27 ± 24% (Table 9). The mean RPD for F2 duplicates (most of the OCPs) was 50 ± 32%. In most cases, duplicate analyses revealed good precision. For select duplicate analyses (e.g., F-3170 and F3171), RPD values were higher than expected. This is most likely a result of sub-sampling error. For example, for those samples that were homogenized with skins retained, the homogenate often contained small chunks of skin mixed with tissue from the fillet. If, when sub-sampling, a piece of skin was taken for one duplicate and not the other, this could affect the final concentration values (as well as lipid) and cause higher than expected RPD values between duplicates.

Additional Quality Assurance: Additions of known volumes of calibration standards to matrix blanks, or 'spiked samples', were used to further evaluate quality assurance of the analytical procedure. Analytes were quantified and resulting masses were compared to the masses initially spiked into the matrix prior to extraction. For most PCB congeners, recoveries ranged from 44 % (congener 47/48) to 123 % (congener 83) (Table 10). Several congeners had recoveries that exceeded 160% (congeners 12/13, 24/27, 29, 25, 63, 137/176, 129/178, 128, 189, and 209). The sum of these congeners represent <5% of the total mass in most fish tissues. Recoveries that are above 160% reflect the difficulty in quantifying congeners whose masses in spiked standards (and in actual samples) are so low.

The recoveries of the OCPs eluting in F1 were not as surprising (Table 11). Cis-nonachlor and o,p-DDE had recoveries exceeding 160% (315% and 192%, respectively). O,p-DDE was found to coelute with PCB congeners 92/85; recoveries exceeding 100% are therefore expected. An unidentifiable coeluting substance is responsible for exceedingly high recovery for cis-nonachlor. Once again, care should be taken when using reported concentrations for these two OCPs. Cis-nonachlor concentrations are likely 2-2.5 times lower than actual concentrations while o,p-DDE should be reported as o,p-DDE + PCB congeners 92/85.

Table 9. Duplicate RPDs for t-PCBs.

Fish ID	t-PCBs Original	t-PCBs Duplicate	t-PCBs Triplicate	RPD
0	548.93	415.02		28
F-2851	42.39	20.48		70
F-2855	695.20	859.43		21
F-2938	554.16	543.99		2
F-2951	101.53	114.45	78.82	
F-2955	1011.19	727.05		33
F-2956	409.75	326.73		23
F-2960	150.46	116.61		25
F-2967	351.19	375.96		7
F-2972	1189.73	2353.34		66
F-2979	159.69	176.99		10
F-2989	361.79	354.36		2
F-3003	176.57	332.58		61
F-3020	49.57	48.55		2
F-3034	1938.10	1907.20		2
F-3036	115.33	123.54		7
F-3046	202.12	233.75		15
F-3051	420.58	316.89		28
F-3053	806.70	1249.15		43
F-3059	1077.87	1152.44		7
F3065	171.12	234.52		31
F-3066	973.22	1102.86		12
F-3071	356.68	446.47		22
F-3078	250.80	327.67		27
F-3098	1267.68	1784.42		34
F-3101	153.06	128.45		17
F-3107	30.39	64.42		72
F-3110	389.93	408.66		5
F-3112	75.18	45.04		50
F-3113	200.23	329.59		49
F-3115	691.55	635.47		8
F-3117	258.12	210.72		20
F-3118	36.69	56.89	54.47	
F-3170	151.01	363.04		82
F-3171	54.51	131.49		83
F-3197	4235.77	3460.19		20
F-3203	512.51	498.30		3
F-3207	46.46	45.22		3
F-3224	72.95	66.55		9

Mean of RPDs 27
Std. Dev. of Mean RPDs 24

Table 10. Spike recoveries for F1 fraction.

Congener	Ave. Spk Mass (n=5) ng	STD Spike (n=5) ng	RSD %	Mullins Conc, ng/L	Mass in Spike, ng
1	2.86	0.28	10%	43	4.3
3	2.10	0.15	7%	26	2.6
4+10	0.29	0.02	7%	2.8	0.28
7	0.22	0.02	8%	2.2	0.22
6	0.33	0.04	11%	4.2	0.42
8+5	4.95	0.36	7%	50	5
14	14.88	0.95	6%	200	20
19	0.05	0.02	39%	1	0.1
12+13	0.16	0.19	123%	0.92	0.092
18	1.10	0.08	7%	13	1.3
17	0.48	0.10	20%	7.4	0.74
24+27	0.16	0.07	44%	0.87	0.087
16+32	1.01	0.12	12%	13.1	1.31
29	0.05	0.01	22%	0.18	0.018
26				2.3	0.23
25	0.66	0.56	85%	1	0.1
31+28	1.88	0.11	6%	38	3.8
33+53+21	1.07	0.10	9%	16.7	1.67
heptachlor	5.24	0.61	12%		9.8
22	1.17	0.30	26%	11	1.1
45	0.13	0.08	58%	2.7	0.27
46	0.13	0.02	18%	1.4	0.14
52	1.08	0.07	7%	12	1.2
49	0.83	0.09	10%	9	0.9
47+48	0.40	0.19	49%	9	0.9
65	12.12	1.02	8%	200	20
44	1.18	0.10	8%	15	1.5
37+42	0.46	0.12	26%	8.8	0.88
41+71	0.61	0.10	17%	9.4	0.94
64	0.62	0.06	9%	6.9	0.69
40	0.07	0.01	21%	3.3	0.33
100	0.05	0.02	43%	0.5	0.05
63	0.12	0.03	23%	0.74	0.074
74	0.87	0.06	7%	8.1	0.81
70+76	1.94	0.17	9%	21	2.1
66+95	2.69	0.39	14%	27.2	2.72
91	0.14	0.02	13%	1.4	0.14
56+60	1.60	0.05	3%	18	1.8
o,p DDE	5.64	0.23	4%		2.94
101	0.60	0.03	4%	4.8	0.48
99	0.26	0.03	12%	2.3	0.23
trans-nonachlor	5.06	0.56	11%		10.89
83	0.04	0.01	16%	0.36	0.036

Table 10 (continued). Spike recoveries for F1 fraction.

Congener	Ave. Spk Mass (n=5) ng	STD Spike (n=5) ng	RSD %	Mullins Conc, ng/L	Mass in Spike, ng
97	0.18	0.02	13%	1.9	0.19
81+87	0.31	0.04	13%	3.32	0.332
p,p DDE	5.19	1.41	27%		6.34
85	0.17	0.07	43%	2.1	0.21
136	0.14	0.01	5%	1.4	0.14
77+110	0.68	0.05	7%	7.1	0.71
82	0.09	0.01	14%	1.3	0.13
151	0.53	0.02	3%	5.7	0.57
135+144	0.23	0.02	8%	2.2	0.22
107	0.02	0.00	0%	0.33	0.033
149	1.13	0.03	2%	11	1.1
118	0.34	0.05	14%	3.5	0.35
134	0.03	0.01	39%	0.45	0.045
cis-nonachlor	31.63	4.53	14%		10.03
153+132+105	2.44	0.11	4%	21.6	2.16
141	0.50	0.02	5%	5.2	0.52
137+176	0.28	0.04	14%	1.388	0.1388
163+138	0.91	0.06	6%	9.8	0.98
158	0.69	0.01	2%	1.2	0.12
129+178	0.25	0.03	12%	3.7	0.37
166	13.02	0.75	6%	200	20
187+182	1.28	0.08	6%	15	1.5
183	0.64	0.02	3%	7.7	0.77
128	0.13	0.04	32%	0.47	0.047
185	0.20	0.03	13%	2.2	0.22
174	1.00	0.10	10%	11	1.1
177	0.39	0.06	15%	5.7	0.57
202+171	0.20	0.02	13%	3.69	0.369
157+200	0.15	0.02	13%	2.07	0.207
172+197	0.20	0.05	26%	2.14	0.214
180	1.88	0.10	5%	24	2.4
193	0.28	0.10	36%	2.4	0.24
191	0.04	0.01	31%	0.45	0.045
199	0.10	0.01	13%	1	0.1
170+190	0.87	0.15	17%	12.1	1.21
198	0.06	0.02	39%	0.67	0.067
201	1.01	0.50	50%	15	1.5
203+196	1.33	0.09	7%	17	1.7
189	0.04	0.02	49%	0.18	0.018
208+195	0.69	0.07	10%	8.0776	0.80776
207	0.04	0.01	41%	0.48	0.048
194	0.45	0.03	6%	6.9	0.69
205	0.04	0.01	35%	0.4	0.04
206	0.30	0.02	8%	4.2	0.42
209	0.02	0.01	25%	0.095	0.0095

Table 11. Spike recoveries (ng) for F2 fractions.

Compound	Mass spk 1	Mass spk 2	Mass spk 3	Mass spk 4	Mass spk 5	Ave. Mass	STD Mass	Mass in Spike	Recovery (%)
alpha BHC	9.12	9.66	9.29	8.77	8.50	9.07	0.45	9.57	95%
beta BHC	46.84	44.59	42.81	31.62	30.15	39.20	7.74	33.20	118%
lindane	7.36	7.71	7.41	6.89	6.35	7.15	0.53	7.13	100%
delta BHC	6.30	8.16	8.00	7.14	6.90	7.30	0.78	8.77	83%
aldrin	1.41	0.86	0.85	0.95	0.60	0.93	0.30	9.59	10%
heptachlor epoxide	11.93	11.05	11.76	11.53	8.89	11.03	1.24	9.22	120%
gamma chlordane	7.68	8.04	7.15	6.50	6.26	7.13	0.76	7.14	100%
endosulfan I	9.85	10.27	9.88	9.00	8.61	9.52	0.69	9.60	99%
alpha chlordane	8.61	8.87	8.42	8.25	7.38	8.31	0.57	8.45	98%
dieldrin	8.84	10.74	10.38	9.95	8.33	9.65	1.02	10.15	95%
o,p DDD	9.21	9.14	8.92	8.20	7.69	8.63	0.66	8.53	101%
endrin	27.38	28.37	27.27	24.72	22.15	25.98	2.53	26.31	99%
endosulfan II	4.99	5.48	4.65	5.20	4.43	4.95	0.42	8.00	62%
p,p DDD	27.84	29.11	28.24	25.87	24.46	27.10	1.90	29.40	92%
o,p DDT	12.52	10.34	10.19	8.89	7.98	9.98	1.72	26.04	38%
p,p DDT	6.92	6.81	7.22	7.68	6.03	6.93	0.61	6.89	101%

Average Recovery 88%

With the exception of two compounds, the remaining OCPs (those that did not elute in F1) had recoveries ranging from 62 to 120 % (Table 11). The recovery of o,p-DDT was low (40%) but still is in the range of acceptable recoveries (40-120 %). It is not known why aldrin had such a low recovery. For the NIST Interlaboratory Comparison exercise, ANS's assigned concentration of aldrin was 2.39 ng/g wet wgt while the NIST assigned value was <1 ng/g wet wgt. NIST considered this within its acceptable range.

Comparison of Methods (Congener specific versus Aroclor Method): The majority of the *t*-PCB concentrations reported in studies associated with consumption guidelines were derived from a quantitation procedure that involves matching Aroclor patterns rather than summing individual congeners (as was done in this study). During the acquisition of data in this study, the question arose as to the comparability of concentrations determined by these two methods. To address this, five extracted and analyzed samples were subsequently sent to US EPA's Environmental Science Center for analysis according to EPA's SOP R3-QA207.1, a consolidated method derived from EPA methods NPDES 608, RCRA 8081 and 8082, and the Superfund CLP Statement of Work. The concentrations determined by the two methods were similar (Table 12) and had relative percent differences ranging from 2 to 26%. From this limited data set, it is likely that the two analytical methods used to determine t-PCBs are very similar with respect to the concentrations they supply, suggesting that past data sets that were reliant on the 'Aroclor method' may be directly compared to those generated in this investigation. The issue of how different extraction and clean up procedures would determine final t-PCB values was not addressed. However, it is likely that small differences in analytical 'work-up' procedures would not have a significant impact on the final concentration.

Table 12. A comparison of two quantitation methods: The Aroclor method (samples sent to US EPA) versus congener-specific determination (this study).

Common Name	Location	*t*-PCBs by Cong-Spec (PCER) ng/g wet wgt	*t*-PCB by 'Aroclor' (US EPA) ng/g wet wgt	RPD %
American Eel	Mullica River	151	126	18
Striped Bass	Delaware Bay	1267	1021	22
Bluefish	Atlantic Ocean, Central	1193	1332	11
Large Mouth Bass	Pennsauken Creek	561	907	47
Carp	Copper River Lake	1052	980	7

Appendix II

Raw Data

Concentrations in ng/g wet wgt)																								
CONGENER:																								
Sample ID	1	3	4+10	7	6	8+5	19	12+13	18	17	24+27	16+32	29	26	25	31+28	33+53+21	22	45	46	52	49	47+48	44
Detection Limits	**0.38**	**0.84**	**0.24**	**0.07**	**0.15**	**0.28**	**0.25**	**0.45**	**0.34**	**0.26**	**0.12**	**0.37**	**0.18**	**0.25**	**0.86**	**1.10**	**0.56**	**0.77**	**0.17**	**0.23**	**0.33**	**0.24**	**1.06**	**0.25**
F-2836	BDL	1.00	0.26	0.21	5.09	6.81	BDL	0.66	2.35	1.33	0.65	2.34	BDL	1.76	1.65	15.65	3.83	1.78	2.43	0.67	14.04	12.52	24.08	10.92
F-2837	ND	BDL	0.25	0.18	3.83	5.75	0.35	BDL	2.75	1.62	0.31	2.22	BDL	1.46	1.58	17.45	4.35	2.26	2.44	0.52	21.52	14.32	22.82	7.21
F-2838	ND	BDL	0.29	0.27	5.79	7.35	0.58	BDL	6.31	3.83	0.95	5.41	BDL	3.17	2.12	43.85	7.34	7.09	1.58	0.94	18.62	16.72	29.50	7.63
F-2840	0.70	1.09	BDL	BDL	ND	2.17	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.45	BDL	1.35	0.62	1.41	ND	0.45	8.14	1.15	11.75	1.89
F-2841	0.45	2.13	BDL	BDL	ND	4.64	BDL	0.45	BDL	0.27	BDL	0.43	BDL	0.53	BDL	1.50	BDL	4.80	ND	1.33	14.80	2.05	14.93	4.26
F-2842	0.41	3.46	BDL	BDL	BDL	1.10	ND	BDL	BDL	BDL	0.33	0.56	BDL	1.20	BDL	13.42	2.83	1.99	4.87	1.44	12.56	2.20	9.79	2.70
F-2843	1.08	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	2.47	0.58	2.88	0.93
F2844	BDL	2.17	0.35	BDL	0.18	1.72	BDL	BDL	1.58	0.79	0.25	1.85	BDL	1.39	1.18	14.87	2.42	3.92	2.64	0.95	8.82	6.76	5.00	8.63
F-2845	0.56	BDL	0.35	BDL	0.16	2.47	0.55	BDL	4.50	2.48	0.65	4.70	BDL	1.81	0.98	30.06	3.16	5.11	5.08	0.56	18.26	15.17	ND	6.60
F-2846	BDL	2.22	0.31	0.26	0.59	6.15	0.67	BDL	3.15	1.65	0.64	4.58	BDL	1.61	1.30	6.26	5.89	5.67	2.12	1.72	20.44	14.85	12.72	18.10
F-2847	0.86	BDL	ND	BDL	BDL	1.28	BDL	BDL	0.81	0.34	0.15	0.67	BDL	BDL	BDL	4.36	1.01	1.66	ND	0.40	5.89	4.65	1.92	4.62
F-2848	0.39	1.68	BDL	BDL	BDL	0.72	ND	ND	BDL	0.30	0.52	ND	BDL	0.28	0.99	2.64	BDL	BDL	0.79	0.36	1.89	0.55	4.01	0.50
F2849	ND	ND	ND	BDL	BDL	BDL	BDL	0.68	BDL	BDL	1.45	0.68	0.21	0.30	1.24	2.44	BDL	0.84	0.65	0.61	1.88	0.34	5.29	0.27
F2850	0.70	ND	ND	BDL	BDL	BDL	BDL	0.70	BDL	BDL	1.36	BDL	BDL	0.30	1.20	1.98	1.64	BDL	0.65	0.46	BDL	BDL	1.73	ND
F-2851	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	BDL	0.31	1.31	BDL	BDL	BDL	BDL	1.54	BDL	BDL	0.25	0.24	BDL	BDL	1.79	6.28
F-2853	0.41	BDL	BDL	BDL	0.75	0.93	BDL	BDL	0.81	0.32	1.60	1.32	BDL	0.57	0.98	3.86	1.04	1.02	1.24	0.56	6.83	5.48	11.10	3.86
F-2854	ND	ND	BDL	BDL	1.25	BDL	BDL	BDL	0.47	BDL	ND	0.78	BDL	0.71	BDL	4.93	1.13	0.87	0.32	0.26	5.48	3.81	8.96	3.68
F-2855	BDL	0.93	BDL	0.10	1.60	2.55	0.47	BDL	0.66	0.34	0.45	0.87	BDL	0.67	1.04	5.70	2.01	1.33	1.81	1.62	8.56	5.88	12.06	6.04
F-2856	0.56	BDL	BDL	0.13	1.59	2.06	0.44	BDL	0.94	0.54	1.71	1.74	0.18	0.34	1.21	4.13	0.94	0.98	1.95	0.64	5.82	3.59	8.13	3.38
F-2857	0.94	1.02	ND	BDL	0.44	0.58	BDL	0.81	0.73	BDL	1.05	0.73	BDL	0.49	0.94	4.48	1.00	BDL	0.79	0.54	5.11	4.60	10.20	2.63
F-2858	0.53	BDL	BDL	BDL	0.18	0.42	BDL	BDL	0.71	0.46	0.96	1.21	BDL	0.49	BDL	4.61	1.13	0.78	0.90	0.45	4.19	4.07	8.34	2.78
F-2859	ND	11.79	0.50	1.51	64.00	49.99	1.00	0.74	14.44	8.04	2.31	13.34	0.41	5.72	3.21	70.32	12.25	13.28	9.17	3.38	58.91	52.24	63.15	55.54
F-2860	ND	8.54	0.48	0.70	21.75	23.72	1.24	BDL	8.96	4.76	2.72	8.05	0.27	5.83	4.64	65.31	12.05	9.26	3.35	2.21	29.68	24.83	ND	25.70
F-2861	ND	1.49	0.34	0.72	11.43	13.05	0.47	BDL	5.99	3.51	1.00	5.34	BDL	2.59	2.27	20.42	7.89	4.60	2.50	1.21	21.59	19.51	22.67	19.60
F-2862	BDL	BDL	0.33	0.11	BDL	2.95	ND	BDL	0.41	BDL	ND	BDL	BDL	0.77	BDL	9.30	1.18	2.08	1.44	0.30	9.92	2.43	23.02	8.27
F-2863	ND	ND	0.34	0.15	1.62	1.81	0.28	BDL	2.64	1.68	0.85	3.43	0.19	1.89	2.90	16.10	4.14	3.65	1.54	1.13	9.69	8.32	9.65	8.01
F-2864	ND	ND	BDL	BDL	0.25	0.35	BDL	BDL	0.56	BDL	0.34	0.46	BDL	0.48	1.61	2.33	1.45	1.19	0.54	0.65	2.10	1.74	ND	1.45
F-2865	ND	ND	BDL	BDL	0.34	1.16	BDL	0.59	0.74	0.55	0.71	1.04	BDL	0.47	2.20	3.54	BDL	1.01	0.56	0.96	4.29	3.63	6.08	2.67
F-2866	ND	1.47	BDL	0.17	2.29	2.72	BDL	BDL	1.47	0.94	0.57	1.97	BDL	1.77	2.03	11.71	2.77	1.99	1.99	0.82	10.66	9.11	9.42	8.05
F-2936	ND	ND	0.93	ND	1.87	BDL	BDL	BDL	BDL	BDL	ND	0.44	ND	0.34	ND	6.12	0.88	2.14	1.86	0.67	7.11	3.22	5.62	3.43
F-2937	ND	5.40	0.71	0.08	0.26	5.11	0.38	0.54	3.71	1.73	1.22	5.56	ND	4.56	2.04	30.07	3.06	13.69	19.87	1.83	15.61	14.83	11.65	13.44
F-2938	0.64	2.51	2.22	0.12	BDL	3.14	0.32	BDL	0.56	BDL	0.19	0.46	BDL	0.37	BDL	18.16	BDL	4.62	1.89	0.32	9.31	1.57	BDL	2.37
F-2939	0.48	BDL	BDL	BDL	0.16	1.62	BDL	BDL	1.56	0.83	0.44	1.82	BDL	0.97	BDL	10.61	2.80	3.59	7.34	0.52	6.72	5.45	4.47	5.65
F-2940	BDL	ND	BDL	0.07	0.61	1.33	BDL	BDL	1.42	0.57	0.43	1.93	BDL	2.32	1.08	10.61	1.23	2.74	5.89	0.58	8.02	7.02	6.72	6.34
F-2945	BDL	2.13	BDL	BDL	0.51	1.89	BDL	0.49	1.25	0.63	0.21	1.71	BDL	0.40	BDL	5.01	1.63	2.38	8.33	0.28	5.14	4.08	2.68	4.12
F-2946	BDL	2.90	0.25	ND	0.49	2.47	BDL	BDL	1.30	0.67	0.20	1.69	BDL	0.79	BDL	7.20	2.95	5.78	10.33	0.78	7.86	7.40	6.62	6.12
F-2947	0.48	BDL	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.37	BDL	BDL	BDL	1.32	0.72	0.48	0.41	0.43	BDL	BDL
F-2948	1.78	BDL	BDL	0.51	BDL	0.51	0.51	BDL	BDL	0.51	0.72	BDL	BDL	BDL	BDL	2.77	BDL	1.26	0.79	BDL	0.55	0.51	1.27	0.29
F-2949	3.01	3.01	3.01	3.01	0.41	1.33	3.01	0.53	BDL	0.36	1.15	1.03	BDL	1.34	BDL	2.59	1.29	6.18	2.65	0.31	1.52	1.63	1.59	1.30
F-2950	8.00	1.56	BDL	BDL	1.28	1.18	1.10	0.55	2.14	BDL	3.37	0.38	BDL	0.76	ND	2.42	1.54	1.56	0.58	BDL	0.69	0.32	9.53	0.41
F-2951	BDL	1.21	BDL	BDL	0.20	0.79	0.36	0.46	0.44	0.28	0.26	BDL	BDL	BDL	BDL	2.21	BDL	1.77	0.93	0.28	1.62	1.09	BDL	1.19
F-2952	4.75	2.95	0.25	2.95	0.65	2.92	1.44	1.36	3.09	1.20	7.57	0.84	BDL	1.46	1.40	5.50	0.73	4.17	3.04	0.44	3.00	2.95	7.24	1.37
F-2953	0.89	4.68	BDL	0.10	0.20	1.34	BDL	0.79	BDL	BDL	0.30	0.74	BDL	1.29	BDL	BDL	0.99	2.38	1.92	BDL	BDL	1.89	BDL	0.86
F-2954	1.00	1.00	BDL	BDL	BDL	0.95	BDL	BDL	BDL	BDL	0.14	BDL	BDL	0.27	BDL	1.33	BDL	3.06	2.74	BDL	BDL	1.34	BDL	0.68
F-2955	0.73	BDL	BDL	BDL	BDL	0.35	0.25	BDL	BDL	BDL	BDL	BDL	BDL	0.31	BDL	1.12	BDL	BDL	0.78	BDL	3.75	0.65	8.16	1.12
F-2956	BDL	BDL	BDL	BDL	BDL	0.67	0.43	BDL	BDL	BDL	0.43	BDL	BDL	BDL	BDL	BDL	BDL	1.67	0.99	BDL	2.96	0.56	2.99	0.90
F-2957	0.43	BDL	BDL	BDL	BDL	0.40	BDL	BDL	BDL	BDL	0.15	BDL	BDL	0.32	BDL	BDL	BDL	0.97	0.58	BDL	BDL	0.42	BDL	0.33
F-2958	0.51	BDL	BDL	0.51	BDL	0.46	0.51	BDL	BDL	BDL	0.51	BDL	BDL	BDL	BDL	BDL	BDL	0.86	1.37	BDL	0.46	0.96	BDL	0.44
F-2959	0.53	BDL	BDL	BDL	BDL	0.76	0.53	BDL	BDL	BDL	0.13	BDL	BDL	BDL	BDL	1.67	BDL	1.67	BDL	0.27	0.38	1.38	BDL	0.59
F-2960	BDL	ND	BDL	BDL	BDL	0.36	BDL	BDL	BDL	BDL	0.64	BDL	BDL	BDL	BDL	3.22	BDL	0.79	0.73	BDL	1.98	BDL	3.02	BDL
F-2961	ND	ND	0.96	0.08	BDL	1.02	ND	BDL	BDL	BDL	ND	BDL	BDL	0.41	BDL	5.87	BDL	0.93	0.62	ND	5.49	2.26	10.12	2.96
F-2962	BDL	BDL	BDL	0.07	BDL	0.90	ND	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	1.83	BDL	BDL	0.27	BDL	3.03	0.39	4.27	0.51
F-2963	0.48	0.86	0.38	BDL	BDL	0.80	0.48	BDL	BDL	BDL	0.13	BDL	BDL	BDL	BDL	2.78	BDL	BDL	BDL	BDL	1.50	BDL	4.94	0.28
F-2964	0.99	1.22	1.01	0.08	BDL	0.99	BDL	BDL	BDL	BDL	ND	BDL	BDL	0.30	BDL	5.89	1.18	1.95	0.73	ND	3.61	0.85	8.82	0.96
F-2965	0.48	1.35	BDL	BDL	BDL	0.62	0.48	BDL	0.54	BDL	0.48	BDL	BDL	0.37	BDL	8.36	BDL	1.19	2.75	0.30	9.81	1.89	10.77	1.82
F-2966	0.51	BDL	0.31	BDL	BDL	2.09	0.51	BDL	BDL	BDL	0.51	BDL	BDL	BDL	BDL	9.04	BDL	BDL	0.72	BDL	7.03	1.16	8.13	1.60
F-2967	0.52	BDL	0.28	0.52	BDL	2.14	0.52	BDL	BDL	0.32	0.52	BDL	0.52	BDL	BDL	BDL	BDL	3.20	11.16	0.26	2.86	0.39	2.82	0.43

Concentrations in ng/g wet wgt)																								
ONGENER:																								
Sample ID	1	3	4+10	7	6	8+5	19	12+13	18	17	24+27	16+32	29	26	25	31+28	33+53+21	22	45	46	52	49	47+48	44
F-2968	0.51	BDL	BDL	BDL	BDL	0.55	0.51	BDL	BDL	BDL	0.51	BDL	BDL	BDL	BDL	3.40	BDL	BDL	1.49	BDL	4.32	1.02	6.01	0.63
F-2969	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
F-2970	0.50	BDL	0.37	BDL	0.23	0.37	0.50	BDL	BDL	BDL	0.50	BDL	BDL	BDL	BDL	2.86	BDL	BDL	1.17	0.41	4.99	1.03	4.26	1.41
F-2971	0.53	BDL	BDL	0.53	0.15	0.53	0.53	BDL	BDL	BDL	0.53	BDL	BDL	0.78	BDL	7.38	BDL	BDL	2.19	0.47	5.12	1.74	18.50	2.04
F-2972	1.34	ND	BDL	BDL	0.56	0.68	BDL	BDL	0.42	BDL	ND	0.59	BDL	ND	BDL	3.91	1.35	1.41	2.83	0.32	14.32	3.24	19.18	4.28
F-2973	0.49	BDL	0.35	0.19	BDL	2.38	BDL	BDL	0.53	0.53	BDL	0.52	BDL	2.16	BDL	7.24	1.05	10.21	5.47	0.81	28.37	4.96	38.48	8.73
F-2974	1.36	1.22	ND	ND	BDL	0.92	BDL	BDL	BDL	BDL	ND	0.41	BDL	ND	1.20	6.70	1.43	1.66	2.98	ND	12.87	2.11	19.87	3.54
F-2975	ND	ND	0.80	0.07	0.27	0.77	BDL	0.53	0.84	BDL	ND	1.04	BDL	ND	BDL	3.07	0.71	1.19	1.23	0.48	1.85	1.52	1.83	1.34
F-2976	ND	ND	BDL	ND	0.26	0.29	BDL	BDL	0.63	0.34	0.37	0.54	BDL	0.40	BDL	2.01	BDL	BDL	1.07	0.39	4.08	3.84	4.99	2.59
F-2977	0.48	BDL	BDL	BDL	0.25	0.67	0.48	BDL	BDL	BDL	0.48	BDL	BDL	BDL	BDL	2.13	BDL	BDL	0.76	BDL	3.55	3.30	3.64	2.16
F-2978	0.55	BDL	0.39	BDL	BDL	1.18	BDL	BDL	0.55	0.54	BDL	1.10	BDL	0.61	BDL	6.81	2.76	4.64	5.40	1.01	5.60	4.68	7.54	4.18
F-2979	0.82	ND	0.47	BDL	0.46	0.80	BDL	BDL	BDL	BDL	ND	BDL	BDL	0.31	BDL	2.07	BDL	0.84	0.73	BDL	1.50	1.40	1.85	1.10
F-2980	0.50	BDL	BDL	BDL	0.20	0.50	BDL	BDL	0.78	0.98	0.50	1.20	BDL	0.49	BDL	3.19	1.48	BDL	1.34	0.60	4.61	3.64	3.91	2.96
F-2981	0.52	BDL	BDL	BDL	BDL	0.60	0.52	BDL	1.86	1.93	1.54	2.96	BDL	1.82	1.14	6.72	3.98	1.90	1.76	0.64	8.43	8.80	10.00	5.33
F-2982	0.60	BDL	0.62	0.20	BDL	1.10	BDL	BDL	0.86	0.85	0.18	1.43	BDL	0.35	1.70	6.74	2.40	3.54	1.45	1.84	9.17	10.21	1.68	8.00
F-2983	0.45	BDL	0.60	0.45	BDL	0.55	0.45	BDL	BDL	0.35	0.45	0.63	BDL	0.34	BDL	BDL	1.28	0.83	0.80	0.30	2.99	2.73	3.30	1.98
F-2984	0.52	ND	BDL	BDL	BDL	0.65	BDL	0.54	0.86	0.84	0.37	1.02	BDL	1.48	1.24	8.54	BDL	1.18	0.84	0.50	10.50	10.91	18.31	4.97
F-2985	ND	1.45	BDL	0.09	0.35	1.37	0.46	BDL	1.11	0.60	0.75	1.97	BDL	0.59	1.04	6.29	2.88	0.81	0.92	0.75	8.84	7.77	17.81	6.41
F-2986	ND	2.08	BDL	BDL	0.24	2.04	0.72	BDL	1.60	1.06	1.42	3.29	BDL	1.35	1.07	9.84	4.72	2.14	1.22	1.06	11.43	10.10	21.67	8.89
F-2987	ND	2.31	BDL	ND	0.35	1.81	BDL	BDL	0.81	0.76	0.27	1.25	BDL	1.23	0.97	3.48	1.54	BDL	1.12	0.59	7.10	6.87	15.37	4.24
F-2988	BDL	ND	BDL	BDL	0.32	0.46	BDL	BDL	0.61	0.38	0.37	0.86	BDL	0.86	1.01	2.70	1.58	BDL	1.11	0.51	5.69	4.78	11.17	3.79
F-2989	ND	2.18	BDL	BDL	0.40	1.43	BDL	BDL	1.06	0.78	0.40	1.88	BDL	0.56	1.08	3.06	1.76	0.79	0.90	0.60	3.99	3.58	9.61	2.89
F-2990	0.59	0.93	BDL	BDL	0.45	0.50	BDL	BDL	0.75	0.54	1.02	1.35	BDL	0.67	0.99	3.08	0.95	0.86	0.93	0.42	3.27	2.99	6.60	2.31
F-2991	ND	ND	BDL	BDL	0.36	0.48	BDL	BDL	1.06	0.84	0.35	1.35	BDL	0.72	BDL	5.72	1.57	1.18	0.94	0.47	5.30	4.89	9.56	3.76
F-2992	ND	BDL	0.36	BDL	BDL	0.94	0.36	BDL	2.29	1.58	1.04	2.55	BDL	0.74	BDL	3.63	1.74	BDL	0.84	0.33	4.33	4.29	4.49	2.56
F-2993	BDL	BDL	BDL	BDL	BDL	0.29	ND	BDL	0.34	BDL	0.15	0.49	BDL	0.52	BDL	3.97	BDL	BDL	BDL	0.29	6.30	4.90	11.97	ND
F-2994	ND	ND	BDL	BDL	0.47	1.27	BDL	BDL	1.24	0.91	0.45	2.17	BDL	0.81	BDL	10.63	1.68	1.33	1.04	0.42	9.15	7.99	16.09	6.85
F-2995	ND	BDL	BDL	BDL	0.27	0.60	BDL	BDL	1.16	0.91	0.18	1.45	BDL	0.77	BDL	9.31	2.31	1.09	0.75	0.34	8.18	7.16	17.54	7.34
F-2996	ND	BDL	0.29	BDL	0.45	0.62	ND	BDL	1.19	0.75	0.17	1.17	BDL	0.66	0.87	5.83	1.44	1.02	0.67	0.28	5.32	4.85	10.18	7.98
F-2998	1.32	1.43	BDL	0.08	0.29	0.54	BDL	BDL	BDL	BDL	0.54	BDL	BDL	BDL	BDL	18.48	BDL	BDL	0.72	BDL	4.45	1.26	BDL	1.38
F-2999	BDL	1.00	0.30	BDL	BDL	0.87	0.49	BDL	0.49	BDL	BDL	BDL	BDL	BDL	BDL	7.19	BDL	1.02	0.90	BDL	3.17	0.48	6.92	1.19
F-3000	BDL	1.01	BDL	BDL	BDL	0.35	0.50	BDL	BDL	BDL	0.50	BDL	BDL	BDL	BDL	3.39	BDL	BDL	0.47	BDL	0.59	BDL	3.03	BDL
F-3001	BDL	BDL	0.29	BDL	BDL	1.76	BDL	BDL	BDL	BDL	0.50	BDL	BDL	0.39	BDL	4.46	BDL	1.57	2.06	0.41	3.68	0.87	6.89	1.07
F-3002	0.54	1.17	BDL	BDL	BDL	1.05	0.54	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.29	BDL	0.47	BDL	BDL	BDL
F-3003	0.50	0.88	BDL	BDL	BDL	BDL	0.50	BDL	BDL	BDL	BDL	0.40	BDL	BDL	BDL	3.00	BDL	BDL	0.34	BDL	2.39	2.25	3.97	1.38
F-3004	0.50	BDL	0.74	BDL	0.68	1.50	BDL	BDL	2.21	1.76	0.72	2.77	BDL	0.87	BDL	16.76	3.08	2.11	1.78	0.44	10.68	9.71	10.30	8.19
F-3005	0.55	BDL	0.33	BDL	0.33	1.12	BDL	BDL	0.61	0.46	0.55	0.89	BDL	BDL	BDL	3.85	BDL	0.80	0.76	0.52	4.93	4.34	5.96	3.09
F-3006	0.48	BDL	BDL	0.48	0.26	1.21	BDL	BDL	1.46	1.24	0.72	2.26	BDL	0.94	1.70	8.56	4.77	2.44	2.80	0.93	15.62	14.53	19.09	10.76
F-3007	0.50	1.18	0.50	BDL	BDL	BDL	0.50	BDL	BDL	BDL	0.50	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.66	0.56	BDL	0.26
F-3008	0.51	BDL	0.87	0.07	1.04	2.61	BDL	BDL	2.20	2.12	0.61	3.17	BDL	1.40	1.08	15.21	4.05	2.03	2.12	0.91	17.56	17.82	19.44	11.44
F-3009	BDL	BDL	BDL	BDL	0.70	ND	BDL	BDL	0.41	BDL	0.35	0.48	BDL	0.31	0.94	2.35	BDL	BDL	0.41	0.26	4.47	3.21	ND	8.63
F-3010	ND	BDL	BDL	BDL	0.34	0.40	BDL	BDL	BDL	BDL	0.14	0.42	BDL	ND	0.91	2.10	BDL	BDL	0.32	BDL	3.15	2.65	6.55	ND
F-3011	BDL	BDL	BDL	BDL	0.32	0.44	BDL	BDL	0.67	0.64	ND	0.98	BDL	ND	BDL	2.82	BDL	BDL	0.36	0.29	2.96	2.55	5.93	7.93
F-3012	0.97	BDL	BDL	0.11	0.48	1.06	BDL	BDL	0.57	0.38	1.06	0.80	BDL	0.60	BDL	2.69	0.59	BDL	0.62	0.26	3.75	3.17	6.94	2.24
F-3013	ND	ND	BDL	BDL	0.66	ND	BDL	BDL	BDL	BDL	ND	0.45	BDL	BDL	BDL	1.25	BDL	BDL	0.46	BDL	2.69	2.07	5.52	1.52
F-3014	ND	ND	BDL	ND	0.45	ND	BDL	ND	0.53	BDL	BDL	0.74	BDL	0.59	BDL	4.05	1.22	BDL	0.89	0.23	5.41	4.95	ND	2.83
F-3015	BDL	ND	ND	BDL	0.31	ND	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	1.76	BDL	BDL	0.30	BDL	2.80	2.49	6.15	ND
F-3016	ND	ND	BDL	BDL	BDL	0.57	BDL	0.72	BDL	BDL	0.54	BDL	BDL	0.76	BDL	2.37	BDL	BDL	0.96	0.51	1.48	0.81	6.87	1.04
F-3017	BDL	ND	BDL	BDL	0.27	0.39	BDL	0.58	BDL	BDL	1.17	0.43	BDL	0.82	1.04	2.71	1.13	0.98	0.64	0.40	3.65	0.96	8.09	1.39
F-3018	7.58	2.98	BDL	0.15	ND	1.69	BDL	BDL	0.40	BDL	0.69	1.02	BDL	0.74	1.04	12.90	2.35	3.83	3.96	1.14	19.09	7.12	53.21	10.44
F-3019	1.64	2.19	1.97	0.13	0.21	1.62	ND	BDL	BDL	BDL	0.73	0.38	BDL	0.33	BDL	3.18	0.80	1.05	2.22	0.65	4.45	0.96	5.00	1.21
F-3020	2.06	ND	BDL	BDL	0.36	0.90	ND	0.51	BDL	BDL	0.79	0.58	BDL	0.43	0.97	2.42	BDL	1.01	0.29	0.51	0.48	2.58	3.23	0.75
F-3021	1.97	ND	BDL	BDL	BDL	0.62	ND	BDL	BDL	BDL	1.16	BDL	BDL	0.48	1.09	2.16	2.11	1.32	0.31	0.45	0.43	1.66	3.51	0.56
F-3022	1.77	ND	BDL	BDL	0.31	1.96	BDL	BDL	0.40	0.26	0.98	0.86	BDL	0.36	0.89	3.82	2.32	2.38	3.23	0.68	2.18	2.44	7.58	0.94
F-3025	BDL	BDL	BDL	BDL	0.17	0.36	ND	BDL	0.53	0.39	ND	0.86	BDL	1.41	BDL	7.88	2.14	0.90	0.58	BDL	14.76	15.72	24.89	8.10
F-3026	ND	BDL	BDL	0.23	7.70	10.72	0.40	BDL	3.06	1.75	0.58	2.46	BDL	1.37	BDL	20.60	0.66	1.93	0.77	0.52	11.88	10.43	18.38	3.50
F-3027	ND	1.67	BDL	0.17	4.08	5.22	0.34	BDL	3.39	1.99	0.59	2.94	BDL	1.58	1.24	16.88	0.78	2.00	2.13	0.61	11.04	9.56	ND	4.22
F-3028	BDL	0.89	BDL	0.28	0.34	3.36	BDL	BDL	0.55	0.28	BDL	0.43	BDL	1.41	BDL	22.01	1.67	2.33	2.38	0.67	20.06	3.46	42.32	7.90
F-3029	ND	ND	BDL	0.08	0.32	1.47	0.25	BDL	2.21	1.56	0.30	2.33	BDL	1.08	BDL	11.90	1.27	2.45	1.62	0.53	4.96	7.37	13.98	8.27
F-3030	0.43	ND	BDL	BDL	BDL	1.04	BDL	BDL	0.41	0.47	0.55	0.68	BDL	2.56	1.06	7.61	0.77	2.89	0.87	1.90	19.53	2.72	21.43	4.52

