



**Columbia Environmental Research Center
U.S. Geological Survey, Biological Resources Division
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**Final Report
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**A Reconnaissance Investigation of Polychlorinated Biphenyl
Congeners in Aquatic Sediments Collected near Anniston,
Alabama**

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I. Introduction and Project Background

Polychlorinated biphenyls (PCBs) are a complex mixture of similar manmade chemicals with from 1 to 10 chlorines attached to a biphenyl structure (Figure 1). They are produced by direct chlorination of biphenyl with chlorine gas. By adjusting the reaction conditions, manufacturers were able to produce different mixtures with different average degrees of chlorination (1). Monsanto, the manufacturer of PCBs in the United States produced these chemicals at two facilities trademarked under the name Aroclor. Mixtures of other chlorinated polyaromatic compounds such as terphenyls were also produced (2,3). Each Aroclor was given a number as part of its name which indicated the weight percent of chlorine in the mixture (i.e. Aroclor 1254 is approximately 54% by weight chlorine). There are 209 possible structural combinations of chlorinated biphenyl; the 209 different combinations are referred to as “congeners”. Each congener has a structure-based name and a shorthand name developed by Ballschmitter (1), which is a number from 1 to 209 (See Appendix A) based on the IUPAC naming conventions.

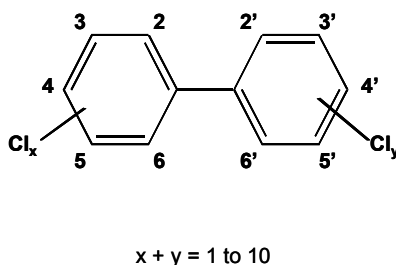


Figure 1. Basic structure of polychlorinated biphenyls. There are 209 different structures possible (The congeners analyzed are listed in Appendix A).

Analytical chemistry methods exist that allows the composition of PCB complex mixtures to be deciphered, i.e. the concentration of each congener in the PCB mixture can be measured. This approach is termed “PCB congener-specific analysis”.

Conducting investigations of PCB environmental contamination on a congener-specific basis allows the relative concentrations of PCBs (often referred to as “patterns” or “fingerprints”) to be evaluated. Different Aroclors and mixtures of Aroclors have different fingerprints; this is an important consideration in designing environmental forensic investigations because the fingerprints of PCBs can be used to better understand the source, fate and effects of PCB contamination. Contamination can also be expressed as a total concentration of PCBs by summing the congener concentrations and arriving at what is referred to as “total-PCB” concentration.

Polychlorinated biphenyls were manufactured from the mid 1930s to the early 1970s at a facility in Anniston Alabama. During that period company records indicate that PCBs were released into ditches outside of the facility that lead to Snow Creek (2,3). Investigations conducted since the 1980s have found that fish, sediments and soils in the Anniston area and downstream are contaminated with PCBs (2). The environmental fate of PCBs released from the Anniston facility is under investigation to evaluate the extent of potential injury to natural resources. The US Geological Survey, in collaboration with the US Fish and Wildlife Service and Geological Survey of Alabama, undertook this reconnaissance investigation to provide a preliminary assessment of the distribution, concentrations, and fingerprint (patterns) of PCBs (on a congener specific basis) in sediments collected from aquatic environments upstream and downstream of the former PCB manufacturing facility. This information will be used to design a comprehensive assessment of the extent and severity of injuries to natural resources of the region.

II. Site Selection and Sample Collection

Thirteen sites (Figure 2, Appendix B) were selected for this reconnaissance investigation of PCB sediment contamination, including sites downstream of the Solutia facility beginning with Eleventh Street ditch, followed by downstream sites in Snow Creek and Choccolocco Creek. Areas outside of the surface water drainage path from the Solutia facility, including sites on Coldwater Creek and Choccolocco Creek were also selected for sampling.

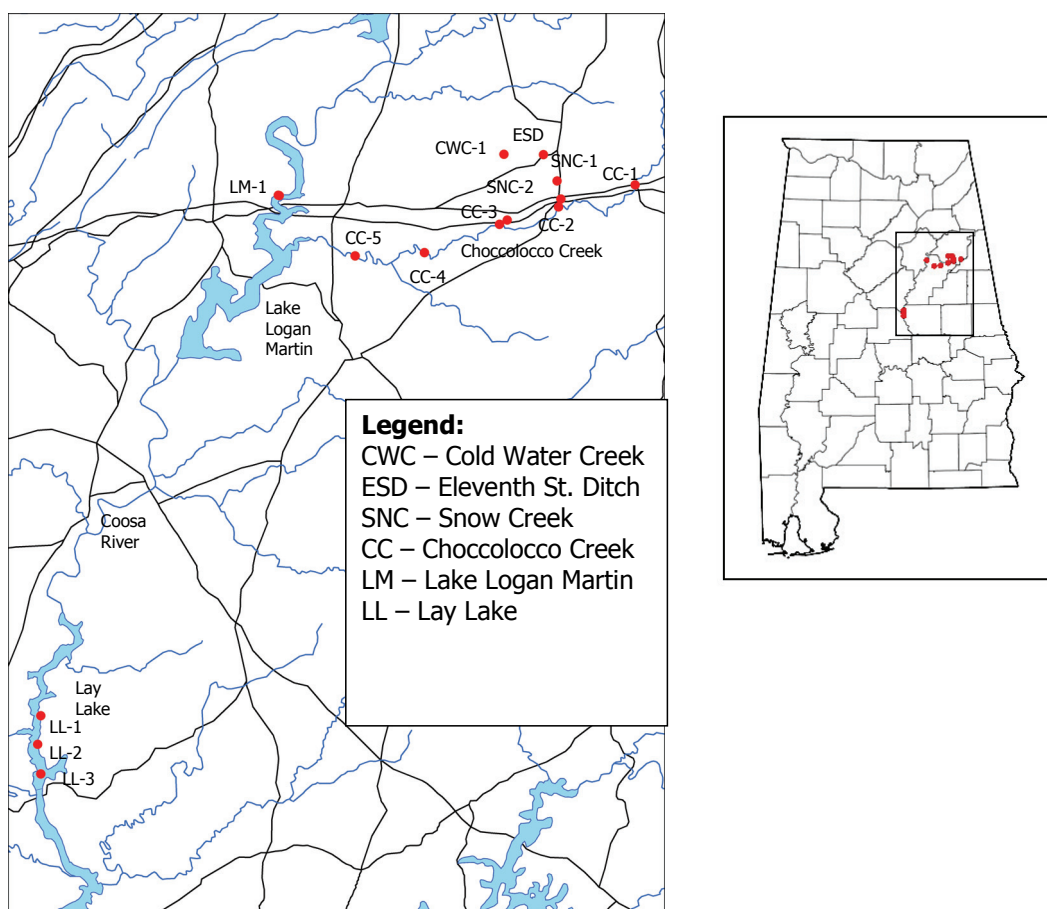


Figure 2. Map of sediment sampling sites near Anniston, AL

Personnel from the U.S. Fish and Wildlife Service (FWS), the U.S. Geological Survey (USGS), and the Geological Survey of Alabama (GSA) collected sediments on the dates 15-17 September 2003 for this investigation. Depending on availability at each site, depositional areas near the surface of the water, midstream bed sediments and

cores from the bank were sampled. USGS Standard Operating Procedures (SOPs) were used to collect the sediment samples (4). In order to obtain a spatially integrative sample of the surficial sediments (the top 2-3 cm) at a site, 5 to 7 sub-samples were spoon sampled at each site and combined (4). The GSA identified bank depositional areas from which segments of sediments 5-10 cm deep were collected using a coring device fitted with clean, disposable sleeves. Bed sediments were sampled from mid-stream and in the reservoirs using a Petite ponar. After each zone was sampled, the sediments were homogenized on site in the stainless steel bowl by stirring thoroughly for several minutes, and then transferred into a pre-cleaned, glass jar fitted with an aluminum foil lid liner. Sediments collected were < 2 mm particle size and did not require sieving. All sampling equipment was cleaned prior to sampling and cleaned after each use by washing with soap and water, followed by rinses of distilled water, acetone, hexane, and then allowed to dry.

Sediments were kept at 4°C in coolers and handled under chain of custody. The FWS Daphne Field Office shipped samples overnight to USGS Columbia Environmental Research Center (CERC) on September 18, 2003.

III. Summary of Analytical Methods

1. Sample Preparation

Sediment samples were analyzed for PCBs using congener-specific methods described by USGS-CERC SOPs (Figure 3), with total PCBs quantified by a summation of congeners. Two sediments were analyzed in triplicate to determine method reproducibility. The following quality control (QC) samples were incorporated into the various analyses:

1-Procedural blank: to measure laboratory background and to establish method detection limits.

2-Sediment matrix blank: to measure laboratory background.

3-Sediment matrix spike (PCB spiked): to demonstrate recovery through the analytical method

4-Positive Control Sediment: CERC laboratory reference material, Saginaw River sediment.

Portions of sediment were used for sediment particle sizing, and determination of percent organic carbon and percent moisture. Particle size analysis was performed by the Bouyoucos method (5). The organic carbon was determined by difference: total carbon by combustion and inorganic carbon by evolved carbon dioxide (6). Percent moisture was determined using an oven to dry the sediment (7).

The PCB analytical procedure began by homogenizing sediment samples by stirring with a clean, solvent-rinsed, stainless steel spoon and weighing out 10-gram portions. The sediment portions were dehydrated by addition of anhydrous sodium sulfate, and surrogate recovery compounds were added and allowed to equilibrate overnight. A mixture of Aroclors 1242, 1248, 1254, and 1260 (in a 1:1:1:1 ratio) was added to control blank sediment to create the sediment matrix spikes. The following surrogate recovery compounds were added to all samples including samples used for QC:

PCB 029 (2,4,5-trichlorobiphenyl)

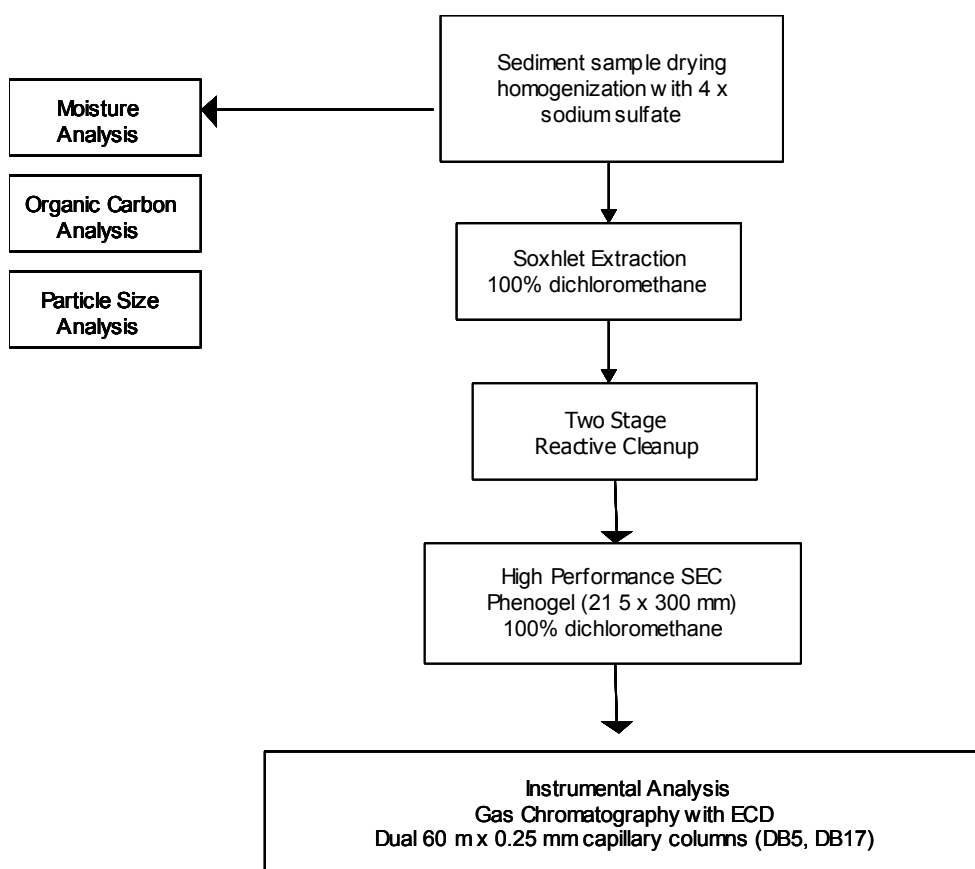
PCB 155 (2,2',4,4',6,6'-hexachlorobiphenyl)

PCB 204 (2,2',3,4,4',5,6,6'-octachlorobiphenyl)

These PCBs are used as surrogates because they are rarely found or undetectable in Aroclors and they are chromatographically resolvable. The three surrogates are used to correct for analytical recoveries of the PCBs: PCB 029, a trichlorobiphenyl, is representative of more volatile early eluting PCBs ($Cl_1 - Cl_3$); PCB 155, a hexachlorobiphenyl, is representative of mid-range eluting congeners ($Cl_4 - Cl_6$); and PCB 204, an octachlorobiphenyl, is less volatile and representative of later eluting PCBs ($Cl_7 - Cl_{10}$). Evaluation of the sediment matrix spikes and positive controls also gives recovery information for PCB congeners.

The sediments were Soxhlet extracted overnight with dichloromethane (8,9). Co-extracted biogenic compounds were removed from the extracts by a two stage reactive cleanup followed by high performance size exclusion chromatography (HPSEC) (10). The resulting fractions were prepared for gas chromatography with electron capture detection (GC/ECD). The sample extracts were adjusted to a final volume of 2 mL. Two instrumental internal standards were added: PCB congeners 030 and 207 (40 ng/mL each).

Figure 3. Analytical Scheme for Congener-specific Analysis of PCBs in Sediment Samples Obtained Upstream and Downstream of Anniston Facility



2. Summary of Gas Chromatographic Method for PCB congeners

Individual PCB congeners were measured by dual-column GC/ECD using Hewlett-Packard 5890 Series II GCs with cool on-column capillary injection systems and Hewlett-Packard model 7673 autosamplers (11). For all analyses, a 3-m section of 0.53 mm i.d. uncoated and deactivated capillary retention gap (Agilent, Palo Alto, CA) was attached to each analytical column by a Press-Tight® (Restek Corp., Bellefonte, PA) union. The dual analytical columns were 60-m x 0.25-mm x 0.25µm DB-5 (5% phenyl-, 95% methylsilicone, Agilent, Palo Alto, CA) and DB-17 (0.25µm 50% phenyl-, 50% methylsilicone, Agilent, Palo Alto, CA) phase columns. The H₂-carrier gas was regulated at 25 psi. The temperature program for the PCB analysis was as follows: initial temperature 60°C, immediately ramped to 150°C at 15°C/min, then ramped to 250°C at 1°C/min, and finally ramped to 320°C at 10°C/min, and held for 1 min. Electron capture detector temperature was 330°C. The capillary GC/ECD data were collected, archived in digital form, and processed using a PerkinElmer chromatography data system, which included the model 970 interface and version 6.1 of TotalChrom Workstation chromatography software, on a Pentium III microcomputer (11,12).

PCB congeners were identified on one or both GC capillary columns based upon known retention times for each congener in the calibration standards. The best resolved peak is picked from either column, with some congeners being analyzed on both columns for confirmatory analysis. A mix of several Aroclors is used to produce the PCB congener calibration standards. These standards have been quantified based on pure primary PCB standards (Accustandard, New Haven, CT) and are used as secondary standards (13). Up to nine levels of calibration for each individual congener are used to quantify up to 140 congeners and combined congener peaks in the samples by an internal standard method. In terms of total-PCB concentrations, the calibration curve covers a range from 50 to 8000 ng/mL. The total-PCB concentration was obtained by summation of congener concentrations.

The method detection limits (MDLs) for individual PCB congeners and for total PCBs were based on procedural blank (PB) results following the method outlined by Keith *et al.* (14,15). Briefly, a mean (\bar{x}_{PB}) and standard deviation (SD) are determined using PB results. These are combined with previous PB samples for a better statistical sample ($n > 10$) (16). This produces a long-term MDL (ng) calculated using the following formula:

$$MDL = \bar{x}_{PB} + 3(SD_{PB})$$

The MDL is then expressed in units of concentration, e.g. mass of analyte per mass of sample. To calculate the long-term MDL the average mass of the samples is used to calculate the \bar{x}_{PB} ; this method produces a conservative MDL value. Data in Table 2 are filtered using the MDL for each congener. If a concentration is below its respective MDL it will be censored with a “< MDL” (where MDL is a value).

The method quantitation limits (MQLs) for congeners is calculated in the same manner as above using the following formula:

$$MQL = \bar{x}_{PB} + 10(SD_{PB})$$

Data that fall between the MDL and MQL are not censored in Table 1. However, data above the MQL presented in Table 2 have a greater degree of confidence—i.e. when the analyte signal is 10 or more times greater than the standard deviation of the measurement there is a 99% probability that the true concentration of the analyte is within $\pm 30\%$ of the calculated concentration (14,15).

