Polychlorinated Biphenyl (PCB) Residues in Water, Stream Sediments and Floodplain Soils Collected March 21-23, 2005 from the Bayou Creek System

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INTRODUCTION

Water, sediments and floodplain soil samples were taken from Big and Little Bayou Creeks on March 21-23, 2005 for PCB analyses. These samples were taken shortly after high-flow stream conditions. A total of 11 sites were sampled from Big Bayou Creek (stations BB1A through BB9) and 5 sites from Little Bayou Creek (stations LB1, LB2, LB2A, LB3 and LB4). In addition, Massac Creek (MC) was sampled (*i.e.* West Fork) and served as a reference station. Samples also were collected near outfalls for effluents 001, 006, 008, and the combined effluents 010 and 011. Three Aroclors (*i.e*. 1248, 1254, 1260) were determined for all samples.

METHODS

Water samples for PCB analyses were collected in chemically cleaned, 1-L amber glass jars with Teflon-lined caps. New jars were obtained from I-Chem®. Samples were placed on ice until delivery to the laboratory and maintained under refrigeration (4°C) until extraction. Sediment samples were restricted to the upper 5-10 cm of sediment soil, including depositional areas when found. Floodplain soils samples FP1 were collected next to the stream bank, while FP2 samples were taken 50-100 yards of the shoreline whenever possible. Both floodplain samples were collected 5-10 cm deep, in areas were flood debris was present. Any surface vegetation was removed prior to sampling floodplain soils. All sediment and floodplain samples were collected in acetone-rinsed 0.47 L glass jars with Teflon-lined lids. Stainless steel spoons and scoops used for collections were acetone-rinsed between sampling stations.

PCB Extraction and Analysis

Extraction and cleanup of water samples followed procedures described by Birge and Price (2002), and were completed within 7 days of collection. Wet sediment or floodplain soil extractions of PCB and sample cleanup were performed following U.S EPA SW-846 Method 3540C (U.S. EPA, 1997; Erickson, 1997) as described previously by Birge and Price (2002). Samples were analyzed for Aroclors 1248, 1254, and 1260 according to SW-846 Method 8082 (U.S. EPA, 1997). Analyses also were performed as described by Birge and Price (2002).

Quality Assurance

Permanent bench records were kept of all assays and annotated as required under Good Laboratory Practices (*Federal Register*, 40 CFR, Part 160, August 17, 1989). All printouts and graphic recordings were filed and are open for inspection. These bench records will be archived within two years after the close of the project but retrievable upon request.

RESULTS

Stream Water

Results for PCB analyses of water samples and effluents are given in Tables 1 and 2 for Big and Little Bayou Creeks, respectively. No PCBs were quantifiable in the water samples collected from Big Bayou Creek, observing a detection limit of 0.08 µg PCB/L. On Little Bayou Creek, Aroclor 1248 was detected only at station LB2A. However the concentrations were below our minimum quantitation limit (MQL). All other water samples

from Little Bayou Creek did not show any detectable PCB (Table 2). **Stream Sediments**

PCB concentrations for individual wet-extracted sediments for Massac Creek and Big Bayou Creek are given in Table 3. Mean values for PCBs in sediments are given in Table 5 and Figures 1 and 2. No PCBs were detected at the reference station MC or at stations BB1A through BB3 on upper Big Bayou Creek. However, PCBs were detected at all stations at and below BB4. Aroclor 1248 was detected only at station BB9 (4.70 µg/Kg). Concerning mean PCB concentrations given in Table 5, Aroclor 1254 ranged from 1.87 to 7.81 µg/Kg for stream stations BB4-BB9, while Aroclor 1260 ranged from 2.34 to 4.76 µg/Kg. Aroclors 1254 and 1260 were highest at station BB6, which possibly was due to effluent 001. Sediments taken at the 001 outfall contained mean concentrations of 15.61 and 10.92 µg/Kg for 1254 and 1260, respectively. Mean total PCB for these stream stations ranged from 4.21 (BB8) to 12.57 (BB6) µg/Kg and was highest at the 001 effluent outfall (26.53 µg/Kg). The second highest value was observed at the BB6 location (12.57 µg/Kg), just downstream of effluent 001.

PCB concentrations for Little Bayou Creek sediments are presented in Table 4 and mean sediment values are presented in Table 5 and Figure 3. As in previous observations, PCBs were not detected at reference station LB1. At the downstream stations LB2A through LB4, Aroclors 1248 and 1260 were detected. This also was observed during the March 2004 collection. The highest 1248 concentration was found at LB3 (149.18 µg/Kg). Aroclor 1254 was detected only at LB4 and at the effluent 010+011 outfall, with values of 14.20 and 3.54 µg/Kg, respectively. Mean Aroclor 1260 concentrations ranged from 10.11 to 38.94 µg/Kg for stations LB2A through LB4 (Table

5).