Concentrations in ng/g wet wgt)																								
	ONGENER:																							
Sample ID	1	3	4+10	7	6	8+5	19	12+13	18	17	24+27	16+32	29	26	25	31+28	33+53+21	22	45	46	52	49	47+48	44
F-3031	1.10	4.89	BDL	BDL	0.25	1.54	BDL	BDL	0.55	0.52	0.25	1.24	0.20	1.25	1.60	2.96	BDL	1.13	1.59	0.82	6.82	1.13	7.36	1.64
F-3032	0.47	BDL	0.54	0.99	0.53	12.62	BDL	BDL	1.46	0.52	ND	0.59	BDL	4.99	BDL	48.86	2.47	5.08	4.20	0.83	55.06	18.69	66.25	8.81
F-3033	ND	ND	BDL	BDL	0.49	0.70	BDL	BDL	1.12	0.76	0.14	1.23	BDL	0.59	BDL	5.45	BDL	0.77	0.65	0.28	5.58	4.91	5.71	7.63
F-3034	0.46	BDL	0.56	0.25	0.21	4.16	0.25	BDL	0.66	0.38	BDL	BDL	BDL	1.29	BDL	22.67	1.39	3.36	2.49	0.36	19.69	4.02	24.84	8.05
F3035	1.09	BDL	0.33	ND	0.28	1.28	ND	ND	BDL	0.33	ND	0.73	BDL	0.32	BDL	4.58	2.36	2.33	3.37	BDL	24.03	3.34	5.63	8.79
F-3036	ND	ND	ND	ND	0.27	0.56	BDL	ND	0.64	0.43	ND	0.78	BDL	BDL	BDL	2.85	1.01	1.06	ND	0.26	2.11	2.23	2.43	2.32
F-3037	ND	ND	ND	ND	ND	0.34	ND	ND	0.35	BDL	ND	0.44	BDL	BDL	BDL	BDL	ND	BDL	ND	ND	2.03	1.67	ND	1.31
F-3038	ND	ND	BDL	BDL	0.18	0.69	BDL	BDL	1.17	0.87	0.22	1.32	BDL	0.86	BDL	2.31	1.68	1.70	1.22	0.30	5.27	4.47	5.06	3.56
F-3039	ND	ND	0.28	ND	1.54	1.31	BDL	1.27	2.68	0.40	3.30	1.08	BDL	0.50	0.96	1.38	0.74	1.76	1.29	BDL	3.10	2.63	10.89	2.46
F-3040	ND	ND	1.07	0.86	0.86	2.85	0.42	BDL	4.35	2.58	0.67	7.58	0.56	0.54	2.53	28.46	7.68	10.29	0.54	1.49	24.06	22.41	21.14	22.38
F-3041	ND	ND	ND	ND	ND	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.18	BDL	BDL	BDL	BDL	BDL
F-3042	ND	ND	BDL	ND	ND	0.30	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.37	BDL	0.47	0.36	BDL	0.26
F-3043	ND	ND	ND	ND	BDL	0.94	ND	ND	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	ND	BDL	1.12	BDL	0.34	0.80	BDL	0.37
F-3044	ND	ND	BDL	ND	BDL	2.04	ND	BDL	BDL	BDL	BDL	0.39	BDL	BDL	BDL	1.76	1.00	0.83	3.07	BDL	1.17	2.95	BDL	1.04
F-3045	ND	ND	BDL	ND	ND	0.74	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	ND	ND	ND	0.63	ND	BDL	0.59	ND	BDL
F-3046	ND	ND	0.27	BDL	0.22	2.94	BDL	BDL	1.51	0.95	0.16	2.17	BDL	1.18	BDL	5.96	1.39	3.63	ND	0.26	5.48	4.78	2.22	4.47
F-3047	ND	ND	BDL	ND	BDL	0.90	ND	ND	0.75	0.58	ND	0.75	BDL	0.48	BDL	2.30	0.96	0.98	ND	BDL	3.36	3.01	1.53	2.22
F-3048	ND	ND	BDL	BDL	BDL	0.94	BDL	BDL	0.57	0.32	BDL	0.83	BDL	0.32	BDL	BDL	0.67	1.24	3.75	BDL	2.39	1.86	BDL	1.89
F-3049	1.93	18.36	0.59	0.08	0.88	13.94	0.28	0.47	3.95	1.60	0.38	3.24	ND	1.71	BDL	13.27	2.42	11.58	ND	1.75	15.88	11.14	2.18	12.49
F-3050	0.93	2.18	0.34	BDL	0.75	6.09	BDL	BDL	2.06	1.10	0.38	2.44	ND	1.36	BDL	10.59	1.83	11.09	18.27	1.01	8.80	7.85	1.26	7.30
F-3051	2.16	3.42	0.33	BDL	0.84	1.49	0.36	0.52	1.67	0.75	0.56	2.20	BDL	1.13	BDL	6.85	3.05	1.23	0.77	0.46	6.86	5.57	3.71	3.92
F-3052	ND	ND	0.57	0.12	1.29	1.17	0.84	ND	1.17	1.04	0.31	2.54	BDL	1.32	BDL	7.46	2.13	1.04	1.36	0.90	11.69	11.78	11.74	5.51
F-3053	4.13	4.72	0.39	0.09	0.75	2.58	BDL	BDL	2.24	1.13	0.49	2.19	BDL	0.91	BDL	12.79	1.87	3.35	1.17	1.18	12.54	11.84	7.70	8.08
F-3054	2.26	ND	BDL	ND	0.17	0.44	BDL	ND	0.53	ND	0.24	BDL	ND	0.41	BDL	1.43	BDL	0.78	0.37	BDL	2.04	1.58	2.42	1.11
F-3055	1.24	ND	BDL	ND	0.30	ND	ND	ND	0.36	ND	0.22	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.38	BDL	2.26	1.56	BDL	1.14
F-3058	1.50	ND	0.30	BDL	1.85	0.32	BDL	ND	0.65	0.44	0.15	1.26	BDL	0.66	BDL	8.55	1.58	0.78	0.35	0.88	11.91	9.80	1.87	6.02
F-3059	3.59	7.32	BDL	0.17	0.63	0.90	BDL	BDL	0.72	0.52	ND	0.56	BDL	2.20	1.07	11.42	ND	0.87	0.91	ND	15.83	15.18	13.22	5.26
F-3060	2.60	5.57	0.36	ND	1.15	1.53	BDL	BDL	0.53	0.32	BDL	0.69	BDL	0.33	BDL	6.62	1.32	3.07	0.31	0.47	6.56	6.21	ND	3.71
F-3061	1.34	ND	0.55	0.12	1.42	4.03	BDL	BDL	2.27	1.38	0.37	2.60	BDL	0.89	BDL	13.38	2.62	2.98	1.58	0.69	9.95	8.60	8.91	8.48
F-3062	ND	ND	ND	0.18	ND	3.81	BDL	ND	3.11	1.97	0.38	2.59	BDL	1.41	BDL	5.14	ND	2.29	1.63	0.30	12.62	10.78	ND	10.10
F-3063	ND	ND	ND	0.11	0.75	2.34	ND	ND	1.49	0.82	ND	1.58	ND	0.46	BDL	1.97	ND	1.89	0.94	0.39	6.81	5.83	ND	5.30
F-3064	ND	ND	ND	0.15	0.86	4.70	0.27	BDL	2.28	1.47	0.40	2.45	BDL	1.11	BDL	10.01	2.74	2.41	1.47	0.49	10.00	8.68	9.29	8.31
F-3065	2.34	5.49	0.37	0.54	0.59	1.79	BDL	BDL	0.43	BDL	0.35	BDL	BDL	0.45	BDL	2.03	BDL	1.30	0.35	BDL	1.37	1.29	1.25	0.82
F-3066	ND	ND	1.39	0.15	0.66	3.89	0.29	0.54	3.82	2.19	0.41	4.04	BDL	3.25	1.16	25.96	5.45	3.70	2.17	0.86	26.42	23.21	23.75	17.16
F-3067	ND	ND	0.57	0.16	0.70	1.75	0.53	0.53	0.36	BDL	0.53	0.57	BDL	0.40	BDL	3.13	BDL	BDL	0.27	BDL	5.88	5.16	5.50	3.49
F-3068	1.96	2.90	ND	0.28	1.04	ND	0.37	0.55	0.66	0.58	ND	0.89	BDL	1.73	BDL	7.63	0.96	0.85	1.56	ND	8.43	6.76	8.30	3.10
F-3069	ND	ND	2.17	0.55	1.98	6.29	0.55	0.55	1.46	0.28	0.55	0.84	BDL	0.28	BDL	3.55	1.52	1.71	1.07	0.33	6.68	6.58	7.61	3.44
F3070	1.37	2.06	BDL	0.08	2.18	0.36	BDL	ND	0.40	0.31	BDL	BDL	BDL	BDL	BDL	2.04	0.65	BDL	0.56	BDL	4.38	2.84	BDL	2.38
F-3071	2.19	2.08	0.48	0.37	2.05	1.33	0.26	BDL	0.49	0.28	0.31	0.69	BDL	0.38	BDL	4.66	0.84	BDL	0.59	0.23	5.39	4.41	2.21	2.93
F-3072	0.49	2.58	BDL	BDL	0.47	2.17	BDL	ND	1.53	0.99	0.24	1.96	BDL	0.37	BDL	8.76	2.19	0.93	1.17	0.81	10.26	8.43	10.17	7.02
F-3073	2.06	1.95	0.97	0.12	0.38	1.03	0.33	ND	0.45	0.33	0.34	0.54	BDL	0.28	ND	4.76	1.03	1.90	0.32	0.45	5.27	4.83	2.43	3.29
F-3074	ND	ND	0.26	BDL	1.34	0.50	0.26	BDL	0.93	0.68	BDL	1.12	BDL	0.78	0.88	7.74	1.39	0.81	0.86	0.30	9.77	8.74	BDL	5.24
F-3075	ND	ND	0.69	0.54	0.72	0.54	0.54	0.54	0.46	0.35	0.54	0.62	BDL	0.41	BDL	2.61	BDL	BDL	0.22	BDL	4.04	3.33	3.41	2.10
F-3076	1.58	ND	BDL	0.15	0.66	1.08	ND	0.54	0.38	BDL	0.48	1.17	BDL	ND	BDL	2.19	1.93	0.81	0.87	0.52	1.52	1.22	3.24	0.66
F-3077	0.54	BDL	BDL	0.54	0.54	BDL	0.54	0.54	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.12	BDL	BDL	BDL	BDL	1.71	1.48	2.16	1.10
F-3078	0.54	BDL	BDL	0.54	0.38	0.42	0.32	BDL	0.69	0.55	0.41	0.95	BDL	0.54	BDL	2.79	0.75	BDL	0.33	BDL	3.84	3.58	2.61	2.24
F-3079	2.84	1.61	1.01	BDL	BDL	1.83	0.38	ND	3.23	2.83	0.41	3.94	BDL	1.38	1.01	13.27	4.48	1.82	1.57	0.71	13.47	12.82	4.25	7.96
F-3080	0.55	BDL	BDL	0.55	BDL	0.56	BDL	BDL	1.26	1.30	0.40	2.12	BDL	0.63	BDL	1.80	1.84	BDL	0.63	0.31	7.08	6.63	7.67	3.75
F-3081	0.53	BDL	0.53	0.53	0.43	0.39	0.53	0.53	BDL	BDL	0.53	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.64	1.17	1.74	0.90
F-3082	ND	ND	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	ND	BDL	2.09	BDL	ND	0.30
F-3083	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	ND	BDL	0.61	BDL	2.05	0.87	2.91	0.54
F-3084	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.31	BDL	BDL	0.76	BDL	0.28	BDL	5.39	4.72	16.41	1.82
F-3085	ND	ND	BDL	ND	0.17	ND	ND	ND	BDL	BDL	BDL	BDL	BDL	0.60	BDL	ND	BDL	BDL	0.25	BDL	7.20	1.13	9.94	1.47
F-3086	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	0.69	BDL	0.56	ND	BDL	ND	ND	ND	ND	10.74	3.06	ND	4.72
F-3087	ND	ND	BDL	ND	0.86	0.40	ND	ND	BDL	BDL	ND	BDL	BDL	1.15	ND	ND	BDL	ND	1.41	BDL	14.46	3.06	12.98	4.36
F-3088	ND	ND	BDL	ND	ND	0.42	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	ND	1.68	BDL	BDL	0.45	BDL	7.17	0.88	8.34	1.67
F-3089	ND	ND	ND	ND	ND	2.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.05	0.33	BDL	0.37
F-3090	ND	ND	BDL	ND	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42	BDL	ND	BDL
F-3091	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL
F-3092	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	0.53	BDL	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL

Concentrations in ng/g wet wgt)																								
ONGENER:																								
Sample ID	1	3	4+10	7	6	8+5	19	12+13	18	17	24+27	16+32	29	26	25	31+28	33+53+21	22	45	46	52	49	47+48	44
F-3093	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	BDL	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	ND	BDL	0.93	0.25	BDL	0.27
F-3094	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	BDL	ND	ND	ND	ND	ND	ND	1.21	0.32	ND	0.33
F-3095	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	ND	ND	ND	BDL	ND	0.56	BDL	BDL	BDL
F-3096	ND	ND	BDL	ND	0.45	0.41	ND	BDL	BDL	BDL	ND	0.47	BDL	BDL	BDL	ND	BDL	BDL	0.32	ND	1.22	BDL	BDL	BDL
F-3097	2.33	BDL	0.54	0.09	1.49	3.64	0.39	BDL	0.54	2.92	0.91	4.94	BDL	2.11	BDL	23.55	4.88	2.88	1.80	0.73	24.14	23.29	30.46	14.09
F-3098	1.25	2.28	0.97	0.11	0.49	2.96	0.25	BDL	2.38	2.19	0.76	3.56	BDL	1.41	BDL	18.68	4.41	3.38	1.64	1.29	14.93	15.40	3.75	9.65
F-3099	1.97	1.88	0.56	BDL	0.73	1.36	BDL	BDL	0.93	0.46	0.17	1.32	BDL	1.22	BDL	11.31	1.62	2.41	0.53	0.93	13.15	8.16	2.42	7.00
F-3100	ND	ND	0.99	BDL	ND	1.06	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.81	BDL	1.56	0.50	1.15	0.34
F-3101	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	ND	BDL	ND	ND	BDL	ND	ND	BDL	ND	BDL	ND	BDL	BDL
F-3102	ND	ND	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	0.24	ND	BDL	BDL	BDL	ND	BDL	BDL	0.27	ND	BDL	BDL	BDL	BDL
F-3103	ND	ND	0.53	ND	0.94	0.98	BDL	ND	2.07	2.93	0.20	2.31	BDL	3.66	2.05	18.61	3.32	3.17	1.26	0.80	18.89	20.18	17.36	10.43
F-3104	0.53	BDL	0.53	0.53	0.29	0.44	BDL	BDL	BDL	BDL	0.53	0.47	BDL	BDL	BDL	1.53	BDL	BDL	0.36	BDL	3.44	3.21	4.19	2.07
F-3105	ND	ND	0.40	ND	ND	0.62	ND	ND	BDL	BDL	ND	BDL	BDL	0.25	ND	1.55	BDL	BDL	0.51	BDL	3.58	0.34	3.18	0.49
F-3106	ND	ND	ND	ND	ND	ND	BDL	ND	BDL	BDL	ND	BDL	BDL	ND	BDL	ND	BDL	BDL	BDL	ND	0.48	BDL	BDL	BDL
F-3107	1.05	2.79	BDL	BDL	0.32	0.42	BDL	ND	BDL	BDL	0.14	BDL	BDL	0.37	BDL	2.30	ND	BDL	ND	BDL	0.37	BDL	BDL	BDL
F-3108	ND	ND	2.03	0.11	2.16	2.10	BDL	BDL	0.38	0.98	BDL	1.38	BDL	1.06	BDL	6.78	2.27	1.19	1.42	0.74	11.21	11.49	11.38	6.84
F-3109	ND	ND	0.50	0.53	0.84	0.53	0.53	0.53	BDL	BDL	0.53	0.42	BDL	0.29	BDL	3.61	0.88	BDL	0.48	0.24	8.91	8.80	10.01	4.42
F-3110	ND	ND	ND	ND	0.17	0.34	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	2.51	ND	BDL	0.32	0.26	4.85	4.83	4.74	2.92
F-3111	ND	ND	ND	ND	0.36	ND	ND	BDL	BDL	ND	0.40	BDL	BDL	BDL	BDL	ND	BDL	ND	BDL	ND	1.05	BDL	1.17	BDL
F-3112	0.61	1.77	BDL	0.10	0.28	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	0.33	BDL	1.65	BDL	BDL	BDL	BDL	0.68	BDL	BDL	BDL
F-3113	ND	ND	BDL	BDL	0.62	0.54	BDL	0.54	0.75	0.60	0.16	1.40	BDL	0.48	BDL	2.11	0.76	BDL	0.32	BDL	3.53	2.64	3.10	2.06
F-3114	ND	ND	0.36	0.55	0.50	0.55	0.55	0.55	BDL	0.55	0.55	0.72	BDL	0.55	BDL	1.75	BDL	BDL	0.27	BDL	4.10	3.31	4.16	2.26
F-3115	ND	ND	1.08	ND	ND	1.18	BDL	BDL	0.49	BDL	ND	0.38	BDL	BDL	BDL	3.82	0.58	0.81	1.85	1.78	13.48	1.62	3.66	4.04
F-3116	ND	4.92	3.67	0.67	1.07	9.18	BDL	BDL	1.01	0.28	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	0.29	BDL	0.60	0.24	BDL	0.33
F-3117	ND	ND	5.29	0.09	0.75	1.08	BDL	BDL	BDL	0.47	ND	ND	0.58	0.40	BDL	2.14	BDL	BDL	0.58	BDL	3.53	0.62	3.62	0.59
F-3118	ND	ND	BDL	ND	BDL	0.37	ND	BDL	BDL	0.27	0.14	0.38	BDL	BDL	BDL	2.07	BDL	BDL	0.44	BDL	1.65	1.54	BDL	0.71
F-3119	ND	ND	BDL	BDL	BDL	0.42	BDL	BDL	0.43	0.47	BDL	0.61	BDL	BDL	BDL	BDL	BDL	0.98	0.75	BDL	2.16	2.02	1.70	1.12
F-3120	ND	ND	ND	ND	0.49	BDL	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	1.51	BDL	BDL	0.27	BDL	1.48	1.31	1.26	0.50
F-3121	ND	ND	0.56	BDL	2.52	0.81	ND	BDL	BDL	BDL	ND	ND	BDL	BDL	ND	2.10	ND	BDL	0.58	0.53	3.13	0.89	2.75	1.44
F-3122	ND	ND	0.38	0.07	0.24	0.51	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.34	0.73	2.19	BDL	BDL	BDL
F-3123	ND	ND	ND	ND	1.09	0.76	BDL	ND	1.18	1.18	0.30	2.18	BDL	1.11	BDL	7.02	2.81	1.15	1.57	0.84	11.88	11.50	13.52	7.96
F-3124	ND	ND	ND	ND	ND	0.50	BDL	ND	0.54	0.62	0.13	1.04	BDL	0.72	BDL	3.73	1.60	BDL	0.70	0.39	6.65	6.67	7.77	3.81
F-3125	0.54	BDL	0.48	0.54	0.22	0.54	0.54	0.54	0.38	0.35	0.54	0.49	BDL	BDL	BDL	1.54	BDL	BDL	0.20	BDL	2.52	2.11	2.38	1.52
F-3126	ND	ND	0.80	ND	0.82	0.38	0.49	ND	1.14	0.98	0.39	1.97	ND	0.65	BDL	4.33	1.56	BDL	0.73	0.34	5.28	4.76	4.82	3.16
F-3127	ND	ND	0.27	0.55	0.27	1.04	BDL	0.55	1.29	0.87	0.15	2.10	BDL	0.99	BDL	8.86	3.13	1.78	1.52	0.66	14.24	11.20	14.31	9.60
F-3128	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	BDL	ND	ND	BDL	ND	BDL	BDL	BDL	BDL	ND	ND	BDL
F-3129	ND	ND	BDL	ND	BDL	BDL	BDL	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.26	BDL	1.48	1.13	1.29	0.92
F-3130	ND	ND	BDL	ND	BDL	BDL	BDL	ND	BDL	BDL	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	ND	BDL	0.40	BDL	BDL	BDL
F-3131	ND	ND	ND	ND	ND	0.30	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	ND	2.83	0.81	1.23	2.50	0.57	3.36	1.24	2.96	1.10
F-3132	ND	ND	ND	ND	ND	BDL	BDL	BDL	ND	0.85	ND	BDL	BDL	BDL	BDL	1.66	BDL	BDL	0.64	BDL	0.56	BDL	1.59	BDL
F-3133	ND	ND	ND	ND	BDL	ND	BDL	BDL	BDL	ND	0.50	BDL	BDL	BDL	BDL	ND	1.24	0.82	1.02	0.29	BDL	BDL	BDL	BDL
F-3134	ND	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND	BDL	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL
F-3135	ND	ND	ND	ND	0.93	0.36	ND	BDL	BDL	BDL	ND	BDL	BDL	BDL	ND	BDL	ND	BDL	2.83	0.65	4.63	1.21	2.81	1.34
F-3165	ND	ND	0.26	ND	ND	0.43	ND	ND	BDL	BDL	ND	0.39	BDL	BDL	BDL	BDL	BDL	BDL	0.35	BDL	0.83	0.96	1.21	0.61
F-3166	ND	ND	BDL	ND	ND	0.47	ND	ND	0.37	0.36	ND	0.78	BDL	BDL	ND	ND	ND	1.20	0.72	0.26	3.23	3.02	2.72	1.30
F-3167	ND	ND	ND	ND	ND	BDL	ND	ND	BDL	BDL	ND	BDL	BDL	ND	ND	BDL	ND	BDL	BDL	BDL	0.69	0.69	BDL	0.25
F-3168	ND	ND	ND	ND	ND	0.38	ND	ND	BDL	ND	ND	ND	BDL	ND	ND	ND	ND	BDL	ND	ND	0.63	0.60	ND	0.41
F-3169	ND	ND	0.37	ND	1.10	4.54	ND	ND	BDL	ND	ND	0.49	ND	0.97	BDL	BDL	ND	1.22	1.82	0.56	2.66	3.37	ND	1.67
F-3170	0.97	ND	BDL	0.10	0.39	0.51	BDL	BDL	0.45	BDL	0.20	0.53	BDL	0.48	BDL	4.40	0.79	1.28	1.22	0.38	3.16	3.03	2.13	1.47
F-3171	ND	ND	BDL	BDL	BDL	0.63	ND	ND	BDL	BDL	0.25	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.52	0.23	1.48	1.35	2.17	0.76
F-3172	ND	ND	1.56	0.10	0.24	6.28	0.35	BDL	4.08	2.51	0.51	6.39	BDL	2.18	1.50	20.26	5.29	8.24	13.88	2.85	13.75	12.18	10.97	11.95
F-3173	ND	ND	1.66	ND	1.25	7.23	ND	0.48	6.13	2.97	0.76	7.28	ND	6.21	2.96	41.97	9.22	13.07	18.59	2.27	40.01	35.83	24.05	37.04
F-3174	ND	ND	BDL	ND	ND	0.33	BDL	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.47	BDL	1.14	0.97	1.08	0.70
F-3175	ND	ND	0.37	ND	5.18	1.14	BDL	ND	2.02	0.68	0.98	0.92	BDL	0.45	ND	5.44	2.16	2.11	1.80	0.82	5.09	4.86	5.38	3.55
F-3176	ND	ND	3.06	ND	ND	1.50	BDL	ND	BDL	0.40	0.18	0.57	BDL	0.69	BDL	5.81	0.98	3.63	ND	0.63	5.12	4.08	3.23	3.94
F-3177	ND	ND	1.89	0.09	1.62	5.52	0.56	BDL	4.71	2.93	0.92	8.32	BDL	2.97	2.12	24.67	10.09	7.36	10.61	2.00	18.13	17.42	22.08	15.43
F-3178	ND	ND	3.07	ND	1.45	10.27	0.65	BDL	10.58	5.73	1.47	13.04	ND	6.52	3.38	32.34	18.06	17.09	16.14	1.93	26.13	23.29	22.52	24.07
F-3179	ND	ND	0.56	0.12	0.56	1.58	BDL	BDL	1.57	0.80	0.18	2.04	BDL	0.71	BDL	8.41	2.83	2.90	ND	0.73	9.10	8.65	11.53	7.42
F-3180	ND	ND	ND	0.08	0.46	1.93	ND	BDL	0.69	0.29	BDL	0.75	BDL	0.27	BDL	BDL	BDL	1.90	3.55	0.27	2.98	2.38	2.11	2.15

Concentrations in ng/g wet wgt)																								
ONGENER:																								
Sample ID	1	3	4+10	7	6	8+5	19	12+13	18	17	24+27	16+32	29	26	25	31+28	33+53+21	22	45	46	52	49	47+48	44
F-3181	ND	ND	0.25	ND	ND	1.75	ND	ND	0.75	ND	ND	0.82	ND	ND	ND	BDL	1.23	1.96	4.60	BDL	4.28	3.35	3.07	2.93
F-3182	ND	ND	ND	ND	BDL	0.43	ND	BDL	BDL	BDL	0.38	BDL	BDL	BDL	BDL	BDL	BDL	0.96	0.53	BDL	1.04	0.64	ND	0.67
F-3183	ND	ND	BDL	BDL	ND	ND	ND	ND	0.35	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.45	0.93	BDL	1.63	1.21	1.55	1.02
F-3184	ND	ND	ND	ND	BDL	0.33	ND	ND	BDL	ND	0.30	BDL	BDL	ND	BDL	ND	BDL	BDL	0.36	BDL	BDL	BDL	1.25	BDL
F-3185	9.19	2.17	BDL	BDL	BDL	0.77	ND	ND	0.89	ND	0.61	BDL	BDL	0.54	BDL	BDL	0.83	0.90	ND	BDL	BDL	0.26	7.16	BDL
F-3186	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	ND	ND	ND	BDL	0.51	0.51	0.43	0.30	ND	BDL
F-3187	2.00	ND	0.32	BDL	0.31	2.86	BDL	BDL	1.06	0.74	0.21	1.31	BDL	0.41	BDL	5.64	0.75	2.67	0.40	0.38	3.90	2.78	2.18	2.63
F-3188	ND	ND	0.53	ND	ND	2.02	BDL	BDL	1.00	0.71	ND	1.27	ND	0.28	BDL	3.79	0.72	2.27	8.04	0.54	3.83	3.24	2.36	2.97
F-3189	ND	ND	ND	ND	ND	0.41	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	0.81	0.68	BDL	0.56
F-3190	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	0.68	0.43	BDL	0.50
F-3191	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	0.16	BDL	BDL	BDL	ND	BDL	ND	BDL	ND	BDL	BDL	BDL	BDL	BDL
F-3192	ND	ND	ND	ND	ND	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	0.36	0.33	BDL	0.39
F-3193	ND	ND	ND	ND	0.21	ND	ND	ND	BDL	BDL	BDL	BDL	BDL	ND	ND	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL
F-3194	ND	ND	BDL	BDL	BDL	0.75	ND	BDL	BDL	0.36	0.20	BDL	BDL	BDL	BDL	ND	BDL	1.48	1.50	BDL	0.38	1.08	BDL	0.72
F-3195	ND	ND	BDL	ND	BDL	0.38	ND	ND	BDL	ND	BDL	BDL	BDL	BDL	ND	BDL	ND	BDL	ND	BDL	BDL	0.54	BDL	BDL
F-3196	ND	ND	BDL	BDL	ND	0.90	ND	0.50	BDL	BDL	0.13	0.48	BDL	0.26	BDL	BDL	BDL	0.97	1.18	0.31	1.82	1.70	BDL	1.27
F-3197	1.74	ND	BDL	BDL	BDL	0.62	BDL	0.57	0.40	0.49	ND	0.58	BDL	1.02	BDL	5.41	0.70	2.65	2.36	ND	2.04	3.24	4.51	1.68
F-3198	0.55	BDL	0.55	0.55	0.45	1.07	BDL	BDL	0.56	0.38	BDL	0.88	BDL	0.39	BDL	3.86	0.87	1.61	0.55	BDL	7.52	6.63	9.54	5.24
F-3199	0.53	BDL	1.58	0.53	1.50	2.58	0.53	0.59	2.67	1.24	0.29	2.70	BDL	0.94	BDL	11.31	2.54	5.64	7.19	0.33	10.24	9.88	15.43	12.44
F-3200	0.53	BDL	1.63	0.53	0.80	3.16	0.53	BDL	3.02	1.57	0.41	3.47	BDL	2.10	1.07	15.69	1.69	6.64	9.14	0.79	14.07	12.81	16.78	11.81
F-3201	0.54	BDL	1.51	0.54	0.54	2.83	0.54	0.54	0.94	0.37	0.54	1.19	BDL	0.38	BDL	4.02	1.48	2.03	3.09	0.24	3.51	3.65	5.05	3.48
F-3202	0.55	BDL	2.16	0.55	1.27	3.27	BDL	1.07	3.63	1.94	0.57	4.33	BDL	2.24	1.22	17.69	2.86	11.22	18.64	0.55	20.50	15.65	16.53	22.56
F-3203	ND	ND	0.37	0.09	0.28	1.84	BDL	BDL	1.43	0.87	BDL	1.65	BDL	0.77	BDL	3.11	1.66	4.36	4.42	0.82	7.63	6.06	4.25	5.33
F-3204	ND	ND	BDL	ND	ND	0.49	ND	BDL	BDL	0.37	ND	BDL	BDL	BDL	BDL	BDL	BDL	0.81	1.21	BDL	BDL	0.88	BDL	0.68
F-3205	ND	ND	ND	ND	BDL	0.35	ND	ND	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	0.82	ND	BDL	0.57	0.65	BDL	BDL
F-3206	ND	ND	BDL	ND	ND	0.53	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.21	ND	BDL	0.28	BDL	BDL
F-3207	ND	ND	BDL	ND	ND	0.41	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.40	BDL	0.66	0.58	BDL	0.39
F-3208	ND	ND	BDL	BDL	ND	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.64	BDL	BDL	BDL	BDL	0.44	0.49	BDL	BDL
F-3209	ND	ND	BDL	BDL	BDL	1.03	BDL	ND	0.59	0.40	BDL	0.44	BDL	BDL	BDL	1.19	BDL	0.80	ND	BDL	0.45	0.54	BDL	0.36
F-3210	ND	ND	BDL	BDL	BDL	2.79	ND	BDL	0.88	0.28	BDL	0.70	BDL	0.56	BDL	3.69	0.66	1.19	1.09	BDL	1.00	1.25	1.37	1.13
F-3211	ND	ND	ND	ND	BDL	0.74	ND	ND	BDL	BDL	0.24	BDL	BDL	BDL	BDL	ND	BDL	1.21	1.84	BDL	BDL	0.63	BDL	0.34
F-3212	ND	ND	BDL	0.54	0.54	2.33	0.54	0.54	0.52	0.39	0.54	0.49	BDL	0.29	BDL	3.34	BDL	1.06	0.54	BDL	1.00	1.48	1.22	1.27
F-3213	ND	ND	ND	ND	0.39	0.66	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.45	0.27	1.11	0.79	BDL	0.58
F-3214	ND	ND	BDL	BDL	0.24	1.03	ND	BDL	BDL	0.27	0.39	0.42	BDL	BDL	BDL	2.21	BDL	1.09	0.84	BDL	1.50	1.14	BDL	1.03
F-3215	ND	ND	ND	ND	0.74	2.40	0.33	0.99	2.01	0.31	1.99	0.77	BDL	0.60	1.06	1.26	0.85	1.67	0.86	0.24	2.90	2.49	6.10	1.65
F-3216	0.55	BDL	0.55	0.55	0.55	0.55	0.55	0.55	BDL	BDL	BDL	0.47	BDL	BDL	BDL	1.23	BDL	BDL	BDL	BDL	1.75	1.63	2.34	0.98
F-3217	ND	ND	BDL	0.07	0.18	1.04	ND	BDL	0.37	0.33	ND	0.46	BDL	0.30	BDL	3.35	BDL	1.70	0.40	BDL	0.99	0.90	1.12	0.60
F-3218	ND	ND	0.34	0.09	0.32	1.07	ND	BDL	0.86	0.47	BDL	2.17	BDL	0.69	BDL	3.33	BDL	2.09	ND	0.36	4.39	3.74	3.54	3.15
F-3219	ND	ND	ND	ND	1.48	1.76	ND	ND	0.53	0.41	ND	0.88	ND	0.66	BDL	1.78	0.93	2.67	4.57	0.69	4.51	ND	2.76	5.23
F-3220	ND	2.32	BDL	BDL	0.15	5.69	BDL	BDL	0.69	BDL	BDL	0.74	ND	0.77	BDL	ND	1.29	1.83	2.00	0.44	6.53	4.49	4.42	4.54
F-3221	ND	ND	0.82	ND	0.67	2.66	BDL	1.09	2.09	0.98	0.13	2.14	ND	1.18	BDL	13.86	1.58	4.83	BDL	0.73	9.25	8.15	7.33	7.69
F-3222	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	ND	ND	ND	BDL	ND	BDL	0.31	BDL	1.38	1.10	ND	0.50
F-3223	ND	ND	ND	ND	ND	0.69	ND	ND	0.52	0.32	BDL	0.49	BDL	BDL	ND	2.01	BDL	0.82	ND	BDL	1.50	1.28	1.09	0.65
F-3224	ND	ND	ND	ND	BDL	0.42	BDL	ND	BDL	BDL	0.16	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.53	BDL	1.71	1.42	1.76	0.57
F-3225	2.49	8.54	0.95	0.31	0.82	11.00	BDL	0.54	12.19	5.78	1.37	12.15	BDL	5.61	2.78	41.21	16.67	18.79	0.54	0.52	57.16	33.79	14.38	48.04
F-3226	ND	ND	1.01	0.35	0.27	2.20	0.51	BDL	3.92	1.93	0.51	5.04	BDL	2.14	1.15	12.71	5.56	6.35	5.91	0.82	12.97	10.82	10.68	11.84
F-3227	ND	ND	1.97	0.24	0.45	8.62	0.93	ND	6.28	3.82	1.22	8.35	BDL	2.82	1.22	34.92	4.59	10.48	10.37	1.87	21.87	18.58	18.21	21.43
F-3228	ND	ND	ND	BDL	ND	0.70	ND	ND	0.36	BDL	0.58	ND	BDL	0.67	ND	1.63	BDL	0.87	ND	BDL	0.86	1.10	BDL	0.85
F-3229	ND	ND	ND	BDL	ND	1.14	ND	ND	1.36	0.78	0.15	1.73	ND	0.59	BDL	11.55	0.95	3.96	ND	0.92	3.81	6.17	7.07	5.59
F-3230	9.76	4.45	0.53	0.53	2.25	3.36	1.65	0.49	4.96	3.90	1.46	10.02	0.53	3.19	2.99	27.42	8.29	11.26	0.53	2.38	21.19	18.91	17.75	19.66
F-3231	ND	ND	1.24	0.36	0.85	5.34	0.96	0.62	5.99	3.99	0.95	9.24	BDL	3.78	2.70	32.57	4.18	11.18	11.18	2.30	25.32	22.29	18.91	24.35
F-3232	ND	ND	ND	ND	0.22	0.36	BDL	ND	0.37	0.54	BDL	0.46	BDL	BDL	ND	1.59	BDL	BDL	ND	BDL	1.37	1.06	1.07	1.00
F-3233	ND	ND	BDL	BDL	BDL	0.56	BDL	BDL	BDL	BDL	0.18	BDL	BDL	ND	BDL	1.67	0.58	BDL	0.25	BDL	3.92	1.91	BDL	1.85
F-3234	ND	ND	ND	ND	ND	0.58	ND	ND	0.47	0.37	ND	0.41	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	0.57	0.67	BDL	0.63

Concentrations in ng/g wet wgt)																								
Sample ID	37+42	41+71	64	40	100	63	74	70+76	66+95	91	56+60	101	99	83	97	81+87	85	136	77+110	82	151	135+144	107	149
Detection Limits	**0.08**	**0.11**	**0.16**	**0.09**	**0.13**	**0.12**	**0.27**	**0.27**	**0.62**	**0.13**	**0.27**	**0.22**	**0.24**	**0.12**	**0.08**	**0.29**	**0.10**	**0.06**	**0.31**	**0.07**	**0.09**	**0.08**	**0.07**	**0.26**
F-2836	7.81	8.86	4.73	2.13	1.60	1.07	11.80	21.65	24.00	4.97	21.71	22.59	16.53	2.10	6.17	10.28	9.05	2.30	33.50	1.80	10.37	7.17	3.22	25.68
F-2837	15.05	8.84	10.02	6.04	1.76	1.38	0.92	10.93	26.91	66.19	5.78	10.91	30.48	19.79	2.26	10.26	65.26	13.29	2.26	54.84	3.04	7.84	7.32	7.12
F-2838	17.34	13.67	15.22	8.00	2.37	2.32	1.10	10.20	26.30	54.49	3.65	8.10	16.00	18.94	1.63	5.19	74.15	5.91	1.48	27.17	1.78	5.90	5.22	3.97
F-2840	2.74	ND	5.27	0.39	0.63	0.82	3.90	0.99	11.26	1.06	3.08	4.80	14.81	0.55	0.94	4.43	7.72	0.35	25.17	0.83	1.30	0.93	1.54	10.76
F-2841	ND	ND	8.71	0.99	ND	1.36	6.61	1.41	22.00	2.75	5.59	15.96	23.33	0.87	1.91	6.04	8.54	0.85	38.18	ND	3.71	1.83	ND	20.87
F-2842	4.15	ND	5.89	0.41	0.76	0.91	6.86	2.47	19.55	2.44	5.21	9.55	14.88	0.74	1.60	4.49	6.47	0.55	22.83	0.91	1.32	1.06	1.92	12.48
F-2843	ND	ND	1.44	ND	ND	0.33	1.45	0.34	4.00	0.55	1.24	1.84	3.74	0.19	0.38	1.45	ND	0.15	5.97	0.25	0.27	0.25	0.25	3.18
F2844	4.86	1.72	2.51	1.79	0.60	1.08	4.06	7.57	18.62	10.56	4.85	8.60	7.73	9.64	2.18	3.98	17.50	1.24	9.53	6.68	3.16	3.19	1.61	8.79
F-2845	17.32	14.53	11.55	9.54	1.93	0.67	1.52	13.16	17.79	61.93	4.31	10.07	20.02	70.10	1.52	6.52	178.23	7.94	2.35	33.55	2.65	7.50	5.32	4.69
F-2846	9.69	9.07	8.07	2.54	0.63	1.65	11.87	21.80	67.43	6.21	17.02	31.06	22.67	2.27	10.90	17.04	10.52	2.24	53.57	4.92	5.91	5.35	2.66	23.14
F-2847	0.97	8.24	ND	0.43	BDL	0.60	3.99	4.79	16.02	1.17	4.26	7.86	4.24	0.46	2.20	3.31	ND	0.63	8.49	0.43	3.14	1.73	0.70	8.62
F-2848	0.62	ND	0.79	BDL	0.26	0.12	1.34	0.37	3.18	0.22	0.78	2.01	4.33	0.16	0.23	0.78	1.61	0.12	4.82	0.08	0.30	0.33	0.39	2.56
F2849	0.43	ND	0.68	ND	0.31	BDL	1.19	BDL	3.27	0.20	0.64	1.08	2.98	0.21	0.11	0.71	1.05	ND	3.10	ND	0.21	0.36	0.42	3.08
F2850	0.11	ND	BDL	0.10	BDL	BDL	0.44	BDL	0.71	BDL	BDL	BDL	0.51	BDL	BDL	BDL	BDL	BDL	BDL	ND	0.10	BDL	ND	BDL
F-2851	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	0.28	BDL	BDL	BDL	0.72	ND	BDL	0.13	2.00	BDL	0.08	BDL	BDL	BDL	BDL
F-2853	3.04	2.09	1.74	1.32	1.47	0.84	6.18	7.57	33.65	4.32	6.81	19.20	19.34	1.40	4.89	5.79	5.90	1.90	24.25	1.20	9.56	5.19	4.74	23.22
F-2854	2.56	2.22	1.32	1.45	0.69	0.89	0.85	4.62	8.17	22.71	1.97	1.39	15.51	4.69	0.73	3.72	ND	5.10	1.33	15.60	0.72	6.15	3.49	6.08
F-2855	4.13	3.28	2.78	2.10	1.69	1.15	5.66	9.70	27.88	21.67	9.25	14.72	22.26	12.44	4.44	6.85	1.56	5.04	18.30	15.72	6.58	7.85	5.24	18.41
F-2856	2.64	1.68	1.68	1.16	0.23	ND	7.01	5.53	22.62	2.12	7.75	14.46	14.69	1.67	3.36	4.79	5.01	1.40	15.33	0.89	6.59	3.71	3.93	17.23
F-2857	2.24	1.77	1.41	1.05	0.83	0.65	4.95	5.29	24.01	3.14	3.58	13.99	15.20	1.02	3.63	3.81	4.26	1.13	16.76	0.56	4.96	3.17	3.67	15.92
F-2858	2.05	2.20	1.34	1.28	1.27	0.46	3.02	5.68	16.90	1.90	4.75	8.73	9.26	0.70	2.04	2.78	1.69	1.16	10.15	0.46	4.95	2.50	2.05	11.70
F-2859	32.50	88.79	ND	8.15	5.21	5.23	46.99	86.95	177.31	2.37	73.66	52.09	44.28	5.73	16.07	21.76	ND	3.69	68.75	5.86	18.14	13.94	6.82	36.00
F-2860	12.13	18.06	10.21	3.53	1.40	1.41	21.01	40.12	85.80	4.86	35.10	23.48	20.20	2.39	7.14	9.38	9.12	2.19	34.81	2.96	8.23	7.23	3.63	19.75
F-2861	11.25	31.13	ND	2.40	1.77	1.83	14.63	26.61	64.83	5.52	26.64	22.24	16.04	2.00	6.65	8.72	ND	1.81	31.88	2.24	6.99	6.28	2.50	18.40
F-2862	3.58	1.67	ND	5.75	0.40	2.99	0.88	8.78	1.19	25.42	1.47	5.72	9.24	57.11	0.92	1.10	ND	7.59	0.79	26.84	0.38	1.17	1.59	3.94
F-2863	5.36	6.58	3.36	1.60	0.84	0.45	5.91	10.31	28.95	2.32	12.84	11.01	8.08	0.86	3.27	3.55	3.58	1.16	15.25	1.46	4.53	3.02	1.54	10.87
F-2864	1.15	1.51	0.78	0.24	0.45	0.15	1.60	1.95	6.89	0.59	2.14	3.87	3.08	0.24	1.00	1.14	1.18	0.31	4.33	0.38	1.69	0.81	0.60	4.11
F-2865	1.98	2.46	1.54	0.43	0.66	0.30	3.68	4.57	16.67	2.20	6.89	8.81	6.83	0.51	2.42	2.68	2.92	0.80	10.09	0.55	3.94	1.93	1.34	9.60
F-2866	5.55	6.89	3.71	1.36	0.90	0.53	8.06	11.64	32.87	2.76	17.69	13.12	10.15	0.90	4.08	4.54	4.84	1.19	18.09	1.88	4.76	2.78	1.72	11.58
F-2936	3.29	ND	2.45	0.49	ND	0.73	3.63	3.54	7.76	1.75	4.06	6.43	6.88	0.79	1.68	2.16	2.48	0.68	10.06	0.68	1.75	1.50	1.36	8.00
F-2937	10.65	8.09	6.69	5.01	13.16	1.52	11.68	17.31	50.32	3.88	34.62	20.47	ND	4.34	5.66	10.35	ND	2.36	36.80	3.64	8.13	5.10	1.89	23.92
F-2938	2.34	0.51	3.82	0.59	0.65	0.43	11.64	1.14	32.82	1.68	12.81	7.95	22.34	1.10	1.46	3.30	6.22	0.82	22.37	0.50	2.67	2.34	0.85	13.80
F-2939	4.02	2.89	2.43	0.68	0.48	0.66	3.46	6.63	21.89	2.11	25.10	11.85	7.60	1.61	3.45	5.69	2.60	1.16	18.58	1.40	4.11	2.86	1.31	14.95
F-2940	4.39	4.04	2.81	1.23	1.10	0.76	4.02	8.10	25.54	2.07	21.91	12.95	7.94	1.58	3.62	5.24	ND	1.49	18.50	1.41	4.70	3.08	1.31	14.91
F-2945	2.80	2.09	2.02	0.25	0.49	0.54	3.68	5.73	16.52	1.39	26.50	12.03	8.00	1.52	3.58	5.91	2.77	0.61	18.33	0.82	1.85	2.08	1.18	11.30
F-2946	4.34	2.64	3.29	1.99	5.48	1.25	6.83	7.66	31.15	2.87	37.60	20.87	9.52	3.67	6.13	9.93	ND	1.98	29.78	2.25	7.38	5.07	2.92	27.54
F-2947	0.48	0.48	BDL	0.48	0.62	0.97	1.16	0.37	1.12	0.19	2.25	0.77	2.05	0.31	0.20	0.42	0.97	0.97	1.22	0.97	0.15	0.10	0.97	0.58
F-2948	0.59	0.17	0.26	BDL	0.51	BDL	1.02	0.61	1.96	BDL	3.08	1.34	1.77	0.20	0.27	0.57	0.49	0.07	1.25	BDL	0.42	0.22	0.17	0.99
F-2949	0.73	0.35	0.31	3.01	3.01	0.35	10.42	1.80	7.48	0.99	11.84	8.79	10.48	1.54	1.65	3.18	5.39	0.39	5.76	0.27	2.74	1.05	1.22	5.27
F-2950	0.21	0.17	BDL	BDL	BDL	0.59	0.58	0.80	8.65	0.26	3.17	1.88	1.79	0.19	0.45	0.71	0.55	0.15	2.37	0.17	0.46	0.31	0.21	1.80
F-2951	0.76	0.42	0.61	0.11	1.00	BDL	0.95	1.63	5.63	0.62	18.03	2.63	2.16	0.38	0.67	1.44	0.75	0.21	3.82	0.24	0.66	0.50	0.22	2.64
F-2952	1.68	0.66	0.79	0.35	2.95	0.51	2.91	2.22	9.26	0.81	15.74	6.43	6.35	0.64	1.53	2.58	3.21	0.24	6.39	0.51	1.10	0.78	0.67	4.45
F-2953	0.59	0.34	0.38	0.24	1.06	0.13	2.18	BDL	1.83	0.23	3.32	0.48	5.54	0.69	0.28	0.68	0.73	0.09	1.66	0.20	0.26	0.20	0.29	0.88
F-2954	1.09	1.00	0.38	0.26	2.17	0.12	4.02	BDL	2.37	0.27	2.59	0.54	8.58	1.03	0.27	0.77	0.72	0.12	1.88	2.01	0.34	0.24	0.23	1.32
F-2955	0.56	0.29	1.08	0.19	1.56	1.01	3.26	0.32	10.23	1.29	6.32	7.63	14.04	2.01	1.09	3.61	4.89	0.68	21.36	0.84	3.69	2.72	0.13	18.37
F-2956	0.93	0.43	1.17	0.15	1.94	0.42	4.66	BDL	6.32	0.65	4.79	3.98	6.07	1.38	0.48	1.50	2.01	0.28	10.78	0.29	0.99	0.95	0.52	7.73
F-2957	0.43	0.51	BDL	0.14	0.67	BDL	1.41	BDL	1.24	0.15	1.32	0.35	2.86	0.39	0.17	0.34	0.22	BDL	1.13	0.08	0.19	0.12	0.07	0.53
F-2958	0.28	0.17	0.22	BDL	0.51	BDL	0.33	BDL	1.91	0.15	3.12	0.87	0.77	BDL	0.29	0.57	1.02	0.12	1.78	0.11	0.25	0.18	0.09	1.02
F-2959	0.36	0.23	0.37	0.10	0.31	BDL	0.55	0.28	2.25	0.60	3.51	0.72	2.19	BDL	0.34	0.83	0.22	0.17	2.17	0.14	0.37	0.26	0.12	1.13
F-2960	0.34	ND	0.67	BDL	0.32	0.15	2.03	0.29	4.20	BDL	0.93	1.02	4.01	BDL	0.12	0.50	1.11	BDL	2.77	BDL	0.19	0.20	0.37	1.34
F-2961	2.58	ND	2.22	0.34	0.74	0.26	6.84	1.23	19.59	0.62	4.61	3.63	10.68	0.34	0.94	1.57	3.41	0.25	6.89	0.28	0.63	0.61	0.68	3.40
F-2962	0.46	ND	0.84	BDL	0.29	0.23	2.95	0.71	6.84	0.23	1.73	2.37	7.00	0.22	0.46	1.26	2.43	0.10	5.56	0.17	0.35	0.42	0.58	2.57
F-2963	0.25	0.48	0.67	BDL	0.19	0.12	3.45	0.29	7.60	0.17	2.15	1.56	7.75	0.18	0.13	0.38	2.61	0.11	4.01	0.10	0.32	0.36	0.14	2.14
F-2964	0.85	ND	1.69	0.29	0.74	0.24	6.16	0.61	14.37	0.55	4.35	3.16	12.54	0.58	0.54	1.32	3.09	0.36	7.35	0.19	1.32	0.87	0.91	5.11
F-2965	2.70	0.48	4.16	BDL	0.54	0.80	9.75	1.64	33.71	2.28	9.98	14.73	22.21	1.06	1.31	5.22	7.31	1.05	30.83	0.29	6.84	3.95	1.32	32.13
F-2966	1.74	0.51	2.64	0.22	0.51	0.54	8.01	2.00	21.02	1.05	1.01	5.95	13.28	0.94	1.15	2.65	5.06	0.57	16.30	0.68	1.93	1.86	1.81	10.75
F-2967	4.28	0.52	1.24	0.39	0.52	0.83	2.12	1.03	4.85	1.26	2.20	3.63	26.11	0.68	0.53	1.46	1.95	0.65	10.83	1.03	1.11	0.87	3.31	7.73

