# Analysis of Polychlorinated Biphenyl (PCB) Residues in Fish Collected May 24-25, 2006 from the Bayou Creek System

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**DRAFT REPORT**

**January 24, 2007**

**Submitted to**

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## INTRODUCTION

Fish were collected on May 24-25, 2006 from our series of sampling stations on Big and Little Bayou Creeks and the reference station on the west fork of Massac Creek (MC). Samples were collected during high-flow stream conditions. Fish could not be collected at station BB9 due to high waters. Fillet samples were analyzed for Aroclor 1248, 1254, and 1260. A total of 66 fish were analyzed from Big and Little Bayou Creeks and Massac Creek. This included 46 fish from Big Bayou Creek, 16 fish from Little Bayou Creek, and 4 fish from Massac Creek. The fish from Big Bayou Creek consisted of 1 bluegill sunfish (*Lepomis macrochirus*) (BG), 10 green sunfish (*Lepomis cyanellus*) (GS), 20 longear sunfish (*Lepomis megalotis*) (LS), 1 largemouth bass (*Micropterus salmoides*) (LMB), and 9 yellow bullhead catfish (*Ictalurus natalis*) (YBH). Fish collected from Little Bayou Creek consisted of 3 green sunfish, 9 longear sunfish, 1 largemouth bass, and 3 yellow bullhead catfish. From Massac Creek, fish consisted of 1 green sunfish and 3 longear sunfish.

## METHODS

### Fish collection

Fish were collected by UK personnel by use of back-pack shocker and seining. Fish that did not meet our requirements were returned to the stream. Collected fish were wrapped in aluminum foil, tagged, bagged in plastic containers by collecting station, and placed on ice (4 $^{o}$C) for transport to the laboratory. Fish species were identified and stored in the freezer (-15 $^{o}$C) until extraction.

**Tissue extraction**

Fish were measured for length and whole body weight, and fillets were taken with solvent-cleaned surgical instruments. The fillets were then weighed and macerated as described below. Otoliths (sagittae) were removed from each specimen for age determinations (Boxrucker, 1986). PCBs in fish tissues were extracted and analyzed as described by Birge and Price (2001), using standard U.S. EPA methods (Watts, 1980; U.S. EPA, 1997; Erickson, 1997).

**Analysis by Gas Chromatography**

Samples were analyzed for Aroclor 1248, 1254, and 1260 according to SW-846 Method 8082 (U.S. EPA, 1997) and previously described by Birge and Price (2001).

**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

A total of 66 fish were analyzed during this survey, which included 1 GS and 3 LS from Massac Creek; 1 BG, 10 GS, 20 LS, 1 LMB, and 9 YBH from Big Bayou Creek; and 3 GS, 9 LS, 1 LMB, and 3 YBH from Little Bayou Creek (Tables 1 and 2). As observed in the past, the fish from Big Bayou Creek ranged in age from <1 to 2+ years old, and the fish from Little Bayou Creek ranged from <1 to 2 years old.

PCB concentrations for fish from Big and Little Bayou Creeks are presented in Tables 1 and 2, respectively. The means ± standard deviations for length, whole body weight, lipid, and Aroclor concentrations for both streams are given in Table 3. Mean PCBs in longear sunfish, green sunfish, and yellow bullhead are represented graphically in Figures 1 through 10. No PCBs were found in any of the fish from the upstream reference stations (MC, BB1A, BB1, and BB2). In Big Bayou Creek, Aroclor 1248 was quantifiable in 31 of 46 fish collected (67.4%), Aroclor 1254 and 1260 were found in 15 and 11 fish out of 46 (32.6% and 23.9%), respectively (Table 1). In comparison, 1248, 1254, and 1260 were quantifiable in 5, 63, and 58% of the fish collected from Big Bayou Creek in March 2005, respectively (Birge and Price, 2005). Highest Aroclor 1248 and 1254 concentrations were detected in a bluegill from station BB8 at 0.58 and 0.29 µg/g, respectively. Although longear sunfish from BB6 had the highest 1248 concentration, total PCBs were higher at station BB5 (Figures 1 and 2). No green sunfish or yellow bullheads were found in station BB5. Green sunfish from BB7 had the highest total PCBs (Figure 3 and 4). The highest 1260 was found in a yellow bullhead at station BB6 at 0.24 µg/g (Table 1 and Figure 5). Yellow bullheads from BB6 also had the highest total PCB concentrations (Figure 6). Of the 46 fish analyzed from Big Bayou Creek, 32 contained fillet total PCB values at or above the lowest action level in Kentucky (0.05 µg/g). Only two fish had total PCBs higher than 0.50 µg/g (BB6-YBH1 and BB7-GS1). In contrast, during the March 2005 collection (Birge and Price, 2005), of the 43 fish analyzed from Big Bayou Creek, 29 contained fillet total PCB values at or above the lowest action level of 0.05 µg/g.

For Little Bayou Creek, Aroclor 1248 was quantifiable in all fish; Aroclor 1254 was found in 1 of 16 fish (6.3%); and Aroclor 1260 was found in 13 of 16 fish (81.3%) (Table 2). During the March 2005 collection, Aroclor 1248, 1254 and 1260 were quantifiable in 78, 89, and 100%, respectively. Mean PCB concentrations in longear and green sunfish from Little Bayou Creek are represented graphically in Figures 7 through 10. Highest Aroclor 1248 and 1260 concentrations were found for a longear sunfish (LS2) from LB3 at 1.56 and 0.33 µg/g, respectively (Table 2 and Figure 7). Aroclor 1254 was found only in one longear sunfish from LB2 (LS3). Both longear and green sunfish had the highest total PCB concentrations at LB3 (Figures 8 and 10). A total of 8 of 16 fish analyzed from Little Bayou Creek contained total PCBs in fillets that were at or above 0.5 µg/g. During the March 2005 collection, 4 fish of 18 analyzed contained total PCBs at or above 0.5 µg/g (Birge and Price, 2005). Two of the fish tested during this collection (LB3-LS2 and LB3-GS2) contained total PCBs above 1.0 µg/g. In comparison, for the March 2004 collection 4 fish tested contained total PCBs above 1.0 µg/g.