IV. Results and Discussion

1. Sediment Results

PCBs were present at measurable levels in samples from all locations. The PCB congener concentrations and total PCBs are presented in Table 1 as ng/g dry weight (dry wt) of sediment. PCB surrogate recoveries used to correct the concentration data are presented in Table 2. The sites outside of the surface water drainage path from the Anniston facility, (i.e. Choccolocco Creek Site 1 (CC-1), and Cold Water Creek (CWC-1)) had concentrations of total PCBs of 21 ng/g and 64 ng/g, respectively. Although these total PCB concentrations were low, they were higher than our MDL, however the CC-1 sample was below the total PCB MQL (29 ng/g) and thus cannot be used for pattern evaluations. In contrast, at the Eleventh St. Ditch (ESD) site, downstream of the Anniston facility, concentrations of total PCBs were 200,000 ng/g (dry wt). This sample was so high in PCBs that quantification by external standard was necessary. PCB concentrations found along Snow Creek and Choccolocco Creek, downstream of Anniston were up to 200 times higher than PCB concentrations of the upstream sites (Table 1).

The sediment particle size and percent organic carbon results are presented in Table 3. For sediments from the sites upstream of Lay Lake, sand ranged from 53-94% and organic carbon ranged from 0.34-2.9%. The ESD sediment was 73% sand, 9% clay and 18% silt, with 2.24% organic carbon. Lay Lake was 24% sand, 33% clay, and 43% silt with percent organic carbon of 2.9% the highest percent organic carbon found in these samples.

Within sites, the bank cores, mid-stream sediments, and surficial sediments showed minimal differences in PCB levels. A chromatographic comparison of the three areas sediment samples from a site demonstrated that congener patterns were similar (Figure 4).

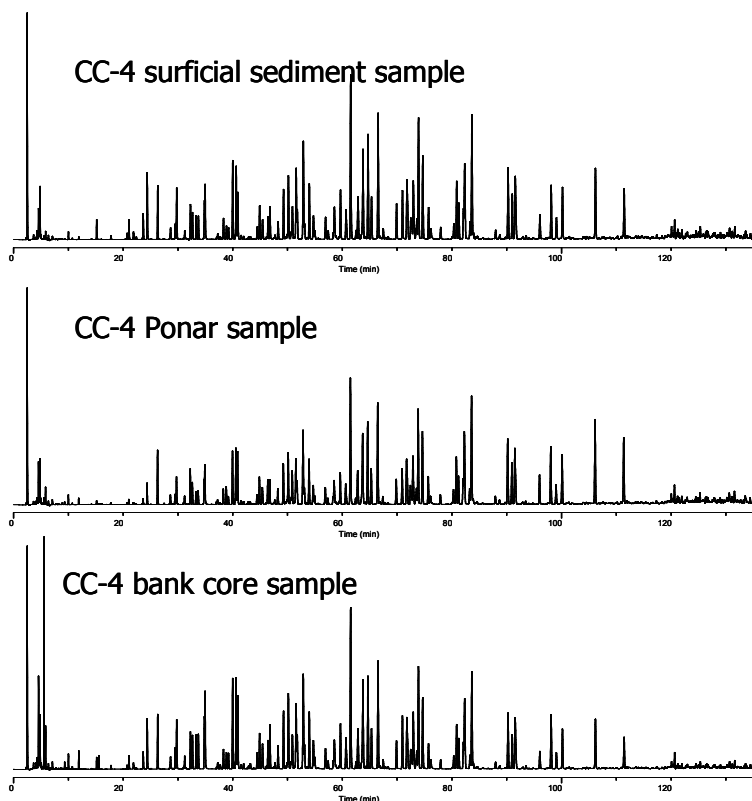


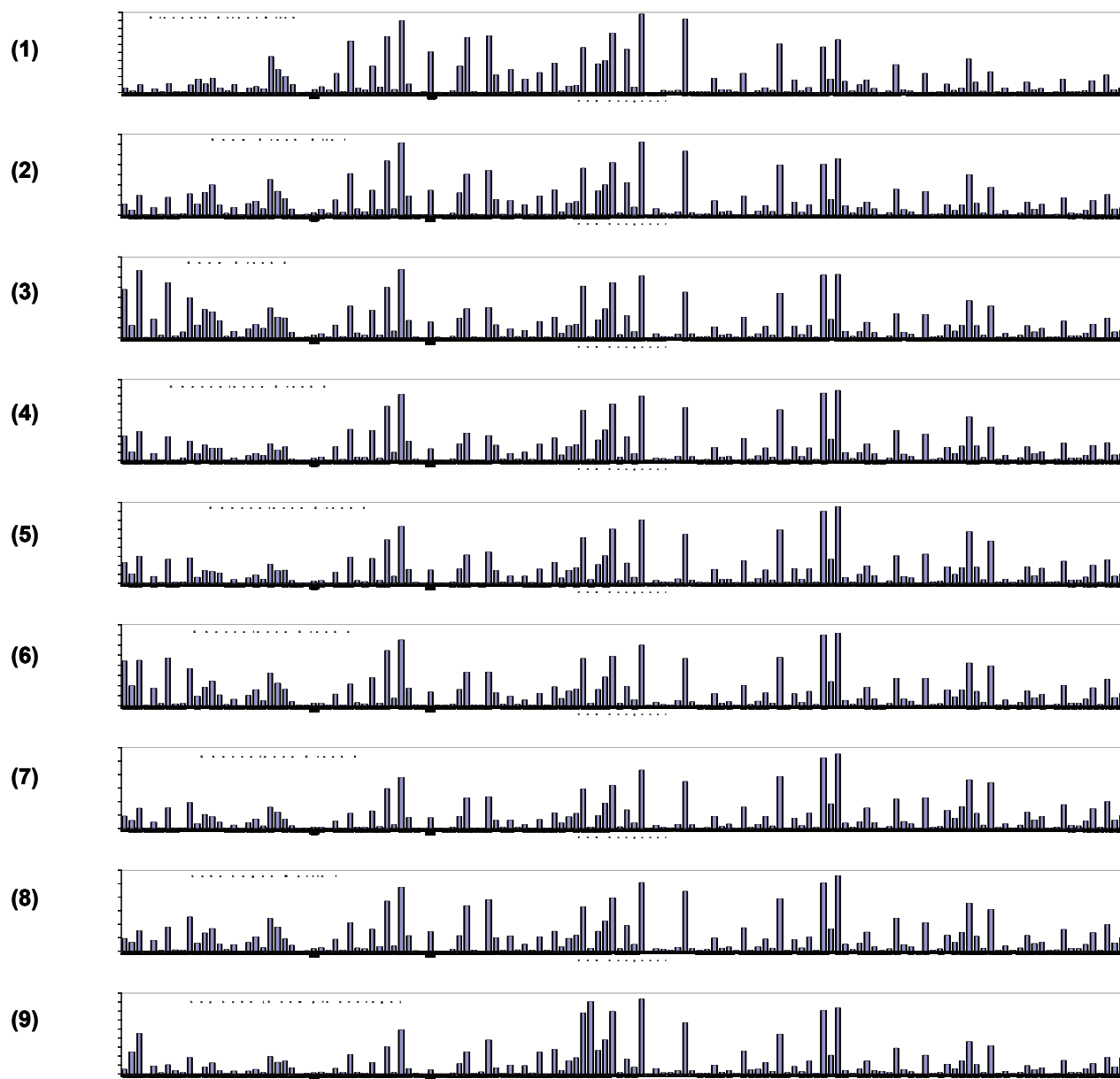
Figure 4. Choccolocco Creek Site 4 sediment sample chromatograms (all at the same scale 500 mV)

The QC results were within established guidelines. Procedure blanks were 7.1, 16 and 6.8 ng/g and matrix blanks, consisting of USGS-CERC control pond sediments, contained expected levels of 21, 19, and 14 ng/g. Recoveries of the PCB congeners in matrix spikes were within the acceptable QC (50-125%) (Table 1), and total PCB recoveries were 93, 90, and 89%, respectively. Our in-house positive control sediment (Saginaw River sediment) values were within $\pm 2.6\%$ of the historic average of 3,900 ng/g total PCBs. Recoveries in the ESD sample had a high bias due to the presence of detectable levels of surrogates. As a result, the average of the recoveries of the QC samples (PB, MB, PC, MS) were used to recovery correct the congener data for the ESD sediment sample.

Histograms (Figure 5) of the 140 PCB congener concentrations are plotted for the ESD sediment and all of the downstream sediments in order to compare PCB congener patterns in these sediment samples. These bar plots show the congeners in numerical

order (001 – 209), and while the scales are very different (10,000 ng/g for ESD versus 10 ng/g for Lay Lake) for these plots, the patterns of the congeners are strikingly similar from site to site for most of the congeners.

Figure 5. PCB Congener Histogram Comparison of All Sites. Concentrations (ng/g dw) scales are not the same. Sites are as follows: (1)ESD, (2) SNC-1, (3) SNC-2, (4) CC-2, (5) CC-3, (6) CC-4, (7) CC-5, (8) LM-1, (9) LL (1-3).



Chromatograms from the GC/ECD analysis showed that a late-eluting (past the last eluting PCB congeners) halogenated mixture of compounds were present in the ESD sample and several of the other downstream sediments. To determine the identity of these compounds, these sediment extracts were analyzed by gas chromatography coupled with mass spectrometry (GC/MS). Based on the elution time, complexity of the mixture, and mass spectra, it was determined that the compounds were chlorinated terphenyls and their identities were confirmed by comparison to an Aroclor 5442 standard, which contains chlorinated terphenyls along with PCBs. The sediment polychlorinated terphenyls were of a higher degree of chlorination than the 5442 standard, however, di-chloro- through perchloro-terphenyls were identified and found to be present at low to moderate concentrations when compared to total-PCBs in the ESD sediment. A comparison of chromatograms from sites moving downstream from the Anniston source shows the presence of these chlorinated terphenyls (although they were not quantified); chromatograms from the upstream sites (CWC and CC-1) above the inputs into Choccolocco Creek did not show the presence of these compounds. This pattern continues downstream, but is not detectable by the last downstream site at Lay Lake. Chromatograms of several of the sediment samples from upstream to downstream (Figure 6) show numerous late eluting peaks, which are the chlorinated terphenyls.

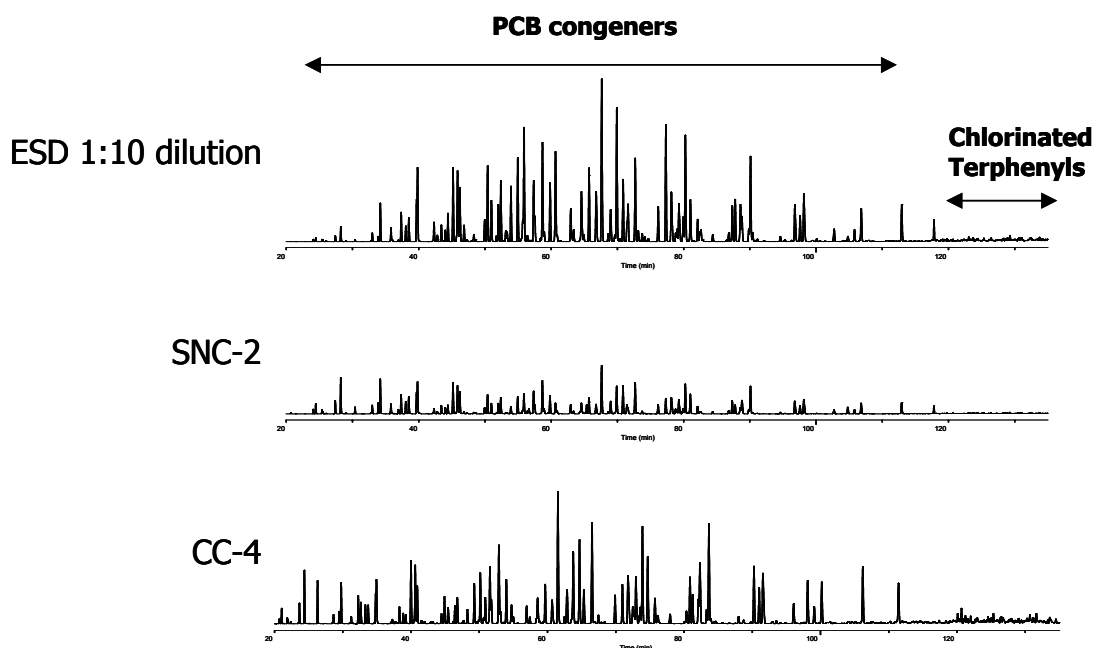


Figure 6. Chromatograms of sediments from several sites showing the chlorinated terphenyl pattern (from 60 meter DB-17 phase capillary column).

2. Source Identification by Principal Component Analysis (PCA)

Congener specific analysis may be used to link a source with its discharge by use of multivariate statistical techniques such as principal components analysis (PCA) (17-20).

Although the scope of this investigation and the number of samples were limited, PCA was conducted in order to evaluate similarities and differences of the PCB sediment patterns: (1) from technical Aroclors and (2) from each other (Figures 7 and 8). The PCB congener concentration data was normalized and then input in the SIMCA-P (version 7, Umetrics, NJ) multivariate software program. The results indicate that the PCB patterns in the sediments are similar to a mixture of Aroclors 1260, 1254, 1248, and 1242. The sediments fall within the center of the area defined by the four individual Aroclors (1260, 1254, 1248, 1242) and within the 95% confidence ellipse of the model (17,18) when the first two principal components are plotted (the score plot). This

indicates that combinations of technical Aroclors are the likely source for the PCB contamination in these sediments.

In comparison, a sediment positive control (from Saginaw River, MI) had a different PCB pattern and falls near technical mixtures Aroclors 1248 and 1242 on the score plot (Figure 7). Although concentrations downstream of Anniston varied, the sediments fell within the model, indicating similar quality (patterns) of PCBs (congeners). The Lay Lake samples are still within the model, even though their concentrations are much lower—typically 150 ng/g. The dam on Lay Lake was built in 1914 and was until 1964 the only dam on the stretch of the Coosa River that is downstream of the Anniston PCB source. Due to this fact, deeper cores (older sediments) in Lay Lake may contain higher levels of PCBs. The Logan Martin Lake and Lay Lake sediments fall within the cluster of the Anniston downstream sediments.

In order to test the sample similarities and differences within the sediments sampled individual Aroclors were removed from the analysis. When the individual Aroclors are removed the PCA produces a model showing that the upstream samples separate themselves from the downstream samples (Figure 8). The Aroclors are very distinct mixtures of PCBs because of their very different congener compositions and when included with environmental samples, especially samples that have multiple PCB sources, Aroclors generally define the extremes of the principal component sample space (17,18). When the Aroclors are removed and PCA repeated, the extremes of the new PC sample space are defined by the samples in the set. Differences in the sample set become clearer; in this case the more contaminated sediment sites show some separation from the less contaminated sediment sites along both principal component axes (Figure 8). All of the reservoir samples and all of the downstream samples stay within the 95% confidence ellipse of the PCA model.