Floodplain Soils

Results for PCBs in individual floodplain soils from Massac Creek and Big Bayou Creek are presented in Table 6 and Figures 4 and 5. Mean Aroclor concentrations are given in Table 8. No Aroclor 1248 was detected in floodplain soils at any of the Big Bayou Creek stations, including locations at effluents 001, 006, and 008. Aroclor 1254 was detected in 7 of 11 stream stations and mean concentrations ranged from 9.46 to 21.99 µg/Kg. Highest 1254 was observed for station BB5. Aroclor 1260 was detected at 9 of 11 stations with concentrations peaking at BB4 (15.44 µg/Kg). PCBs were observed at effluent locations 008, 006, and 001 for both 1254 and 1260. The highest mean concentrations were 10.29 µg/Kg for 1254 at effluent 006 and 17.91 µg/Kg for 1260 at 006 (Table 8).

Results for individual floodplain soils from Little Bayou Creek are shown in Table 7 and Figure 6. Mean Aroclor values are given in Table 8. As with the sediments, no PCBs were detected upstream at the LB1 reference station. Concentrations of 1248 and 1254 were highest at station LB2 with values of 216.57 and 187.52 µg/Kg, respectively. Both 1254 and 1260 were detected at all stations. Aroclor 1260 (µg/Kg) was highest at station LB2A (187.45), station LB2 (186.55), and at 010+011 (236.12). Mean total PCBs ranged from 58.29 to 343.92 µg/Kg and were highest for station LB2 (Table 8). PCB contamination decreased in a downstream progression (Figure 6). This trend also was observed in the past.

SUMMARY

Although PCB contamination was not evident in water and effluent samples taken from the Bayou Creek system, significant concentrations of Aroclor 1248, 1254, and 1260 were observed in sediments and floodplain soils taken from Little Bayou creek. The highest values for total sediment PCB were found near the combined outfall for effluent ditches 010+011. Sediment exposure at this location likely is sufficient to produce problematic tissue residues in some biota. This will be discussed further in forthcoming reports on PCBs in fish taken from the Little Bayou creek.

Concerning Big Bayou creek, Aroclor 1248 was non-detectable except at station BB9. However, Aroclor 1254 and 1260 were observed at all sites at and below station BB4. It is of interest that these Aroclor are still associated with sediment taken at effluent outfalls 008, 006, and, especially, at 001. The highest "overall" PCB contamination was found in the near floodplain soils. Total concentrations ranged up to 374 µg/Kg in Little Bayou creek. Recent data indicate that higher PCB tissue residues in fish correlate with high-flow conditions, and that this results from greater PCB exposure form both sediment and eroded floodplain soils. These results will be discussed in forthcoming reports on PCB residues in fish. In summary, PCB contamination decreased in the following order: floodplain soil > stream sediment > stream water. The wide distribution of PCBs in sediments and near floodplain soils was clearly observed and these conditions warrant further study. Attention should be directed to effluent 001 as a possible source of PCB contamination.

REFERENCES

Birge, W.J. and D.J. Price. 2002. Analysis of Polychlorinated Biphenyl (PCB) Residues and Metals in Sediment Samples Collected February 19-20, 2001 from the Bayou Creek System. Report submitted February 4, 2002 to Jon Maybriar, Division of Waste Management.

Erickson, M.D. 1997. *Analytical Chemistry of PCBs*, 2nd edition. CRC Press, Boca Raton, FL. pp.667.

Federal Register. 1989. Good Laboratory Practice Standards. 40 CFR Part 160. August 17, 1989. Washington, DC.

U.S. EPA. 1997. Test methods for evaluating solid wastes, SW-846, Final Update 3. Office of Solid Waste and Emergency Response, Washington, D.C.

Table 1. PCBs in water samples and effluents from Big Bayou Creek collected March 21-23, 2005.