## DISCUSSION

As noted in previous reports, younger fish (i.e. <1 to 1+ years) tended to predominate both stream systems. In both Big and Little Bayou Creeks, no fish over 3 years old were obtained. The lack of older fish may account in part for the lower PCB concentrations found in both streams, as the fish may have not had time to bioaccumulate significant PCB concentrations. Fish from the effluent receiving zone (i.e. BB4-BB7) in Big Bayou Creek still have detectable PCBs (Table 1, Figures 1, 3, and 5).

A total of 32 of 46 fish analyzed from Big Bayou Creek contained fillet total PCB values at or above the lowest action level in Kentucky (0.05 µg/g).

Concerning Little Bayou Creek, Aroclor 1248 occurred in fillets for all fish tested and Aroclor 1260 was detected in 81.3% of all fish analyzed. The high frequency of detection of Aroclor 1248 may indicate that exposure was recent. However, based on frequency of detection for Aroclor 1260, fish from Little Bayou Creek also have bioaccumulated the higher chlorinated PCBs over time. A total of 8 of 16 fish analyzed from Little Bayou Creek contained total PCBs in fillets that were at or above 0.5 µg/g, and in addition, two of the fish tested contained total PCBs above 1.0 µg/g. Based on these results, station LB3 was the most impacted station in Little Bayou Creek at the time of collection.

## REFERENCES


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Table 1. PCB concentrations in fish from Massac Creek and Big Bayou Creek collected May 24-25, 2006.

| Station | Date | Type | Length (mm) | Age (Years) | Whole Body Wt. (g) | Fillet Wt. (g) | mg fat /g tissue | Aroclor Conc. (μg/g) 1248 | 1254 | 1260 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MC | 05/25/06 | LS1 | 85 | 1 | 14.489 | 1.983 | 7.82 | <0.101 | <0.101 | <0.101 | <0.101 |
| MC | 05/25/06 | LS2 | 84 | 1 | 14.591 | 1.796 | 8.91 | <0.111 | <0.111 | <0.111 | <0.111 |
| MC | 05/25/06 | LS3 | 83 | 1 | 12.740 | 1.744 | 17.78 | <0.115 | <0.115 | <0.115 | <0.115 |
| MC | 05/25/06 | GS1 | 83 | 1+ | 10.677 | 1.479 | 9.80 | <0.135 | <0.135 | <0.135 | <0.135 |
| BB1A | 05/24/06 | LS1 | 107 | 2+ | 33.453 | 4.551 | 5.82 | <0.044 | <0.044 | <0.044 | <0.044 |
| BB1A | 05/24/06 | LS2 | 107 | 2+ | 26.524 | 3.931 | 7.38 | <0.051 | <0.051 | <0.051 | <0.051 |
| BB1A | 05/24/06 | LS3 | 104 | 2+ | 25.445 | 3.669 | 8.18 | <0.055 | <0.055 | <0.055 | <0.055 |
| BB1A | 05/24/06 | GS1 | 102 | 1+ | 22.600 | 2.877 | 8.34 | <0.070 | <0.070 | <0.070 | <0.070 |
| BB1A | 05/24/06 | YBH1 | 106 | --- | 15.756 | 1.591 | 6.91 | <0.126 | <0.126 | <0.126 | <0.126 |
| BB1 | 05/24/06 | LS1 | 108 | 2+ | 33.399 | 5.162 | 9.01 | <0.039 | <0.039 | <0.039 | <0.039 |
| BB1 | 05/24/06 | BG1 | 98 | <1 | 16.949 | 1.428 | 5.25 | <0.140 | <0.140 | <0.140 | <0.140 |
| BB1 | 05/24/06 | BG2 | 92 | 1 | 13.867 | 2.443 | 7.78 | 0.093 | <0.082 | <0.082 | 0.093 |
| BB1 | 05/24/06 | GS1 | 103 | <1 | 19.436 | 2.516 | 3.97 | <0.079 | <0.079 | <0.079 | <0.079 |
| BB2 | 05/24/06 | GS1 | 91 | 1 | 16.273 | 2.249 | 5.11 | <0.089 | <0.089 | <0.089 | <0.089 |
| BB3 | 05/24/06 | LS1 | 122 | 1+ | 40.263 | 5.785 | 2.51 | <0.035 | <0.035 | <0.035 | <0.035 |
| BB3 | 05/24/06 | LS2 | 125 | 1+ | 48.969 | 6.764 | 3.10 | <0.030 | 0.038 | <0.030 | 0.038 |
| BB3 | 05/24/06 | GS1 | 118 | 1 | 35.403 | 5.116 | 4.20 | 0.049 | <0.039 | <0.039 | 0.049 |
| BB3 | 05/24/06 | GS2 | 103 | 1+ | 23.172 | 3.278 | 7.63 | <0.061 | <0.061 | <0.061 | <0.061 |
| BB3 | 05/24/06 | BG1 | 108 | 1+ | 19.643 | 2.680 | 9.70 | <0.075 | 0.120 | <0.075 | 0.120 |
| BB3 | 05/24/06 | YBH1 | 119 | --- | 22.835 | 1.760 | 5.40 | 0.229 | <0.114 | <0.114 | 0.229 |
| BB3 | 05/24/06 | YBH2 | 115 | --- | 20.613 | 1.542 | 4.22 | 0.218 | <0.130 | <0.130 | 0.218 |

