Contaminated Monitoring Report for Seafood Harvested in 2008 from the New Bedford Harbor Superfund Site

by

Massachusetts Department of Environmental Protection

and

Massachusetts Division of Marine Fisheries

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1. Introduction

This report documents the levels of PCBs (polychlorinated biphenyls) measured in edible seafood species caught in New Bedford Harbor and surrounding Buzzards Bay in southeastern Massachusetts in 2008. This seafood monitoring program is part of the ongoing PCB cleanup program for the New Bedford Harbor (NBH) Superfund Site, and was a collaborative effort involving the MA Department of Marine Fisheries (DMF), the MA Department of Environmental Protection, (MassDEP) and the U.S. Environmental Protection Agency-New England Region (EPA).

Due to the identification of high PCB levels in area seafood, the MA Department of Public Health in 1979 promulgated regulations restricting seafood consumption in three closure areas in and around NBH as shown on Figure 1 (MADPH, 1979). NBH was subsequently listed as a Superfund site in 1983. Per a 1998 Record of Decision (ROD) (EPA, 1998) for the site, approximately 880,000 cubic yards (cy) of PCB-contaminated sediments and soils are to be removed. As of December 2008, approximately 150,000 cy of the most highly PCB-contaminated sediments and shoreline soils have been remediated (including all pilot studies and hot spot dredging volumes). Each year about 20,000 cy to 25,000 cy of sediments are expected to be dredged at the current rate of funding. Consistent with the 1998 ROD, this seafood monitoring program will aid in the evaluation of the overall effectiveness of the harbor cleanup, as well as assist in the implementation of institutional controls and seafood restrictions.

2. Seafood Monitoring Program Design

Based on previous investigations and risk assessments performed for the NBH site, a variety of species were selected for this monitoring program that are considered locally caught seafood; are generally available for field collection; and which bracket potential worse case tissue levels **(**MassDEP, 2008**)**. These species include lobster (*Homarus americanus*), blue crabs (*Carcinus maenas*), quahog (i.e., hard shelled clam, *Mercenaria mercenaria*), alewife (*Alosa pseudoharengus*), American eel (*Anguilla rostrata*), black sea bass (*Centropristes striatus*), winter flounder (*Pseudopleuronectes americanus*), and scup (*Stenotomus chrysops).* The goal of this seafood monitoring program is to acquire annual collections of these species in sufficient numbers from all three closure areas to enable statistical comparisons between them, but with the understanding that some species may not necessarily be caught in sufficient numbers every year.

To meet this goal, the monitoring design calls for five composite samples for each species from each of the three closure areas. Based on previous site sampling experience, modifications have been made to the original sampling approach. Because there has been no significant change since 2002 in the PCB concentration levels to below the regulated restrictions (MADPH, 1979), the species collected for the most part in 2008 were ones that do not currently have restrictions that may pose a risk, if consumed. Thus, lobster, blue crab, eel, and quahog in Area I were not samples in 2008 because their PCB concentrations were significantly above the seafood restrictions. However, additional sampling did include a

second post-spawn quahog event and bluefish. The rest of the species collected were the same as the previous year and included pre-spawn quahog, black sea bass, alewife, and scup. Each composite sample consists of five legally harvestable organisms, except for bluefish in which three legally harvestable organisms collected. For quahog, the composite sample consists of one dozen legally harvestable organisms. The number of composites was determined according to Sokal and Rohlf (1995) using the coefficient of variation (c.v.) from the DMF's 1995 lobster sampling program in Area III (mean = 1.3 ppm, standard deviation = 0.28, c.v. = 22%). The significance level used was 5% and the probability that the significance will be found if it exists was set at 90%. Based on the known levels of PCBs in NBH seafood, there is a high likelihood of detecting PCB concentrations that are 50% different between each closure area.

In addition to comparing the results of this monitoring to past and future seafood monitoring results, the results of this seafood monitoring program will be compared to the current U.S. Food and Drug Administration's (FDA's) criteria for PCBs in commercial seafood of 2 parts per million (ppm). It was exceedances of the FDA criteria in NBH seafood which prompted promulgation of the state's seafood closure areas in 1979 (the FDA criteria at that time was 5 ppm). In addition to comparisons to the current FDA level, and as explained in the 1998 ROD, EPA will compare the results of the seafood monitoring program to a site-specific threshold of 0.02 ppm PCBs. This 0.02 ppm PCB level was developed to ensure the protection of local residents and sport fishermen whose seafood consumption might include seafood caught mostly if not entirely from NBH.

3. 2008 Field Collection

The DMF field sampling program included the collection of quahog, black sea bass, scup, alewife and bluefish. The Sampling Report for all species collected in 2008 is in Appendix C attached.

The collection of quahog was done pre-spawn in June, 1st post-spawn in August, and 2nd post-spawn in October (Figure 2). Quahogs were collected using a rake from two of the three seafood closure areas. Six stations were located in Area 2 and four stations were located in Area 3.

Black sea bass was harvested by fish pots during June to September (Figure 3). Alewife were collected using nets in May (Figure 4). Scup were collected using pots in June to July (Figure 5). Bluefish were collected using rod and reel in September and October (Figure 6).

Despite considerable effort to collect species according to the monitoring program design, all species were not obtained in all three closure areas as originally planned, such as, flounder.

Complete collection information including the dates fished, identification

information, species, station identification, latitude and longitude, and collection method are included on the Field Collection Forms in Appendix C. All samples were delivered frozen to Alpha Woods Hole Labs (Alpha) in Raynham, MA for analysis.

4. Analytical Chemistry

The first step in the analytical process for the quahog samples was the compositing, twelve individual samples from each location were combined to form one composite sample per location.

The seafood samples were analyzed for five PCB Aroclors and 136 PCB congeners by GC/MS-SIM (gas chromatography/mass spectrometry-selective ion monitoring) based on EPA Methods 680 and 8270C. Both the Aroclor and the congener approach were used to allow comparisons with previous site data of both types. The five Aroclors measured were Aroclors 1232, 1242, 1248, 1254 and 1260. The 136 congeners measured included the eighteen NOAA (National Oceanic and Atmospheric Administration) list congeners and the twelve WHO '98 (1998 World Health Organization) list of dioxin-like congeners. Two congeners, BZ #105 and #118, appear on both lists. The NOAA congener list was used by the MA DMF in its analysis of Area III lobsters from 1988 - 1998, while Aroclors had been used previous to this. The NOAA list typically represents approximately 45% of the total PCB in marine tissue (NOAA, 1993).

The congeners quantitated in this effort are listed in the New Bedford Harbor Superfund Site Quality Assurance Project Plan **(**MassDEP, 2008a**).** The WHO '98 congeners were included to enable the evaluation of risks to human health due to the presence of any dioxin-like PCB congeners, if deemed necessary.

Tissue from the collected specimens were filleted, sub-sampled and/or composited as necessary for sample homogenization, extraction and analysis. For each group, approximately five grams of wet sample tissue was homogenized using a tissumizer. Samples were then extracted using EPA method 3570 Microscale Solvent Extraction (MSE) techniques (spin extraction with acetone/methylene chloride in a sealed vessel).

The extract was then cleaned up to remove the lipid portion and separate the PCB Analytes from the lipid. Following sample cleanup, extracts were dried and concentrated using either the Kuderna-Danish (K-D) or TurboVap method, brought up to final volume and analyzed. Extract cleanup was performed using Gel Permeation Chromatography (GPC) and Sulfuric Acid Cleanup. Silica Gel Cleanup was also employed as appropriate, based on the sample extracts.

Sample analysis using GC/MS-SIM allowed identification and quantitation of both congeners and Aroclors using selected PCB congeners from BZ1 to BZ209. The identification of the specific congeners was accomplished by comparing their mass spectra with the electron impact spectra of the calibration standards. Congener concentrations were determined using mean relative response factors from a multi-level calibration curve.

Response factors for congeners were determined relative to internal standard technique. Aroclor identification was performed using pattern recognition from the GC/MS-SIM chromatogram and comparing responses of three to five discrete peaks unique to each Aroclor. Aroclor concentrations were determined by calculating the concentration of each corresponding peak in the sample chromatogram and the three to five resulting concentrations are averaged to provide a final result for the sample. A multi-point curve was used for the individual congeners to demonstrate the linear range of the instrument. Continuing calibrations assured linearity remained for the duration of the analysis. A single point calibration was used for the Aroclors utilizing the congener calibration. Laboratory SOPs are available in the Quality Assurance Project Plan Revision 3 (MassDEP, 2005) should further details on chromatographic conditions, quality control criteria, and other elements of the analysis be needed. While lipid content was reported, the wet weight PCB concentrations reported herein are not lipid normalized.

The data validation summary for the laboratory analysis is presented in Appendix B.

5. Results and Discussion

As with previous studies of sediments, water column, seafood, and air at the NBH Site, the current data set demonstrates a generally decreasing trend (north to south) of PCB levels in locally caught seafood. In other words, tissue PCB levels decrease proportionally with the distance from the primary source of PCBs to the upper harbor (the Aerovox facility). Figures 7 through 11 graphically summarize the current data, and Tables 1 through 6 tabulate the totals and averages of the congener and Aroclor sample results.

PCBs are a group of similar organic molecules featuring a “figure-eight” structure of two bonded benzene rings with chlorine atoms attached at up to ten different attachment sites. Theoretically, up to 209 different PCB congeners (or molecular variations) are possible, yet only about 120 of these are found in the natural environment. Furthermore, NOAA has demonstrated that 18 specific congeners are the most pervasive and generally make up almost half of the PCB mass in marine tissues. In addition, WHO considers 12 specific dioxin-like congeners to present the greatest risk to human health. As noted above in section 4, two congeners, BZ #105 and BZ #118, are included in both the NOAA and the WHO congener sets.

Throughout their industrial use in the U.S., PCBs were sold under the Aroclor trade name. Aroclors are a mixture of congeners, and different Aroclor types consisting of different congeners and chlorine levels were manufactured (e.g., Aroclor 1242 had 42% chlorine, and Aroclor 1260 had 60% chlorine). For this monitoring effort, both Aroclors and congeners (136 including the 28 congeners of the combined NOAA and WHO subsets) were measured to assist in the comparison with previous site data, as well as to further understand the similarities and differences of these two analytical approaches.

In the current data, all species, except for scup, the congener and Aroclor data generally had good correlation. For scup, the PCB results indicate that the Aroclor approach

greatly under-estimates the true total PCB concentration. All ten locations for scup had PCBs detected using congeners, but all locations had non-detect for Aroclors.

There was an average increase of about 12% (112% - 100%) post-spawn 1 and about 67% (167% - 100%) post-spawn 2 in PCB congener concentration in quahog after spawning using only the detected values as shown in Table 4. There was an average 10% reduction (100% - 90%) post-spawn 1 and an average 67% increase (167% - 100%) post-spawn 2 in the lipid concentration for the quahog after spawning. In the previous sampling round in 2007, there was a decrease in both the PCB and lipid ratios between pre and post-spawn quahogs of 22% and 39% respectively.

Overall, the current data set indicate continued levels of PCBs in NBH area seafood above the 1998 ROD's site-specific goal of 0.02 ppm. Alewife (Area I, congener basis = 4.6 ppm) and bluefish (Location 2A, Aroclor basis = 2.0 ppm) were found to be elevated equal or above the FDA level of 2 ppm. The highest PCB level reported for this data set was 4.6 ppm (congener basis) in Area I alewife (congener basis = 4.6 ppm, station 1-A, see Table 5).

It should be noted that these PCB levels do not apply to seafood caught by the harbor's commercial fishing fleet, as this seafood is caught significantly further offshore than the three PCB closure areas at the New Bedford Harbor Superfund Site. However, these results do indicate the need to continue the outreach program to inform and educate the local communities and recreational sport fishermen about the fishing bans. The current data also highlights the limitations of using the Aroclor analytical approach for monitoring locally harvested seafood.

Finally, in comparison to historic PCB monitoring of NBH area lobster dating to the mid 1980s, the current data set shows significantly decreased levels over time. This historic lobster PCB data can be found in the 2002 seafood monitoring report "Contaminated Monitoring Report for Seafood Harvested in 2002 from the New Bedford Harbor Superfund Site," available at www.epa.gov/ne/nbh under "Technical Documents." Also, because this seafood sampling program has been on going since 2002, the previous years reports can be found at the EPA's web site as well.