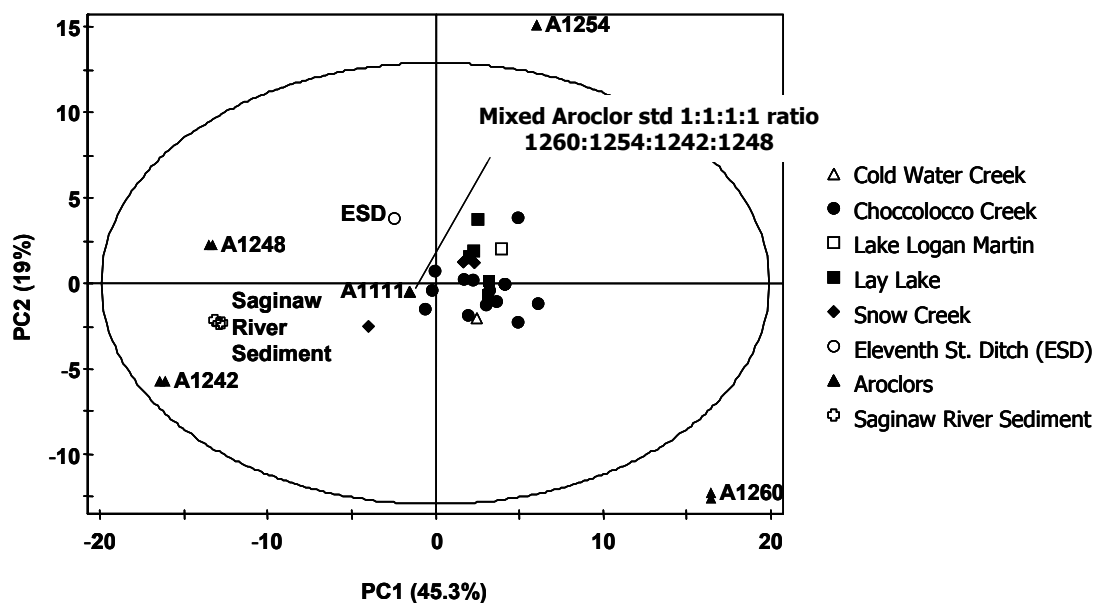


Figure 7. Principal Components Plot Score Plot PC1 versus PC2—Sediment Samples and Aroclors

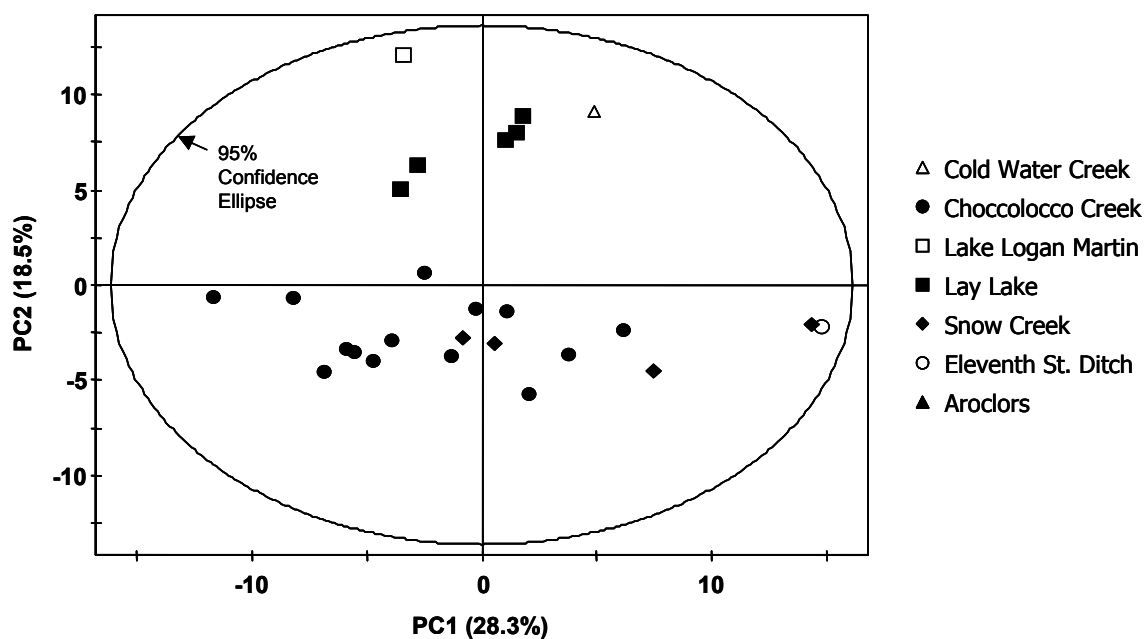


Figure 8. Principal Components Plot—Sediment Samples only

V. Conclusion

Sediment samples, collected during September of 2003, contained elevated concentrations of PCBs in sites downstream from the Anniston facility. At these downstream locations, the congener-specific chemical analysis and an evaluation of the patterns by histogram and multivariate statistical analysis indicated that the PCBs closely resemble a combination of technical Aroclor mixtures including Aroclors 1260, 1254, 1242, and 1248. Additionally, chlorinated terphenyls were found in sediments from the Eleventh Street Ditch site and downstream sites. Although sample numbers were limited, the upstream PCB concentrations were much lower and the patterns were different than in downstream sediments. These data suggest that PCBs from the Anniston PCB manufacturing site have moved downstream at least as far as Lay Lake. The limited number of samples taken for this reconnaissance do not address a complete spatial distribution of these PCBs in downstream areas, nor do they address the mass of PCBs likely present in deeper sediments of the reservoirs. For these reasons, a comprehensive assessment of sediments in the streams, floodplains and reservoirs of the region would provide valuable information in characterizing the distribution of these PCBs and the potential threat to natural resources.

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Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample ID	Field ID		Description	Sample Type	Grams- for Analysis (g)	% Moisture
Set 1						
30127^	A03SE010	ng/g	Site ESD-1 11th St. Ditch near McDaniel St.-spoon sample	Sediment	10.06	32
30128	A03SS020	ng/g	Site SNC-1 Snow Creek near Nobel ST & P St.-spoon sample	Sediment	10.05	21
30129-1	A03SS030 REP1	ng/g	Site SNC-2 Snow Creek near Hwy 78-spoon sample	Sediment	10.09	32
30129-2	A03SS030 REP2	ng/g	Site SNC-2 Snow Creek near Hwy 78-spoon sample	Sediment	10.12	32
30129-3	A03SS030 REP3	ng/g	Site SNC-2 Snow Creek near Hwy 78-spoon sample	Sediment	10.10	32
30130	A03SW030	ng/g	Site CWC-1 Cold Water Creek near Willingham Rd.-spoon sample	Sediment	10.03	23
30131	A03SC110	ng/g	Site CC-1 Choccolocco Creek near SR 431-spoon sample	Sediment	10.03	42
30132	A03SC210	ng/g	Site CC-2 Choccolocco Creek near Friendship Rd.-spoon sample	Sediment	10.18	28
30133	A03SC220	ng/g	Site CC-2 Choccolocco Creek near Friendship Rd.-ponar sample	Sediment	10.02	22
Set 2						
30134	A03SC230	ng/g	Site CC-2 Choccolocco Creek near Friendship Rd.-bank core sample	Sediment	10.01	19
30135	A03SC310	ng/g	Site CC-3 Choccolocco Creek near Tull WWTP.-spoon sample	Sediment	10.03	44
30136-1	A03SC320 REP1	ng/g	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	Sediment	10.03	23
30136-2	A03SC320 REP2	ng/g	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	Sediment	10.09	23
30136-3	A03SC320 REP3	ng/g	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	Sediment	10.09	23
30137	A03SC330	ng/g	Site CC-3 Choccolocco Creek near Tull WWTP.-bank core sample	Sediment	10.08	15
30138	A03SC410	ng/g	Site CC-4 Choccolocco Creek near CR 399.-spoon sample	Sediment	10.07	43
30139	A03SC420	ng/g	Site CC-4 Choccolocco Creek near CR 399.-ponar sample	Sediment	10.03	44
30140	A03SC430	ng/g	Site CC-4 Choccolocco Creek near CR 399.-bank core sample	Sediment	10.03	9.8
Set 3						
30141	A03SC510	ng/g	Site CC-5 Choccolocco Creek near Jackson Shoals.-spoon sample	Sediment	10.09	29
30142	A03SC520	ng/g	Site CC-5 Choccolocco Creek near Jackson Shoals.-ponar sample	Sediment	10.04	24
30143	A03SC530	ng/g	Site CC-5 Choccolocco Creek near Jackson Shoals.-bank core sample	Sediment	10.03	23
30144	A03SLM10	ng/g	Site LM-1 Lake Logan Martin upstream Hwy 78	Sediment	10.02	48
30145-1	A03SLL10 REP1	ng/g	Site LL-1 Lay Lake site 1	Sediment	10.02	70
30145-2	A03SLL10 REP2	ng/g	Site LL-1 Lay Lake site 1	Sediment	10.03	70
30145-3	A03SLL10 REP3	ng/g	Site LL-1 Lay Lake site 1	Sediment	10.03	70
30146	A03SLL20	ng/g	Site LL-1 Lay Lake site 2	Sediment	10.04	66
30147	A03SLL30	ng/g	Site LL-1 Lay Lake site 3	Sediment	10.03	63

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample ID	Field ID		Description	Sample Type	Grams- for Analysis (g)	% Moisture
QC Samples						
PB092403	Procedure Blank	ng/g	Set 1, procedure blank	Na ₂ SO ₄	10.08	---
PB092503	Procedure Blank	ng/g	Set 2, procedure blank	Na ₂ SO ₄	10.05	---
PB092603	Procedure Blank	ng/g	Set 3, procedure blank	Na ₂ SO ₄	10.04	---
MB092403	Matrix Blank	ng/g	Control Pond Sediment 356C 033192	Sediment	10.05	2.99
MB092503	Matrix Blank	ng/g	Control Pond Sediment 356C 033192	Sediment	10.03	2.99
MB092603	Matrix Blank	ng/g	Control Pond Sediment 356C 033192	Sediment	10.02	2.99
PC092403	Positive Control	ng/g	Saginaw Bay Sediment 235C 051795	Sediment	10.03	1.32
PC092503	Positive Control	ng/g	Saginaw Bay Sediment 235C 051795	Sediment	10.01	1.32
PC092603	Positive Control	ng/g	Saginaw Bay Sediment 235C 051795	Sediment	10.02	1.32
MS-PCB092403*	Matrix Spike PCBs	ng	Matrix Spike, PCBs in Control Pond Sediment 356C 033192	Sediment	10.02	2.99
Percent Recovery			%			
MS-PCB092503*	Matrix Spike PCBs	ng	Matrix Spike, PCBs in Control Pond Sediment 356C 033192	Sediment	10.05	2.99
Percent Recovery			%			
MS-PCB092603*	Matrix Spike PCBs	ng	Matrix Spike, PCBs in Control Pond Sediment 356C 033192	Sediment	10.02	2.99
Percent Recovery			%			
Method Detection Limit		ng/g				
Method Quantitation Limit		ng/g				
Note values are rounded to 2 significant figures.						
Values are corrected for analytical recovery.						
PCBs determined by dual column high resolution capillary GC with ECD.						
n/a (not applicable)-recovery not calculated.						
^External standard calculated concentration.						
*MS values are background corrected for MB.						
--- no recovery calculated--<DL or interference						

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		001	003	004	005	006	007	008	009	010	015	016	017	018	019	020
ID	ID																
Set 1																	
30127^	A03SE010	ng/g	530	210	980	34	450	82	1,100	110	110	950	1,700	1,100	1,800	580	220
30128	A03SS020	ng/g	11	5.1	20	0.15	7.7	1.0	18	1.0	1.6	21	11	23	30	10	1.9
30129-1	A03SS030 REP1	ng/g	400	120	550	7.4	200	28	560	22	42	380	120	250	270	120	16
30129-2	A03SS030 REP2	ng/g	130	26	170	0.55	21	2.9	74	2.7	18	76	26	58	40	54	2.4
30129-3	A03SS030 REP3	ng/g	140	23	200	0.42	23	3.2	100	2.8	21	80	30	75	42	66	2.6
30130	AO3SW030	ng/g	< 0.52	1.9	< 1.1	< 0.04	0.09	< 0.09	0.25	0.02	< 0.01	0.28	< 0.02	0.23	0.40	0.83	< 0.01
30131	AO3SC110	ng/g	< 0.52	1.2	< 1.1	< 0.04	< 0.02	< 0.09	< 0.14	< 0.02	< 0.01	< 0.06	< 0.02	0.10	0.13	< 0.10	< 0.01
30132	AO3SC210	ng/g	46	18	64	0.34	14	2.5	52	1.8	6.7	42	15	43	24	32	1.2
30133	AO3SC220	ng/g	88	30	95	0.25	26	3.1	82	2.8	7.1	58	22	47	47	29	1.3
Set 2																	
30134	A03SC230	ng/g	46	15	56	0.27	13	1.6	43	1.7	6.2	43	12	25	20	30	0.98
30135	A03SC310	ng/g	30	17	37	0.41	12	1.7	41	1.8	2.8	48	12	21	22	17	1.4
30136-1	A03SC320 REP1	ng/g	15	8.5	26	0.18	8.5	1.1	26	1.0	1.6	27	7.9	17	17	12	0.79
30136-2	A03SC320 REP2	ng/g	23	11	30	0.24	7.6	1.1	27	1.1	1.8	28	6.7	14	13	11	0.69
30136-3	A03SC320 REP3	ng/g	13	8.3	22	0.14	6.4	0.82	22	0.82	1.4	25	6.8	14	12	11	0.73
30137	AO3SC330	ng/g	50	55	95	1.7	46	8.9	150	8.2	8.4	180	32	56	61	36	7.5
30138	AO3SC410	ng/g	150	48	140	0.72	56	6.7	140	6.3	7.1	74	20	41	71	23	2.4
30139	AO3SC420	ng/g	27	25	37	0.33	12	1.8	43	1.7	2.4	48	13	27	23	18	1.5
30140	AO3SC430	ng/g	88	45	93	0.83	36	5.2	100	4.1	4.4	99	23	42	51	23	3.7
Set 3																	
30141	A03SC510	ng/g	9.5	6.3	17	0.11	5.1	1.1	18	0.62	0.73	24	4.5	15	11	7.7	0.68
30142	A03SC520	ng/g	4.8	3.2	7.6	0.09	4.0	0.34	9.0	0.52	0.38	13	2.9	6.7	8.4	2.7	0.59
30143	A03SC530	ng/g	13	8.2	20	0.12	5.1	0.69	19	0.97	0.72	21	3.2	9.4	7.5	4.0	0.44
30144	A03SLM10	ng/g	< 0.52	1.5	1.6	< 0.04	0.21	< 0.09	< 0.14	0.05	< 0.01	0.07	< 0.02	0.05	< 0.12	0.10	0.01
30145-1	A03SLL10 REP1	ng/g	0.61	1.9	3.5	< 0.04	0.41	< 0.09	1.3	0.19	0.07	2.2	< 0.02	1.1	1.3	0.61	0.07
30145-2	A03SLL10 REP2	ng/g	< 0.52	2.0	3.5	< 0.04	0.46	< 0.09	1.2	0.15	0.06	1.8	< 0.02	1.1	1.2	0.40	0.05
30145-3	A03SLL10 REP3	ng/g	< 0.52	3.2	3.5	< 0.04	0.95	0.14	1.1	0.35	0.14	1.8	< 0.02	0.94	1.4	0.29	0.06
30146	A03SLL20	ng/g	< 0.52	5.5	3.9	< 0.04	0.87	0.10	1.2	0.32	0.20	1.9	< 0.02	0.90	1.2	0.32	0.08
30147	A03SLL30	ng/g	0.54	2.5	4.5	< 0.04	0.90	0.13	1.0	0.39	0.18	1.8	< 0.02	0.78	1.2	0.38	0.08

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		001	003	004	005	006	007	008	009	010	015	016	017	018	019	020
ID	ID																
QC Samples																	
PB092403	Procedure Blank	ng/g	0.18	0.10	0.33	0.00	0.09	0.00	0.03	0.03	0.00	0.10	0.00	0.01	0.10	0.01	0.00
PB092503	Procedure Blank	ng/g	0.02	0.07	1.4	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.04	0.10	0.01	0.00
PB092603	Procedure Blank	ng/g	0.19	0.20	1.4	0.00	0.06	0.00	0.02	0.06	0.00	0.14	0.00	0.00	0.02	0.00	0.00
MB092403	Matrix Blank	ng/g	0.02	0.28	1.4	0.01	0.06	0.03	0.17	0.10	0.00	0.10	0.00	0.12	0.37	0.00	0.00
MB092503	Matrix Blank	ng/g	0.02	0.14	1.8	0.00	1.5	0.01	0.21	0.06	0.02	0.37	0.00	0.09	0.43	0.05	0.01
MB092603	Matrix Blank	ng/g	0.17	0.43	2.0	0.00	1.3	0.03	0.20	0.13	0.00	0.03	0.00	0.14	0.37	0.07	0.01
PC092403	Positive Control	ng/g	5.6	5.0	68	0.26	110	1.8	110	4.0	1.9	150	64	130	250	27	13
PC092503	Positive Control	ng/g	5.6	4.1	70	0.27	110	1.8	110	4.0	1.8	140	65	120	250	27	12
PC092603	Positive Control	ng/g	6.3	4.4	71	0.29	110	1.9	110	4.2	1.6	150	64	130	250	27	13
MS-PCB092403*	Matrix Spike PCBs	ng	22	8.0	88	3.8	44	6.2	190	12	3.5	55	160	140	380	30	13
Percent Recovery			85	129	90	86	92	90	86	86	88	92	94	88	90	91	93
MS-PCB092503*	Matrix Spike PCBs	ng	21	5.2	81	3.8	31	6.3	190	13	3.5	52	150	140	370	30	13
Percent Recovery			81	68	79	86	62	89	86	93	85	73	88	88	86	88	87
MS-PCB092603*	Matrix Spike PCBs	ng	15	4.2	81	3.7	28	5.9	180	11	3.3	52	150	130	360	27	12
Percent Recovery			58	51	82	80	58	83	82	79	83	85	88	81	86	82	86
Method Detection Limit		ng/g	0.52	0.7	1.1	0.04	0.02	0.09	0.14	0.02	0.01	0.06	0.02	0.03	0.12	0.10	0.01
Method Quantitation Limit		ng/g	1.5	2.1	2.8	0.13	0.06	0.25	0.42	0.05	0.02	0.17	0.06	0.08	0.32	0.26	0.03
Note values are rounded to 2 significant figures.																	
Values are corrected for analytical recovery.																	
PCBs determined by dual column high resolution capillary GC with ECD.																	
n/a (not applicable)-recovery not calculated.																	
^External standard calculated concentration.																	
*MS values are background corrected for MB.																	
--- no recovery calculated---<DL or interference																	