Table 1, continued. PCB concentrations in fish from Massac Creek and Big Bayou Creek collected May 24-25, 2006.

| Station | Date | Type | Length (mm) | Age (Years) | Whole Body Wt. (g) | Fillet Wt. (g) | mg fat /g tissue | Aroclor Conc. (μg/g) 1248 | 1254 | 1260 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BB4 | 05/24/06 | LS1 | 119 | 2 | 41.002 | 5.680 | 5.11 | 0.067 | 0.078 | 0.035 | 0.180 |
| BB4 | 05/24/06 | LS2 | 95 | 1 | 20.604 | 3.347 | 9.56 | 0.170 | <0.060 | <0.060 | 0.170 |
| BB4 | 05/24/06 | LS3 | 92 | 1 | 20.404 | 2.508 | 10.37 | 0.152 | <0.080 | <0.080 | 0.152 |
| BB4 | 05/24/06 | GS1 | 102 | 1 | 24.963 | 3.694 | 11.23 | <0.054 | 0.121 | 0.075 | 0.196 |
| BB4 | 05/24/06 | YBH1 | 121 | --- | 27.351 | 2.012 | 5.22 | 0.213 | <0.099 | <0.099 | 0.213 |
| BB4 | 05/24/06 | YBH2 | 143 | --- | 44.445 | 2.939 | 4.08 | 0.166 | <0.068 | <0.068 | 0.166 |
| BB5 | 05/24/06 | LS1 | 131 | 1+ | 52.464 | 7.315 | 4.78 | 0.161 | 0.132 | 0.075 | 0.368 |
| BB5 | 05/24/06 | LS2 | 122 | 1+ | 39.228 | 5.956 | 3.44 | 0.056 | 0.059 | <0.034 | 0.115 |
| BB5 | 05/24/06 | LS3 | 132 | 1+ | 44.669 | 6.701 | 3.21 | 0.076 | 0.060 | 0.044 | 0.181 |
| BB5 | 05/24/06 | LS4 | 97 | 1 | 18.700 | 2.379 | 7.15 | 0.194 | 0.145 | <0.084 | 0.340 |
| BB5 | 05/24/06 | BG1 | 108 | 1 | 24.324 | 3.219 | 9.01 | 0.123 | <0.062 | <0.062 | 0.123 |
| BB6 | 05/25/06 | LS1 | 110 | 1 | 31.672 | 4.486 | 5.13 | 0.089 | <0.045 | <0.045 | 0.089 |
| BB6 | 05/25/06 | LS2 | 88 | 1 | 14.667 | 2.361 | 8.68 | 0.296 | <0.085 | <0.085 | 0.296 |
| BB6 | 05/25/06 | GS1 | 121 | 1 | 35.841 | 4.828 | 5.49 | 0.123 | 0.133 | 0.076 | 0.332 |
| BB6 | 05/25/06 | GS2 | 104 | 1+ | 23.502 | 2.867 | 9.07 | 0.156 | <0.070 | <0.070 | 0.156 |
| BB6 | 05/25/06 | YBH1 | 216 | --- | 137.600 | 5.207 | 2.02 | 0.124 | 0.192 | 0.241 | 0.557 |

Table 1, continued. PCB concentrations in fish from Massac Creek and Big Bayou Creek collected May 21-22, 2005.

| Station | Date | Type | Length (mm) | Age (Years) | Whole Body Wt. (g) | Fillet Wt. (g) | mg fat /g tissue | Aroclor Conc. (μg/g) 1248 | 1254 | 1260 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BB7 | 05/25/06 | LS1 | 111 | 1 | 31.815 | 4.706 | 12.96 | 0.145 | 0.148 | 0.056 | 0.349 |
| BB7 | 05/25/06 | LS2 | 106 | 1 | 30.169 | 4.201 | 10.59 | 0.114 | <0.048 | <0.048 | 0.114 |
| BB7 | 05/25/06 | LS3 | 91 | 1 | 18.025 | 2.660 | 9.59 | 0.237 | <0.075 | <0.075 | 0.237 |
| BB7 | 05/25/06 | GS1 | 94 | 2 | 17.847 | 2.651 | 15.47 | 0.240 | 0.255 | 0.093 | 0.589 |
| BB7 | 05/25/06 | BG1 | 87 | <1 | 12.281 | 2.135 | 2.81 | 0.214 | <0.094 | <0.094 | 0.214 |
| BB7 | 05/25/06 | LMB1 | 132 | 1 | 31.803 | 4.568 | 4.49 | 0.124 | 0.128 | 0.060 | 0.312 |
| BB7 | 05/25/06 | YBH1 | 139 | --- | 45.105 | 2.385 | 3.98 | 0.204 | <0.084 | <0.084 | 0.204 |
| BB8 | 05/25/06 | LS1 | 133 | 2+ | 58.583 | 8.019 | 5.24 | 0.068 | <0.025 | <0.025 | 0.068 |
| BB8 | 05/25/06 | LS2 | 123 | 1 | 53.962 | 7.695 | 10.20 | 0.089 | <0.026 | 0.038 | 0.127 |
| BB8 | 05/25/06 | BG1 | 110 | 1+ | 28.219 | 4.378 | 9.25 | 0.582 | 0.288 | 0.150 | 1.020 |
| BB8 | 05/25/06 | GS1 | 82 | 2 | 10.069 | 1.430 | 9.09 | 0.279 | <0.140 | <0.140 | 0.279 |
| BB8 | 05/25/06 | YBH1 | 164 | --- | 81.260 | 5.379 | 2.60 | 0.101 | <0.037 | <0.037 | 0.101 |
| BB8 | 05/25/06 | YBH2 | 114 | --- | 25.867 | 1.601 | 5.93 | <0.125 | 0.202 | <0.125 | 0.202 |