6. References

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FIGURES

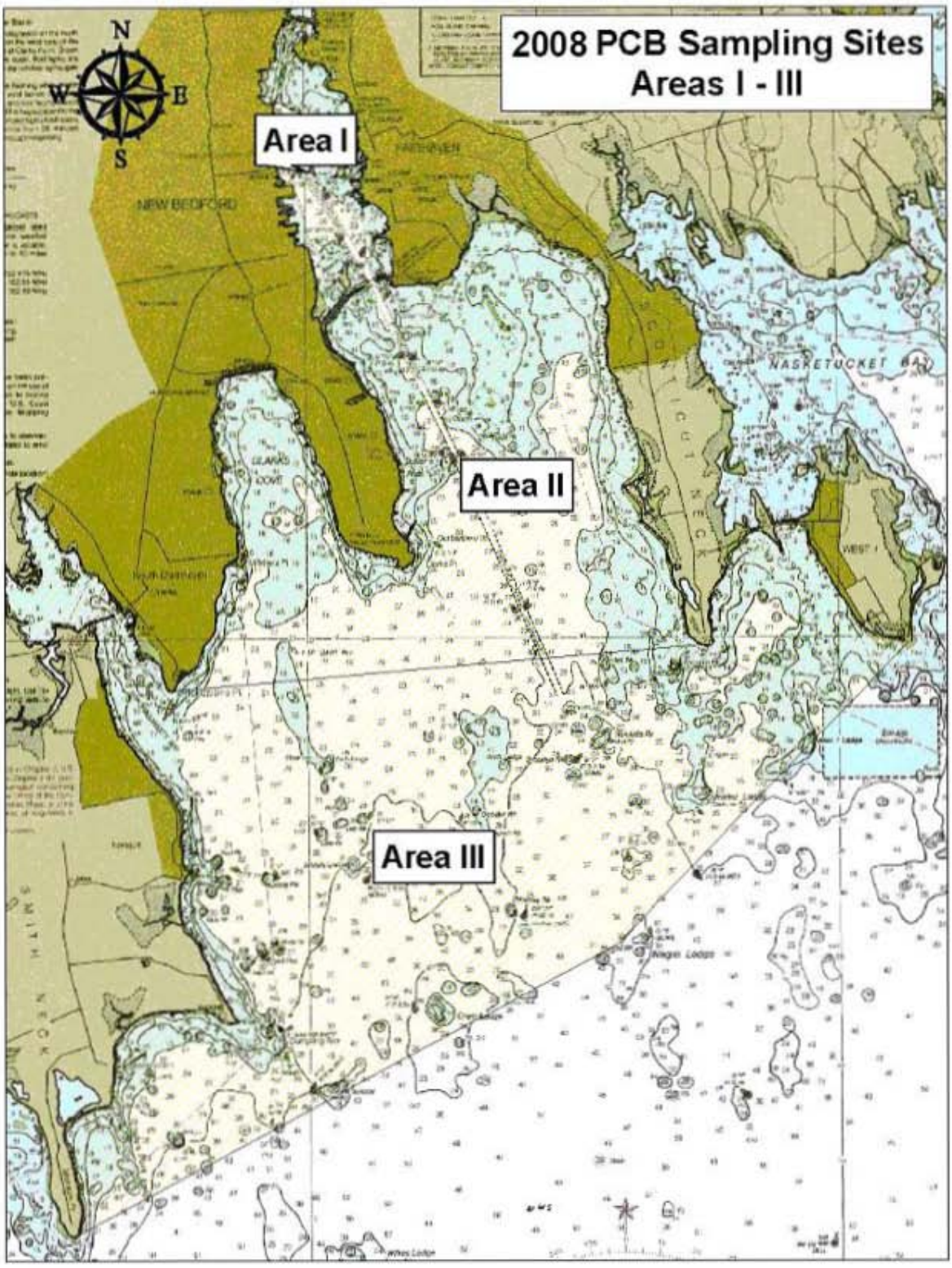


Figure 1 Fish Closure Areas I to III

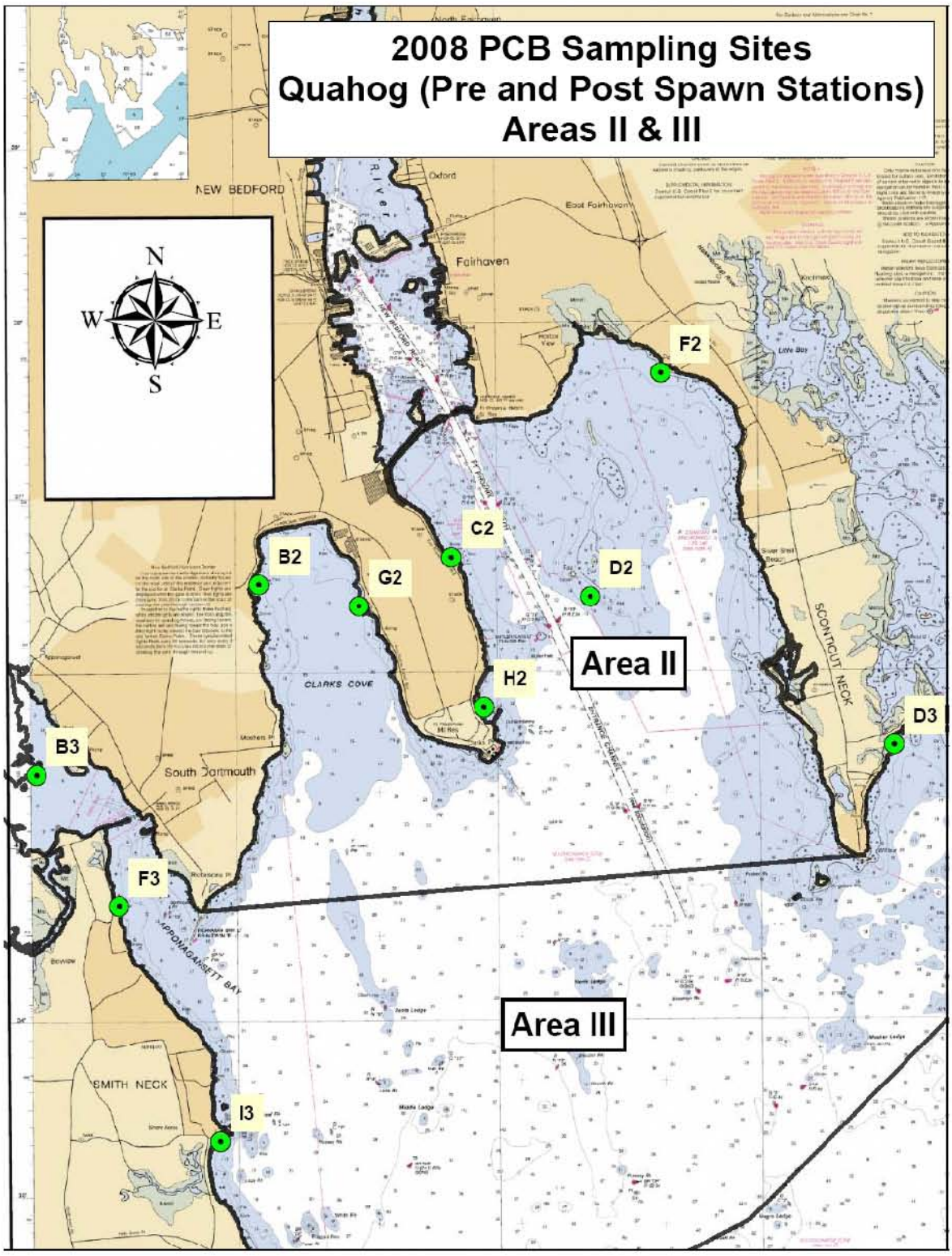


Figure 2 Quahog (Pre and Post-Spawn) Sample Locations - Area II & III

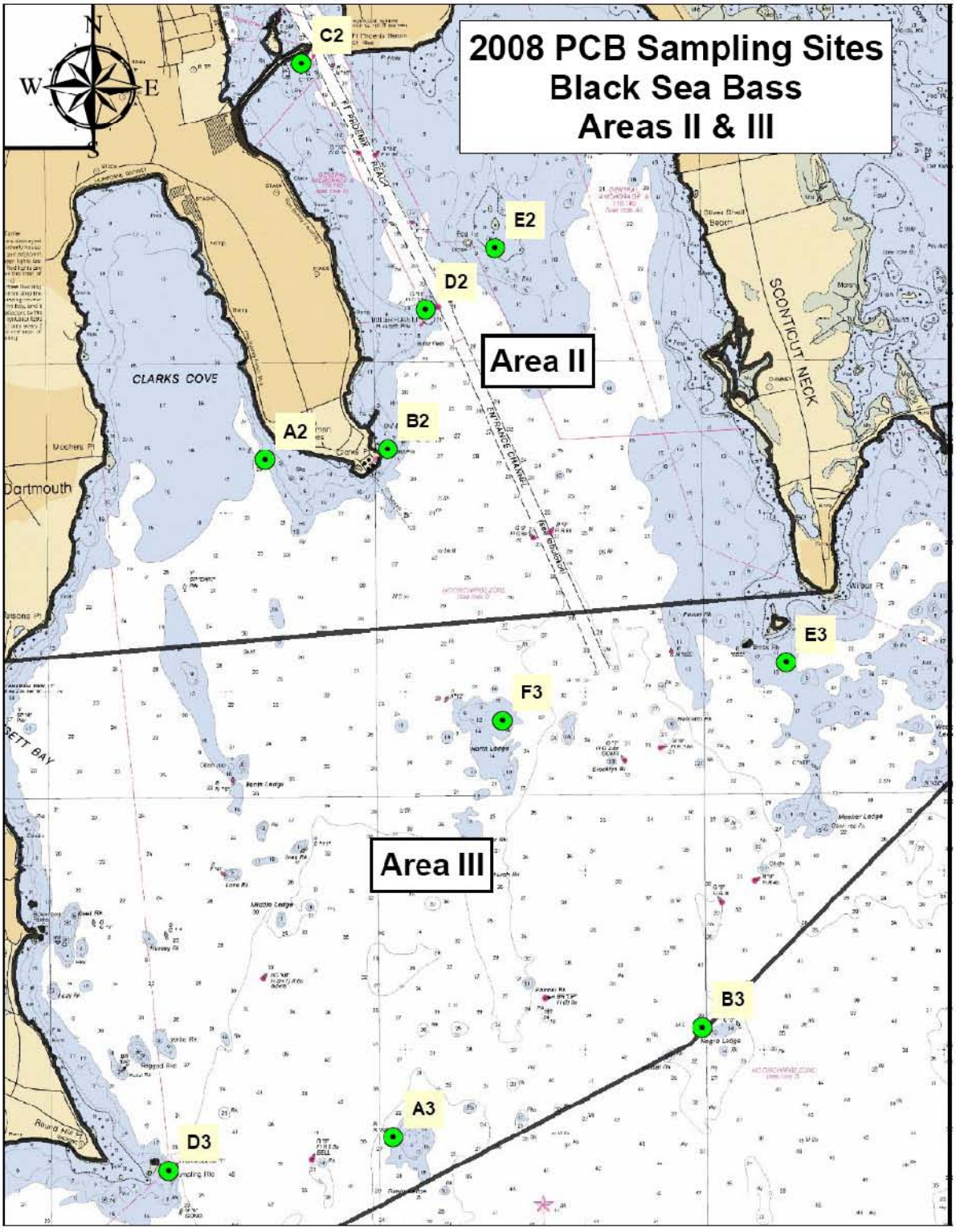


Figure 3 Sea Bass Sample Locations - Area II & III

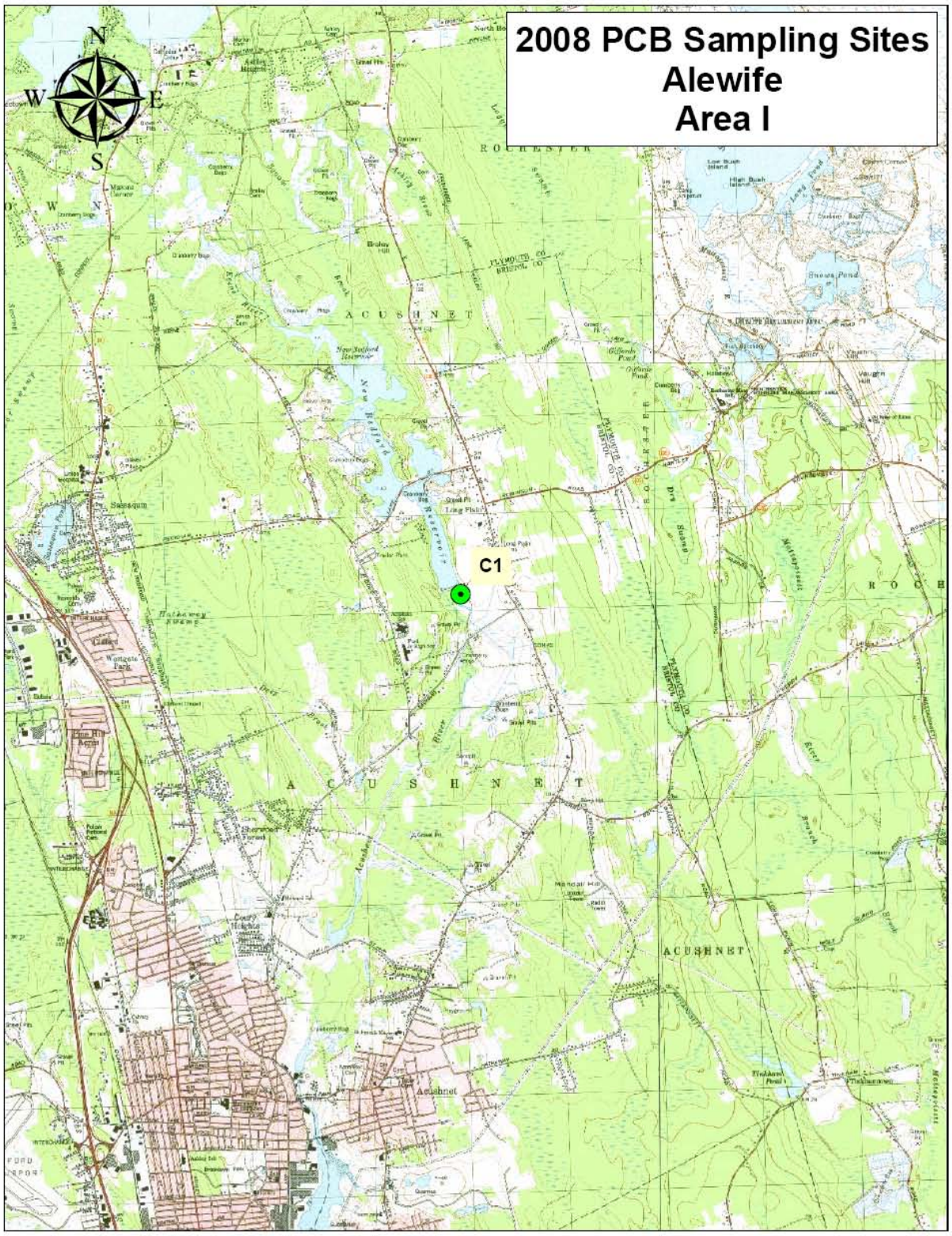


Figure 4 Alewife Sample Locations - Area I

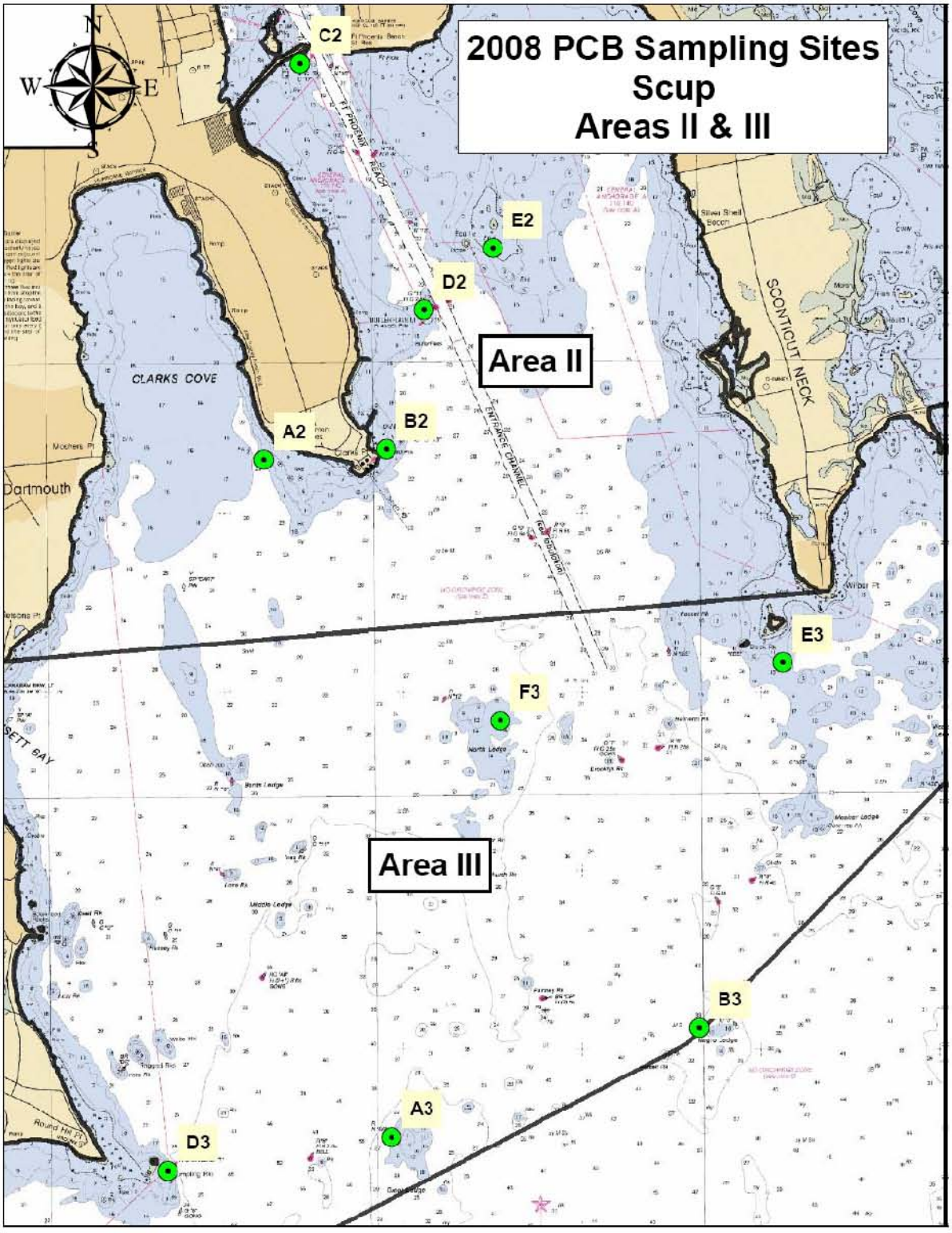


Figure 5 Scup Sample Locations - Area II & III

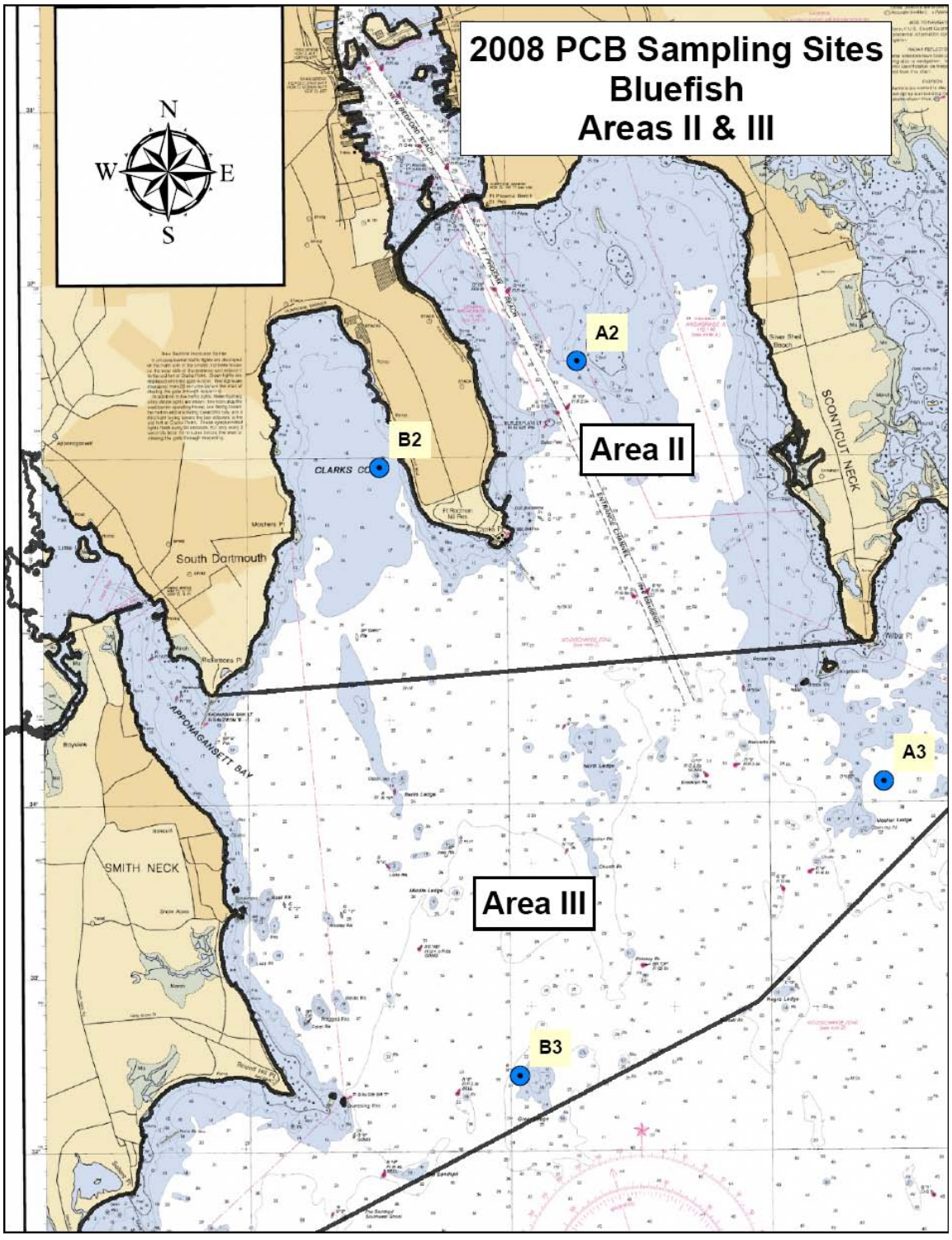
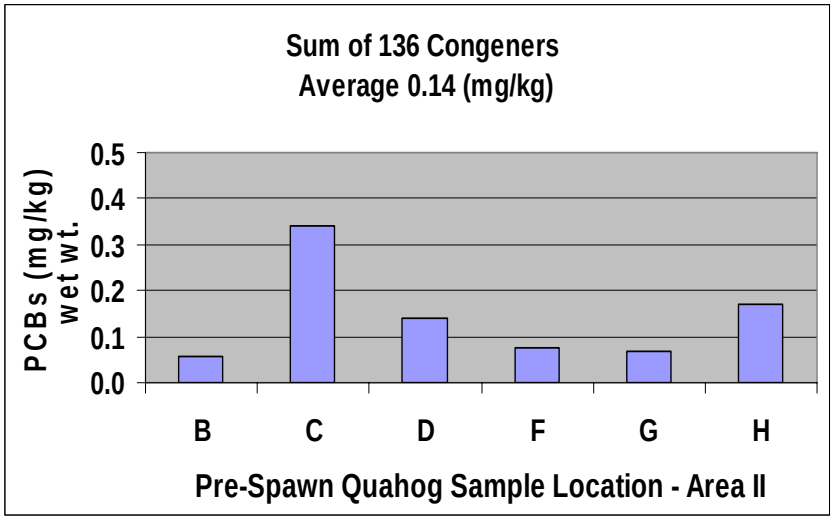
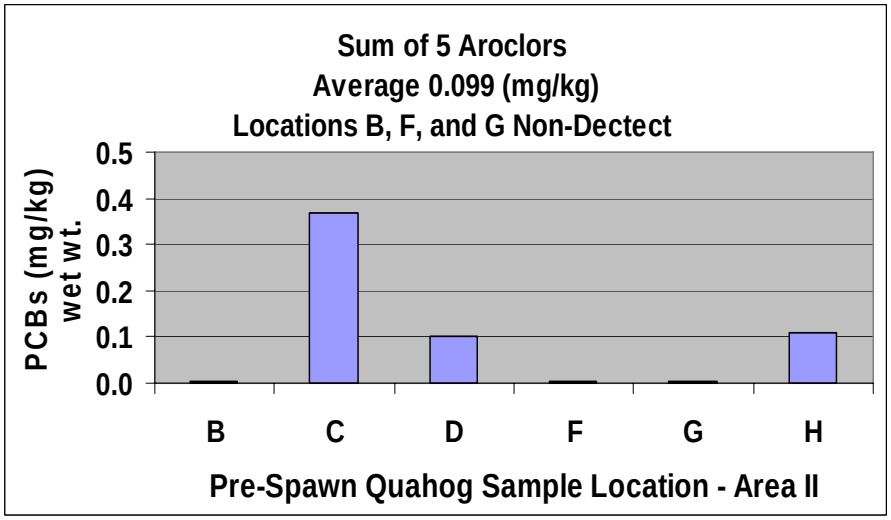
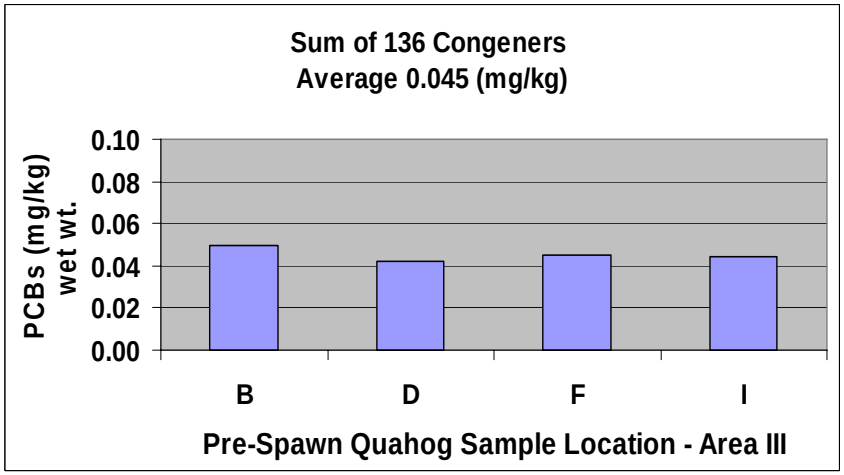


Figure 6 Bluefish Sample Locations - Area II and III







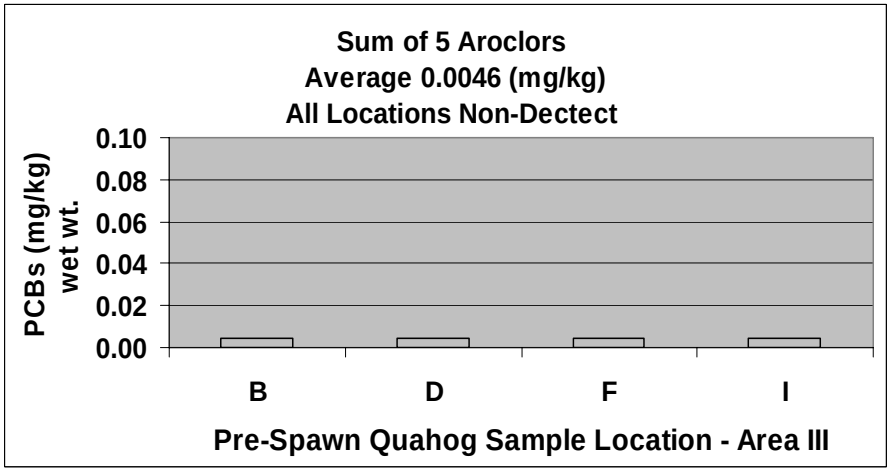
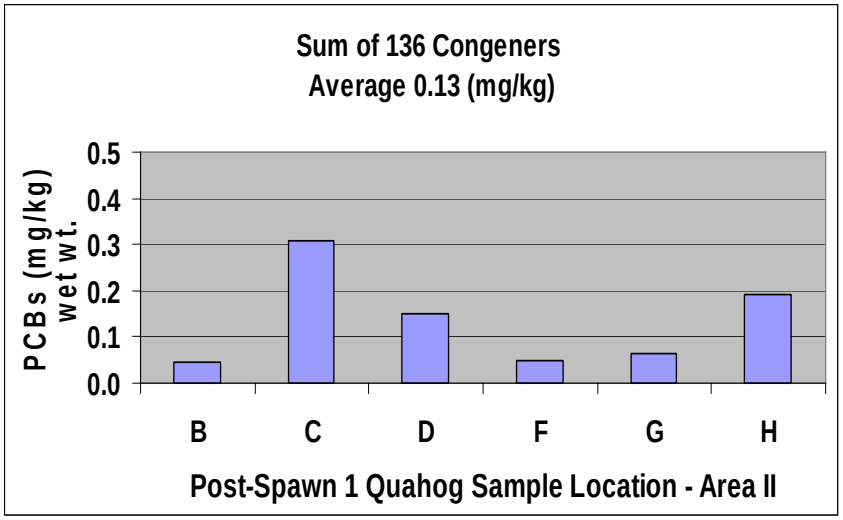
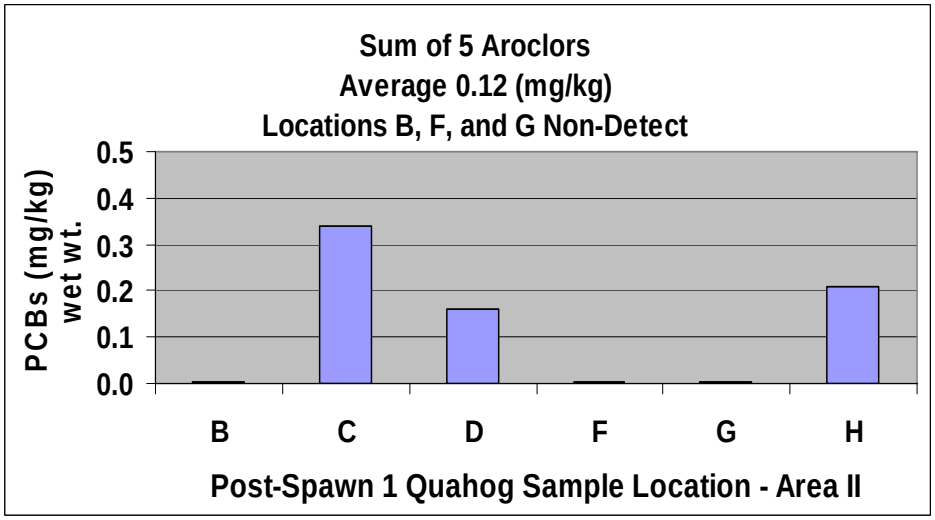
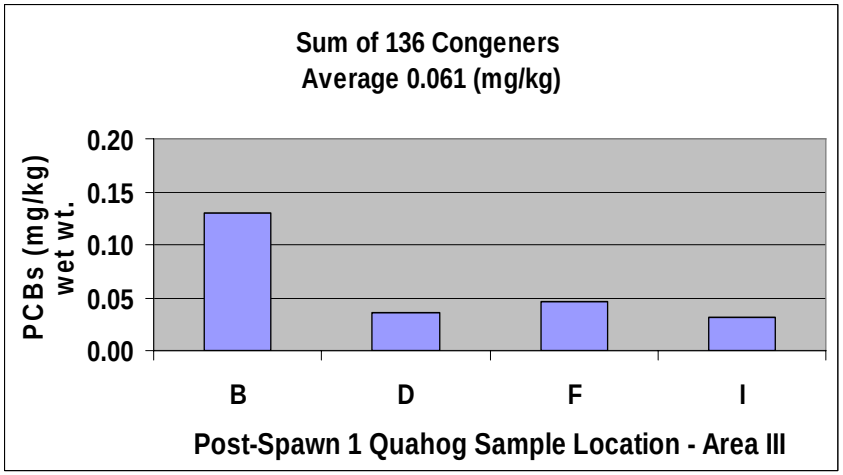