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		022	024	025	026	027	028	031	032	033	034	035	037,059	040	041	042
ID	ID																
Set 1																	
30127^	A03SE010	ng/g	1,000	27	570	750	480	4,500	2,900	2,000	1,000	29	55	380	710	310	2,300
30128	A03SS020	ng/g	7.7	0.10	11	14	6.6	35	24	17	6.2	0.42	1.0	2.5	5.5	1.9	14
30129-1	A03SS030 REP1	ng/g	62	4.9	88	120	73	240	190	160	52	3.5	3.6	17	24	6.2	71
30129-2	A03SS030 REP2	ng/g	14	< 0.01	18	27	25	79	47	51	12	1.2	5.5	9	15	3.2	48
30129-3	A03SS030 REP3	ng/g	15	< 0.01	19	29	31	86	48	58	11	1.5	2.4	12	15	3.5	49
30130	AO3SW030	ng/g	0.13	< 0.01	0.09	0.09	0.04	0.45	0.40	0.99	0.15	< 0.09	0.08	0.04	0.11	0.07	0.24
30131	AO3SC110	ng/g	< 0.03	< 0.01	< 0.02	0.03	< 0.004	< 0.21	0.12	< 0.88	< 0.04	< 0.09	< 0.01	< 0.02	0.02	0.03	< 0.05
30132	AO3SC210	ng/g	6.7	< 0.01	14	18	14	47	27	30	5.0	1.1	0.88	5.1	7.1	1.5	23
30133	AO3SC220	ng/g	7.4	0.15	12	18	13	43	28	45	3.7	0.82	0.60	5.8	12	1.6	50
Set 2																	
30134	A03SC230	ng/g	6.3	< 0.01	10	16	12	34	22	26	3.7	0.70	0.85	5.9	7.1	1.3	29
30135	A03SC310	ng/g	8.1	0.01	9.5	15	7.2	40	25	22	6.7	0.58	0.83	4.3	4.6	1.3	18
30136-1	A03SC320 REP1	ng/g	5.1	0.04	6.8	10	4.9	24	16	16	3.0	0.35	0.38	2.3	3.0	0.84	12
30136-2	A03SC320 REP2	ng/g	4.1	< 0.01	6.0	9.1	4.8	21	14	15	3.1	0.37	0.38	2.5	3.0	0.75	12
30136-3	A03SC320 REP3	ng/g	4.3	< 0.01	5.7	9.3	4.4	22	14	14	3.1	0.35	0.43	2.8	2.9	0.82	12
30137	AO3SC330	ng/g	42	0.17	39	69	19	170	120	54	27	1.8	3.0	12	10	3.6	35
30138	AO3SC410	ng/g	13	0.13	20	32	8.8	63	46	33	8.5	0.81	0.84	4.3	4.6	1.2	23
30139	AO3SC420	ng/g	8.3	< 0.01	12	18	8.1	46	27	26	6.5	0.79	0.66	4.2	4.0	1.0	19
30140	AO3SC430	ng/g	16	0.10	29	45	12	85	60	39	8.9	0.92	1.1	7.1	5.1	1.5	28
Set 3																	
30141	A03SC510	ng/g	3.4	0.06	6.1	10.7	2.9	22	16	9.2	2.3	0.16	0.29	1.5	1.0	0.27	6.9
30142	A03SC520	ng/g	2.4	0.04	3.2	5.3	1.3	12	9.0	4.6	2.2	0.11	0.21	0.90	1.3	0.40	4.5
30143	A03SC530	ng/g	2.2	0.03	3.9	5.6	1.9	14	11	7.1	1.7	0.15	0.22	0.75	0.63	0.22	5.2
30144	A03SLM10	ng/g	0.03	< 0.01	< 0.02	0.03	0.01	< 0.21	0.19	< 0.88	0.14	< 0.09	< 0.01	< 0.02	0.03	0.02	0.12
30145-1	A03SLL10 REP1	ng/g	0.34	< 0.01	0.30	0.70	0.22	2.3	1.5	1.5	0.74	< 0.09	0.06	0.11	0.24	0.05	0.75
30145-2	A03SLL10 REP2	ng/g	0.30	< 0.01	0.25	0.54	0.19	2.1	1.3	1.5	0.66	< 0.09	0.05	0.12	0.20	0.08	0.67
30145-3	A03SLL10 REP3	ng/g	0.35	< 0.01	0.32	0.50	0.16	2.0	1.4	1.6	0.76	< 0.09	0.07	0.13	0.20	0.08	0.66
30146	A03SLL20	ng/g	0.32	< 0.01	0.33	0.65	0.17	2.2	1.7	1.6	0.91	< 0.09	0.03	0.12	0.20	0.08	0.84
30147	A03SLL30	ng/g	0.34	< 0.01	0.34	0.51	0.16	1.9	1.3	1.5	0.72	< 0.09	0.06	0.14	0.21	0.08	0.64

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		022	024	025	026	027	028	031	032	033	034	035	037,059	040	041	042
ID	ID																
QC Samples																	
PB092403	Procedure Blank	ng/g	0.02	0.00	0.00	0.00	0.03	0.04	0.05	0.35	0.06	0.01	0.00	0.00	0.01	0.00	0.02
PB092503	Procedure Blank	ng/g	0.02	0.00	0.02	0.02	0.00	0.05	0.06	0.22	0.03	0.00	0.00	0.00	0.03	0.00	0.08
PB092603	Procedure Blank	ng/g	0.00	0.00	0.02	0.00	0.01	0.00	0.01	0.73	0.00	0.00	0.00	0.00	0.00	0.02	0.00
MB092403	Matrix Blank	ng/g	0.04	0.00	0.00	0.02	0.02	0.12	0.12	0.63	0.09	0.00	0.00	0.00	0.01	0.02	0.02
MB092503	Matrix Blank	ng/g	0.05	0.01	0.01	0.02	0.02	0.19	0.14	0.31	0.10	0.00	0.03	0.02	0.05	0.00	0.12
MB092603	Matrix Blank	ng/g	0.03	0.00	0.00	0.03	0.02	0.13	0.13	0.53	0.07	0.00	0.01	0.00	0.01	0.02	0.02
PC092403	Positive Control	ng/g	31	0.49	90	200	21	120	290	100	19	4.1	1.9	7.7	32	5.1	54
PC092503	Positive Control	ng/g	32	0.57	82	190	20	120	290	100	19	4.0	2.0	9.6	29	4.8	53
PC092603	Positive Control	ng/g	30	1.1	92	200	21	120	280	100	19	3.3	2.0	9.7	32	4.6	51
MS-PCB092403*	Matrix Spike PCBs	ng	100	3.3	18	45	14	240	270	78	190	0.82	1.8	20	53	36	73
Percent Recovery			91	89	95	90	93	89	93	86	90	86	95	83	91	92	90
MS-PCB092503*	Matrix Spike PCBs	ng	110	3.3	17	48	14	250	270	85	190	0.80	1.7	21	53	37	75
Percent Recovery			92	83	85	91	88	89	90	91	90	101	81	88	90	90	88
MS-PCB092603*	Matrix Spike PCBs	ng	93	3.1	17	43	13	230	260	74	180	0.89	1.6	24	50	35	72
Percent Recovery			85	84	85	86	81	85	87	84	86	89	76	133	88	90	89
Method Detection Limit		ng/g	0.03	0.01	0.02	0.03	0.004	0.21	0.10	0.88	0.04	0.09	0.01	0.02	0.02	0.01	0.05
Method Quantitation Limit		ng/g	0.08	0.02	0.06	0.08	0.01	0.6	0.28	2.5	0.11	0.28	0.04	0.07	0.05	0.02	0.13
Note values are rounded to 2 significant figures.																	
Values are corrected for analytical recovery.																	
PCBs determined by dual column high resolution capillary GC with ECD.																	
n/a (not applicable)-recovery not calculated.																	
^External standard calculated concentration.																	
*MS values are background corrected for MB.																	
--- no recovery calculated---<DL or interference																	

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample ID	Field ID		043	044	045	046	047	048	049	051	052	053	054	055	056,060	057	058	063
Set 1																		
30127^	A03SE010	ng/g	150	6,200	560	330	3,200	700	6,800	390	8,700	1,000	33	100	4,900	65	44	240
30128	A03SS020	ng/g	2.7	39	6.1	3.4	23	5.3	51	5.9	68	18	0.58	0.56	23	0.65	0.43	2.0
30129-1	A03SS030 REP1	ng/g	7	160	30	15	140	18	270	41	360	110	5.4	1.6	74	3.2	1.5	8
30129-2	A03SS030 REP2	ng/g	5.4	120	17	8.1	110	10	190	23	270	57	4.4	1.3	66	2.8	1.3	6.5
30129-3	A03SS030 REP3	ng/g	5.3	130	18	8.9	120	11	200	25	280	60	5.1	1.5	70	2.5	1.5	7.3
30130	AO3SW030	ng/g	0.11	0.88	0.10	0.06	0.31	< 1.2	0.94	0.06	1.4	0.25	< 0.02	< 0.003	0.74	< 0.03	< 0.01	0.05
30131	AO3SC110	ng/g	1.1	0.19	< 0.03	0.11	< 0.15	< 1.2	0.39	< 0.01	0.32	0.04	< 0.02	0.02	< 0.21	< 0.03	< 0.01	< 0.02
30132	AO3SC210	ng/g	3.2	58	7.8	4.3	50	4.4	81	15	111	31	2.8	0.50	23	1.4	0.64	3.6
30133	AO3SC220	ng/g	2.9	111	10	15	101	5.7	208	28	237	80	3.7	0.62	30	2.1	1.4	5.4
Set 2																		
30134	A03SC230	ng/g	1.6	63	7.3	4.1	73	5.2	110	19	140	33	3.9	0.72	33	0.89	0.82	3.9
30135	A03SC310	ng/g	2.0	44	5.0	2.8	44	5.0	74	13	210	23	2.0	0.52	26	0.91	0.53	2.8
30136-1	A03SC320 REP1	ng/g	0.79	28	3.3	1.9	26	3.9	46	7.9	61	16	1.1	0.30	14	0.45	0.25	1.5
30136-2	A03SC320 REP2	ng/g	0.85	29	3.3	1.9	28	3.4	48	7.9	63	16	1.3	0.23	15	0.49	0.35	1.7
30136-3	A03SC320 REP3	ng/g	0.93	27	3.1	1.9	29	3.5	48	8.6	60	15	1.3	0.23	15	0.51	0.32	1.7
30137	AO3SC330	ng/g	2.9	80	11	4.8	76	12	150	19	210	37	2.8	1.7	60	2.0	0.99	6.9
30138	AO3SC410	ng/g	1.6	46	6.2	3.5	45	5.6	110	13	140	40	2.2	0.57	27	0.90	0.57	3.3
30139	AO3SC420	ng/g	1.6	36	4.8	3.7	50	4.8	88	17	100	27	2.5	0.38	22	0.87	0.58	3.1
30140	AO3SC430	ng/g	1.1	46	6.5	4.1	72	5.8	130	15	150	36	2.0	0.96	33	1.5	0.79	4.6
Set 3																		
30141	A03SC510	ng/g	0.66	16	1.5	0.93	14	1.3	40	4.1	58	12.0	0.67	0.26	10	0.39	0.15	1.4
30142	A03SC520	ng/g	0.45	11	1.2	0.89	8.2	1.7	19	1.9	24	5.7	0.20	0.16	7.3	0.15	0.09	0.74
30143	A03SC530	ng/g	0.54	8.0	1.0	0.47	17	< 1.2	30	2.6	32	7.4	0.32	0.13	7.0	0.13	0.15	1.4
30144	A03SLM10	ng/g	0.05	0.30	0.03	0.02	0.19	< 1.2	0.49	0.02	0.67	0.08	< 0.02	< 0.003	< 0.21	< 0.03	< 0.01	0.05
30145-1	A03SLL10 REP1	ng/g	0.18	1.9	0.22	0.15	1.7	< 1.2	3.6	0.28	4.9	0.86	0.04	0.02	0.90	< 0.03	0.02	0.15
30145-2	A03SLL10 REP2	ng/g	0.15	1.8	0.21	0.12	1.5	< 1.2	3.3	0.23	4.5	0.80	0.04	< 0.003	0.85	< 0.03	< 0.01	0.17
30145-3	A03SLL10 REP3	ng/g	0.18	2.1	0.21	0.13	1.3	< 1.2	3.2	0.16	4.9	0.70	0.04	0.01	0.77	< 0.03	< 0.01	0.13
30146	A03SLL20	ng/g	0.14	2.0	0.22	0.12	1.4	< 1.2	3.4	0.15	5.0	0.64	0.08	< 0.003	0.78	< 0.03	< 0.01	0.15
30147	A03SLL30	ng/g	0.18	2.2	0.20	0.11	1.3	< 1.2	3.0	0.16	4.9	0.62	0.05	0.02	0.45	< 0.03	< 0.01	0.13

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		043	044	045	046	047	048	049	051	052	053	054	055	056,060	057	058	063
ID	ID																	
QC Samples																		
PB092403	Procedure Blank	ng/g	0.00	0.09	0.01	0.00	0.02	0.00	0.07	0.00	0.15	0.01	0.00	0.00	0.11	0.00	0.00	0.00
PB092503	Procedure Blank	ng/g	0.00	0.11	0.01	0.00	0.03	0.00	0.10	0.03	0.20	0.00	0.00	0.00	0.26	0.00	0.00	0.00
PB092603	Procedure Blank	ng/g	0.00	0.04	0.00	0.00	0.00	0.00	0.04	0.02	0.08	0.00	0.00	0.00	0.13	0.00	0.00	0.00
MB092403	Matrix Blank	ng/g	0.03	0.13	0.04	0.00	0.01	0.04	0.10	0.00	0.23	0.03	0.00	0.00	0.00	0.00	0.00	0.00
MB092503	Matrix Blank	ng/g	0.04	0.22	0.04	0.01	0.04	0.00	0.19	0.06	0.38	0.00	0.00	0.00	0.18	0.00	0.00	0.01
MB092603	Matrix Blank	ng/g	0.00	0.12	0.03	0.01	0.02	0.00	0.09	0.03	0.23	0.04	0.00	0.00	0.37	0.00	0.00	0.00
PC092403	Positive Control	ng/g	8.3	150	32	25	80	16	230	16	290	60	0.41	1.2	46	3.9	1.0	8.0
PC092503	Positive Control	ng/g	7.9	140	33	25	73	17	220	16	260	56	0.49	1.0	44	3.3	1.0	7.2
PC092603	Positive Control	ng/g	6.2	140	32	25	80	16	240	16	290	60	0.35	1.2	43	3.0	0.84	8.0
MS-PCB092403*	Matrix Spike PCBs	ng	15	310	67	28	52	80	240	13	440	64	0.99	3.2	160	1.4	0.23	8.7
Percent Recovery			115	91	91	90	90	133	92	93	92	89	---	91	89	88	42	94
MS-PCB092503*	Matrix Spike PCBs	ng	14	310	68	29	55	88	240	13	420	65	0.34	3.2	180	1.5	0.42	8.8
Percent Recovery			93	91	88	91	92	92	89	87	88	89	85	89	95	100	140	91
MS-PCB092603*	Matrix Spike PCBs	ng	13	290	63	27	49	76	230	12	420	62	1.4	3.1	150	1.1	0.36	8.3
Percent Recovery			100	85	86	87	89	89	88	86	89	85	---	84	83	85	82	89
Method Detection Limit		ng/g	0.02	0.11	0.03	0.01	0.15	1.2	0.19	0.01	0.23	0.03	0.02	0.003	0.21	0.03	0.01	0.02
Method Quantitation Limit		ng/g	0.06	0.28	0.07	0.02	0.42	3.5	0.52	0.02	0.61	0.10	0.07	0.01	0.58	0.09	0.04	0.06
Note values are rounded to 2 significant figures.																		
Values are corrected for analytical recovery.																		
PCBs determined by dual column high resolution capillary GC with ECD.																		
n/a (not applicable)-recovery not calculated.																		
^External standard calculated concentration.																		
*MS values are background corrected for MB.																		
--- no recovery calculated--<DL or interference																		