Table 2. PCB concentrations in fish from Little Bayou Creek collected May 24-25, 2006.

| Station | Date | Type | Length (mm) | Age (Years) | Whole Body Wt. (g) | Fillet Wt. (g) | mg fat /g tissue | Aroclor Conc. (μg/g) 1248 | 1254 | 1260 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LB2 | 05/24/06 | LS1 | 120 | 2 | 41.533 | 6.285 | 3.74 | 0.254 | <0.032 | 0.083 | 0.337 |
| LB2 | 05/24/06 | LS2 | 97 | 1+ | 24.362 | 2.922 | 4.28 | 0.429 | <0.068 | 0.097 | 0.526 |
| LB2 | 05/24/06 | LS3 | 101 | 1 | 23.969 | 3.342 | 2.69 | 0.440 | 0.161 | 0.288 | 0.888 |
| LB2 | 05/24/06 | LS4 | 91 | 1+ | 17.403 | 2.526 | 4.35 | 0.331 | <0.079 | 0.108 | 0.439 |
| LB3 | 05/24/06 | LS1 | 110 | 1+ | 33.932 | 4.800 | 3.02 | 0.191 | <0.042 | 0.051 | 0.242 |
| LB3 | 05/24/06 | LS2 | 75 | <1 | 11.190 | 1.349 | 11.49 | 1.563 | <0.148 | 0.325 | 1.888 |
| LB3 | 05/24/06 | GS1 | 84 | 1 | 12.921 | 1.820 | 5.49 | 0.672 | <0.110 | <0.110 | 0.672 |
| LB3 | 05/24/06 | GS2 | 93 | 1+ | 18.007 | 2.173 | 4.83 | 1.026 | <0.092 | 0.133 | 1.159 |
| LB3 | 05/24/06 | LMB1 | 144 | 1+ | 42.085 | 3.709 | 5.53 | 0.435 | <0.054 | 0.078 | 0.513 |
| LB3 | 05/24/06 | YBH1 | 105 | --- | 18.134 | 1.427 | 3.50 | 0.587 | <0.140 | 0.160 | 0.746 |
| LB4 | 05/25/06 | LS1 | 85 | 1 | 12.618 | 1.783 | 6.45 | 0.216 | <0.112 | 0.112 | 0.328 |
| LB4 | 05/25/06 | LS2 | 83 | <1 | 13.872 | 1.684 | 5.64 | 0.293 | <0.119 | <0.119 | 0.293 |
| LB4 | 05/25/06 | LS3 | 85 | <1 | 12.484 | 1.973 | 6.08 | 0.660 | <0.101 | 0.135 | 0.795 |
| LB4 | 05/25/06 | GS1 | 115 | 2 | 27.227 | 3.361 | 3.87 | 0.197 | <0.060 | 0.064 | 0.262 |
| LB4 | 05/25/06 | YBH1 | 125 | --- | 26.266 | 2.293 | 5.23 | 0.326 | <0.087 | 0.145 | 0.471 |
| LB4 | 05/25/06 | YBH2 | 94 | --- | 11.587 | 0.964 | 4.67 | 0.494 | <0.207 | <0.207 | 0.494 |

Table 3. Means ± standard deviations for measured parameters of fish from the Bayou Creek system, collected May 24-25, 2006.

| System | Fish Type | Length (mm) | Whole Body Wt. (g) | Lipid (mg/g) | Mean Aroclor Conc. (µg/g) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 1248 | 1254 | 1260 | Total |
| MC | LS | 84±1.0 | 13.94±1.04 | 11.50±5.46 | N.D. | N.D. | N.D. | N.D. |
| MC | GS | 83 | 10.68 | 9.80 | N.D. | N.D. | N.D. | N.D. |
| BB1A | LS | 106±1.7 | 28.47±4.35 | 7.13±1.20 | N.D. | N.D. | N.D. | N.D. |
| BB1A | GS | 102 | 22.60 | 8.34 | N.D. | N.D. | N.D. | N.D. |
| BB1A | YBH | 106 | 15.76 | 6.91 | N.D. | N.D. | N.D. | N.D. |
| BB1 | LS | 108 | 33.40 | 9.01 | N.D. | N.D. | N.D. | N.D. |
| BB1 | BG | 95±4.2 | 15.41±2.18 | 6.51±1.79 | 0.093 | N.D. | N.D. | 0.093 |
| BB1 | GS | 103 | 19.44 | 3.97 | N.D. | N.D. | N.D. | N.D. |
| BB2 | GS | 91 | 16.27 | 5.11 | N.D. | N.D. | N.D. | N.D. |
| BB3 | LS | 124±2.1 | 44.62±6.16 | 2.81±0.42 | N.D. | 0.038 | N.D. | 0.038 |
| BB3 | GS | 111±10.6 | 29.29±8.65 | 5.91±2.42 | 0.049 | N.D. | N.D. | 0.049 |
| BB3 | BG | 108 | 19.64 | 9.70 | N.D. | 0.120 | N.D. | 0.120 |
| BB3 | YBH | 117±2.8 | 21.72±1.57 | 4.81±0.84 | 0.224±0.008 | N.D. | N.D. | 0.224±0.008 |
| BB4 | LS | 102±14.8 | 27.34±11.83 | 8.34±2.83 | 0.129±0.055 | 0.078 | 0.035 | 0.167±0.014 |
| BB4 | GS | 102 | 24.96 | 11.23 | N.D. | 0.121 | 0.075 | 0.196 |
| BB4 | YBH | 132±15.6 | 35.90±12.09 | 4.65±0.80 | 0.189±0.034 | N.D. | N.D. | 0.189±0.034 |
| BB5 | LS | 121±16.3 | 38.77±14.44 | 4.65±1.81 | 0.122±0.067 | 0.099±0.046 | 0.060±0.022 | 0.251±0.122 |
| BB5 | BG | 108 | 24.32 | 9.01 | 0.123 | N.D. | N.D. | 0.123 |