Concentrations in ng/g wet wgt)																								
Sample ID	27+42	41+71	64	40	100	63	74	70+76	66+95	91	56+60	101	99	83	97	81+87	85	136	77+110	82	151	135+144	107	149
F-2968	1.42	0.51	1.75	0.51	0.48	0.32	4.35	BDL	15.78	1.03	4.79	7.48	11.43	0.58	0.81	2.45	1.03	0.51	15.51	0.25	3.34	1.51	1.03	14.23
F-2969	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
F-2970	0.45	0.50	2.02	0.10	0.41	0.44	3.07	0.94	10.16	1.30	4.14	8.08	7.90	0.70	0.86	3.26	3.69	0.63	18.34	1.89	2.34	1.40	1.12	13.21
F-2971	2.18	0.53	2.80	BDL	3.48	1.82	6.71	0.52	23.19	1.32	20.13	7.44	19.10	1.55	1.39	4.11	1.06	1.42	24.17	1.06	2.56	2.89	2.77	24.79
F-2972	1.54	ND	6.11	0.29	4.20	1.76	4.41	0.55	20.59	1.29	10.80	15.41	21.38	2.46	3.32	8.48	191.21	2.14	46.79	0.84	3.64	4.79	3.32	37.80
F-2973	4.46	0.49	17.77	1.90	5.85	10.13	22.43	0.99	21.97	7.22	22.49	35.61	38.83	11.46	4.79	19.47	0.99	4.28	111.86	3.64	10.90	9.90	0.99	77.62
F-2974	1.96	ND	4.86	0.32	4.32	1.47	5.16	0.85	20.76	1.24	13.08	8.45	19.12	1.41	1.28	4.42	514.24	1.24	22.56	0.68	2.21	2.23	1.47	16.88
F-2975	0.95	ND	0.25	ND	0.25	0.14	1.01	2.05	ND	0.48	2.47	3.59	3.04	0.24	0.91	1.17	20.54	0.31	4.93	0.53	1.69	0.87	0.52	4.53
F-2976	1.97	ND	0.81	ND	1.70	0.48	2.10	4.10	ND	1.93	9.41	12.11	7.48	1.23	3.25	4.02	120.10	1.71	15.77	1.15	8.33	3.98	1.61	19.19
F-2977	1.85	1.33	1.02	0.43	1.12	0.96	3.81	2.76	15.90	1.50	8.26	7.67	6.14	0.59	2.29	2.58	2.48	0.68	9.95	0.66	3.44	1.79	1.19	8.46
F-2978	3.81	2.44	2.36	0.99	2.99	0.68	4.58	5.69	24.23	2.96	28.81	11.35	11.58	1.24	2.86	4.76	1.09	1.75	16.17	2.33	7.27	3.61	1.53	17.21
F-2979	0.82	ND	0.22	ND	0.53	0.17	1.22	1.58	ND	0.47	3.21	3.43	3.55	0.34	0.89	1.17	25.00	0.36	4.67	0.39	1.82	0.86	0.48	4.18
F-2980	2.28	3.07	1.50	0.79	0.95	0.43	3.46	4.53	16.73	1.01	7.45	9.51	7.63	0.67	2.82	3.36	3.18	0.91	11.20	1.84	4.48	2.42	1.62	11.37
F-2981	4.19	6.74	2.98	1.61	1.66	0.88	5.55	6.96	27.55	3.68	12.12	17.06	14.62	1.37	4.52	5.58	5.18	1.81	19.77	2.31	9.05	4.54	3.21	20.83
F-2982	5.20	6.63	4.84	2.69	2.52	1.15	10.75	19.55	56.21	7.14	26.15	35.11	33.90	3.60	10.30	17.77	10.23	4.18	60.71	2.81	21.86	12.04	6.15	55.44
F-2983	1.38	1.56	0.98	0.56	0.54	0.24	1.89	3.17	11.26	1.60	5.58	6.95	5.53	0.80	1.87	2.41	1.59	0.94	9.26	1.24	4.36	2.17	0.99	10.30
F-2984	4.46	3.98	2.70	1.97	1.35	0.97	8.92	7.83	41.13	5.08	6.12	22.70	23.59	1.25	6.31	6.41	6.56	1.34	21.51	0.88	5.99	3.71	5.27	19.20
F-2985	4.80	6.58	3.33	2.39	2.13	1.19	5.16	9.54	39.06	4.64	15.86	18.44	12.69	2.48	4.61	7.16	2.53	3.43	29.22	2.00	11.64	6.26	2.79	29.17
F-2986	6.50	9.07	4.59	2.96	1.83	1.26	5.47	11.87	41.72	4.92	17.02	18.76	12.35	2.71	5.17	7.77	3.12	3.19	30.22	2.06	10.73	5.96	2.76	26.91
F-2987	3.65	4.74	2.69	1.92	1.83	0.82	3.94	7.64	28.78	5.16	13.18	17.46	13.40	1.78	4.80	6.41	2.76	2.38	28.05	1.69	9.09	4.33	2.94	20.13
F-2988	3.13	3.87	2.19	1.50	1.23	0.77	2.91	5.18	20.56	3.17	8.58	12.77	7.94	1.32	3.41	4.73	1.27	1.71	19.52	0.96	7.21	3.02	1.72	16.30
F-2989	2.23	3.32	1.62	1.31	1.23	0.53	1.92	3.92	14.29	2.42	6.06	7.87	5.04	1.05	1.93	2.88	2.12	1.28	11.71	0.90	4.77	2.25	1.15	11.54
F-2990	2.02	2.03	1.13	0.94	0.64	0.44	3.03	3.71	14.42	1.88	4.27	8.31	7.34	0.58	2.15	2.88	2.77	0.80	9.68	0.70	4.46	2.12	1.89	10.51
F-2991	3.31	3.72	1.80	1.50	0.70	0.60	4.41	5.53	22.78	3.23	5.53	11.07	9.31	0.94	3.04	3.59	2.99	1.12	14.05	0.77	5.31	2.98	2.26	14.11
F-2992	1.81	3.45	1.45	0.50	0.65	0.46	3.57	3.67	7.32	1.46	4.28	10.11	8.49	0.46	2.87	3.17	3.63	0.72	9.29	0.69	4.67	2.13	1.73	9.85
F-2993	0.74	0.46	1.07	BDL	0.42	0.64	0.32	3.26	4.62	14.62	1.16	BDL	8.97	1.67	0.23	1.60	7.74	1.83	0.52	1.17	ND	3.69	1.98	1.94
F-2994	5.21	5.11	2.71	1.79	0.70	0.80	7.40	7.05	30.29	3.12	8.47	11.89	9.25	1.08	3.25	4.35	3.77	1.02	15.55	0.98	4.84	2.54	1.99	11.68
F-2995	5.98	5.09	6.72	2.86	0.97	1.04	0.62	5.43	8.27	13.60	3.18	4.06	12.72	7.84	1.10	4.16	46.13	4.37	1.43	17.96	0.98	5.24	3.18	3.63
F-2996	2.54	3.17	3.49	1.79	1.20	0.78	0.47	3.26	5.71	19.50	2.61	4.12	10.45	11.27	0.73	2.90	65.32	3.58	1.12	13.86	0.81	5.55	2.78	3.79
F-2998	1.12	0.24	2.77	0.19	0.31	0.92	14.01	2.76	22.35	0.69	10.77	3.60	9.06	0.39	0.65	2.11	3.95	0.32	9.56	0.38	0.72	0.74	1.25	5.11
F-2999	0.88	0.49	1.29	0.14	0.38	0.20	6.97	0.81	14.14	0.29	4.35	3.52	12.01	0.24	0.36	2.05	4.08	0.18	8.95	0.16	0.30	0.50	1.03	3.76
F-3000	0.25	BDL	0.46	0.11	0.24	BDL	3.61	BDL	3.79	BDL	1.47	0.56	4.89	0.13	BDL	BDL	1.21	BDL	2.71	BDL	BDL	0.19	0.37	1.21
F-3001	1.47	0.50	2.56	0.34	2.99	0.90	7.54	0.39	10.46	0.93	8.57	4.41	15.51	0.99	0.38	1.75	3.08	0.41	10.15	0.89	0.74	0.76	1.00	8.61
F-3002	0.15	0.54	0.25	BDL	BDL	BDL	0.75	BDL	1.40	BDL	1.11	0.86	2.68	BDL	BDL	0.41	0.56	0.08	2.67	0.07	0.25	0.33	0.49	2.77
F-3003	0.96	1.38	0.87	0.42	0.30	0.23	3.10	2.93	14.04	1.11	3.01	6.53	7.43	0.42	1.49	1.93	2.19	0.52	8.47	0.55	2.99	1.60	1.34	7.97
F-3004	5.65	7.92	3.84	2.88	1.00	0.73	7.18	12.87	39.26	3.53	11.29	15.78	12.86	1.22	4.69	5.69	4.95	1.41	20.70	1.62	6.81	4.31	2.49	19.21
F-3005	2.49	2.71	1.83	1.15	0.78	0.54	5.13	5.29	23.00	2.13	7.41	13.55	13.63	0.74	3.48	4.95	5.11	1.17	15.35	2.18	6.65	3.12	2.62	15.28
F-3006	7.53	11.07	6.73	4.12	4.39	1.67	8.90	18.86	64.12	7.76	33.18	32.23	23.85	3.73	8.98	13.49	0.96	4.31	49.66	5.10	18.70	9.49	4.51	44.02
F-3007	0.23	0.50	0.21	0.11	BDL	BDL	0.62	0.79	3.43	0.35	0.83	2.36	1.80	BDL	0.55	0.79	1.00	0.21	2.59	0.25	1.28	0.56	0.41	3.30
F-3008	9.36	13.88	6.75	4.16	0.51	1.22	11.98	16.14	26.21	6.58	18.10	25.97	22.04	2.32	7.58	10.28	8.38	2.75	36.22	3.75	12.46	6.74	3.65	30.10
F-3009	2.24	2.05	1.26	1.41	1.02	0.95	0.70	3.48	5.60	21.19	1.86	2.08	13.73	13.30	0.94	3.56	ND	4.34	1.29	13.72	0.84	6.38	3.71	5.74
F-3010	0.15	BDL	ND	ND	0.62	0.70	BDL	1.38	2.23	9.29	0.76	ND	11.19	1.93	0.23	1.32	ND	1.72	0.65	0.55	ND	6.00	3.45	2.82
F-3011	1.72	1.57	1.02	0.84	0.33	0.56	0.34	2.15	4.05	11.90	1.04	1.36	7.12	5.33	0.53	1.79	ND	2.10	0.69	7.46	0.24	3.70	1.93	2.61
F-3012	1.89	1.16	1.14	1.06	0.69	0.57	3.84	5.37	18.57	2.60	5.71	10.56	9.93	0.96	2.68	3.14	3.09	1.06	12.27	0.55	5.30	2.90	2.49	13.89
F-3013	1.36	0.92	0.90	0.43	0.43	0.37	2.16	3.57	11.47	1.23	3.74	7.47	7.24	0.69	1.78	2.28	2.08	0.62	6.87	0.66	3.76	2.12	1.76	10.32
F-3014	2.49	1.52	1.61	1.33	0.92	0.69	5.46	6.25	29.61	3.25	5.79	20.00	19.95	1.18	4.96	5.46	5.97	1.83	19.94	0.96	8.79	4.77	4.80	23.74
F-3015	1.35	0.92	0.88	0.52	0.37	0.31	2.75	3.86	13.00	1.42	4.44	8.85	8.44	0.61	2.04	2.50	0.99	0.86	7.46	0.39	4.51	2.22	2.06	11.36
F-3016	0.92	ND	0.70	0.18	0.47	0.30	1.31	0.33	4.14	0.22	2.23	1.67	4.22	0.23	0.30	0.77	1.98	0.24	3.22	0.13	0.22	0.20	0.35	2.61
F-3017	1.38	ND	1.31	0.31	1.34	0.52	1.12	BDL	5.44	0.75	2.21	3.07	4.30	0.50	0.72	1.58	2.00	0.68	7.90	0.29	0.96	0.67	0.78	7.04
F-3018	5.63	ND	12.24	1.35	3.94	5.40	11.76	2.60	27.12	5.98	23.24	30.41	34.40	3.62	6.03	14.20	6.73	5.14	85.94	2.49	9.98	7.66	5.75	50.24
F-3019	1.46	ND	1.92	0.41	0.46	1.39	4.37	1.18	11.18	1.29	3.88	6.49	9.89	0.75	0.92	3.19	3.80	0.73	19.36	2.32	1.62	1.42	1.40	10.60
F-3020	1.16	0.32	0.31	BDL	BDL	BDL	0.52	0.42	2.02	0.20	0.98	0.46	0.83	BDL	0.21	0.59	0.14	0.09	1.25	0.10	0.28	0.17	0.14	0.81
F-3021	1.08	0.52	0.38	BDL	BDL	BDL	0.46	BDL	1.77	0.20	0.79	0.49	1.48	BDL	0.23	0.68	0.19	0.08	1.45	0.11	0.29	0.17	0.14	0.90
F-3022	1.37	0.35	1.21	0.54	ND	0.69	3.08	0.81	9.70	0.84	8.93	4.86	10.61	0.36	0.63	1.84	3.32	0.45	4.90	0.28	2.02	0.75	1.26	3.44
F-3025	6.41	5.77	5.98	4.40	2.18	2.28	1.37	10.98	11.42	68.22	8.04	6.00	34.83	11.19	2.72	11.84	ND	12.44	3.04	53.29	2.09	9.91	7.66	16.91
F-3026	10.31	7.49	7.06	4.42	1.21	1.24	0.77	7.27	16.58	39.20	2.62	6.61	11.17	14.79	1.21	3.47	ND	4.29	1.14	17.03	1.04	4.01	3.11	2.80
F-3027	9.21	6.86	7.67	3.73	1.24	0.92	0.74	6.05	14.12	34.34	2.39	5.71	10.78	12.93	1.07	3.28	ND	3.81	1.14	16.06	1.01	3.82	3.07	2.45
F-3028	5.71	3.28	ND	8.42	0.54	1.62	1.07	12.62	2.27	50.11	2.86	5.59	15.52	80.81	2.13	2.41	ND	13.48	1.41	43.64	0.71	2.65	2.99	5.61
F-3029	6.75	5.00	4.94	3.26	1.02	0.52	0.61	5.04	2.84	23.15	1.34	3.97	6.34	11.85	0.73	2.54	32.45	3.44	0.73	13.59	1.02	2.86	2.22	2.11
F-3030	2.81	ND	10.41	0.77	2.19	2.46	10.84	2.37	38.26	3.38	13.43	17.75	28.54	2.86	3.36	8.80	ND	2.37	66.07	3.33	5.66	4.85	3.78	28.81

Concentrations in ng/g wet wgt)																								
Sample ID	37+42	41+71	64	40	100	63	74	70+76	66+95	91	56+60	101	99	83	97	81+87	85	136	77+110	82	151	135+144	107	149
F-3031	1.82	ND	2.90	0.17	1.18	0.99	3.52	0.57	12.29	1.04	12.53	5.61	11.98	0.85	1.41	2.66	ND	0.82	20.55	1.15	1.56	1.34	1.56	11.63
F-3032	30.95	14.25	ND	22.88	2.17	1.60	2.19	21.08	11.77	105.76	8.38	19.96	39.91	85.26	5.58	9.09	395.12	21.43	4.16	96.92	3.47	10.49	9.31	9.97
F-3033	3.64	2.95	3.84	1.65	0.60	0.60	0.41	3.58	6.25	21.09	2.07	3.11	9.27	6.62	0.75	2.70	37.40	2.97	1.00	12.44	0.63	4.55	2.70	3.09
F-3034	6.27	3.28	ND	11.36	0.65	4.14	1.48	16.90	2.95	50.02	2.86	8.81	13.53	101.17	2.20	2.02	355.87	16.13	1.46	53.00	0.64	1.95	3.10	8.77
F3035	9.06	4.82	ND	5.13	0.62	2.41	0.93	6.47	8.14	49.39	3.56	13.59	14.54	63.42	2.55	5.13	123.70	10.77	1.48	57.16	1.85	3.75	2.79	3.39
F-3036	1.47	1.44	1.27	0.35	0.19	0.29	1.99	2.98	4.01	0.87	3.70	3.67	2.85	0.22	1.27	1.98	1.26	0.20	5.67	0.73	1.01	0.71	0.44	3.74
F-3037	0.87	0.74	0.71	ND	BDL	0.17	1.40	1.68	5.08	0.40	1.89	2.15	1.51	BDL	0.58	0.99	0.82	0.06	2.60	BDL	0.47	ND	0.19	1.91
F-3038	2.50	2.90	BDL	0.40	0.49	0.55	4.24	5.35	15.16	1.56	6.02	7.21	4.99	0.30	2.14	3.26	2.54	0.35	9.15	0.88	2.78	1.23	0.99	6.79
F-3039	1.31	1.83	BDL	0.45	0.34	0.29	3.80	3.09	10.18	0.71	3.22	3.75	2.64	0.38	1.30	1.96	1.38	0.21	5.84	0.87	1.36	0.67	0.57	3.55
F-3040	16.63	14.00	12.93	5.88	0.54	3.61	25.10	24.01	75.05	8.94	25.08	31.70	1.09	5.02	12.38	20.35	13.13	3.22	49.60	5.58	7.39	7.26	5.20	25.73
F-3041	BDL	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	0.33	0.33	BDL	0.09	BDL	0.14	BDL	0.39	ND	BDL	BDL	BDL	BDL
F-3042	0.29	0.13	BDL	BDL	ND	BDL	0.84	0.33	1.25	0.26	0.74	1.15	0.98	BDL	0.29	0.56	0.43	BDL	1.42	BDL	0.24	0.13	0.10	0.81
F-3043	0.17	ND	BDL	ND	ND	0.12	0.33	BDL	1.69	0.22	0.51	0.50	0.64	BDL	0.26	0.46	0.25	0.07	1.30	ND	0.33	0.19	0.18	1.14
F-3044	0.54	0.53	0.44	0.10	ND	0.34	0.60	0.54	3.54	0.33	1.80	1.68	1.37	0.25	0.64	1.13	ND	0.20	3.31	0.21	0.55	0.41	0.29	2.01
F-3045	ND	ND	BDL	ND	ND	BDL	BDL	ND	0.90	BDL	0.44	BDL	0.38	ND	0.14	0.36	ND	0.08	0.91	ND	0.14	0.10	0.07	0.46
F-3046	2.85	2.25	2.48	1.55	ND	0.78	3.31	6.50	15.88	1.94	8.60	7.89	3.83	0.82	2.51	4.33	2.40	0.80	12.26	1.27	2.18	1.73	0.82	7.27
F-3047	1.32	1.17	1.02	0.22	0.36	0.48	1.51	3.23	9.40	ND	5.18	6.11	3.95	0.59	1.82	2.85	ND	0.49	8.22	0.50	1.45	1.23	0.75	5.97
F-3048	1.14	0.86	0.27	0.32	0.17	0.33	1.33	2.43	6.96	0.85	3.85	4.34	2.46	0.37	1.31	2.08	1.00	0.37	5.73	0.54	1.45	0.82	0.45	4.18
F-3049	ND	3.64	6.13	5.01	0.45	2.52	25.61	17.38	58.51	5.58	29.53	31.48	117.03	2.63	10.04	19.33	9.67	2.35	56.30	4.68	7.69	6.66	0.86	31.56
F-3050	4.82	3.68	4.21	5.26	0.14	1.62	11.13	8.76	30.10	3.32	15.69	15.73	74.22	1.53	4.98	9.17	4.03	1.34	26.07	2.77	4.56	3.32	1.09	15.61
F-3051	1.94	1.40	2.02	0.94	0.52	0.84	4.74	5.92	21.72	1.91	5.09	10.65	10.72	0.91	2.90	3.37	2.91	0.88	11.56	1.45	5.11	2.77	1.82	12.31
F-3052	4.70	5.88	ND	2.53	2.09	1.78	10.70	9.25	50.51	7.18	14.09	ND	35.61	2.25	9.00	10.64	7.70	3.78	39.31	4.34	23.73	10.10	7.43	43.81
F-3053	4.95	4.18	4.72	2.66	1.62	1.44	11.01	13.34	28.00	5.06	12.79	25.61	28.76	2.00	6.65	8.50	9.07	2.49	15.00	2.76	15.04	7.40	4.05	31.30
F-3054	0.66	0.30	0.48	0.31	0.29	0.35	1.83	2.41	9.53	0.87	2.19	6.45	6.17	0.46	1.59	1.80	1.75	0.64	5.83	0.53	2.92	1.68	0.96	7.80
F-3055	0.75	0.38	0.57	0.35	0.31	0.43	1.89	2.63	9.86	1.01	3.30	7.30	6.64	0.40	1.67	2.08	1.86	0.65	6.72	0.52	3.22	2.03	1.13	9.41
F-3058	4.89	3.89	4.05	1.87	2.66	2.75	12.16	14.00	57.84	5.76	16.12	38.20	36.34	2.72	10.40	12.53	13.17	3.25	48.28	2.60	13.84	9.05	1.13	42.25
F-3059	3.44	ND	0.80	ND	2.67	1.04	12.58	16.61	ND	5.29	3.80	37.59	28.79	1.65	9.53	10.58	68.28	4.02	22.04	0.18	18.86	10.85	5.31	47.37
F-3060	3.08	2.26	2.18	1.40	1.55	1.30	6.68	6.76	35.12	3.53	10.99	24.42	22.80	1.39	6.49	7.29	6.68	2.22	24.34	1.39	11.65	6.45	ND	31.63
F-3061	4.37	6.24	3.81	1.86	0.58	0.88	6.23	9.80	26.72	2.13	10.39	9.59	6.98	1.02	2.93	3.64	3.06	0.95	12.31	1.25	3.19	2.22	1.17	7.73
F-3062	5.81	6.81	3.65	ND	0.65	1.16	8.40	13.19	36.23	2.73	10.88	12.48	8.37	1.30	3.43	4.17	3.90	1.30	12.72	0.24	4.33	2.93	1.25	10.27
F-3063	2.76	3.80	2.37	1.14	0.42	0.61	4.38	5.92	18.89	1.53	5.95	7.11	5.34	0.67	2.01	2.44	2.28	0.64	8.75	0.82	2.50	1.53	0.75	5.66
F-3064	4.12	5.98	3.63	0.56	0.43	0.90	6.99	9.95	28.71	2.10	9.15	10.19	7.53	1.12	3.20	4.06	3.54	1.02	12.50	0.71	3.48	2.41	1.56	8.23
F-3065	0.58	0.59	0.45	0.63	0.32	0.22	1.22	1.89	7.04	1.06	2.71	5.03	5.27	0.41	1.13	1.29	0.54	0.56	4.63	0.32	2.56	1.42	0.92	8.10
F-3066	8.99	12.12	8.29	4.58	2.00	2.70	18.33	20.33	36.76	8.21	16.57	33.42	32.47	3.29	9.59	12.69	10.24	3.42	36.91	2.74	13.00	8.32	7.39	32.00
F-3067	1.88	2.09	1.67	0.90	0.54	0.91	5.97	6.56	11.59	2.38	6.16	13.17	14.18	1.46	3.90	4.75	4.27	1.27	13.76	1.14	5.47	3.25	2.90	13.74
F-3068	2.05	ND	0.43	ND	1.58	0.93	6.37	9.42	ND	2.59	0.84	20.15	18.45	1.31	5.23	5.29	56.70	1.77	13.93	ND	10.22	5.60	3.65	25.12
F-3069	2.71	1.75	1.91	1.58	3.70	1.21	7.87	6.99	12.20	4.05	9.58	23.87	28.03	2.87	6.94	7.99	8.33	3.17	21.10	1.61	13.19	6.53	6.60	29.39
F3070	1.55	1.31	1.30	0.55	0.56	1.60	3.65	5.34	19.90	2.01	6.07	12.97	12.07	1.30	3.19	3.41	3.52	1.06	11.82	0.48	6.60	3.80	2.33	17.46
F-3071	1.64	1.33	1.45	0.70	0.40	0.98	4.11	6.47	21.60	2.01	6.20	13.02	12.78	1.13	3.56	3.95	3.73	1.12	13.07	0.69	4.84	3.22	2.41	14.72
F-3072	3.53	4.96	3.26	1.95	1.01	1.33	7.87	8.30	16.92	2.95	10.42	16.11	14.55	2.01	4.52	5.46	5.35	1.59	16.97	2.07	7.33	4.11	2.89	16.58
F-3073	1.91	2.00	1.62	0.90	0.56	0.95	5.36	7.01	27.10	2.42	5.88	15.04	15.35	1.15	4.46	4.40	4.45	1.32	17.70	1.46	6.35	4.17	0.74	17.87
F-3074	3.32	3.52	2.61	1.11	1.23	1.28	7.27	8.75	37.09	3.75	7.67	20.23	15.74	1.42	5.85	6.00	5.22	1.80	21.04	1.02	7.82	4.57	2.73	20.93
F-3075	1.26	1.45	1.15	0.41	0.32	0.68	3.08	3.78	15.68	1.66	3.00	9.19	8.88	0.75	2.75	2.63	2.65	0.79	9.58	0.60	3.38	2.14	2.13	9.95
F-3076	0.58	ND	BDL	ND	0.38	0.30	1.23	1.85	ND	0.70	0.70	3.88	3.74	0.19	0.79	0.86	13.03	0.34	2.89	ND	3.19	1.17	0.62	0.91
F-3077	0.74	0.89	0.59	0.38	BDL	0.21	1.67	1.43	7.56	0.75	1.60	4.51	4.79	0.25	1.10	1.28	1.43	0.40	4.47	0.25	2.11	1.02	1.00	5.17
F-3078	1.54	2.64	1.25	0.71	0.51	0.37	2.85	2.96	12.58	1.34	3.87	7.59	7.46	0.36	2.04	2.18	2.45	0.65	7.73	0.56	3.98	1.77	1.66	9.07
F-3079	4.32	9.05	4.12	2.71	1.48	1.49	13.44	12.18	25.57	4.34	12.59	24.10	25.64	2.10	6.70	6.74	7.65	1.81	32.03	2.02	10.92	5.37	1.12	26.84
F-3080	2.34	4.80	1.98	1.26	0.47	0.56	3.97	4.72	17.62	2.30	4.12	11.23	10.08	0.66	3.23	3.49	3.30	1.09	10.97	0.87	4.70	2.59	1.90	12.15
F-3081	0.43	0.64	0.48	0.35	0.17	0.27	1.55	1.94	7.23	0.79	2.10	5.06	5.04	0.35	1.33	1.52	1.49	0.46	4.66	0.33	2.58	1.36	1.00	6.74
F-3082	0.27	ND	0.75	BDL	0.22	0.43	1.33	BDL	4.04	ND	1.51	1.92	3.54	0.37	0.32	1.14	1.88	0.11	7.49	ND	0.88	0.70	0.61	5.70
F-3083	0.44	ND	0.67	ND	ND	0.26	0.98	0.76	3.44	0.41	0.96	1.70	1.91	0.19	0.30	0.84	ND	0.16	3.02	0.08	0.70	0.40	0.35	3.20
F-3084	2.42	ND	4.81	BDL	2.01	1.21	7.02	0.77	30.17	9.43	7.73	111.68	109.08	2.80	41.98	29.59	99.74	2.09	142.46	0.97	2.71	9.48	7.48	88.38
F-3085	1.00	ND	2.97	0.11	1.31	1.98	3.32	ND	13.78	1.79	9.08	14.02	14.33	1.36	1.90	4.35	7.42	0.99	19.17	0.75	6.58	2.95	1.68	18.94
F-3086	2.63	ND	5.57	BDL	0.76	2.33	7.01	0.59	27.26	2.67	9.12	9.03	13.24	1.58	2.96	4.85	7.62	1.16	27.11	0.21	2.97	2.36	ND	15.70
F-3087	2.79	ND	5.44	0.16	0.66	2.12	9.96	1.95	29.98	2.32	17.29	12.91	17.37	1.34	1.95	5.76	ND	0.96	22.42	ND	1.90	1.76	2.48	13.57
F-3088	0.78	ND	3.66	BDL	0.78	1.58	2.41	0.44	9.70	1.13	3.45	4.90	9.82	1.09	0.83	3.20	ND	0.81	20.98	0.12	0.99	1.64	1.74	10.39
F-3089	0.31	ND	0.41	ND	ND	1.51	2.53	1.17	2.59	0.19	1.65	1.55	2.07	0.19	0.29	0.48	ND	ND	3.34	ND	0.28	0.37	0.40	2.25
F-3090	0.13	ND	0.18	ND	BDL	BDL	0.58	BDL	1.86	BDL	1.01	0.40	2.21	BDL	BDL	ND	ND	BDL	0.78	ND	BDL	BDL	0.16	0.59
F-3091	BDL	ND	BDL	ND	ND	BDL	0.27	BDL	0.64	BDL	0.47	0.47	1.06	BDL	BDL	ND	ND	BDL	0.77	ND	BDL	BDL	ND	0.58
F-3092	BDL	ND	BDL	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	0.27	0.81	BDL	BDL	BDL	ND	BDL	0.93	BDL	BDL	0.11	0.15	0.93

Concentrations in ng/g wet wgt)																								
Sample ID	37+42	41+71	64	40	100	63	74	70+76	66+95	91	56+60	101	99	83	97	87+81	85	136	77+110	82	151	135+144	107	149
F-3093	0.25	ND	0.30	ND	ND	0.30	0.75	0.66	2.80	0.14	0.70	1.12	1.39	BDL	0.25	0.31	0.52	0.10	1.86	BDL	0.30	0.23	0.21	1.34
F-3094	0.35	ND	0.44	BDL	0.27	0.15	1.06	0.48	5.53	0.36	1.60	1.74	3.94	0.18	0.24	0.32	ND	0.17	2.50	ND	0.27	0.43	ND	2.81
F-3095	0.09	ND	0.22	ND	BDL	BDL	0.53	ND	1.55	BDL	1.12	0.63	2.04	BDL	BDL	BDL	ND	0.09	1.54	BDL	BDL	0.17	0.26	1.29
F-3096	0.15	0.45	ND	BDL	ND	0.32	1.51	0.31	2.35	0.17	1.01	1.03	3.48	0.28	0.18	0.56	ND	0.09	3.50	0.09	0.57	0.42	0.59	2.76
F-3097	8.96	30.72	0.41	4.64	1.85	2.75	21.43	20.02	72.46	1.33	23.45	33.98	30.84	2.92	10.11	13.72	1.08	3.17	40.74	15.28	0.35	8.52	1.08	59.12
F-3098	7.73	10.58	6.11	3.72	1.89	2.36	20.02	17.10	71.72	6.64	19.58	35.08	39.72	2.92	10.55	10.61	12.34	3.08	48.25	4.31	19.94	9.49	1.08	44.34
F-3099	3.74	4.10	4.43	1.97	0.95	1.83	12.69	10.76	20.34	3.49	13.66	19.59	6.70	1.93	5.48	7.61	6.60	1.43	28.33	3.13	5.56	4.09	0.62	19.53
F-3100	0.47	0.45	BDL	BDL	ND	0.28	2.50	0.51	4.26	0.51	1.37	2.57	7.07	0.41	0.41	0.78	ND	0.23	4.09	0.14	0.78	0.55	0.82	4.27
F-3101	ND	ND	BDL	ND	ND	0.14	BDL	ND	BDL	BDL	0.42	0.46	1.35	BDL	BDL	ND	ND	BDL	1.45	ND	BDL	0.16	0.30	2.24
F-3102	BDL	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.27	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
F-3103	6.72	11.16	7.39	3.24	3.13	1.83	12.67	14.56	49.73	7.45	14.86	26.03	24.88	2.22	8.51	8.77	8.12	2.43	33.95	2.87	11.49	5.33	5.14	24.93
F-3104	1.56	2.03	1.20	0.69	0.50	0.43	3.17	3.32	7.04	1.60	5.30	10.27	8.59	0.51	2.98	3.22	3.21	0.81	9.74	0.77	4.84	2.22	1.80	10.80
F-3105	0.59	ND	1.50	BDL	0.40	1.64	1.81	0.46	6.53	0.62	2.47	3.71	7.16	0.63	0.38	1.55	ND	0.42	9.53	0.40	0.96	1.28	1.58	7.88
F-3106	0.13	ND	0.26	BDL	BDL	BDL	0.43	BDL	1.24	BDL	0.52	0.81	1.39	BDL	0.14	0.42	0.56	BDL	2.05	BDL	BDL	0.18	0.25	1.30
F-3107	BDL	ND	0.25	ND	BDL	BDL	0.38	BDL	0.84	BDL	0.58	0.62	0.84	BDL	0.09	BDL	0.40	BDL	1.20	BDL	BDL	0.11	0.09	0.79
F-3108	5.29	6.73	3.92	3.18	1.29	0.93	8.84	10.98	37.45	5.25	12.31	23.46	25.40	2.98	6.59	7.67	7.67	2.77	25.64	2.65	14.22	6.54	4.66	28.28
F-3109	3.63	3.18	3.18	2.05	1.56	1.49	9.23	9.92	18.43	5.56	11.50	28.07	29.00	2.20	8.07	9.86	9.92	3.33	29.64	2.05	13.86	7.69	7.65	31.17
F-3110	2.26	1.89	1.74	1.11	0.76	0.61	3.97	6.14	22.86	2.76	6.04	12.78	10.72	0.97	4.00	4.02	4.04	1.74	14.36	1.22	5.98	3.85	3.02	15.55
F-3111	0.19	ND	0.41	BDL	BDL	0.17	0.83	0.57	2.34	0.23	1.00	1.57	2.96	0.22	0.19	0.63	0.72	0.16	3.86	0.11	0.40	0.42	0.57	3.14
F-3112	0.11	ND	0.26	BDL	ND	BDL	0.55	0.34	0.96	BDL	0.64	0.75	1.46	0.12	0.16	0.43	0.47	BDL	2.19	0.07	BDL	0.16	0.15	1.07
F-3113	1.31	1.95	0.98	BDL	0.19	0.47	2.04	3.00	9.87	0.99	3.10	5.79	5.61	0.62	1.57	1.75	1.75	0.47	5.58	0.40	2.53	1.43	1.35	6.88
F-3114	1.72	1.60	1.50	0.50	0.66	0.70	3.81	4.12	7.52	1.97	6.36	11.83	12.24	0.95	3.15	3.86	3.97	1.13	12.14	0.85	5.67	3.00	2.84	14.48
F-3115	1.52	ND	3.27	0.20	ND	1.27	7.44	6.96	31.83	3.04	15.31	17.61	17.07	3.01	4.26	10.64	ND	1.76	43.33	ND	3.82	3.80	3.33	20.25
F-3116	0.22	ND	0.22	BDL	ND	0.13	1.34	0.33	1.27	0.13	0.69	0.65	1.61	0.22	0.10	0.50	1.07	0.08	1.53	0.08	0.11	0.13	0.09	1.00
F-3117	0.59	3.03	ND	0.17	1.03	1.42	8.89	3.90	14.00	0.41	8.49	3.43	8.25	0.57	0.50	2.45	4.07	0.15	8.56	0.24	1.03	0.22	1.04	3.56
F-3118	0.64	0.55	0.60	BDL	0.21	0.14	1.07	1.54	3.93	0.28	1.55	1.82	1.32	BDL	0.47	0.88	0.71	BDL	1.85	0.18	0.49	0.24	0.17	1.47
F-3119	0.99	0.81	0.77	0.11	0.15	0.21	1.43	2.09	5.41	0.39	2.31	2.34	1.90	BDL	0.61	1.01	0.96	0.08	2.21	0.39	0.46	0.31	0.22	1.64
F-3120	0.50	ND	0.47	BDL	0.22	0.14	1.31	1.61	4.18	0.25	1.97	2.20	1.69	BDL	0.55	0.88	0.93	BDL	1.77	BDL	0.31	0.26	0.20	1.38
F-3121	1.00	ND	1.35	BDL	ND	0.97	3.35	2.48	11.90	0.91	4.14	4.37	6.86	0.77	1.60	2.95	3.09	0.46	13.57	2.08	1.70	1.55	1.49	8.86
F-3122	0.58	ND	0.51	BDL	0.33	0.24	2.00	0.67	3.31	0.39	5.16	1.91	4.54	0.74	1.13	1.43	0.95	0.10	11.00	2.27	0.65	0.52	0.46	3.55
F-3123	5.68	8.34	5.22	2.80	2.33	1.61	6.40	13.38	38.80	5.50	20.78	23.89	15.29	3.07	6.93	8.96	6.94	3.51	31.29	4.12	17.03	6.48	3.83	28.03
F-3124	2.77	4.91	2.39	1.39	1.06	0.79	4.42	6.04	21.17	2.49	7.30	13.29	11.75	1.22	3.67	4.41	4.42	1.63	14.60	1.63	9.16	3.63	2.55	15.33
F-3125	1.03	1.07	0.83	0.35	0.27	0.35	2.14	2.71	9.85	1.20	2.65	7.08	7.00	0.39	1.95	2.27	2.21	0.58	6.74	0.50	3.35	1.77	1.53	8.84
F-3126	2.08	3.32	1.82	1.00	0.88	0.78	4.02	5.63	7.93	2.32	6.93	11.20	11.10	0.84	2.94	3.25	3.49	1.02	11.74	1.07	5.60	2.74	2.72	12.82
F-3127	5.73	9.42	5.46	3.35	3.66	1.90	9.91	15.24	54.22	7.31	23.98	31.70	28.72	3.39	9.36	10.96	9.50	4.70	39.07	3.53	17.43	10.01	7.39	40.25
F-3128	ND	ND	BDL	ND	ND	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
F-3129	0.54	0.46	0.47	0.29	0.31	0.22	1.15	1.73	5.78	0.53	2.75	4.01	3.93	0.36	0.95	1.20	1.20	0.41	3.66	0.39	2.81	1.07	0.92	5.26
F-3130	0.22	ND	BDL	BDL	BDL	BDL	0.72	BDL	1.96	0.13	1.02	0.41	2.37	BDL	BDL	BDL	0.74	0.08	1.11	ND	BDL	0.08	0.25	0.83
F-3131	1.92	ND	1.31	0.21	ND	0.47	2.64	0.95	9.10	1.03	3.73	3.77	7.32	0.59	0.59	1.57	2.31	0.45	7.48	0.17	1.07	0.85	0.93	5.26
F-3132	0.40	ND	0.21	BDL	ND	BDL	1.48	ND	3.56	0.25	2.15	0.53	3.67	BDL	0.08	0.33	ND	0.11	1.47	BDL	BDL	0.10	0.32	0.75
F-3133	0.12	0.15	ND	ND	0.50	BDL	ND	BDL	ND	ND	BDL	BDL	BDL	ND	BDL	BDL	0.14	BDL	BDL	ND	BDL	ND	BDL	BDL
F-3134	ND	ND	BDL	ND	ND	BDL	0.28	BDL	BDL	BDL	BDL	BDL	0.44	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
F-3135	2.22	ND	1.44	0.24	ND	0.56	2.61	1.05	9.70	1.34	4.23	4.65	6.35	0.60	0.76	2.29	ND	0.56	10.67	0.09	1.16	0.93	0.83	7.15
F-3165	0.47	0.50	0.31	0.15	ND	0.17	0.71	1.13	2.86	0.31	2.68	1.82	1.62	0.27	0.40	0.56	ND	0.21	1.63	0.18	0.78	0.37	0.26	1.65
F-3166	1.58	1.10	1.24	0.37	ND	0.38	1.49	4.01	10.11	1.19	9.62	6.80	3.93	0.44	1.40	2.24	1.87	0.54	8.92	0.67	3.49	1.13	0.50	8.21
F-3167	0.30	ND	0.36	BDL	0.21	0.13	0.40	0.99	2.49	0.34	1.29	2.34	1.25	BDL	0.46	0.76	0.61	0.14	2.80	0.23	1.38	0.44	0.26	3.35
F-3168	0.28	ND	0.33	ND	ND	0.12	0.37	ND	ND	0.20	0.92	1.42	0.73	BDL	0.21	0.51	ND	0.09	1.80	0.13	0.45	0.32	0.13	2.04
F-3169	1.27	1.81	ND	0.51	ND	0.63	1.78	0.93	8.78	0.88	5.08	5.01	2.58	0.43	0.87	1.88	ND	0.46	6.45	0.85	2.60	1.42	0.58	6.85
F-3170	1.10	0.89	1.33	0.17	0.57	1.28	1.87	0.60	10.31	0.86	5.68	6.42	3.66	0.37	0.65	1.83	1.87	0.34	7.26	0.39	3.39	2.07	0.58	9.02
F-3171	0.47	0.68	BDL	0.14	BDL	0.21	1.02	BDL	4.69	0.44	2.94	2.56	1.81	0.28	0.34	0.97	0.61	0.16	3.10	0.29	1.37	0.66	0.32	3.08
F-3172	9.44	8.70	7.23	6.28	10.35	2.46	10.86	15.91	43.24	4.64	25.97	18.84	6.95	2.69	5.47	9.38	5.48	2.96	34.18	4.24	10.61	5.24	2.28	23.83
F-3173	13.23	14.47	20.51	11.22	10.91	8.08	30.18	39.57	141.25	14.30	111.95	66.56	34.60	20.87	22.78	36.25	ND	11.37	125.47	13.07	43.68	22.46	9.73	92.00
F-3174	0.46	0.43	0.43	0.15	0.16	0.12	0.57	0.90	3.77	0.36	3.34	2.36	1.38	0.22	0.45	0.88	ND	0.22	2.92	0.27	1.27	0.43	0.24	2.92
F-3175	2.60	3.06	2.46	1.20	1.29	1.14	5.15	6.42	20.12	2.39	19.53	12.43	7.85	2.13	3.22	5.09	ND	1.47	17.80	2.90	9.37	3.57	1.89	17.92
F-3176	2.59	0.76	2.14	1.42	ND	0.78	3.97	5.67	17.17	2.08	17.81	9.18	4.02	3.32	2.54	3.72	2.45	1.04	18.03	2.15	4.61	2.30	0.91	11.22
F-3177	10.27	13.33	8.61	6.79	9.58	4.75	13.79	21.36	58.62	6.64	41.02	24.04	10.24	9.66	6.38	10.58	6.72	5.26	47.96	5.71	20.02	8.77	3.31	37.29
F-3178	17.02	16.65	13.57	7.85	2.76	4.17	18.86	30.65	81.48	8.38	76.37	32.42	15.26	9.59	10.58	16.58	10.18	4.98	64.36	6.47	15.77	8.73	3.66	36.13
F-3179	4.80	4.57	4.39	2.61	0.82	2.19	7.90	9.59	34.11	4.25	25.64	20.11	10.65	5.63	5.86	8.58	ND	3.33	32.93	1.97	12.10	6.04	2.71	27.49
F-3180	1.68	1.23	0.40	1.13	3.13	0.31	3.95	3.73	10.32	1.39	12.15	6.71	3.36	1.81	1.99	3.06	2.08	0.71	10.61	0.99	2.74	1.43	0.90	6.87