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		064	066	067	069	070	071	072	074	075	082	083	084	086	087	090	091
ID	ID																	
Set 1																		
30127^	A03SE010	ng/g	3,200	6,700	160	20	6,800	2,200	78	2,800	110	1,700	98	2,400	72	3,600	190	790
30128	A03SS020	ng/g	21	38	1.4	0.23	42	15	1.0	14	1.4	10	1.1	18	1.0	24	3.4	11
30129-1	A03SS030 REP1	ng/g	110	140	5.1	2.7	150	74	6.5	48	9	32	4.5	81	2.7	93	20	58
30129-2	A03SS030 REP2	ng/g	77	120	2.7	2.6	120	47	5.7	33	5.0	33	4.0	66	3.6	92	19	50
30129-3	A03SS030 REP3	ng/g	80	120	3.0	2.6	130	50	6.0	36	5.9	34	4.2	69	3.2	97	19	52
30130	A03SW030	ng/g	0.42	0.82	0.03	0.08	1.1	0.26	0.01	0.32	0.02	0.26	0.02	0.81	< 0.003	0.61	0.22	0.26
30131	A03SC110	ng/g	0.06	< 0.26	< 0.02	< 0.03	0.26	< 0.06	< 0.01	< 0.19	< 0.01	0.09	0.01	0.18	< 0.003	0.26	< 0.02	0.09
30132	A03SC210	ng/g	32	48	1.5	1.0	50	27	2.7	14	2.0	14	1.9	30	1.2	43	13	26
30133	A03SC220	ng/g	52	90	2.6	0.69	73	53	4.2	22	6.1	17	3.0	48	2.4	49	13	39
Set 2																		
30134	A03SC230	ng/g	39	65	1.5	1.3	61	34	3.9	16	2.9	31	3.1	43	2.8	75	16	38
30135	A03SC310	ng/g	25	55	1.3	0.57	58	22	2.5	14	1.7	12	1.7	25	1.3	38	9.5	22
30136-1	A03SC320 REP1	ng/g	15	31	0.74	0.40	34	13	1.4	8.2	1.1	6.7	0.93	14	0.61	21	5.1	13
30136-2	A03SC320 REP2	ng/g	16	32	0.73	0.59	35	14	1.5	8.1	1.3	8.1	1.0	16	0.76	23	5.9	14
30136-3	A03SC320 REP3	ng/g	15	32	0.79	0.42	36	14	1.5	8.7	0.89	7.6	1.0	15	0.76	22	6.0	15
30137	A03SC330	ng/g	59	110	3.7	0.83	130	39	4.6	44	3.7	17	2.6	36	1.7	58	14	34
30138	A03SC410	ng/g	31	68	2.0	0.43	68	23	3.1	17	2.4	13	2.0	28	1.2	44	9.1	27
30139	A03SC420	ng/g	24	54	1.3	0.66	55	25	2.8	15	1.8	9.3	1.5	20	1.1	28	14	25
30140	A03SC430	ng/g	41	77	2.3	0.89	77	29	5.1	22	4.0	11	1.8	25	1.3	39	20	34
Set 3																		
30141	A03SC510	ng/g	12	27	0.71	0.18	30	7.3	1.2	7.6	1.4	3.8	0.72	9.2	0.38	17	4.1	10
30142	A03SC520	ng/g	5.8	17	0.49	0.11	19	5.1	0.40	5.5	0.51	2.6	0.35	5.3	0.30	7.4	1.7	4.8
30143	A03SC530	ng/g	9.6	24	0.38	0.51	22	6.4	1.5	5.8	1.0	2.8	0.46	5.8	0.33	11	6.8	11
30144	A03SLM10	ng/g	0.13	0.53	0.03	< 0.03	0.54	0.11	0.02	< 0.19	0.03	0.19	0.03	0.42	< 0.003	0.38	0.08	0.25
30145-1	A03SLL10 REP1	ng/g	1.1	2.9	0.09	0.05	2.9	0.84	0.12	0.91	0.12	0.59	0.10	1.4	< 0.003	1.4	0.48	1.2
30145-2	A03SLL10 REP2	ng/g	1.0	2.5	0.09	0.04	2.6	0.75	0.10	0.88	0.12	0.56	0.08	1.3	< 0.003	1.2	0.42	1.1
30145-3	A03SLL10 REP3	ng/g	1.1	2.4	0.08	0.18	3.3	0.71	0.08	1.1	0.11	0.76	0.11	1.9	< 0.003	2.1	0.42	1.3
30146	A03SLL20	ng/g	1.2	2.6	0.12	0.19	3.3	0.84	0.09	1.1	0.13	0.73	0.10	1.8	< 0.003	1.9	0.42	1.4
30147	A03SLL30	ng/g	1.2	2.5	0.07	0.24	3.8	0.72	0.08	1.0	0.10	0.92	0.13	2.4	< 0.003	2.7	0.41	1.5

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		064	066	067	069	070	071	072	074	075	082	083	084	086	087	090	091
ID	ID																	
QC Samples																		
PB092403	Procedure Blank	ng/g	0.04	0.06	0.02	0.08	0.07	0.02	0.00	0.03	0.00	0.04	0.00	0.07	0.00	0.12	0.00	0.03
PB092503	Procedure Blank	ng/g	0.16	0.07	0.03	0.20	0.20	0.03	0.00	0.21	0.01	0.05	0.00	0.14	0.03	0.15	0.01	0.06
PB092603	Procedure Blank	ng/g	0.01	0.02	0.00	0.14	0.07	0.02	0.00	0.01	0.00	0.03	0.00	0.08	0.00	0.10	0.00	0.02
MB092403	Matrix Blank	ng/g	0.05	0.08	0.02	0.07	0.21	0.01	0.00	0.06	0.00	0.05	0.01	0.19	0.00	0.19	0.02	0.04
MB092503	Matrix Blank	ng/g	0.14	0.14	0.03	0.10	0.33	0.05	0.04	0.18	0.01	0.09	0.02	0.25	0.00	0.31	0.01	0.12
MB092603	Matrix Blank	ng/g	0.04	0.08	0.02	0.04	0.15	0.03	0.00	0.04	0.00	0.04	0.01	0.13	0.00	0.15	0.02	0.05
PC092403	Positive Control	ng/g	58	66	4.0	0.62	91	84	4.3	38	4.1	11	2.3	40	1.1	20	5.3	26
PC092503	Positive Control	ng/g	56	63	3.7	0.61	88	83	4.8	37	4.2	11	2.3	40	1.0	20	5.8	26
PC092603	Positive Control	ng/g	56	64	3.7	0.76	87	84	4.5	37	5.1	10	2.2	39	1.1	19	5.6	26
MS-PCB092403*	Matrix Spike PCBs	ng	130	200	5.9	0.66	360	74	0.68	120	5.3	44	4.6	120	2.9	150	6.5	51
Percent Recovery			93	91	91	---	92	94	52	92	106	92	88	92	104	94	89	93
MS-PCB092503*	Matrix Spike PCBs	ng	130	200	5.7	0.04	370	73	1.3	120	4.0	47	4.8	120	3.3	150	7.3	52
Percent Recovery			87	91	85	---	93	90	93	92	100	92	87	92	97	94	91	91
MS-PCB092603*	Matrix Spike PCBs	ng	130	190	5.9	0.05	340	70	0.67	110	3.9	43	4.6	110	2.7	140	6.4	49
Percent Recovery			93	86	89	---	89	89	84	85	67	90	88	85	84	88	90	89
Method Detection Limit		ng/g	0.04	0.26	0.02	0.03	0.25	0.06	0.01	0.19	0.01	0.03	0.01	0.08	0.003	0.18	0.02	0.04
Method Quantitation Limit		ng/g	0.11	0.74	0.06	0.07	0.69	0.16	0.03	0.54	0.02	0.08	0.03	0.19	0.01	0.44	0.05	0.11
Note values are rounded to 2 significant figures.																		
Values are corrected for analytical recovery.																		
PCBs determined by dual column high resolution capillary GC with ECD.																		
n/a (not applicable)-recovery not calculated.																		
^External standard calculated concentration.																		
*MS values are background corrected for MB.																		
--- no recovery calculated---<DL or interference																		

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		092	095	096	097	099	101	102	105	109	110	112	113	114	115	117	118	119
ID	ID																		
Set 1																			
30127^	A03SE010	ng/g	890	5,400	65	3,500	3,800	7,200	140	5,300	700	9,500	44	40	290	170	270	8,900	150
30128	A03SS020	ng/g	13	44	1.1	23	29	49	2.2	31	7.6	68	0.38	6.2	2.0	1.4	3.3	60	2.4
30129-1	A03SS030 REP1	ng/g	64	230	6.3	81	130	230	16	91	26	270	1.7	16	5.9	4.2	14	200	21
30129-2	A03SS030 REP2	ng/g	57	230	5.8	77	120	250	13	98	27	270	2.0	23	6.2	5.0	15	200	16
30129-3	A03SS030 REP3	ng/g	61	230	6.2	80	140	250	14	100	28	280	2.0	16	6.7	5.2	17	210	16
30130	A03SW030	ng/g	0.33	1.3	0.69	0.68	0.71	1.4	0.06	0.73	0.17	1.9	< 0.04	0.97	< 0.03	0.03	0.05	1.7	0.03
30131	A03SC110	ng/g	< 0.09	0.53	0.42	0.15	0.23	0.53	< 0.01	< 0.47	0.04	0.72	< 0.04	0.10	< 0.03	< 0.01	0.04	0.56	< 0.01
30132	A03SC210	ng/g	29	91	2.9	36	53	108	5.9	39	11	120	0.76	4.6	2.8	1.8	8.2	82	7.2
30133	A03SC220	ng/g	48	154	4.4	50	81	154	11	42	15	163	1.0	4.3	3.5	2.2	11	111	12
Set 2																			
30134	A03SC230	ng/g	41	130	4.3	65	92	160	8.4	95	23	200	1.8	6.4	8.0	4.4	13	200	9.1
30135	A03SC310	ng/g	28	110	3.9	32	49	170	4.5	36	11	190	0.74	5.7	2.5	1.8	8.0	150	5.9
30136-1	A03SC320 REP1	ng/g	16	47	3.6	18	27	50	2.6	19	5.7	60	0.39	2.4	1.5	1.0	4.4	49	3.2
30136-2	A03SC320 REP2	ng/g	17	51	4.2	21	31	60	2.9	23	6.8	71	0.45	3.2	1.9	1.1	4.9	54	3.6
30136-3	A03SC320 REP3	ng/g	17	49	4.2	20	30	59	3.1	21	6.7	69	0.42	3.2	1.6	1.0	5.1	57	3.7
30137	A03SC330	ng/g	46	150	3.8	47	81	160	5.5	61	17	190	1.1	7.7	3.4	3.1	13	140	9.6
30138	A03SC410	ng/g	35	110	5.1	37	60	110	5.9	41	13	130	0.75	6.8	2.3	2.0	8.9	100	7.2
30139	A03SC420	ng/g	27	72	5.6	27	48	84	4.5	30	10	100	0.62	5.3	2.2	1.4	8.7	83	7.1
30140	A03SC430	ng/g	38	98	3.9	32	61	100	5.7	44	12	130	0.99	7.5	2.6	2.0	13	97	9.4
Set 3																			
30141	A03SC510	ng/g	16	45	0.85	13	23	46	1.7	17	4.9	59	0.32	3.7	1.0	0.84	3.5	42	3.6
30142	A03SC520	ng/g	5.9	16	1.1	7.4	11	20	0.92	9.5	2.5	25	0.16	0.89	0.73	0.43	1.4	22	1.1
30143	A03SC530	ng/g	12	27	1.6	8.8	23	31	1.4	15	5.1	46	0.34	2.7	1.0	0.53	4.8	40	4.3
30144	A03SLM10	ng/g	0.37	1.2	0.41	0.54	1.0	1.5	< 0.01	< 0.47	0.18	1.8	< 0.04	0.11	< 0.03	< 0.01	0.05	1.6	0.12
30145-1	A03SLL10 REP1	ng/g	1.6	4.4	0.80	1.8	3.2	4.9	0.15	1.4	0.66	6.2	< 0.04	0.58	0.09	0.08	0.34	4.9	0.43
30145-2	A03SLL10 REP2	ng/g	1.5	4.1	1.3	1.6	2.9	4.5	0.13	1.3	0.59	5.6	< 0.04	0.52	0.07	0.07	0.28	4.5	0.39
30145-3	A03SLL10 REP3	ng/g	1.7	6.0	1.5	2.3	3.5	6.1	0.17	1.4	0.71	7.1	< 0.04	0.50	0.11	0.12	0.30	5.0	0.38
30146	A03SLL20	ng/g	1.8	5.8	9.5	2.2	3.7	6.1	0.19	1.3	0.77	7.2	< 0.04	0.31	0.11	0.09	0.38	5.1	0.43
30147	A03SLL30	ng/g	1.8	6.8	8.1	2.6	3.8	6.9	0.18	1.7	0.73	8.3	< 0.04	0.62	0.14	0.15	0.36	5.7	0.37

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		092	095	096	097	099	101	102	105	109	110	112	113	114	115	117	118	119
ID	ID																		
QC Samples																			
PB092403	Procedure Blank	ng/g	0.08	0.20	0.02	0.05	0.09	0.30	0.00	0.03	0.02	0.23	0.00	0.00	0.00	0.00	0.00	0.13	0.00
PB092503	Procedure Blank	ng/g	0.10	0.32	5.0	0.14	0.25	0.39	0.00	0.08	0.03	0.43	0.07	0.01	0.01	0.00	0.01	0.36	0.00
PB092603	Procedure Blank	ng/g	0.07	0.20	0.01	0.09	0.08	0.21	0.00	0.06	0.00	0.25	0.00	0.01	0.00	0.00	0.01	0.16	0.00
MB092403	Matrix Blank	ng/g	0.15	0.42	0.02	0.15	0.17	0.47	0.00	0.10	0.05	0.49	0.00	0.08	0.00	0.00	0.01	0.39	0.01
MB092503	Matrix Blank	ng/g	0.10	0.60	0.05	0.22	0.29	0.66	0.00	0.20	0.05	0.84	0.13	0.14	0.00	0.00	0.01	0.74	0.00
MB092603	Matrix Blank	ng/g	0.09	0.36	0.05	0.10	0.16	0.37	0.00	0.12	0.02	0.39	0.00	0.13	0.02	0.00	0.00	0.32	0.01
PC092403	Positive Control	ng/g	21	76	3.2	25	32	45	7.8	20	7.0	88	1.4	3.1	2.2	2.1	7.9	49	3.9
PC092503	Positive Control	ng/g	22	76	4.7	25	31	44	7.6	19	7.3	84	1.6	3.5	2.1	1.6	8.6	49	3.7
PC092603	Positive Control	ng/g	21	76	17	24	31	44	7.6	19	7.3	86	1.4	3.4	2.3	2.1	8.4	48	3.8
MS-PCB092403*	Matrix Spike PCBs	ng	69	350	3.4	120	120	340	10	95	22	330	1.2	0.17	8.1	7.7	13	240	5.7
Percent Recovery			91	92	85	92	92	92	100	90	92	92	92	13	89	92	93	89	106
MS-PCB092503*	Matrix Spike PCBs	ng	72	340	18	120	120	330	8.5	97	24	330	0.13	1.7	9.5	7.8	13	260	4.6
Percent Recovery			91	89	---	92	92	92	90	92	96	92	9	106	97	91	87	93	88
MS-PCB092603*	Matrix Spike PCBs	ng	68	340	3.8	120	120	330	9.0	94	21	320	1.3	3.3	8.3	7.9	12	240	4.7
Percent Recovery			88	89	95	92	92	89	85	91	88	89	93	---	89	93	100	89	94
Method Detection Limit		ng/g	0.09	0.22	0.04	0.10	0.16	0.34	0.01	0.47	0.03	0.30	0.04	0.02	0.03	0.01	0.02	0.44	0.01
Method Quantitation Limit		ng/g	0.22	0.52	0.14	0.23	0.39	0.81	0.02	1.4	0.09	0.69	0.12	0.07	0.09	0.0	0.06	1.1	0.04
Note values are rounded to 2 significant figures.																			
Values are corrected for analytical recovery.																			
PCBs determined by dual column high resolution capillary GC with ECD.																			
n/a (not applicable)-recovery not calculated.																			
^External standard calculated concentration.																			
*MS values are background corrected for MB.																			
--- no recovery calculated--<DL or interference																			