Table 3, continued. Means ± standard deviations for measured parameters of fish from the Bayou Creek system, collected May 24-25, 2006.

| System | Fish Type | Length (mm) | Whole Body Wt. (g) | Lipid (mg/g) | Mean Aroclor Conc. (µg/g) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | 1248 | 1254 | 1260 | Total |
| BB6 | LS | 99±15.6 | 23.17±12.02 | 6.90±2.51 | 0.192±0.146 | N.D. | N.D. | 0.192±0.146 |
| BB6 | GS | 113±12.0 | 29.67±8.72 | 7.28±2.53 | 0.140±0.023 | 0.133 | 0.076 | 0.244±0.125 |
| BB6 | YBH | 216 | 137.60 | 2.02 | 0.124 | 0.192 | 0.241 | 0.557 |
| BB7 | LS | 103±10.4 | 26.67±7.53 | 11.05±1.73 | 0.166±0.064 | 0.148 | 0.056 | 0.233±0.117 |
| BB7 | GS | 94 | 17.85 | 15.47 | 0.240 | 0.255 | 0.093 | 0.589 |
| BB7 | BG | 87 | 12.28 | 2.81 | 0.214 | N.D. | N.D. | 0.214 |
| BB7 | LMB | 132 | 31.80 | 4.49 | 0.124 | 0.128 | 0.060 | 0.312 |
| BB7 | YBH | 139 | 45.11 | 3.98 | 0.204 | N.D. | N.D. | 0.204 |
| BB8 | LS | 128±7.1 | 56.27±3.27 | 7.72±3.51 | 0.079±0.015 | N.D. | 0.038 | 0.097±0.041 |
| BB8 | BG | 110 | 28.22 | 9.25 | 0.582 | 0.288 | 0.150 | 1.020 |
| BB8 | GS | 82 | 10.07 | 9.09 | 0.279 | N.D. | N.D. | 0.279 |
| BB8 | YBH | 139±35.4 | 53.56±39.17 | 4.27±2.36 | 0.101 | 0.202 | N.D. | 0.152±0.071 |
| LB2 | LS | 13 | 10.32 | 0.77 | 0.088 | N.D. | 0.096 | 0.240±0.000 |
| LB3 | LS | 93±24.7 | 22.56±16.08 | 7.26±5.99 | 0.877±0.970 | N.D. | 0.188±0.194 | 1.065±1.164 |
| LB3 | GS | 89±6.4 | 15.46±3.60 | 5.16±0.47 | 0.849±0.250 | N.D. | 0.133 | 0.915±0.344 |
| LB3 | LMB | 144 | 42.09 | 5.53 | 0.435 | N.D. | 0.078 | 0.513 |
| LB3 | YBH | 105 | 18.13 | 3.50 | 0.587 | N.D. | 0.160 | 0.746 |
| LB4 | LS | 84±1.2 | 12.99±0.77 | 6.06±0.40 | 0.390±0.237 | N.D. | 0.124±0.016 | 0.472±0.280 |
| LB4 | GS | 115 | 27.23 | 3.87 | 0.197 | N.D. | 0.064 | 0.262 |
| LB4 | YBH | 110±21.9 | 18.93±10.38 | 4.95±0.40 | 0.410±0.119 | N.D. | 0.145 | 0.482±0.016 |