Figure 7 PCBs Concentrations in Pre-Spawn Quahog 2008







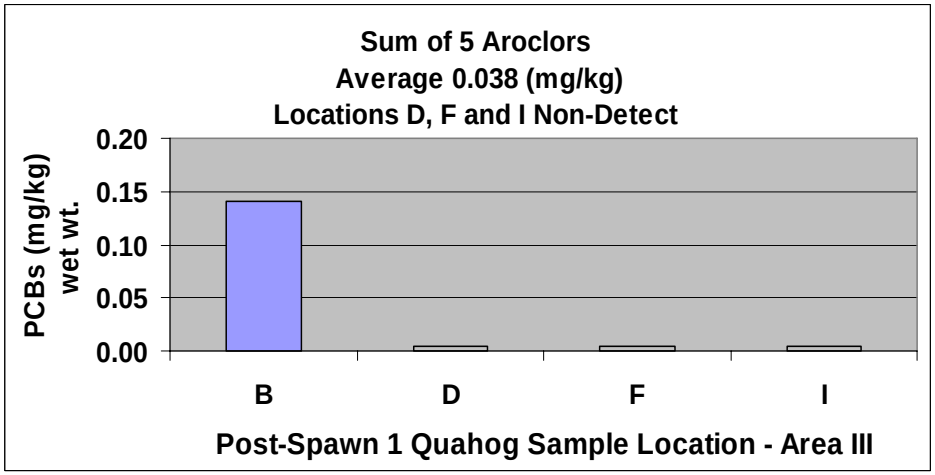
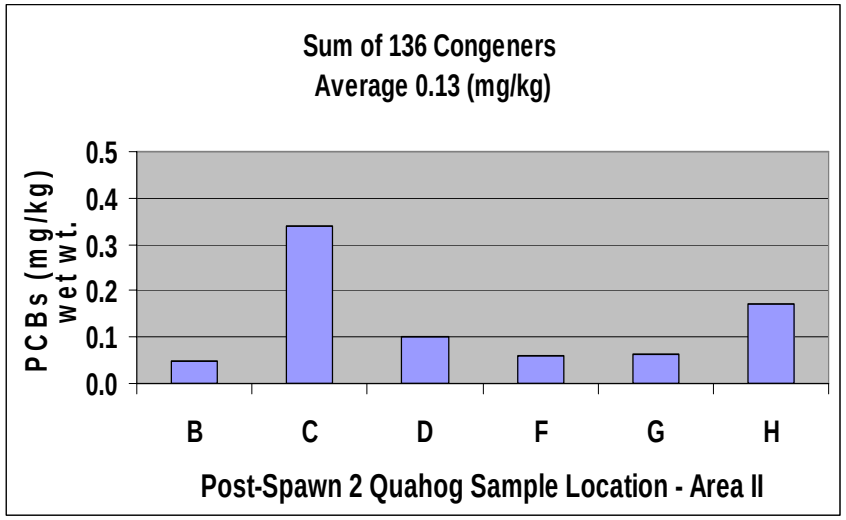
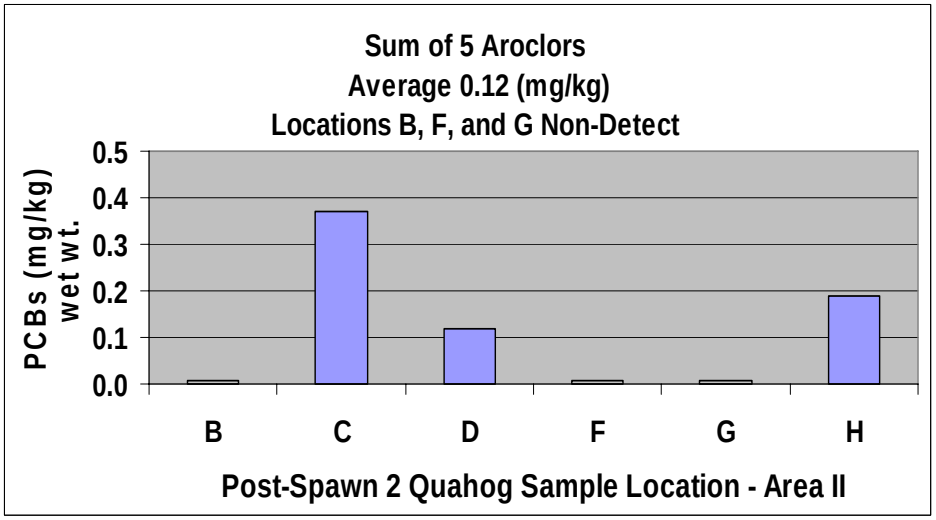
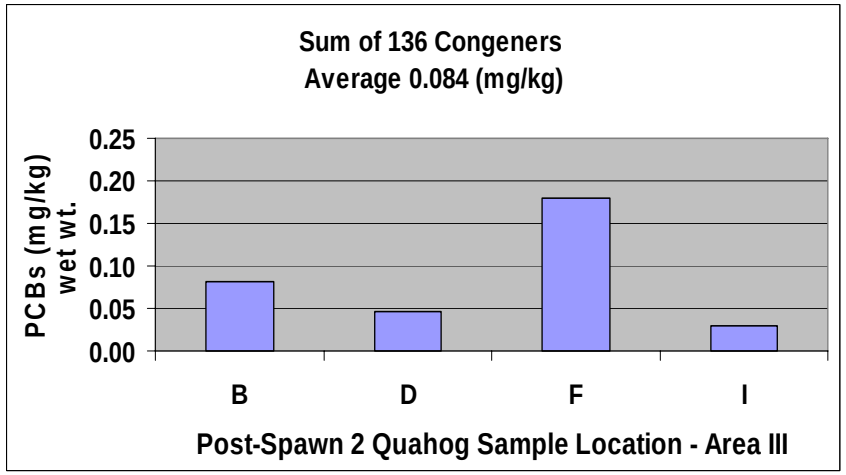


Figure 8 PCBs Concentrations in Post-Spawn 1 Quahog 2008







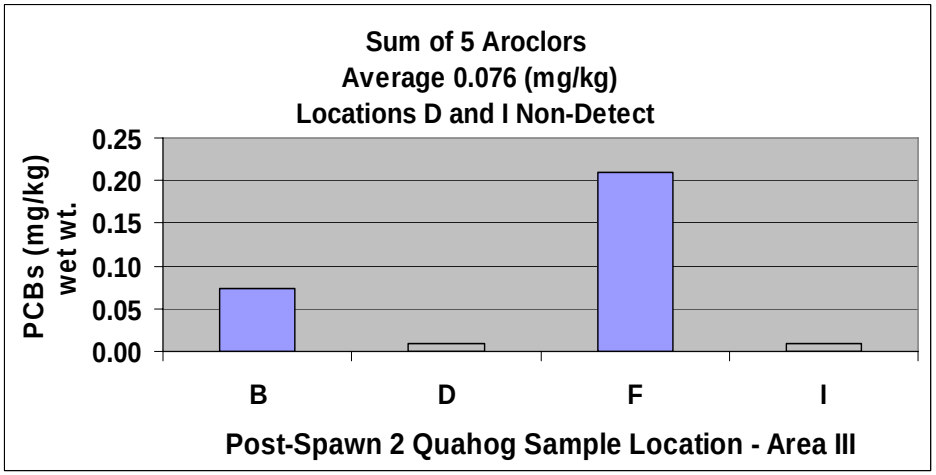


Figure 9 PCBs Concentrations in Post-Spawn 2 Quahog 2008

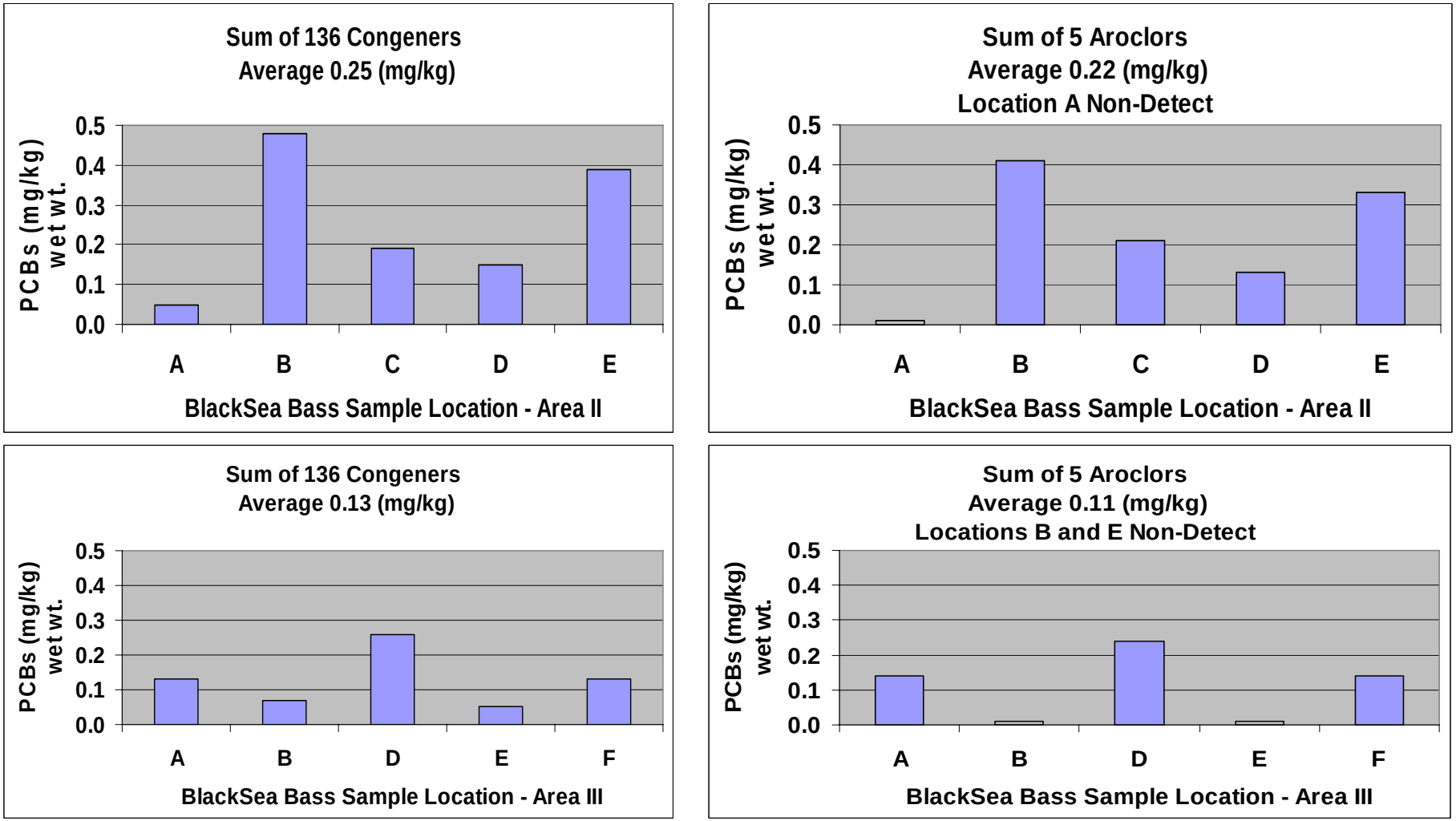
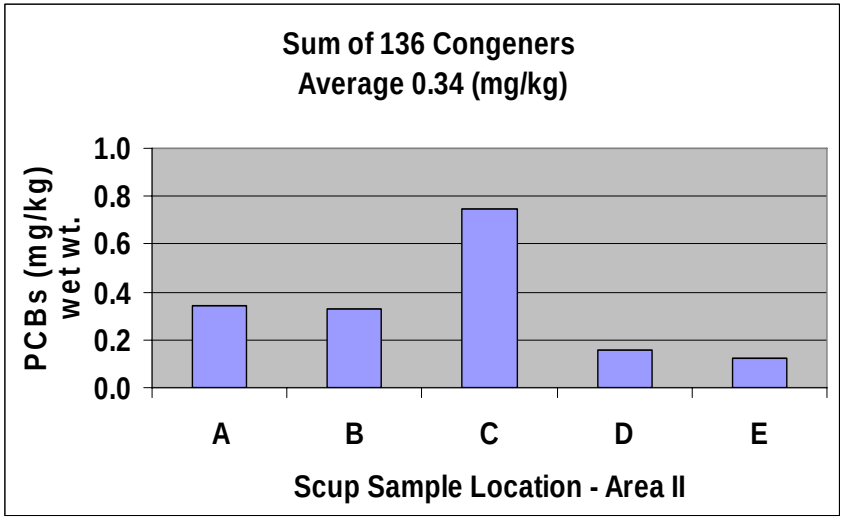
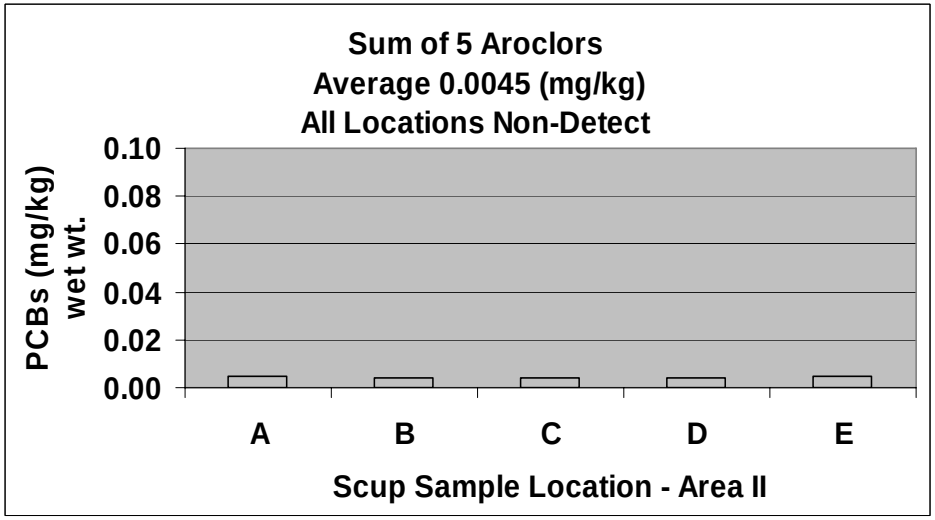
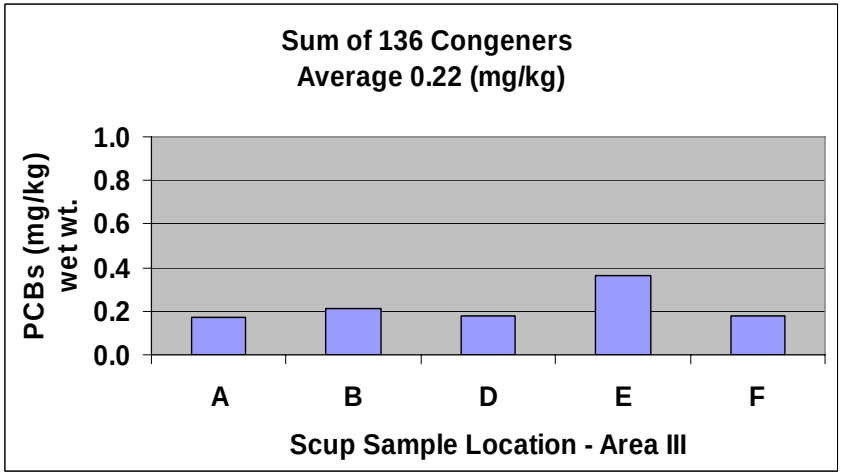


Figure 10 PCBs Concentrations in Black Sea Bass 2008







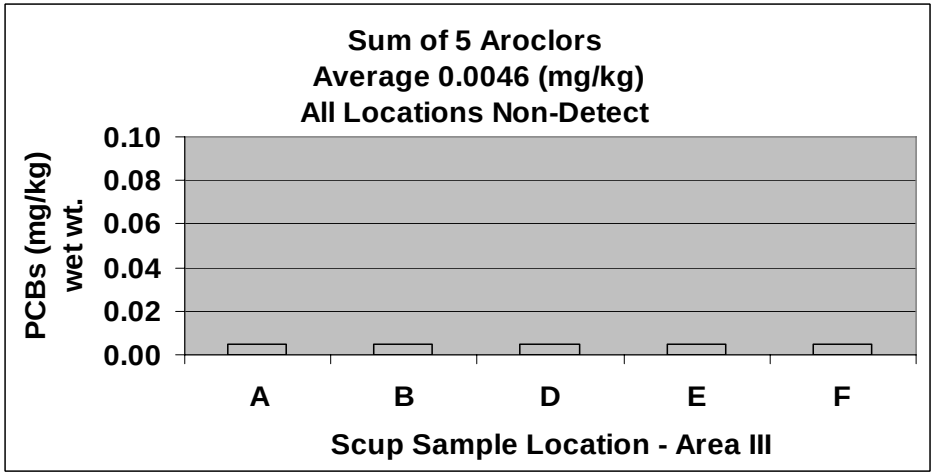
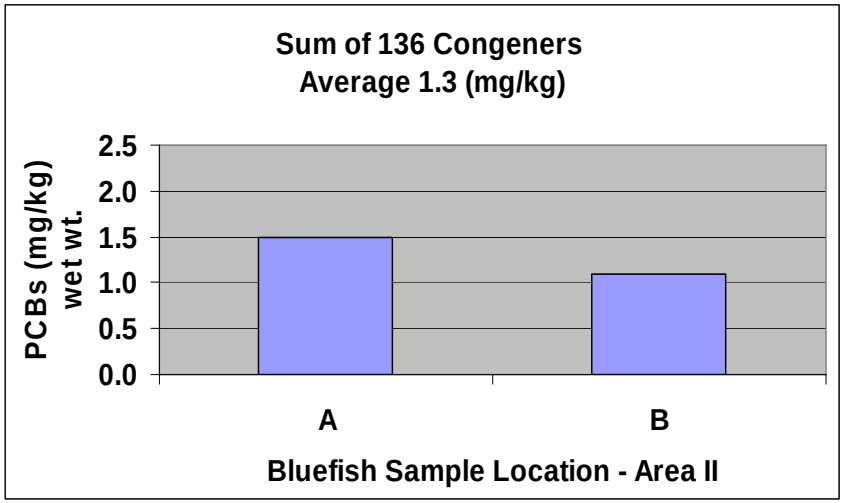
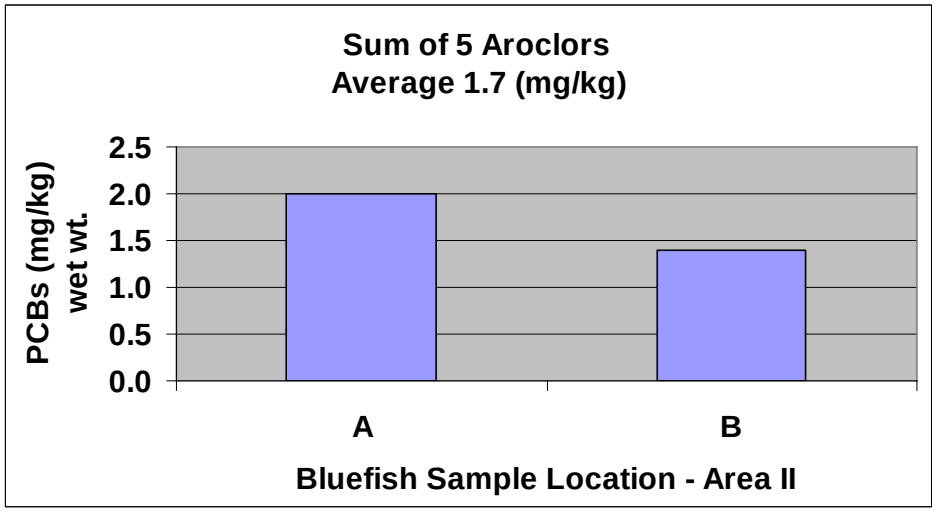
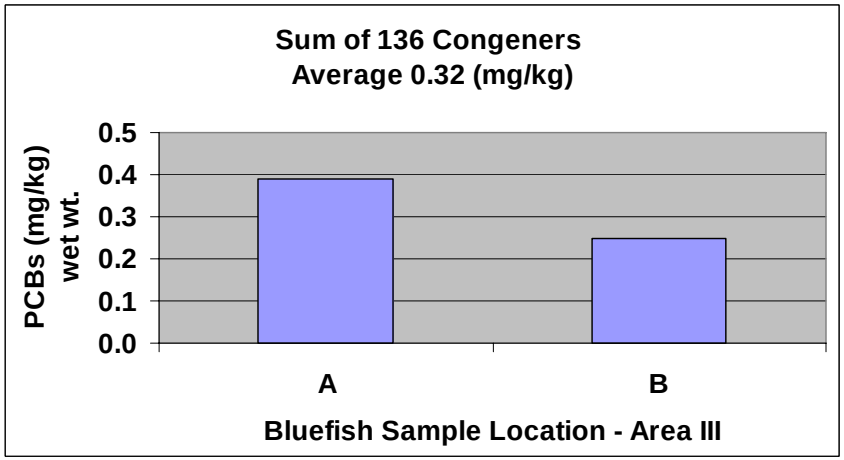


Figure 11 PCBs Concentrations in Scup 2008







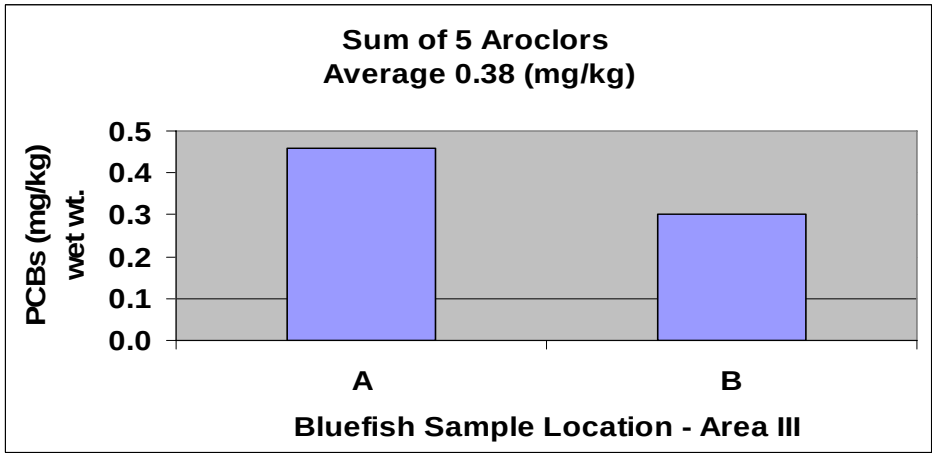


Figure 12 PCBs Concentrations in Bluefish 2008

TABLES

Notes and Footnotes for Tables:
[1] = summation of 136 PCB congener results (1/2 Sample Quantitation Limit [SQL] used for non-detected results)

[2] = summation of detected 136 PCB congeners

[3] = summation of 18 NOAA PCB congener results (1/2 SQL used for non-detected results)

[4] = summation of 12 WHO PCB congener results (1/2 SQL used for non-detected results)

[5] = summation of 18 NOAA & 12 WHO PCB congener results (1/2 SQL used for non-detected results); duplicative congeners (BZ# 105, #118, #167/128) subtracted from total for one data set

[6] = summation of 5 Aroclor results (1/2 SQL used for non-detected results); if all Aroclor results are not detected, then total value represets SQL for each individual Aroclor

U = not detected; value represents SQL
J1 = concentration of detected congeners contributes < 50% of total congener result
J2 = concentration of detected congeners contributes 50% to 90% of total congener result
J3 = concentration of detected congeners contributes 90% to 99% of total congener result
J4 = concentration of detected congeners contributes > 99% of total congener result

Results reported in milligrams per kilogram (mg/kg) wet weight, unless otherwise noted.
PCB Congeners and Aroclors analyzed by GC/MS-SIM.