Station	Date	Sample	Aroclor Concentration (μg/L)		
			1248	1254	1260
MC	3/21/05	PWS1	<0.081	<0.081	<0.081
MC	3/21/05	PWS2	<0.082	<0.082	<0.082
BB1A	3/21/05	PWS1	<0.081	<0.081	<0.081
BB1A	3/21/05	PWS2	<0.080	<0.080	<0.080
BB1	3/21/05	PWS1	<0.080	<0.080	<0.080
BB1	3/21/05	PWS2	<0.081	<0.081	<0.081
BB2	3/22/05	PWS1	<0.082	<0.082	<0.082
BB2	3/22/05	PWS2	<0.085	<0.085	<0.085
BB2A	3/21/05	PWS1	<0.082	<0.082	<0.082
BB2A	3/21/05	PWS2	<0.082	<0.082	<0.082
BB3	3/21/05	PWS1	<0.080	<0.080	<0.080
BB3	3/21/05	PWS2	<0.080	<0.080	<0.080
008	3/23/05	PWS1	<0.082	<0.082	<0.082
008	3/23/05	PWS2	<0.080	<0.080	<0.080
BB4	3/21/05	PWS1	<0.080	<0.080	<0.080
BB4	3/21/05	PWS2	<0.081	<0.081	<0.081
006	3/21/05	PWS1	<0.082	<0.082	<0.082
006	3/21/05	PWS2	<0.080	<0.080	<0.080
BB5	3/21/05	PWS1	<0.080	<0.080	<0.080
BB5	3/21/05	PWS2	<0.081	<0.081	<0.081
001	3/23/05	PWS1	<0.082	<0.082	<0.082
001	3/23/05	PWS2	<0.082	<0.082	<0.082

Table 1, continued. PCBs in water samples and effluents from Big Bayou Creek collected March 21-23, 2005.

			Aroclor Concentration (μg/L)		
Station	Date	Sample	1248	1254	1260
BB6	3/22/05	PWS1	<0.082	<0.082	<0.082
BB6	3/22/05	PWS2	<0.082	<0.082	<0.082
BB7	3/22/05	PWS1	<0.081	<0.081	<0.081
BB7	3/22/05	PWS2	<0.081	<0.081	<0.081
BB8	3/22/05	PWS1	<0.082	<0.082	<0.082
BB8	3/22/05	PWS2	<0.082	<0.082	<0.082
BB9	3/22/05	PWS1	<0.082	<0.082	<0.082
BB9	3/22/05	PWS2	<0.082	<0.082	<0.082

Table 2. PCB results for water samples Little Bayou Creek collected March 21-23, 2005.

Station	Date	Sample	Aroclor Concentration (μg/L) 1248	1254	1260
LB1	3/22/05	PWS1	<0.082	<0.082	<0.082
LB1	3/22/05	PWS2	<0.082	<0.082	<0.082
LB2A	3/23/05	PWS1	<0.082	0.059*	<0.082
LB2A	3/23/05	PWS2	<0.082	0.025*	<0.082
010+011	3/23/05	PWS1	<0.082	<0.082	<0.082
010+011	3/23/05	PWS2	<0.082	<0.082	<0.082
LB2	3/23/05	PWS1	<0.082	<0.082	<0.082
LB2	3/23/05	PWS2	<0.082	<0.082	<0.082
LB3	3/23/05	PWS1	<0.081	<0.081	<0.081
LB3	3/23/05	PWS2	<0.081	<0.081	<0.081
LB4	3/22/05	PWS1	<0.081	<0.081	<0.081
LB4	3/22/05	PWS2	<0.082	<0.082	<0.082

* PCBs detected, however below minimum quantitation limit (MQL).

Table 3. PCB results in sediment samples taken at stream stations and effluent locations in Big Bayou Creek, collected March 21-23, 2005.

Station	Date	Sample[1]	Sample		% Moisture	Aroclor Conc. (µg/Kg)			
			Wet Wt. (g)	Dry Wt. (g)		1248	1254	1260	Total
MC	03/22/05	PSED1	49.82	42.24	15.2	<4.74	<4.74	<4.74	<4.74
MC	03/22/05	PSED2	50.17	42.05	16.2	<4.76	<4.76	<4.76	<4.76
BB1A	03/21/05	PSED1	50.55	40.93	19.0	<4.89	<4.89	<4.89	<4.89
BB1A	03/21/05	PSED2	50.75	41.03	19.2	<4.87	<4.87	<4.87	<4.87
BB1	03/21/05	PSED1	50.05	43.30	13.5	<4.62	<4.62	<4.62	<4.62
BB1	03/21/05	PSED2	50.65	41.70	17.7	<4.80	<4.80	<4.80	<4.80
BB2	03/22/05	PSED1	50.85	40.71	19.9	<4.91	<4.91	<4.91	<4.91
BB2	03/22/05	PSED2	51.33	41.41	19.3	<4.83	<4.83	<4.83	<4.83
BB2A	03/21/05	PSED1	50.77	42.60	16.1	<4.70	<4.70	<4.70	<4.70
BB2A	03/21/05	PSED2	50.25	41.25	17.9	<4.85	<4.85	<4.85	<4.85
BB3	03/21/05	PSED1	51.13	42.35	17.2	<4.72	<4.72	<4.72	<4.72
BB3	03/21/05	PSED2	51.38	43.75	14.8	<4.57	<4.57	<4.57	<4.57
008	03/23/05	PSED1A	50.59	39.99	21.0	<5.00	<5.00	4.05	4.05
008	03/23/05	PSED1B	50.40	37.91	24.8	<5.28	<5.28	4.53	4.53
BB4	03/21/05	PSED1	50.71	42.44	16.3	<4.71	2.64	2.89	5.53
BB4	03/21/05	PSED2	49.80	40.60	18.5	<4.93	1.58	3.13	4.71

[1] PSED1 and PSED2 are separate samples from the station. PSED1A and 1B are duplicate samples.