Concentrations in ng/g wet wgt)																								
Sample ID	37+42	41+71	64	40	100	63	74	70+76	66+95	91	56+60	101	99	83	97	87+81	85	136	77+110	82	151	135+144	107	149
F-3181	1.80	1.29	1.69	0.93	ND	0.44	3.65	4.90	17.53	2.15	13.96	12.79	8.01	1.33	3.66	5.17	3.90	1.31	17.19	1.18	4.76	2.80	1.51	15.50
F-3182	0.44	0.38	BDL	0.23	ND	BDL	1.23	1.26	4.02	0.45	3.09	2.57	1.49	0.20	0.72	1.09	0.73	0.18	3.70	0.26	1.08	0.52	0.31	2.76
F-3183	0.81	0.68	0.18	0.30	0.43	0.24	2.26	2.36	6.58	0.73	5.82	4.19	2.66	0.61	1.09	1.62	1.35	0.29	5.08	0.61	1.99	0.82	0.57	4.09
F-3184	0.16	0.12	BDL	0.14	BDL	BDL	0.28	BDL	1.06	BDL	0.85	0.51	0.25	0.15	0.18	0.40	0.20	0.08	1.19	0.07	0.28	0.16	0.07	0.69
F-3185	ND	BDL	BDL	ND	ND	BDL	1.56	0.55	1.57	BDL	1.37	1.09	1.18	ND	0.26	0.50	0.39	BDL	0.92	BDL	0.32	0.15	0.13	0.83
F-3186	0.17	ND	0.16	ND	ND	BDL	BDL	0.55	ND	0.13	1.09	1.17	0.79	BDL	0.25	0.45	0.32	BDL	1.51	0.09	0.34	ND	0.10	0.93
F-3187	2.01	1.24	1.60	1.19	0.60	0.53	4.80	3.39	16.05	1.52	9.34	12.09	7.04	1.44	3.46	4.61	2.99	0.73	15.79	1.19	3.25	2.36	0.30	12.42
F-3188	2.30	1.50	1.91	0.82	ND	0.55	2.63	3.72	13.11	1.65	13.37	7.02	3.81	1.11	2.30	3.66	2.26	0.79	11.14	1.12	2.66	1.58	0.79	7.63
F-3189	0.34	0.28	0.34	0.24	ND	BDL	0.86	1.04	2.73	0.28	2.45	1.37	2.23	0.26	0.38	0.70	ND	0.12	2.09	0.15	0.47	0.27	0.12	1.28
F-3190	0.27	0.21	0.27	0.10	ND	BDL	0.58	0.79	2.61	0.26	2.22	1.71	1.04	0.19	0.46	0.67	0.50	0.10	2.37	0.16	0.65	0.32	0.16	1.75
F-3191	0.10	BDL	BDL	0.10	ND	BDL	BDL	BDL	0.90	BDL	0.72	0.31	0.89	BDL	0.14	0.31	ND	BDL	0.86	0.08	0.17	0.10	BDL	0.44
F-3192	0.19	0.17	0.24	0.15	ND	BDL	0.58	0.31	1.90	0.15	1.31	0.75	0.53	0.15	0.31	0.55	0.37	0.14	1.91	0.15	0.52	0.26	0.11	1.23
F-3193	0.09	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.70	BDL	0.94	0.54	0.31	BDL	0.13	BDL	0.16	BDL	0.79	BDL	0.20	0.11	BDL	0.63
F-3194	0.44	0.46	0.19	0.17	BDL	0.18	0.82	0.42	2.53	0.25	2.68	0.78	0.76	BDL	0.36	0.71	ND	0.18	1.96	0.19	0.90	0.35	0.26	1.55
F-3195	ND	ND	BDL	BDL	ND	BDL	0.27	BDL	1.03	0.13	0.94	0.30	0.83	BDL	0.18	0.39	0.13	0.06	0.98	0.08	0.31	0.19	0.11	0.83
F-3196	0.85	0.77	BDL	0.26	0.33	0.27	1.16	2.05	5.66	0.72	4.27	3.64	2.49	0.32	0.87	1.44	1.04	0.33	4.30	0.37	1.85	0.72	0.56	4.16
F-3197	1.16	ND	0.32	ND	1.45	0.42	2.80	3.36	BDL	0.37	2.39	8.87	69.91	6.35	25.05	32.51	ND	6.10	71.85	ND	46.33	ND	11.76	ND
F-3198	2.88	2.10	2.58	1.66	1.93	1.34	6.81	5.65	29.62	4.14	10.42	20.01	15.08	2.56	6.02	9.22	5.39	3.65	28.31	1.39	9.59	6.68	3.22	29.57
F-3199	7.66	7.51	6.11	6.00	4.69	5.06	11.87	11.77	38.99	5.24	22.12	20.78	33.77	4.95	6.45	9.50	6.79	4.87	30.50	2.96	12.95	7.92	3.98	30.16
F-3200	7.60	8.28	6.43	5.04	7.55	2.76	13.06	13.48	47.48	6.74	30.00	29.71	43.75	4.98	9.24	15.08	8.51	5.39	41.92	3.97	14.30	9.65	4.97	41.20
F-3201	1.55	1.60	1.74	1.64	2.88	0.93	5.71	3.33	12.54	1.86	8.66	9.89	11.90	1.87	2.96	4.36	1.09	1.58	11.70	0.91	4.15	2.53	1.77	12.88
F-3202	12.79	8.98	8.69	7.09	15.40	3.41	18.27	16.35	57.00	8.59	33.18	29.05	95.24	7.48	10.00	17.43	7.31	5.55	51.50	3.60	11.23	7.88	4.80	34.26
F-3203	3.85	3.26	0.57	1.14	1.61	1.22	4.78	8.73	23.85	3.59	16.79	14.03	10.36	1.64	3.79	5.93	3.96	1.64	18.32	1.59	8.08	3.46	2.53	16.15
F-3204	0.39	0.38	BDL	0.16	BDL	0.21	0.58	0.27	2.36	0.17	1.90	0.65	0.91	BDL	0.31	0.58	ND	0.18	1.78	0.17	0.80	0.32	0.20	1.35
F-3205	0.35	0.17	0.29	0.10	BDL	0.12	0.48	0.68	1.75	0.17	1.34	1.08	0.88	BDL	0.26	0.57	0.32	BDL	1.47	0.12	0.51	0.24	0.20	1.25
F-3206	0.13	0.12	BDL	BDL	BDL	BDL	BDL	0.30	0.86	0.15	0.83	0.95	0.78	BDL	0.19	BDL	0.26	BDL	0.50	BDL	0.62	0.17	0.19	0.87
F-3207	0.29	0.23	0.28	BDL	BDL	BDL	0.57	0.58	1.91	0.18	1.26	1.20	0.72	BDL	0.29	0.58	ND	0.18	1.60	0.15	0.83	0.22	0.18	1.49
F-3208	0.16	0.22	BDL	BDL	0.25	0.12	0.66	0.88	1.66	0.13	0.71	1.53	0.87	BDL	0.27	0.51	0.47	BDL	0.74	0.09	0.28	0.14	0.20	0.72
F-3209	0.22	0.22	0.25	BDL	0.15	BDL	0.34	0.66	0.93	BDL	0.62	0.74	ND	ND	0.19	0.43	0.29	BDL	0.81	0.10	0.19	0.08	0.10	0.50
F-3210	0.53	0.73	BDL	0.11	0.14	0.16	1.05	0.52	2.80	0.21	3.01	1.23	0.87	BDL	0.45	0.79	0.45	0.13	2.25	0.17	0.43	0.24	0.17	1.06
F-3211	0.44	0.28	BDL	0.11	ND	BDL	0.29	BDL	0.89	BDL	0.74	0.30	ND	BDL	0.12	0.36	0.17	BDL	0.71	0.10	0.13	0.09	BDL	0.40
F-3212	0.75	0.52	0.62	0.13	0.17	0.17	0.81	0.63	3.29	0.23	1.68	1.30	1.03	0.14	0.57	0.95	0.61	0.17	2.55	0.16	0.49	0.35	0.26	1.53
F-3213	0.35	0.42	BDL	0.12	1.03	0.12	0.66	0.87	2.47	0.23	3.39	1.86	1.18	BDL	0.47	0.77	0.55	BDL	2.08	0.19	0.55	0.22	0.21	1.45
F-3214	0.71	0.64	BDL	0.26	0.36	0.19	0.89	1.56	4.10	0.64	2.03	2.69	2.00	0.16	0.69	1.08	0.73	0.12	3.34	0.28	0.92	0.39	0.28	2.26
F-3215	1.24	1.37	0.18	0.35	0.97	0.34	2.34	3.22	9.67	0.95	3.97	7.38	5.20	0.41	2.11	2.75	2.63	0.31	8.60	0.72	3.12	1.10	1.06	6.76
F-3216	0.69	1.11	0.56	0.34	0.18	0.16	1.23	1.29	5.64	0.63	1.32	3.45	3.43	1.10	0.91	0.94	1.12	0.30	3.27	0.19	1.76	0.78	0.84	4.09
F-3217	0.68	0.53	BDL	0.19	1.08	0.20	1.42	1.39	2.68	0.21	3.54	2.05	1.40	BDL	0.48	0.73	0.64	BDL	1.46	0.11	0.69	0.26	0.27	1.24
F-3218	2.61	1.52	2.10	1.09	ND	1.44	3.82	5.07	15.53	1.83	7.58	10.40	7.97	0.95	3.31	4.55	3.34	0.88	12.23	1.00	3.65	2.08	1.48	10.29
F-3219	3.04	3.26	0.75	1.03	ND	1.49	3.85	5.07	15.36	1.77	7.92	10.49	6.86	1.31	3.31	4.87	2.85	0.70	13.25	1.02	3.37	2.13	1.59	10.45
F-3220	1.92	1.96	2.53	0.71	0.45	1.16	7.00	6.33	12.52	2.53	15.06	20.01	13.81	1.08	5.50	7.79	3.79	1.16	25.39	1.22	5.05	3.58	2.72	18.89
F-3221	6.24	3.16	3.80	1.01	0.74	1.70	6.43	11.28	29.22	3.57	17.91	15.99	16.20	1.49	4.66	7.54	5.65	1.67	20.23	1.57	6.00	3.23	2.54	14.64
F-3222	0.44	ND	0.44	ND	ND	0.16	1.17	1.98	3.63	0.33	1.32	2.51	2.17	BDL	0.51	0.84	0.96	BDL	2.33	0.25	0.63	0.31	0.24	1.72
F-3223	0.76	0.52	0.61	BDL	BDL	BDL	1.08	1.99	3.67	0.30	1.65	1.71	1.53	BDL	0.45	0.81	0.65	BDL	2.16	0.27	0.41	0.21	0.18	1.32
F-3224	0.64	0.53	0.68	BDL	ND	0.17	1.47	2.03	4.65	0.41	1.98	2.39	2.56	BDL	0.65	1.10	0.95	0.08	2.72	0.48	0.54	0.31	0.30	1.80
F-3225	12.54	74.67	0.54	8.61	0.54	3.12	36.92	67.17	162.01	19.54	38.13	86.25	23.88	7.87	35.45	59.49	25.34	7.25	145.08	18.50	18.67	20.46	10.15	68.67
F-3226	7.53	7.15	6.05	2.58	3.23	1.48	12.11	9.58	39.87	4.86	11.97	16.13	8.48	2.30	5.61	9.17	5.86	1.97	27.10	2.66	6.07	4.21	2.38	20.40
F-3227	13.09	5.04	12.12	4.50	7.99	3.36	26.78	20.80	63.14	6.81	28.66	25.60	BDL	2.83	7.66	13.59	9.36	2.86	39.35	6.21	13.12	7.05	3.79	32.23
F-3228	0.65	0.47	0.53	0.17	ND	BDL	0.98	0.69	2.85	BDL	1.29	1.02	0.76	BDL	0.40	0.80	0.48	0.07	2.02	0.34	0.34	0.21	0.16	1.00
F-3229	3.35	2.71	3.88	0.93	ND	1.01	7.81	1.91	22.60	1.45	10.37	5.16	5.33	0.73	2.71	4.59	3.66	0.48	13.12	2.30	1.89	1.33	1.37	6.21
F-3230	14.96	38.38	0.53	5.84	0.59	2.95	24.57	27.43	68.33	2.26	24.37	29.53	60.14	5.25	10.81	18.14	1.06	3.38	50.43	5.09	7.70	7.04	3.81	25.55
F-3231	15.08	22.95	ND	5.55	8.80	2.83	22.44	30.50	74.30	7.83	30.56	29.80	17.68	4.10	10.11	17.56	11.84	2.21	49.27	7.71	8.42	6.19	3.42	23.07
F-3232	0.68	0.59	0.55	0.16	ND	0.13	1.02	1.17	3.72	0.34	2.19	1.73	1.27	0.14	0.52	0.87	0.62	0.07	2.34	0.28	0.43	0.27	0.17	1.50
F-3233	0.58	0.96	0.78	0.14	0.17	0.16	2.04	3.56	11.54	0.86	2.26	6.09	3.29	0.30	1.99	3.27	2.12	0.24	9.47	0.73	0.87	1.00	0.45	4.43
F-3234	0.39	0.28	0.34	0.10	ND	BDL	0.56	0.40	1.95	0.14	0.89	0.67	0.66	BDL	0.29	0.62	0.36	BDL	1.48	0.20	0.18	0.14	0.13	0.56

Concentrations in ng/g wet wgt)																								
Sample ID	118	134	131	146	53+132+10	141	137+176	163+138	158	129+178	187+182	183	128	185	174	177	202+171	157+200	172+197	180	193	191	199	170+190
Detection Limits	**0.23**	**0.12**	**0.07**	**0.28**	**1.15**	**0.12**	**0.36**	**0.68**	**0.23**	**0.19**	**0.36**	**0.16**	**0.17**	**0.08**	**0.09**	**0.12**	**0.12**	**0.09**	**0.07**	**0.38**	**0.28**	**0.09**	**0.07**	**0.23**
F-2836	25.84	2.53	1.24	14.14	103.75	3.56	1.01	77.74	12.62	5.92	25.88	17.96	9.28	2.17	6.44	3.33	8.98	3.62	5.37	59.83	6.54	1.44	BDL	40.69
F-2837	24.15	42.63	ND	BDL	9.86	77.15	2.49	1.64	77.94	14.11	8.89	13.31	7.77	6.20	1.02	4.92	3.20	ND	9.99	2.20	22.49	0.88	0.91	BDL
F-2838	15.63	17.88	ND	BDL	7.20	56.11	1.99	1.05	43.40	6.63	8.67	12.90	8.02	2.30	1.22	5.19	3.44	3.50	9.87	2.44	29.66	1.19	1.26	BDL
F-2840	39.59	1.48	ND	12.87	108.10	0.98	4.18	118.62	16.37	4.02	20.30	11.55	19.64	0.29	3.58	8.45	11.94	4.03	3.92	43.98	4.76	1.07	0.09	31.68
F-2841	31.21	1.73	ND	14.58	100.63	1.37	3.20	104.75	12.92	4.97	33.67	12.96	14.37	0.59	4.86	10.01	5.44	3.44	4.39	46.03	ND	1.17	0.14	33.16
F-2842	28.36	0.93	0.11	11.12	80.86	0.71	2.94	79.74	ND	4.88	21.81	11.11	11.37	0.48	3.62	8.43	5.34	3.13	3.68	38.10	5.20	0.71	0.08	28.14
F-2843	6.18	0.26	ND	3.70	28.80	BDL	0.99	25.47	3.55	1.68	8.97	4.59	3.28	0.08	0.93	2.92	2.75	0.98	1.77	14.39	2.28	0.38	BDL	10.13
F2844	12.01	5.04	3.38	3.15	28.23	18.09	1.72	21.57	16.36	3.41	13.97	10.81	5.53	1.47	3.86	5.50	4.32	2.25	6.71	17.48	22.18	9.98	0.58	11.41
F-2845	24.79	24.16	12.26	BDL	7.99	76.08	3.77	1.57	63.09	10.08	8.10	20.58	13.84	3.44	2.34	12.05	9.53	6.12	9.74	3.97	45.12	36.23	2.06	0.73
F-2846	36.97	2.60	ND	7.93	70.40	1.62	3.12	74.64	9.54	1.55	12.04	5.27	11.57	0.82	4.01	4.34	6.77	ND	1.69	17.39	ND	0.49	0.27	13.66
F-2847	7.98	0.63	ND	3.37	36.23	1.47	1.32	27.29	3.49	1.81	11.21	6.70	2.88	1.13	4.13	4.20	3.80	1.38	2.23	24.01	1.60	0.54	0.31	15.58
F-2848	7.71	0.18	BDL	4.31	30.54	0.20	0.71	17.57	1.77	1.64	6.34	2.67	2.47	0.10	0.50	1.98	1.81	0.81	0.63	6.83	1.24	0.11	ND	4.12
F2849	4.77	0.38	0.10	3.64	25.25	0.23	0.42	16.12	2.02	1.68	6.94	3.73	2.41	BDL	0.42	2.79	2.84	0.82	0.51	5.36	1.04	0.15	ND	3.55
F2850	0.64	ND	0.10	BDL	3.82	BDL	BDL	2.18	0.28	0.29	0.37	0.38	0.36	ND	BDL	BDL	BDL	ND	ND	1.27	0.37	ND	ND	1.00
F-2851	BDL	0.31	0.19	BDL	BDL	2.21	BDL	BDL	0.57	BDL	3.58	0.23	0.25	0.08	ND	BDL	BDL	BDL	9.72	1.07	1.40	0.20	0.07	0.35
F-2853	26.86	2.99	0.68	19.72	115.17	3.89	2.09	79.57	8.14	7.27	22.79	11.03	12.55	0.92	4.19	8.11	11.65	3.88	2.72	24.10	2.85	0.73	0.21	16.59
F-2854	16.45	25.36	9.93	BDL	14.73	100.62	2.49	1.39	64.96	5.97	6.11	15.88	8.53	4.02	0.59	3.09	5.14	4.09	10.20	2.15	21.32	11.34	0.61	BDL
F-2855	28.92	14.97	7.26	10.67	70.19	54.84	4.55	47.93	42.91	7.68	16.86	16.66	15.61	4.07	3.22	7.07	11.16	7.40	6.17	14.74	34.74	9.69	0.68	9.71
F-2856	20.75	2.34	0.43	14.92	91.08	2.56	1.52	66.18	6.05	5.55	17.76	8.47	16.49	1.21	2.94	5.74	5.98	3.13	2.09	18.36	18.92	0.53	0.15	13.01
F-2857	21.36	1.93	0.38	13.35	79.64	1.79	1.17	53.23	5.83	4.01	12.37	5.88	8.35	0.34	2.33	4.31	3.98	2.54	1.61	13.30	7.33	0.32	0.11	9.73
F-2858	11.16	1.11	0.25	10.38	64.87	2.58	0.95	40.63	4.08	5.65	15.49	8.40	5.52	0.76	4.18	5.55	10.48	4.50	2.62	22.94	10.44	0.51	0.32	14.55
F-2859	71.37	3.70	ND	24.11	161.65	5.30	5.93	134.33	14.27	7.45	31.72	18.89	15.70	1.83	8.70	7.60	8.66	ND	5.24	61.70	1.94	1.46	0.15	35.82
F-2860	32.38	1.60	0.91	12.03	80.38	2.48	2.80	61.64	7.98	3.91	16.79	9.52	7.25	0.75	5.31	5.09	5.68	2.76	2.81	28.32	14.64	0.46	0.10	17.05
F-2861	25.09	1.75	ND	8.86	68.89	2.59	2.25	55.52	5.50	2.92	13.29	7.66	6.23	0.78	4.72	3.60	3.37	2.18	2.25	27.36	0.74	0.40	BDL	14.96
F-2862	13.32	32.82	18.26	BDL	16.25	127.86	1.37	1.41	91.55	16.49	10.07	35.66	20.94	5.25	0.54	4.40	13.30	7.56	10.06	5.59	60.77	6.21	2.12	BDL
F-2863	11.67	0.78	0.14	5.92	40.68	2.12	1.70	27.80	2.58	2.68	10.35	4.96	3.60	0.44	2.90	3.90	4.28	1.79	1.28	13.02	ND	0.25	0.14	8.13
F-2864	4.36	0.20	BDL	3.18	20.11	0.69	0.72	12.44	1.10	1.97	6.12	3.58	2.28	0.35	0.98	1.62	2.34	0.81	0.74	5.34	0.34	0.12	BDL	3.45
F-2865	10.44	0.69	ND	6.85	43.32	1.57	1.71	27.58	2.75	2.71	10.24	5.11	2.86	0.58	2.75	3.67	5.54	1.99	1.56	13.20	0.78	0.70	0.86	6.77
F-2866	14.69	0.71	0.17	6.81	47.07	1.99	1.59	32.99	3.76	2.83	11.25	6.15	4.48	0.57	2.92	3.68	6.41	2.11	1.62	16.23	1.02	0.30	0.14	10.15
F-2936	7.84	0.94	0.12	4.98	31.18	1.01	1.30	19.64	1.91	2.29	7.31	3.38	2.92	0.19	1.76	2.52	3.37	1.16	0.87	7.54	ND	0.16	BDL	4.15
F-2937	21.21	16.16	0.47	9.16	66.34	2.90	2.94	56.34	7.59	3.08	18.52	9.38	7.96	1.71	7.83	6.73	6.45	2.39	3.11	32.80	69.72	0.80	0.45	22.70
F-2938	27.35	1.80	0.11	12.21	100.86	1.86	2.13	61.41	6.86	5.10	18.39	10.10	8.32	0.15	2.54	7.04	8.43	2.21	1.72	25.51	5.68	0.92	BDL	13.78
F-2939	15.02	1.24	0.20	6.96	50.69	1.77	2.00	42.94	5.78	2.33	15.63	7.82	5.10	0.92	5.32	5.14	4.56	1.85	2.63	29.85	3.49	0.76	0.39	21.26
F-2940	12.63	1.35	0.15	6.01	47.08	1.70	1.88	36.82	4.99	2.17	12.64	6.60	4.88	1.27	5.18	5.26	4.50	2.18	2.37	21.71	18.03	0.50	0.32	14.37
F-2945	16.82	0.81	0.20	5.64	52.83	0.56	1.65	42.61	6.49	1.01	6.70	4.89	5.15	0.48	2.86	2.12	1.81	1.40	1.71	18.71	4.45	0.61	0.17	13.44
F-2946	26.63	3.63	0.39	13.74	102.92	2.79	3.96	86.95	12.53	2.34	31.41	15.87	11.86	2.42	10.38	11.69	8.75	3.78	5.73	59.82	40.93	1.40	0.70	42.15
F-2947	0.67	0.96	0.97	0.29	2.25	0.97	BDL	1.71	0.27	0.97	0.49	0.20	0.17	0.97	0.13	0.12	0.12	0.97	0.97	0.65	0.51	0.97	0.97	0.48
F-2948	1.53	0.15	BDL	0.66	5.47	BDL	BDL	4.01	0.59	0.34	1.16	0.59	0.56	BDL	0.25	0.21	0.25	0.13	0.21	1.67	1.49	BDL	BDL	1.23
F-2949	11.24	6.78	0.14	4.32	37.27	0.39	0.85	28.88	4.33	1.48	8.01	3.73	4.06	0.42	1.23	1.77	1.97	0.79	1.42	10.97	8.33	0.34	6.02	8.02
F-2950	2.41	0.17	BDL	1.06	8.90	BDL	BDL	6.90	1.44	0.19	1.84	0.18	1.03	0.09	0.31	0.22	0.42	0.26	0.38	3.68	BDL	0.11	BDL	2.45
F-2951	2.86	0.24	0.08	1.04	9.05	0.21	0.47	6.73	0.97	0.37	1.61	0.99	0.97	0.12	0.63	0.47	0.49	0.21	0.32	2.98	0.68	0.10	BDL	1.96
F-2952	9.75	0.30	0.16	4.38	37.91	0.20	0.79	26.95	4.26	0.56	7.22	4.59	3.77	0.20	0.93	0.36	1.22	0.88	1.23	15.73	7.33	0.41	0.08	10.42
F-2953	1.23	3.22	0.12	0.60	1.71	BDL	BDL	3.26	0.57	BDL	1.34	0.84	0.75	0.09	0.18	0.30	4.26	0.26	0.49	1.56	1.22	4.26	0.11	1.30
F-2954	1.36	5.73	0.07	0.76	1.99	BDL	BDL	3.68	0.49	BDL	1.55	0.56	0.54	BDL	0.23	0.30	0.42	0.15	0.26	1.63	1.11	BDL	BDL	1.02
F-2955	22.04	9.60	0.50	20.85	155.68	2.07	3.13	107.45	16.28	11.36	40.15	27.51	11.93	0.62	8.22	13.96	13.17	3.37	7.66	86.02	21.62	2.57	0.10	58.88
F-2956	10.26	13.32	BDL	8.92	61.31	0.56	1.61	44.24	5.70	4.00	16.45	8.92	5.17	0.16	2.52	5.43	5.48	1.67	2.48	27.22	11.62	0.79	BDL	16.82
F-2957	0.84	1.78	BDL	0.49	1.21	BDL	BDL	2.26	0.38	BDL	0.97	0.37	0.33	BDL	0.20	0.25	0.18	0.11	0.21	1.52	0.77	BDL	BDL	0.98
F-2958	1.23	BDL	BDL	0.48	3.43	BDL	BDL	3.04	0.43	0.20	0.95	0.44	0.37	BDL	0.20	0.44	0.21	BDL	0.16	1.22	BDL	BDL	BDL	0.93
F-2959	1.63	0.33	BDL	0.61	2.45	BDL	BDL	3.67	0.59	1.05	1.20	0.59	0.61	0.09	0.23	0.40	0.18	0.14	0.21	1.78	BDL	1.05	BDL	1.22
F-2960	9.16	0.15	BDL	4.04	32.11	0.24	0.65	15.89	1.73	1.55	5.63	2.55	2.34	BDL	0.29	1.43	1.34	0.70	0.55	6.59	1.33	0.15	ND	3.46
F-2961	16.74	0.38	BDL	6.04	50.76	0.41	ND	24.96	2.61	2.30	8.56	4.04	3.88	ND	0.71	1.91	2.36	1.22	0.78	10.11	3.87	0.23	BDL	5.01
F-2962	10.98	0.21	ND	4.25	37.16	0.21	0.80	19.60	1.85	1.33	6.13	2.95	2.98	BDL	0.48	1.62	1.36	0.86	0.61	6.68	0.73	0.15	BDL	3.10
F-2963	12.71	0.40	BDL	5.07	39.59	0.20	0.84	22.86	2.05	1.73	6.96	2.50	3.52	BDL	0.31	2.03	1.90	0.86	0.55	7.35	1.44	0.19	BDL	3.74
F-2964	14.03	0.84	BDL	6.56	54.87	0.81	ND	31.01	2.98	2.58	10.19	4.36	3.73	BDL	1.13	3.52	2.67	1.06	1.01	12.31	2.97	0.29	BDL	7.44
F-2965	35.75	2.10	0.10	29.74	225.67	2.54	4.87	152.01	18.89	16.13	68.79	44.87	14.59	1.24	13.97	30.91	27.42	6.21	11.25	124.04	21.25	4.97	0.22	83.56
F-2966	20.08	1.74	0.08	10.57	75.60	1.35	2.10	50.61	5.40	4.40	16.42	9.52	6.51	1.01	1.00	5.88	6.91	2.05	0.98	14.62	9.73	0.49	BDL	8.66
F-2967	11.36	0.55	0.14	9.49	64.86	0.38	1.72	42.92	4.69	4.18	17.30	9.00	4.24	0.14	1.91	6.00	5.81	1.43	1.89	22.48	4.33	0.79	BDL	15.46

Concentrations in ng/g wet wgt)																								
Sample ID	118	134	131	146	53+132+103	141	137+176	163+138	158	129+178	187+182	183	128	185	174	177	202+171	157+200	172+197	180	193	191	199	170+190
F-2968	18.49	0.93	1.03	14.01	103.88	1.48	2.42	66.98	7.82	7.67	29.18	17.72	6.76	0.40	4.50	10.77	10.26	2.65	3.71	47.10	6.67	1.63	0.09	29.17
F-2969	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
F-2970	17.11	1.15	BDL	10.76	79.50	1.00	2.71	59.59	7.77	5.38	22.93	10.64	7.94	0.65	3.87	7.85	7.79	2.56	2.53	27.61	65.99	0.90	0.09	19.73
F-2971	41.37	2.64	1.06	37.11	270.04	1.71	5.29	185.18	31.78	18.93	66.69	49.82	20.97	0.69	11.84	23.69	32.76	6.83	13.58	138.72	76.98	5.75	0.16	109.27
F-2972	44.45	4.35	BDL	43.09	281.63	15.54	4.06	214.21	35.58	22.97	83.01	51.99	25.35	1.56	14.71	32.83	18.90	5.45	17.13	151.98	12.17	4.10	0.27	98.09
F-2973	87.74	57.24	0.16	94.10	521.35	6.69	20.88	414.20	74.80	49.14	160.22	106.30	62.48	3.36	26.71	69.98	49.86	0.99	37.72	312.24	37.81	13.69	0.68	217.21
F-2974	36.26	1.81	ND	28.79	205.37	1.20	ND	138.87	26.24	12.57	47.73	33.84	16.18	0.33	5.81	12.33	ND	5.38	8.82	92.94	16.99	2.36	0.08	64.04
F-2975	4.05	0.35	BDL	3.29	21.31	0.61	ND	13.45	1.31	1.40	5.30	2.31	1.74	0.10	1.12	1.70	2.63	0.96	0.68	5.62	12.63	0.18	BDL	3.95
F-2976	10.76	1.03	0.13	11.81	74.52	3.16	ND	50.90	6.23	5.51	22.18	14.09	5.76	2.20	7.03	6.37	11.74	4.05	4.22	40.35	22.62	1.07	0.34	27.08
F-2977	9.17	0.77	BDL	6.00	34.92	1.25	1.23	25.11	2.16	2.71	8.68	3.74	3.09	0.28	1.71	3.06	2.80	1.28	0.94	9.16	6.17	0.18	0.08	5.99
F-2978	1.09	1.10	0.25	10.50	81.06	2.36	2.05	53.09	6.89	4.87	17.66	11.29	6.20	1.54	5.32	4.69	6.45	2.61	2.58	30.11	49.91	0.87	0.19	16.85
F-2979	3.88	0.76	BDL	2.98	20.17	0.74	ND	12.51	1.39	1.42	4.93	2.42	1.62	0.25	1.01	1.44	2.30	0.86	0.64	6.13	6.51	0.13	BDL	3.95
F-2980	12.76	0.91	0.09	7.81	49.77	1.51	1.73	35.25	2.98	2.86	10.11	4.77	4.48	0.41	2.06	3.46	3.88	1.61	1.14	10.97	29.95	0.38	0.09	7.67
F-2981	23.15	1.32	0.15	15.45	93.81	2.77	3.06	65.78	6.29	5.74	19.97	10.37	8.87	1.11	5.07	5.31	6.24	3.05	2.59	26.32	36.30	0.81	0.15	16.28
F-2982	55.02	8.62	0.52	33.44	221.48	8.20	7.49	173.41	22.34	11.76	57.77	35.77	27.30	4.81	20.37	22.95	30.80	10.68	11.66	108.37	4.78	3.42	0.97	85.46
F-2983	0.90	0.89	0.09	6.52	40.78	1.64	1.58	26.22	2.91	2.89	12.13	6.91	3.11	0.85	3.17	3.23	5.92	2.32	1.92	19.10	1.18	0.57	0.17	12.86
F-2984	32.79	2.42	0.56	14.89	92.10	1.75	1.40	68.35	8.90	3.95	10.93	5.51	12.38	0.40	2.42	4.27	3.64	2.91	1.59	12.83	7.77	0.36	0.08	10.73
F-2985	16.18	2.50	0.89	14.61	93.49	4.48	1.66	64.72	10.27	7.04	24.14	15.66	8.20	2.58	9.54	7.61	15.28	4.44	4.36	42.94	80.01	1.50	0.39	29.87
F-2986	16.53	2.68	1.01	12.59	80.46	4.50	1.85	60.94	8.90	4.85	19.70	12.92	8.10	2.32	9.15	8.07	14.10	3.97	3.82	37.05	69.92	0.96	0.42	26.55
F-2987	16.71	1.53	1.00	14.21	83.17	2.89	1.47	58.46	9.57	5.06	19.02	12.98	8.16	2.10	4.86	4.75	13.02	4.47	3.55	33.44	2.34	1.42	0.28	23.31
F-2988	10.12	0.69	0.50	9.21	57.50	2.00	0.93	41.65	6.32	3.54	14.28	9.46	5.19	1.63	4.29	3.84	8.60	2.82	2.55	24.34	23.75	0.66	0.16	17.65
F-2989	6.26	0.65	0.36	6.95	45.84	1.63	0.67	29.68	4.49	2.53	11.74	7.54	3.92	1.18	3.37	2.69	6.59	2.13	2.08	20.18	1.10	0.55	0.14	13.81
F-2990	11.21	0.97	0.34	8.49	52.38	1.67	0.87	35.06	4.38	3.41	12.63	6.64	5.27	0.48	2.40	4.21	7.11	2.37	1.67	16.18	1.07	0.48	0.19	10.15
F-2991	12.91	1.46	0.38	9.48	54.36	2.20	0.95	38.27	4.16	3.81	12.43	5.99	5.33	0.49	3.24	4.86	7.23	2.37	1.52	13.29	0.93	0.32	0.13	9.26
F-2992	12.09	0.67	ND	7.06	50.13	1.59	1.78	35.00	2.56	2.86	11.14	5.70	4.25	0.47	2.11	3.38	3.38	1.71	1.36	12.52	1.04	0.25	0.10	7.76
F-2993	8.51	7.75	ND	BDL	5.50	37.96	1.21	BDL	18.22	1.94	3.22	8.59	4.02	0.11	0.30	1.62	1.51	2.52	9.83	0.86	9.28	0.87	0.28	BDL
F-2994	13.83	1.29	0.47	7.91	48.06	1.84	0.79	33.41	4.56	3.14	10.63	5.57	4.75	0.43	2.11	3.62	6.15	1.76	1.27	13.15	0.79	0.34	0.08	8.01
F-2995	13.78	14.24	ND	BDL	7.77	51.31	2.24	0.98	36.27	4.26	9.39	12.34	6.07	1.98	0.48	2.35	4.22	3.78	10.18	1.09	12.46	7.46	0.36	BDL
F-2996	12.60	12.91	ND	BDL	9.91	63.04	2.32	1.06	39.38	3.36	8.88	16.82	7.76	2.36	0.64	3.24	4.98	7.46	10.48	1.96	19.11	13.84	0.60	BDL
F-2998	13.79	0.49	BDL	5.29	38.21	0.32	1.23	25.27	2.93	1.65	8.23	3.68	3.72	0.12	1.21	2.79	2.69	0.88	0.84	9.62	0.53	0.29	1.07	5.58
F-2999	19.12	0.45	BDL	6.05	54.22	BDL	1.02	35.36	5.34	1.59	7.01	4.64	7.04	BDL	0.54	1.41	2.05	1.35	0.97	12.23	2.46	0.40	0.98	6.77
F-3000	6.18	0.35	BDL	2.89	25.29	BDL	0.43	13.51	1.69	1.11	4.65	2.30	2.05	BDL	0.22	1.12	1.29	0.54	0.72	5.66	0.88	0.20	0.99	2.95
F-3001	15.85	3.67	BDL	13.17	91.63	0.31	1.17	54.98	7.15	4.41	22.77	13.18	7.93	0.08	1.74	4.53	11.31	3.10	3.23	37.74	37.88	1.03	1.01	21.80
F-3002	5.77	0.68	1.08	5.60	38.18	0.18	0.90	26.02	2.66	2.38	10.67	5.47	3.77	BDL	0.88	3.78	4.06	0.79	1.78	15.00	2.45	0.52	BDL	10.23
F-3003	10.44	0.73	BDL	7.55	45.61	1.02	1.25	26.13	2.05	2.60	10.53	4.05	3.46	0.22	1.45	3.08	4.39	1.41	1.05	10.57	0.63	0.32	BDL	6.43
F-3004	18.63	1.52	0.21	11.38	69.91	2.96	2.65	50.58	4.02	4.46	16.41	7.47	6.69	0.58	3.92	6.49	7.03	2.60	1.75	17.92	0.72	0.39	0.11	11.51
F-3005	23.07	1.11	0.12	12.30	88.68	2.27	2.81	61.66	1.09	4.54	16.75	9.33	9.66	0.67	3.16	5.75	6.99	3.00	2.24	22.40	0.82	0.88	0.15	14.63
F-3006	33.08	3.14	0.56	23.36	144.74	5.84	6.38	109.03	13.88	7.42	34.59	22.96	16.60	3.62	13.33	12.95	24.81	6.80	7.17	66.18	2.04	2.06	0.62	40.76
F-3007	2.91	0.19	BDL	2.23	14.62	0.45	0.49	9.22	0.81	0.81	3.21	1.49	1.17	0.14	0.83	1.23	1.44	0.47	0.41	3.53	3.80	0.11	BDL	2.42
F-3008	28.71	2.83	0.29	16.54	104.62	4.34	4.31	77.19	7.60	6.82	24.61	13.15	11.74	1.46	7.58	9.19	11.54	4.05	3.64	35.59	1.02	0.98	0.32	24.75
F-3009	16.92	20.02	ND	BDL	14.29	95.51	2.83	1.46	61.27	5.28	9.89	19.89	9.64	4.22	0.68	3.46	6.16	5.83	10.87	2.10	20.30	12.92	0.84	BDL
F-3010	15.46	8.60	ND	ND	14.58	94.87	2.94	0.93	32.40	3.01	2.44	20.44	9.74	0.10	0.61	3.63	2.40	5.66	10.48	2.30	21.69	2.32	0.58	BDL
F-3011	8.53	9.99	5.55	BDL	7.57	51.10	1.71	0.72	31.83	3.06	9.70	11.89	5.38	1.62	0.36	1.87	3.38	4.47	10.84	1.30	12.18	4.21	0.33	BDL
F-3012	13.40	1.43	0.33	12.47	69.21	2.37	1.19	45.52	4.09	4.87	16.49	7.12	6.95	0.57	2.91	5.54	8.25	3.14	1.97	16.95	1.15	0.48	0.21	11.13
F-3013	9.39	1.00	0.14	8.54	54.41	1.73	0.91	34.04	2.83	3.35	11.90	5.32	5.55	0.34	2.31	4.14	4.60	2.16	1.49	ND	0.65	0.29	0.09	8.49
F-3014	26.70	2.31	0.54	22.20	125.14	3.66	1.85	80.85	8.28	7.33	24.81	11.70	12.45	0.67	4.04	8.33	8.22	4.20	2.74	25.28	1.33	0.53	0.22	16.95
F-3015	10.48	0.96	0.18	11.56	64.74	2.12	0.95	40.88	3.14	4.47	16.72	6.81	5.51	0.44	2.50	5.15	6.38	3.18	1.89	16.53	ND	0.29	0.13	10.98
F-3016	6.07	0.20	0.09	4.67	33.22	0.13	BDL	18.65	3.44	1.81	7.52	4.43	2.48	BDL	0.65	1.69	2.83	1.05	1.34	12.78	1.74	0.31	BDL	7.74
F-3017	7.35	0.79	0.09	9.97	63.31	0.70	0.75	42.61	7.38	4.72	18.51	11.61	5.15	0.19	2.17	5.95	9.06	2.21	3.57	34.10	4.96	0.87	BDL	22.03
F-3018	66.71	8.71	0.75	52.26	304.16	6.22	5.08	245.49	48.88	24.33	81.40	52.82	35.03	2.33	15.46	34.80	29.51	10.07	15.36	134.97	11.25	5.10	0.71	86.52
F-3019	19.82	2.28	0.17	7.74	58.40	0.65	0.74	48.64	8.60	3.62	14.67	6.77	7.80	0.39	2.69	5.82	5.83	2.07	2.23	17.66	7.58	0.57	BDL	14.37
F-3020	1.10	BDL	0.10	0.49	2.18	BDL	BDL	3.01	0.53	0.31	1.50	0.68	0.60	0.13	0.37	0.34	0.24	0.17	0.29	1.24	BDL	BDL	BDL	1.26
F-3021	1.21	BDL	0.10	0.50	2.33	0.12	BDL	3.18	0.51	0.34	1.30	0.63	0.62	0.09	0.40	0.34	0.30	0.26	0.20	1.95	0.35	BDL	BDL	1.30
F-3022	11.62	0.37	0.28	5.83	48.87	0.23	BDL	32.83	6.21	1.64	9.11	6.17	5.59	0.58	1.85	0.38	3.17	1.53	2.10	21.62	2.07	0.46	BDL	15.15
F-3025	38.64	58.48	19.77	BDL	25.94	172.57	2.91	2.77	127.41	14.09	9.61	19.62	10.31	11.43	0.48	4.09	6.96	5.71	10.45	2.60	22.34	2.98	0.89	BDL
F-3026	9.78	13.36	6.16	BDL	4.83	34.91	1.46	BDL	26.96	4.05	4.51	7.46	4.40	1.43	0.68	2.97	2.27	1.96	10.23	1.11	11.96	6.03	0.42	BDL
F-3027	10.18	10.66	5.71	BDL	4.02	31.23	1.47	BDL	23.74	3.43	4.65	7.22	3.67	1.25	0.53	2.83	2.14	1.75	10.80	1.00	10.70	4.58	0.51	BDL
F-3028	22.87	53.89	25.11	BDL	23.38	182.46	2.35	1.97	137.57	23.43	10.50	45.21	28.95	8.66	0.84	7.75	16.86	11.31	10.91	8.22	91.26	9.43	3.59	BDL
F-3029	7.36	9.67	4.02	BDL	3.73	23.70	1.29	BDL	22.63	3.56	9.18	6.89	3.25	1.40	0.60	3.03	2.66	1.50	10.37	1.10	12.69	3.51	0.37	BDL
F-3030	51.22	3.13	0.18	30.93	183.00	3.58	6.55	137.75	21.82	12.75	42.35	26.85	21.73	1.17	11.44	18.83	16.71	7.12	7.58	73.93	11.49	1.43	0.21	51.13