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		122	123	128	129	130	131	132	133	134	136	137	138	139	141	144	146
ID	ID																	
Set 1																		
30127^	A03SE010	ng/g	120	130	1,700	340	310	78	2,300	49	260	570	290	6,000	81	1,500	250	610
30128	A03SS020	ng/g	1.1	1.5	14	3.4	3.9	0.79	18	0.90	3.8	9	3.5	47	1.0	12	2.8	10
30129-1	A03SS030 REP1	ng/g	3.3	5.7	44	11	16	3.2	90	6.2	18	52	11	190	3.5	47	14	56
30129-2	A03SS030 REP2	ng/g	3.6	5.9	50	13	16	3.3	90	6.3	18	48	12	200	3.6	54	14	55
30129-3	A03SS030 REP3	ng/g	3.6	7.1	51	13	16	3.3	90	5.1	18	49	13	200	3.6	55	14	56
30130	A03SW030	ng/g	0.02	0.02	0.43	0.07	0.12	0.02	0.72	0.03	0.23	0.23	0.11	1.70	0.02	0.33	0.06	0.34
30131	A03SC110	ng/g	< 0.02	0.01	0.12	< 0.05	0.04	< 0.004	0.40	0.05	0.03	0.12	< 0.06	< 0.70	0.03	< 0.16	< 0.03	< 0.17
30132	A03SC210	ng/g	1.4	2.2	23	5.5	7.5	1.6	43	3.7	8.4	24	5.9	95	1.8	25	7.1	26
30133	A03SC220	ng/g	1.6	2.3	26	6.6	8.9	2.2	53	2.7	12	35	7.2	113	2.9	32	11	32
Set 2																		
30134	A03SC230	ng/g	3.9	3.4	48	13	14	3.1	68	4.0	14	34	12	170	3.5	45	11	36
30135	A03SC310	ng/g	1.3	1.8	23	5.5	7.4	1.5	64	2.8	8.2	23	5.8	140	1.9	26	7.0	25
30136-1	A03SC320 REP1	ng/g	0.67	1.1	13	3.1	4.1	0.80	21	1.4	4.6	14	3.2	52	1.0	14	3.9	14
30136-2	A03SC320 REP2	ng/g	1.1	0.93	16	4.4	4.7	1.1	25	1.4	5.3	15	3.7	60	1.6	16	4.5	16
30136-3	A03SC320 REP3	ng/g	0.70	0.87	15	4.0	4.6	0.87	26	1.8	5.3	15	3.5	57	1.1	17	4.3	16
30137	A03SC330	ng/g	1.8	2.2	34	7.6	11	2.1	65	3.2	12	32	8.1	140	2.6	37	9.7	37
30138	A03SC410	ng/g	1.3	1.7	27	6.1	9.7	1.8	50	2.1	11	30	6.4	110	2.2	28	7.9	31
30139	A03SC420	ng/g	1.0	1.3	22	4.5	7.5	1.3	37	2.7	7.4	21	5.2	86	1.7	21	5.5	26
30140	A03SC430	ng/g	1.3	2.3	23	5.1	8.0	1.4	35	2.9	8.9	26	5.8	91	1.9	22	6.3	29
Set 3																		
30141	A03SC510	ng/g	0.46	0.74	12	2.3	4.5	0.64	22	1.1	4.7	13	2.7	54	0.86	11.6	3.3	15
30142	A03SC520	ng/g	0.29	0.60	4.9	1.1	1.6	0.28	8.7	0.48	1.6	4.5	1.2	20	0.41	4.3	1.2	5.3
30143	A03SC530	ng/g	0.40	1.1	10	1.7	3.8	0.44	17	1.5	3.4	9.4	2.2	43	0.76	7.5	2.1	14
30144	A03SLM10	ng/g	< 0.02	0.02	0.37	0.05	0.11	0.01	0.68	0.04	0.09	0.29	0.08	1.4	0.02	0.20	0.08	0.47
30145-1	A03SLL10 REP1	ng/g	0.03	0.10	1.1	0.16	0.46	0.04	2.3	0.13	0.40	1.2	0.22	4.6	0.13	0.71	0.17	1.8
30145-2	A03SLL10 REP2	ng/g	0.02	0.09	1.0	0.16	0.45	0.03	2.2	0.13	0.32	1.0	0.19	4.1	0.08	0.64	0.20	1.5
30145-3	A03SLL10 REP3	ng/g	0.03	0.09	0.95	0.17	0.39	0.07	2.3	0.17	0.47	1.2	0.23	4.1	0.09	0.72	0.25	1.5
30146	A03SLL20	ng/g	0.03	0.11	0.95	0.15	0.44	0.06	2.3	0.12	0.38	1.2	0.23	4.0	0.14	0.65	0.21	1.6
30147	A03SLL30	ng/g	0.04	0.10	1.0	0.20	0.41	0.10	2.6	0.46	0.53	1.3	0.30	4.4	0.16	0.83	0.25	1.5

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		122	123	128	129	130	131	132	133	134	136	137	138	139	141	144	146
ID	ID																	
QC Samples																		
PB092403	Procedure Blank	ng/g	0.00	0.00	0.05	0.01	0.00	0.00	0.10	0.00	0.02	0.04	0.00	0.16	0.00	0.05	0.01	0.07
PB092503	Procedure Blank	ng/g	0.03	0.01	0.04	0.03	0.01	0.00	0.18	0.00	0.02	0.06	0.01	0.28	0.00	0.12	0.05	0.07
PB092603	Procedure Blank	ng/g	0.00	0.00	0.03	0.00	0.00	0.00	0.18	0.00	0.01	0.04	0.01	0.16	0.00	0.03	0.01	0.05
MB092403	Matrix Blank	ng/g	0.00	0.00	0.07	0.02	0.03	0.00	0.23	0.00	0.02	0.06	0.02	0.28	0.00	0.06	0.01	0.09
MB092503	Matrix Blank	ng/g	0.02	0.01	0.11	0.03	0.03	0.00	0.29	0.00	0.05	0.09	0.03	0.58	0.00	0.09	0.06	0.14
MB092603	Matrix Blank	ng/g	0.00	0.01	0.06	0.01	0.01	0.00	0.24	0.00	0.03	0.04	0.02	0.31	0.00	0.05	0.02	0.09
PC092403	Positive Control	ng/g	0.72	1.1	4.9	1.4	2.0	0.41	9.4	0.50	3.0	6.3	1.7	18	0.72	4.2	1.0	6.9
PC092503	Positive Control	ng/g	0.77	0.74	5.2	1.6	2.0	0.51	9.1	0.36	2.8	6.3	1.7	17	0.80	4.5	1.0	6.5
PC092603	Positive Control	ng/g	0.77	0.93	4.7	1.5	1.9	0.45	9.8	0.62	3.0	6.3	1.7	17	0.82	4.0	1.2	6.6
MS-PCB092403*	Matrix Spike PCBs	ng	2.8	5.2	57	18	18	6.1	130	3.4	26	81	15	290	6.0	110	30	56
Percent Recovery			88	106	95	95	90	94	93	67	96	94	94	94	103	100	94	93
MS-PCB092503*	Matrix Spike PCBs	ng	3.0	2.9	61	19	19	6.0	130	6.0	27	81	16	280	5.6	110	30	58
Percent Recovery			103	85	95	95	95	91	93	92	93	91	94	93	97	92	91	92
MS-PCB092603*	Matrix Spike PCBs	ng	2.8	4.1	54	17	18	6.1	130	4.8	25	78	15	280	5.3	100	29	54
Percent Recovery			90	146	90	89	90	91	93	98	89	90	94	93	93	91	91	89
Method Detection Limit		ng/g	0.02	0.005	0.08	0.05	0.03	0.004	0.38	0.01	0.02	0.05	0.06	0.70	0.01	0.16	0.03	0.17
Method Quantitation Limit		ng/g	0.06	0.01	0.20	0.13	0.1	0.01	0.97	0.04	0.05	0.11	0.18	1.89	0.03	0.44	0.09	0.4
Note values are rounded to 2 significant figures.																		
Values are corrected for analytical recovery.																		
PCBs determined by dual column high resolution capillary GC with ECD.																		
n/a (not applicable)-recovery not calculated.																		
^External standard calculated concentration.																		
*MS values are background corrected for MB.																		
--- no recovery calculated--<DL or interference																		

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		147	149	151	153	156	157	158	163	164	166	167	170	171	172	173	174
ID	ID																	
Set 1																		
30127^	A03SE010	ng/g	24	5,500	1,700	6,400	1,400	220	950	1,600	490	31	190	3,500	370	250	28	2,400
30128	A03SS020	ng/g	0.51	47	15	53	8.9	2.4	7.2	12	6.0	0.43	2.5	26	5.5	3.6	0.34	23
30129-1	A03SS030 REP1	ng/g	3.1	260	81	240	27	6.3	26	66	24	1.1	7.9	130	29	17	1.6	120
30129-2	A03SS030 REP2	ng/g	3.1	280	80	300	30	7.4	29	68	22	1.4	8.6	110	28	18	2.1	110
30129-3	A03SS030 REP3	ng/g	3.1	290	81	300	31	7.5	29	69	22	1.4	8.7	120	26	17	2.0	110
30130	AO3SW030	ng/g	< 0.01	1.5	0.41	1.9	0.21	0.06	0.21	0.42	0.18	< 0.19	0.07	1.9	0.15	0.17	< 0.05	1.7
30131	AO3SC110	ng/g	< 0.01	0.55	0.13	< 1.03	< 0.18	< 0.03	< 0.08	0.14	< 0.04	< 0.19	< 0.04	1.8	0.08	< 0.06	< 0.05	< 0.20
30132	AO3SC210	ng/g	2.5	130	41	138	13	3.2	14	32	13	0.80	4.1	59	13	8.2	0.8	52
30133	AO3SC220	ng/g	2.5	180	60	170	13	3.4	18	37	15	1.0	5.4	54	16	10	1.2	63
Set 2																		
30134	A03SC230	ng/g	3.4	190	57	210	33	8.4	27	53	23	1.4	8.5	110	19	13	1.5	81
30135	A03SC310	ng/g	2.1	190	42	200	11	2.8	15	32	12	0.75	4.3	79	13	8.5	0.91	50
30136-1	A03SC320 REP1	ng/g	1.2	68	24	72	6.0	1.6	8.1	17	7.5	0.44	2.4	32	7.8	5.3	0.59	32
30136-2	A03SC320 REP2	ng/g	1.4	80	27	85	6.5	1.6	10	20	8.8	0.62	2.8	31	7.7	6.1	0.78	33
30136-3	A03SC320 REP3	ng/g	1.4	81	27	85	5.9	1.6	9.6	20	7.7	0.57	2.7	32	7.5	5.7	0.70	32
30137	AO3SC330	ng/g	2.8	200	68	200	16	4.3	21	53	20	1.1	6.1	82	17	12	1.5	76
30138	AO3SC410	ng/g	2.1	150	54	160	12	3.5	16	39	15	0.90	5.0	61	16	10	1.3	65
30139	AO3SC420	ng/g	2.5	130	41	130	9.7	2.7	13	32	13	0.71	4.0	56	12	8.5	0.84	49
30140	AO3SC430	ng/g	3.1	140	48	140	11	3.2	14	38	13	0.76	4.2	47	12	8.0	0.88	48
Set 3																		
30141	A03SC510	ng/g	0.87	75	26	75	5.2	1.4	7.0	19	6.9	0.41	2.1	30	7.8	5.1	0.54	34
30142	A03SC520	ng/g	0.37	25	8.3	28	2.6	0.69	2.9	7.1	1.6	0.24	0.89	12	2.5	1.6	0.14	11
30143	A03SC530	ng/g	1.4	57	21	63	4.5	1.3	5.4	19	4.6	0.53	1.9	23	5.7	4.0	0.36	24
30144	A03SLM10	ng/g	0.01	1.9	0.53	2.4	< 0.18	< 0.03	0.14	0.38	0.14	< 0.19	0.05	1.3	0.17	0.10	< 0.05	0.64
30145-1	A03SLL10 REP1	ng/g	0.09	7.0	2.2	7.6	0.46	0.10	0.52	1.7	0.48	0.27	0.21	3.8	0.61	0.39	< 0.05	2.5
30145-2	A03SLL10 REP2	ng/g	0.08	6.2	2.0	7.0	0.21	0.08	0.46	1.5	0.46	0.27	0.19	4.3	0.54	0.48	< 0.05	3.3
30145-3	A03SLL10 REP3	ng/g	0.08	6.7	2.1	6.7	0.39	0.08	0.48	1.4	0.42	0.28	0.17	2.6	0.52	0.29	< 0.05	2.3
30146	A03SLL20	ng/g	0.08	7.0	2.1	6.8	0.33	0.09	0.45	1.4	0.42	0.29	0.19	3.3	0.53	0.33	< 0.05	2.2
30147	A03SLL30	ng/g	0.08	7.1	2.1	7.4	0.41	0.10	0.56	1.4	0.42	0.30	0.17	2.9	0.50	0.26	< 0.05	2.1

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		147	149	151	153	156	157	158	163	164	166	167	170	171	172	173	174
ID	ID																	
QC Samples																		
PB092403	Procedure Blank	ng/g	0.00	0.26	0.06	0.13	0.00	0.00	0.03	0.09	0.00	0.03	0.00	0.28	0.01	0.00	0.00	0.43
PB092503	Procedure Blank	ng/g	0.00	0.32	0.07	0.62	0.00	0.00	0.01	0.03	0.16	0.10	0.00	0.44	0.01	0.28	0.00	0.13
PB092603	Procedure Blank	ng/g	0.00	0.21	0.03	0.45	0.01	0.00	0.00	0.02	0.00	0.09	0.00	0.26	0.00	0.00	0.00	0.01
MB092403	Matrix Blank	ng/g	0.00	0.35	0.09	0.54	0.00	0.07	0.04	0.12	0.09	0.05	0.01	0.28	0.04	0.12	0.01	4.3
MB092503	Matrix Blank	ng/g	0.00	0.67	0.13	0.77	0.00	0.01	0.06	0.10	0.12	0.10	0.00	0.51	0.08	0.03	0.00	0.14
MB092603	Matrix Blank	ng/g	0.00	0.33	0.07	0.57	0.00	0.01	0.03	0.07	0.02	0.11	0.01	0.56	0.01	0.05	0.00	0.07
PC092403	Positive Control	ng/g	0.39	27	8.4	24	2.0	1.3	3.2	6.7	1.9	0.90	1.2	11	2.1	1.8	0.21	7.6
PC092503	Positive Control	ng/g	0.35	27	8.7	24	2.0	1.3	3.3	6.0	2.9	0.91	1.3	13	2.2	1.7	0.22	7.2
PC092603	Positive Control	ng/g	0.39	27	8.4	23	1.8	1.3	3.3	7.1	1.3	1.2	1.1	9.3	2.0	1.8	0.16	7.7
MS-PCB092403*	Matrix Spike PCBs	ng	1.4	380	130	370	29	7.7	47	76	36	1.2	10	190	42	25	4.2	160
Percent Recovery			93	93	93	88	81	122	94	94	90	100	91	95	95	104	140	89
MS-PCB092503*	Matrix Spike PCBs	ng	1.5	370	130	380	30	6.1	48	73	40	1.2	11	180	40	25	2.7	170
Percent Recovery			100	93	93	90	91	94	91	82	143	92	100	90	89	100	96	94
MS-PCB092603*	Matrix Spike PCBs	ng	1.4	370	120	370	32	5.9	45	77	31	0.93	9.6	180	41	22	2.8	170
Percent Recovery			93	93	86	88	91	97	88	93	86	78	87	90	93	92	93	94
Method Detection Limit		ng/g	0.01	0.32	0.12	1.0	0.18	0.03	0.08	0.10	0.04	0.19	0.04	0.33	0.06	0.06	0.05	0.20
Method Quantitation Limit		ng/g	0.03	0.8	0.33	2.8	0.56	0.09	0.22	0.25	0.11	0.6	0.10	0.87	0.16	0.2	0.17	0.56
Note values are rounded to 2 significant figures.																		
Values are corrected for analytical recovery.																		
PCBs determined by dual column high resolution capillary GC with ECD.																		
n/a (not applicable)-recovery not calculated.																		
^External standard calculated concentration.																		
*MS values are background corrected for MB.																		
--- no recovery calculated---<DL or interference																		

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		175	176	177	178	179	180	183	185	187	189	190	191	193	194	195	196
ID	ID																	
Set 1																		
30127^	A03SE010	ng/g	65	99	1,100	290	530	4,200	1,300	170	2,700	95	590	62	160	1,300	380	530
30128	A03SS020	ng/g	1.0	1.5	11	4.8	10	40	12	2.4	28	1.2	4.5	0.78	2.3	13	6.0	11
30129-1	A03SS030 REP1	ng/g	5.0	10	65	35	70	190	63	12	160	4.7	26	3.4	12	59	30	40
30129-2	A03SS030 REP2	ng/g	5.2	11	66	33	62	190	60	13	160	5.3	13	3.8	13	63	29	54
30129-3	A03SS030 REP3	ng/g	4.8	10	61	31	57	170	56	12	150	4.2	27	3.5	12	57	27	44
30130	AO3SW030	ng/g	< 0.03	0.04	0.31	0.18	0.31	2.1	0.29	0.05	1.1	0.03	< 0.10	< 0.03	0.07	0.41	0.16	0.46
30131	AO3SC110	ng/g	< 0.03	< 0.02	< 0.11	0.05	0.08	1.1	< 0.23	< 0.02	0.38	< 0.02	< 0.10	< 0.03	< 0.04	< 0.10	< 0.05	< 0.11
30132	AO3SC210	ng/g	2.5	4.0	28	15	31	86	29	5.8	70	2.0	10	1.6	5.5	30	15	20
30133	AO3SC220	ng/g	2.0	5.7	30	16	39	98	37	7.3	78	3.4	9.2	2.2	6.8	28	15	27
Set 2																		
30134	A03SC230	ng/g	3.6	6.0	40	21	37	140	43	8.8	100	4.3	19	3.0	8.7	45	21	19
30135	A03SC310	ng/g	2.6	4.1	28	16	28	110	28	6.0	100	2.4	12	1.7	5.6	38	14	20
30136-1	A03SC320 REP1	ng/g	1.5	2.6	18	9.7	18	52	18	3.6	44	1.3	5.8	1.0	3.5	18	8.8	14
30136-2	A03SC320 REP2	ng/g	1.8	2.5	18	9.9	17	57	18	3.9	47	1.7	4.4	1.3	3.8	18	8.4	17
30136-3	A03SC320 REP3	ng/g	1.7	2.5	18	9.7	17	55	17	3.7	46	1.5	3.9	1.1	3.6	18	7.9	14
30137	AO3SC330	ng/g	3.1	5.1	41	22	38	110	35	8.9	100	3.1	15	2.4	8.3	38	21	21
30138	AO3SC410	ng/g	2.8	5.2	36	20	36	97	34	7.7	88	2.4	16	2.0	7.1	32	18	28
30139	AO3SC420	ng/g	2.4	3.7	28	16	27	82	27	5.4	76	2.0	8.1	1.7	5.9	31	15	20
30140	AO3SC430	ng/g	2.2	4.0	29	18	30	74	25	5.6	73	2.2	9.2	1.4	5.5	24	13	20
Set 3																		
30141	A03SC510	ng/g	1.3	2.0	19	10	23	52	16	4.0	47	1.3	4.7	0.91	3.6	17	9.3	14
30142	A03SC520	ng/g	0.44	0.84	5.9	3.3	7.0	18	5.5	1.1	15	0.40	1.9	0.32	1.2	5.8	2.9	3.4
30143	A03SC530	ng/g	1.0	1.7	15	9.5	19	38	12	2.8	40	1.1	4.2	0.68	3.0	14	7.2	10
30144	A03SLM10	ng/g	< 0.03	0.03	0.34	0.17	0.43	1.5	0.31	0.04	0.91	< 0.02	0.11	< 0.03	0.08	0.22	0.12	0.20
30145-1	A03SLL10 REP1	ng/g	0.11	0.19	1.5	0.81	1.9	4.5	1.3	0.24	4.0	0.07	0.49	0.07	0.30	1.2	0.69	0.68
30145-2	A03SLL10 REP2	ng/g	0.09	0.12	1.3	0.77	1.7	4.9	1.2	0.22	3.6	0.06	0.43	0.05	0.24	1.1	0.51	0.77
30145-3	A03SLL10 REP3	ng/g	0.08	0.12	1.2	0.66	1.6	3.4	1.1	0.16	3.3	0.07	0.44	0.03	0.20	0.94	0.50	0.75
30146	A03SLL20	ng/g	0.10	0.16	1.2	0.71	1.6	4.0	1.1	0.16	3.4	0.07	0.56	0.05	0.21	0.97	0.55	0.78
30147	A03SLL30	ng/g	0.09	0.15	1.1	0.60	1.5	3.6	1.0	0.15	3.2	0.05	0.32	0.03	0.20	0.92	0.47	0.69