Table 1 Summary of Sample Data for Pre-Spawn Quahog (mg/kg, wet weight) 2008

	Parameter	Lipids		Total PCB Congeners[1]		Total PCB Congeners Hits[2]		Total NOAA Congeners[3]		Total WHO Congeners[4]		Total NOAA / WHO Combined[5]		Total Aroclor[6]	
	Units	PERCENT		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Area	Station														
II	Station B	0.24		0.056	J2	0.036		0.020	J3	0.0051	J2	0.022	J2	0.0043	U
II	Station C	0.24		0.34	J3	0.33		0.14	J4	0.020	J3	0.15	J3	0.37	J3
II	Station D	0.23		0.14	J2	0.13		0.058	J3	0.0083	J2	0.060	J3	0.10	J2
II	Station F	0.10	U	0.075	J2	0.053		0.027	J3	0.0052	J1	0.030	J2	0.0048	U
II	Station G	0.24		0.070	J2	0.050		0.026	J3	0.0060	J2	0.028	J2	0.0047	U
II	Station H	0.19		0.17	J3	0.16		0.070	J3	0.011	J2	0.072	J3	0.11	J2
	Average	**0.21**		**0.14**		**0.13**		**0.057**		**0.0093**		**0.060**		**0.099**	
III	Station B	0.19		0.050	J2	0.026		0.016	J2	0.0045	J1	0.018	J2	0.0046	U
III	Station D	0.10	U	0.042	J1	0.017		0.012	J2	0.0038	J1	0.014	J2	0.0045	U
III	Station F	0.13		0.045	J1	0.021		0.014	J2	0.0043	J1	0.016	J2	0.0046	U
III	Station I	0.10	U	0.044	J1	0.019		0.012	J2	0.0037	J1	0.014	J2	0.0046	U
	Average	**0.13**		**0.045**		**0.021**		**0.014**	**J2**	**0.0041**	**J1**	**0.016**	**J2**	**0.0046**	**U**

Table 2 Summary of Sample Data for Post-Spawn 1 Quahog (mg/kg, wet weight) 2008

	Parameter	Lipids		Total PCB Congeners[1]		Total PCB Congeners Hits[2]		Total NOAA Congeners[3]		Total WHO Congeners[4]		Total NOAA / WHO Combined[5]		Total Aroclor[6]	
	Units	PERCENT		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Area	**Station**														
II	Station B	0.10	U	0.046	J1	0.023		0.014	J2	0.0045	J1	0.016	J2	0.0044	U
II	Station C	0.16		0.31	J3	0.30		0.13	J4	0.020	J3	0.14	J3	0.34	J3
II	Station D	0.15		0.15	J3	0.13		0.060	J3	0.0086	J2	0.062	J3	0.16	J3
II	Station F	0.11		0.047	J1	0.023		0.015	J2	0.0039	J1	0.017	J2	0.0046	U
II	Station G	0.13		0.064	J2	0.045		0.023	J3	0.0056	J2	0.025	J2	0.0046	U
II	Station H	0.24		0.19	J3	0.18		0.079	J4	0.012	J2	0.081	J3	0.21	J3
	Average	**0.15**		**0.13**		**0.12**		**0.054**		**0.0091**		**0.057**		**0.12**	
III	Station B	0.10	U	0.13	J2	0.12		0.053	J3	0.0083	J2	0.056	J3	0.14	J3
III	Station D	0.15		0.036	J1	0.0082		0.0081	J2	0.0034	J1	0.010	J1	0.0046	U
III	Station F	0.16		0.046	J1	0.022		0.014	J2	0.0042	J1	0.016	J2	0.0045	U
III	Station I	0.28		0.032	J1	0.00026		0.0055	J1	0.0030	U	0.0076	J1	0.0046	U
	Average	**0.17**		**0.061**		**0.038**		**0.020**		**0.0047**		**0.022**		**0.038**	

Table 3 Summary of Sample Data for Post-Spawn 2 Quahog (mg/kg, wet weight) 2008

	Parameter	Lipids		Total PCB Congeners[1]		Total PCB Congeners Hits[2]		Total NOAA Congeners[3]		Total WHO Congeners[4]		Total NOAA / WHO Combined[5]		Total Aroclor[6]	
	Units	PERCENT		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Area	Station														
II	Station B	0.16		0.047	J2	0.024		0.015	J2	0.0047	J1	0.017	J2	0.0089	U
II	Station C	0.22		0.34	J3	0.33		0.14	J4	0.023	J3	0.15	J3	0.37	J3
II	Station D	0.25		0.099	J2	0.083		0.039	J3	0.0072	J2	0.041	J3	0.12	J2
II	Station F	0.24		0.058	J2	0.036		0.020	J2	0.0045	J1	0.022	J2	0.0091	U
II	Station G	0.45		0.062	J2	0.042		0.023	J3	0.0062	J2	0.025	J2	0.0090	U
II	Station H	0.29		0.17	J3	0.16		0.072	J4	0.011	J2	0.075	J3	0.19	J2
	Average	**0.27**		**0.13**		**0.11**		**0.052**		**0.0094**		**0.055**		**0.12**	
III	Station B	0.38		0.081	J2	0.065		0.031	J3	0.0059	J2	0.033	J2	0.074	J2
III	Station D	0.22		0.046	J1	0.022		0.014	J2	0.0041	J1	0.016	J2	0.0091	U
III	Station F	0.29		0.18	J3	0.17		0.074	J3	0.013	J2	0.076	J3	0.21	J2
III	Station I	0.36		0.030	J1	0.00027		0.0054	J1	0.0029	U	0.0074	J1	0.0090	U
	Average	**0.31**		**0.084**		**0.064**		**0.031**		**0.0065**		**0.033**		**0.076**	

Table 4 Comparison of Pre-Spawn and Post Spawn Quahog 2008

		Lipids					Total PCB Congeners[1] (mg/kg)					Total PCB Congeners Hits[2] (mg/kg)				
Area	Station	Pre	Post 1	Post 2	Post 1/Pre Ratio, as%	Post 2/Pre Ratio, as%	Pre	Post 1	Post 2	Post 1/Pre Ratio, as%	Post 2/Pre Ratio, as%	Pre	Post 1	Post 2	Post 1/Pre Ratio, as%	Post 2/Pre Ratio, as%
II	B	0.16	0.10	0.16			0.056	0.046	0.047	82	84	0.036	0.023	0.024	64	67
II	C	0.22	0.16	0.22			0.34	0.31	0.34	91	100	0.33	0.30	0.33	91	100
II	D	0.25	0.15	0.25			0.14	0.15	0.099	107	71	0.13	0.13	0.083	100	64
II	F	0.24	0.11	0.24			0.075	0.047	0.058	63	77	0.053	0.023	0.036	43	68
II	G	0.45	0.13	0.45			0.070	0.064	0.062	91	89	0.050	0.045	0.042	90	84
II	H	0.29	0.24	0.29			0.17	0.19	0.17	112	100	0.16	0.18	0.16	113	100
III	B	0.38	0.10	0.38			0.050	0.13	0.081	260	162	0.026	0.12	0.065	462	250
III	D	0.22	0.15	0.22			0.042	0.036	0.046	86	110	0.017	0.0082	0.022	48	129
III	F	0.29	0.16	0.29			0.045	0.046	0.18	102	400	0.021	0.022	0.17	105	810
III	I	0.36	0.28	0.36			0.044	0.032	0.030	73	68	0.019	0.00026	0.00027	1	1
Average for 2 Areas		0.29	0.16	0.29	90	163				107	126				112	167

Notes: For the PCBs concentrations, the post-spawn was divided by the pre-spawn and multiplied by 100 to obtain a percentage of the pre-spawn. Less than 100% means that the pre-spawn was higher than the post-spawn results. More than 100% means that the post-spawn was higher than the pre-spawn results.

For the Lipid concentrations, the 10 post-spawn samples were averaged, the 10 pre-spawn samples were averaged, and then the Post/Pre was calculated and multiplied by 100 to obtain a percentage of the pre-spawn.

Table 5 Summary of Sample Data for Black Sea Bass (mg/kg, wet weight) 2008

	Parameter	Lipids		Total PCB Congeners[1]		Total PCB Congeners Hits[2]		Total NOAA Congeners[3]		Total WHO Congeners[4]		Total NOAA / WHO Combined[5]		Total Aroclor[6]	
	Units	PERCENT		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Area	**Station**														
II	Station A	0.80	J	0.049	J2	0.026		0.019	J3	0.0056	J2	0.021	J2	0.0091	U
II	Station B	0.60	J	0.48	J3	0.47		0.28	J4	0.073	J3	0.29	J4	0.41	J3
II	Station C	0.54	J	0.19	J3	0.18		0.097	J4	0.021	J3	0.10	J3	0.21	J2
II	Station D	1.9	J	0.15	J3	0.14		0.079	J4	0.022	J3	0.083	J3	0.13	J2
II	Station E	0.66	J	0.39	J3	0.38		0.22	J4	0.058	J3	0.23	J4	0.33	J2
	Average	**0.90**	**J**	**0.25**		**0.24**		**0.14**		**0.036**		**0.14**		**0.22**	
III	Station A	1.3	J	0.13	J2	0.12		0.075	J3	0.020	J3	0.078	J3	0.14	J2
III	Station B	0.29	J	0.069	J2	0.048		0.034	J3	0.0097	J2	0.036	J3	0.0091	U
III	Station C	0.65	J	0.26	J3	0.25		0.15	J4	0.042	J3	0.15	J3	0.24	J2
III	Station D	0.54	J	0.052	J2	0.030		0.022	J3	0.0072	J2	0.024	J2	0.0090	U
III	Station E	0.85	J	0.13	J2	0.12		0.073	J3	0.021	J3	0.076	J3	0.14	J2
	Average	**0.73**	**J**	**0.13**		**0.11**		**0.071**		**0.020**		**0.073**		**0.11**	

Table 6 Summary of Sample Data for Alewife and Scup (mg/kg, wet weight) 2008

		Parameter	Lipids		Total PCB Congeners[1]		Total PCB Congeners Hits[2]		Total NOAA Congeners[3]		Total WHO Congeners[4]		Total NOAA / WHO Combined[5]		Total Aroclor[6]	
		Units	PERCENT		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Species	**Area**	**Station**														
Alewife	I	Station A	2.0		4.6	J4	4.6		2.0	J4	0.090	J4	2.0	J4	4.2	J4
Scup	II	Station A	1.1		0.34	J3	0.33		0.21	J4	0.058	J3	0.22	J4	0.0046	U
Scup	II	Station B	0.57		0.33	J3	0.32		0.20	J4	0.055	J3	0.21	J4	0.0044	U
Scup	II	Station C	0.90		0.75	J4	0.75		0.42	J4	0.11	J4	0.43	J4	0.0044	U
Scup	II	Station D	0.74		0.16	J3	0.14		0.088	J4	0.024	J3	0.092	J3	0.0044	U
Scup	II	Station E	0.81		0.12	J2	0.11		0.068	J3	0.018	J3	0.070	J3	0.0048	U
		Average	**0.82**		**0.34**		**0.33**		**0.20**		**0.053**		**0.20**		**0.0045**	**U**
Scup	III	Station A	0.82		0.17	J3	0.16		0.10	J4	0.030	J4	0.11	J4	0.0047	U
Scup	III	Station B	0.96		0.21	J3	0.20		0.13	J4	0.032	J3	0.13	J3	0.0046	U
Scup	III	Station C	1.3		0.18	J3	0.17		0.10	J4	0.026	J3	0.10	J3	0.0045	U
Scup	III	Station D	1.4		0.36	J3	0.35		0.22	J4	0.055	J3	0.22	J4	0.0045	U
Scup	III	Station E	1.1		0.18	J3	0.16		0.094	J3	0.030	J3	0.097	J3	0.0047	U
		Average	**1.1**		**0.22**	**J3**	**0.21**		**0.13**		**0.035**		**0.13**		**0.0046**	**U**

Table 7 Summary of Sample Data for Bluefish (mg/kg, wet weight) 2008

	Parameter	Lipids		Total PCB Congeners[1]		Total PCB Congeners Hits[2]		Total NOAA Congeners[3]		Total WHO Congeners[4]		Total NOAA / WHO Combined[5]		Total Aroclor[6]	
	Units	PERCENT		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG		MG/KG	
Area	Station														
II	Station A	4.8	J	1.5	J4	1.5		0.71	J4	0.11	J4	0.72	J4	2.0	J3
II	Station B	2.2	J	1.1	J4	1.1		0.48	J4	0.079	J4	0.48	J4	1.4	J3
	Average	**3.5**	**J**	**1.3**	**J4**	**1.3**		**0.60**	**J4**	**0.095**	**J4**	**0.60**	**J4**	**1.7**	
III	Station A	4.2	J	0.39	J3	0.39		0.20	J4	0.046	J3	0.21	J4	0.46	J3
III	Station B	4.1	J	0.25	J3	0.24		0.13	J4	0.029	J3	0.13	J3	0.30	J2
	Average	**4.2**	**J**	**0.32**	**J3**	**0.32**		**0.17**	**J4**	**0.038**	**J3**	**0.17**		**0.38**	

Appendices

Appendix A	Laboratory Data
Appendix B	Data Validation Summary, MassDEP, NBH Seafood Contaminant Survey Monitoring 2008 Sampling
Appendix C	Seafood Monitoring - Field Sampling Activities for the NBH Superfund Site 2008 Annual Report
Appendix D	Congeners Used to Quantitate Aroclors / Determination of PCBs by GC/MS-SIM for Aroclor

Appendix A Laboratory Data

The following notes and footnotes apply to the tables in Appendix A

[1] = summation of 136 PCB congener results (1/2 Sample Quantitation Limit [SQL] used for non-detected results)

[2] = summation of detected 136 PCB congeners

[3] = summation of 18 NOAA PCB congener results (1/2 SQL used for non-detected results)

[4] = summation of 12 WHO PCB congener results (1/2 SQL used for non-detected results)

[5] = summation of 18 NOAA & 12 WHO PCB congener results (1/2 SQL used for non-detected results); duplicative congeners (BZ# 105, #118, #167/128) subtracted from total for one data set

[6] = summation of 5 Aroclor results (1/2 SQL used for non-detected results); if all Aroclor results are not detected, then total value represets SQL for each individual Aroclor

U = not detected; value represents SQL
J1 = concentration of detected congeners contributes < 50% of total congener result
J2 = concentration of detected congeners contributes 50% to 90% of total congener result
J3 = concentration of detected congeners contributes 90% to 99% of total congener result
J4 = concentration of detected congeners contributes > 99% of total congener result

Results reported in milligrams per kilogram (mg/kg) wet weight, unless otherwise noted.
PCB Congeners and Aroclors analyzed by GC/MS-SIM.

Table 1A Sample Data for Quahogs, Pre-Spawning (mg/kg wet weight) Area II 2008

	Sample#	NBH08-SF-B-2		NBH08-SF-C-2		NBH08-SF-D-2		NBH08-SF-F-2		NBH08-SF-G-2		NBH08-SF-H-2	
	Species	Quahogs, Pre-spawning		Quahogs, Pre-spawning		Quahogs, Pre-spawning		Quahogs, Pre-spawning		Quahogs, Pre-spawning		Quahogs, Pre-spawning	
	Area	II		II		II		II		II		II	
	Station	Station B		Station C		Station D		Station F		Station G		Station H	
	Sample Date	6/10/2008		6/10/2008		6/10/2008		6/10/2008		6/11/2008		6/11/2008	
Parameter	**Units**												
Lipids	PERCENT	0.24		0.24		0.23		0.10	U	0.24		0.19	
Total PCB Congeners[1]	MG/KG	0.056	J2	0.34	J3	0.14	J2	0.075	J2	0.070	J2	0.17	J3
Total PCB Congeners Hits[2]	MG/KG	0.036		0.33		0.13		0.053		0.050		0.16	
Total NOAA Congeners[3]	MG/KG	0.020	J3	0.14	J4	0.058	J3	0.027	J3	0.026	J3	0.070	J3
Total WHO Congeners[4]	MG/KG	0.0051	J2	0.020	J3	0.0083	J2	0.0052	J1	0.0060	J2	0.011	J2
Total NOAA / WHO Combined[5]	MG/KG	0.022	J2	0.15	J3	0.060	J3	0.030	J2	0.028	J2	0.072	J3
Total Aroclors[6]	MG/KG	0.0043	U	0.37	J3	0.10	J2	0.0048	U	0.0047	U	0.11	J2
Cl1-BZ#1	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl1-BZ#3	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl2-BZ#4/#10	MG/KG	0.00086	U	0.00073	J	0.00094	U	0.00095	U	0.00094	U	0.00094	U
Cl2-BZ#5/#8	MG/KG	0.00086	U	0.0014		0.00094	U	0.00095	U	0.00094	U	0.00094	U
Cl2-BZ#6	MG/KG	0.00043	U	0.00091		0.00027	J	0.00048	U	0.00047	U	0.00030	J
Cl2-BZ#7	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl2-BZ#12/#13	MG/KG	0.00086	U	0.00088	J	0.00094	U	0.00095	U	0.00094	U	0.00094	U
Cl2-BZ#15	MG/KG	0.00043	U	0.0012		0.00044	J	0.00048	U	0.00047	U	0.00054	
Cl3-BZ#16/#32	MG/KG	0.00086	U	0.0039		0.0012		0.00095	U	0.00094	U	0.0016	
Cl3-BZ#17	MG/KG	0.00043	U	0.0033		0.0011		0.00035	J	0.00038	J	0.0014	
Cl3-BZ#18	MG/KG	0.00029	J	0.0080	J	0.0026	J	0.00086	J	0.00082	J	0.0034	J
Cl3-BZ#19	MG/KG	0.00043	U	0.00065		0.00047	U	0.00048	U	0.00047	U	0.00029	J
Cl3-BZ#21/#33	MG/KG	0.00086	U	0.0019		0.00061	J	0.00095	U	0.00094	U	0.00073	J
Cl3-BZ#22	MG/KG	0.00043	U	0.0021		0.00081		0.00036	J	0.00027	J	0.00092	
Cl3-BZ#24/#27	MG/KG	0.00086	U	0.0012		0.00094	U	0.00095	U	0.00094	U	0.00059	J
Cl3-BZ#25	MG/KG	0.00029	J	0.0061		0.0026		0.00082		0.00062		0.0028	
Cl3-BZ#26	MG/KG	0.00062		0.011		0.0047		0.0018		0.0014		0.0050	
Cl3-BZ#28/#31	MG/KG	0.0016		0.028		0.011		0.0045		0.0030		0.012	
Cl3-BZ#29	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl3-BZ#37	MG/KG	0.00043	U	0.0012		0.00044	J	0.00048	U	0.00047	U	0.00054	
Cl4-BZ#40	MG/KG	0.00043	U	0.0015		0.00062		0.00027	J	0.00047	U	0.00063	
Cl4-BZ#41/#71	MG/KG	0.00048	J	0.0066		0.0023		0.00099		0.00072	J	0.0027	
Cl4-BZ#42	MG/KG	0.00022	J	0.0026		0.0011		0.00042	J	0.00038	J	0.0013	
Cl4-BZ#43/#49	MG/KG	0.0018		0.023		0.0096		0.0038		0.0027		0.0099	
Cl4-BZ#44	MG/KG	0.00067		0.0071		0.0029		0.0012		0.00095		0.0031	
Cl4-BZ#45	MG/KG	0.00043	U	0.00091		0.00029	J	0.00048	U	0.00047	U	0.00039	J
Cl4-BZ#46	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl4-BZ#47/#48	MG/KG	0.00085	J	0.0099		0.0041		0.0017		0.0012		0.0043	
Cl4-BZ#50	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl4-BZ#51	MG/KG	0.00043	U	0.00074		0.00047	U	0.00048	U	0.00047	U	0.00029	J
Cl4-BZ#52	MG/KG	0.0020		0.028		0.012		0.0051		0.0032		0.013	
Cl4-BZ#53	MG/KG	0.00043	U	0.0022		0.00073		0.00034	J	0.00023	J	0.00097	
Cl4-BZ#54	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl4-BZ#56/#60	MG/KG	0.00086	U	0.0035		0.0013		0.00054	J	0.00094	U	0.0013	
Cl4-BZ#63	MG/KG	0.00043	U	0.00066		0.00036	J	0.00048	U	0.00047	U	0.00035	J
Cl4-BZ#64	MG/KG	0.00029	J	0.0038		0.0016		0.00057		0.00042	J	0.0016	
Cl4-BZ#66	MG/KG	0.0011		0.0077		0.0030		0.0013		0.0013		0.0034	
Cl4-BZ#70	MG/KG	0.00085		0.0067		0.0025		0.0011		0.0011		0.0028	
Cl4-BZ#74	MG/KG	0.00056		0.0053		0.0021		0.00093		0.00068		0.0023	
Cl4-BZ#76	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl4-BZ#77	MG/KG	0.00043	UJ	0.00083	J	0.00032	J	0.00048	UJ	0.00047	UJ	0.00039	J
Cl4-BZ#81	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl5-BZ#82	MG/KG	0.00043	U	0.00072		0.00032	J	0.00048	U	0.00047	U	0.00045	J
Cl5-BZ#83	MG/KG	0.00043	U	0.00092		0.00041	J	0.00048	U	0.00047	U	0.00051	
Cl5-BZ#85	MG/KG	0.00038	J	0.0014		0.00054		0.00025	J	0.00036	J	0.00076	
Cl5-BZ#87	MG/KG	0.00062		0.0036		0.0014		0.00071		0.00067		0.0018	
Cl5-BZ#89	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U