**Figure 1. Mean PCB concentrations in longear sunfish from Big Bayou Creek, collected May 24-25, 2006.**

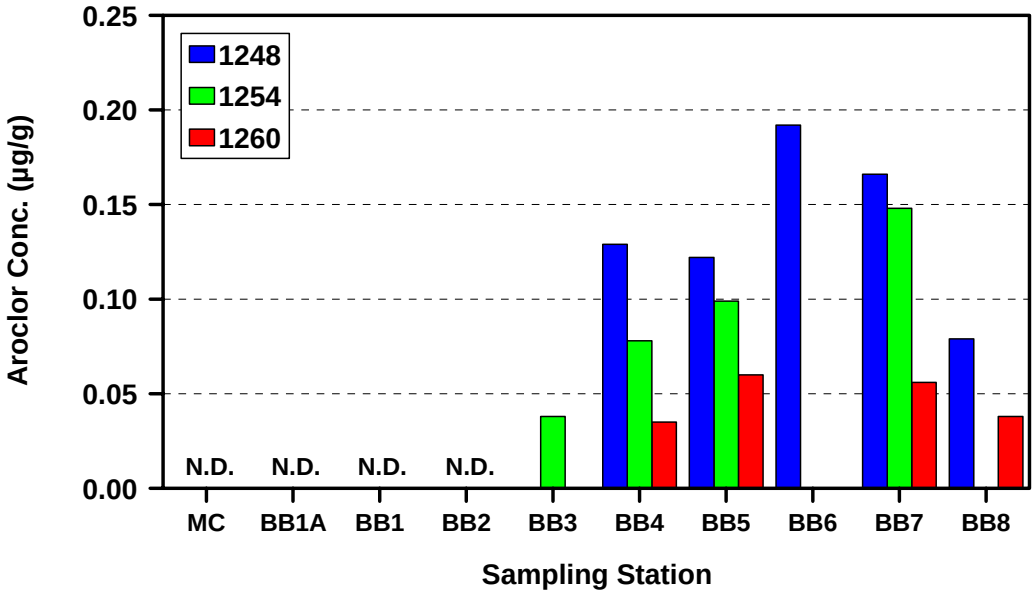


**Figure 2. Mean total PCB concentrations in longear sunfish from Big Bayou Creek, collected May 24-25, 2006.**

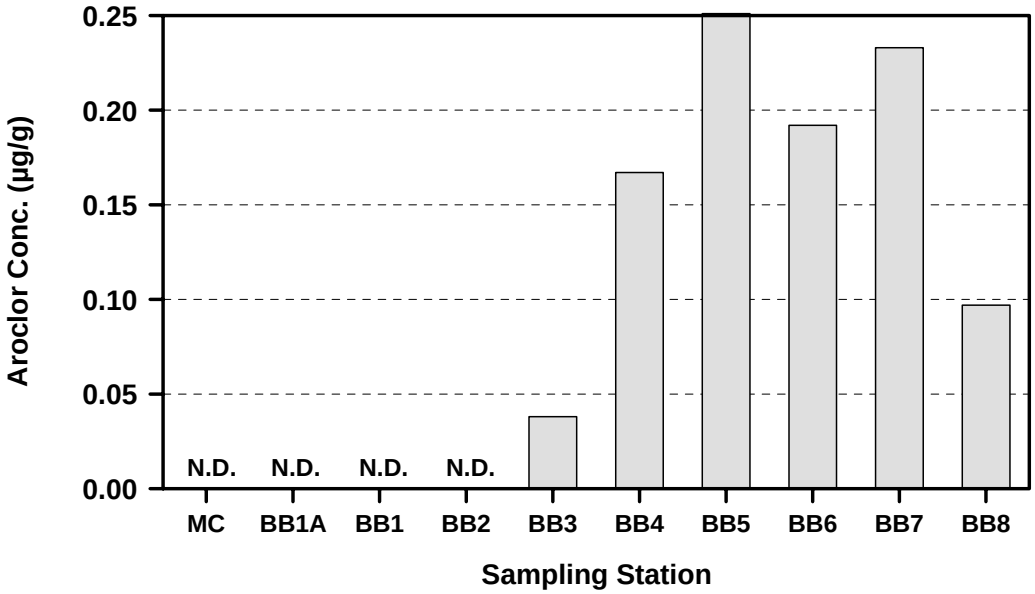

**Figure 3. PCB concentrations in green sunfish from Big Bayou Creek, collected May 24-25, 2006.**

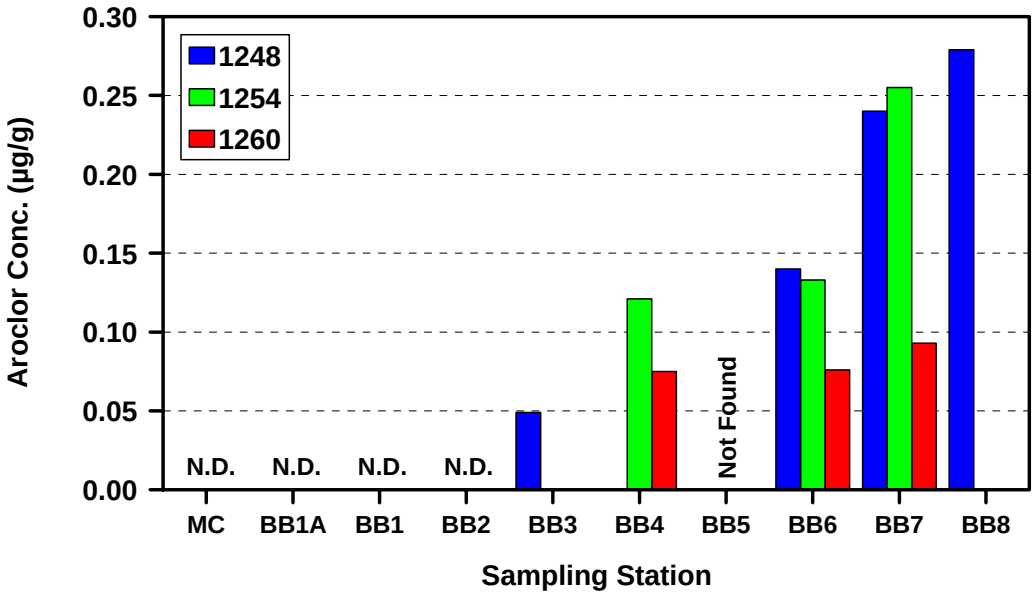