Table 3, continued. PCB results in sediment samples taken at stream stations and effluent locations in Big Bayou Creek, collected March 21-23, 2005.

Station	Date	Sample[1]	Sample		% Moisture	Aroclor Conc. (µg/Kg)			
			Wet Wt. (g)	Dry Wt. (g)		1248	1254	1260	Total
006	03/21/05	PSED1A	51.25	39.10	23.7	<5.11	4.30	4.26	8.57
006	03/21/05	PSED1B	50.88	40.69	20.0	<4.92	<4.92	2.53	2.53
BB5	03/21/05	PSED1	50.68	40.19	20.7	<4.98	3.68	3.82	7.50
BB5	03/21/05	PSED2	51.21	42.52	17.0	<4.70	1.32	2.78	4.10
001	03/23/05	PSED1A	50.52	38.00	24.8	<5.26	28.03	18.52	46.55
001	03/23/05	PSED1B	49.87	42.32	15.1	<4.73	3.18	3.33	6.51
BB6	03/22/05	PSED1	50.98	39.22	23.1	<5.10	5.71	5.48	11.19
BB6	03/22/05	PSED2	50.75	39.13	22.9	<5.11	9.92	4.04	13.95
BB7	03/22/05	PSED1	50.06	42.13	15.8	<4.75	2.18	2.71	4.89
BB7	03/22/05	PSED2	50.50	42.11	16.6	<4.75	5.89	6.25	12.14
BB8	03/22/05	PSED1	50.66	40.82	19.4	<4.90	2.55	2.36	4.91
BB8	03/22/05	PSED2	50.75	43.68	13.9	<4.58	1.19	2.31	3.50
BB9	03/22/05	PSED1	50.90	44.31	12.9	<4.51	<4.51	<4.51	<4.51
BB9	03/22/05	PSED2	50.34	39.56	21.4	4.70	4.15	3.10	11.95

[1] PSED1 and PSED2 are separate samples from the station. PSED1A and 1B are duplicate samples.

Table 4. PCB results in sediment samples taken at stream stations and effluent locations in Little Bayou Creek, collected March 21-23, 2005.

Station	Date	Sample[1]	Sample		% Moisture	Aroclor Conc. (µg/Kg)			
			Wet Wt. (g)	Dry Wt. (g)		1248	1254	1260	Total
LB1	03/22/05	PSED1	50.41	43.86	13.0	<4.56	<4.56	<4.56	<4.56
LB1	03/22/05	PSED2	49.76	40.99	17.6	<4.88	<4.88	<4.88	<4.88
LB2A	03/23/05	PSED1	50.26	43.27	13.9	87.42	<4.62	26.85	114.27
LB2A	03/23/05	PSED2	50.74	42.90	15.5	49.68	<4.66	18.51	68.19
010+011	03/23/05	PSED1A	50.74	40.96	19.3	<4.88	<4.88	3.29	3.29
010+011	03/23/05	PSED1B	51.41	40.54	21.1	<4.93	3.54	4.55	8.09
LB2	03/23/05	PSED1	51.92	44.44	14.4	184.67	<4.50	68.83	253.50
LB2	03/23/05	PSED2	52.13	44.46	14.7	27.26	<4.50	9.04	36.31
LB3	03/23/05	PSED1	50.87	34.57	32.0	178.36	<5.78	32.47	210.83
LB3	03/23/05	PSED2	51.99	37.33	28.2	120.00	<5.36	23.63	143.63
LB4	03/22/05	PSED1	50.15	41.77	16.7	<4.79	<4.79	<4.79	<4.79
LB4	03/22/05	PSED2	51.14	39.29	23.2	40.88	14.20	10.11	65.18

[1] PSED1 and PSED2 are separate samples from the station. PSED1A and 1B are duplicate samples.

Table 5. Mean PCB results for stream sediment samples from the Bayou Creek system collected March 21-23, 2005.