Table 1A Sample Data for Quahogs, Pre-Spawning (mg/kg wet weight) Area II 2008

	Sample#	NBH08-SF-B-2		NBH08-SF-C-2		NBH08-SF-D-2		NBH08-SF-F-2		NBH08-SF-G-2		NBH08-SF-H-2	
Cl5-BZ#91	MG/KG	0.00042	J	0.0038		0.0015		0.00067		0.00058		0.0018	
Cl5-BZ#92	MG/KG	0.00077		0.0044		0.0021		0.0010		0.00094		0.0024	
Cl5-BZ#95	MG/KG	0.0011		0.0091		0.0035		0.0017		0.0014		0.0044	
Cl5-BZ#97	MG/KG	0.00059		0.0039		0.0016		0.00072		0.00077		0.0020	
Cl5-BZ#99	MG/KG	0.0024		0.014		0.0061		0.0028		0.0029		0.0071	
Cl5-BZ#100	MG/KG	0.00043	U	0.00050		0.00047	U	0.00048	U	0.00047	U	0.00024	J
Cl5-BZ#101/#84	MG/KG	0.0034		0.019		0.0083		0.0040		0.0041		0.0099	
Cl5-BZ#104	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl5-BZ#105	MG/KG	0.00052		0.0027		0.00089		0.00042	J	0.00065		0.0013	
Cl5-BZ#107	MG/KG	0.00039	J	0.0014		0.00073		0.00038	J	0.00044	J	0.00082	
Cl5-BZ#110	MG/KG	0.0019	J	0.013	J	0.0053	J	0.0023	J	0.0023	J	0.0063	J
Cl5-BZ#114	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl5-BZ#118	MG/KG	0.0022		0.012		0.0044		0.0022		0.0027		0.0059	
Cl5-BZ#119	MG/KG	0.00043	U	0.0015		0.00068		0.00032	J	0.00028	J	0.00071	
Cl5-BZ#123	MG/KG	0.00043	U	0.00070		0.00047	U	0.00048	U	0.00047	U	0.00030	J
Cl5-BZ#124	MG/KG	0.00043	U	0.00046		0.00047	U	0.00048	U	0.00047	U	0.00024	J
Cl5-BZ#126	MG/KG	0.00043	UJ	0.00045	UJ	0.00047	UJ	0.00048	UJ	0.00047	UJ	0.00047	UJ
Cl6-BZ#129	MG/KG	0.00043	U	0.00028	J	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl6-BZ#130	MG/KG	0.00023	J	0.00082		0.00036	J	0.00048	U	0.00028	J	0.00050	
Cl6-BZ#131	MG/KG	0.00086	U	0.00091	U	0.00094	U	0.00095	U	0.00094	U	0.00094	U
Cl6-BZ#132/#168	MG/KG	0.00047	J	0.0020		0.00073	J	0.00095	U	0.00054	J	0.0012	
Cl6-BZ#134	MG/KG	0.00043	U	0.00099		0.00041	J	0.00048	U	0.00028	J	0.00054	
Cl6-BZ#135/#144	MG/KG	0.00086	U	0.0018		0.00083	J	0.00095	U	0.00050	J	0.0010	
Cl6-BZ#136	MG/KG	0.00043	U	0.0011		0.00040	J	0.00048	U	0.00047	U	0.00058	
Cl6-BZ#137	MG/KG	0.00043	U	0.00063		0.00025	J	0.00048	U	0.00047	U	0.00034	J
Cl6-BZ#138/#163	MG/KG	0.0024		0.010		0.0039		0.0021		0.0031		0.0060	
Cl6-BZ#141	MG/KG	0.00043	U	0.00078		0.00030	J	0.00048	U	0.00047	U	0.00042	J
Cl6-BZ#146	MG/KG	0.00075	J	0.0027		0.0014		0.00076	J	0.00088	J	0.0017	
Cl6-BZ#147	MG/KG	0.00043	U	0.00082		0.00037	J	0.00048	U	0.00047	U	0.00047	
Cl6-BZ#149	MG/KG	0.0016		0.0089		0.0036		0.0018		0.0019		0.0048	
Cl6-BZ#151	MG/KG	0.00024	J	0.0012		0.00043	J	0.00024	J	0.00031	J	0.00069	
Cl6-BZ#153	MG/KG	0.0029		0.013		0.0055		0.0030		0.0036		0.0074	
Cl6-BZ#154	MG/KG	0.00043	U	0.00052		0.00047	U	0.00048	U	0.00047	U	0.00024	J
Cl6-BZ#155	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl6-BZ#156	MG/KG	0.00043	U	0.00087		0.00031	J	0.00048	U	0.00047	U	0.00046	J
Cl6-BZ#157	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl6-BZ#158	MG/KG	0.00043	U	0.00064		0.00047	U	0.00048	U	0.00047	U	0.00034	J
Cl6-BZ#167/#128	MG/KG	0.00047	J	0.0020		0.00069	J	0.00095	U	0.00059	J	0.0011	
Cl6-BZ#169	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#170/#190	MG/KG	0.00086	U	0.00072	J	0.00094	U	0.00095	U	0.00094	U	0.00094	U
Cl7-BZ#171	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#172	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#173	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#174	MG/KG	0.00043	U	0.00055		0.00026	J	0.00048	U	0.00047	U	0.00035	J
Cl7-BZ#175	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#176	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#177	MG/KG	0.00025	J	0.00069		0.00030	J	0.00048	U	0.00047	U	0.00043	J
Cl7-BZ#178	MG/KG	0.00043	U	0.00028	J	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#180	MG/KG	0.00037	J	0.0017		0.00066		0.00034	J	0.00047		0.00095	
Cl7-BZ#182/#187	MG/KG	0.00046	J	0.0018		0.00079	J	0.00095	U	0.00055	J	0.0010	
Cl7-BZ#183	MG/KG	0.00043	U	0.00035	J	0.00047	U	0.00048	U	0.00047	U	0.00024	J
Cl7-BZ#184	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#185	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#188	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#189	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#191	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl7-BZ#193	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#194	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#195	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#196/203	MG/KG	0.00086	U	0.00091	U	0.00094	U	0.00095	U	0.00094	U	0.00094	U
Cl8-BZ#197	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U

Table 1A Sample Data for Quahogs, Pre-Spawning (mg/kg wet weight) Area II 2008

	Sample#	NBH08-SF-B-2		NBH08-SF-C-2		NBH08-SF-D-2		NBH08-SF-F-2		NBH08-SF-G-2		NBH08-SF-H-2	
Cl8-BZ#199	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#200	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#201	MG/KG	0.00043	U	0.00026	J	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#202	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl8-BZ#205	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl9-BZ#206	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl9-BZ#207	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl9-BZ#208	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Cl10-BZ#209	MG/KG	0.00043	U	0.00045	U	0.00047	U	0.00048	U	0.00047	U	0.00047	U
Aroclor-1232	MG/KG	0.0086	U	0.0091	U	0.0094	U	0.0095	U	0.0094	U	0.0094	U
Aroclor-1242	MG/KG	0.0086	U	0.0091	U	0.0094	U	0.0095	U	0.0094	U	0.0094	U
Aroclor-1248	MG/KG	0.0086	U	0.20		0.082		0.0095	U	0.0094	U	0.088	
Aroclor-1254	MG/KG	0.0086	U	0.15		0.0094	U	0.0095	U	0.0094	U	0.0094	U
Aroclor-1260	MG/KG	0.0086	U	0.0091	U	0.0094	U	0.0095	U	0.0094	U	0.0094	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 1B Sample Data for Quahogs, Pre-Spawning (mg/kg wet weight) Area III 2008

	Sample#	NBH08-SF-B-3		NBH08-SF-D-3		NBH08-SF-F-3		NBH08-SF-I-3	
	Species	Quahogs, Pre-spawning		Quahogs, Pre-spawning		Quahogs, Pre-spawning		Quahogs, Pre-spawning	
	Area	III		III		III		III	
	Station	Station B		Station D		Station F		Station I	
	Sample Date	6/12/2008		6/10/2008		6/12/2008		6/17/2008	
Parameter	**Units**								
Lipids	PERCENT	0.19		0.10	U	0.13		0.10	U
Total PCB Congeners[1]	MG/KG	0.050	J2	0.042	J1	0.045	J1	0.044	J1
Total PCB Congeners Hits[2]	MG/KG	0.026		0.017		0.021		0.019	
Total NOAA Congeners[3]	MG/KG	0.016	J2	0.012	J2	0.014	J2	0.012	J2
Total WHO Congeners[4]	MG/KG	0.0045	J1	0.0038	J1	0.0043	J1	0.0037	J1
Total NOAA / WHO Combined[5]	MG/KG	0.018	J2	0.014	J2	0.016	J2	0.014	J2
Total Aroclors[6]	MG/KG	0.0046	U	0.0045	U	0.0046	U	0.0046	U
Cl1-BZ#1	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl1-BZ#3	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl2-BZ#4/#10	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl2-BZ#5/#8	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl2-BZ#6	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl2-BZ#7	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl2-BZ#12/#13	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl2-BZ#15	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl3-BZ#16/#32	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl3-BZ#17	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl3-BZ#18	MG/KG	0.00030	J	0.00045	UJ	0.00046	UJ	0.00040	J
Cl3-BZ#19	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl3-BZ#21/#33	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl3-BZ#22	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl3-BZ#24/#27	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl3-BZ#25	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00033	J
Cl3-BZ#26	MG/KG	0.00046		0.00040	J	0.00039	J	0.00056	
Cl3-BZ#28/#31	MG/KG	0.0012		0.00088	J	0.00091		0.0013	
Cl3-BZ#29	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl3-BZ#37	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#40	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#41/#71	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl4-BZ#42	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#43/#49	MG/KG	0.0013		0.0011		0.0011		0.0014	
Cl4-BZ#44	MG/KG	0.00054		0.00039	J	0.00050		0.00043	J
Cl4-BZ#45	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#46	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#47/#48	MG/KG	0.00068	J	0.00048	J	0.00058	J	0.00062	J
Cl4-BZ#50	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#51	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#52	MG/KG	0.0017		0.0013		0.0014		0.0016	
Cl4-BZ#53	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#54	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#56/#60	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl4-BZ#63	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#64	MG/KG	0.00024	J	0.00045	U	0.00046	U	0.00028	J
Cl4-BZ#66	MG/KG	0.00084		0.00054		0.00065		0.00052	
Cl4-BZ#70	MG/KG	0.00065		0.00043	J	0.00054		0.00045	J
Cl4-BZ#74	MG/KG	0.00042	J	0.00027	J	0.00034	J	0.00030	J
Cl4-BZ#76	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl4-BZ#77	MG/KG	0.00046	UJ	0.00045	UJ	0.00046	UJ	0.00046	UJ
Cl4-BZ#81	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#82	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#83	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#85	MG/KG	0.00027	J	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#87	MG/KG	0.00044	J	0.00031	J	0.00038	J	0.00031	J
Cl5-BZ#89	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#91	MG/KG	0.00030	J	0.00025	J	0.00027	J	0.00030	J
Cl5-BZ#92	MG/KG	0.00065		0.00042	J	0.00054		0.00046	
Cl5-BZ#95	MG/KG	0.00088		0.00062		0.00073		0.00062	
Cl5-BZ#97	MG/KG	0.00055		0.00037	J	0.00038	J	0.00032	J
Cl5-BZ#99	MG/KG	0.0018		0.0013		0.0016		0.0013	
Cl5-BZ#100	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#101/#84	MG/KG	0.0026		0.0020		0.0021		0.0018	

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 1B Sample Data for Quahogs, Pre-Spawning (mg/kg wet weight) Area III 2008

	Sample#	NBH08-SF-B-3		NBH08-SF-D-3		NBH08-SF-F-3		NBH08-SF-I-3	
Cl5-BZ#104	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#105	MG/KG	0.00035	J	0.00023	J	0.00041	J	0.00046	U
Cl5-BZ#107	MG/KG	0.00030	J	0.00045	U	0.00029	J	0.00046	U
Cl5-BZ#110	MG/KG	0.0015	J	0.00099	J	0.0013	J	0.00097	J
Cl5-BZ#114	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#118	MG/KG	0.0016		0.0011		0.0014		0.00093	
Cl5-BZ#119	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#123	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#124	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl5-BZ#126	MG/KG	0.00046	UJ	0.00045	UJ	0.00046	UJ	0.00046	UJ
Cl6-BZ#129	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#130	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#131	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl6-BZ#132/#168	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl6-BZ#134	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#135/#144	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl6-BZ#136	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#137	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#138/#163	MG/KG	0.0019		0.0013		0.0017		0.0012	
Cl6-BZ#141	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#146	MG/KG	0.00058	J	0.00091	U	0.00048	J	0.00092	U
Cl6-BZ#147	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#149	MG/KG	0.0011		0.00089		0.00098		0.00081	
Cl6-BZ#151	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#153	MG/KG	0.0021		0.0017		0.0018		0.0014	
Cl6-BZ#154	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#155	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#156	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#157	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#158	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl6-BZ#167/#128	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl6-BZ#169	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#170/#190	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl7-BZ#171	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#172	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#173	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#174	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#175	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#176	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#177	MG/KG	0.00027	J	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#178	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#180	MG/KG	0.00034	J	0.00025	J	0.00026	J	0.00046	U
Cl7-BZ#182/#187	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl7-BZ#183	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#184	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#185	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#188	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#189	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#191	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl7-BZ#193	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#194	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#195	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#196/203	MG/KG	0.00093	U	0.00091	U	0.00091	U	0.00092	U
Cl8-BZ#197	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#199	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#200	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#201	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#202	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl8-BZ#205	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl9-BZ#206	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl9-BZ#207	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl9-BZ#208	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Cl10-BZ#209	MG/KG	0.00046	U	0.00045	U	0.00046	U	0.00046	U
Aroclor-1232	MG/KG	0.0093	U	0.0091	U	0.0091	U	0.0092	U
Aroclor-1242	MG/KG	0.0093	U	0.0091	U	0.0091	U	0.0092	U
Aroclor-1248	MG/KG	0.0093	U	0.0091	U	0.0091	U	0.0092	U
Aroclor-1254	MG/KG	0.0093	U	0.0091	U	0.0091	U	0.0092	U
Aroclor-1260	MG/KG	0.0093	U	0.0091	U	0.0091	U	0.0092	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 1C Sample Data for Quahogs, Post-Spawning (mg/kg wet weight) Area II 2008

	Sample#	NBH08-SF-B-2		NBH08-SF-C-2		NBH08-SF-D-2		NBH08-SF-F-2		NBH08-SF-G-2		NBH08-SF-H-2	
	Species	Quahogs, Post Spawning 1		Quahogs, Post Spawning 1		Quahogs, Post Spawning 1		Quahogs, Post Spawning 1		Quahogs, Post Spawning 1		Quahogs, Post Spawning 1	
	Area	II		II		II		II		II		II	
	Station	Station B		Station C		Station D		Station F		Station G		Station H	
	Sample Date	8/27/2008		8/27/2008		8/28/2008		8/27/2008		8/27/2008		8/27/2008	
Parameter	**Units**												
Lipids	PERCENT	0.10	U	0.16		0.15		0.11		0.13		0.24	
Total PCB Congeners[1]	MG/KG	0.046	J1	0.31	J3	0.15	J3	0.047	J1	0.064	J2	0.19	J3
Total PCB Congeners Hits[2]	MG/KG	0.023		0.30		0.13		0.023		0.045		0.18	
Total NOAA Congeners[3]	MG/KG	0.014	J2	0.13	J4	0.060	J3	0.015	J2	0.023	J3	0.079	J4
Total WHO Congeners[4]	MG/KG	0.0045	J1	0.020	J3	0.0086	J2	0.0039	J1	0.0056	J2	0.012	J2
Total NOAA / WHO Combined[5]	MG/KG	0.016	J2	0.14	J3	0.062	J3	0.017	J2	0.025	J2	0.081	J3
Total Aroclors[6]	MG/KG	0.0044	U	0.34	J3	0.16	J3	0.0046	U	0.0046	U	0.21	J3
Cl1-BZ#1	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl1-BZ#3	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl2-BZ#4/#10	MG/KG	0.00089	U	0.00083	J	0.00091	U	0.00093	U	0.00091	U	0.00092	U
Cl2-BZ#5/#8	MG/KG	0.00089	U	0.0016		0.00050	J	0.00093	U	0.00091	U	0.00051	J
Cl2-BZ#6	MG/KG	0.00044	U	0.00083		0.00029	J	0.00046	U	0.00046	U	0.00031	J
Cl2-BZ#7	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl2-BZ#12/#13	MG/KG	0.00089	U	0.00059	J	0.00091	U	0.00093	U	0.00091	U	0.00092	U
Cl2-BZ#15	MG/KG	0.00044	U	0.0011		0.00045	J	0.00046	U	0.00046	U	0.00045	J
Cl3-BZ#16/#32	MG/KG	0.00089	U	0.0032		0.0012		0.00093	U	0.00091	U	0.0013	
Cl3-BZ#17	MG/KG	0.00044	U	0.0028		0.0012		0.00046	U	0.00046	U	0.0012	
Cl3-BZ#18	MG/KG	0.00044	UJ	0.0068	J	0.0030	J	0.00052	J	0.00047	J	0.0029	J
Cl3-BZ#19	MG/KG	0.00044	U	0.00061		0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl3-BZ#21/#33	MG/KG	0.00089	U	0.0020		0.00078	J	0.00093	U	0.00091	U	0.00086	J
Cl3-BZ#22	MG/KG	0.00044	U	0.0021		0.00093		0.00046	U	0.00046	U	0.00094	
Cl3-BZ#24/#27	MG/KG	0.00089	U	0.0010		0.00049	J	0.00093	U	0.00091	U	0.00092	U
Cl3-BZ#25	MG/KG	0.00044	U	0.0049		0.0027		0.00040	J	0.0004	J	0.0025	
Cl3-BZ#26	MG/KG	0.00033	J	0.0092		0.0052		0.00086		0.00081		0.0051	
Cl3-BZ#28/#31	MG/KG	0.00097		0.026		0.013		0.0023		0.0022		0.013	
Cl3-BZ#29	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl3-BZ#37	MG/KG	0.00044	U	0.0013		0.00052		0.00046	U	0.00046	U	0.00057	
Cl4-BZ#40	MG/KG	0.00044	U	0.0013		0.00064		0.00046	U	0.00046	U	0.00071	
Cl4-BZ#41/#71	MG/KG	0.00089	U	0.0060		0.0026		0.00048	J	0.00070	J	0.0032	
Cl4-BZ#42	MG/KG	0.00044	U	0.0023		0.0011		0.00046	U	0.00034	J	0.0013	
Cl4-BZ#43/#49	MG/KG	0.0011		0.019		0.0090		0.0016		0.0023		0.011	
Cl4-BZ#44	MG/KG	0.00043	J	0.0062		0.0031		0.00055		0.00087		0.0035	
Cl4-BZ#45	MG/KG	0.00044	U	0.00080		0.00035	J	0.00046	U	0.00046	U	0.00041	J
Cl4-BZ#46	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl4-BZ#47/#48	MG/KG	0.00058	J	0.0087		0.0043		0.00082	J	0.0013		0.0050	
Cl4-BZ#50	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl4-BZ#51	MG/KG	0.00044	U	0.00055		0.00045	U	0.00046	U	0.00046	U	0.00023	J
Cl4-BZ#52	MG/KG	0.0014		0.024		0.012		0.0023		0.0029		0.014	
Cl4-BZ#53	MG/KG	0.00044	U	0.0018		0.00074		0.00046	U	0.00046	U	0.00077	
Cl4-BZ#54	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl4-BZ#56/#60	MG/KG	0.00089	U	0.0033		0.0013		0.00093	U	0.00091	U	0.0016	
Cl4-BZ#63	MG/KG	0.00044	U	0.00070		0.00035	J	0.00046	U	0.00046	U	0.00043	J
Cl4-BZ#64	MG/KG	0.00044	U	0.0033		0.0014		0.00024	J	0.00031	J	0.0015	
Cl4-BZ#66	MG/KG	0.00082		0.0076		0.0032		0.00067		0.0013		0.0041	
Cl4-BZ#70	MG/KG	0.00068		0.0067		0.0026		0.00053		0.0010		0.0033	
Cl4-BZ#74	MG/KG	0.00040	J	0.0055		0.0023		0.00043	J	0.00070		0.0026	
Cl4-BZ#76	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl4-BZ#77	MG/KG	0.00044	UJ	0.00079	J	0.00037	J	0.00046	UJ	0.00046	UJ	0.00043	J
Cl4-BZ#81	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl5-BZ#82	MG/KG	0.00044	U	0.00075		0.00031	J	0.00046	U	0.00046	U	0.00039	J
Cl5-BZ#83	MG/KG	0.00044	U	0.00088		0.00037	J	0.00046	U	0.00024	J	0.00062	
Cl5-BZ#85	MG/KG	0.00025	J	0.0015		0.00058		0.00046	U	0.00041	J	0.0010	
Cl5-BZ#87	MG/KG	0.00039	J	0.0038		0.0014		0.00029	J	0.00066		0.0022	
Cl5-BZ#89	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl5-BZ#91	MG/KG	0.00028	J	0.0031		0.0013		0.00027	J	0.00047		0.0019	
Cl5-BZ#92	MG/KG	0.00057		0.0039		0.0019		0.00053		0.00090		0.0030	
Cl5-BZ#95	MG/KG	0.00074		0.0080		0.0033		0.00069		0.0014		0.0050	
Cl5-BZ#97	MG/KG	0.00045		0.0035		0.0015		0.00030	J	0.00068		0.0022	
Cl5-BZ#99	MG/KG	0.0017		0.013		0.0060		0.0014		0.0029		0.0087	
Cl5-BZ#100	MG/KG	0.00044	U	0.00040	J	0.00045	U	0.00046	U	0.00046	U	0.00027	J
Cl5-BZ#101/#84	MG/KG	0.0022		0.019		0.0079		0.0019		0.0038		0.012	
Cl5-BZ#104	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 1C Sample Data for Quahogs, Post-Spawning (mg/kg wet weight) Area II 2008

	Sample#	NBH08-SF-B-2		NBH08-SF-C-2		NBH08-SF-D-2		NBH08-SF-F-2		NBH08-SF-G-2		NBH08-SF-H-2	
Cl5-BZ#105	MG/KG	0.00037	J	0.0028		0.0010		0.00025	J	0.00055		0.0015	
Cl5-BZ#107	MG/KG	0.00027	J	0.0014		0.00066		0.00046	U	0.00042	J	0.0011	
Cl5-BZ#110	MG/KG	0.0013	J	0.012	J	0.0048	J	0.00097	J	0.0021	J	0.0073	J
Cl5-BZ#114	MG/KG	0.00044	U	0.00024	J	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl5-BZ#118	MG/KG	0.0017		0.012		0.0045		0.0011		0.0025		0.0067	
Cl5-BZ#119	MG/KG	0.00044	U	0.0013		0.00057		0.00046	U	0.00023	J	0.00080	
Cl5-BZ#123	MG/KG	0.00044	U	0.00059		0.00025	J	0.00046	U	0.00046	U	0.00038	J
Cl5-BZ#124	MG/KG	0.00044	U	0.00043	J	0.00045	U	0.00046	U	0.00046	U	0.00030	J
Cl5-BZ#126	MG/KG	0.00044	UJ	0.00046	UJ	0.00045	UJ	0.00046	UJ	0.00046	UJ	0.00046	UJ
Cl6-BZ#129	MG/KG	0.00044	U	0.00028	J	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl6-BZ#130	MG/KG	0.00044	U	0.00079		0.00034	J	0.00046	U	0.00027	J	0.00065	
Cl6-BZ#131	MG/KG	0.00089	U	0.00091	U	0.00091	U	0.00093	U	0.00091	U	0.00092	U
Cl6-BZ#132/#168	MG/KG	0.00089	U	0.0020		0.00071	J	0.00093	U	0.00053	J	0.0016	
Cl6-BZ#134	MG/KG	0.00044	U	0.00095		0.00038	J	0.00046	U	0.00025	J	0.00064	
Cl6-BZ#135/#144	MG/KG	0.00089	U	0.0017		0.00076	J	0.00093	U	0.00047	J	0.0013	
Cl6-BZ#136	MG/KG	0.00044	U	0.00094		0.00039	J	0.00046	U	0.00046	U	0.00068	
Cl6-BZ#137	MG/KG	0.00044	U	0.00062		0.00045	U	0.00046	U	0.00046	U	0.00040	J
Cl6-BZ#138/#163	MG/KG	0.0017		0.010		0.0041		0.0011		0.0026		0.0074	
Cl6-BZ#141	MG/KG	0.00044	U	0.00084		0.00026	J	0.00046	U	0.00046	U	0.00051	
Cl6-BZ#146	MG/KG	0.00053	J	0.0027		0.0013		0.00093	U	0.00081	J	0.0022	
Cl6-BZ#147	MG/KG	0.00044	U	0.00079		0.00036	J	0.00046	U	0.00046	U	0.00055	
Cl6-BZ#149	MG/KG	0.0010		0.0081		0.0033		0.00078		0.0017		0.0057	
Cl6-BZ#151	MG/KG	0.00044	U	0.0011		0.00035	J	0.00046	U	0.00025	J	0.00079	
Cl6-BZ#153	MG/KG	0.0021		0.013		0.0052		0.0015		0.0034		0.0090	
Cl6-BZ#154	MG/KG	0.00044	U	0.00045	J	0.00045	U	0.00046	U	0.00046	U	0.00029	J
Cl6-BZ#155	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl6-BZ#156	MG/KG	0.00044	U	0.00089		0.00030	J	0.00046	U	0.00046	U	0.00050	
Cl6-BZ#157	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl6-BZ#158	MG/KG	0.00044	U	0.00061		0.00045	U	0.00046	U	0.00046	U	0.00046	
Cl6-BZ#167/#128	MG/KG	0.00089	U	0.0019		0.00076	J	0.00093	U	0.00056	J	0.0015	
Cl6-BZ#169	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#170/#190	MG/KG	0.00089	U	0.00076	J	0.00091	U	0.00093	U	0.00091	U	0.00064	J
Cl7-BZ#171	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#172	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#173	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#174	MG/KG	0.00044	U	0.00063		0.00026	J	0.00046	U	0.00046	U	0.00043	J
Cl7-BZ#175	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#176	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#177	MG/KG	0.00044	U	0.00069		0.00030	J	0.00046	U	0.00026	J	0.00055	
Cl7-BZ#178	MG/KG	0.00044	U	0.00031	J	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#180	MG/KG	0.00029	J	0.0018		0.00069		0.00046	U	0.00047		0.0013	
Cl7-BZ#182/#187	MG/KG	0.00089	U	0.0018		0.00074	J	0.00093	U	0.00050	J	0.0013	
Cl7-BZ#183	MG/KG	0.00044	U	0.00037	J	0.00045	U	0.00046	U	0.00046	U	0.00029	J
Cl7-BZ#184	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#185	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#188	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#189	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#191	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl7-BZ#193	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#194	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#195	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#196/203	MG/KG	0.00089	U	0.00091	U	0.00091	U	0.00093	U	0.00091	U	0.00092	U
Cl8-BZ#197	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#199	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#200	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#201	MG/KG	0.00044	U	0.00029	J	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#202	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl8-BZ#205	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl9-BZ#206	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl9-BZ#207	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl9-BZ#208	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Cl10-BZ#209	MG/KG	0.00044	U	0.00046	U	0.00045	U	0.00046	U	0.00046	U	0.00046	U
Aroclor-1232	MG/KG	0.0089	U	0.0091	U	0.0091	U	0.0093	U	0.0091	U	0.0092	U
Aroclor-1242	MG/KG	0.0089	U	0.0091	U	0.0091	U	0.0093	U	0.0091	U	0.0092	U
Aroclor-1248	MG/KG	0.0089	U	0.18		0.081		0.0093	U	0.0091	U	0.096	
Aroclor-1254	MG/KG	0.0089	U	0.15		0.061		0.0093	U	0.0091	U	0.10	
Aroclor-1260	MG/KG	0.0089	U	0.0091	U	0.0091	U	0.0093	U	0.0091	U	0.0092	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 1D Sample Data For Quahogs, Post-Spawning (mg/kg wet weight) Area III 2008