**Figure 4. Mean total PCB concentrations in green sunfish from Big Bayou Creek, collected May 24-25, 2006.**

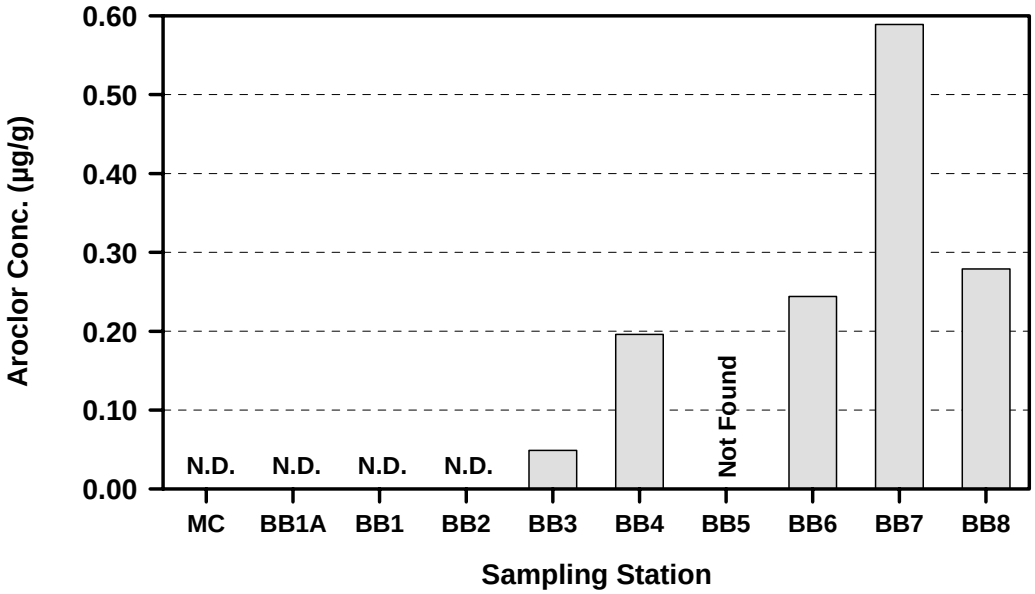

**Figure 5. PCB concentrations in yellow bullhead from Big Bayou Creek, collected May 24-25, 2006.**

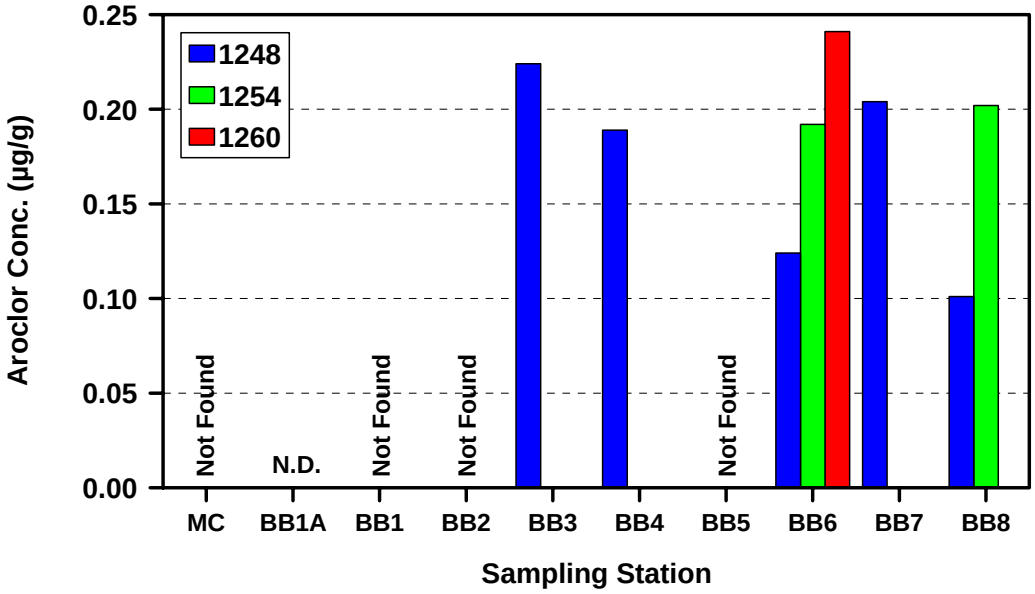


**Figure 6. Mean total PCB concentrations in yellow bullhead from Big Bayou Creek, collected May 24-25, 2006.**

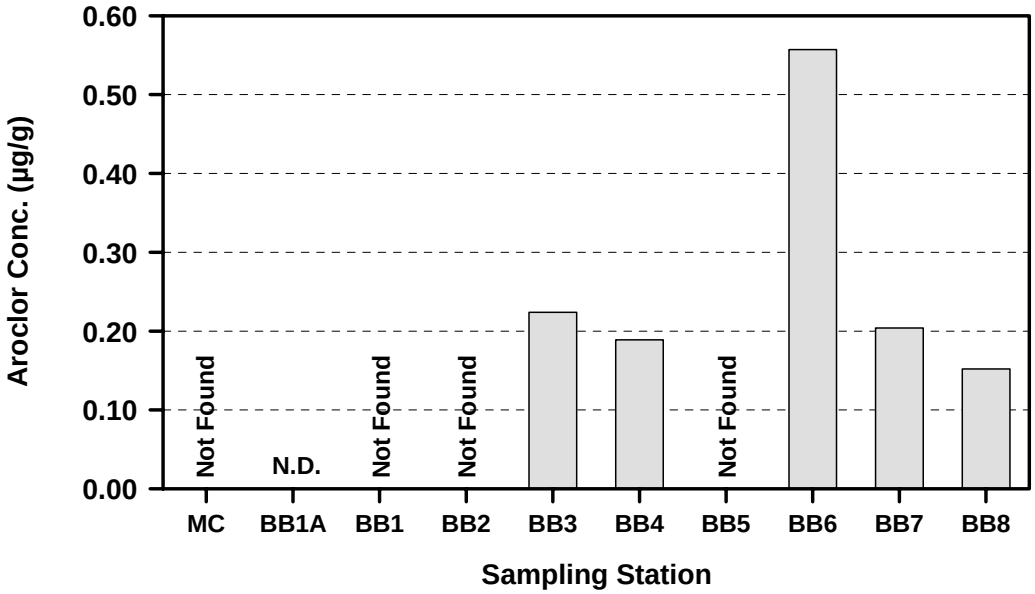

**Figure 7. Mean PCB concentrations in longear sunfish from Little Bayou Creek, collected May 24-25, 2006.**

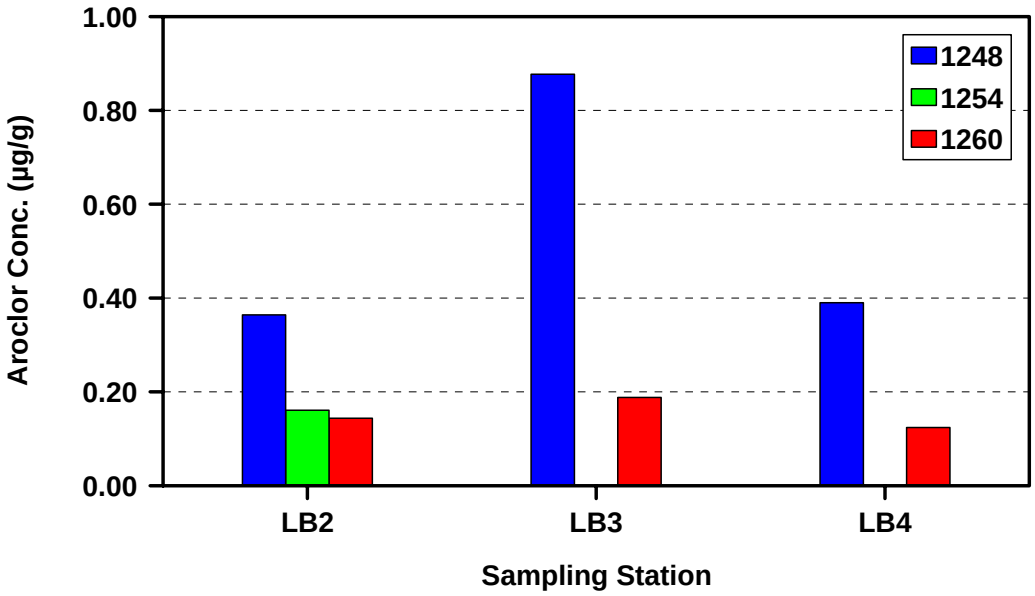