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		175	176	177	178	179	180	183	185	187	189	190	191	193	194	195	196
ID	ID																	
QC Samples																		
PB092403	Procedure Blank	ng/g	0.00	0.00	0.10	0.01	0.02	0.12	0.03	0.01	0.09	0.00	0.00	0.00	0.00	0.01	0.00	0.04
PB092503	Procedure Blank	ng/g	0.00	0.00	0.09	0.01	0.08	0.20	0.00	0.17	0.07	0.00	0.00	0.00	0.00	0.05	0.00	0.04
PB092603	Procedure Blank	ng/g	0.00	0.00	0.02	0.00	0.01	0.17	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.02
MB092403	Matrix Blank	ng/g	0.00	0.01	0.05	0.02	0.06	0.28	0.04	0.00	0.15	0.01	0.00	0.00	0.00	0.03	0.00	0.04
MB092503	Matrix Blank	ng/g	0.00	0.01	0.06	0.02	0.00	0.41	0.06	0.10	0.15	0.00	0.18	0.00	0.00	0.04	0.01	0.05
MB092603	Matrix Blank	ng/g	0.00	0.00	0.04	0.02	0.02	0.39	0.03	0.00	0.14	0.00	0.02	0.00	0.01	0.03	0.01	0.02
PC092403	Positive Control	ng/g	0.36	1.2	4.0	2.1	4.7	14	4.9	0.80	10	0.52	3.4	0.64	1.3	4.8	2.9	3.2
PC092503	Positive Control	ng/g	0.39	1.1	4.3	2.3	4.4	14	4.8	0.92	10	0.32	1.3	0.66	1.3	5.1	3.2	2.4
PC092603	Positive Control	ng/g	0.42	0.96	4.0	2.3	4.9	14	4.7	0.70	10	0.27	1.8	0.70	1.4	5.1	2.9	3.6
MS-PCB092403*	Matrix Spike PCBs	ng	7.1	12	76	29	63	260	90	17	160	4.4	37	4.9	13	52	32	32
Percent Recovery			95	92	95	97	89	93	95	94	94	94	116	92	87	98	107	114
MS-PCB092503*	Matrix Spike PCBs	ng	7.5	12	78	29	68	270	89	17	160	4.9	20	5.2	14	55	27	29
Percent Recovery			97	75	93	91	92	96	94	94	94	104	74	100	100	98	90	97
MS-PCB092603*	Matrix Spike PCBs	ng	7.0	15	73	28	63	250	86	16	150	4.5	27	4.8	13	49	28	28
Percent Recovery			92	94	91	90	86	89	92	94	88	94	96	87	81	92	93	104
Method Detection Limit		ng/g	0.03	0.02	0.11	0.03	0.04	0.57	0.23	0.02	0.37	0.02	0.10	0.03	0.04	0.10	0.05	0.11
Method Quantitation Limit		ng/g	0.10	0.07	0.30	0.1	0.1	1.6	0.66	0.05	1.0	0.06	0.29	0.08	0.11	0.29	0.15	0.31
Note values are rounded to 2 significant figures.																		
Values are corrected for analytical recovery.																		
PCBs determined by dual column high resolution capillary GC with ECD.																		
n/a (not applicable)-recovery not calculated.																		
^External standard calculated concentration.																		
*MS values are background corrected for MB.																		
--- no recovery calculated---<DL or interference																		

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		197	198	199	200	201	202	203	205	206	208	209	Total PCBs
ID	ID													
Set 1														
30127^	A03SE010	ng/g	39	79	1,700	150	110	270	1,500	62	2,200	360	590	200,000
30128	A03SS020	ng/g	0.60	1.1	17	2.2	1.8	4.9	15	0.86	21	6.1	7.5	1,700
30129-1	A03SS030 REP1	ng/g	2.9	5.0	78	10	11	24	67	< 0.01	84	25	30	10,000
30129-2	A03SS030 REP2	ng/g	3.3	5.9	94	11	12	26	76	< 0.01	120	36	42	6,900
30129-3	A03SS030 REP3	ng/g	3.0	5.3	74	10	10	22	61	< 0.01	89	25	38	7,100
30130	AO3SW030	ng/g	< 0.07	0.08	1.4	0.07	0.14	0.83	0.78	0.03	5.3	1.9	5.1	63
30131	AO3SC110	ng/g	< 0.07	< 0.00	0.29	< 0.01	< 0.02	0.10	0.23	< 0.01	1.01	0.44	1.4	21
30132	AO3SC210	ng/g	1.4	3.0	37	5.1	5.2	11	32	2.2	40	12	14	3,200
30133	AO3SC220	ng/g	1.6	4.9	37	6.6	6.1	12	32	2.6	29	11	16	4,500
Set 2														
30134	A03SC230	ng/g	2.3	4.3	55	7.8	7.2	15	49	3.2	64	17	20	4,600
30135	A03SC310	ng/g	1.5	2.9	54	5.2	5.3	11	33	2.2	63	15	27	3,600
30136-1	A03SC320 REP1	ng/g	0.93	1.7	23	3.2	3.3	6.8	20	1.3	27	8.3	11	1,700
30136-2	A03SC320 REP2	ng/g	1.4	2.0	25	3.6	3.7	6.9	20	1.4	26	7.9	10	1,900
30136-3	A03SC320 REP3	ng/g	1.2	1.7	24	3.4	3.3	6.7	19	1.3	26	7.7	9.9	1,800
30137	AO3SC330	ng/g	1.9	4.3	55	7.4	6.0	15	47	3.1	65	18	27	5,500
30138	AO3SC410	ng/g	1.8	3.6	44	6.7	6.0	15	42	2.8	56	18	26	4,100
30139	AO3SC420	ng/g	1.5	3.1	42	5.4	5.2	13	35	2.3	63	19	32	3,000
30140	AO3SC430	ng/g	1.2	2.7	35	4.8	4.5	12	30	2.0	39	12	16	3,800
Set 3														
30141	A03SC510	ng/g	0.74	1.7	25	3.6	2.8	7.9	21	1.3	27	8.3	12	1,600
30142	A03SC520	ng/g	0.26	0.55	8.0	1.0	0.92	2.5	6.8	0.41	9.9	3.1	5.1	670
30143	A03SC530	ng/g	0.62	1.4	20	2.6	2.4	6.6	16	1.0	24	7.1	12	1,200
30144	A03SLM10	ng/g	< 0.07	0.01	0.34	0.04	0.03	0.09	0.24	0.01	0.22	0.18	< 0.77	38
30145-1	A03SLL10 REP1	ng/g	0.08	0.10	1.9	0.23	0.22	0.58	1.5	0.11	2.5	0.92	2.2	150
30145-2	A03SLL10 REP2	ng/g	0.08	0.09	1.7	0.19	0.22	1.3	1.2	0.09	2.9	0.78	1.9	140
30145-3	A03SLL10 REP3	ng/g	< 0.07	0.08	1.5	0.18	0.16	0.57	1.2	0.09	2.3	0.85	2.5	150
30146	A03SLL20	ng/g	< 0.07	0.08	1.5	0.17	0.15	0.48	1.2	0.10	2.0	0.73	1.9	160
30147	A03SLL30	ng/g	< 0.07	0.08	1.5	0.16	0.15	0.57	1.2	0.08	1.9	0.79	1.8	160

Table 1. PCB congeners (ng/g) in Aquatic Sediments from Waterways near Anniston, Alabama

Sample	Field		197	198	199	200	201	202	203	205	206	208	209	Total PCBs
ID	ID													
QC Samples														
PB092403	Procedure Blank	ng/g	0.02	0.00	0.02	0.00	0.00	0.71	0.02	0.00	0.00	0.06	0.41	7.1
PB092503	Procedure Blank	ng/g	0.02	0.06	0.04	0.01	0.01	0.01	0.04	0.00	0.02	0.28	0.54	16
PB092603	Procedure Blank	ng/g	0.01	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.09	0.57	6.8
MB092403	Matrix Blank	ng/g	0.00	0.00	0.07	0.00	0.04	0.94	0.00	0.00	2.7	1.5	0.57	21
MB092503	Matrix Blank	ng/g	0.01	0.00	0.11	0.00	0.01	0.02	0.02	0.00	0.04	0.11	0.54	19
MB092603	Matrix Blank	ng/g	0.02	0.00	0.06	0.01	0.01	0.02	0.06	0.01	0.04	0.11	0.60	14
PC092403	Positive Control	ng/g	0.20	0.53	4.3	1.0	0.55	1.0	3.5	0.63	2.6	2.8	2.0	4,000
PC092503	Positive Control	ng/g	0.18	0.76	4.5	0.61	0.58	1.1	3.4	0.81	2.5	2.4	2.0	3,800
PC092603	Positive Control	ng/g	0.20	0.27	4.4	0.99	0.52	1.1	3.6	0.99	2.6	2.9	2.2	4,000
MS-PCB092403*	Matrix Spike PCBs	ng	3.0	3.4	54	8.5	8.8	13	43	2.6	15	<DL	<DL	10,000
Percent Recovery			94	97	95	96	105	120	93	87	107	---	---	91
MS-PCB092503*	Matrix Spike PCBs	ng	2.8	3.4	57	8.8	7.4	9.9	42	3.1	13	3.6	<DL	10,000
Percent Recovery			88	103	95	98	91	93	91	107	93	116	---	88
MS-PCB092603*	Matrix Spike PCBs	ng	2.7	3.2	53	8.3	7.3	9.7	42	2.8	13	1.9	<DL	9,800
Percent Recovery			84	91	91	90	88	90	93	97	93	61	---	89
Method Detection Limit		ng/g	0.07	0.002	0.10	0.01	0.02	0.05	0.08	0.01	0.04	0.13	0.77	12
Method Quantitation Limit		ng/g	0.22	0.01	0.29	0.04	0.06	0.16	0.23	0.03	0.12	0.37	2.0	29
Note values are rounded to 2 significant figures.														
Values are corrected for analytical recovery.														
PCBs determined by dual column high resolution capillary GC with ECD.														
n/a (not applicable)-recovery not calculated.														
^External standard calculated concentration.														
*MS values are background corrected for MB.														
--- no recovery calculated---<DL or interference														

**Table 2. Percent Recoveries of Surrogate Standards for PCBs in Sediments
Downstream of Anniston, AL**

		029	155	204
Sample	Field	%	%	%
ID	ID	Recovery	Recovery	Recovery
30127	A03SE010	126	94	124
30128	A03SS020	90	98	96
30129-1	A03SS030 REP1	102	107	94
30129-2	A03SS030 REP2	96	106	97
30129-3	A03SS030 REP3	95	100	99
30130	AO3SW030	91	95	96
30131	AO3SC110	89	93	93
30132	AO3SC210	90	94	94
30133	AO3SC220	92	93	98
Set 2				
30134	A03SC230	92	94	97
30135	A03SC310	91	93	99
30136-1	A03SC320 REP1	88	93	92
30136-2	A03SC320 REP2	90	92	99
30136-3	A03SC320 REP3	91	93	101
30137	AO3SC330	90	90	97
30138	AO3SC410	90	93	94
30139	AO3SC420	94	95	102
30140	AO3SC430	92	95	96
Set 3				
30141	A03SC510	87	93	92
30142	A03SC520	85	92	93
30143	A03SC530	86	91	91
30144	A03SLM10	86	91	90
30145-1	A03SLL10 REP1	88	92	91
30145-2	A03SLL10 REP2	85	90	88
30145-3	A03SLL10 REP3	85	90	88
30146	A03SLL20	87	90	89
30147	A03SLL30	90	94	92
PB092403	Procedure Blank	88	92	95
PB092503	Procedure Blank	88	89	96
PB092603	Procedure Blank	87	91	91
MB092403	Matrix Blank	77	87	87
MB092503	Matrix Blank	89	93	92
MB092603	Matrix Blank	89	92	93
PC092403	Positive Control	91	92	97
PC092503	Positive Control	90	92	95
PC092603	Positive Control	91	91	94
MS-PCB092403	Matrix Spike PCBs	91	93	95
MS-PCB092503	Matrix Spike PCBs	90	91	97
MS-PCB092603	Matrix Spike PCBs	87	90	91
Average		90	93	95
SD		7	4	6

Table 3. Organic Carbon (%) and Particle Size analysis (g %) for Sediments

site	Field ID	Description	% OC	sand (g)	clay (g)	silt (g)	% sand	% clay	% silt
30127	A03SE010	Site ESD-1 11th St. Ditch near McDaniel St.-spoon sample	2.24	43.5	5.6	11.0	73	9	18
30128	A03SS020	Site SNC-1 Snow Creek near Nobel ST & P St.-spoon sample	0.43	56.5	1.1	2.4	94	2	4
30129	A03SS030	Site SNC-2 Snow Creek near Hwy 78-spoon sample	1.59	43.8	4.2	12.0	73	7	20
30130	A03SW030	Site CWC-1 Cold Water Creek near Willingham Rd.-spoon sample	0.71	51.4	3.6	5.0	86	6	8
30131	A03SC110	Site CC-1 Choccolocco Creek near SR 431-spoon sample	1.35	32.3	6.7	21.1	54	11	35
30132	A03SC210	Site CC-2 Choccolocco Creek near Friendship Rd.-spoon sample	1.13	44.3	3.1	12.6	74	5	21
30133	A03SC220	Site CC-2 Choccolocco Creek near Friendship Rd.-ponar sample	0.34	55.4	1.6	3.1	92	3	5
30134	A03SC230	Site CC-2 Choccolocco Creek near Friendship Rd.-bank core sample	0.78	50.9	8.2	1.0	85	14	2
30135	A03SC310	Site CC-3 Choccolocco Creek near Tull WWTP.-spoon sample	1.28	35.4	5.1	19.6	59	8	33
30136	A03SC320	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	0.49	52.4	1.6	6.1	87	3	10
30137	A03SC330	Site CC-3 Choccolocco Creek near Tull WWTP.-bank core sample	1.34	41.8	3.2	15.0	70	5	25
30138	A03SC410	Site CC-4 Choccolocco Creek near CR 399.-spoon sample	2.33	35.8	7.3	17.0	60	12	28
30139	A03SC420	Site CC-4 Choccolocco Creek near CR 399.-ponar sample	1.95	35.7	4.8	19.5	59	8	33
30140	A03SC430	Site CC-4 Choccolocco Creek near CR 399.-bank core sample	2.06	51.4	1.6	7.0	86	3	12
30141	A03SC510	Site CC-5 Choccolocco Creek near Jackson Shoals.-spoon sample	0.75	47.3	3.3	9.5	79	5	16
30142	A03SC520	Site CC-5 Choccolocco Creek near Jackson Shoals.-ponar sample	0.57	50.3	2.1	7.6	84	4	13
30143	A03SC530	Site CC-5 Choccolocco Creek near Jackson Shoals.-bank core sample	1.27	48.3	3.3	8.5	80	5	14
30144	A03SLM10	Site LM-1 Lake Logan Martin upstream Hwy 78	1.54	33.7	8.4	17.9	56	14	30
Lay Lake composite (30145, 30146, 30147)	A03SLL10, A03SLL20, A03SLL30	LL-1 Lay Lake sites 1-3	2.94	14.1	19.9	26.0	24	33	43