Concentrations in ng/g wet wgt)																								
Sample ID	118	134	131	146	53+132+10	141	137+176	163+138	158	129+178	187+182	183	128	185	174	177	202+171	157+200	172+197	180	193	191	199	170+190
F-3031	25.47	0.71	ND	18.70	130.26	1.20	2.69	94.01	13.83	7.55	31.08	20.74	13.38	0.26	5.84	9.62	18.47	4.76	6.51	68.72	8.38	1.48	0.18	48.83
F-3032	49.09	63.66	65.29	BDL	26.65	200.82	8.90	2.91	166.98	19.47	10.86	48.66	28.69	11.67	2.38	19.47	24.85	13.65	10.61	10.16	106.27	8.79	3.16	0.60
F-3033	10.32	11.98	5.92	BDL	6.81	42.28	1.84	0.76	29.82	3.10	9.01	11.22	5.05	1.46	0.49	2.46	3.80	3.42	10.49	1.12	12.00	9.27	0.23	BDL
F-3034	19.75	65.89	36.94	BDL	33.27	243.89	2.17	3.45	181.28	34.37	11.34	73.33	42.11	11.33	0.68	7.55	26.37	15.29	10.15	11.60	132.25	13.44	5.17	BDL
F3035	15.29	31.11	11.62	BDL	6.48	60.80	2.48	0.84	47.81	8.98	9.81	16.44	9.53	3.10	0.82	4.64	4.51	2.99	10.46	1.19	23.49	1.89	0.75	BDL
F-3036	4.33	0.29	0.09	1.52	12.74	0.26	0.62	10.00	1.64	0.56	2.83	1.71	1.74	0.25	1.10	1.00	0.78	0.47	0.62	5.14	0.42	0.15	BDL	3.13
F-3037	2.30	BDL	BDL	0.75	5.79	BDL	BDL	4.72	0.57	0.33	1.50	0.52	0.47	0.09	0.35	0.30	ND	0.16	0.24	1.70	0.30	BDL	ND	1.17
F-3038	8.42	0.30	0.11	3.29	26.57	0.36	1.00	21.13	3.35	1.14	7.45	3.85	2.55	0.47	1.96	1.84	1.57	1.00	1.29	12.05	8.94	0.28	BDL	8.78
F-3039	4.69	0.88	0.10	1.62	13.15	0.20	0.57	10.43	1.71	0.46	3.10	1.63	1.55	0.24	0.96	0.84	0.82	0.43	0.61	5.34	0.40	0.10	BDL	3.94
F-3040	36.76	19.25	1.47	11.73	79.66	2.00	5.13	71.54	14.44	2.76	13.23	7.55	15.78	1.31	5.97	6.04	1.09	4.01	2.33	22.18	2.70	1.13	0.36	18.29
F-3041	0.55	BDL	BDL	BDL	1.53	BDL	BDL	1.23	BDL	BDL	BDL	BDL	0.19	BDL	BDL	BDL	ND	BDL	ND	0.43	BDL	BDL	ND	0.31
F-3042	1.75	0.19	BDL	0.51	4.99	BDL	BDL	4.01	0.60	0.23	0.84	0.43	0.68	BDL	0.14	0.20	ND	0.12	0.20	1.45	0.74	BDL	BDL	0.96
F-3043	1.16	BDL	BDL	0.56	1.67	BDL	BDL	2.59	0.40	0.22	1.20	0.26	BDL	BDL	0.29	0.26	ND	0.10	0.17	0.93	BDL	BDL	BDL	0.67
F-3044	2.29	0.21	BDL	0.80	4.70	0.17	BDL	4.96	0.87	0.45	1.70	1.01	0.67	0.10	0.34	0.54	ND	0.25	0.32	2.13	BDL	BDL	BDL	1.53
F-3045	0.73	BDL	BDL	0.32	BDL	BDL	BDL	1.71	0.27	ND	0.66	0.28	0.25	BDL	0.14	0.18	ND	BDL	0.22	1.29	0.32	BDL	ND	0.81
F-3046	7.27	1.20	0.35	2.54	18.40	0.73	0.90	16.12	2.55	1.15	4.08	2.70	2.86	0.34	1.69	1.64	1.13	0.59	0.69	5.91	ND	0.12	0.12	4.30
F-3047	6.38	0.58	0.12	2.45	19.84	0.45	0.82	15.16	2.47	0.74	3.69	2.52	2.14	0.33	1.41	1.37	ND	0.64	1.27	6.90	ND	0.16	0.10	4.66
F-3048	4.29	0.31	0.14	1.73	12.85	0.35	0.57	10.45	1.62	0.47	3.34	1.37	1.53	0.23	1.04	1.06	0.59	0.43	0.58	4.96	2.75	BDL	BDL	3.37
F-3049	36.92	14.68	0.83	12.05	95.92	2.13	4.39	87.96	11.86	3.74	25.97	11.80	13.48	1.97	8.59	7.05	5.09	1.07	3.11	41.64	1.88	0.83	0.63	28.98
F-3050	17.01	5.88	0.38	6.16	47.70	1.59	2.08	44.77	6.27	1.98	12.95	5.14	6.51	0.92	3.74	4.18	2.53	1.70	1.46	19.33	1.35	0.43	0.32	14.11
F-3051	13.02	2.04	0.10	9.10	60.60	1.67	2.12	39.11	2.61	3.90	13.12	5.39	6.33	0.49	2.38	4.16	4.45	2.05	1.31	12.52	6.02	0.26	0.13	8.31
F-3052	38.75	6.50	0.54	36.94	210.47	8.16	10.68	132.73	12.39	18.79	56.02	27.86	21.73	2.34	11.53	18.71	22.84	11.94	7.03	63.71	51.33	1.67	0.83	41.33
F-3053	31.55	4.04	0.18	26.97	158.37	6.61	7.72	100.13	8.05	14.16	43.44	20.41	13.40	1.80	9.31	14.21	15.59	8.29	5.29	54.10	13.63	1.60	0.70	34.32
F-3054	8.44	0.79	BDL	6.50	44.94	1.32	1.34	27.62	1.89	2.94	9.85	4.09	3.29	0.28	1.58	2.96	2.79	1.56	0.97	9.50	0.68	0.27	0.10	6.15
F-3055	8.67	0.91	BDL	7.72	52.33	1.70	1.67	32.05	2.48	3.90	13.03	5.72	5.39	0.43	2.12	3.67	4.97	2.37	1.36	13.88	2.58	0.42	0.16	8.62
F-3058	60.33	4.41	0.19	32.26	214.32	5.65	8.92	160.09	14.07	11.53	37.64	18.76	33.31	1.47	7.61	13.03	13.59	7.28	3.76	43.57	2.33	1.04	0.43	33.20
F-3059	40.32	2.11	0.27	29.20	176.87	7.35	ND	107.04	11.56	12.13	39.92	20.63	3.99	1.98	11.28	11.93	16.85	7.11	5.77	51.99	7.18	1.22	0.62	31.85
F-3060	36.03	2.68	0.09	27.34	172.21	5.37	6.47	119.65	8.71	11.52	38.56	16.84	17.03	1.46	6.71	11.96	11.07	6.50	3.50	41.38	1.41	1.07	0.59	30.30
F-3061	8.41	0.94	0.11	3.76	26.65	1.35	1.35	18.20	2.04	2.09	5.68	3.18	2.73	0.27	1.82	2.20	2.10	1.05	0.78	7.59	0.29	0.19	0.08	3.90
F-3062	11.22	0.76	0.10	5.02	34.80	1.68	1.51	23.95	2.25	2.57	7.27	4.10	1.73	0.46	2.81	2.76	1.94	1.27	1.12	10.85	1.70	0.29	0.11	7.03
F-3063	6.66	0.47	BDL	3.03	21.22	0.91	0.96	14.18	1.23	1.39	4.30	2.36	1.99	0.20	1.19	1.59	1.51	0.71	0.62	5.76	ND	0.15	BDL	2.91
F-3064	9.70	0.99	0.14	4.56	30.26	1.35	1.29	20.71	2.60	2.22	6.22	3.58	2.73	0.31	1.91	2.29	1.90	1.10	0.88	9.60	ND	ND	0.08	4.36
F-3065	4.22	1.16	0.56	5.50	31.84	1.10	1.29	18.22	1.50	2.66	8.85	3.23	2.35	0.33	1.89	2.65	3.47	1.63	0.93	8.29	0.77	0.20	0.11	5.63
F-3066	38.11	7.34	0.54	24.63	135.28	4.70	5.82	94.57	10.64	9.24	29.00	14.47	17.97	1.24	6.06	10.26	9.49	6.19	3.22	33.43	1.74	1.03	0.41	19.04
F-3067	15.12	4.98	0.17	11.06	63.82	1.99	2.40	42.35	4.18	4.27	12.57	6.26	8.26	0.53	2.67	4.43	4.39	2.45	1.40	13.74	0.95	0.38	0.13	7.78
F-3068	27.64	1.46	0.15	20.18	123.33	4.40	ND	78.15	7.53	7.41	24.95	12.53	3.68	0.77	4.88	7.10	6.44	3.53	3.06	28.71	4.16	0.60	0.20	17.86
F-3069	29.16	9.30	0.34	30.83	158.95	5.63	8.83	104.04	9.62	12.15	38.03	17.04	20.93	1.60	5.92	12.20	11.56	7.21	3.70	37.48	1.47	1.32	0.40	27.85
F3070	17.68	1.31	BDL	15.00	96.65	2.84	2.88	62.41	4.65	6.82	22.72	9.09	8.25	0.60	3.71	6.71	7.66	3.49	1.92	22.57	1.35	0.64	0.19	14.61
F-3071	17.21	1.57	0.10	11.41	71.92	1.85	2.16	47.79	3.90	4.14	12.78	5.72	7.30	0.42	2.37	4.16	3.51	2.19	1.39	12.33	0.71	0.35	0.62	8.78
F-3072	17.51	3.41	0.24	11.57	67.68	2.69	3.51	47.15	4.56	5.72	16.34	7.86	7.55	0.69	3.99	5.96	5.78	3.23	2.23	17.75	0.59	0.51	0.19	9.92
F-3073	18.36	2.27	BDL	12.83	82.27	2.71	2.58	54.67	3.68	5.32	16.93	7.39	6.96	0.59	3.35	6.02	5.07	2.69	1.40	16.61	1.02	0.46	0.17	11.03
F-3074	24.11	2.16	0.13	15.01	94.80	2.74	3.85	65.93	5.30	6.53	18.30	7.66	6.92	0.73	3.66	6.38	4.75	2.28	1.41	18.19	0.60	0.64	0.21	10.53
F-3075	11.09	1.40	0.09	7.56	45.44	1.16	1.91	29.33	2.53	2.44	7.92	3.36	5.21	0.18	1.51	2.88	2.21	1.32	0.79	7.38	0.31	0.19	BDL	5.37
F-3076	5.79	1.59	0.23	5.75	37.20	1.09	ND	17.86	1.49	3.10	8.86	4.18	0.84	0.55	1.96	2.39	4.04	ND	1.66	10.15	2.41	2.07	0.92	ND
F-3077	5.47	0.48	BDL	5.20	26.56	0.74	0.96	15.59	1.42	1.91	6.82	2.70	1.87	0.14	1.07	1.90	1.92	1.05	0.71	6.17	BDL	0.14	BDL	3.95
F-3078	9.45	0.63	BDL	8.83	48.72	1.58	1.81	28.93	2.35	3.63	13.05	5.60	3.25	0.40	2.13	3.89	3.44	1.89	1.34	13.94	0.90	0.35	0.11	8.78
F-3079	32.51	5.05	0.12	21.93	129.19	4.23	4.32	84.97	6.71	9.67	32.47	13.56	10.20	0.96	5.33	8.10	8.74	4.76	2.69	32.80	1.84	0.88	0.34	20.43
F-3080	10.74	1.73	0.12	8.73	50.20	1.84	2.06	31.76	3.13	3.18	11.45	5.47	4.28	0.48	2.37	3.83	3.53	1.74	1.20	12.41	1.09	0.24	0.13	6.49
F-3081	5.61	0.82	BDL	5.23	32.02	1.06	1.28	19.59	1.96	2.37	8.41	3.74	3.72	0.33	1.61	2.58	2.99	1.54	1.04	9.31	1.59	0.20	0.08	5.91
F-3082	7.78	0.48	BDL	5.32	41.99	0.55	1.12	29.37	3.29	2.73	11.28	6.54	3.84	0.26	2.74	4.00	2.97	1.23	1.79	18.44	ND	0.69	ND	10.22
F-3083	3.27	0.45	ND	2.15	14.10	0.33	0.46	9.90	1.14	1.18	6.49	1.40	0.82	0.09	0.95	1.17	1.07	0.42	0.97	3.31	ND	0.27	0.12	1.63
F-3084	251.70	13.79	1.48	69.61	520.13	1.40	31.98	523.95	126.93	11.05	42.39	37.78	84.66	1.78	6.07	23.07	ND	34.21	10.78	94.83	14.18	4.58	0.20	80.80
F-3085	25.55	1.60	ND	21.00	140.95	2.78	2.86	97.56	16.45	11.09	38.11	25.68	16.42	1.88	9.46	6.95	11.01	6.24	7.50	73.28	8.81	2.37	0.19	47.45
F-3086	23.48	1.46	BDL	17.00	99.97	1.50	3.59	75.72	9.85	7.60	29.02	18.01	7.29	0.86	7.16	9.26	9.17	4.91	5.95	52.81	8.18	1.82	0.18	30.69
F-3087	27.88	1.25	0.11	12.34	78.83	0.85	2.45	59.48	10.96	4.91	18.04	10.52	5.60	0.75	3.68	5.16	ND	3.52	3.21	30.36	4.66	1.08	0.17	21.27
F-3088	18.37	2.18	ND	18.08	101.65	0.85	4.18	71.37	13.23	9.45	30.22	19.47	8.16	0.16	4.12	12.27	14.81	4.52	6.03	47.08	7.49	1.74	0.12	33.87
F-3089	2.50	0.18	ND	2.38	13.53	0.22	0.41	8.10	0.95	1.59	4.42	2.00	1.05	ND	1.05	1.58	1.60	1.01	0.71	4.70	0.90	ND	ND	2.63
F-3090	2.64	BDL	ND	2.08	16.52	BDL	ND	7.04	0.69	0.80	3.55	1.95	0.92	1.08	0.10	0.49	1.13	0.72	0.48	4.52	0.69	0.12	BDL	2.19
F-3091	1.41	BDL	ND	1.40	9.43	BDL	BDL	4.88	0.43	0.67	2.55	1.29	0.68	ND	0.19	0.74	0.95	0.52	0.44	3.33	0.53	BDL	BDL	1.81
F-3092	1.48	BDL	ND	1.75	12.83	BDL	0.42	7.26	0.90	0.95	4.16	2.16	0.98	ND	0.30	1.26	1.30	0.29	0.74	5.76	1.38	0.17	ND	3.21

Concentrations in ng/g wet wgt)																								
Sample ID	118	134	131	146	153+132+105	141	137+176	163+138	158	129+178	187+182	183	128	185	174	177	202+171	157+200	172+197	180	193	191	199	170+190
F-3093	1.88	BDL	ND	1.15	8.92	0.15	BDL	4.68	0.44	0.49	1.77	0.87	0.65	BDL	0.27	0.46	0.72	0.23	0.22	1.80	ND	BDL	BDL	1.08
F-3094	4.19	BDL	ND	3.72	20.81	0.27	0.40	9.68	0.61	1.66	6.03	2.07	1.24	BDL	0.48	1.55	2.47	0.88	0.50	4.22	0.81	0.10	BDL	2.49
F-3095	2.77	0.14	ND	2.70	19.46	BDL	BDL	8.90	1.06	1.28	5.19	2.49	1.38	ND	0.34	1.14	2.10	0.90	0.63	5.70	ND	0.12	ND	2.86
F-3096	5.44	0.78	ND	4.40	31.59	0.37	0.70	19.17	1.69	2.25	7.60	3.91	2.84	BDL	0.97	2.17	2.62	0.95	1.29	9.89	4.18	0.24	BDL	5.85
F-3097	1.08	5.36	0.47	23.39	131.85	5.50	7.02	93.40	11.29	9.51	31.13	15.37	4.89	1.27	5.93	11.11	17.67	5.68	2.78	30.55	1.96	0.60	0.21	21.22
F-3098	45.28	9.66	0.19	33.26	190.57	7.18	7.37	130.80	9.59	14.65	48.43	20.79	14.98	1.97	10.55	16.29	13.97	7.07	5.06	55.19	2.56	1.30	0.61	36.41
F-3099	25.23	5.20	0.11	12.08	81.74	2.18	2.80	61.97	5.86	5.50	18.30	7.90	8.59	0.92	3.75	6.46	6.72	2.42	1.55	19.85	2.25	0.56	0.23	13.83
F-3100	5.58	2.47	ND	5.28	35.05	0.30	0.71	21.90	2.20	2.30	10.59	4.78	4.15	0.10	0.97	2.85	3.04	1.14	1.39	11.71	5.14	0.31	BDL	7.87
F-3101	3.28	0.17	ND	4.29	31.33	BDL	0.77	19.43	2.38	2.53	10.40	5.88	2.39	BDL	0.68	3.41	3.24	0.84	1.93	15.97	2.39	0.45	ND	10.94
F-3102	0.83	ND	ND	BDL	6.57	ND	BDL	3.24	0.29	0.20	0.52	0.83	0.36	ND	BDL	BDL	0.19	BDL	0.15	2.54	0.49	0.09	ND	1.65
F-3103	28.18	3.54	0.36	16.19	99.74	3.04	4.54	67.52	7.10	6.51	19.92	10.22	10.89	0.93	4.36	6.75	7.04	4.46	2.42	23.47	1.24	0.89	0.27	16.48
F-3104	11.47	0.77	0.12	8.83	51.20	1.57	1.97	33.27	3.29	3.15	11.99	5.03	3.96	0.43	1.93	3.48	3.59	1.60	1.16	11.36	1.31	0.26	BDL	6.36
F-3105	8.35	1.12	BDL	11.54	61.00	0.92	1.88	33.59	4.34	6.00	20.29	9.46	4.82	0.33	3.57	6.89	6.49	3.60	3.03	25.93	ND	0.69	0.11	12.99
F-3106	3.06	BDL	ND	2.00	13.87	BDL	0.52	8.48	1.16	1.13	4.59	1.77	1.45	BDL	0.41	1.35	1.09	0.64	0.61	5.08	0.71	0.10	BDL	2.73
F-3107	1.33	BDL	BDL	1.14	7.66	BDL	BDL	4.03	0.49	0.63	2.30	1.04	0.61	BDL	0.27	0.72	0.81	0.35	0.34	2.20	BDL	BDL	BDL	1.21
F-3108	26.19	8.97	0.38	22.16	129.22	5.28	6.89	87.48	8.25	11.05	32.18	16.14	17.39	1.76	6.96	10.88	10.55	7.53	4.18	36.27	32.43	1.00	0.64	20.29
F-3109	33.14	4.67	0.58	29.17	150.74	5.48	7.43	98.87	9.52	11.38	33.82	16.56	19.06	1.20	6.84	11.38	11.28	7.28	3.82	39.09	2.32	1.48	0.59	27.02
F-3110	12.34	1.76	0.11	10.35	56.25	2.84	2.69	34.92	3.14	5.19	15.94	7.14	5.15	0.52	3.71	5.71	5.11	3.09	1.94	14.91	10.36	0.48	0.26	9.87
F-3111	4.34	0.31	ND	4.02	24.95	0.38	0.83	14.70	1.48	1.93	7.02	3.05	1.89	0.52	0.81	2.01	2.63	1.11	0.87	6.53	3.18	0.19	BDL	4.01
F-3112	2.43	BDL	BDL	1.48	10.15	BDL	0.37	6.10	0.76	0.84	2.87	1.17	1.05	ND	0.36	0.95	0.92	0.46	0.42	3.09	BDL	BDL	BDL	1.79
F-3113	6.71	0.80	BDL	5.34	32.85	0.86	1.20	19.94	1.71	1.82	6.81	2.81	5.26	0.24	1.25	2.22	2.27	1.09	0.76	6.84	0.57	0.15	BDL	4.35
F-3114	14.98	2.54	0.16	13.34	75.71	2.25	2.80	49.92	5.39	5.31	18.52	9.07	9.73	0.64	3.45	6.17	6.17	3.53	2.13	20.75	1.12	0.65	0.16	12.00
F-3115	35.87	6.63	0.17	12.55	90.70	1.35	ND	82.61	14.55	4.09	17.51	10.09	17.22	0.58	5.80	7.95	7.53	4.12	3.63	30.51	2.29	0.98	0.11	25.26
F-3116	1.92	1.39	BDL	0.76	5.50	BDL	BDL	4.15	0.38	0.29	1.44	0.37	1.01	BDL	0.21	0.33	0.40	BDL	0.18	1.06	ND	ND	ND	0.91
F-3117	12.08	2.76	BDL	3.72	28.54	0.30	1.33	21.49	2.99	2.13	6.59	4.18	3.78	0.43	1.12	1.72	2.77	1.10	1.34	11.13	5.11	0.36	0.07	7.41
F-3118	1.86	BDL	BDL	0.60	4.39	BDL	BDL	3.89	0.60	0.23	1.21	0.34	0.50	BDL	0.29	0.24	0.22	0.10	0.21	1.15	BDL	BDL	BDL	0.85
F-3119	2.69	0.13	BDL	0.79	6.37	BDL	BDL	5.29	0.82	0.38	1.32	0.55	0.91	BDL	0.40	0.37	0.38	0.18	0.24	1.75	ND	BDL	BDL	1.15
F-3120	2.73	ND	BDL	0.75	6.40	BDL	BDL	5.33	0.85	0.41	1.17	0.52	0.50	BDL	0.30	0.29	ND	0.15	0.20	1.80	ND	BDL	BDL	1.30
F-3121	11.98	1.26	ND	5.69	40.76	0.71	4.36	31.80	4.57	2.04	9.31	4.66	4.83	0.29	2.34	3.46	2.52	1.42	1.51	13.10	ND	0.34	BDL	9.73
F-3122	8.37	12.83	ND	3.82	29.44	0.21	ND	23.75	3.66	1.98	5.92	3.39	4.26	1.23	1.32	ND	4.53	1.18	1.45	10.81	65.69	0.37	ND	7.72
F-3123	19.24	1.94	0.62	15.20	95.58	3.96	4.61	67.09	10.11	5.51	24.54	16.38	9.12	3.10	8.05	7.06	13.03	5.20	4.10	42.85	3.76	1.42	0.41	24.86
F-3124	15.24	1.37	0.24	12.75	72.33	2.65	3.00	47.87	4.94	5.68	17.91	8.82	7.88	0.87	4.09	5.65	5.48	3.04	2.35	22.36	21.38	0.50	0.16	12.41
F-3125	9.32	0.70	0.07	7.82	47.26	1.30	2.03	29.29	3.01	2.99	10.91	5.11	3.96	0.36	1.91	3.36	3.45	1.97	1.31	12.37	1.26	0.33	BDL	8.46
F-3126	14.09	1.24	0.14	10.15	62.80	1.74	2.48	39.25	3.93	4.27	13.13	5.98	5.97	0.41	2.72	4.47	4.18	2.87	1.62	14.24	0.66	0.54	0.22	8.14
F-3127	30.01	5.29	0.81	28.76	153.75	6.36	7.51	99.97	11.68	11.17	37.41	20.40	17.45	2.12	11.09	13.07	13.08	6.59	4.64	49.55	7.19	1.96	0.53	28.86
F-3128	0.24	ND	ND	BDL	2.10	BDL	ND	1.08	BDL	BDL	0.52	0.31	BDL	BDL	BDL	BDL	0.22	BDL	0.31	0.96	BDL	BDL	ND	0.66
F-3129	4.79	0.54	BDL	4.89	30.51	1.08	1.14	17.67	1.50	2.83	8.88	4.06	2.21	0.32	1.75	2.83	2.97	1.72	1.15	10.26	0.46	0.25	0.10	5.39
F-3130	3.58	BDL	BDL	1.51	12.98	BDL	BDL	7.25	1.06	0.54	2.28	1.19	1.18	ND	0.12	0.50	0.50	0.32	0.29	2.61	BDL	BDL	ND	1.24
F-3131	9.21	0.70	0.11	4.05	32.04	0.73	1.06	19.83	3.39	2.20	7.27	4.40	2.47	0.12	1.42	2.18	1.15	1.02	0.87	10.24	1.16	0.24	ND	5.85
F-3132	4.76	BDL	ND	1.67	17.15	BDL	BDL	8.25	1.31	0.66	2.46	1.70	1.04	ND	0.10	0.29	0.57	0.37	0.38	3.82	0.91	BDL	ND	1.93
F-3133	BDL	ND	BDL	BDL	1.77	BDL	BDL	ND	ND	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ND	1.04	ND	BDL	ND	0.65
F-3134	0.81	BDL	ND	BDL	3.46	BDL	BDL	2.25	0.27	BDL	0.37	0.33	0.39	ND	BDL	BDL	0.12	BDL	0.17	0.98	ND	BDL	BDL	0.62
F-3135	8.92	0.85	0.11	3.59	30.68	0.68	0.93	20.38	3.41	2.05	7.37	4.13	2.23	0.25	1.83	2.73	1.45	0.89	0.74	10.01	1.57	0.19	BDL	5.95
F-3165	1.69	0.22	BDL	1.02	7.66	0.19	BDL	5.22	0.56	0.48	2.17	0.95	0.67	0.13	0.53	0.65	0.53	0.18	0.37	2.95	3.17	BDL	BDL	2.00
F-3166	5.40	0.37	BDL	3.56	24.34	0.75	0.76	20.03	1.53	1.64	9.69	2.45	2.34	0.56	2.44	1.70	1.49	0.54	0.99	8.97	8.18	0.14	0.10	5.12
F-3167	2.11	0.13	BDL	1.73	12.91	0.35	BDL	9.43	0.94	0.79	4.49	1.67	0.94	0.27	1.06	0.96	0.93	0.29	0.60	5.14	4.02	0.14	BDL	3.07
F-3168	1.35	0.19	ND	1.02	9.12	0.21	ND	5.20	0.60	0.39	2.48	1.47	0.54	0.19	1.04	0.69	ND	0.20	0.47	4.41	ND	0.10	BDL	2.21
F-3169	4.44	0.44	ND	2.93	24.35	0.90	0.93	15.42	2.25	1.44	6.11	3.91	1.98	0.69	3.49	2.44	1.74	0.75	1.15	11.19	ND	0.35	0.14	6.23
F-3170	5.18	BDL	BDL	4.51	38.16	1.46	1.15	24.83	3.26	2.47	10.00	6.36	2.25	1.06	5.45	3.57	3.04	0.95	1.71	19.49	3.91	0.47	0.16	13.38
F-3171	2.47	0.60	BDL	1.60	13.20	0.41	0.41	8.30	1.22	0.74	3.26	1.90	0.94	0.29	1.42	1.05	0.79	0.32	0.64	5.69	0.31	0.12	BDL	3.76
F-3172	17.94	21.93	0.71	9.87	66.71	3.15	3.60	52.89	7.62	3.90	20.65	11.16	7.54	2.29	9.65	7.69	5.67	3.26	3.39	35.86	1.83	1.39	0.56	26.17
F-3173	66.91	68.19	3.11	38.84	248.78	12.50	14.23	217.66	33.26	16.55	81.84	44.99	39.05	8.91	38.42	31.59	20.79	11.61	14.11	141.55	137.23	4.05	2.30	89.16
F-3174	2.12	0.14	BDL	1.35	10.59	0.15	0.41	7.06	0.99	0.64	2.51	1.43	1.05	0.14	0.85	0.67	0.65	0.26	0.44	3.97	ND	0.09	BDL	2.76
F-3175	13.00	3.98	0.33	10.09	72.62	1.68	2.47	51.47	7.71	5.43	20.88	13.03	7.92	2.02	6.74	6.30	6.51	2.83	4.10	40.53	1.55	1.21	0.22	23.09
F-3176	8.35	20.35	0.30	4.29	32.00	1.10	1.37	24.14	3.50	1.67	7.38	5.37	4.38	1.04	4.39	3.09	2.94	1.26	1.55	15.00	0.86	0.34	0.15	8.85
F-3177	20.09	46.74	0.35	12.85	89.80	6.51	5.06	70.79	10.13	9.14	29.97	16.49	9.00	3.88	17.01	12.70	8.86	4.11	4.67	48.96	4.90	1.93	0.88	31.34
F-3178	31.43	50.48	0.67	13.47	90.82	4.70	6.42	81.11	12.80	5.76	24.66	13.76	15.62	3.10	13.15	10.37	7.75	4.83	4.48	41.46	1.92	1.26	0.72	32.86
F-3179	20.64	20.25	0.62	11.77	84.77	3.74	4.16	66.73	9.75	5.33	25.23	14.52	11.62	2.63	11.74	9.63	7.30	4.01	4.62	46.48	4.44	1.31	0.70	27.34
F-3180	6.85	8.39	0.21	3.39	25.09	0.71	1.15	19.43	2.95	1.15	6.28	3.19	2.87	0.62	1.81	2.07	1.61	0.90	1.07	9.47	0.35	0.21	0.16	6.62

Concentrations in ng/g wet wgt)																								
Sample ID	118	134	131	146	53+132+10:	141	137+176	163+138	158	129+178	187+182	183	128	185	174	177	202+171	157+200	172+197	180	193	191	199	170+190
F-3181	13.80	1.42	0.23	8.35	62.54	1.84	2.82	48.69	5.77	2.74	23.44	9.97	7.66	1.83	5.65	6.13	4.34	2.76	3.44	34.25	3.76	1.02	0.54	21.59
F-3182	2.59	1.14	BDL	1.27	10.39	0.18	0.48	7.56	1.09	0.41	2.17	1.23	1.15	0.18	0.76	0.59	0.70	0.33	0.48	3.78	1.85	BDL	BDL	2.50
F-3183	4.55	1.44	0.08	2.35	18.83	0.31	0.77	13.30	1.95	0.79	4.08	2.35	1.89	0.33	1.19	1.22	1.39	0.59	0.81	7.05	0.49	0.15	BDL	4.91
F-3184	0.61	0.41	BDL	0.32	1.88	BDL	BDL	1.89	0.26	BDL	0.59	0.30	0.26	BDL	0.28	0.21	0.28	0.11	0.21	0.98	0.32	BDL	BDL	0.70
F-3185	1.27	0.53	ND	0.66	5.30	BDL	BDL	4.00	0.56	0.25	1.12	0.49	0.52	BDL	0.19	0.27	0.31	0.13	0.20	1.48	BDL	0.11	BDL	1.10
F-3186	1.06	BDL	ND	0.54	4.44	BDL	ND	3.19	0.34	0.24	0.85	0.43	0.48	BDL	0.19	0.25	0.40	0.11	0.29	1.30	ND	ND	ND	0.87
F-3187	13.74	4.44	0.14	8.08	71.87	1.15	2.31	51.01	7.14	2.57	14.56	9.03	6.06	1.35	3.97	4.32	3.70	2.02	2.63	31.77	1.31	1.06	0.31	20.08
F-3188	7.19	1.28	0.33	3.12	23.69	0.73	1.23	19.90	3.08	1.01	5.52	2.86	3.64	0.52	2.47	2.02	1.33	0.98	1.03	9.18	1.15	0.20	0.13	5.48
F-3189	1.29	0.86	BDL	0.54	4.47	0.12	BDL	3.45	0.47	0.30	0.97	0.44	0.59	BDL	0.32	0.36	0.44	0.13	0.27	1.38	ND	ND	ND	0.98
F-3190	1.70	0.37	BDL	0.85	7.10	BDL	BDL	5.08	0.72	0.26	1.46	0.81	0.85	0.10	0.41	0.35	0.43	0.14	0.36	2.45	BDL	BDL	BDL	1.59
F-3191	0.50	0.21	ND	BDL	1.17	BDL	BDL	1.43	BDL	BDL	0.46	BDL	0.24	BDL	0.14	0.15	0.16	BDL	0.18	0.60	BDL	BDL	BDL	0.42
F-3192	1.22	0.42	ND	0.59	3.60	0.16	BDL	3.53	0.49	0.24	1.00	0.49	0.67	BDL	0.54	0.39	0.33	0.17	0.25	1.69	BDL	BDL	BDL	1.17
F-3193	0.52	BDL	ND	0.30	2.48	BDL	BDL	1.80	0.26	BDL	0.60	0.26	0.26	BDL	0.14	0.16	BDL	BDL	0.18	0.86	0.30	BDL	BDL	0.54
F-3194	1.74	BDL	BDL	0.99	3.63	0.29	0.54	5.19	0.72	0.61	2.12	1.20	0.67	0.18	0.98	0.90	0.84	0.26	0.45	3.77	1.51	0.09	BDL	2.57
F-3195	0.76	BDL	BDL	0.50	1.53	0.16	BDL	2.43	0.38	0.25	1.12	0.71	0.33	0.11	0.41	0.44	0.37	0.13	0.30	2.05	BDL	BDL	BDL	1.35
F-3196	3.53	0.28	0.11	1.89	16.22	0.30	0.65	11.44	1.62	0.97	3.82	2.36	1.37	0.31	1.32	1.02	1.80	0.51	0.79	7.11	3.21	0.18	BDL	4.88
F-3197	113.84	3.70	ND	69.25	551.36	45.57	10.47	368.25	57.38	7.08	130.70	83.28	18.65	10.09	39.24	24.01	ND	8.33	23.61	266.59	25.65	6.15	0.79	173.29
F-3198	19.60	14.03	0.44	13.34	103.53	4.16	4.79	75.35	13.64	5.98	25.80	19.15	8.78	3.24	14.82	12.12	10.00	4.70	5.30	61.71	5.92	1.94	0.85	44.08
F-3199	18.48	12.54	0.93	14.29	91.12	5.22	5.65	65.85	11.76	8.45	26.21	16.35	8.57	3.84	13.84	12.37	13.61	4.97	4.83	49.89	3.65	1.71	0.70	37.39
F-3200	27.57	15.02	0.53	18.78	138.42	6.89	7.85	106.16	20.88	10.12	39.85	27.63	14.86	6.36	20.40	20.23	23.68	10.43	9.36	92.80	8.12	3.19	1.51	57.76
F-3201	10.82	11.01	0.26	7.88	65.15	1.60	2.63	42.61	7.30	2.99	16.54	10.94	4.50	1.63	5.67	6.58	5.34	1.52	3.03	37.36	3.10	0.95	0.36	19.57
F-3202	28.57	75.41	1.63	14.91	106.25	4.99	5.46	86.80	17.15	6.90	27.00	16.99	14.25	3.73	12.96	13.12	19.14	8.91	5.71	52.57	5.78	1.94	0.80	39.27
F-3203	14.01	1.01	0.45	8.28	61.71	1.53	1.84	46.13	7.27	3.11	15.75	10.26	5.85	1.62	5.34	3.85	5.30	2.84	3.19	32.84	1.60	0.81	0.17	19.10
F-3204	1.29	0.21	BDL	0.74	3.56	0.28	BDL	3.95	0.52	0.42	1.62	0.82	0.51	0.12	0.79	0.60	0.70	0.25	0.37	2.35	1.47	BDL	BDL	1.73
F-3205	1.19	0.14	BDL	0.65	5.16	0.16	BDL	3.62	0.53	0.39	1.44	0.79	0.45	0.13	0.47	0.46	0.44	0.14	0.29	2.46	BDL	BDL	BDL	1.63
F-3206	1.18	BDL	BDL	0.78	6.67	BDL	BDL	4.54	0.61	0.38	1.62	0.90	0.53	0.10	0.27	0.45	0.75	0.18	0.35	2.62	1.21	0.10	BDL	1.86
F-3207	1.21	0.19	ND	0.68	5.67	0.18	BDL	3.97	0.56	0.41	1.36	0.75	0.50	0.13	0.42	0.42	0.76	0.17	0.30	2.28	1.88	BDL	BDL	1.50
F-3208	1.89	BDL	BDL	0.87	6.52	BDL	BDL	4.01	0.51	BDL	0.87	0.69	0.60	0.09	0.21	0.26	0.59	0.15	0.41	2.88	0.75	BDL	BDL	1.66
F-3209	0.75	ND	ND	0.37	2.78	BDL	BDL	2.04	0.30	BDL	0.56	0.30	0.27	BDL	0.12	0.16	0.25	BDL	0.18	0.83	ND	BDL	ND	0.57
F-3210	1.27	BDL	BDL	0.63	3.17	0.13	BDL	3.41	0.52	0.34	0.93	0.46	0.45	BDL	0.31	0.35	0.44	0.16	0.21	1.50	BDL	BDL	BDL	0.99
F-3211	0.56	BDL	BDL	BDL	BDL	BDL	BDL	1.48	0.26	BDL	0.56	0.22	0.29	BDL	0.16	0.19	0.18	BDL	0.14	0.84	0.74	BDL	BDL	0.52
F-3212	1.70	0.17	BDL	1.08	3.78	0.17	BDL	4.86	0.74	0.44	1.90	0.76	0.68	0.14	0.73	0.60	0.40	0.20	0.37	3.01	0.31	BDL	BDL	1.94
F-3213	1.75	BDL	BDL	0.88	6.23	BDL	BDL	4.76	0.72	0.28	1.31	0.76	0.73	0.08	0.28	0.26	0.36	0.11	0.27	2.13	1.42	BDL	ND	1.41
F-3214	2.43	0.17	BDL	1.14	8.28	BDL	0.38	6.48	0.97	0.39	1.76	1.04	0.99	0.11	0.56	0.45	0.50	0.19	0.36	2.83	1.95	BDL	BDL	1.93
F-3215	7.61	0.27	0.08	4.70	30.73	0.26	1.04	24.15	3.72	1.13	7.45	4.04	3.59	0.58	1.64	1.35	1.85	0.94	1.24	12.09	7.11	0.27	BDL	6.99
F-3216	4.02	0.27	BDL	4.11	21.83	0.68	0.83	12.33	1.11	1.56	5.88	2.50	1.41	0.19	0.92	1.72	1.53	0.82	0.68	6.03	0.66	0.13	BDL	3.88
F-3217	1.98	BDL	BDL	0.88	6.59	BDL	0.51	5.03	0.76	0.36	1.29	0.72	0.70	0.11	0.32	0.43	0.66	0.16	0.26	1.92	1.66	BDL	BDL	1.44
F-3218	12.67	0.95	0.19	6.39	50.56	1.00	2.09	36.69	5.94	2.12	11.20	7.31	6.77	1.46	4.03	4.55	3.07	2.24	2.58	24.73	1.96	0.62	0.29	12.67
F-3219	12.47	0.75	0.26	6.12	47.94	0.90	2.04	35.19	5.82	1.77	8.80	6.64	5.55	1.08	3.81	3.44	2.52	1.67	2.16	21.70	9.96	0.55	0.22	14.26
F-3220	27.39	1.55	ND	10.33	91.31	1.78	3.09	75.01	8.52	2.77	18.03	12.30	10.88	1.79	6.07	5.59	4.66	2.92	4.18	40.74	3.79	1.04	0.40	27.05
F-3221	16.98	1.55	0.48	7.86	57.07	1.40	2.48	44.78	7.09	2.73	13.41	7.47	6.32	1.31	4.83	5.05	3.51	2.69	2.21	22.90	1.65	0.69	0.28	15.80
F-3222	3.10	BDL	BDL	1.08	9.51	BDL	BDL	7.88	0.96	0.62	2.34	1.08	1.46	ND	0.45	0.41	0.55	0.32	ND	3.50	ND	0.10	BDL	2.09
F-3223	1.93	BDL	BDL	0.57	4.82	BDL	BDL	4.09	0.66	0.22	1.27	0.51	0.56	BDL	0.31	0.28	0.30	0.13	0.31	1.55	ND	BDL	BDL	1.21
F-3224	2.91	0.13	BDL	0.83	7.77	BDL	0.42	6.28	1.01	0.41	1.76	0.82	1.06	0.10	0.44	0.51	0.52	0.20	0.31	2.54	ND	BDL	BDL	1.75
F-3225	93.74	20.84	2.23	25.30	182.01	6.09	12.30	178.65	39.06	7.30	33.72	23.56	34.30	4.02	21.04	16.77	31.30	1.09	7.08	74.18	2.61	2.72	1.19	63.77
F-3226	16.85	11.55	0.74	8.04	60.79	2.34	3.20	49.24	8.97	3.41	18.65	10.34	8.78	1.80	8.62	6.89	4.65	3.07	3.11	34.35	1.80	1.42	0.58	25.18
F-3227	28.93	8.19	1.10	12.63	103.87	4.82	5.34	85.49	12.62	69.07	36.03	20.96	12.65	3.41	15.96	13.50	15.28	5.75	6.81	69.69	87.38	2.63	1.07	49.75
F-3228	1.66	0.16	BDL	0.56	3.37	BDL	BDL	3.65	0.58	0.22	1.19	0.46	0.62	0.09	0.35	0.38	0.30	0.13	0.26	1.79	BDL	BDL	BDL	1.31
F-3229	11.46	0.89	0.21	3.36	16.40	0.50	1.23	21.92	3.76	0.98	6.02	2.35	4.22	0.44	2.22	2.17	1.34	ND	1.02	8.91	0.72	0.34	0.08	5.54
F-3230	31.77	1.06	1.33	11.41	76.33	2.05	5.20	65.44	12.14	2.90	15.32	7.12	11.07	1.32	5.57	5.92	4.28	1.06	2.04	20.94	2.34	0.93	0.38	16.51
F-3231	31.43	9.28	1.26	9.58	63.52	2.24	4.10	59.16	9.83	5.33	12.26	5.78	12.40	0.97	4.44	5.03	3.41	3.36	1.81	14.59	70.95	0.39	0.28	12.04
F-3232	1.97	0.14	BDL	0.68	5.39	BDL	0.38	4.26	0.66	0.34	1.08	0.50	0.75	BDL	0.30	0.30	0.29	0.15	0.28	1.63	BDL	BDL	BDL	1.09
F-3233	6.01	0.44	ND	1.18	9.67	BDL	0.59	10.44	1.53	0.74	0.76	0.46	2.17	BDL	0.62	0.32	ND	0.31	0.13	1.48	1.20	BDL	ND	1.40
F-3234	1.27	BDL	BDL	0.36	1.98	BDL	BDL	2.46	0.41	BDL	0.62	0.31	0.38	BDL	0.22	0.25	0.12	BDL	0.19	1.01	BDL	BDL	BDL	0.76