	Aroclor Conc. (µg/Kg)			
Station	1248	1254	1260	Total
MC	N.D.	N.D.	N.D.	N.D.
BB1A	N.D.	N.D.	N.D.	N.D.
BB1	N.D.	N.D.	N.D.	N.D.
BB2	N.D.	N.D.	N.D.	N.D.
BB2A	N.D.	N.D.	N.D.	N.D.
BB3	N.D.	N.D.	N.D.	N.D.
008	N.D.	N.D.	4.29	4.29
BB4	N.D.	2.11	3.01	5.12
006	N.D.	4.30	3.40	5.55
BB5	N.D.	2.50	3.30	5.80
001	N.D.	15.61	10.92	26.53
BB6	N.D.	7.81	4.76	12.57
BB7	N.D.	4.04	4.48	8.51
BB8	N.D.	1.87	2.34	4.21
BB9	4.70	4.15	3.10	11.95
LB1	N.D.	N.D.	N.D.	N.D.
LB2A	68.55	N.D.	22.68	91.23
010+011	N.D.	3.54	3.92	5.69
LB2	105.97	N.D.	38.94	144.90
LB3	149.18	N.D.	28.05	177.23
LB4	40.88	14.20	10.11	65.18

Table 6. PCB in floodplain soil samples taken at stream stations and effluents locations in Big Bayou Creek, collected March 21-23, 2005.

Station	Date	Sample	Sample		%	Aroclor Conc. (µg/Kg)			
			Wet Wt. (g)	Dry Wt. (g)	Moisture	1248	1254	1260	Total
MC	032205	PFP1	49.90	37.87	24.1	<5.28	<5.28	<5.28	<5.28
MC	032205	PFP2	51.88	44.96	13.3	<4.45	<4.45	<4.45	<4.45
BB1A	032105	PFP1	51.81	45.94	11.3	<4.35	<4.35	<4.35	<4.35
BB1A	032105	PFP2	49.96	43.23	13.5	<4.63	<4.63	<4.63	<4.63
BB1	032105	PFP1	50.53	38.00	24.8	<5.26	<5.26	8.46	8.46
BB1	032105	PFP2	50.80	46.92	7.6	<4.26	14.71	10.48	25.19
BB2	032205	PFP1	51.80	39.50	23.7	<5.06	<5.06	<5.06	<5.06
BB2	032205	PFP2	51.20	35.56	30.5	<5.62	<5.62	<5.62	<5.62
BB2A	032105	PFP1	51.21	41.01	19.9	<4.88	<4.88	4.73	4.73
BB2A	032105	PFP2	50.88	41.99	17.5	<4.76	17.59	9.68	27.27
BB3	032105	PFP1	49.95	48.06	3.8	<4.16	<4.16	<4.16	<4.16
BB3	032105	PFP2	50.03	47.33	5.4	<4.23	<4.23	14.78	14.78
008	032305	PFP1A	50.70	39.41	22.3	<5.08	8.34	11.18	19.52
008	032305	PFP1B	50.53	40.01	20.8	<5.00	<5.00	7.92	7.92
BB4	032105	PFP1	50.36	47.76	5.2	<4.19	<4.19	5.84	5.84
BB4	032105	PFP2	50.44	49.86	1.1	<4.01	<4.01	25.04	25.04

[1] PFP1 and PFP2 are separate samples from the station. PFP1A and 1B are duplicate samples.

Table 7, continued. PCB in floodplain soil samples taken at stream stations and effluents locations in Big Bayou Creek, collected March 21-23, 2005.

Station	Date	Sample	Sample		%	Aroclor Conc. (µg/Kg)			
			Wet Wt. (g)	Dry Wt. (g)	Moisture	1248	1254	1260	Total
006	032105	PFP1A	51.23	47.46	7.4	<4.21	10.46	16.69	27.15
006	032105	PFP1B	50.41	46.57	7.6	<4.29	10.12	19.13	29.26
BB5	032105	PFP1	50.27	41.19	18.1	<4.86	21.99	6.66	28.65
BB5	032105	PFP2	51.40	34.96	32.0	<5.72	<5.72	3.65	3.65
001	032305	PFP1A	49.83	36.19	27.4	<5.53	<5.53	3.49	3.49
001	032305	PFP1B	50.86	35.55	30.1	<5.63	5.14	6.14	11.28
BB6	032205	PFP1	49.97	42.75	14.4	<4.68	<4.68	3.10	3.10
BB6	032205	PFP2	50.82	35.68	29.8	<5.61	14.50	5.30	19.80
BB7	032205	PFP1	50.79	37.35	26.5	<5.36	10.39	10.13	20.52
BB7	032205	PFP2	50.39	35.93	28.7	<5.57	<5.57	4.21	4.21
BB8	032205	PFP1	50.66	50.33	0.7	<3.97	3.31	12.50	15.81
BB8	032205	PFP2	50.56	43.03	14.9	<4.65	15.61	15.93	31.54
BB9	032205	PFP1	50.20	34.90	30.5	<5.73	13.06	8.26	21.33
BB9	032205	PFP2	51.51	37.85	26.5	<5.28	<5.28	4.87	4.87

[1] PFP1 and PFP2 are separate samples from the station. PFP1A and 1B are duplicate samples.