Appendix A. Table of PCB Congeners Determined and GC Column for Quantification

IUPAC# <i>italics</i> <0.05% bold >0.05%	CI position	Structural Name	GC Capillary Column Congener Quantified
bold >1.0%	ring1-ring2		n/a - not analyzed
1	2	monochlorobiphenyl	DB17
2	3	monochlorobiphenyl	n/a
3	4	monochlorobiphenyl	DB17
4	2-2	dichlorobiphenyl	DB17
5	23	dichlorobiphenyl	DB17
6	2-3	dichlorobiphenyl	DB17
7	24	dichlorobiphenyl	DB17
8	2-4	dichlorobiphenyl	DB17
9	25	dichlorobiphenyl	DB17
10	26	dichlorobiphenyl	DB17
11	3-3	dichlorobiphenyl	n/a
12	34	dichlorobiphenyl	n/a
13	3-4	dichlorobiphenyl	n/a
14	35	dichlorobiphenyl	n/a
15	4-4	dichlorobiphenyl	DB17
16	23-2	trichlorobiphenyl	Both
17	24-2	trichlorobiphenyl	Both
18	25-2	trichlorobiphenyl	DB5
19	26-2	trichlorobiphenyl	DB5
20	23-3	trichlorobiphenyl	DB17
21	234	trichlorobiphenyl	n/a
22	23-4	trichlorobiphenyl	DB5
23	235	trichlorobiphenyl	n/a
24	236	trichlorobiphenyl	Both
25	24-3	trichlorobiphenyl	DB5
26	25-3	trichlorobiphenyl	DB17
27	26-3	trichlorobiphenyl	DB17
28	24-4	trichlorobiphenyl	Both
29	245	trichlorobiphenyl	Both
30	246	trichlorobiphenyl	Both
31	25-4	trichlorobiphenyl	DB17
32	26-4	trichlorobiphenyl	DB17
33	34-2	trichlorobiphenyl	DB17
34	35-2	trichlorobiphenyl	DB5
35	34-3	trichlorobiphenyl	DB17
36	35-3	trichlorobiphenyl	n/a
37	34-4	trichlorobiphenyl	DB5
38	345	trichlorobiphenyl	n/a
39	35-4	trichlorobiphenyl	n/a
40	23-23	tetrachlorobiphenyl	DB17
41	234-2	tetrachlorobiphenyl	DB17
42	23-24	tetrachlorobiphenyl	DB17
43	235-2	tetrachlorobiphenyl	DB5
44	23-25	tetrachlorobiphenyl	DB17
45	236-2	tetrachlorobiphenyl	DB5
46	23-26	tetrachlorobiphenyl	DB17
47	24-24	tetrachlorobiphenyl	Both
48	245-2	tetrachlorobiphenyl	DB17
49	24-25	tetrachlorobiphenyl	DB5
50	246-2	tetrachlorobiphenyl	n/a
51	24-26	tetrachlorobiphenyl	DB17

Appendix A. Table of PCB Congeners Determined and GC Column for Quantification

IUPAC#	Structural Name	GC Capillary
<i>italics</i> <0.05%	CI position	Column Congener
bold >0.05%		Quantified
<u>bold</u> >1.0%	ring1-ring2	n/a - not analyzed
<u>52</u>	25-25	tetrachlorobiphenyl DB17
<u>53</u>	25-26	tetrachlorobiphenyl DB17
<u>54</u>	26-26	tetrachlorobiphenyl DB17
<u>55</u>	234-3	tetrachlorobiphenyl DB17
<u>56</u>	23-34	tetrachlorobiphenyl DB17
<u>57</u>	235-3	tetrachlorobiphenyl DB17
<u>58</u>	23-35	tetrachlorobiphenyl DB17
<u>59</u>	236-3	tetrachlorobiphenyl DB5
<u>60</u>	234-4	tetrachlorobiphenyl DB17
<u>61</u>	2345	tetrachlorobiphenyl n/a
<u>62</u>	2346	tetrachlorobiphenyl n/a
<u>63</u>	235-4	tetrachlorobiphenyl DB17
<u>64</u>	236-4	tetrachlorobiphenyl DB17
<u>65</u>	2356	tetrachlorobiphenyl n/a
<u>66</u>	24-34	tetrachlorobiphenyl DB17
<u>67</u>	245-3	tetrachlorobiphenyl DB17
<u>68</u>	24-35	tetrachlorobiphenyl n/a
<u>69</u>	246-3	tetrachlorobiphenyl DB5
<u>70</u>	25-34	tetrachlorobiphenyl DB5
<u>71</u>	26-34	tetrachlorobiphenyl DB17
<u>72</u>	25-35	tetrachlorobiphenyl DB17
<u>73</u>	26-35	tetrachlorobiphenyl n/a
<u>74</u>	245-4	tetrachlorobiphenyl DB17
<u>75</u>	246-4	tetrachlorobiphenyl DB17
<u>76</u>	345-2	tetrachlorobiphenyl n/a
<u>77</u>	34-34	tetrachlorobiphenyl GCMS
<u>78</u>	345-3	tetrachlorobiphenyl n/a
<u>79</u>	34-35	tetrachlorobiphenyl n/a
<u>80</u>	35-35	tetrachlorobiphenyl n/a
<u>81</u>	345-4	tetrachlorobiphenyl GCMS
<u>82</u>	234-23	pentachlorobiphenyl DB5
<u>83</u>	235-23	pentachlorobiphenyl DB17
<u>84</u>	236-23	pentachlorobiphenyl DB5
<u>85</u>	234-24	pentachlorobiphenyl DB17
<u>86</u>	2345-2	pentachlorobiphenyl DB5
<u>87</u>	234-25	pentachlorobiphenyl DB17
<u>88</u>	2346-2	pentachlorobiphenyl n/a
<u>89</u>	234-26	pentachlorobiphenyl n/a
<u>90</u>	235-24	pentachlorobiphenyl DB17
<u>91</u>	236-24	pentachlorobiphenyl DB5
<u>92</u>	235-25	pentachlorobiphenyl DB5
<u>93</u>	2356-2	pentachlorobiphenyl n/a
<u>94</u>	235-26	pentachlorobiphenyl n/a
<u>95</u>	236-25	pentachlorobiphenyl DB17
<u>96</u>	236-26	pentachlorobiphenyl DB5
<u>97</u>	245-23	pentachlorobiphenyl DB5
<u>98</u>	246-23	pentachlorobiphenyl n/a
<u>99</u>	245-24	pentachlorobiphenyl DB17
<u>100</u>	246-24	pentachlorobiphenyl n/a
<u>101</u>	245-25	pentachlorobiphenyl Both
<u>102</u>	245-26	pentachlorobiphenyl DB5

Appendix A. Table of PCB Congeners Determined and GC Column for Quantification

IUPAC#	Structural Name	GC Capillary
<i>italics</i> <0.05%	CI position	Column Congener
bold >0.05%		Quantified
bold >1.0%	ring1-ring2	n/a - not analyzed
<i>103</i>	246-25	pentachlorobiphenyl
<i>104</i>	246-26	pentachlorobiphenyl
105	234-34	pentachlorobiphenyl
<i>106</i>	2345-3	pentachlorobiphenyl
<i>107</i>	234-35	pentachlorobiphenyl
<i>108</i>	2346-3	pentachlorobiphenyl
109	235-34	pentachlorobiphenyl
110	236-34	pentachlorobiphenyl
<i>111</i>	235-35	pentachlorobiphenyl
<i>112</i>	2356-3	pentachlorobiphenyl
<i>113</i>	236-35	pentachlorobiphenyl
114	2345-4	pentachlorobiphenyl
115	2346-4	pentachlorobiphenyl
<i>116</i>	23456	pentachlorobiphenyl
117	2356-4	pentachlorobiphenyl
118	245-34	pentachlorobiphenyl
119	246-34	pentachlorobiphenyl
<i>120</i>	245-35	pentachlorobiphenyl
<i>121</i>	246-35	pentachlorobiphenyl
122	345-23	pentachlorobiphenyl
123	345-24	pentachlorobiphenyl
124	345-25	pentachlorobiphenyl
<i>125</i>	345-26	pentachlorobiphenyl
<i>126</i>	345-34	pentachlorobiphenyl
<i>127</i>	345-35	pentachlorobiphenyl
128	234-234	hexachlorobiphenyl
129	2345-23	hexachlorobiphenyl
130	234-235	hexachlorobiphenyl
131	2346-23	hexachlorobiphenyl
132	234-236	hexachlorobiphenyl
133	235-235	hexachlorobiphenyl
134	2356-23	hexachlorobiphenyl
135	235-236	hexachlorobiphenyl
136	236-236	hexachlorobiphenyl
137	2345-24	hexachlorobiphenyl
138	234-245	hexachlorobiphenyl
139	2346-24	hexachlorobiphenyl
<i>140</i>	234-246	hexachlorobiphenyl
141	2345-25	hexachlorobiphenyl
<i>142</i>	23456-2	hexachlorobiphenyl
<i>143</i>	2345-26	hexachlorobiphenyl
144	2346-25	hexachlorobiphenyl
<i>145</i>	2346-26	hexachlorobiphenyl
146	235-245	hexachlorobiphenyl
147	2356-24	hexachlorobiphenyl
<i>148</i>	235-246	hexachlorobiphenyl
149	236-245	hexachlorobiphenyl
<i>150</i>	236-246	hexachlorobiphenyl
151	2356-25	hexachlorobiphenyl
<i>152</i>	2356-26	hexachlorobiphenyl
153	245-245	hexachlorobiphenyl

Appendix A. Table of PCB Congeners Determined and GC Column for Quantification

IUPAC#	Structural Name	GC Capillary
<i>italics</i> <0.05%	CI position	Column Congener
bold >0.05%		Quantified
bold >1.0%	ring1-ring2	n/a - not analyzed
154	245-246 hexachlorobiphenyl	n/a
155	246-246 hexachlorobiphenyl	Both
156	2345-34 hexachlorobiphenyl	DB17
157	234-345 hexachlorobiphenyl	DB17
158	2346-34 hexachlorobiphenyl	DB5
159	2345-35 hexachlorobiphenyl	n/a
160	23456-3 hexachlorobiphenyl	n/a
161	2346-35 hexachlorobiphenyl	n/a
162	235-345 hexachlorobiphenyl	n/a
163	2356-34 hexachlorobiphenyl	DB17
164	236-345 hexachlorobiphenyl	DB17
165	2356-35 hexachlorobiphenyl	n/a
166	23456-4 hexachlorobiphenyl	DB5
167	245-345 hexachlorobiphenyl	DB5
168	246-345 hexachlorobiphenyl	n/a
169	345-345 hexachlorobiphenyl	GCMS
170	2345-234 heptachlorobiphenyl	DB17
171	2346-234 heptachlorobiphenyl	DB17
172	2345-235 heptachlorobiphenyl	DB5
173	23456-23 heptachlorobiphenyl	DB5
174	2345-236 heptachlorobiphenyl	DB17
175	2346-235 heptachlorobiphenyl	DB5
176	2346-236 heptachlorobiphenyl	DB17
177	2356-234 heptachlorobiphenyl	DB5
178	2356-235 heptachlorobiphenyl	DB5
179	2356-236 heptachlorobiphenyl	DB5
180	2345-245 heptachlorobiphenyl	DB5
181	23456-24 heptachlorobiphenyl	n/a
182	2345-246 heptachlorobiphenyl	n/a
183	2346-245 heptachlorobiphenyl	DB17
184	2346-246 heptachlorobiphenyl	n/a
185	23456-25 heptachlorobiphenyl	DB17
186	23456-26 heptachlorobiphenyl	n/a
187	2356-245 heptachlorobiphenyl	DB5
188	2356-246 heptachlorobiphenyl	n/a
189	2345-345 heptachlorobiphenyl	DB17
190	23456-34 heptachlorobiphenyl	Both
191	2346-345 heptachlorobiphenyl	DB5
192	23456-35 heptachlorobiphenyl	n/a
193	2356-345 heptachlorobiphenyl	DB5
194	2345-2345 octachlorobiphenyl	DB5
195	23456-234 octachlorobiphenyl	DB17
196	2345-2346 octachlorobiphenyl	DB5
197	2346-2346 octachlorobiphenyl	DB5
198	23456-235 octachlorobiphenyl	DB17
199	2345-2356 octachlorobiphenyl	DB5
200	23456-236 octachlorobiphenyl	DB17
201	2346-2356 octachlorobiphenyl	DB5
202	2356-2356 octachlorobiphenyl	DB17
203	23456-245 octachlorobiphenyl	DB17
204	23456-246 octachlorobiphenyl	DB5

Appendix A. Table of PCB Congeners Determined and GC Column for Quantification

IUPAC#	Structural Name	GC Capillary
<i>italics</i> <0.05%	CI position	Column Congener
bold >0.05%		Quantified
<u>bold >1.0%</u>	ring1-ring2	n/a - not analyzed
205	23456-345 octachlorobiphenyl	DB5
206	23456-2345 nonachlorobiphenyl	DB17
<i>207</i>	23456-2346 nonachlorobiphenyl	both
208	23456-2356 nonachlorobiphenyl	DB17
<i>209</i>	23456-23456 decachlorobiphenyl	DB17

Appendix B. Table of Sampling Site GPS or Topo Coordinates for Anniston Reconnaissance Sediment Samples

Sample ID	Field ID	Description	Topo Coordinates	GPS Collected Coordinates
30127	A03SE010	Site ESD-1 11th St. Ditch near McDaniel St.-spoon sample	UTM 16 606924E 3724680N Anniston Quad (NAD 27)	
30128	A03SS020	Site SNC-1 Snow Creek near Nobel ST & P St.-spoon sample	UTM 16 608585E 3721445N Anniston Quad (NAD 27)	
30129-1	A03SS030 REP1	Site SNC-2 Snow Creek near Hwy 78-spoon sample	UTM 16 609050E 3719236N Oxford Quad (NAD 27)	
30129-2	A03SS030 REP2	Site SNC-2 Snow Creek near Hwy 78-spoon sample	UTM 16 609050E 3719236N Oxford Quad (NAD 27)	
30129-3	A03SS030 REP3	Site SNC-2 Snow Creek near Hwy 78-spoon sample	UTM 16 609050E 3719236N Oxford Quad (NAD 27)	
30130	A03SW030	Site CWC-1 Cold Water Creek near Willingham Rd.-spoon sample		UTM 0602081E 3724720N
30131	A03SC110	Site CC-1 Choccolocco Creek near SR 431-spoon sample	UTM 16 618141 E 3720965N Choccolocco Quad (NAD 27)	
30132	A03SC210	Site CC-2 Choccolocco Creek near Friendship Rd.-spoon sample	UTM 16 608765E 3718272N Anniston Quad (NAD 27)	
30133	A03SC220	Site CC-2 Choccolocco Creek near Friendship Rd.-ponar sample	UTM 16 608765E 3718272N Anniston Quad (NAD 27)	
30134	A03SC230	Site CC-2 Choccolocco Creek near Friendship Rd.-bank core sample	UTM 16 608765E 3718272N Anniston Quad (NAD 27)	
30135	A03SC310	Site CC-3 Choccolocco Creek near Tull WWTP.-spoon sample	UTM 16 601540E 3716136N Munford Quad (NAD 27)	
30136-1	A03SC320 REP1	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	UTM 16 601540E 3716136N Munford Quad (NAD 27)	
30136-2	A03SC320 REP2	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	UTM 16 601540E 3716136N Munford Quad (NAD 27)	
30136-3	A03SC320 REP3	Site CC-3 Choccolocco Creek near Tull WWTP.-ponar sample	UTM 16 601540E 3716136N Munford Quad (NAD 27)	
30137	A03SC330	Site CC-3 Choccolocco Creek near Tull WWTP.-bank core sample		UTM 0602487E 3716643N
30138	A03SC410	Site CC-4 Choccolocco Creek near CR 399.-spoon sample	UTM 16 592344E 3712667N Eastboga Quad (NAD 27)	
30139	A03SC420	Site CC-4 Choccolocco Creek near CR 399.-ponar sample	UTM 16 592344E 3712667N Eastboga Quad (NAD 27)	
30140	A03SC430	Site CC-4 Choccolocco Creek near CR 399.-bank core sample	UTM 16 592344E 3712667N Eastboga Quad (NAD 27)	
30141	A03SC510	Site CC-5 Choccolocco Creek near Jackson Shoals.-spoon sample	UTM 16 583859E 3712260N Eastaboga Quad (NAD 27)*	
30142	A03SC520	Site CC-5 Choccolocco Creek near Jackson Shoals.-ponar sample	UTM 16 583859E 3712260N Eastaboga Quad (NAD 27)*	
30143	A03SC530	Site CC-5 Choccolocco Creek near Jackson Shoals.-bank core sample	UTM 16 583859E 3712260N Eastaboga Quad (NAD 27)*	
30144	A03SLM10	Site LM-1 Lake Logan Martin upstream Hwy 78		UTM 0574446E 3719700N and 0574566E 3719665N
30145-1	A03SLL10 REP1	Site LL-1 Lay Lake site 1		UTM 0545354E 3648764N
30145-2	A03SLL10 REP2	Site LL-1 Lay Lake site 1		UTM 0545354E 3648764N
30145-3	A03SLL10 REP3	Site LL-1 Lay Lake site 1		UTM 0545354E 3648764N
30146	A03SLL20	Site LL-1 Lay Lake site 2		UTM 0544973E 3652405N
30147	A03SLL30	Site LL-1 Lay Lake site 3		UTM 0545346E 3655907N

*number from the notes was 371226, changed to 3712260 missing a value.