Concentrations in ng/g wet wgt)																							
																	Organochlorine Pesticides						
													SURROGATE RECOVERIES										
Sample ID	198	201	203+196	189	208+195	207	194	205	206	209		Total PCBs		14	65	166		alpha BHC	beta BHC	lindane	delta BHC	aldrin	dieldrin	onna chlord
Detection Limits	**0.08**	**0.17**	**0.23**	**0.11**	**0.14**	**0.09**	**0.27**	**0.12**	**0.18**	**0.08**		**24.19**						**0.26**	**2.16**	**0.23**	**0.60**	**1.58**	**0.14**	**0.25**
F-2836	0.56	13.17	22.64	1.33	10.51	0.74	10.01	0.48	7.14	0.43		878.01		105	82	98		3.51	12.85	BDL	BDL	BDL	7.72	6.30
F-2837	17.63	0.21	5.13	7.01	0.24	4.07	BDL	2.79	BDL	2.70		873.23		109	80	99		0.69	5.58	0.31	0.99	BDL	11.74	8.80
F-2838	18.10	0.40	7.10	10.97	0.32	6.26	BDL	5.13	0.32	5.22		792.87		115	86	98		1.00	7.50	0.64	1.21	BDL	15.61	10.72
F-2840	0.67	13.17	15.27	0.69	9.09	0.48	6.48	0.42	6.27	0.83		660.32		93	91	95		4.97	ND	0.93	ND	5.25	19.43	9.92
F-2841	0.80	15.93	16.85	0.70	10.33	0.49	7.10	0.52	6.82	1.14		730.33		115	95	92		8.96	73.54	2.44	0.76	5.92	85.50	21.38
F-2842	0.69	12.31	14.38	0.22	8.30	0.31	6.05	0.35	5.27	0.56		585.57		121	93	105		0.50	5.66	1.01	BDL	1.91	28.32	8.66
F-2843	0.29	5.96	6.95	0.29	4.06	0.20	3.12	0.21	2.74	0.33		183.46		90	86	88		1.44	15.05	0.54	BDL	5.14	7.14	3.27
F2844	7.19	5.88	10.79	4.57	3.90	2.70	3.42	2.19	2.54	1.82		481.51		112	92	96		BDL	2.33	0.46	0.74	BDL	4.40	7.14
F-2845	32.12	0.81	15.13	18.64	0.35	10.88	0.28	8.44	0.31	5.99		1098.56		118	75	92		0.65	7.23	0.98	BDL	1.59	20.78	42.93
F-2846	0.28	6.65	8.02	0.53	4.82	0.31	3.17	0.25	4.08	0.63		774.54		111	96	97		5.46	38.86	1.55	1.65	5.11	17.12	30.72
F-2847	0.42	7.96	10.60	0.39	6.12	0.30	4.86	0.29	3.75	0.54		309.44		93	88	90		2.17	16.15	0.64	2.34	5.51	5.30	8.80
F-2848	0.08	2.35	2.60	BDL	1.71	0.14	1.07	BDL	1.58	0.22		145.02		120	97	103		BDL	2.93	BDL	0.78	BDL	1.16	1.20
F2849	ND	1.82	2.57	0.29	1.47	0.14	0.91	BDL	1.21	0.09		130.59		97	81	82		0.35	2.35	BDL	0.68	BDL	1.17	0.59
F2850	ND	0.44	0.53	BDL	0.63	BDL	BDL	BDL	0.60	BDL		25.93		92	73	70		BDL	7.18	BDL	BDL	BDL	3.65	BDL
F-2851	0.83	0.29	0.37	0.32	BDL	0.42	BDL	0.24	BDL	0.17		37.78		88	76	78		BDL	3.38	BDL	0.62	BDL	4.09	BDL
F-2853	0.41	8.70	8.67	2.03	6.19	0.67	3.47	0.33	4.61	0.33		662.38		100	84	94		2.53	11.12	0.30	0.92	BDL	6.34	2.76
F-2854	13.69	0.30	5.92	6.97	0.42	4.32	0.38	3.21	0.18	4.46		519.40		90	40	66		0.99	5.62	BDL	0.95	BDL	0.69	0.33
F-2855	7.83	5.42	10.16	5.01	5.13	4.60	2.66	2.22	4.76	4.70		783.62		123	87	102		2.33	3.95	0.66	1.23	BDL	8.92	3.25
F-2856	0.33	6.38	7.04	2.07	4.48	0.56	2.48	0.37	3.80	0.35		540.48		106	82	90		5.11	13.46	0.67	1.24	BDL	8.75	4.38
F-2857	0.21	5.40	5.31	0.86	3.92	0.49	2.12	0.15	3.31	0.25		451.33		130	90	101		0.99	4.73	BDL	0.77	BDL	2.33	1.13
F-2858	0.78	15.06	16.39	1.37	23.20	3.48	5.90	0.50	25.77	3.46		475.07		82	70	78		1.41	8.11	BDL	BDL	BDL	6.53	1.58
F-2859	0.58	11.40	16.12	1.27	4.96	0.47	5.66	0.34	4.37	0.83		2009.06		115	99	101		9.57	134.00	1.51	0.89	4.88	22.66	16.07
F-2860	0.35	7.06	8.10	0.22	2.26	0.19	3.23	0.15	2.99	0.45		995.85		124	91	100		1.43	ND	0.69	1.33	BDL	17.52	10.94
F-2861	0.29	6.11	7.40	0.58	2.56	0.26	3.01	0.22	3.34	0.63		765.83		95	87	89		5.32	48.87	0.35	BDL	5.45	10.94	9.72
F-2862	28.44	0.84	15.44	20.70	0.34	8.79	0.35	7.07	0.20	3.95		818.96		117	91	111		0.84	6.54	0.74	0.74	BDL	44.82	10.40
F-2863	0.31	5.73	6.26	0.27	5.14	0.25	2.60	0.19	4.32	0.65		403.54		109	82	89		0.37	ND	BDL	1.09	BDL	4.73	3.22
F-2864	0.10	2.34	2.61	BDL	2.29	0.12	0.93	0.14	1.77	0.30		139.14		94	85	103		BDL	2.45	BDL	1.03	BDL	1.11	0.66
F-2865	2.56	6.79	7.37	1.04	5.80	0.66	25.87	2.67	6.15	1.12		338.62		89	66	92		BDL	BDL	BDL	0.99	BDL	2.12	1.01
F-2866	0.29	6.26	7.49	0.34	5.69	0.28	2.93	0.15	4.36	0.67		451.59		94	80	89		0.55	BDL	BDL	0.81	BDL	2.23	1.98
F-2936	ND	3.79	3.97	0.31	4.14	0.42	1.37	0.21	3.59	0.71		231.83		105	95	85		2.02	13.24	0.43	BDL	BDL	40.19	11.26
F-2937	0.52	9.76	13.25	0.59	8.08	0.53	5.67	0.36	6.72	2.32		865.45		172	120	93		0.84	18.13	1.70	0.80	BDL	114.91	73.84
F-2938	0.19	5.91	6.84	0.20	3.14	0.14	2.44	0.14	1.20	0.14		547.78		127	87	90		3.97	32.20	0.60	1.51	BDL	21.50	9.20
F-2939	0.53	10.53	13.54	0.77	8.48	0.67	6.67	0.32	7.57	1.14		486.42		63	40	44		6.01	43.35	1.19	1.02	BDL	120.69	84.82
F-2940	0.39	8.61	10.71	0.41	9.00	0.97	3.93	0.21	8.93	4.37		473.75		125	83	89		0.67	11.54	0.64	1.17	BDL	34.66	27.71
F-2945	0.21	4.36	6.24	0.42	3.00	0.23	2.80	BDL	2.42	0.20		387.89		105	74	80		7.71	57.38	1.17	1.04	BDL	37.19	43.14
F-2946	0.94	19.28	24.48	0.99	15.24	1.12	10.78	0.61	13.03	4.62		891.82		124	98	97		0.64	8.91	0.83	0.84	BDL	42.77	49.32
F-2947	0.97	0.21	0.27	0.97	0.97	0.97	BDL	0.97	0.97	0.97		51.25		84	74	76		BDL	BDL	ND	ND	BDL	3.83	0.75
F-2948	BDL	0.49	0.64	BDL	0.29	BDL	BDL	BDL	0.23	BDL		50.12		6	77	82		0.94	6.84	0.36	0.96	BDL	11.99	1.13
F-2949	0.31	3.83	4.47	0.33	2.32	0.31	1.81	0.22	1.66	0.28		296.57		90	72	75		BDL	BDL	BDL	ND	BDL	4.63	0.30
F-2950	BDL	1.03	1.65	BDL	0.71	BDL	0.55	BDL	0.58	BDL		99.40		241	65	176		1.27	7.30	BDL	1.03	BDL	6.81	2.59
F-2951	BDL	0.83	1.14	BDL	0.54	BDL	0.41	BDL	0.33	BDL		95.98		103	75	80		2.37	15.01	0.32	0.87	BDL	33.67	10.95
F-2952	0.15	4.26	8.44	0.47	3.02	0.32	2.95	0.35	4.09	0.24		297.95		110	73	86		0.43	3.79	BDL	0.86	BDL	6.63	2.11
F-2953	4.26	0.62	0.82	BDL	0.37	BDL	0.30	BDL	0.33	0.09		75.11		90	73	77		BDL	BDL	BDL	ND	BDL	2.54	1.09
F-2954	BDL	0.61	0.66	BDL	0.33	BDL	0.27	BDL	0.34	BDL		68.90		84	73	74		0.59	2.98	0.29	ND	BDL	10.04	2.22
F-2955	1.01	20.99	29.94	1.27	16.89	0.94	12.25	0.52	12.23	1.33		866.57		77	65	88		0.31	2.49	0.43	BDL	BDL	15.27	2.64
F-2956	0.50	9.29	11.44	0.48	5.52	0.67	4.52	0.20	7.28	1.11		365.72		90	70	79		0.41	5.64	0.35	BDL	BDL	23.90	4.27
F-2957	BDL	0.58	0.70	BDL	0.38	BDL	0.29	BDL	0.31	BDL		31.05		87	78	80		BDL	2.31	BDL	BDL	BDL	4.62	0.55
F-2958	BDL	0.40	0.50	BDL	0.29	BDL	BDL	1.02	0.18	BDL		36.50		85	64	71		0.37	4.08	BDL	BDL	BDL	5.26	6.65
F-2959	BDL	0.68	0.84	BDL	0.48	BDL	0.31	BDL	0.36	BDL		45.80		99	82	84		1.79	13.09	BDL	BDL	BDL	9.15	14.28
F-2960	BDL	2.04	2.52	BDL	1.17	0.11	0.80	BDL	0.91	0.35		131.08		87	87	88		BDL	BDL	BDL	0.76	BDL	2.57	0.63
F-2961	0.12	3.08	3.46	0.14	1.66	0.15	1.18	BDL	1.28	0.43		261.44		88	81	76		0.75	2.36	0.59	0.96	BDL	9.71	2.82
F-2962	BDL	2.05	2.28	BDL	0.98	BDL	0.54	0.20	0.67	0.10		159.90		80	66	68		0.37	BDL	7.75	5.54	BDL	2.61	0.92
F-2963	BDL	2.42	2.35	BDL	0.63	BDL	0.74	BDL	0.78	0.10		171.60		55	48	51		1.16	8.54	0.26	BDL	BDL	6.23	1.61
F-2964	0.12	3.08	3.65	0.14	1.86	0.10	1.40	BDL	0.93	0.32		271.72		94	84	78		0.50	3.41	0.24	0.86	BDL	8.01	3.40
F-2965	1.00	31.31	45.31	0.93	20.62	1.13	19.26	0.76	6.28	0.67		1303.87		120	85	119		6.08	44.50	0.64	BDL	BDL	35.26	13.87
F-2966	0.17	3.34	5.23	0.77	2.64	0.21	1.78	0.19	1.96	0.25		406.04		83	66	76		2.75	15.23	0.74	0.79	BDL	10.75	4.96
F-2967	0.62	5.93	7.55	0.35	4.38	0.30	3.30	BDL	1.83	0.27		361.16		98	85	81		6.14	29.72	0.85	BDL	BDL	23.62	14.42

Concentrations in ng/g wet wgt)																							
													SURROGATE RECOVERIES				Organochlorine Pesticides						
Sample ID	198	201	203+196	189	208+195	207	194	205	206	209		Total PCBs		14	65	166		alpha BHC	beta BHC	lindane	delta BHC	aldrin	dieldrin	oxna chlord.
F-2968	0.45	11.29	15.34	0.69	7.24	0.45	6.46	0.15	2.72	0.34		550.50		6	77	92		2.42	15.14	0.52	1.75	BDL	11.84	8.18
F-2969	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		0.00		0	0	0		1.17	8.29	BDL	BDL	BDL	3.02	2.75
F-2970	0.52	13.28	13.34	0.45	8.55	0.60	4.33	0.24	4.79	0.60		518.30		94	77	91		2.51	14.76	1.35	1.10	BDL	16.75	5.87
F-2971	2.30	34.44	49.56	2.26	28.93	1.60	20.81	0.84	18.20	2.00		1511.78		93	66	106		2.81	20.77	1.57	1.88	BDL	50.95	8.55
F-2972	3.02	55.15	65.71	1.85	38.20	3.83	24.53	0.45	51.59	15.40		1890.69		100	71	123		0.42	2.18	1.33	0.72	BDL	53.92	7.03
F-2973	6.83	102.49	128.24	6.24	45.83	6.68	57.09	2.24	97.23	10.88		3447.78		140	91	154		1.60	9.97	3.11	0.91	BDL	180.07	18.51
F-2974	1.67	26.71	35.40	1.10	27.44	2.06	11.48	0.27	26.74	9.03		1606.29		114	72	103		0.48	2.31	1.89	0.69	BDL	88.36	6.65
F-2975	0.13	3.01	3.10	0.21	3.59	0.35	0.95	ND	3.42	1.57		169.02		64	67	70		BDL	BDL	BDL	0.87	BDL	3.28	0.99
F-2976	1.03	19.42	22.58	0.62	27.34	2.94	7.12	0.42	35.80	14.66		709.30		84	73	92		BDL	BDL	BDL	0.82	BDL	4.55	1.40
F-2977	0.18	4.25	4.32	0.67	3.48	0.34	1.68	BDL	2.89	0.41		253.45		70	61	72		BDL	BDL	BDL	0.61	BDL	0.79	1.39
F-2978	0.58	9.66	12.33	0.67	11.94	1.07	4.16	0.19	11.62	2.13		583.73		83	65	73		1.59	12.28	0.46	BDL	BDL	142.79	17.58
F-2979	0.23	3.21	3.63	0.27	4.78	0.59	1.12	BDL	5.38	3.23		166.18		93	81	81		BDL	BDL	BDL	0.77	BDL	2.18	0.58
F-2980	0.17	4.12	4.18	0.73	3.04	0.27	1.54	BDL	2.47	0.35		343.61		64	59	66		0.52	4.19	0.33	0.94	BDL	3.33	1.38
F-2981	0.46	9.46	10.81	1.16	8.73	0.94	3.97	0.20	9.33	1.44		650.69		72	65	78		1.07	8.06	0.58	0.99	BDL	4.33	2.36
F-2982	1.76	46.29	57.08	2.23	0.39	4.54	22.04	1.61	50.51	7.81		1631.49		83	80	112		2.07	18.18	BDL	BDL	BDL	19.70	6.65
F-2983	0.48	9.78	11.42	0.86	13.63	1.57	4.15	0.17	15.30	2.87		313.78		72	62	71		0.33	3.99	BDL	1.02	BDL	2.59	1.07
F-2984	0.15	4.38	4.52	0.65	3.49	0.45	1.40	0.14	3.51	0.31		594.42		90	80	85		0.54	BDL	BDL	BDL	BDL	1.97	0.48
F-2985	0.98	17.88	21.52	1.15	23.55	2.97	6.62	0.34	29.27	2.92		858.92		127	89	105		1.66	11.65	0.67	BDL	BDL	13.80	5.03
F-2986	0.91	16.82	19.75	1.17	24.61	2.96	7.37	0.45	31.95	3.63		845.87		122	82	95		2.32	13.11	1.14	BDL	BDL	21.87	6.75
F-2987	0.92	17.89	20.58	1.09	30.40	4.33	5.82	0.31	42.04	5.12		695.89		95	79	92		1.32	10.26	0.45	BDL	BDL	7.73	2.35
F-2988	0.64	11.25	13.40	0.63	17.96	2.44	3.84	0.47	23.44	3.10		500.03		99	87	103		0.95	6.65	0.23	BDL	BDL	5.70	1.74
F-2989	0.42	8.12	10.49	0.47	11.11	1.69	3.02	0.15	13.82	1.57		357.22		99	78	83		0.56	3.80	0.33	BDL	BDL	6.32	2.06
F-2990	0.32	7.13	7.58	1.02	7.28	0.88	2.86	0.19	7.04	0.74		342.58		99	91	93		0.88	4.95	BDL	BDL	BDL	3.76	0.88
F-2991	0.28	6.16	6.07	0.99	5.47	0.58	2.11	0.17	4.58	0.47		385.45		94	91	95		1.28	11.85	0.28	BDL	BDL	4.13	1.67
F-2992	0.15	4.30	4.67	0.34	3.06	0.20	1.51	BDL	1.93	0.27		303.81		88	74	83		0.61	ND	BDL	BDL	BDL	2.13	0.67
F-2993	4.04	BDL	2.98	3.29	BDL	2.11	BDL	1.16	BDL	1.70		227.25		24	0	36		0.67	BDL	BDL	BDL	4.12	29.62	1.27
F-2994	0.23	4.80	5.61	0.83	4.77	0.50	1.79	BDL	4.33	0.45		404.64		58	54	59		1.65	9.00	0.44	BDL	BDL	5.60	2.04
F-2995	7.47	0.20	4.84	5.66	0.38	4.03	BDL	2.19	BDL	3.63		457.37		98	80	103		0.66	4.21	0.49	0.92	BDL	3.62	1.78
F-2996	11.46	0.45	9.93	10.34	0.57	11.35	0.91	3.65	BDL	11.05		516.99		101	85	94		0.47	3.89	0.36	0.89	BDL	4.81	1.81
F-2998	0.13	3.42	3.75	BDL	2.12	0.16	1.22	BDL	1.60	0.21		267.51		97	80	90		1.32	14.56	0.32	BDL	BDL	10.47	3.64
F-2999	0.12	3.38	4.33	0.13	2.00	0.16	1.36	BDL	1.28	0.15		275.00		112	84	90		1.17	17.35	0.24	BDL	BDL	10.40	2.52
F-3000	BDL	1.81	2.25	BDL	0.58	BDL	0.74	BDL	0.78	0.12		112.33		79	74	79		0.84	8.97	BDL	BDL	BDL	5.96	1.19
F-3001	0.85	18.14	20.11	0.32	26.51	2.79	5.29	0.26	28.51	4.46		576.18		116	91	99		2.36	13.01	0.97	1.29	BDL	48.01	2.89
F-3002	0.25	5.45	6.08	0.16	3.33	0.28	2.41	0.15	2.13	0.23		182.77		102	79	87		0.35	BDL	BDL	BDL	BDL	2.19	0.45
F-3003	0.18	4.98	4.95	0.22	3.48	0.33	1.93	BDL	2.84	0.42		251.66		82	72	80		0.52	3.08	BDL	BDL	BDL	2.19	0.63
F-3004	0.32	7.92	8.07	0.98	7.97	0.68	3.10	0.21	6.69	0.99		559.53		103	81	96		2.26	25.50	0.62	BDL	BDL	8.99	3.68
F-3005	0.29	7.45	8.47	0.95	6.26	1.09	3.46	0.22	4.38	0.50		496.51		88	79	86		0.99	16.88	0.29	BDL	BDL	3.89	1.52
F-3006	1.71	29.93	34.65	1.16	47.38	4.90	11.98	0.75	58.41	9.96		1280.38		111	84	106		3.81	21.31	0.58	1.66	BDL	19.92	5.90
F-3007	0.09	1.52	1.62	BDL	1.39	0.12	0.62	BDL	1.23	0.23		85.64		73	62	66		0.29	BDL	BDL	BDL	BDL	BDL	BDL
F-3008	0.68	13.52	15.63	1.31	13.90	1.24	5.92	0.37	13.10	1.97		863.89		113	88	99		1.60	23.41	0.43	BDL	BDL	8.22	3.65
F-3009	13.05	0.35	7.97	7.89	0.57	5.22	0.38	2.75	0.19	3.83		500.46		104	88	101		0.47	BDL	BDL	1.00	BDL	2.82	1.15
F-3010	7.42	0.38	9.43	9.39	BDL	6.69	0.56	3.47	BDL	5.65		360.12		11	0	26		0.37	2.57	BDL	BDL	4.20	35.20	1.11
F-3011	7.60	0.21	5.09	5.25	0.33	4.30	0.32	2.12	BDL	3.59		302.68		102	81	99		0.93	BDL	BDL	0.69	BDL	1.77	1.21
F-3012	0.40	8.28	8.16	1.76	8.77	1.15	3.32	0.39	8.69	0.92		417.26		101	82	88		1.69	8.89	BDL	BDL	BDL	3.90	1.40
F-3013	0.24	5.54	5.75	0.95	4.79	0.66	2.13	0.18	4.32	0.43		277.51		111	90	96		0.82	5.95	BDL	BDL	BDL	2.39	0.74
F-3014	0.37	10.04	10.16	1.63	6.71	0.83	3.90	0.28	5.51	0.37		643.26		104	89	105		1.42	7.96	BDL	BDL	BDL	2.41	1.74
F-3015	0.40	8.79	8.82	1.31	9.76	1.30	3.37	0.35	9.14	0.98		356.15		93	81	88		1.36	7.47	BDL	BDL	BDL	3.28	1.24
F-3016	0.35	6.29	6.73	0.21	8.51	0.97	1.66	BDL	10.58	0.92		192.66		91	79	81		BDL	BDL	BDL	BDL	BDL	2.65	0.51
F-3017	0.80	13.33	15.71	0.54	14.46	1.44	4.91	0.30	15.63	1.19		395.87		116	88	99		0.57	2.86	0.27	BDL	BDL	7.30	1.49
F-3018	2.85	46.43	56.48	2.20	44.45	3.54	18.12	1.01	45.52	3.08		1993.81		167	91	123		4.64	42.51	3.32	BDL	BDL	88.00	17.51
F-3019	0.44	9.31	10.10	0.44	4.60	0.37	2.94	0.29	4.01	0.15		390.45		116	87	93		1.87	18.66	2.90	0.68	BDL	32.15	8.41
F-3020	BDL	0.86	1.03	BDL	0.70	0.10	0.41	BDL	0.58	BDL		47.06		133	84	90		0.45	5.73	BDL	0.84	BDL	17.67	9.57
F-3021	BDL	0.75	0.95	0.14	0.73	BDL	0.40	BDL	0.46	BDL		48.70		113	86	84		0.45	3.28	0.30	1.11	BDL	15.07	7.80
F-3022	0.40	6.26	8.75	0.43	2.17	0.52	3.35	0.25	5.31	0.40		301.14		114	91	97		0.28	4.31	0.43	0.98	BDL	14.28	8.96
F-3025	19.36	0.45	12.79	11.75	0.36	9.81	0.90	3.41	BDL	10.81		1017.37		95	86	102		BDL	BDL	BDL	0.80	BDL	0.39	0.41
F-3026	7.61	BDL	3.12	3.95	BDL	1.16	ND	1.38	BDL	1.43		441.31		57	38	49		0.59	5.92	0.31	BDL	BDL	13.76	8.25
F-3027	6.99	BDL	2.88	3.77	BDL	1.07	BDL	1.37	BDL	1.49		382.47		63	43	48		1.21	8.59	0.59	1.21	BDL	19.35	12.65
F-3028	47.69	1.58	26.11	33.78	0.61	17.77	0.70	14.04	0.43	10.99		1256.05		109	80	107		1.42	4.73	0.91	0.72	2.34	58.26	16.47
F-3029	8.06	ND	3.41	4.34	BDL	1.94	ND	1.87	BDL	1.99		354.38		111	89	98		0.35	3.77	0.23	0.76	BDL	6.77	10.63
F-3030	1.99	34.75	36.77	0.36	41.07	2.81	9.22	0.34	52.80	6.25		1261.79		116	85	113		0.70	6.91	1.43	1.23	BDL	54.48	6.84

Concentrations in ng/g wet wgt)																							
																	Organochlorine Pesticides						
													SURROGATE RECOVERIES										
Sample ID	198	201	203+196	189	208+195	207	194	205	206	209		Total PCBs		14	65	166		alpha BHC	beta BHC	lindane	delta BHC	aldrin	dieldrin	oma chlord.
F-3031	1.67	30.17	33.78	0.36	38.77	2.76	10.90	0.50	55.76	7.79		850.06		91	73	92		0.50	2.88	0.26	BDL	2.65	8.42	1.33
F-3032	75.50	2.38	41.25	40.18	0.78	26.94	1.54	21.23	0.85	29.37		2308.25		147	92	114		1.93	8.76	1.81	0.97	2.28	68.84	47.99
F-3033	7.30	0.18	4.55	4.70	0.45	3.66	BDL	1.57	BDL	2.22		377.41		95	81	95		0.38	11.98	0.43	0.96	BDL	2.91	1.65
F-3034	68.25	1.78	31.27	43.87	0.68	17.86	0.68	15.07	0.24	8.47		1933.41		136	88	124		1.16	6.65	1.14	BDL	2.15	95.48	19.20
F3035	10.48	0.42	8.87	11.39	BDL	4.04	BDL	3.22	0.45	2.35		769.70		192	93	104		1.19	8.74	0.35	0.76	1.65	56.60	43.12
F-3036	0.09	1.91	2.43	0.14	1.51	0.14	1.00	BDL	1.18	0.16		119.20		98	88	94		0.45	3.48	0.37	BDL	BDL	3.27	2.39
F-3037	BDL	0.55	0.67	ND	ND	BDL	BDL	ND	0.29	BDL		53.16		67	48	63		BDL	BDL	0.55	BDL	BDL	1.73	1.23
F-3038	0.16	4.22	5.38	0.20	3.17	0.23	2.31	0.15	2.27	0.28		248.74		98	72	85		0.95	7.71	0.59	BDL	BDL	6.35	3.70
F-3039	BDL	1.93	2.41	BDL	1.43	BDL	1.00	BDL	1.12	0.16		149.11		UQ	80	112		0.36	5.47	0.71	BDL	BDL	3.24	1.16
F-3040	0.52	8.75	10.30	1.48	5.80	0.37	3.86	0.32	4.71	0.57		946.12		94	126	97		BDL	2.77	1.70	BDL	BDL	19.27	20.33
F-3041	BDL	0.18	0.25	BDL	ND	BDL	BDL	ND	BDL	0.10		6.24		77	74	78		BDL	ND	ND	BDL	BDL	0.71	0.34
F-3042	BDL	0.40	0.57	BDL	0.30	BDL	BDL	1.07	0.30	0.16		32.54		92	77	82		0.31	ND	BDL	BDL	BDL	8.70	0.57
F-3043	BDL	0.38	0.38	BDL	ND	ND	BDL	ND	BDL	BDL		23.14		124	42	83		BDL	2.90	BDL	1.28	1.81	7.92	4.15
F-3044	BDL	0.84	0.96	BDL	0.60	BDL	0.38	ND	0.48	BDL		61.34		111	78	90		ND	5.23	BDL	BDL	BDL	6.07	12.77
F-3045	BDL	0.50	0.66	BDL	0.35	BDL	0.27	ND	0.38	0.08		15.37		112	79	93		BDL	BDL	BDL	BDL	BDL	1.85	2.40
F-3046	0.11	2.04	2.55	0.20	1.64	0.12	1.02	ND	0.99	0.14		218.01		120	87	89		4.63	42.49	0.33	BDL	BDL	33.63	58.82
F-3047	0.10	2.23	2.76	0.18	1.57	0.12	1.18	BDL	1.08	0.17		159.19		115	86	93		1.94	17.28	BDL	BDL	BDL	17.18	20.01
F-3048	BDL	1.62	2.01	0.11	1.30	BDL	0.90	BDL	0.81	0.13		119.26		102	77	81		2.17	15.39	ND	BDL	BDL	10.48	15.69
F-3049	0.61	13.08	16.13	1.92	9.85	0.62	7.23	0.50	6.20	0.63		1052.05		135	89	82		0.45	5.73	0.39	BDL	BDL	40.04	70.33
F-3050	0.31	6.69	8.01	1.08	5.11	0.29	3.58	0.25	3.32	0.34		576.25		99	70	68		0.67	9.70	0.24	BDL	BDL	23.89	52.25
F-3051	0.24	5.54	5.58	0.72	2.64	0.48	1.96	0.27	3.99	0.69		385.52		88	79	85		0.54	BDL	0.29	BDL	BDL	1.96	0.47
F-3052	1.48	31.80	33.36	3.11	28.85	2.76	13.75	1.10	24.07	4.50		1329.98		94	91	109		0.40	BDL	0.53	BDL	BDL	6.05	2.07
F-3053	1.31	27.02	28.82	1.20	13.80	2.09	12.03	1.01	20.65	3.00		1033.36		101	75	90		0.51	2.45	0.34	BDL	BDL	5.36	3.67
F-3054	0.17	4.42	4.32	1.68	0.99	0.40	1.78	0.19	3.00	0.47		228.82		81	62	66		0.35	BDL	0.54	5.48	BDL	0.40	0.37
F-3055	0.33	7.26	7.62	1.27	2.13	1.01	2.97	0.49	8.53	1.63		281.94		68	55	62		BDL	BDL	BDL	BDL	BDL	0.36	0.51
F-3058	0.73	14.62	15.70	0.82	3.72	1.07	5.76	1.43	10.15	1.31		1192.71		68	58	76		2.71	2.66	0.49	BDL	BDL	6.09	2.81
F-3059	1.10	24.04	25.49	0.74	24.72	2.72	8.74	0.58	25.60	12.46		1117.05		72	UQ	63		1.33	BDL	0.49	0.62	2.54	62.59	5.07
F-3060	0.90	17.45	17.92	1.01	3.92	1.73	6.39	1.21	16.44	2.45		910.79		72	62	77		1.53	BDL	0.33	BDL	BDL	6.40	1.82
F-3061	ND	2.75	3.20	0.49	ND	0.20	1.20	BDL	1.76	0.29		307.88		86	73	79		0.80	7.64	0.25	BDL	BDL	4.18	4.34
F-3062	0.16	3.32	4.08	0.39	1.30	0.16	1.71	0.19	1.74	0.35		353.17		74	43	72		0.87	BDL	0.43	BDL	1.87	8.41	6.33
F-3063	BDL	1.84	2.22	0.46	ND	0.11	0.84	0.14	1.12	0.25		199.27		79	64	68		0.28	BDL	0.46	BDL	BDL	2.62	3.07
F-3064	0.13	2.70	3.23	0.41	ND	0.16	1.29	0.15	1.59	0.25		317.83		92	73	87		0.36	BDL	BDL	BDL	BDL	4.98	5.07
F-3065	0.27	5.64	5.10	0.59	3.77	0.83	1.70	0.16	7.97	1.43		205.51		90	74	80		0.54	BDL	0.32	BDL	BDL	3.43	0.99
F-3066	0.67	14.19	15.21	3.80	7.25	0.79	5.81	0.91	9.27	0.83		1037.97		109	94	107		0.85	BDL	0.55	BDL	BDL	7.61	5.17
F-3067	0.26	5.30	5.59	2.10	1.59	0.38	2.16	0.32	3.49	0.43		391.35		90	90	98		0.44	2.86	BDL	BDL	BDL	2.71	1.01
F-3068	0.36	9.37	10.29	0.45	6.02	0.59	3.55	0.32	5.04	1.69		666.55		100	UQ	61		2.43	BDL	0.40	BDL	3.74	47.78	2.87
F-3069	0.79	16.68	16.78	6.02	16.00	1.74	6.31	1.26	14.86	2.14		899.28		95	106	118		0.40	BDL	0.51	BDL	BDL	7.44	0.99
F3070	0.54	9.79	9.89	2.64	2.51	0.85	3.70	0.55	7.28	1.06		496.03		74	46	65		3.16	2.83	0.85	BDL	BDL	6.74	1.59
F-3071	0.15	4.58	4.64	1.44	2.03	0.68	1.83	0.27	2.31	0.20		400.16		82	69	78		2.09	2.65	1.23	BDL	BDL	9.63	1.08
F-3072	0.39	9.07	9.14	1.48	ND	1.11	2.92	0.34	9.67	1.43		504.76		102	82	92		0.78	6.37	0.41	BDL	BDL	4.90	2.71
F-3073	0.31	7.28	6.98	0.37	2.14	0.50	2.67	0.41	4.08	0.40		472.76		80	57	70		BDL	BDL	0.39	0.69	ND	1.93	1.43
F-3074	0.30	6.60	6.59	5.19	1.84	0.61	16.44	2.55	4.50	0.60		581.60		68	46	64		0.79	BDL	0.36	BDL	BDL	3.17	2.14
F-3075	0.12	2.70	2.67	1.41	0.52	0.20	1.05	0.34	1.39	0.18		261.75		100	94	101		BDL	BDL	0.73	BDL	BDL	1.15	BDL
F-3076	6.40	11.59	2.91	2.55	ND	2.64	ND	ND	ND	7.28		203.87		75	UQ	58		0.51	BDL	0.38	0.67	3.23	9.14	0.95
F-3077	0.11	3.64	3.38	0.41	2.63	0.29	1.19	BDL	2.06	0.21		154.57		89	88	92		BDL	BDL	BDL	BDL	BDL	0.60	0.30
F-3078	0.24	6.69	6.65	0.70	1.79	0.35	2.70	0.19	3.42	0.38		287.71		73	71	78		BDL	BDL	0.34	BDL	BDL	0.71	0.51
F-3079	0.58	17.24	16.33	1.65	4.97	0.89	6.22	0.35	8.42	0.97		824.55		102	71	90		0.31	BDL	0.43	BDL	BDL	2.36	0.45
F-3080	0.15	4.74	5.09	1.55	1.36	0.25	1.87	0.21	2.20	0.19		333.30		87	84	92		BDL	BDL	0.35	BDL	BDL	1.24	0.40
F-3081	0.20	5.20	5.45	0.99	6.00	0.69	2.00	0.13	6.42	0.75		198.16		67	72	76		0.40	BDL	BDL	BDL	BDL	1.68	0.31
F-3082	0.34	6.77	8.84	0.40	2.86	0.39	2.96	0.28	4.81	0.85		220.70		63	65	75		BDL	BDL	BDL	BDL	BDL	3.52	0.89
F-3083	ND	3.37	2.42	1.00	8.50	3.41	14.48	2.00	1.39	0.41		116.42		98	48	85		BDL	2.26	1.51	0.61	2.27	23.65	3.96
F-3084	1.24	20.70	29.46	3.72	ND	2.04	11.20	1.17	25.45	10.14		2836.17		80	54	167		0.55	BDL	BDL	BDL	BDL	17.39	0.56
F-3085	1.78	29.98	35.72	1.21	ND	3.31	11.33	0.75	42.08	15.93		867.85		86	78	108		1.47	2.34	0.40	BDL	BDL	5.16	0.56
F-3086	1.76	30.05	31.64	1.30	ND	4.16	9.66	0.81	59.62	12.47		743.42		78	56	91		0.69	2.85	1.34	BDL	BDL	20.88	2.90
F-3087	0.85	14.28	15.06	0.66	ND	1.74	4.64	0.27	22.82	4.17		565.33		109	68	99		1.17	4.56	1.99	0.77	BDL	31.39	7.76
F-3088	1.71	28.46	29.77	0.99	ND	3.59	7.40	0.39	43.45	5.09		651.27		88	58	87		BDL	BDL	2.27	BDL	BDL	13.74	1.72
F-3089	0.21	4.94	4.53	ND	ND	1.45	0.81	ND	5.87	2.26		97.10		66	47	63		0.95	3.55	0.82	BDL	BDL	15.67	0.44
F-3090	0.12	2.87	3.30	BDL	ND	0.66	0.74	ND	4.26	1.39		69.37		52	46	55		0.40	BDL	0.36	BDL	BDL	4.79	0.49
F-3091	0.12	3.15	3.00	BDL	ND	0.79	0.57	BDL	4.00	1.85		48.98		65	42	63		BDL	ND	BDL	BDL	BDL	1.60	0.29
F-3092	BDL	2.16	2.55	0.16	1.39	0.13	ND	BDL	0.85	0.11		58.35		89	80	85		BDL	4.01	BDL	BDL	BDL	0.65	0.31