Table 7. PCB in floodplain soil samples taken at stream stations and effluents locations in Little Bayou Creek, collected March 21-23, 2005.

Station	Date	Sample	Sample		% Moisture	Aroclor Conc. (µg/Kg)			
			Wet Wt. (g)	Dry Wt. (g)		1248	1254	1260	Total
LB1	032205	PFP1	51.83	41.38	20.2	<4.83	<4.83	<4.83	<4.83
LB1	032205	PFP2	51.05	39.20	23.2	<5.10	<5.10	<5.10	<5.10
LB2A	032305	PFP1	51.34	40.94	20.3	<4.89	166.64	187.45	354.09
LB2A	032305	PFP2	51.61	41.40	19.8	<4.83	66.42	151.85	218.27
010+011	032305	PFP1A	50.20	34.01	32.3	<5.88	43.06	62.60	105.66
010+011	032305	PFP1B	49.96	32.50	35.0	<6.15	103.31	236.12	339.43
LB2	032305	PFP1	51.08	38.20	25.2	216.57	<5.24	97.20	313.77
LB2	032305	PFP2	51.94	39.81	23.4	<5.02	187.52	186.55	374.06
LB3	032305	PFP1	53.24	41.87	21.4	114.72	<4.78	48.01	162.73
LB3	032305	PFP2	51.39	39.60	22.9	109.86	26.16	29.00	165.02
LB4	032205	PFP1	50.88	40.28	20.8	41.07	<4.96	16.59	57.66
LB4	032205	PFP2	51.08	36.89	27.8	11.48	14.04	33.41	58.93

[1] PFP1 and PFP2 are separate samples from the station. PFP1A and 1B are duplicate samples.

Table 9. Mean PCB results for floodplain soil samples from Bayou Creek system collected March 21-23, 2005.

	Aroclor Conc. (µg/Kg)			
Station	1248	1254	1260	Total
MC	N.D.	N.D.	N.D.	N.D.
BB1A	N.D.	N.D.	N.D.	N.D.
BB1	N.D.	14.71	9.47	16.82
BB2	N.D.	N.D.	N.D.	N.D.
BB2A	N.D.	17.59	7.21	16.00
BB3	N.D.	N.D.	14.78	14.78
008	N.D.	8.34	9.55	13.72
BB4	N.D.	N.D.	15.44	15.44
006	N.D.	10.29	17.91	28.20
BB5	N.D.	21.99	5.16	16.15
001	N.D.	5.14	4.82	7.38
BB6	N.D.	14.50	4.20	11.45
BB7	N.D.	10.39	7.17	12.37
BB8	N.D.	9.46	14.21	23.67
BB9	N.D.	13.06	6.57	13.10
LB1	N.D.	N.D.	N.D.	N.D.
LB2A	N.D.	116.53	169.65	286.18
010+011	N.D.	73.18	149.36	222.54
LB2	216.57	187.52	141.87	343.92
LB3	112.29	26.16	38.51	163.87
LB4	26.27	14.04	25.00	58.29

Figure 1. Mean PCB concentrations in sediments from Big Bayou Creek collected March 21-23, 2005.