**Figure 8. Mean total PCB concentrations in longear sunfish from Little Bayou Creek, collected May 24-25, 2006.**

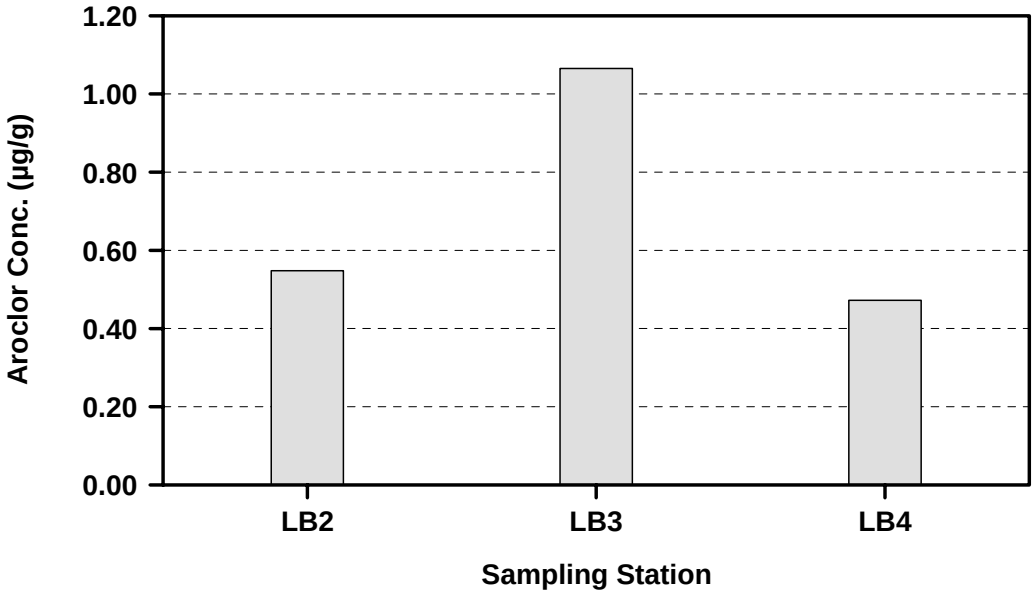

**Figure 9. PCB concentrations in green sunfish from Little Bayou Creek, collected May 24-25, 2006.**

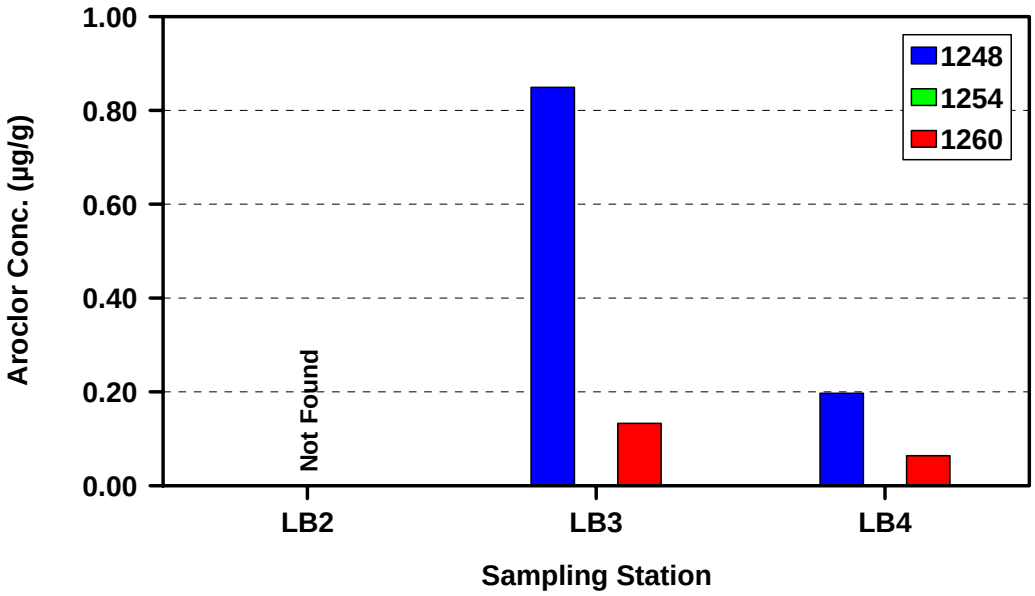


**Figure 10. Mean total PCB concentrations in green sunfish from Little Bayou Creek, collected May 24-25, 2006.**