Concentrations in ng/g wet wgt)																							
													SURROGATE RECOVERIES			Organochlorine Pesticides						
Sample ID	198	201	203+196	189	208+195	207	194	205	206	209	Total PCBs		14	65	166	alpha BHC	beta BHC	lindane	delta BHC	aldrin	dieldrin	oxna chlord
F-3093	BDL	0.71	0.83	BDL	ND	0.10	0.32	ND	0.66	0.14	43.51		46	46	48	0.29	ND	ND	BDL	BDL	0.90	1.76
F-3094	0.15	3.18	3.32	0.16	ND	0.68	0.72	BDL	6.07	1.94	105.11		63	53	67	0.84	3.08	0.60	BDL	BDL	19.99	1.84
F-3095	0.15	3.85	4.05	BDL	ND	0.70	0.82	BDL	4.53	2.49	85.83		59	56	64	0.55	BDL	0.29	BDL	BDL	5.35	0.48
F-3096	0.11	3.42	3.88	0.21	2.67	0.36	1.63	0.17	2.06	0.43	146.55		56	72	76	BDL	BDL	BDL	BDL	BDL	5.20	0.86
F-3097	0.35	9.94	11.25	0.73	3.22	0.39	1.66	1.08	3.89	0.28	1026.67		105	95	108	0.74	2.61	0.69	BDL	BDL	8.63	1.59
F-3098	0.95	24.32	24.31	3.31	6.70	1.05	9.91	0.55	9.97	1.01	1266.74		91	69	90	BDL	BDL	0.36	BDL	BDL	3.90	BDL
F-3099	0.35	7.82	8.29	0.47	2.97	0.48	2.99	0.63	4.75	0.60	572.05		88	71	83	0.38	BDL	0.28	BDL	BDL	4.00	0.75
F-3100	0.16	4.73	5.08	0.32	3.82	0.36	2.04	BDL	2.97	0.56	188.82		83	90	93	BDL	BDL	BDL	BDL	BDL	8.25	1.03
F-3101	0.23	5.22	6.62	0.32	3.54	0.24	2.78	0.20	2.00	0.56	150.96		82	67	82	BDL	ND	BDL	BDL	BDL	0.33	BDL
F-3102	BDL	0.52	0.87	BDL	0.55	BDL	0.31	0.16	0.32	BDL	21.45		80	73	76	BDL	BDL	BDL	BDL	BDL	1.06	BDL
F-3103	0.53	10.76	11.45	1.47	ND	1.11	4.30	0.33	11.19	2.24	796.51		99	84	91	0.36	BDL	0.93	BDL	BDL	8.16	1.31
F-3104	0.17	4.56	4.58	1.92	3.25	0.34	1.62	0.27	2.70	0.19	292.43		82	80	90	BDL	BDL	BDL	BDL	BDL	2.32	0.59
F-3105	0.86	17.43	16.96	0.55	25.70	2.48	4.97	0.26	30.67	5.44	394.66		100	72	82	0.71	3.26	0.69	BDL	BDL	15.48	4.14
F-3106	0.14	3.09	3.22	BDL	ND	0.31	1.02	BDL	2.32	1.13	72.14		79	70	78	0.27	ND	BDL	BDL	BDL	1.82	0.46
F-3107	BDL	1.87	1.99	BDL	0.52	0.40	0.39	1.04	1.62	0.75	47.65		78	63	68	BDL	BDL	0.23	BDL	BDL	2.42	0.45
F-3108	0.93	17.68	18.68	4.07	20.16	2.35	6.77	0.85	17.63	1.94	913.36		106	89	101	0.28	BDL	0.42	BDL	BDL	6.44	0.92
F-3109	0.95	20.03	20.68	3.20	15.64	1.69	8.30	1.13	16.35	1.97	916.96		95	85	106	BDL	BDL	0.28	BDL	BDL	3.81	1.41
F-3110	0.40	9.44	9.03	0.63	8.04	0.80	3.70	0.24	6.98	1.07	407.37		92	79	95	0.33	4.08	BDL	BDL	BDL	1.61	1.73
F-3111	0.24	4.41	4.58	0.14	6.05	0.78	1.24	0.13	6.06	1.42	135.49		65	70	79	BDL	BDL	0.40	BDL	BDL	6.06	0.75
F-3112	0.09	2.42	2.36	BDL	0.85	0.45	0.60	BDL	1.83	0.97	60.07		84	68	76	BDL	BDL	BDL	BDL	BDL	2.66	0.66
F-3113	1.08	2.86	2.89	1.06	1.17	0.30	1.36	1.08	1.63	0.23	198.74		80	73	81	0.66	BDL	0.34	BDL	BDL	2.76	0.44
F-3114	0.45	10.78	11.07	1.82	9.78	1.05	4.30	0.40	10.81	1.68	446.41		100	90	100	0.54	BDL	0.40	BDL	BDL	5.43	0.87
F-3115	0.67	12.51	14.99	1.07	7.45	0.62	5.41	0.53	6.23	0.42	666.53		89	90	103	1.01	3.80	0.40	0.68	BDL	15.17	2.03
F-3116	BDL	0.63	0.71	BDL	0.17	BDL	BDL	ND	0.39	BDL	55.96		106	68	69	BDL	BDL	0.32	BDL	BDL	1.57	0.29
F-3117	0.28	4.50	5.47	0.25	2.75	0.29	2.02	0.14	1.90	0.22	236.02		79	89	96	0.46	BDL	0.71	BDL	BDL	7.26	0.82
F-3118	BDL	0.51	0.47	BDL	0.22	BDL	BDL	BDL	0.22	BDL	45.79		77	60	68	BDL	BDL	0.30	BDL	BDL	1.16	0.35
F-3119	BDL	0.63	0.75	BDL	0.38	BDL	BDL	ND	0.28	0.11	63.32		93	78	86	0.42	2.22	0.34	BDL	BDL	2.78	0.86
F-3120	BDL	0.62	0.74	BDL	0.40	BDL	0.31	ND	0.35	0.14	52.86		78	56	79	0.34	BDL	BDL	BDL	BDL	0.84	0.29
F-3121	0.22	5.52	6.65	0.48	3.71	0.32	2.50	0.19	3.31	0.33	270.63		114	84	98	0.56	8.29	0.31	BDL	BDL	14.37	2.43
F-3122	0.20	4.69	5.72	0.31	2.87	0.17	2.18	0.22	2.71	0.21	259.12		73	72	79	BDL	BDL	BDL	BDL	BDL	2.34	0.47
F-3123	1.00	19.93	24.27	1.29	32.83	3.39	7.78	0.55	39.40	9.84	864.29		108	89	104	BDL	BDL	0.61	BDL	BDL	12.94	4.00
F-3124	0.40	8.81	9.47	1.48	8.55	0.74	3.49	0.22	7.05	0.82	496.88		63	62	72	0.47	BDL	BDL	BDL	BDL	0.73	0.62
F-3125	0.17	5.25	5.70	1.27	4.27	0.41	2.29	0.21	3.38	0.33	263.88		91	87	94							
F-3126	0.29	6.95	6.85	0.73	7.83	0.78	2.70	0.20	6.80	1.65	379.86		99	79	83	1.24	6.73	0.30	BDL	BDL	4.30	1.06
F-3127	1.00	19.40	21.42	4.61	16.36	1.52	8.21	0.64	17.08	2.47	1091.54		79	76	94	1.11	11.50	ND	BDL	BDL	11.29	4.17
F-3128	BDL	0.52	0.60	BDL	ND	0.13	BDL	BDL	0.99	0.17	8.80		85	83	89	BDL	ND	ND	BDL	BDL	0.18	BDL
F-3129	0.23	5.30	5.71	0.47	6.13	0.68	2.25	0.16	4.70	1.38	179.80		79	72	77	0.58	2.40	0.38	BDL	BDL	2.55	1.29
F-3130	BDL	0.84	1.10	BDL	0.27	BDL	0.37	ND	0.43	BDL	50.50		99	81	89	0.58	3.62	BDL	BDL	BDL	4.15	1.21
F-3131	ND	3.33	4.86	0.19	2.36	0.17	1.56	ND	1.32	0.14	196.28		138	80	88	3.08	23.91	0.32	BDL	BDL	36.08	19.60
F-3132	BDL	1.06	1.48	0.13	0.85	0.09	0.51	ND	0.54	0.08	72.83		101	73	92	1.33	10.37	BDL	BDL	BDL	14.84	3.32
F-3133	ND	BDL	0.70	BDL	0.24	BDL	0.29	BDL	0.34	0.26	10.08		44	3	33	BDL	BDL	BDL	0.74	2.31	0.20	BDL
F-3134	ND	0.26	0.40	ND	ND	ND	BDL	ND	BDL	0.10	11.23		68	63	68	BDL	ND	0.25	BDL	BDL	1.20	BDL
F-3135	0.15	3.16	4.77	0.12	2.54	0.15	1.58	ND	1.28	0.35	199.21		124	84	93	3.42	19.35	0.35	BDL	BDL	54.31	38.51
F-3165	BDL	1.06	1.15	BDL	0.73	BDL	0.43	BDL	0.54	0.12	59.44		88	83	85	0.66	5.80	0.91	BDL	BDL	7.69	1.19
F-3166	0.12	4.04	3.32	0.32	2.33	ND	1.34	BDL	1.80	0.43	202.47		74	76	78	0.71	7.77	0.65	BDL	BDL	12.52	2.03
F-3167	BDL	1.86	1.94	ND	1.39	BDL	0.73	BDL	0.94	0.22	81.20		69	69	78	0.36	3.34	0.38	BDL	BDL	2.24	0.52
F-3168	BDL	1.55	2.01	0.12	0.68	BDL	0.74	BDL	0.92	0.20	50.17		80	79	82	ND	4.49	0.59	BDL	BDL	2.53	1.42
F-3169	0.18	3.40	4.48	ND	1.72	ND	1.67	ND	1.78	0.28	177.20		101	87	89	1.00	14.15	0.92	BDL	BDL	17.08	7.50
F-3170	0.30	5.35	6.82	0.55	4.12	0.19	3.00	0.23	2.67	0.37	260.44		72	61	69	1.28	7.28	0.92	BDL	BDL	7.57	4.80
F-3171	0.09	2.02	2.44	BDL	0.88	0.10	0.94	BDL	1.16	0.23	90.79		109	84	88	0.41	8.18	0.62	BDL	BDL	4.19	2.29
F-3172	0.68	11.71	15.67	0.94	ND	0.57	6.72	0.49	6.93	1.29	772.74		135	132	96	5.36	47.92	3.23	1.42	BDL	169.25	58.56
F-3173	2.83	49.33	61.94	4.74	27.97	3.06	26.72	1.72	34.10	3.32	2774.86		139	121	128	11.10	106.69	2.55	1.31	BDL	199.93	111.39
F-3174	BDL	1.28	1.46	BDL	0.95	BDL	0.54	BDL	0.53	BDL	72.00		63	57	64	0.38	3.05	0.33	BDL	BDL	5.30	1.75
F-3175	0.75	12.88	16.81	1.34	10.17	0.70	7.29	0.53	10.49	0.74	561.34		144	74	95	0.75	7.22	0.46	0.70	BDL	19.81	5.42
F-3176	ND	4.95	6.58	0.51	4.10	0.28	2.84	0.21	3.19	0.28	330.30		109	81	85	0.50	7.63	0.63	BDL	BDL	41.88	10.46
F-3177	0.85	16.05	20.51	1.03	13.09	0.61	8.46	0.64	7.68	1.32	1086.52		98	114	102	1.50	19.50	1.99	1.06	BDL	97.79	47.56
F-3178	0.91	15.18	18.90	1.79	13.47	0.81	7.58	0.54	9.80	1.02	1293.77		138	114	100	5.34	52.42	2.35	1.24	BDL	170.14	82.46
F-3179	0.93	16.25	20.69	1.94	8.17	0.95	8.44	0.56	11.59	1.22	768.05		104	89	92	0.79	12.99	1.01	BDL	BDL	18.64	13.13
F-3180	0.23	4.41	4.95	0.21	4.54	0.35	1.81	0.14	4.78	0.99	231.46		85	95	95	0.98	10.42	0.36	BDL	BDL	10.68	9.13

Concentrations in ng/g wet wgt)																							
													SURROGATE RECOVERIES				Organochlorine Pesticides						
Sample ID	198	201	203+196	189	208+195	207	194	205	206	209		Total PCBs		14	65	166		alpha BHC	beta BHC	lindane	delta BHC	aldrin	dieldrin	oxna chlord
F-3181	0.87	17.73	22.17	0.96	18.45	1.70	8.56	0.61	22.61	5.54		526.21		89	83	93		3.14	16.90	0.90	BDL	BDL	14.50	28.16
F-3182	BDL	1.57	1.94	0.12	1.46	0.19	0.68	BDL	1.66	0.33		80.14		95	87	91		0.39	4.63	ND	ND	BDL	5.43	1.48
F-3183	0.12	2.84	3.55	0.15	0.98	0.22	1.29	BDL	2.75	0.45		136.68		113	91	93		0.75	ND	BDL	BDL	BDL	7.81	2.86
F-3184	BDL	0.57	0.65	BDL	0.85	BDL	BDL	BDL	0.73	0.22		21.73		128	99	103		BDL	4.07	ND	BDL	BDL	0.78	0.95
F-3185	BDL	0.70	0.73	BDL	BDL	BDL	BDL	BDL	0.86	0.16		55.10		109	59	67		BDL	BDL	ND	BDL	BDL	2.21	0.32
F-3186	ND	0.53	0.64	BDL	ND	BDL	BDL	ND	0.55	0.16		26.67		57	54	56		0.37	2.65	ND	BDL	BDL	3.31	0.44
F-3187	0.64	11.64	15.31	1.10	2.73	1.19	6.04	0.39	16.81	2.73		463.67		96	67	75		0.56	5.18	0.25	BDL	BDL	10.78	9.76
F-3188	0.16	3.48	3.95	0.31	1.80	0.26	1.57	BDL	3.52	0.44		234.56		119	85	85		1.60	21.32	0.37	BDL	BDL	36.26	60.49
F-3189	BDL	0.61	0.72	BDL	0.20	BDL	BDL	BDL	0.64	0.14		40.19		88	87	89		0.43	5.22	0.36	BDL	BDL	3.87	3.54
F-3190	BDL	1.01	1.24	0.13	0.40	0.12	0.41	BDL	1.03	0.12		48.51		71	65	68		0.51	2.76	ND	BDL	BDL	5.05	2.50
F-3191	ND	0.29	0.32	BDL	BDL	BDL	BDL	ND	0.39	BDL		11.95		105	76	82		0.37	3.14	ND	BDL	BDL	1.97	1.79
F-3192	BDL	0.87	0.98	BDL	0.37	0.17	0.32	BDL	1.29	0.21		34.25		95	78	83		BDL	2.77	ND	BDL	BDL	2.36	2.96
F-3193	BDL	0.41	0.43	ND	BDL	BDL	BDL	BDL	0.38	BDL		14.68		96	72	80		BDL	ND	ND	BDL	BDL	1.25	0.74
F-3194	BDL	1.24	1.56	BDL	1.09	BDL	0.63	BDL	0.83	0.15		57.34		119	88	95		BDL	BDL	BDL	BDL	BDL	6.31	4.91
F-3195	BDL	0.75	0.97	BDL	ND	BDL	0.37	BDL	0.58	0.09		23.78		107	87	91		0.41	3.53	0.38	BDL	BDL	6.98	4.10
F-3196	0.12	2.01	2.73	0.18	1.55	0.12	1.15	BDL	1.24	0.18		122.93		113	85	101		0.90	11.91	0.30	BDL	BDL	15.10	4.91
F-3197	2.80	70.69	98.36	2.86	49.13	3.98	36.38	3.41	42.18	11.40		2677.51		79	UQ	UQ		0.89	12.87	BDL	BDL	3.01	67.94	5.29
F-3198	0.91	19.17	26.48	1.91	16.28	0.97	10.93	0.64	11.62	0.85		814.08		83	81	93		0.48	7.96	ND	BDL	BDL	8.51	7.64
F-3199	0.74	15.01	19.66	1.89	13.35	0.74	7.63	0.45	10.16	0.91		896.07		106	117	110		1.47	18.26	0.31	BDL	BDL	35.32	27.13
F-3200	1.62	30.38	42.78	3.66	25.38	1.32	18.56	1.16	16.02	1.03		1319.59		106	101	112		2.16	25.78	0.54	BDL	BDL	28.50	51.26
F-3201	0.44	10.49	15.23	1.32	8.52	0.48	6.46	0.30	6.43	0.38		466.45		85	100	100		1.41	15.91	0.56	BDL	ND	9.96	10.70
F-3202	0.74	16.80	22.05	2.44	13.87	0.81	8.95	0.55	10.01	0.72		1271.26		154	158	111		2.87	35.38	0.54	BDL	BDL	156.34	69.94
F-3203	0.57	9.37	13.57	0.71	8.03	0.50	5.59	0.36	6.04	0.70		505.11		132	83	91		4.32	30.42	0.61	BDL	ND	75.96	14.07
F-3204	BDL	0.84	1.08	BDL	0.85	BDL	0.38	BDL	0.62	0.08		44.28		99	84	90		BDL	BDL	BDL	BDL	BDL	4.13	3.68
F-3205	BDL	0.96	1.19	BDL	0.70	BDL	0.44	BDL	0.53	BDL		39.09		118	79	87		0.47	5.24	ND	BDL	BDL	5.13	0.77
F-3206	BDL	0.75	0.97	BDL	0.68	BDL	0.56	BDL	0.54	0.11		36.67		89	88	92		0.29	2.69	0.23	BDL	BDL	3.09	0.68
F-3207	BDL	0.65	0.85	BDL	0.49	BDL	0.34	BDL	0.50	BDL		41.34		104	81	85		0.31	3.16	ND	BDL	BDL	4.39	0.63
F-3208	BDL	0.45	0.98	BDL	0.45	BDL	0.56	BDL	0.42	BDL		38.99		51	UQ	26		BDL	BDL	BDL	BDL	BDL	ND	BDL
F-3209	ND	0.25	0.35	BDL	0.21	BDL	BDL	ND	BDL	BDL		22.94		106	76	84		0.27	3.57	0.32	0.74	BDL	1.98	BDL
F-3210	BDL	0.67	0.89	BDL	0.72	BDL	0.42	BDL	0.69	0.24		53.00		93	66	76		BDL	4.31	BDL	BDL	BDL	1.36	1.77
F-3211	BDL	0.39	0.47	BDL	0.41	ND	BDL	BDL	0.35	0.09		17.98		112	76	80		1.52	10.55	ND	0.75	BDL	3.72	10.70
F-3212	BDL	1.32	1.62	BDL	0.42	0.14	0.69	BDL	1.26	0.26		65.44		99	64	84		1.23	14.70	0.28	0.60	BDL	4.71	6.38
F-3213	BDL	0.64	0.89	BDL	0.47	0.14	0.31	ND	0.35	BDL		50.00		82	75	74		0.51	6.67	ND	BDL	BDL	1.76	0.94
F-3214	BDL	0.98	1.41	BDL	0.79	BDL	0.41	BDL	0.74	0.16		73.87		121	92	100		0.59	5.81	ND	0.64	BDL	9.44	3.08
F-3215	0.14	4.00	5.43	0.19	3.15	0.35	1.98	BDL	3.23	0.55		237.83		167	58	83		1.08	9.60	0.45	1.02	BDL	4.87	2.85
F-3216	0.09	3.01	3.00	0.41	2.10	0.21	1.20	BDL	1.51	0.13		132.30		44	42	45		0.37	2.29	ND	BDL	BDL	0.64	0.32
F-3217	BDL	0.68	0.85	BDL	0.52	BDL	0.41	BDL	0.46	0.11		61.85		89	77	79		0.34	ND	1.18	BDL	BDL	7.85	1.35
F-3218	0.39	8.83	11.96	0.86	4.02	0.64	4.85	0.28	7.25	0.86		373.35		99	66	64		3.18	26.57	0.39	BDL	BDL	42.39	65.95
F-3219	0.34	6.74	9.36	0.44	6.06	0.48	3.66	ND	4.92	1.04		363.29		88	66	69		1.72	16.41	0.32	BDL	BDL	31.05	28.25
F-3220	0.60	12.15	16.62	0.51	5.45	0.71	6.35	0.34	8.88	1.36		612.21		130	83	92		14.19	102.58	0.31	2.14	BDL	92.56	62.87
F-3221	0.41	8.41	10.30	0.53	7.44	0.54	3.91	0.29	6.93	1.50		522.45		198	99	90		10.10	59.45	0.42	BDL	BDL	176.18	105.11
F-3222	ND	1.11	1.32	0.14	0.80	BDL	0.50	BDL	0.54	0.13		65.25		72	74	78		BDL	3.12	0.44	BDL	BDL	1.95	0.47
F-3223	BDL	0.53	0.63	BDL	0.39	BDL	BDL	ND	0.22	BDL		50.15		91	74	82		BDL	ND	BDL	BDL	BDL	1.41	0.27
F-3224	BDL	0.83	1.02	BDL	0.63	BDL	0.41	BDL	0.39	0.18		66.28		97	74	82		0.32	6.26	BDL	BDL	BDL	1.80	0.56
F-3225	1.34	25.40	32.20	2.94	17.68	0.77	14.57	0.90	9.95	0.57		2237.64		124	114	118		2.56	20.52	1.25	BDL	BDL	15.04	18.18
F-3226	0.71	12.83	16.28	0.92	9.26	0.52	7.62	0.61	7.03	0.92		666.52		151	102	101		1.89	24.37	1.38	BDL	BDL	13.65	14.01
F-3227	1.52	28.08	35.31	1.79	22.45	1.08	16.14	1.48	14.25	2.02		1331.28		124	101	102		4.50	66.21	2.01	BDL	BDL	22.74	23.38
F-3228	BDL	0.74	0.88	BDL	0.56	BDL	0.35	BDL	0.44	BDL		42.88		116	79	86		0.34	2.89	0.58	BDL	BDL	2.29	1.44
F-3229	0.17	3.25	3.78	0.26	2.33	0.14	1.69	BDL	1.61	0.20		260.18		125	83	89		BDL	BDL	0.49	BDL	BDL	9.73	14.50
F-3230	0.48	8.92	10.89	1.06	5.87	0.38	4.00	0.31	4.98	0.34		957.26		92	121	99		2.02	41.98	1.52	BDL	BDL	23.07	13.69
F-3231	0.31	6.01	7.21	0.57	4.13	0.27	2.59	0.23	3.35	0.61		969.25		93	114	101		4.41	51.44	2.72	BDL	BDL	32.55	33.60
F-3232	BDL	0.62	0.76	BDL	0.40	BDL	BDL	BDL	0.33	BDL		51.11		90	78	86		0.45	7.22	0.47	BDL	BDL	2.85	1.59
F-3233	ND	0.29	0.42	BDL	0.24	ND	BDL	ND	BDL	BDL		108.60		83	64	66		0.29	BDL	0.40	BDL	BDL	1.22	0.74
F-3234	BDL	0.42	0.51	BDL	0.39	BDL	BDL	ND	0.30	BDL		26.01		86	80	85		BDL	BDL	BDL	BDL	BDL	0.97	1.43

Concentrations in ng/g wet wgt)																
Sample ID	Total Chlordanes															
	alpha chlordane	(cis + trans)	endosulfan I	endosulfan II	o,p DDD	p,p DDD	o,p DDT*	p,p DDT	o,p DDE*	p,p DDE	endrin	cis-heptachlor epoxide	trans-heptachlor epoxide	trans-nonachlor	cis-nonachlor*	oxychlordane
Detection Limits	**0.28**		**0.19**	**0.23**	**0.16**	**0.49**	**0.27**	**0.60**	**0.28**	**1.11**	**0.23**	**0.11**	**0.08**	**0.54**	**1.00**	**0.30**
F-2836	22.78	29.08	1.89	1.19	43.58	124.37	25.49	14.03	9.21	147.39	BDL	1.94	1.81	28.53	16.33	11.45
F-2837	33.63	42.43	2.23	1.25	29.05	78.34	39.86	12.20	14.79	15.09	0.28	2.78	2.42	20.20	2.32	41.27
F-2838	37.53	48.25	3.25	1.80	32.79	106.21	40.52	13.34	22.36	6.30	0.72	3.60	3.30	10.77	1.54	36.44
F-2840	40.16	50.09	0.93	13.22	ND	42.09	55.69	4.41	8.18	137.24	ND	6.58	1.15	63.51	16.56	47.08
F-2841	90.73	112.11	1.59	36.08	3.55	80.78	110.89	8.25	43.00	245.16	0.81	21.41	2.87	174.89	21.22	114.13
F-2842	36.07	44.73	0.52	11.22	1.70	32.35	79.70	7.01	3.05	126.36	1.14	9.33	0.84	99.13	10.10	193.10
F-2843	10.03	13.30	BDL	4.58	0.73	10.90	23.95	2.18	3.44	89.06	BDL	3.13	0.51	34.64	4.75	31.50
F2844	11.86	19.00	0.91	0.52	1.58	15.14	18.02	0.84	4.71	33.97	0.33	2.07	0.88	14.51	3.25	18.13
F-2845	84.49	127.42	4.32	3.08	10.53	57.33	100.50	3.18	18.80	9.14	1.29	6.45	2.71	16.87	2.04	107.67
F-2846	54.70	85.42	15.17	1.59	19.31	68.13	36.55	BDL	52.59	500.71	0.28	7.46	4.01	48.28	17.94	20.97
F-2847	19.27	28.07	1.27	0.69	3.02	16.23	14.37	BDL	6.64	52.08	BDL	2.18	0.39	12.26	2.85	6.07
F-2848	2.98	4.18	BDL	0.99	0.31	4.57	11.10	1.36	0.57	29.41	0.26	0.46	ND	6.10	3.13	15.45
F2849	1.12	1.71	BDL	0.75	0.16	4.49	5.49	BDL	0.32	10.54	BDL	0.18	0.77	4.28	1.92	15.70
F2850	BDL	0.00	BDL	0.62	BDL	0.54	2.25	BDL	0.31	1.23	BDL	0.94	0.64	2.47	BDL	7.11
F-2851	BDL	0.00	BDL	BDL	BDL	BDL	1.31	BDL	BDL	1.80	BDL	2.84	0.43	0.96	BDL	12.12
F-2853	10.43	13.19	0.39	0.95	2.69	12.59	16.78	5.66	4.06	108.00	0.41	0.93	0.75	18.57	13.62	6.95
F-2854	2.88	3.22	ND	0.67	2.20	0.78	18.01	2.35	4.18	3.62	1.31	BDL	0.36	13.24	1.16	2.60
F-2855	17.32	20.57	0.65	1.59	2.58	29.38	45.19	18.91	9.35	133.22	3.06	1.34	0.78	27.54	11.60	32.75
F-2856	16.75	21.13	3.52	0.90	0.85	16.03	22.20	8.63	2.43	161.88	BDL	1.79	0.69	26.46	11.32	9.10
F-2857	3.93	5.07	0.48	0.45	1.54	5.44	6.50	2.85	2.21	39.71	0.28	0.44	0.46	7.93	7.90	3.51
F-2858	6.76	8.34	1.61	0.78	2.92	15.33	11.32	2.12	3.19	126.78	0.27	1.32	0.76	10.20	7.40	5.29
F-2859	52.59	68.66	11.37	3.94	146.03	511.12	47.12	15.02	116.53	64.79	1.39	5.15	9.47	45.05	51.98	44.89
F-2860	30.76	41.70	6.22	2.57	67.62	279.71	40.73	11.52	15.88	216.85	2.19	3.61	4.11	21.65	19.79	71.56
F-2861	25.27	34.99	4.91	1.14	84.54	245.79	21.32	12.29	39.37	26.28	0.59	2.93	4.19	16.57	15.27	14.72
F-2862	29.57	39.97	0.57	9.61	3.47	109.68	77.46	9.79	8.18	3.86	0.24	9.85	0.85	17.43	1.66	80.50
F-2863	8.12	11.34	1.30	0.43	10.17	27.96	12.51	1.64	5.45	45.19	0.35	1.39	1.83	7.33	5.55	8.80
F-2864	1.92	2.58	0.40	BDL	1.64	4.67	4.30	1.09	1.10	11.95	ND	0.46	0.74	2.85	2.16	3.65
F-2865	4.53	5.54	0.59	BDL	3.92	7.40	10.62	1.87	1.77	42.69	0.25	0.63	0.77	5.49	2.93	6.08
F-2866	7.09	9.07	0.58	0.41	9.66	27.31	14.30	1.82	5.33	62.46	BDL	0.49	1.20	10.07	6.95	12.95
F-2936	23.91	35.17	1.51	4.39	2.29	37.88	17.12	2.60	3.22	48.77	BDL	10.97	0.73	17.20	6.57	24.02
F-2937	90.09	163.94	18.78	ND	39.93	305.85	94.29	1.30	52.14	566.04	ND	17.01	5.80	82.05	56.27	71.29
F-2938	21.63	30.84	0.61	12.65	5.48	71.31	50.89	2.01	7.18	284.41	0.34	7.63	0.51	31.49	12.22	89.85
F-2939	141.36	226.18	12.51	4.98	130.68	853.45	113.30	3.06	11.15	410.40	0.44	15.20	1.42	28.22	5.67	77.57
F-2940	50.20	77.91	3.05	1.37	27.16	220.16	54.82	2.18	11.29	446.35	0.38	5.37	2.17	23.97	5.62	26.36
F-2945	66.42	109.56	1.37	3.06	20.09	234.24	62.70	2.72	4.50	702.28	BDL	7.36	1.31	32.73	6.69	46.46
F-2946	64.46	113.78	1.17	2.93	19.38	320.32	110.31	1.65	24.42	1149.29	0.69	6.75	2.18	81.73	31.52	64.30
F-2947	1.26	2.01	BDL	0.48	0.48	2.70	1.93	BDL	1.30	25.32	ND	0.55	0.48	4.10	4.68	2.83
F-2948	2.95	4.08	0.40	1.24	0.38	12.27	11.94	BDL	1.92	64.98	0.59	1.28	0.51	11.58	2.21	18.35
F-2949	0.61	0.91	BDL	0.34	BDL	3.48	5.40	BDL	5.08	534.89	0.37	0.66	0.62	66.46	68.92	4.79
F-2950	6.69	9.28	BDL	0.67	1.82	12.10	14.57	1.28	1.23	116.72	BDL	1.07	3.31	10.98	1.47	12.17
F-2951	27.96	38.91	0.54	1.50	4.39	33.48	22.62	1.21	2.75	176.02	0.65	4.34	0.34	17.48	1.44	24.01
F-2952	4.71	6.83	BDL	0.43	1.25	9.51	9.59	BDL	4.08	345.69	0.26	0.99	2.95	33.36	4.59	3.32
F-2953	1.01	2.10	BDL	0.34	0.21	2.67	1.10	BDL	2.98	50.72	BDL	0.49	0.32	9.06	10.94	1.26
F-2954	3.23	5.46	0.66	1.00	0.87	7.54	4.67	1.88	5.38	93.09	1.78	2.03	0.41	11.83	14.37	4.61
F-2955	9.06	11.70	0.39	3.01	1.96	116.97	23.47	3.36	3.91	578.06	BDL	2.04	0.19	30.45	26.17	22.55
F-2956	10.42	14.69	0.45	4.02	2.26	98.33	23.51	1.44	3.77	272.90	BDL	3.96	0.21	25.58	22.28	36.02
F-2957	BDL	0.55	0.20	0.39	0.22	1.54	0.44	BDL	1.51	27.49	ND	1.28	0.15	3.57	5.98	4.76
F-2958	10.18	16.83	0.25	1.01	1.14	14.49	9.89	0.67	0.92	44.48	BDL	1.80	0.23	3.85	BDL	5.29
F-2959	27.69	41.98	0.35	2.64	1.36	21.76	10.77	7.60	1.59	107.45	1.15	3.90	0.50	9.82	1.49	96.20
F-2960	2.15	2.78	BDL	1.34	0.19	4.59	11.63	0.88	0.41	22.07	BDL	0.80	0.30	4.95	3.24	16.99
F-2961	6.24	9.06	0.31	4.14	1.15	17.64	24.73	1.06	2.06	71.91	BDL	2.86	0.41	12.58	6.03	43.68
F-2962	2.27	3.20	1.07	1.13	2.09	3.29	7.69	5.25	1.96	28.44	2.48	0.76	ND	5.33	6.53	18.25
F-2963	5.49	7.10	BDL	4.66	0.56	14.54	17.20	1.37	0.95	49.85	BDL	2.26	0.16	12.10	4.65	21.48
F-2964	8.22	11.62	BDL	5.88	0.56	21.70	29.78	1.14	3.17	112.98	BDL	2.78	0.65	17.63	9.79	40.67
F-2965	46.92	60.79	BDL	17.55	10.47	109.22	86.53	4.77	2.89	282.54	0.34	9.48	0.51	48.46	18.81	82.40
F-2966	10.90	15.86	0.49	3.99	2.23	31.82	24.79	1.43	3.22	61.03	0.46	2.92	0.17	19.02	15.32	31.28
F-2967	42.98	57.39	0.54	57.91	1.87	29.47	253.07	7.68	5.08	100.84	1.49	34.64	1.43	222.55	7.51	NQ

Concentrations in ng/g wet wgt)																
Sample ID	Total Chlordanes (cis +trans)	cha chlorda	endosulfan	endosulfan I	o,p DDD	p,p DDD	o,p DDT	p,p DDT	o,p DDE	p,p DDE	endrin	tachlor epo	hepta chlor	trans-nona chlor	cis-nona chlor	oxychlor
F-2968	16.93	25.11	0.21	6.33	1.99	33.52	41.00	3.22	1.03	133.12	BDL	4.97	0.25	24.65	8.95	33.83
F-2969	7.61	10.36	BDL	2.66	1.03	7.90	12.23	0.91	ND	ND	BDL	1.63	ND	ND	ND	30.94
F-2970	18.62	24.49	2.90	4.26	3.51	50.40	34.12	16.03	1.52	218.65	1.08	3.03	0.30	25.51	10.00	34.14
F-2971	22.52	31.07	2.05	6.03	11.23	292.49	58.37	11.76	2.83	1086.63	BDL	5.03	0.36	36.82	29.23	132.47
F-2972	27.21	34.23	1.25	6.35	7.09	166.76	55.40	9.41	4.03	681.95	0.26	3.90	1.13	34.71	33.73	41.32
F-2973	53.03	71.54	3.18	18.76	13.45	541.02	112.77	7.44	24.74	1872.94	1.21	13.56	1.78	127.34	165.94	89.42
F-2974	19.96	26.61	1.83	9.10	6.27	217.51	62.55	9.77	3.43	ND	BDL	5.03	1.27	31.00	23.73	107.36
F-2975	3.08	4.07	1.35	0.30	2.65	7.42	7.71	3.05	1.47	ND	BDL	0.80	1.04	3.64	3.59	5.25
F-2976	6.01	7.41	1.59	0.33	7.74	25.60	13.52	5.24	9.53	ND	ND	0.51	1.29	6.92	8.27	4.29
F-2977	4.87	6.26	0.29	0.33	1.60	1.59	4.00	BDL	2.31	43.39	BDL	0.46	BDL	4.81	4.60	4.38
F-2978	45.71	63.29	7.87	4.50	16.36	56.12	44.83	3.55	11.69	294.18	0.86	17.38	1.99	33.01	8.69	68.72
F-2979	1.23	1.82	0.57	BDL	1.15	6.17	2.94	0.88	2.04	ND	BDL	0.59	0.45	3.57	5.28	2.48
F-2980	5.47	6.86	0.53	0.61	3.75	5.56	8.70	1.61	2.60	42.94	0.69	1.03	0.48	9.08	5.89	6.35
F-2981	8.72	11.08	2.01	0.51	11.68	29.36	16.42	3.63	8.75	179.83	0.41	0.96	1.60	13.63	11.17	7.59
F-2982	24.12	30.77	14.33	2.67	31.65	166.93	67.06	43.38	26.59	778.43	0.51	1.76	1.43	63.56	112.65	18.72
F-2983	3.04	4.10	1.83	0.33	4.49	16.63	7.19	0.87	4.80	99.95	0.30	0.64	0.57	6.83	6.81	4.23
F-2984	2.29	2.77	0.27	BDL	4.46	8.83	4.26	1.14	3.25	30.71	BDL	0.40	0.81	7.53	8.71	1.92
F-2985	15.44	20.48	5.58	1.00	24.33	86.04	20.12	4.12	20.81	385.54	BDL	1.50	2.80	20.47	10.25	7.83
F-2986	20.62	27.37	11.03	0.92	28.53	110.21	20.92	4.56	28.74	394.21	BDL	2.55	4.60	19.91	10.33	3.45
F-2987	10.12	12.47	3.47	0.86	16.84	77.14	19.36	4.58	14.58	350.24	BDL	0.89	1.79	16.85	9.55	5.35
F-2988	7.04	8.78	1.54	0.34	12.29	35.69	11.03	4.82	11.18	242.13	ND	0.45	1.68	7.86	5.12	2.63
F-2989	5.45	7.51	2.47	0.24	10.91	30.37	6.62	1.38	10.14	154.07	BDL	1.01	1.99	5.80	3.38	1.96
F-2990	4.62	5.50	0.97	0.41	3.00	12.00	9.21	2.92	2.29	66.07	0.26	1.07	0.69	9.00	5.24	3.92
F-2991	6.87	8.54	2.16	0.46	5.38	15.25	10.64	2.62	3.52	63.58	BDL	1.15	0.95	9.13	6.00	4.29
F-2992	3.08	3.75	0.68	BDL	1.45	8.57	7.52	3.75	6.10	68.81	BDL	0.47	0.49	5.43	10.09	2.73
F-2993	5.10	6.37	BDL	0.36	20.98	20.38	14.28	4.19	ND	1.52	2.12	0.39	0.61	7.05	BDL	8.46
F-2994	8.76	10.81	1.49	0.91	7.60	30.90	14.57	2.35	4.45	77.72	0.28	1.12	0.87	8.72	5.50	7.95
F-2995	6.39	8.17	0.81	0.59	5.38	15.07	15.75	4.43	8.23	3.58	1.27	0.69	1.07	9.91	1.11	9.66
F-2996	5.82	7.63	1.15	0.57	4.25	18.15	17.52	3.99	5.60	2.63	0.78	0.88	0.75	9.17	1.00	7.74
F-2998	9.08	12.72	0.88	3.64	1.44	17.65	19.02	4.95	1.46	78.51	BDL	3.11	0.16	15.16	5.41	18.90
F-2999	5.59	8.11	0.22	7.59	0.27	18.30	26.19	2.62	2.50	99.05	0.48	3.72	0.30	22.72	8.15	58.62
F-3000	2.51	3.69	BDL	3.58	0.19	9.46	14.87	1.75	1.07	60.31	BDL	2.32	0.22	13.11	6.24	18.50
F-3001	10.85	13.74	1.09	10.38	4.72	146.95	26.84	8.97	5.99	361.50	0.78	5.25	0.41	39.02	22.71	42.06
F-3002	1.82	2.27	BDL	1.28	0.28	18.77	5.69	3.54	BDL	140.55	BDL	0.44	BDL	7.58	5.56	3.95
F-3003	2.68	3.31	0.54	0.43	1.75	6.66	5.76	1.37	1.98	32.12	0.40	0.31	0.11	5.76	7.36	7.30
F-3004	11.50	15.17	3.33	1.37	16.47	38.97	18.20	3.95	6.26	105.93	0.68	1.53	0.67	11.69	8.93	6.87
F-3005	4.76	6.28	0.89	3.01	5.42	27.52	19.61	2.78	3.32	101.91	2.13	0.92	0.22	16.23	11.51	4.90
F-3006	23.42	29.32	3.98	1.97	44.90	207.57	37.85	6.29	35.39	612.71	BDL	1.78	3.35	33.53	20.74	9.08
F-3007	1.14	1.14	BDL	BDL	3.73	2.55	2.96	1.39	0.37	8.84	BDL	BDL	0.50	1.67	1.27	1.35
F-3008	10.64	14.29	2.39	1.45	21.14	76.37	24.93	3.71	13.21	223.02	0.37	1.32	1.63	23.00	18.63	8.73
F-3009	6.11	7.26	BDL	0.68	0.70	6.68	17.89	8.97	4.83	3.11	ND	0.55	0.57	12.99	1.55	11.13
F-3010	5.38	6.50	BDL	3.90	22.10	8.36	16.56	12.32	ND	BDL	1.76	0.24	0.82	10.08	BDL	12.82
F-3011	4.02	5.23	0.23	0.48	0.96	5.95	10.69	4.71	2.67	1.69	ND	0.36	0.51	6.15	BDL	45.86
F-3012	6.66	8.06	0.77	0.73	2.18	13.78	13.22	4.45	2.86	107.10	0.43	0.83	0.45	12.21	7.64	4.89
F-3013	4.42	5.16	0.20	0.63	0.73	6.59	9.70	2.13	1.34	53.04	0.51	0.40	0.08	9.70	5.05	3.88
F-3014	8.24	9.98	0.29	0.79	1.19	9.03	16.23	5.83	3.01	105.08	0.39	0.67	ND	18.01	12.02	5.44
F-3015	5.34	6.58	0.55	0.75	1.26	10.73	10.85	3.43	2.11	94.78	BDL	0.88	BDL	8.75	6.50	3.72
F-3016	0.87	1.38	BDL	0.69	0.69	15.96	3.44	2.86	0.55	122.44	BDL	0.41	0.52	3.46	3.26	4.85
F-3017	4.62	6.12	0.48	1.33	1.78	21.77	7.03	1.79	1.33	209.93	BDL	1.13	0.74	7.46	5.88	4.72
F-3018	43.36	60.87	3.62	11.62	10.34	177.02	57.54	8.65	12.18	1456.14	0.69	8.90	2.30	65.61	36.09	32.79
F-3019	24.14	32.55	4.05	6.08	3.41	30.48	29.97	35.44	2.45	195.12	1.64	6.63	0.78	35.02	15.60	31.71
F-3020	16.40	25.97	0.80	1.28	0.48	3.73	11.15	BDL	0.91	8.75	ND	2.36	1.12	7.73	BDL	15.26
F-3021	14.91	22.71	0.99	1.33	0.21	3.61	12.16	BDL	1.72	8.81	BDL	1.99	1.14	10.75	BDL	11.32
F-3022	17.65	26.61	0.44	1.56	1.68	44.53	50.49	3.47	4.62	239.33	BDL	2.89	1.37	37.85	5.97	8.82
F-3025	2.03	2.43	BDL	0.30	1.41	1.57	6.81	1.44	5.75	8.25	ND	0.12	1.06	36.51	4.86	3.36
F-3026	25.23	33.47	2.28	1.38	21.96	66.58	26.16	6.11	17.20	4.39	0.75	2.89	1.70	8.65	BDL	55.89
F-3027	39.28	51.93	3.04	1.76	32.62	108.01	41.43	11.73	10.99	3.76	0.54	4.55	1.98	7.32	BDL	44.12
F-3028	45.21	61.68	1.06	15.92	7.55	286.45	119.74	43.70	16.85	6.20	1.61	12.89	1.41	28.39	2.95	NQ
F-3029	15.81	26.45	1.13	1.08	5.10	33.17	18.68	3.07	8.98	3.07	BDL	1.71	0.91	5.46	BDL	15.80
F-3030	20.66	27.49	0.59	6.97	5.57	249.64	52.36	10.23	5.91	839.83	0.47	3.67	0.85	37.17	30.54	52.34