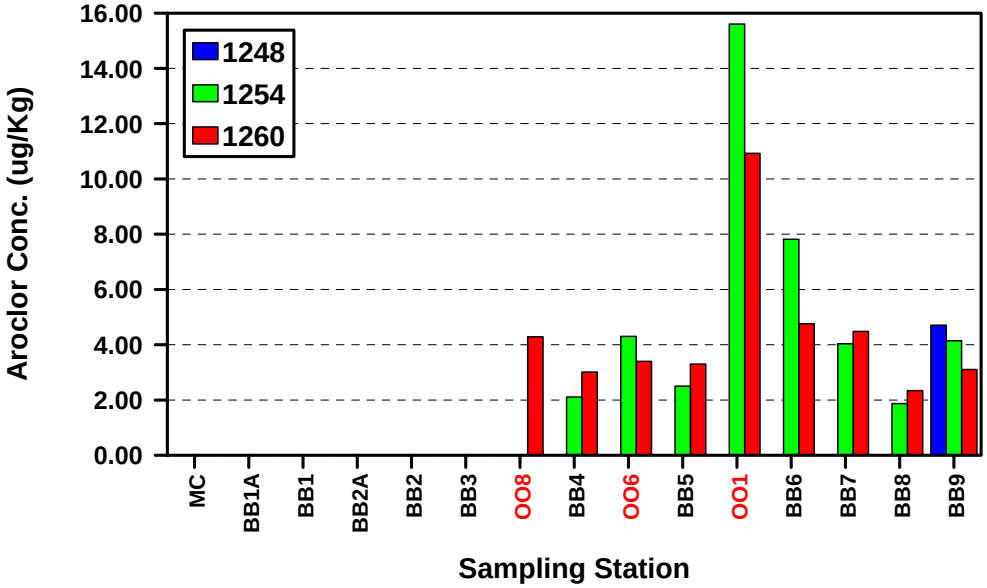

Figure 2. Mean total PCB concentrations in sediments from Big Bayou Creek collected March 21-23, 2005.

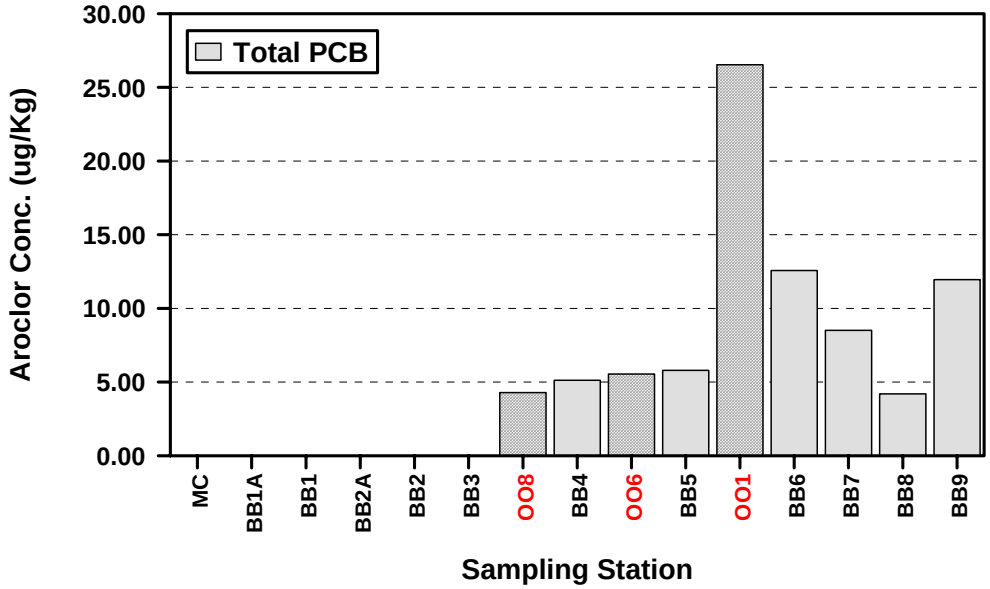

Figure 3. Mean PCB concentrations in sediments from Little Bayou Creek collected March 21-23, 2005.

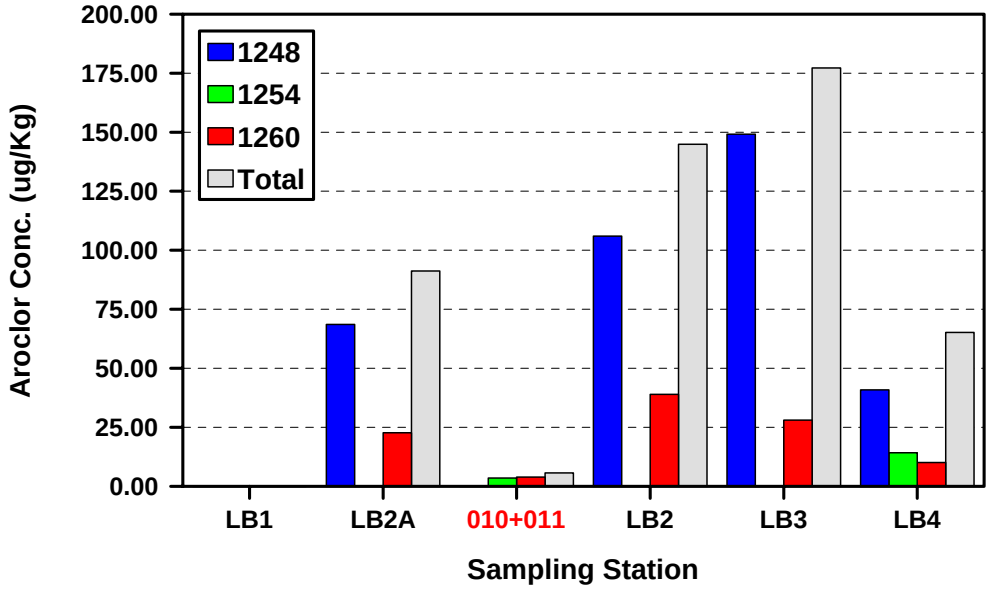

Figure 4. Mean PCB concentrations in floodplain soils from Big Bayou Creek collected March 21-23, 2005.