	Sample#	NBH08-SF-B-3		NBH08-SF-D-3		NBH08-SF-F-3		NBH08-SF-I-3	
	Species	Quahogs, Post Spawning 1		Quahogs, Post Spawning 1		Quahogs, Post Spawning 1		Quahogs, Post Spawning 1	
	Area	III		III		III		III	
	Station	Station B		Station D		Station F		Station I	
	Sample Date	8/27/2008		8/27/2008		8/27/2008		8/27/2008	
Parameter	**Units**								
Lipids	PERCENT	0.10	U	0.15		0.16		0.28	
Total PCB Congeners[1]	MG/KG	0.13	J2	0.036	J1	0.046	J1	0.032	J1
Total PCB Congeners Hits[2]	MG/KG	0.12		0.0082		0.022		0.00026	
Total NOAA Congeners[3]	MG/KG	0.053	J3	0.0081	J2	0.014	J2	0.0055	J1
Total WHO Congeners[4]	MG/KG	0.0083	J2	0.0034	J1	0.0042	J1	0.0030	U
Total NOAA / WHO Combined[5]	MG/KG	0.056	J3	0.010	J1	0.016	J2	0.0076	J1
Total Aroclors[6]	MG/KG	0.14	J3	0.0046	U	0.0045	U	0.0046	U
Cl1-BZ#1	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl1-BZ#3	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl2-BZ#4/#10	MG/KG	0.00092	U	0.00092	U	0.00090	U	0.00092	U
Cl2-BZ#5/#8	MG/KG	0.00056	J	0.00092	U	0.00090	U	0.00092	U
Cl2-BZ#6	MG/KG	0.00033	J	0.00046	U	0.00045	U	0.00046	U
Cl2-BZ#7	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl2-BZ#12/#13	MG/KG	0.00092	U	0.00092	U	0.00090	U	0.00092	U
Cl2-BZ#15	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00046	U
Cl3-BZ#16/#32	MG/KG	0.0012		0.00092	U	0.00090	U	0.00092	U
Cl3-BZ#17	MG/KG	0.0011		0.00046	U	0.00045	U	0.00046	U
Cl3-BZ#18	MG/KG	0.0026	J	0.00046	UJ	0.00024	J	0.00046	UJ
Cl3-BZ#19	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl3-BZ#21/#33	MG/KG	0.00082	J	0.00092	U	0.00090	U	0.00092	U
Cl3-BZ#22	MG/KG	0.00084		0.00046	U	0.00045	U	0.00046	U
Cl3-BZ#24/#27	MG/KG	0.00092	U	0.00092	U	0.00090	U	0.00092	U
Cl3-BZ#25	MG/KG	0.0020		0.00046	U	0.00045	U	0.00046	U
Cl3-BZ#26	MG/KG	0.0038		0.00023	J	0.00032	J	0.00046	U
Cl3-BZ#28/#31	MG/KG	0.011		0.00053	J	0.0010		0.00092	U
Cl3-BZ#29	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl3-BZ#37	MG/KG	0.00048		0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#40	MG/KG	0.00054		0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#41/#71	MG/KG	0.0022		0.00092	U	0.00090	U	0.00092	U
Cl4-BZ#42	MG/KG	0.0010		0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#43/#49	MG/KG	0.0076		0.00057	J	0.0011		0.00092	U
Cl4-BZ#44	MG/KG	0.0024		0.00046	U	0.00051		0.00046	U
Cl4-BZ#45	MG/KG	0.00031	J	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#46	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#47/#48	MG/KG	0.0038		0.00092	U	0.00060	J	0.00092	U
Cl4-BZ#50	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#51	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#52	MG/KG	0.0099		0.00075		0.0014		0.00046	U
Cl4-BZ#53	MG/KG	0.00066		0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#54	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#56/#60	MG/KG	0.0012		0.00092	U	0.00090	U	0.00092	U
Cl4-BZ#63	MG/KG	0.00032	J	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#64	MG/KG	0.0013		0.00046	U	0.00023	J	0.00046	U
Cl4-BZ#66	MG/KG	0.0033		0.00031	J	0.00074		0.00046	U
Cl4-BZ#70	MG/KG	0.0024		0.00026	J	0.00056		0.00046	U
Cl4-BZ#74	MG/KG	0.0020		0.00046	U	0.00037	J	0.00046	U
Cl4-BZ#76	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl4-BZ#77	MG/KG	0.00031	J	0.00046	UJ	0.00045	UJ	0.00046	UJ
Cl4-BZ#81	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#82	MG/KG	0.00029	J	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#83	MG/KG	0.00033	J	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#85	MG/KG	0.00058		0.00046	U	0.00026	J	0.00046	U
Cl5-BZ#87	MG/KG	0.0015		0.00046	U	0.00042	J	0.00046	U
Cl5-BZ#89	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#91	MG/KG	0.0013		0.00046	U	0.00028	J	0.00046	U
Cl5-BZ#92	MG/KG	0.0019		0.00027	J	0.00055		0.00046	U
Cl5-BZ#95	MG/KG	0.0033		0.00034	J	0.00078		0.00046	U
Cl5-BZ#97	MG/KG	0.0013		0.00046	U	0.00047		0.00046	U
Cl5-BZ#99	MG/KG	0.0053		0.00076		0.0016		0.00046	U
Cl5-BZ#100	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#101/#84	MG/KG	0.0071		0.0010		0.0022		0.00092	U
Cl5-BZ#104	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 1D Sample Data For Quahogs, Post-Spawning (mg/kg wet weight) Area III 2008

	Sample#	NBH08-SF-B-3		NBH08-SF-D-3		NBH08-SF-F-3		NBH08-SF-I-3	
Cl5-BZ#105	MG/KG	0.00099		0.00046	U	0.00036	J	0.00046	U
Cl5-BZ#107	MG/KG	0.00066		0.00046	U	0.00025	J	0.00046	U
Cl5-BZ#110	MG/KG	0.0044	J	0.00049	J	0.0013	J	0.00046	UJ
Cl5-BZ#114	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#118	MG/KG	0.0043		0.00062		0.0014		0.00046	U
Cl5-BZ#119	MG/KG	0.00056		0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#123	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#124	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl5-BZ#126	MG/KG	0.00046	UJ	0.00046	UJ	0.00045	UJ	0.00046	UJ
Cl6-BZ#129	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#130	MG/KG	0.00033	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#131	MG/KG	0.00092	U	0.00092	U	0.00090	U	0.00092	U
Cl6-BZ#132/#168	MG/KG	0.00083	J	0.00092	U	0.00090	U	0.00092	U
Cl6-BZ#134	MG/KG	0.00040	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#135/#144	MG/KG	0.00075	J	0.00092	U	0.00090	U	0.00092	U
Cl6-BZ#136	MG/KG	0.00044	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#137	MG/KG	0.00025	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#138/#163	MG/KG	0.0037		0.00069	J	0.0017		0.00092	U
Cl6-BZ#141	MG/KG	0.00030	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#146	MG/KG	0.0012		0.00092	U	0.00046	J	0.00092	U
Cl6-BZ#147	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#149	MG/KG	0.0034		0.00044	J	0.0010		0.00046	U
Cl6-BZ#151	MG/KG	0.00047		0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#153	MG/KG	0.0050		0.00097		0.0020		0.00026	J
Cl6-BZ#154	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#155	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#156	MG/KG	0.00032	J	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#157	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#158	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl6-BZ#167/#128	MG/KG	0.00071	J	0.00092	U	0.00090	U	0.00092	U
Cl6-BZ#169	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#170/#190	MG/KG	0.00092	U	0.00092	U	0.00090	U	0.00092	U
Cl7-BZ#171	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#172	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#173	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#174	MG/KG	0.00031	J	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#175	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#176	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#177	MG/KG	0.00033	J	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#178	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#180	MG/KG	0.00072		0.00046	U	0.00029	J	0.00046	U
Cl7-BZ#182/#187	MG/KG	0.00083	J	0.00092	U	0.00090	U	0.00092	U
Cl7-BZ#183	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#184	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#185	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#188	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#189	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#191	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl7-BZ#193	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#194	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#195	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#196/203	MG/KG	0.00092	U	0.00092	U	0.00090	U	0.00092	U
Cl8-BZ#197	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#199	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#200	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#201	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#202	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl8-BZ#205	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl9-BZ#206	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl9-BZ#207	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl9-BZ#208	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Cl10-BZ#209	MG/KG	0.00046	U	0.00046	U	0.00045	U	0.00046	U
Aroclor-1232	MG/KG	0.0092	U	0.0092	U	0.00900	U	0.0092	U
Aroclor-1242	MG/KG	0.0092	U	0.0092	U	0.00900	U	0.0092	U
Aroclor-1248	MG/KG	0.069		0.0092	U	0.00900	U	0.0092	U
Aroclor-1254	MG/KG	0.058		0.0092	U	0.00900	U	0.0092	U
Aroclor-1260	MG/KG	0.0092	U	0.0092	U	0.00900	U	0.0092	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 3A Sample Data for Scup (mg/kg wet weight) Area II 2008

	Sample#	NBH08-FF-A-2		NBH08-FF-B-2		NBH08-FF-C-2		NBH08-FF-D-2		NBH08-FF-E-2	
	Species	Scup		Scup		Scup		Scup		Scup	
	Area	II		II		II		II		II	
	Station	Station A		Station B		Station C		Station D		Station E	
Parameter	Units										
Lipids	PERCENT	1.1		0.57		0.90		0.74		0.81	
Total PCB Congeners[1]	MG/KG	0.34	J3	0.33	J3	0.75	J4	0.16	J3	0.12	J2
Total PCB Congeners Hits[2]	MG/KG	0.33		0.32		0.75		0.14		0.11	
Total NOAA Congeners[3]	MG/KG	0.21	J4	0.20	J4	0.42	J4	0.088	J4	0.068	J3
Total WHO Congeners[4]	MG/KG	0.058	J3	0.055	J3	0.11	J4	0.024	J3	0.018	J3
Total NOAA / WHO Combined[5]	MG/KG	0.22	J4	0.21	J4	0.43	J4	0.092	J3	0.070	J3
Total Aroclors[6]	MG/KG	0.0046	U	0.0044	U	0.0044	U	0.0044	U	0.0048	U
Cl1-BZ#1	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl1-BZ#3	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl2-BZ#4/#10	MG/KG	0.00092	U	0.00087	U	0.00089	U	0.00088	U	0.00096	U
Cl2-BZ#5/#8	MG/KG	0.00092	U	0.00087	U	0.00089	U	0.00088	U	0.00096	U
Cl2-BZ#6	MG/KG	0.00046	U	0.00044	U	0.00048		0.00044	U	0.00048	U
Cl2-BZ#7	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl2-BZ#12/#13	MG/KG	0.00092	U	0.00087	U	0.00089	U	0.00088	U	0.00096	U
Cl2-BZ#15	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl3-BZ#16/#32	MG/KG	0.00092	U	0.00087	U	0.0016		0.00088	U	0.00096	U
Cl3-BZ#17	MG/KG	0.00050		0.00043	J	0.0023		0.00025	J	0.00048	U
Cl3-BZ#18	MG/KG	0.0011		0.00075		0.0041		0.00054		0.00036	J
Cl3-BZ#19	MG/KG	0.00046	U	0.00044	U	0.00027	J	0.00044	U	0.00048	U
Cl3-BZ#21/#33	MG/KG	0.00092	U	0.00087	U	0.00060	J	0.00088	U	0.00096	U
Cl3-BZ#22	MG/KG	0.00027	J	0.00044	U	0.00089		0.00044	U	0.00048	U
Cl3-BZ#24/#27	MG/KG	0.00092	U	0.00087	U	0.00051	J	0.00088	U	0.00096	U
Cl3-BZ#25	MG/KG	0.00060		0.00036	J	0.0020		0.00040	J	0.00024	J
Cl3-BZ#26	MG/KG	0.0015		0.0012		0.0057		0.00082		0.00051	
Cl3-BZ#28/#31	MG/KG	0.0040	J	0.0025	J	0.014	J	0.0020	J	0.0012	J
Cl3-BZ#29	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl3-BZ#37	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl4-BZ#40	MG/KG	0.00046	U	0.00028	J	0.00076		0.00044	U	0.00048	U
Cl4-BZ#41/#71	MG/KG	0.0025		0.0023		0.0094		0.0015		0.00083	J
Cl4-BZ#42	MG/KG	0.00059		0.00043	J	0.0022		0.00048		0.00048	U
Cl4-BZ#43/#49	MG/KG	0.0087		0.0072		0.035		0.0052		0.0026	
Cl4-BZ#44	MG/KG	0.0011		0.0015		0.0044		0.00068		0.00048	
Cl4-BZ#45	MG/KG	0.00046	U	0.00044	U	0.00045		0.00044	U	0.00048	U
Cl4-BZ#46	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl4-BZ#47/#48	MG/KG	0.0062		0.0056		0.020		0.0031		0.0018	
Cl4-BZ#50	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl4-BZ#51	MG/KG	0.00046	U	0.00044	U	0.00045		0.00044	U	0.00048	U
Cl4-BZ#52	MG/KG	0.0084		0.0087		0.030		0.0046		0.0026	
Cl4-BZ#53	MG/KG	0.00023	J	0.00044	U	0.00061		0.00044	U	0.00048	U
Cl4-BZ#54	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl4-BZ#56/#60	MG/KG	0.0012		0.0010		0.0041		0.00065	J	0.00096	U
Cl4-BZ#63	MG/KG	0.00071		0.00052		0.0016		0.00029	J	0.00048	U
Cl4-BZ#64	MG/KG	0.00046	U	0.00044	U	0.0018		0.00044	U	0.00048	U
Cl4-BZ#66	MG/KG	0.0084		0.0064		0.021		0.0035		0.0024	
Cl4-BZ#70	MG/KG	0.00038	J	0.00023	J	0.0012		0.00034	J	0.00048	U
Cl4-BZ#74	MG/KG	0.0047		0.0038		0.015		0.0024		0.0013	
Cl4-BZ#76	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl4-BZ#77	MG/KG	0.00040	J	0.00037	J	0.0011		0.00024	J	0.00048	U
Cl4-BZ#81	MG/KG	0.00046	U	0.00044	U	0.00028	J	0.00044	U	0.00048	U
Cl5-BZ#82	MG/KG	0.00030	J	0.00030	J	0.00069		0.00025	J	0.00025	J
Cl5-BZ#83	MG/KG	0.00046	U	0.00044	U	0.00057		0.00044	U	0.00048	U
Cl5-BZ#85	MG/KG	0.0029		0.0034		0.0065		0.0013		0.00099	
Cl5-BZ#87	MG/KG	0.0033		0.0038		0.0083		0.0016		0.0011	
Cl5-BZ#89	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl5-BZ#91	MG/KG	0.0016		0.0019		0.0058		0.00092		0.00063	
Cl5-BZ#92	MG/KG	0.0010		0.0014		0.0033		0.00065		0.00053	
Cl5-BZ#95	MG/KG	0.0022		0.0032		0.0075		0.0012		0.00092	
Cl5-BZ#97	MG/KG	0.0041		0.0039		0.011		0.0021		0.0014	
Cl5-BZ#99	MG/KG	0.028		0.027		0.063		0.013		0.0097	
Cl5-BZ#100	MG/KG	0.00041	J	0.00041	J	0.0011		0.00025	J	0.00048	U
Cl5-BZ#101/#84	MG/KG	0.027		0.029		0.065		0.012		0.0086	
Cl5-BZ#104	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl5-BZ#105	MG/KG	0.0066		0.0063		0.013		0.0025		0.0018	
Cl5-BZ#107	MG/KG	0.0031		0.0029		0.0053		0.0012		0.0012	

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 3A Sample Data for Scup (mg/kg wet weight) Area II 2008

	Sample#	NBH08-FF-A-2		NBH08-FF-B-2		NBH08-FF-C-2		NBH08-FF-D-2		NBH08-FF-E-2	
Cl5-BZ#110	MG/KG	0.0045		0.0056		0.020		0.0029		0.0018	
Cl5-BZ#114	MG/KG	0.00035	J	0.00030	J	0.0007		0.00044	U	0.00048	U
Cl5-BZ#118	MG/KG	0.036		0.034		0.072		0.014		0.011	
Cl5-BZ#119	MG/KG	0.0015		0.0012		0.0036		0.00072		0.00050	
Cl5-BZ#123	MG/KG	0.00082		0.00086		0.0019		0.00037	J	0.00028	J
Cl5-BZ#124	MG/KG	0.00046	U	0.00044	U	0.00026	J	0.00044	U	0.00048	U
Cl5-BZ#126	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl6-BZ#129	MG/KG	0.00023	J	0.00044	U	0.00034	J	0.00044	U	0.00048	U
Cl6-BZ#130	MG/KG	0.00076		0.00073		0.0013		0.00035	J	0.00032	J
Cl6-BZ#131	MG/KG	0.00092	U	0.00087	U	0.00089	U	0.00088	U	0.00096	U
Cl6-BZ#132/#168	MG/KG	0.00079	J	0.0010		0.0023		0.00047	J	0.00096	U
Cl6-BZ#134	MG/KG	0.00032	J	0.00038	J	0.00073		0.00044	U	0.00048	U
Cl6-BZ#135/#144	MG/KG	0.00071	J	0.00078	J	0.0016		0.00088	U	0.00096	U
Cl6-BZ#136	MG/KG	0.00039	J	0.00049		0.00090		0.00044	U	0.00048	U
Cl6-BZ#137	MG/KG	0.0015		0.0016		0.0029		0.00060		0.00043	J
Cl6-BZ#138/#163	MG/KG	0.030		0.034		0.054		0.013		0.011	
Cl6-BZ#141	MG/KG	0.00071		0.00080		0.0017		0.00033	J	0.00029	J
Cl6-BZ#146	MG/KG	0.0085		0.0077		0.014		0.0034		0.0028	
Cl6-BZ#147	MG/KG	0.0012		0.0013		0.0024		0.00051		0.00039	J
Cl6-BZ#149	MG/KG	0.0067		0.0083		0.019		0.0035		0.0028	
Cl6-BZ#151	MG/KG	0.00086		0.0010		0.0018		0.00047		0.00048	
Cl6-BZ#153	MG/KG	0.062		0.055		0.10		0.024		0.019	
Cl6-BZ#154	MG/KG	0.00097		0.00091		0.0022		0.00052		0.00040	J
Cl6-BZ#155	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl6-BZ#156	MG/KG	0.0029		0.0028		0.0052		0.0012		0.00089	
Cl6-BZ#157	MG/KG	0.00081		0.00064		0.0011		0.00032	J	0.00029	J
Cl6-BZ#158	MG/KG	0.0025		0.0031		0.0055		0.0011		0.00085	
Cl6-BZ#167/#128	MG/KG	0.0087		0.0090		0.015		0.0035		0.0028	
Cl6-BZ#169	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl7-BZ#170/#190	MG/KG	0.0037		0.0036		0.0057		0.0016		0.0014	
Cl7-BZ#171	MG/KG	0.00086		0.00090		0.0016		0.00047		0.00039	J
Cl7-BZ#172	MG/KG	0.00045	J	0.00034	J	0.00056		0.00044	U	0.00048	U
Cl7-BZ#173	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl7-BZ#174	MG/KG	0.00025	J	0.00027	J	0.00056		0.00044	U	0.00048	U
Cl7-BZ#175	MG/KG	0.00024	J	0.00023	J	0.00030	J	0.00044	U	0.00048	U
Cl7-BZ#176	MG/KG	0.00046	U	0.00044	U	0.00024	J	0.00044	U	0.00048	U
Cl7-BZ#177	MG/KG	0.00042	J	0.00041	J	0.00067		0.00024	J	0.00027	J
Cl7-BZ#178	MG/KG	0.00035	J	0.00026	J	0.00040	J	0.00044	U	0.00048	U
Cl7-BZ#180	MG/KG	0.0068		0.0062		0.011		0.0029		0.0024	
Cl7-BZ#182/#187	MG/KG	0.0055		0.0049		0.0082		0.0023		0.0023	
Cl7-BZ#183	MG/KG	0.0025		0.0023		0.0040		0.0011		0.0010	
Cl7-BZ#184	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl7-BZ#185	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl7-BZ#188	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl7-BZ#189	MG/KG	0.00032	J	0.00024	J	0.00037	J	0.00044	U	0.00048	U
Cl7-BZ#191	MG/KG	0.00030	J	0.00044	U	0.00033	J	0.00044	U	0.00048	U
Cl7-BZ#193	MG/KG	0.00037	J	0.00034	J	0.00056		0.00044	U	0.00048	U
Cl8-BZ#194	MG/KG	0.0012		0.00097		0.0016		0.00044	U	0.00048	U
Cl8-BZ#195	MG/KG	0.00046	U	0.00044	U	0.00051		0.00044	U	0.00048	U
Cl8-BZ#196/203	MG/KG	0.0013		0.0011		0.0019		0.00088	U	0.00096	U
Cl8-BZ#197	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl8-BZ#199	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl8-BZ#200	MG/KG	0.00028	J	0.00023	J	0.00031	J	0.00044	U	0.00048	U
Cl8-BZ#201	MG/KG	0.00060		0.00049		0.00074		0.00044	U	0.00048	U
Cl8-BZ#202	MG/KG	0.00026	J	0.00044	U	0.00028	J	0.00044	U	0.00048	U
Cl8-BZ#205	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl9-BZ#206	MG/KG	0.00070		0.00052		0.00084		0.00044		0.00046	J
Cl9-BZ#207	MG/KG	0.00046	U	0.00044	U	0.00044	U	0.00044	U	0.00048	U
Cl9-BZ#208	MG/KG	0.00027	J	0.00022	J	0.00025	J	0.00044	U	0.00048	U
Cl10-BZ#209	MG/KG	0.00038	J	0.00031	J	0.00036	J	0.00025	J	0.00027	J
Aroclor-1232	MG/KG	0.0092	U	0.0087	U	0.0089	U	0.0088	U	0.0096	U
Aroclor-1242	MG/KG	0.0092	U	0.0087	U	0.0089	U	0.0088	U	0.0096	U
Aroclor-1248	MG/KG	0.0092	U	0.0087	U	0.0089	U	0.0088	U	0.0096	U
Aroclor-1254	MG/KG	0.0092	U	0.0087	U	0.0089	U	0.0088	U	0.0096	U
Aroclor-1260	MG/KG	0.0092	U	0.0087	U	0.0089	U	0.0088	U	0.0096	U