Concentrations in ng/g wet wgt)																
Sample ID	Total Chlordanes	alpha chlordane	(cis + trans) nonachlor	endosulfan I	endosulfan II	o,p DDD	p,p DDD	o,p DDT	p,p DDT	o,p DDE	p,p DDE	endrin	tachlor epoxide	heptachlor	trans-nonachlor	cis-nonachlor	oxychlor
F-3031	4.88	6.21	0.22	1.57	0.81	47.64	12.21	1.47	1.66	407.55	BDL	0.72	0.77	11.60	14.75	7.67
F-3032	84.45	132.44	1.74	12.44	89.58	1308.12	129.82	104.37	44.97	15.03	1.31	15.18	2.49	40.89	7.76	108.34
F-3033	4.76	6.41	0.87	0.29	4.14	12.21	12.09	2.70	5.37	2.63	0.41	0.69	0.79	7.24	BDL	6.28
F-3034	64.81	84.01	1.53	19.16	9.62	282.25	167.32	30.54	16.94	7.71	0.55	16.54	1.60	32.82	3.43	NQ
F3035	81.64	124.77	ND	13.87	8.10	187.39	102.76	22.83	7.31	9.12	2.31	14.47	1.80	18.07	2.26	135.01
F-3036	5.40	7.80	1.48	0.84	1.42	4.85	6.04	1.14	1.59	9.73	BDL	1.31	0.24	8.09	2.80	6.56
F-3037	3.62	4.85	3.24	0.30	1.41	3.29	4.72	0.87	BDL	7.84	ND	0.74	0.12	1.40	1.55	6.20
F-3038	11.41	15.11	2.63	1.31	3.44	10.19	14.86	1.48	1.43	21.60	BDL	2.13	0.46	16.70	4.23	17.09
F-3039	2.06	3.22	1.24	0.72	0.69	4.09	3.86	BDL	2.65	11.20	0.63	1.22	0.79	13.50	11.79	5.29
F-3040	25.94	46.27	9.99	2.12	7.28	40.42	27.82	0.64	24.13	175.22	BDL	6.65	3.23	79.26	83.27	25.45
F-3041	0.65	0.99	ND	BDL	ND	0.70	1.13	ND	BDL	2.62	ND	0.33	ND	1.33	BDL	0.83
F-3042	2.69	3.25	0.21	1.27	ND	4.64	4.34	BDL	0.95	8.77	ND	1.29	0.08	7.29	2.62	8.41
F-3043	10.64	14.79	BDL	0.83	ND	5.82	4.68	1.21	BDL	7.92	ND	1.61	0.11	0.60	BDL	8.14
F-3044	24.44	37.21	ND	1.24	1.38	11.31	10.77	BDL	1.06	19.34	BDL	1.60	0.59	9.87	1.24	17.84
F-3045	4.69	7.09	0.55	0.33	0.27	2.31	2.89	BDL	BDL	6.78	ND	0.58	ND	2.78	BDL	1.97
F-3046	78.42	137.25	1.13	2.50	12.99	67.23	44.45	0.86	11.07	88.27	0.24	6.64	2.54	45.74	11.39	19.49
F-3047	34.44	54.46	0.78	0.97	4.71	28.36	19.52	BDL	2.15	78.68	ND	2.72	0.86	16.04	3.38	8.96
F-3048	28.15	43.84	0.31	1.49	5.24	23.78	16.86	1.15	2.93	43.70	BDL	1.89	0.79	19.24	2.44	7.68
F-3049	90.32	160.65	1.11	3.25	17.42	210.48	80.02	0.84	72.66	670.64	0.42	8.08	3.40	202.42	97.54	41.87
F-3050	78.88	131.14	0.76	2.49	13.01	103.32	62.00	BDL	45.39	265.55	BDL	4.45	2.69	103.39	53.00	20.98
F-3051	3.28	3.75	0.31	0.60	0.22	6.44	6.35	1.81	3.33	44.35	0.24	0.53	0.29	11.13	16.76	5.52
F-3052	8.83	10.90	0.93	1.97	1.58	25.85	26.89	5.86	7.43	241.69	0.45	0.64	0.58	37.35	61.27	7.07
F-3053	7.69	11.37	0.82	1.86	0.83	27.25	19.66	1.68	9.49	156.40	BDL	1.23	0.76	26.80	32.36	8.33
F-3054	1.57	1.94	BDL	0.25	0.64	1.49	2.08	1.71	1.49	25.26	0.29	BDL	ND	6.58	7.20	2.00
F-3055	1.87	2.38	BDL	0.37	BDL	3.64	5.91	1.47	1.42	49.10	BDL	0.12	0.08	8.86	8.14	2.72
F-3058	15.15	17.96	0.33	1.53	1.54	21.45	29.11	16.44	5.28	264.50	BDL	0.99	0.34	41.52	24.09	16.51
F-3059	24.04	29.11	1.13	3.51	42.40	49.85	54.42	12.46	1.49	ND	3.61	1.47	0.88	9.19	19.89	19.65
F-3060	8.24	10.05	1.13	1.01	1.38	16.33	20.59	5.51	5.18	229.88	0.87	1.05	0.35	25.38	ND	6.58
F-3061	5.61	9.95	0.99	0.66	3.90	41.98	6.71	0.88	7.15	41.81	0.41	0.58	0.79	5.87	5.60	4.13
F-3062	11.37	17.69	1.48	0.61	14.95	80.30	10.09	4.67	6.35	59.25	2.08	1.23	0.80	2.64	7.04	9.80
F-3063	5.07	8.14	0.59	0.41	2.66	33.14	6.62	1.71	4.65	27.48	0.63	0.51	0.42	4.45	4.10	4.56
F-3064	8.09	13.16	0.79	0.34	5.13	39.96	7.40	1.78	6.43	46.01	BDL	0.81	0.71	4.53	6.58	8.71
F-3065	1.74	2.73	0.29	0.45	0.25	4.14	4.73	0.66	2.06	35.26	BDL	0.64	0.38	6.82	9.12	1.66
F-3066	10.56	15.73	0.93	1.65	2.36	41.32	22.10	3.31	11.37	111.33	0.32	0.92	1.38	26.44	40.50	22.98
F-3067	3.02	4.03	BDL	0.61	0.41	6.99	6.22	1.01	3.59	54.33	0.24	0.43	0.14	13.58	25.45	2.91
F-3068	15.81	18.67	0.36	1.18	26.81	24.99	37.76	17.49	0.69	ND	5.15	1.03	1.30	8.01	14.33	19.19
F-3069	2.33	3.32	0.84	0.92	0.66	8.60	10.91	1.11	6.68	177.61	BDL	1.04	0.55	32.59	64.50	3.16
F3070	8.21	9.80	1.05	0.83	1.66	10.67	14.80	9.86	1.58	134.90	0.24	1.14	0.20	11.56	9.96	8.29
F-3071	7.74	8.82	0.34	2.10	1.98	7.82	15.43	7.03	2.53	65.17	1.56	0.82	0.15	13.63	13.89	7.22
F-3072	5.02	7.73	2.04	0.72	2.37	20.66	8.95	1.07	6.55	100.59	BDL	0.67	0.54	13.17	20.88	5.13
F-3073	2.83	4.26	0.81	0.95	BDL	6.74	6.87	2.34	4.33	70.09	BDL	0.29	0.31	13.68	15.56	2.68
F-3074	6.65	8.78	0.94	0.60	3.90	12.21	12.27	1.01	3.50	82.75	ND	0.44	0.45	9.96	13.18	5.19
F-3075	2.11	2.11	0.45	0.33	0.57	4.68	5.72	0.98	1.74	23.60	0.46	0.20	0.15	6.13	8.13	2.37
F-3076	2.64	3.59	0.23	0.42	3.72	3.45	8.89	2.66	0.39	ND	0.92	0.50	1.35	1.82	3.13	3.96
F-3077	0.82	1.12	0.20	BDL	0.53	2.42	2.96	BDL	0.96	13.91	1.48	0.82	0.09	3.28	5.52	1.81
F-3078	1.19	1.70	0.25	0.31	0.74	3.25	5.41	BDL	1.39	19.84	0.93	0.89	0.23	5.47	6.75	2.18
F-3079	1.89	2.35	0.88	0.95	1.05	7.17	7.32	BDL	7.66	119.88	BDL	0.56	1.15	22.49	37.83	4.33
F-3080	1.84	2.23	BDL	0.35	1.00	6.68	7.58	1.38	2.83	31.77	1.31	0.85	0.64	10.47	14.53	2.12
F-3081	1.62	1.93	BDL	0.26	0.70	4.72	5.87	0.91	1.19	28.84	0.70	0.26	0.14	7.02	7.47	35.37
F-3082	3.78	4.67	0.27	0.85	1.12	14.67	10.33	6.87	BDL	91.04	0.39	0.37	ND	6.06	ND	4.45
F-3083	9.46	13.42	2.39	2.59	ND	18.38	9.83	15.80	BDL	38.46	0.31	3.67	0.13	3.62	3.36	1.42
F-3084	3.30	3.86	0.26	1.41	167.01	41.49	13.09	5.34	1.62	177.59	ND	0.39	0.13	19.54	175.82	7.20
F-3085	6.86	7.42	0.44	1.34	1.47	75.14	15.86	6.99	0.90	443.32	ND	0.36	0.09	15.56	25.72	5.30
F-3086	11.92	14.82	0.36	2.87	11.01	169.23	20.69	5.81	1.68	328.77	0.91	1.85	ND	6.31	ND	10.54
F-3087	27.68	35.44	2.82	13.77	5.34	89.02	60.88	10.05	1.51	224.55	ND	9.37	0.31	12.23	18.06	NQ
F-3088	6.99	8.71	0.19	2.19	1.07	80.95	15.33	4.59	1.01	312.90	0.26	1.22	0.11	6.07	22.62	11.83
F-3089	2.96	3.40	BDL	0.61	4.59	24.15	3.05	1.88	ND	52.84	0.56	4.27	ND	0.62	2.74	7.87
F-3090	1.41	1.90	BDL	0.74	0.55	15.91	5.78	1.12	BDL	41.88	BDL	1.18	ND	1.56	2.53	9.00
F-3091	0.92	1.22	BDL	0.47	0.41	7.70	2.07	1.09	BDL	24.68	BDL	0.28	ND	BDL	ND	2.40
F-3092	0.45	0.75	BDL	BDL	ND	1.54	1.01	0.65	BDL	12.41	ND	0.42	ND	1.97	1.89	1.07

Concentrations in ng/g wet wgt)																	
Sample ID	Total Chlordanes	oha chlorda	(cis +trans)	endosulfan	ndosulfan I	o,p DDD	p,p DDD	o,p DDT*	p,p DDT	o,p DDE*	p,p DDE	endrin	tachlor epo	heptachlor	cis-nonachlor	trans-nonachlor*	oxychlor
F-3093	1.31	3.07	ND	0.27	0.82	3.96	3.29	BDL	BDL	7.74	ND	0.83	ND	1.16	1.22	2.54	
F-3094	4.93	6.77	0.39	1.25	1.90	22.83	7.61	1.50	0.31	72.11	BDL	2.68	BDL	3.30	ND	9.12	
F-3095	1.56	2.04	BDL	0.70	0.94	17.59	5.63	1.12	BDL	56.70	ND	0.78	ND	2.94	3.26	6.35	
F-3096	1.62	2.48	BDL	0.99	0.18	9.52	6.53	1.27	0.72	45.68	BDL	0.98	ND	7.07	7.51	7.13	
F-3097	7.03	8.62	2.81	1.85	5.50	30.93	28.53	2.30	11.14	17.65	3.03	1.22	1.66	32.95	43.90	17.23	
F-3098	1.30	1.30	1.95	0.80	1.36	5.90	7.05	BDL	11.25	151.54	BDL	0.74	1.26	31.82	67.03	12.86	
F-3099	1.87	2.62	0.29	0.84	0.85	6.58	6.09	0.65	8.91	95.57	0.55	0.86	0.41	24.92	34.06	3.50	
F-3100	1.10	2.13	0.34	1.84	0.33	8.42	7.02	0.81	1.85	55.59	BDL	1.20	0.17	24.45	25.70	4.11	
F-3101	BDL	0.00	BDL	0.33	BDL	BDL	0.97	ND	BDL	37.60	ND	0.80	ND	2.19	3.82	2.37	
F-3102	BDL	0.00	BDL	BDL	BDL	BDL	1.09	BDL	BDL	BDL	BDL	1.66	0.15	0.65	BDL	4.12	
F-3103	5.01	6.32	2.04	1.03	4.15	26.37	15.44	2.91	7.60	125.83	BDL	1.20	1.46	21.90	29.35	6.37	
F-3104	1.67	2.25	0.60	BDL	1.89	4.69	6.20	0.87	2.28	37.36	BDL	0.67	0.21	6.77	8.78	1.70	
F-3105	8.06	12.21	0.53	2.19	0.99	59.73	15.14	2.06	1.61	133.73	BDL	2.11	0.12	15.10	15.33	15.44	
F-3106	1.23	1.69	0.25	0.49	0.22	4.99	2.95	0.95	BDL	16.01	ND	0.28	ND	2.07	2.53	NQ	
F-3107	0.82	1.27	BDL	0.31	0.32	2.95	1.32	BDL	BDL	15.54	BDL	0.49	ND	1.26	1.47	2.53	
F-3108	2.79	3.71	0.97	0.59	0.92	8.73	7.82	1.67	8.76	163.83	BDL	1.23	0.88	30.06	60.88	2.99	
F-3109	5.33	6.74	0.71	1.00	0.71	10.59	16.82	1.94	5.31	135.49	BDL	0.57	0.33	31.90	33.49	5.29	
F-3110	6.91	8.65	0.23	0.50	1.33	6.48	10.21	1.24	3.04	40.53	0.33	0.17	0.15	9.71	11.06	2.97	
F-3111	2.19	2.94	BDL	0.85	0.37	11.04	6.15	1.15	0.31	35.95	BDL	0.92	ND	3.81	4.20	4.14	
F-3112	1.27	1.92	BDL	0.27	0.51	3.49	1.54	0.92	BDL	19.45	BDL	0.49	ND	1.32	1.71	2.60	
F-3113	3.32	3.76	BDL	0.29	1.01	6.99	8.85	2.76	1.15	29.77	0.52	0.50	0.26	7.79	5.48	3.59	
F-3114	4.60	5.48	0.32	0.83	2.90	19.01	13.34	3.48	2.75	83.22	0.69	0.84	0.14	14.46	17.90	6.54	
F-3115	7.70	9.72	0.36	3.75	12.25	181.31	25.94	164.48	6.79	384.84	0.67	2.60	0.17	32.28	104.61	24.08	
F-3116	BDL	0.29	0.19	0.29	0.18	3.77	0.90	BDL	0.87	26.19	BDL	0.51	0.09	3.13	3.74	0.73	
F-3117	3.49	4.31	0.82	3.71	0.55	109.36	14.96	1.38	1.86	197.18	BDL	2.11	0.23	18.94	13.33	12.01	
F-3118	1.41	1.76	2.35	0.47	0.48	2.33	3.81	0.71	BDL	4.54	0.61	0.70	0.09	3.72	1.15	7.74	
F-3119	5.03	5.89	7.74	1.19	0.96	3.95	8.03	1.93	0.33	10.03	BDL	1.76	0.14	8.19	1.38	11.79	
F-3120	1.42	1.71	2.37	0.41	1.24	1.37	3.79	BDL	BDL	9.29	ND	0.34	ND	1.39	1.41	4.65	
F-3121	6.93	9.36	0.66	1.36	2.48	25.77	11.34	33.38	1.54	98.00	1.19	1.63	ND	12.31	23.15	8.06	
F-3122	1.12	1.59	BDL	0.75	2.86	104.61	6.67	17.97	1.04	110.49	BDL	0.42	0.11	9.33	205.87	4.02	
F-3123	17.98	21.97	3.73	0.93	23.18	154.76	33.16	6.96	23.25	356.30	BDL	0.94	2.55	25.28	18.96	7.90	
F-3124	3.74	4.36	BDL	0.32	3.91	20.58	16.37	2.59	5.12	105.94	BDL	0.13	0.78	12.99	15.04	5.33	
F-3125																	
F-3126	5.37	6.44	0.78	0.55	2.99	11.91	11.20	3.06	2.91	65.59	0.48	0.86	0.47	11.17	12.62	8.65	
F-3127	19.27	23.44	1.47	2.48	15.91	55.66	35.78	5.83	14.38	204.06	0.50	1.50	1.51	38.12	33.92	14.38	
F-3128	ND	0.00	ND	ND	ND	ND	BDL	ND	BDL	BDL	ND	BDL	ND	BDL	BDL	0.43	
F-3129	2.82	4.10	0.36	0.64	2.09	10.77	5.68	2.01	1.60	41.31	0.45	0.42	BDL	4.91	6.74	2.99	
F-3130	3.66	4.88	BDL	2.04	0.56	10.25	9.86	1.34	BDL	26.11	ND	1.06	0.08	10.29	1.79	14.33	
F-3131	42.46	62.07	0.47	9.11	2.16	68.65	39.93	4.94	2.14	90.91	BDL	10.28	0.59	37.92	5.55	1.82	
F-3132	8.11	11.43	0.38	4.17	0.81	20.07	18.36	1.50	0.29	50.05	ND	3.69	0.16	11.90	2.53	NQ	
F-3133	BDL	0.00	BDL	BDL	BDL	BDL	0.35	0.84	BDL	BDL	ND	BDL	0.42	ND	BDL	1.89	
F-3134	0.68	0.68	BDL	0.35	0.64	7.58	3.66	3.52	BDL	BDL	ND	0.11	ND	1.82	1.11	1.82	
F-3135	63.72	102.24	0.70	13.79	4.81	120.51	57.12	8.10	1.04	110.68	1.13	15.65	0.70	31.96	5.73	36.75	
F-3165	2.44	3.62	3.70	1.45	1.52	16.42	8.62	2.81	2.03	105.60	0.56	1.10	ND	11.42	3.19	7.52	
F-3166	7.06	9.10	4.26	3.05	5.13	34.85	15.72	3.13	3.04	92.20	0.69	1.69	0.35	15.75	3.85	21.49	
F-3167	0.93	1.45	0.57	0.77	1.36	5.80	3.58	1.91	0.37	ND	0.39	0.35	0.11	2.41	2.59	3.74	
F-3168	2.48	3.89	0.75	1.31	1.78	6.38	3.13	1.67	0.87	16.44	ND	0.54	ND	2.62	2.31	1.67	
F-3169	10.17	17.67	13.44	1.94	3.48	29.26	10.07	0.64	4.16	78.67	ND	2.82	0.64	13.13	5.95	6.22	
F-3170	9.66	14.46	3.13	1.51	3.93	31.01	9.19	2.01	3.11	122.59	ND	1.08	0.31	9.08	5.27	4.38	
F-3171	3.93	6.22	1.01	1.07	1.79	14.09	3.75	1.10	1.70	38.59	BDL	0.55	0.23	5.41	3.38	2.67	
F-3172	68.37	126.94	43.70	4.64	52.83	303.76	53.18	2.23	43.00	363.77	0.55	18.82	5.58	72.41	69.38	22.17	
F-3173	151.53	262.92	16.48	1.62	194.93	1417.85	136.84	1.65	143.19	1919.23	BDL	19.85	5.12	202.61	165.17	35.86	
F-3174	4.36	6.11	1.68	0.49	4.58	16.61	7.37	1.56	1.29	40.39	0.35	0.52	0.20	3.77	1.65	3.63	
F-3175	10.96	16.38	7.57	2.12	12.27	99.04	30.19	3.89	10.88	275.06	0.49	1.83	1.16	37.42	27.18	37.97	
F-3176	14.01	24.46	16.54	1.76	28.72	195.87	19.77	5.12	14.72	163.31	BDL	3.94	ND	22.91	27.65	7.95	
F-3177	43.15	90.71	19.65	3.66	72.14	361.18	37.72	4.38	55.58	522.17	0.51	9.27	9.35	53.91	64.27	12.59	
F-3178	117.10	199.55	22.42	6.00	148.36	983.16	96.13	7.06	58.69	723.07	0.70	16.24	6.60	99.25	93.78	37.49	
F-3179	15.21	28.34	3.42	0.95	17.44	141.30	22.90	0.73	24.55	567.37	0.26	2.54	1.93	42.07	48.89	8.07	
F-3180	8.26	17.39	0.44	0.70	5.77	43.48	12.53	BDL	8.79	90.46	ND	2.06	0.94	31.84	35.95	4.91	

Concentrations in ng/g wet wgt)																
Sample ID	Total Chlordanes	cha chlorda (cis +trans)	endosulfan	ludosulfan I	o,p DDD	p,p DDD	o,p DDT*	p,p DDT	o,p DDE*	p,p DDE	eudrin	tachlor epo	hep tachlor	ors-nonac	hcis-nonachlor*	oxychlor
F-3181	33.36	61.52	1.01	1.00	15.94	126.23	53.19	0.77	8.96	226.13	1.14	1.87	0.86	50.78	15.71	8.72
F-3182	3.03	4.51	BDL	0.52	0.93	8.72	5.86	BDL	2.38	25.21	ND	0.37	0.27	11.06	11.27	2.90
F-3183	6.07	8.93	0.26	2.37	2.17	20.82	1.93	2.51	3.81	55.12	ND	3.92	0.21	20.77	15.34	8.26
F-3184	1.18	2.14	BDL	BDL	0.17	2.24	1.05	ND	0.60	4.82	ND	0.11	0.19	1.71	2.78	0.34
F-3185	0.47	0.79	ND	1.09	0.21	2.51	2.80	0.91	0.87	9.01	ND	0.37	0.09	4.67	4.75	1.56
F-3186	1.45	1.89	0.54	1.11	0.69	5.30	5.95	1.99	ND	9.02	BDL	0.32	ND	3.46	4.65	7.07
F-3187	10.27	20.02	0.81	1.38	3.18	24.94	18.61	1.11	9.24	187.54	ND	1.06	0.65	29.59	29.40	4.72
F-3188	74.76	135.24	1.53	2.48	18.31	186.68	56.80	1.53	9.41	112.89	0.42	4.83	1.77	47.23	12.98	18.57
F-3189	3.75	7.29	0.39	0.87	2.45	11.08	5.26	1.53	1.76	13.64	BDL	0.44	0.23	4.81	4.81	3.98
F-3190	4.90	7.40	0.55	1.40	1.90	12.23	10.06	2.14	1.30	17.11	0.58	0.48	BDL	7.09	4.52	5.29
F-3191	2.08	3.87	0.40	0.90	0.67	3.12	2.10	1.31	0.55	4.05	0.73	0.23	ND	1.75	1.85	0.52
F-3192	4.68	7.63	0.61	1.16	0.97	7.04	5.27	0.63	0.92	9.52	ND	0.41	0.15	3.66	4.19	3.45
F-3193	1.02	1.76	0.29	0.51	1.12	1.66	1.68	0.81	BDL	4.05	BDL	0.19	BDL	0.99	BDL	0.92
F-3194	9.57	14.48	0.50	1.10	0.59	10.60	7.60	0.72	1.50	32.52	ND	0.80	0.21	7.16	2.25	8.55
F-3195	6.22	10.32	0.32	1.37	1.01	10.24	4.55	1.84	0.64	12.26	ND	1.03	0.18	3.60	1.04	2.90
F-3196	15.98	20.90	1.21	2.15	4.61	25.26	22.19	6.21	1.62	67.79	0.62	1.71	0.36	9.46	2.80	21.42
F-3197	23.57	28.87	0.61	2.89	13.04	59.49	74.09	11.11	0.50	ND	BDL	2.13	ND	62.18	48.69	37.04
F-3198	9.87	17.51	0.59	ND	3.82	51.34	23.76	0.85	9.99	305.21	ND	1.04	0.85	33.99	53.92	6.28
F-3199	35.65	62.78	1.54	3.18	23.95	217.60	40.86	1.55	28.64	363.73	0.50	4.66	1.91	41.58	44.83	22.76
F-3200	59.86	111.12	2.63	2.79	26.12	335.57	104.12	1.46	30.47	513.23	0.28	3.64	3.19	90.13	85.38	22.78
F-3201	8.24	18.94	1.72	31.71	4.00	ND	ND	80.48	8.47	227.66	23.06	1.57	0.75	22.02	35.82	NQ
F-3202	85.00	154.94	2.60	5.18	36.69	442.52	90.83	3.45	49.64	634.81	3.44	14.96	3.39	148.02	177.64	26.14
F-3203	74.18	88.25	1.85	6.03	17.13	167.23	94.16	21.13	8.15	314.50	0.65	6.47	1.30	56.75	14.34	54.36
F-3204	8.12	11.81	0.40	0.57	0.50	6.76	4.88	BDL	0.87	19.76	ND	0.70	0.15	4.05	1.45	6.69
F-3205	3.14	3.90	0.64	1.37	0.65	4.40	4.68	1.16	0.60	13.73	BDL	0.76	BDL	3.17	1.25	7.28
F-3206	1.53	2.21	0.47	0.86	0.54	2.95	4.69	1.23	BDL	18.58	BDL	0.36	BDL	2.94	BDL	4.30
F-3207	1.62	2.25	0.43	1.11	0.56	4.90	4.16	BDL	0.77	17.12	0.35	0.59	BDL	2.92	2.39	4.88
F-3208	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	ND	BDL	ND	BDL	BDL	1.51	0.61
F-3209	1.45	1.45	0.31	1.34	0.23	1.22	4.30	1.61	BDL	4.56	ND	0.27	BDL	2.21	BDL	4.08
F-3210	4.96	6.73	0.26	0.68	0.57	1.20	4.20	ND	0.55	6.78	ND	0.24	0.24	1.07	BDL	5.50
F-3211	15.92	26.62	0.58	0.99	0.63	3.16	7.72	1.58	1.16	6.10	0.27	0.46	0.40	9.80	BDL	6.36
F-3212	10.72	17.09	7.19	1.65	4.06	7.17	9.72	2.02	0.72	13.12	0.87	0.47	0.18	3.17	1.31	8.56
F-3213	3.21	4.16	0.39	0.67	0.90	1.02	3.56	2.65	0.66	15.87	0.48	0.28	0.19	4.17	1.51	5.19
F-3214	9.52	12.61	0.51	1.68	1.40	5.53	17.01	2.39	1.29	19.59	BDL	0.66	0.26	9.69	1.68	14.27
F-3215	7.37	10.22	0.58	4.62	1.12	5.76	32.67	5.25	1.70	74.45	2.72	0.56	0.61	17.57	5.35	12.25
F-3216	0.97	1.29	0.48	0.56	0.97	1.92	2.97	7.38	0.53	8.15	1.00	0.18	0.14	2.43	3.27	1.44
F-3217	1.66	3.01	0.69	2.20	0.17	5.34	9.02	0.71	2.12	15.68	0.25	0.56	0.15	9.96	5.44	11.45
F-3218	110.54	176.48	0.94	3.47	6.80	39.97	89.31	3.22	5.91	156.83	0.48	4.78	1.79	57.96	7.81	26.94
F-3219	42.18	70.43	0.83	2.26	4.75	30.21	49.89	1.22	8.91	152.05	0.29	3.19	0.94	42.90	12.05	23.90
F-3220	163.52	226.39	1.54	5.30	9.31	67.25	112.87	1.99	13.11	751.18	BDL	9.04	1.33	60.54	18.38	36.48
F-3221	206.07	311.18	1.77	5.97	16.04	112.26	166.81	2.89	10.19	320.85	0.46	13.54	4.12	108.69	11.86	78.08
F-3222	1.60	2.08	0.62	0.66	0.50	2.28	7.61	1.94	ND	7.26	BDL	1.05	ND	9.14	1.64	11.65
F-3223	1.60	1.87	0.58	0.60	0.25	2.09	3.98	BDL	0.42	5.19	0.27	0.53	0.08	6.49	1.22	14.17
F-3224	1.76	2.32	0.81	0.92	ND	2.54	8.65	0.82	0.60	8.08	ND	0.68	0.12	16.03	2.24	13.37
F-3225	23.33	41.52	9.33	1.81	9.52	36.15	23.66	1.63	42.41	107.43	0.29	6.15	1.53	65.35	97.64	14.92
F-3226	21.95	35.96	4.32	2.29	5.71	26.88	20.60	1.96	14.97	92.56	0.32	5.05	2.14	57.27	47.70	12.73
F-3227	41.48	64.86	12.01	2.46	8.19	38.28	53.38	ND	30.49	229.34	0.25	8.33	2.91	140.73	87.82	46.52
F-3228	1.47	2.91	1.10	0.83	BDL	3.78	2.67	1.27	1.22	4.28	BDL	0.71	BDL	4.19	2.41	3.34
F-3229	24.42	38.93	3.68	3.28	1.07	14.02	20.01	1.57	5.80	28.02	ND	3.38	0.47	34.10	8.82	32.29
F-3230	17.37	31.06	17.93	2.00	6.40	24.80	20.80	2.48	31.41	16.03	BDL	7.29	3.71	89.85	107.61	11.39
F-3231	41.72	75.32	25.60	3.35	13.55	54.47	41.38	3.47	30.37	176.21	0.43	10.83	3.37	86.84	65.79	29.63
F-3232	3.61	5.20	3.31	0.67	1.52	4.43	5.42	2.18	0.87	9.27	BDL	0.96	0.09	4.81	2.68	4.26
F-3233	1.61	2.35	2.48	BDL	0.88	1.81	3.29	1.17	4.01	3.94	BDL	0.48	ND	2.46	3.17	2.93
F-3234	2.39	3.83	0.57	0.25	0.21	1.14	1.73	BDL	0.41	1.90	BDL	0.48	BDL	2.25	BDL	3.40

Total PCBs for individual specimens, as estimated by different methods of handling estimates of congener concentrations below the detection limit for ea

Location	Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Total PCB Mid	Total PCB Min	Total PCB Max
"Hopkins Pond"										
	Ameiurus nebulosus	brown bullhead								
			M	21	110.2	F-3021	0.71	51	49	54
Atlantic Ocean, Asbury Park to Atlantic City										
	Morone saxatilis	striped bass								
			U	68.7	3400	F-3078	0.80	290	288	291
			F	69.2	3400	F-3077		158	155	161
			M	71.5	3300	F-3007	0.86	90	86	93
			M	75.4	4700	F-3079	2.55	825	825	825
			M	80.8	5300	F-3080	1.47	335	333	337
			F	88.2	6500	F-3081	3.80	201	198	204
	Pomatomus saltatrix	bluefish								
			M	66.2	2874.2	F-3071	13.67	401	400	402
			M	66.22	2700	F-2853	10.39	663	662	664
			M	68.2	2809.6	F-3067	5.50	393	391	395
			F	76.8	4100	F-3068	13.19	667	667	670
			M	82	4950	F-2855	17.27	784	784	785
			M	82.6	5500	F-2854	25.82	521	519	524
			F	83.6	6200	F-2856	22.30	541	540	542
			M	84.9	5800	F-3058	14.27	1193	1193	1195
Cape May										
	Morone saxatilis	striped bass								
			M	81.4	6300	F-3124	1.44	498	497	501
			F	89.6	7100	F-3125	2.37	266	264	268
			F	91.3	8200	F-3126	6.83	381	380	383
			F	94.4	7700	F-3127	4.02	1092	1092	1094
			F	100.5	8800	F-3129	0.91	183	180	188
			F	125.77	22500	F-2858	5.49	477	475	478
	Pomatomus saltatrix	bluefish								
			M	45.1	907.1	F-3065	7.48	207	206	209
			F	63	2364.9	F-3066	10.53	1038	1038	1039
			M	86.1	5800	F-3012	6.38	419	417	421
			M	87.5	5900	F-3059	10.98	1118	1117	1120
			F	88.7	6800	F-3060	14.85	912	911	914

							Total PCB		
Location Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Mid	Min	Max
		M	88.7	6300	F-3069	13.69	900	899	902
		F	90.9	6400	F-3015	5.07	359	356	363
Park									
Morone saxatilis	striped bass								
		F	73	4150	F-2991	4.41	386	385	389
		F	73.3	3800	F-2993	1.24	231	227	235
		F	73.6	4450	F-3004	9.28	561	560	562
		M	73.7	3700	F-2992	0.56	306	304	308
		F	76.4	4450	F-2995	3.68	459	457	462
		F	77.9	4700	F-3005	4.63	498	497	500
		M	89.6	7500	F-2996	4.62	518	517	520
		F	91.5	7850	F-3008	4.43	865	864	866
Pomatomus saltatrix	bluefish								
		F	67.1	2400	F-3009	3.45	503	500	506
		M	67.2	2350	F-3014	3.40	645	643	649
		F	73.7	3500	F-3051	4.30	386	386	387
		F	73.8	2950	F-3013	2.32	280	278	284
		F	76.5	3400	F-3054	1.71	230	229	233
		F	83.2	4100	F-3053	2.45	1034	1033	1035
		F	86.3	4500	F-3055	0.75	285	282	290
		F	86.7	4900	F-3052	4.29	1331	1330	1333
Cohansey River									
Anguilla rostrata	American eel								
			51.1	275.8	F-3094	15.86	106	105	115
			53.5	323	F-3090	6.89	71	69	82
			58	224.7	F-3091	0.96	51	49	62
			59.1	416.1	F-3089	13.12	98	97	107
			60.6	407.9	F-3095	3.96	88	86	98
Evans Pond									
Ameiurus nebulosus	brown bullhead								
		M	26.1	232.7	F-3044	1.37	64	61	69
		F	26.4	264.3	F-3043	1.11	27	23	35
		M	28.4	279.6	F-3045	0.58	18	15	29
Cyprinus carpio	common carp								
		F	43.2	1170.1	F-3046	6.13	219	218	222
		F	47	1536.6	F-3047	1.96	160	159	164

							Total PCB		
Location Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Mid	Min	Max
		F	47.2	1526.5	F-3048	1.89	122	119	126
		F	51.2	2271.3	F-3050	4.96	577	576	578
		M	52.3	2175.4	F-3049	6.06	1052	1052	1053
Lepomis macrochirus	bluegill								
		M	15.3	65.2	F-3042	0.42	37	33	43
		F	15.4	57.9	F-3041	0.32	13	6	23
Cooper River Lake									
Ameiurus nebulosus	brown bullhead								
		M	23.8	153.2	F-3204	1.03	48	44	54
		F	25.2	205.4	F-3194	1.44	60	57	66
		M	28.9	341.1	F-3195	1.50	28	24	36
Cyprinus carpio	common carp								
		U	48	1704.2	F-3202	7.84	1272	1271	1273
		U	49.1	1662.5	F-3198	2.13	816	814	817
		U	52.5	2127.7	F-3199	7.26	897	896	898
		F	56.4	2448.1	F-3201	4.46	467	466	468
		U	56.5	2384.3	F-3200	4.55	1320	1320	1321
Lepomis macrochirus	bluegill								
		F	15.6	92.5	F-3207	0.75	45	41	51
		U	15.9	100.7	F-3205	1.18	43	39	49
		M	16.2	95.9	F-3206	0.85	41	37	48
Micropterus salmoides	largemouth bass								
		F	33.6	670.5	F-3196	0.12	125	123	130
		M	38.6	1074.3	F-3197	1.05	2679	2678	2682
		F	44.5	1497.7	F-3203	2.48	506	505	508
May									
Morone saxatilis	striped bass								
		M	73.9	4800	F-3098	4.49	1267	1267	1268
		F	74	4500	F-3006	4.34	1281	1280	1282
		F	74.3	4600	F-2994	3.59	406	405	408
		F	75.6	4500	F-3099	4.59	573	572	574
		M	80.8	6100	F-3097		1028	1027	1029
		F	92.7	8400	F-3113	4.80	200	199	203
		F	97.2	11000	F-3114	4.92	448	446	451
Pomatomus saltatrix	bluefish								
		F	48	889.7	F-3110	0.23	409	407	413

							Total PCB		
Location Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Mid	Min	Max
		F	53.5	1023.7	F-3025	0.33	1019	1017	1022
		M	76.7	3300	F-3109	3.85	918	917	921
		M	87.1	5700	F-3108	10.16	914	913	916
Delaware River, Above Trenton									
Anguilla rostrata	American eel								
		F	41.8	185.4	F-3019	15.36	392	390	393
			49.8	232.1	F-3121	14.81	272	271	277
			58.3	331	F-3115	17.25	668	667	671
			58.7	418.6	F-3116	13.28	60	56	65
			70	683.9	F-3122	4.19	263	259	268
			77.1	569.7	F-3117	22.07	238	236	241
National Park									
Anguilla rostrata	American eel								
		F	37.9	115.3	F-3018	9.19	1994	1994	1995
		M	43.1	161.5	F-3017	0.72	397	396	399
		F	57.7	359.1	F-3001	10.96	579	576	581
Morone saxatilis	striped bass								
		M	73.7	3800	F-3104	0.87	295	292	297
		F	78.8	5900	F-3103	6.42	797	797	799
Anguilla rostrata	American eel								
		F	52	283.9	F-3082	1.22	221	221	231
		F	57.9	399.6	F-3083	9.79	119	116	125
Maskells Mill Lake									
Chelydra serpentina	turtle								
		U		4600	F-3128	0.19	13	9	26
Maurice River									
Anguilla rostrata	American eel								
			36.8	98.6	F-3105	17.10	396	395	401
			37.1	85	F-3106	3.48	76	72	84
			45.8	182.5	F-3107	3.40	52	48	57
			54.8	331.9	F-3112	2.76	64	60	68
			56.9	326	F-3111	4.66	137	135	144
Mullica River									
Anguilla rostrata	American eel								
		M	29.7	149.6	F-3002	2.48	187	183	191
			39.5	127.1	F-3101	0.15	154	151	164

Location	Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Total PCB Mid	Total PCB Min	Total PCB Max
				42.5	157.3	F-3093	1.92	47	44	54
				45.7	173.5	F-3100	13.56	192	189	197
				46.3	199.1	F-3092	0.08	62	58	72
				69	633.3	F-3096	6.11	149	147	156
Navesink River										
	Anguilla rostrata	American eel								
			M	35.6	92.4	F-2998	6.15	271	268	274
			F	40.4	131.1	F-3000	2.01	116	112	120
			M	47.1	185.4	F-2999	3.98	277	275	279
Newton Lake										
	Ameiurus nebulosus	brown bullhead								
			U	23.7	165.8	F-3210	1.22	55	53	59
			F	30.1	338	F-3212	2.23	67	65	70
			F	30.3	331	F-3211	1.13	22	18	30
	Cyprinus carpio	common carp								
			M	52.7	1965.7	F-3219	4.60	364	363	367
			F	54.2	2632.8	F-3216	7.31	135	132	137
			M	54.5	2233.6	F-3218	0.81	374	373	377
			F	61.3	3600	F-3220	3.52	613	612	616
			F	63	3600	F-3221	9.21	523	522	525
	Lepomis macrochirus	bluegill								
			M	15.4	76.8	F-3217	2.25	64	62	67
			F	16.8	110.1	F-3208	2.13	43	39	49
			F	16.9	116.4	F-3209	1.50	26	23	32
	Micropterus salmoides	largemouth bass								
			F	35.7	616	F-3213	0.39	54	50	60
				37.8	866.2	F-3214	0.17	76	74	80
			M	42.9	1404.2	F-3215	0.81	238	238	240
Passaic River at Elmwood Park										
	Ameiurus nebulosus	brown bullhead								
			U	17.5	57	F-3234	2.54	30	26	36
			M	28.3	339.3	F-3228	1.80	45	43	51
			F	29.4	349.4	F-3229	2.25	261	260	264
	Cyprinus carpio	common carp								
			M	48.7	1642	F-2845	4.86	1099	1099	1101
				51.7	2084.6	F-3225	4.36	2238	2238	2238

Location	Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Total PCB Mid	Total PCB Min	Total PCB Max
			M	53.7	1838.2	F-2847	1.13	311	309	313
			F	54.1	2150	F-2844	1.89	482	482	483
			F	54.3	2595.9	F-3226	3.83	667	667	668
			F	57.6	2915.8	F-3227	7.91	1331	1331	1333
	Lepomis auritus	redbreast sunfish								
			F	15.1	72.3	F-3222	0.28	67	65	76
			F	15.7	79.1	F-3223	16.52	52	50	57
			F	16	91.1	F-3224	0.52	69	66	75
	Micropterus salmoides	largemouth bass								
			F	34	679.9	F-3036	0.66	120	119	123
			F	39.3	1079.9	F-3038	1.10	250	249	252
			F	44	1384.5	F-3039	0.73	150	149	152
Passaic River at Pompton										
	Cyprinus carpio	common carp								
			F	49.6	1844	F-2846	5.60	775	775	776
			M	50.3	2023.7	F-3040	7.43	946	946	948
			F	51.2	2142.5	F-3231	5.61	969	969	971
			F	51.3	2396.7	F-3230	8.74	957	957	957
	Lepomis auritus	redbreast sunfish								
			U	14.2	62.8	F-3118	0.43	49	46	55
			U	14.3	65.9	F-3119	0.92	66	63	71
			U	16.7	100.2	F-3120	0.24	56	53	61
	Micropterus salmoides	largemouth bass								
			M	27.9	352.9	F-3233	0.36	112	109	117
			F	29.8	401.3	F-3232	0.56	53	51	58
			F	34.6	699.5	F-3037	0.68	56	53	63
Pennsauken River at Forked										
	Ameiurus catus	white catfish								
			F	30.6	335.8	F-3168	0.66	51	50	61
			U	36	655.9	F-3169	0.16	178	177	185
			U	37.8	632.6	F-3170	1.96	262	260	264
			M	42.2	930.7	F-3171	0.25	94	91	99
	Chelydra serpentina	turtle								
					4200	F-3102	0.73	27	21	37
	Cyprinus carpio	common carp								
			M	50.6	1986.2	F-3179	4.45	769	768	771

Location	Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Total PCB Mid	Total PCB Min	Total PCB Max
			F	55.1	2608	F-3177	11.53	1087	1087	1088
			M	56.7	2712.8	F-3172	14.89	773	773	775
			U	57.6	2930.6	F-3178	11.79	1294	1294	1296
			M	62.7	3750	F-3173	19.56	2775	2775	2777
	Lepomis gibbosus	pumpkinseed								
			M	15	67.7	F-3167	0.35	84	81	91
			F	18.6	163.5	F-3166	2.37	203	202	208
	Lepomis macrochirus	bluegill								
			M	17.4	110.6	F-3165	1.66	62	59	67
	Micropterus salmoides	largemouth bass								
			M	17.4	110.6	F-3165	1.66	62	59	67
			M	30.2	442.8	F-3176	2.18	331	330	334
			M	30.6	431.4	F-3174	0.65	75	72	80
Pompton lake-Delta										
	Chelydra serpentina	turtle								
					16000	F-3134	0.38	15	11	28
					16000	F-3134	0.38	15	11	28
Raccoon Creek										
	Anguilla rostrata	American eel								
			U	41.3	165.9	F-3084	0.54	2839	2836	2844
				47.4	217	F-3085	0.72	870	868	876
				55.5	346.5	F-3086	4.47	744	743	752
				60.8	501.5	F-3087	8.29	566	565	573
				69.5	824.1	F-3088	4.06	653	651	658
	Morone saxatilis	striped bass								
			M	67	3119.5	F-3123	1.68	865	864	868
Raritan Bay at Rt. 1										
	Anguilla rostrata	American eel								
			F	45.1	187.6	F-3034	13.73	1935	1933	1937
			M	47.6	221.3	F-3028	9.13	1258	1256	1259
	Morone americana	white perch								
			M	16.1	56	F-3027	3.94	384	382	387
			F	18.1	82.2	F-2838	2.97	794	793	796
			M	18.6	90.5	F-3026	4.48	443	441	446
			M	19.2	93	F-2837	1.95	874	873	876
			F	22	162.7	F-2836	1.57	878	878	879

							Total PCB		
Location Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Mid	Min	Max
Raritan Bay upper									
Pomatomus saltatrix	bluefish								
		U	23.7	132.3	F-3063	2.03	200	199	205
		U	25	164.8	F-3061	2.14	309	308	311
		U	25.2	184.9	F-3064	1.90	319	318	321
		U	25.6	183.8	F-3062	3.07	354	353	358
Raritan River lower									
Pomatomus saltatrix	bluefish								
		F	55.2	1762	F-3072	7.12	506	505	507
		F	55.2	1762	F-3072	7.12	506	505	507
		M	57.9	1836.2	F-3076	2.36	205	204	209
		M	57.9	1836.2	F-3076	2.36	205	204	209
		M	63.6	2191.5	F-3075	2.80	263	262	266
		M	63.6	2191.5	F-3075	2.80	263	262	266
		M	63.6	2329	F-3074	4.99	583	582	585
		M	63.6	2329	F-3074	4.99	583	582	585
		M	66.7	2750	F-2857	2.41	452	451	453
		M	66.7	2750	F-2857	2.41	452	451	453
		M	67.8	2455.6	F-3073	3.13	473	473	474
		M	67.8	2455.6	F-3073	3.13	473	473	474
Stewart Lake									
Ameiurus nebulosus	brown bullhead								
		F	25.4	182.65	F-3184	0.08	25	22	32
		F	27.3	250.4	F-3191	1.19	17	12	26
		U	31.1	409.5	F-3192	3.09	38	34	45
Chelydra serpentina	turtle								
				3500	F-2850	0.29	30	26	36
Cyprinus carpio	common carp								
		F	43.8	1133.6	F-3189	1.73	44	40	51
		M	49.3	1681.1	F-3188	6.26	235	235	238
		M	54.5	2135	F-3187	2.38	465	464	466
		M	59.8	2808.2	F-3181	5.04	527	526	531
		F	65.8	3850	F-3180	0.28	233	231	236
Lepomis macrochirus	bluegill								
		U	15.9	79.7	F-3185	0.54	58	55	63
		U	16.4	90.4	F-3186	0.80	28	27	39

							Total PCB		
Location Scientific Name	Common Name	Sex	Total Length cm	Total Wet Weight g	Sample ID	Lipid%	Mid	Min	Max
Micropterus salmoides	largemouth bass								
		M	35.9	632.5	F-3190	0.48	52	49	59
		M	38.9	934.9	F-3182	0.18	83	80	89
		F	43.5	1492.3	F-3183	0.16	139	137	143
Pomoxis nigromaculatus	black crappie								
		F	18.3	74.1	F-3193	0.46	20	15	28
Strawbridge Ponds									
Chelydra serpentina	turtle								
				4700	F-2851	0.17	45	38	52
Cyprinus carpio	common carp								
		M	59	3061.8	F-2946	7.26	893	892	894
Ictalurus punctatus	channel catfish								
		F	44.5	1082.3	F-3022	2.31	302	301	304
Toms River									
Anguilla rostrata	American eel								
			39.4	116.7	F-3130	1.97	55	50	63
			44.9	165.8	F-3135	9.50	201	199	207
			56.6	628	F-3131	13.44	197	196	202
			70.3	803.4	F-3132	5.99	76	73	82