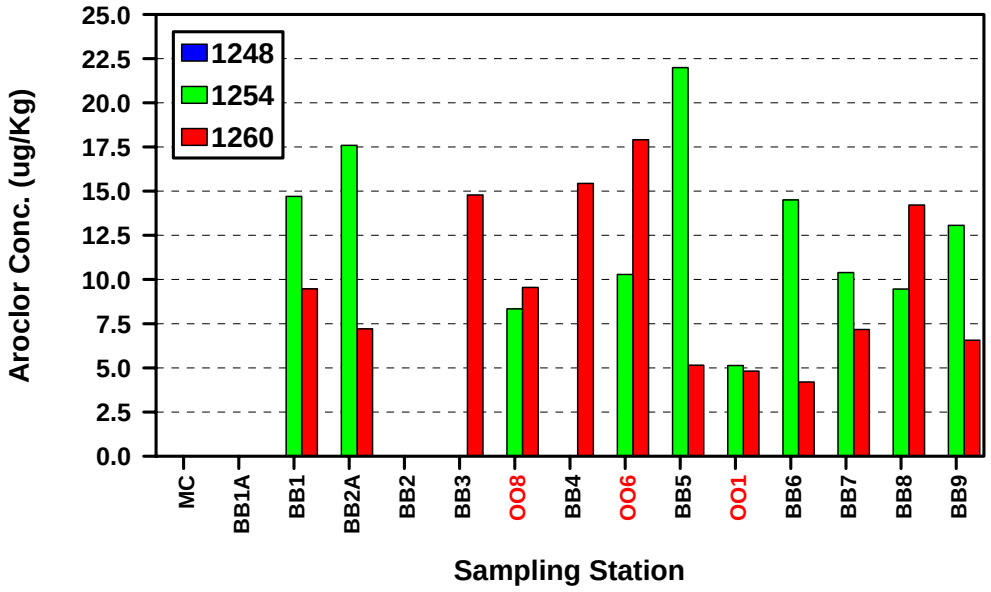

Figure 5. Mean total PCB concentrations in floodplain soils from Big Bayou Creek collected March 21-23, 2005.

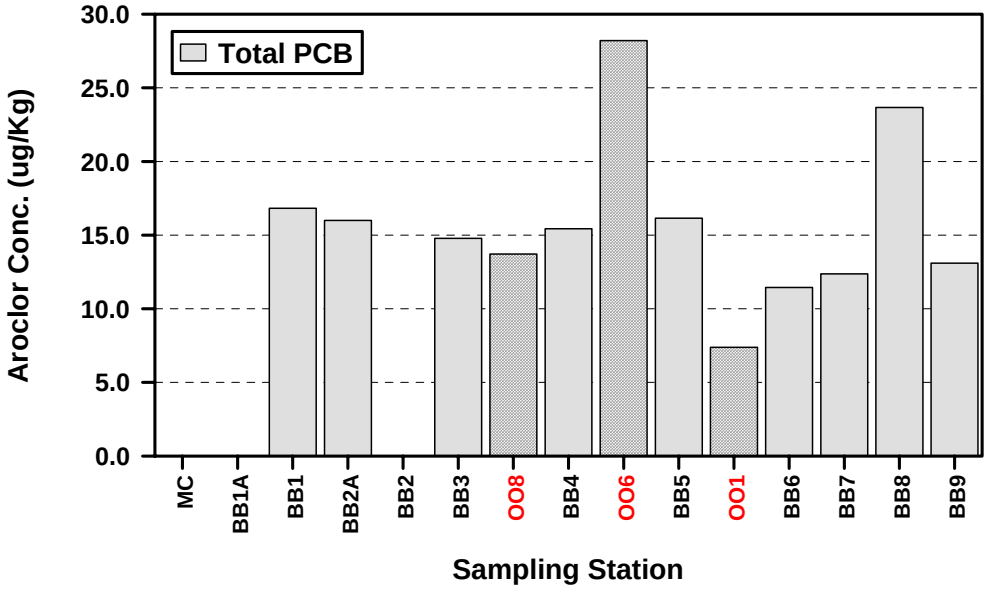

Figure 6. Mean PCB concentrations in floodplain soils from Little Bayou Creek collected March 21-23, 2005.