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 3B Sample Data for Scup (mg/kg wet weight) Area III 2008

	Sample#	NBH08-FF-A-3		NBH08-FF-B-3		NBH08-FF-C-3		NBH08-FF-D-3		NBH08-FF-E-3	
	Species	Scup		Scup		Scup		Scup		Scup	
	Area	III		III		III		III		III	
	Station	Station A		Station B		Station C		Station D		Station E	
Parameter	**Units**										
Lipids	PERCENT	0.82		0.96		1.3		1.4		1.1	
Total PCB Congeners[1]	MG/KG	0.17	J3	0.21	J3	0.18	J3	0.36	J3	0.18	J3
Total PCB Congeners Hits[2]	MG/KG	0.16		0.20		0.17		0.35		0.16	
Total NOAA Congeners[3]	MG/KG	0.10	J4	0.13	J4	0.10	J4	0.22	J4	0.094	J3
Total WHO Congeners[4]	MG/KG	0.030	J4	0.032	J3	0.026	J3	0.055	J3	0.030	J3
Total NOAA / WHO Combined[5]	MG/KG	0.11	J4	0.13	J3	0.10	J3	0.22	J4	0.097	J3
Total Aroclors[6]	MG/KG	0.0047	U	0.0046	U	0.0045	U	0.0045	U	0.0047	U
Cl1-BZ#1	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl1-BZ#3	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl2-BZ#4/#10	MG/KG	0.00094	U	0.00091	U	0.00090	U	0.00089	U	0.00094	U
Cl2-BZ#5/#8	MG/KG	0.00094	U	0.00091	U	0.00090	U	0.00089	U	0.00094	U
Cl2-BZ#6	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl2-BZ#7	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl2-BZ#12/#13	MG/KG	0.00094	U	0.00091	U	0.00090	U	0.00089	U	0.00094	U
Cl2-BZ#15	MG/KG	0.00029	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl3-BZ#16/#32	MG/KG	0.00094	U	0.00091	U	0.00090	U	0.00089	U	0.00094	U
Cl3-BZ#17	MG/KG	0.00047	U	0.00046	U	0.00025	J	0.00030	J	0.00047	U
Cl3-BZ#18	MG/KG	0.00043	J	0.00027	J	0.00041	J	0.00051		0.00038	J
Cl3-BZ#19	MG/KG	0.00029	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl3-BZ#21/#33	MG/KG	0.00094	U	0.00091	U	0.0009	U	0.00089	U	0.00094	U
Cl3-BZ#22	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl3-BZ#24/#27	MG/KG	0.00094	U	0.00091	U	0.00090	U	0.00089	U	0.00094	U
Cl3-BZ#25	MG/KG	0.00047	U	0.00046	U	0.00023	J	0.00028	J	0.00047	U
Cl3-BZ#26	MG/KG	0.00027	J	0.00036	J	0.00048		0.00070		0.00060	
Cl3-BZ#28/#31	MG/KG	0.0014	J	0.0010	J	0.0013	J	0.0019	J	0.0012	J
Cl3-BZ#29	MG/KG	0.00033	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl3-BZ#37	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#40	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00026	J	0.00047	U
Cl4-BZ#41/#71	MG/KG	0.00076	J	0.00098		0.00069	J	0.0020		0.0012	
Cl4-BZ#42	MG/KG	0.00047	U	0.00031	J	0.00047		0.00047		0.00039	J
Cl4-BZ#43/#49	MG/KG	0.0025		0.0037		0.0038		0.0066		0.0041	
Cl4-BZ#44	MG/KG	0.00060		0.00053		0.00074		0.00090		0.00069	
Cl4-BZ#45	MG/KG	0.00043	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#46	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#47/#48	MG/KG	0.0022		0.0027		0.0024		0.0047		0.0027	
Cl4-BZ#50	MG/KG	0.00035	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#51	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#52	MG/KG	0.0022		0.0032		0.0035		0.0057		0.0041	
Cl4-BZ#53	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#54	MG/KG	0.00032	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#56/#60	MG/KG	0.00070	J	0.00046	J	0.00055	J	0.00095		0.00060	J
Cl4-BZ#63	MG/KG	0.00047	U	0.00028	J	0.00025	J	0.00052		0.00028	J
Cl4-BZ#64	MG/KG	0.00047	U	0.00046	U	0.00042	J	0.00045	U	0.00047	U
Cl4-BZ#66	MG/KG	0.0031		0.0035		0.0032		0.0066		0.0034	
Cl4-BZ#70	MG/KG	0.00044	J	0.00024	J	0.00032	J	0.00037	J	0.00029	J
Cl4-BZ#74	MG/KG	0.0018		0.0017		0.0016		0.0032		0.0018	
Cl4-BZ#76	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl4-BZ#77	MG/KG	0.00047		0.00030	J	0.00030	J	0.00050		0.00028	J
Cl4-BZ#81	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl5-BZ#82	MG/KG	0.00047	U	0.00046	U	0.0003	J	0.00044	J	0.00047	U
Cl5-BZ#83	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00022	J	0.00047	U
Cl5-BZ#85	MG/KG	0.0015		0.0019		0.0016		0.0033		0.0018	
Cl5-BZ#87	MG/KG	0.0015		0.0020		0.0017		0.0031		0.0021	
Cl5-BZ#89	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl5-BZ#91	MG/KG	0.00055		0.0011		0.0010		0.0017		0.0012	

Table 3B Sample Data for Scup (mg/kg wet weight) Area III 2008

	Sample#	NBH08-FF-A-3		NBH08-FF-B-3		NBH08-FF-C-3		NBH08-FF-D-3		NBH08-FF-E-3	
Cl5-BZ#92	MG/KG	0.00041	J	0.00092		0.0010		0.0014		0.0011	
Cl5-BZ#95	MG/KG	0.00091		0.0014		0.0014		0.0022		0.0016	
Cl5-BZ#97	MG/KG	0.0016		0.0028		0.0026		0.0050		0.0031	
Cl5-BZ#99	MG/KG	0.014		0.019		0.014		0.031		0.016	
Cl5-BZ#100	MG/KG	0.00047	U	0.00033	J	0.00025	J	0.00047		0.00024	J
Cl5-BZ#101/#84	MG/KG	0.011		0.016		0.012		0.026		0.016	
Cl5-BZ#104	MG/KG	0.00036	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl5-BZ#105	MG/KG	0.0029		0.0030		0.0024		0.0053		0.0030	
Cl5-BZ#107	MG/KG	0.0016		0.0024		0.0019		0.0040		0.0019	
Cl5-BZ#110	MG/KG	0.0018		0.0031		0.0033		0.0052		0.0034	
Cl5-BZ#114	MG/KG	0.00049		0.00046	U	0.00045	U	0.00027	J	0.00047	U
Cl5-BZ#118	MG/KG	0.016		0.019		0.015		0.034		0.018	
Cl5-BZ#119	MG/KG	0.00064		0.00095		0.00081		0.0016		0.00098	
Cl5-BZ#123	MG/KG	0.00064		0.00047		0.00045		0.00076		0.00048	
Cl5-BZ#124	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl5-BZ#126	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl6-BZ#129	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00024	J	0.00047	U
Cl6-BZ#130	MG/KG	0.00035	J	0.00072		0.00072		0.0013		0.00074	
Cl6-BZ#131	MG/KG	0.00094	U	0.00091	U	0.00090	U	0.00089	U	0.00094	U
Cl6-BZ#132/#168	MG/KG	0.00094	U	0.00053	J	0.00071	J	0.00078	J	0.00066	J
Cl6-BZ#134	MG/KG	0.00047	U	0.00034	J	0.00043	J	0.00060		0.00043	J
Cl6-BZ#135/#144	MG/KG	0.00094	U	0.00051	J	0.00054	J	0.00083	J	0.00081	J
Cl6-BZ#136	MG/KG	0.00047	U	0.00030	J	0.00034	J	0.00051		0.00035	J
Cl6-BZ#137	MG/KG	0.00069		0.00078		0.00061		0.0013		0.00079	
Cl6-BZ#138/#163	MG/KG	0.017		0.023		0.019		0.040		0.00094	U
Cl6-BZ#141	MG/KG	0.00028	J	0.00055		0.00050		0.00095		0.00065	
Cl6-BZ#146	MG/KG	0.0047		0.0062		0.0050		0.011		0.0052	
Cl6-BZ#147	MG/KG	0.00049		0.00090		0.00071		0.0015		0.00089	
Cl6-BZ#149	MG/KG	0.0030		0.0056		0.0054		0.0098		0.0060	
Cl6-BZ#151	MG/KG	0.00068		0.00085		0.00088		0.0014		0.00047	U
Cl6-BZ#153	MG/KG	0.030		0.038		0.029		0.064		0.031	
Cl6-BZ#154	MG/KG	0.00079		0.00087		0.00065		0.0015		0.00069	
Cl6-BZ#155	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl6-BZ#156	MG/KG	0.0017		0.0016		0.0013		0.0028		0.0016	
Cl6-BZ#157	MG/KG	0.00067		0.00052		0.00041	J	0.00083		0.00042	J
Cl6-BZ#158	MG/KG	0.0016		0.0015		0.0011		0.0023		0.00047	U
Cl6-BZ#167/#128	MG/KG	0.0052		0.0057		0.0046		0.0098		0.0051	
Cl6-BZ#169	MG/KG	0.0003	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#170/#190	MG/KG	0.0023		0.0025		0.0021		0.0043		0.0022	
Cl7-BZ#171	MG/KG	0.00054		0.00071		0.00053		0.0011		0.00065	
Cl7-BZ#172	MG/KG	0.00024	J	0.00036	J	0.00032	J	0.00062		0.00099	
Cl7-BZ#173	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#174	MG/KG	0.00049		0.00028	J	0.00039	J	0.00047		0.00032	J
Cl7-BZ#175	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#176	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#177	MG/KG	0.00056		0.00057		0.00063		0.00093		0.00054	
Cl7-BZ#178	MG/KG	0.00047	U	0.00034	J	0.00035	J	0.00060		0.00039	J
Cl7-BZ#180	MG/KG	0.0038		0.0042		0.0034		0.0075		0.0038	
Cl7-BZ#182/#187	MG/KG	0.0032		0.0044		0.0036		0.0082		0.0039	
Cl7-BZ#183	MG/KG	0.0018		0.0017		0.0013		0.0027		0.0015	
Cl7-BZ#184	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#185	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#188	MG/KG	0.00038	J	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#189	MG/KG	0.00051		0.00046	U	0.00045	U	0.00031	J	0.00047	U
Cl7-BZ#191	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl7-BZ#193	MG/KG	0.00047	U	0.00028	J	0.00028	J	0.00046		0.00047	U
Cl8-BZ#194	MG/KG	0.0011		0.00076		0.00077		0.0016		0.00047	U
Cl8-BZ#195	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl8-BZ#196/203	MG/KG	0.00077	J	0.00091		0.00078	J	0.0016		0.00079	J

Table 3B Sample Data for Scup (mg/kg wet weight) Area III 2008

	Sample#	NBH08-FF-A-3		NBH08-FF-B-3		NBH08-FF-C-3		NBH08-FF-D-3		NBH08-FF-E-3	
Cl8-BZ#197	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl8-BZ#199	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl8-BZ#200	MG/KG	0.00048		0.00025	J	0.00045	U	0.00035	J	0.00047	U
Cl8-BZ#201	MG/KG	0.00064		0.00063		0.00064		0.0011		0.00054	
Cl8-BZ#202	MG/KG	0.00043	J	0.00027	J	0.00024	J	0.00043	J	0.00047	U
Cl8-BZ#205	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl9-BZ#206	MG/KG	0.00093		0.00061		0.00052		0.0011		0.00047	U
Cl9-BZ#207	MG/KG	0.00047	U	0.00046	U	0.00045	U	0.00045	U	0.00047	U
Cl9-BZ#208	MG/KG	0.00052		0.00027	J	0.00045	U	0.00034	J	0.00024	J
Cl10-BZ#209	MG/KG	0.00067		0.00034	J	0.00026	J	0.00048		0.00024	J
Aroclor-1232	MG/KG	0.0094	U	0.0091	U	0.0090	U	0.0089	U	0.0094	U
Aroclor-1242	MG/KG	0.0094	U	0.0091	U	0.0090	U	0.0089	U	0.0094	U
Aroclor-1248	MG/KG	0.0094	U	0.0091	U	0.0090	U	0.0089	U	0.0094	U
Aroclor-1254	MG/KG	0.0094	U	0.0091	U	0.0090	U	0.0089	U	0.0094	U
Aroclor-1260	MG/KG	0.0094	U	0.0091	U	0.0090	U	0.0089	U	0.0094	U

Table 4 Sample Data for Alewife (mg/kg wet weight) Area I 2008

	Sample#	NBH08-FF-C-1	
	Species	Alewife	
	Area	I	
	Station	Station A	
Parameter	**Units**		
Lipids	PERCENT	2.0	
Total PCB Congeners[1]	MG/KG	4.6	J4
Total PCB Congeners Hits[2]	MG/KG	4.6	
Total NOAA Congeners[3]	MG/KG	2.0	J4
Total WHO Congeners[4]	MG/KG	0.090	J4
Total NOAA / WHO Combined[5]	MG/KG	2.0	J4
Total Aroclors[6]	MG/KG	4.2	J4
Cl1-BZ#1	MG/KG	0.0012	
Cl1-BZ#3	MG/KG	0.00030	J
Cl2-BZ#4/#10	MG/KG	0.037	
Cl2-BZ#5/#8	MG/KG	0.073	
Cl2-BZ#6	MG/KG	0.084	
Cl2-BZ#7	MG/KG	0.0097	
Cl2-BZ#12/#13	MG/KG	0.014	
Cl2-BZ#15	MG/KG	0.014	
Cl3-BZ#16/#32	MG/KG	0.13	
Cl3-BZ#17	MG/KG	0.091	
Cl3-BZ#18	MG/KG	0.24	
Cl3-BZ#19	MG/KG	0.020	
Cl3-BZ#21/#33	MG/KG	0.026	
Cl3-BZ#22	MG/KG	0.031	
Cl3-BZ#24/#27	MG/KG	0.038	
Cl3-BZ#25	MG/KG	0.21	
Cl3-BZ#26	MG/KG	0.34	
Cl3-BZ#28/#31	MG/KG	0.67	J
Cl3-BZ#29	MG/KG	0.00044	U
Cl3-BZ#37	MG/KG	0.0058	
Cl4-BZ#40	MG/KG	0.015	
Cl4-BZ#41/#71	MG/KG	0.080	
Cl4-BZ#42	MG/KG	0.042	
Cl4-BZ#43/#49	MG/KG	0.45	
Cl4-BZ#44	MG/KG	0.098	
Cl4-BZ#45	MG/KG	0.011	
Cl4-BZ#46	MG/KG	0.017	
Cl4-BZ#47/#48	MG/KG	0.15	
Cl4-BZ#50	MG/KG	0.0011	
Cl4-BZ#51	MG/KG	0.026	
Cl4-BZ#52	MG/KG	0.49	
Cl4-BZ#53	MG/KG	0.061	
Cl4-BZ#54	MG/KG	0.00075	
Cl4-BZ#56/#60	MG/KG	0.016	
Cl4-BZ#63	MG/KG	0.0043	
Cl4-BZ#64	MG/KG	0.072	
Cl4-BZ#66	MG/KG	0.047	
Cl4-BZ#70	MG/KG	0.033	
Cl4-BZ#74	MG/KG	0.036	
Cl4-BZ#76	MG/KG	0.00044	U
Cl4-BZ#77	MG/KG	0.0042	
Cl4-BZ#81	MG/KG	0.00059	
Cl5-BZ#82	MG/KG	0.0027	
Cl5-BZ#83	MG/KG	0.0066	
Cl5-BZ#85	MG/KG	0.0049	
Cl5-BZ#87	MG/KG	0.016	
Cl5-BZ#89	MG/KG	0.00044	U
Cl5-BZ#91	MG/KG	0.053	
Cl5-BZ#92	MG/KG	0.031	
Cl5-BZ#95	MG/KG	0.082	
Cl5-BZ#97	MG/KG	0.030	
Cl5-BZ#99	MG/KG	0.10	
Cl5-BZ#100	MG/KG	0.0058	
Cl5-BZ#101/#84	MG/KG	0.14	
Cl5-BZ#104	MG/KG	0.00044	U
Cl5-BZ#105	MG/KG	0.0077	
Cl5-BZ#107	MG/KG	0.0052	

Prepared by: BJS 12/3/08
Checked by: BBL 12/4/08

Table 4 Sample Data for Alewife (mg/kg wet weight) Area I 2008

	Sample#	NBH08-FF-C-1	
Cl5-BZ#110	MG/KG	0.10	
Cl5-BZ#114	MG/KG	0.00068	
Cl5-BZ#118	MG/KG	0.061	
Cl5-BZ#119	MG/KG	0.016	
Cl5-BZ#123	MG/KG	0.0036	
Cl5-BZ#124	MG/KG	0.0020	
Cl5-BZ#126	MG/KG	0.00044	U
Cl6-BZ#129	MG/KG	0.00091	
Cl6-BZ#130	MG/KG	0.0020	
Cl6-BZ#131	MG/KG	0.00064	J
Cl6-BZ#132/#168	MG/KG	0.0049	
Cl6-BZ#134	MG/KG	0.0054	
Cl6-BZ#135/#144	MG/KG	0.0086	
Cl6-BZ#136	MG/KG	0.0075	
Cl6-BZ#137	MG/KG	0.0018	
Cl6-BZ#138/#163	MG/KG	0.044	
Cl6-BZ#141	MG/KG	0.0031	
Cl6-BZ#146	MG/KG	0.012	
Cl6-BZ#147	MG/KG	0.0048	
Cl6-BZ#149	MG/KG	0.065	
Cl6-BZ#151	MG/KG	0.010	
Cl6-BZ#153	MG/KG	0.073	
Cl6-BZ#154	MG/KG	0.0047	
Cl6-BZ#155	MG/KG	0.00044	U
Cl6-BZ#156	MG/KG	0.0026	
Cl6-BZ#157	MG/KG	0.00052	
Cl6-BZ#158	MG/KG	0.0047	
Cl6-BZ#167/#128	MG/KG	0.0080	
Cl6-BZ#169	MG/KG	0.00044	U
Cl7-BZ#170/#190	MG/KG	0.0033	
Cl7-BZ#171	MG/KG	0.00089	
Cl7-BZ#172	MG/KG	0.00057	
Cl7-BZ#173	MG/KG	0.00044	U
Cl7-BZ#174	MG/KG	0.0017	
Cl7-BZ#175	MG/KG	0.00044	U
Cl7-BZ#176	MG/KG	0.00028	J
Cl7-BZ#177	MG/KG	0.0015	
Cl7-BZ#178	MG/KG	0.0014	
Cl7-BZ#180	MG/KG	0.0060	
Cl7-BZ#182/#187	MG/KG	0.0075	
Cl7-BZ#183	MG/KG	0.0027	
Cl7-BZ#184	MG/KG	0.00044	U
Cl7-BZ#185	MG/KG	0.00024	J
Cl7-BZ#188	MG/KG	0.00044	U
Cl7-BZ#189	MG/KG	0.00044	U
Cl7-BZ#191	MG/KG	0.00022	J
Cl7-BZ#193	MG/KG	0.00048	
Cl8-BZ#194	MG/KG	0.00085	
Cl8-BZ#195	MG/KG	0.00036	J
Cl8-BZ#196/203	MG/KG	0.0011	
Cl8-BZ#197	MG/KG	0.00044	U
Cl8-BZ#199	MG/KG	0.00044	U
Cl8-BZ#200	MG/KG	0.00044	U
Cl8-BZ#201	MG/KG	0.00097	
Cl8-BZ#202	MG/KG	0.00045	
Cl8-BZ#205	MG/KG	0.00044	U
Cl9-BZ#206	MG/KG	0.00052	
Cl9-BZ#207	MG/KG	0.00044	U
Cl9-BZ#208	MG/KG	0.00024	J
Cl10-BZ#209	MG/KG	0.00026	J
Aroclor-1232	MG/KG	0.0089	U
Aroclor-1242	MG/KG	0.0089	U
Aroclor-1248	MG/KG	3.3	
Aroclor-1254	MG/KG	0.90	
Aroclor-1260	MG/KG	0.0089	U

Appendix B
Data Validation Summary
Massachusetts Department of Environmental Protection
New Bedford Harbor Seafood Contaminant Survey Monitoring
2008 Sampling

Data Validation Summary
Massachusetts Department of Environmental Protection
New Bedford Harbor Seafood Contaminant Survey Monitoring
2008 Sampling

Introduction:

Fifty-five fish tissue samples were collected from New Bedford Harbor, MA, during 2008. Samples were preserved by freezing (-20°C) and were received in May through November, 2008, by Alpha Woods Hole Laboratory located in Mansfield, Massachusetts. Tissue samples were analyzed for the following parameters: polychlorinated biphenyls (PCBs) by GC/MS Single Ion Monitoring (SIM) and percent lipids.

Tissue samples were analyzed in four separate data sets: 0809015 (scup/alewife), 0809016 (quahogs), 0811078 (quahogs – post-spawning 2) and 0811079 (black sea bass/blue fish). Tier I+ data validation was performed for all data sets. The data packages were validated using Region I EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses (USEPA, 1996), Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses (USEPA, 2004), Alpha Woods Hole Laboratory Standard Operating Procedure (SOP) O-010 (Alpha, 2002), and the Quality Assurance Project Plan, Seafood Contaminant Survey, New Bedford Harbor Superfund Site, Revision 5.0 (MADEP, 5/1/08).

For Tier I+ data validation, data were evaluated for the following parameters:

* Collection and Preservation
* Holding Times
* Data Completeness
* Initial Calibration (only if problems noted in case narrative)
  Continuing Calibration (only if problems noted in case narrative)
* Blanks
* Surrogate Standards
  Standard Reference Material
  Laboratory Control Samples
* Matrix Spike/Matrix Spike Duplicates
  Laboratory Duplicates
* Internal Standards (only if problems noted in case narrative)
* Target Compound Quantitation (only if problems noted in case narrative)

* - all criteria were met for this parameter

In general, laboratory performance is considered acceptable and all results are usable. The following qualifying statements have been applied to the 2008 data.

Continuing Calibration

PCB (0809015) – The narrative states that the continuing calibration percent difference for congener BZ 28/31 was outside the control limit of 25.0 in the continuing calibration standard associated with the samples. Positive results for congener BZ 28/31 were reported in all samples and were qualified as estimated (J).

Standard Reference Material

PCB (0811079) - Percent recovery for congener BZ 28/31 (51) in the Standard Reference Material was outside the 60-140 control limits. A potential slight low bias is indicated for this congener, and positive and non-detected results for BZ 28/31 in all samples were qualified as estimated (J/UJ).

Laboratory Control Samples

PCB (0809016) – Percent recoveries for congeners BZ 18 (58), BZ 77 (59), BZ 110 (56, 64), and BZ126 (56, 54) in the laboratory control sample/laboratory control sample duplicate were outside the 60-140 control limits. Potential low biases are indicated for these congeners; therefore, positive and non-detected results for BZ 18, BZ 77, BZ 110, and BZ 126 were qualified as estimated (J/UJ) in all samples in SDG 0809016.

Laboratory Duplicates

PCB (0811079) – The relative percent difference (RPD) between laboratory duplicate results for congener BZ 182/187 (31) in sample NBH-FF-B-3 was above the control limit of 30, and the absolute difference between the sample and duplicate result was greater than the reporting limit. The positive detection of BZ 182/187 in NBH-FF-B-3 was qualified as estimated (J).

Percent Lipids (0811079) – The RPD between laboratory duplicate results for percent lipids in sample NBH-FF-B-3 (44) was above the control limit of 20 indicating potential sample non-homogeneity. All sample results for percent lipids in SDG 0811079 were qualified as estimated (J).

References:

U.S. Environmental Protection Agency (USEPA), 1996. "Region I, EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses, Parts I and II," Quality Assurance Unit Staff; Office of Environmental Measurement and Evaluation; December, 1996.

U.S. Environmental Protection Agency (USEPA), 2004. "Region I, Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses;" Hazardous Site Evaluation Division; Draft, February, 2004.

MADEP, May 1, 2008. "Quality Assurance Project Plan, Seafood Contaminant Survey, New Bedford Harbor Superfund Site, Revision 5.0", Massachusetts Department of Environmental Protection; May 2008.

Alpha Woods Hole Laboratory, 2002. "Determination of PCB Homologs and Individual Congeners by GC/MS-SIM," Alpha Woods Hole Group Environmental Laboratories; October, 2002.

Data Validator: Julie Ricardi

Signature: on file Date: March 13, 2009

Reviewed by: JPConnolly 3/20/09

Appendix C

Seafood Monitoring - Field Sampling Activities for the New Bedford Harbor Superfund Site 2008 Annual Report

Seafood Monitoring - Field Sampling Activities for the New Bedford Harbor Superfund Site
2008 Annual Report

Vin Malkoski, Senior Marine Fisheries Biologist
Massachusetts Division of Marine Fisheries
August 2009

The Massachusetts Division of Marine Fisheries (*MarineFisheries*) under an agreement with the Massachusetts Department of Environmental Protection (MassDEP) collects legal size fish and shellfish from the three New Bedford Harbor fish closure areas. At the end of the collection period, these frozen samples were delivered to the Alpha Woods Hole Laboratories in Raynham, Massachusetts for analysis. MassDEP provides the results of the analyses to EPA to monitor and support the site remediation project. This report describes *MarineFisheries*' field activities in 2008 in accordance with the Seafood Monitoring and Field Sampling Work Plan and makes recommendations for the upcoming 2009 field season based on results obtained during the previous field season.

Sample Sites

The three Fish Closure Areas are identified in Attachment 1 from the EPA Record of Decision for the Upper and Lower Operable Unit, New Bedford Harbor Superfund Site, New Bedford, Massachusetts, dated September 25, 1998. These three Fish Closure Areas were designated by the Mass. Dept. of Public Health in 1979. Area 1 includes the waters of the Acushnet River and the New Bedford/Fairhaven Inner Harbor north of the Hurricane Barrier. Area 2 comprises the waters of the Outer Harbor and Clarks Cove south of the Hurricane Barrier and north of a line drawn from Wilbur Point in Fairhaven to Ricketsons Point in Dartmouth. Area 3 is that portion of Buzzards Bay south of the line drawn from Wilbur Point in Fairhaven to Ricketsons Point in Dartmouth and north of a line drawn from Rocky Point on West Island in Fairhaven to the Negro Ledge C3 buoy then to Mishaum Point in Dartmouth.

There are five original sample stations in each of the three fish closure areas in the waters of the City of New Bedford and the Towns of Dartmouth and Fairhaven. Station locations within each area vary for different species as what may be suitable habitat for one species may not be suitable for another (Attachment 1 – Figure 1 to 9). Area 1 was not sampled during the 2008 collection season. An additional sample location was added in 2008 for Area 3 quahog, as described below.

2008 Field Collections

Complete information including the harvest dates, collection identification information, species, station identification information, location by latitude and longitude, and collection method is appended to this report as Attachment 2 – Collection Sheets 1 to 7.

Quahog (*Mercenaria mercenaria*)
Marine Fisheries collected pre-spawn and post-spawn quahogs from ten stations in two of the three Fish Closure Areas. Stations A and E in Area 2 and Stations A, C, and E in Area 3 were not sampled. Station I was added to Area 3 and sampled. Pre-spawn quahogs were collected in June. Post-spawn quahogs were collected in August, with a second sampling in October. Twelve legal size quahogs per station were harvested in each collection in order to provide sufficient sample sizes for the Work Plan.

Black Sea Bass (*Centropristes striata*)
In 2008, Black Sea Bass were collected from ten stations in Areas 2 and 3. As per the work plan, five legal size black sea bass were harvested during June to September from each of the stations.

Scup (*Stenotomus chrysops)*
Five legal size scup were collected in June and July from each of the ten stations in Areas 2 and 3.

Alewife (*Alosa pseudoharengus*)
Five alewife were collected at the New Bedford Reservoir at Station C-1 in May.

Bluefish (*Pomatomus saltatrix)*
Four stations were established in 2008 for the collection of bluefish: Stations A-2 and B-2 in Area 2 and Stations A-3 and B-3 in Area 3. Three legal size bluefish were collected from each station during September and October.

Planning for 2009 Field Collections

Alewife, quahog, lobster, blue crab, eel, scup & sea bass sampling will continue as described above. Lobster will be collected in Areas 2 and 3, and efforts will continue to collect lobster in Area 1. However, as this is not considered lobster habitat, blue crabs, as in past years, will again
replace lobsters as the target crustacean species in that area.

An effort will once again be made to collect winter flounder as a benthic species at all stations in all areas. Sampling will start in March, if the river and harbor are free of ice, to collect winter flounder while spawning in Areas 1 and 2. If winter flounder can not be collected at any stations in Areas 2 and 3, black sea bass will again as in the past, be harvested in their place.

ATTACHMENT 1

DMF HARVEST SITE MAPS

Note: These figures are in the main body of the "Contaminated Monitoring Report for Seafood Harvested in 2008 from the New Bedford Harbor Superfund Site" Report.

ATTACHMENT 2

DMF FIELD COLLECTION SHEETS

Field Collection Form 1 Scup
Field Collection Form 2 Black Sea Bass
Field Collection Form 3 Quahog Pre-spawn
Field Collection Form 4 Quahog Post-spawn 1
Field Collection Form 5 Quahog Post-spawn 2
Field Collection Form 6 Alewife
Field Collection Form 7 Bluefish

FIELD COLLECTION FORM 1: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF ~~Vin Malkoski~~ SHIPPER: MDMF Vin Malkoski CONDITION: FRESH____

FROZEN__X__ SAMPLE

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
11/07/08	NBH08-FF-A-3	5 Scup	Station A Great Ledge	NBH Area 3	041º 32.291' 070º 53.867'	Fish Pots	
23/06/08	NBH08-FF-B-3	5 Scup	Station B Negro Ledge	NBH Area 3	041º 32.922' 070º 52.023'	Fish Pots	
11/07/08	NBH08-FF-C-3	5 Scup	Station C North Ledge	NBH Area 3	041º 34.341' 070º 53.234'	Fish Pots	
03/07/08	NBH08-FF-D-3	5 Scup	Station D Radome	NBH Area 3	041º 32.254' 070º 55.275'	Fish Pots	
17/06/08	NBH08-FF-E-3	5 Scup	Station E Angelica Rock	NBH Area 3	041º 34.619' 070º 51.498'	Fish Pots	
13/06/08	NBH08-FF-A-2	5 Scup	Station A SMAST Pier	NBH Area 2	041º 35.600' 070º 54.707'	Fish Pots	
17/06/08	NBH08-FF-B-2	5 Scup	Station B E of Fort Rodman	NBH Area 2	041º 35.596' 070º 53.922'	Fish Pots	
13/06/08	NBH08-FF-C-2	5 Scup	Station C W of Opening	NBH Area 2	041º 37.380' 070º 54.399'	Fish Pots	
13/06/08	NBH08-FF-D-2	5 Scup	Station D Lighthouse	NBH Area 2	041º 36.223' 070º 53.679'	Fish Pots	
13/06/08	NBH08-FF-E-2	5 Scup	Station E Egg Island Rocks	NBH Area 2	041º 36.523' 070º 53.258'	Fish Pots	

FIELD COLLECTION FORM 2: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF Vin Malkoski SHIPPER: MDMF Vin Malkoski AMPLE CONDITION: FRESH FROZEN X S

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
23/06/08	NBH08-FF-B-3	5 Black Sea Bass	Station B Negro Ledge	NBH Area 3	041º 32.922' 070º 52.023'	Fish Pots	
03/07/08	NBH08-FF-D-3	5 Black Sea Bass	Station D Radome	NBH Area 3	041º 32.254' 070º 55.275'	Fish Pots	
12/09/08	NBH08-FF-C-3	5 Black Sea Bass	Station F North Ledge	NBH Area 3	041º 34.341' 070º 53.234'	Fish Pots	
20/06/08	NBH08-FF-A-3	5 Black Sea Bass	Station A Great Ledge	NBH Area 3	041º 32.291' 070º 53.867'	Fish Pots	
05/09/08	NBH08-FF-E-3	5 Black Sea Bass	Station E Angelica Rock	NBH Area 3	041º 34.619' 070º 51.498'	Fish Pots	
05/08/08	NBH08-FF-B-2	5 Black Sea Bass	Station B E of Fort Rodman	NBH Area 2	041º 35.596' 070º 53.922'	Fish Pots	
13/06/08	NBH08-FF-D-2	5 Black Sea Bass	Station D Lighthouse	NBH Area 2	041º 36.223' 070º 53.679'	Fish Pots	
13/08/08	NBH08-FF-A-2	5 Black Sea Bass	Station A SMAST Pier	NBH Area 2	041º 35.600' 070º 54.707'	Fish Pots	
19/09/08	NBH08-FF-E-2	5 Black Sea Bass	Station E Egg Island	NBH Area 2	041º 36.523' 070º 53.258'	Fish Pots	
13/06/08	NBH08-FF-C-2	5 Black Sea Bass	Station C W of Opening	NBH Area 2	041º 37.380' 070º 54.399'	Fish Pots	

FIELD COLLECTION FORM 3: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF Vin Malkoski SHIPPER: MDMF Vin Malkoski CONDITION: FRESH____ FROZEN X SAMPLE

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
10/06/08	NBH08-SF-B-2	12 Quahogs (Prespawn)	Station B Rogers Street	NBH Area 2	041º 36.500' 070º 55.820'	Rake	
10/06/08	NBH08-SF-C-2	12 Quahogs (Prespawn)	Station C S of Fredrick St Ramp	NBH Area 2	041º 36.650' 070º 54.345'	Rake	
10/06/08	NBH08-SF-D-2	12 Quahogs (Prespawn)	Station D Egg Island	NBH Area 2	041º 36.807 070º 53.240'	Rake	
10/06/08	NBH08-SF-F-2	12 Quahogs (Prespawn)	Station F Priest's Cove	NBH Area 2	041º 37.752' 070º 52.760'	Rake	
11/06/08	NBH08-SF-G -2	12 Quahogs (Prespawn)	Station G W Rodney Family Area	NBH Area 2	041º 36.364' 070º 54.999'	Rake	
11/06/08	NBH08-SF-H -2	12 Quahogs (Prespawn)	Station H E Rodney Family Area	NBH Area 2	041º 35.369' 070º 54.108'	Rake	
12/06/08	NBH08-SF-B-3	12 Quahogs (Prespawn)	Station B Star of the Sea	NBH Area 3	041º 35.387' 070º 57.595'	Rake	
10/06/08	NBH08-SF-D-3	12 Quahogs (Prespawn)	Station D Nakata Beach	NBH Area 3	041º 35.562' 070º 51.000'	Rake	
17/06/08	NBH08-SF-I-3	12 Quahogs (Prespawn)	Station I Nonquit	NBH Area 3	041º 33.400' 070º 56.132'	Rake	
12/06/08	NBH08-SF-F-3	12 Quahogs (Prespawn)	Station F G Bourne Knowles Pier	NBH Area 3	041 34.664' 070 56.902'	Rake	

FIELD COLLECTION FORM 4: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF Vin Malkoski SHIPPER: MDMF Vin Malkoski CONDITION: FRESH____ FROZEN__X__ SAMPLE

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
27/08/08	NBH08-SF-B-2	12 Quahogs (Postspawn1)	Station B Rogers Street	NBH Area 2	041º 36.500' 070º 55.820'	Rake	
27/08/08	NBH08-SF-C-2	12 Quahogs (Postspawn1)	Station C S of Fredrick St Ramp	NBH Area 2	041º 36.650' 070º 54.345'	Rake	
28/08/08	NBH08-SF-D-2	12 Quahogs (Postspawn1)	Station D Egg Island	NBH Area 2	041º 36.807 070º 53.240'	Rake	
27/08/08	NBH08-SF-F-2	12 Quahogs (Postspawn1)	Station F Priest's Cove	NBH Area 2	041º 37.752' 070º 52.760'	Rake	
27/08/08	NBH08-SF-G -2	12 Quahogs (Postspawn1)	Station G W Rodney Family Area	NBH Area 2	041º 36.364' 070º 54.999'	Rake	
27/08/08	NBH08-SF-H -2	12 Quahogs (Postspawn1)	Station H E Rodney Family Area	NBH Area 2	041º 35.369' 070º 54.108'	Rake	
27/08/08	NBH08-SF-B-3	12 Quahogs (Postspawn1)	Station B Star of the Sea	NBH Area 3	041º 35.387' 070º 57.595'	Rake	
27/08/08	NBH08-SF-D-3	12 Quahogs (Postspawn1)	Station D Nakata Beach	NBH Area 3	041º 35.562' 070º 51.000'	Rake	
27/08/08	NBH08-SF-I-3	12 Quahogs (Postspawn1)	Station I Nonquit	NBH Area 3	041º 33.400' 070º 56.132'	Rake	
27/08/08	NBH08-SF-F-3	12 Quahogs (Postspawn1)	Station F G Bourne Knowles Pier	NBH Area 3	041 34.664' 070 56.902'	Rake	

FIELD COLLECTION FORM 5: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF Vin Malkoski SHIPPER: MDMF Vin Malkoski AMPLE CONDITION: FRESH____ FROZEN__X__ S

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
22/10/08	NBH08-SF-B-2	12 Quahogs (Postspawn2)	Station B Rogers Street	NBH Area 2	041º 36.500' 070º 55.820'	Rake	
22/10/08	NBH08-SF-C-2	12 Quahogs (Postspawn2)	Station C S of Fredrick St Ramp	NBH Area 2	041º 36.650' 070º 54.345'	Rake	
22/10/08	NBH08-SF-D-2	12 Quahogs(Postspawn2)	Station D Egg Island	NBH Area 2	041º 36.807 070º 53.240'	Rake	
22/10/08	NBH08-SF-F-2	12 Quahogs(Postspawn2)	Station F Priest's Cove	NBH Area 2	041º 37.752' 070º 52.760'	Rake	
22/10/08	NBH08-SF-G -2	12 Quahogs(Postspawn2)	Station G W Rodney Family Area	NBH Area 2	041º 36.364' 070º 54.999'	Rake	
22/10/08	NBH08-SF-H -2	12 Quahogs(Postspawn2)	Station H E Rodney Family Area	NBH Area 2	041º 35.369' 070º 54.108'	Rake	
22/10/08	NBH08-SF-B-3	12 Quahogs(Postspawn2)	Station B Star of the Sea	NBH Area 3	041º 35.387' 070º 57.595'	Rake	
22/10/08	NBH08-SF-D-3	12 Quahogs (Postspawn2)	Station D Nakata Beach	NBH Area 3	041º 35.562' 070º 51.000'	Rake	
22/10/08	NBH08-SF-I-3	12 Quahogs (Postspawn2)	Station I Nonquit	NBH Area 3	041º 33.400' 070º 56.132'	Rake	
22/10/08	NBH08-SF-F-3	12 Quahogs (Postspawn2)	Station F G Bourne Knowles Pier	NBH Area 3	041 34.664' 070 56.902'	Rake	

FIELD COLLECTION FORM 6: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF Vin Malkoski SHIPPER: MDMF Vin Malkoski CONDITION: FRESH FROZEN X SAMPLE

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
02/05/08 & 03/05/08	NBH08-FF-C-1	5 Alewife	Station C NBR	NBH Area 1	041º 43.724' 070º 53.915'	Net	

FIELD COLLECTION FORM 7: DIVISION MARINE FISHERIES, NEW BEDFORD OFFICE, 838 S. RODNEY FRENCH BLVD, NEW BEDFORD, MA 02744

PROJECT #: NBH08 REQUESTED BY/AGENCY: Paul Craffey / Dept. Environmental Protection ANALYSIS REQUESTED:

COLLECTOR: MDMF Vin Malkoski SHIPPER: MDMF Vin Malkoski CONDITION: FRESH____ FROZEN X SAMPLE

COLLECTION DATE DDMMYY	COLLECTION/TAG #	SPECIES & # IN SAMPLE	STATION I.D.	LOCATION	LAT/LONG DEG. MIN.	COLLECTION METHOD	RESERVED FOR OFFICE USE
07/10/08	NBH08-FF-A-2	3 Bluefish	Station A Egg Island	NBH Area 2	041º 36.879' 070º 53.366'	Rod & Reel	
16/10/08	NBH08-FF-B-2	3 Bluefish	Station B Clarks Cove	NBH Area 2	041º 35.983' 070º 54.954'	Rod & Reel	
14/09/08	NBH08-FF-A-3	3 Bluefish	Station A S. of Sconticut Neck	NBH Area 3	041º 34.167' 070º 51.110'	Rod & Reel	
23/10/08	NBH08-FF-B-3	3 Bluefish	Station B Near Great Ledge	NBH Area 3	041º 32.433' 070º 53.867'	Rod & Reel	

Appendix D Congeners Used to Quantitate Aroclors /Determination of PCBs by GC/MS-SIM for Aroclor

New Bedford Harbor Seafood Monitoring Program

Congeners Used to Quantitate Aroclor 1232

C11-BZ#1
C11-BZ#3
C12-BZ#4#10
C12-BZ #5#8
C12-BZ#12/#13

Congeners Used to Quantitate Aroclor 1242

C12-BZ#4#10
C12-BZ#5#8
C13-BZ#18
C13-BZ#17
C13-BZ#28#31

Congeners Used to Quantitate Aroclor 1248

C14-BZ#52
C14BZ#43#49
C14-BZ#44
C14-BZ #41#71
C14-BZ#70

Congeners Used to Quantitate Aroclor 1254

C15BZ#101/#84
C16-BZ#154
C15-BZ#118
C16-BZ #153
C16-BZ#138/#163

Congeners Used to Quantitate Aroclor 1260

C17-BZ#174
C17-BZ#180
C17-BZ#170 BZ #190
C18-BZ #201
C18-BZ#196/203

Determination of PCBs by GC/MS-SIM for Aroclor

1.0 Sample Analysis for Aroclor by GC/MS – SIM

1.1 Analyze extracts using the same experimental conditions used for the analysis of the calibration standards. All the Aroclors will be analyzed as one point calibrations after the congener calibration curve. Ensure that calibration verification standards (Aroclor 1660) are interspersed, at least, every 20 samples or every 12 hour period. Area measurements will be performed on 3-5 discrete peaks that will be as unique as possible for the Aroclor they represent.

1.2 Qualitative identification of multicomponent analytes (Aroclors) requires pattern matching between the calibration standards and the response observed in the sample. Retention time windows should be used as a gauge; however, pattern recognition for the multicomponent analytes is most important. Qualitative identification for congeners are made when a peak in a sample is observed within the retention time window for a calibrated analyte. In other words, an Aroclor is not considered present in a sample unless the Aroclor has a recognizable pattern to the standard(s) established during calibration. Congeners may be detected without an Aroclor pattern being identified.

1.3 For samples with PCB Aroclors positively identified, compare the responses of the 3 to 5 major peaks in the single point calibration standard for that Aroclor with the peaks observed in the sample extract. The relative peaks and number of peaks in the sample should be similar to that observed in the standard; however, degradation, weathering and interferences may cause the sample pattern to differ from that observed from the standard. The peaks chosen for quantitation must be free from interferences. Calculate the concentration of each corresponding peak in the sample chromatogram and the 3 to 5 resulting concentrations are averaged to provide the final result for the sample.

1.4 The multi-point curve for the individual congeners is used to describe the linear range of the instrument. Single point calibration standards for the Aroclors will follow the congener calibration. These single point calibrations will be used qualitatively and quantitativly for the Aroclors. The congener continuing calibrations will be used to assure the linearity of the analytical system.