

# **Final 2009 Peconic River Monitoring Report**



**June 4, 2010**

**Prepared for: Brookhaven Site Office  
Building 464, 53 Bell Avenue  
Upton, New York 11973**

**Prepared by: Brookhaven Science Associates, LLC  
Brookhaven National Laboratory  
Upton, New York 11973**

**Under Contract with the United States Department of Energy. Contract No. DE-AC02-98CH10**

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## **EXECUTIVE SUMMARY**

### **2009 PECONIC RIVER MONITORING REPORT**

This section summarizes the major post-cleanup findings and recommendations relating to the 2009 Peconic River sediment, surface water, and fish monitoring. Section 2 through Section 4 of the report discusses the details on which the recommendations and summary are based. The recommendations are summarized in Table E-1.

Figure 1-1 shows the location of the Peconic River relative to Brookhaven National Laboratory (BNL, Laboratory), the Long Island Expressway and Flanders Bay, into which the river flows. The Peconic River cleanup goals<sup>1</sup> stated in the Record of Decision (ROD) and discussed in this report are as follows:

- The on-Laboratory cleanup areas (Areas A, B, C, D onsite) are shown in Figure 1-2. On Laboratory property, this alternative would focus on sediment in designated depositional areas. For the sections of the river on Laboratory property, the average mercury concentration after remediation will be less than 1 part per million (ppm)<sup>2</sup>, with a goal that all mercury concentrations in the remediated areas are less than 2 ppm following the cleanup. The 1 ppm limit is expected to protect human health and the environment under current conditions.
- The outside Laboratory cleanup areas are shown in Figures 1-2 (Area D offsite, E and P) and 1-3 (Manor Road). This remedy would focus on a more stringent cleanup target concentration outside BNL property. This alternative would also allow the greatest flexibility in the uses of the area as County parkland or any potential future development. Sediment would be removed from the ponded areas where methylation leading to bioaccumulation is most likely to occur, as well as other areas containing higher concentrations of contamination between the Laboratory property line and Connecticut Avenue. The average mercury concentration within the sediment outside Laboratory property will be less than 0.75 ppm, with a goal that all mercury concentrations in the remediated areas are less than 2 ppm following the cleanup.

Within this report, the term “onsite” refers to Laboratory property, and the term “offsite” refers to property outside the Laboratory. “Routine” samples are collected as part of the annual post-cleanup monitoring program. “Supplemental” sediment or water column samples are

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<sup>1</sup> BNL, 2004. Final Operable Unit V Record of Decision for Area of Concern 30 (Peconic River), November 3, 2004, Brookhaven Science Associates, Upton, NY, pages iii, 26.

<sup>2</sup> The ROD states the cleanup requirements in terms of ppm (parts per million). This report states all concentrations in terms of the units of contaminant per unit of environmental matrix in which the contaminant is found, for example milligrams per kilogram (mg/kg). For mercury in sediment the concentration is expressed as mg of mercury per kg of sediment. The terms mg/kg and ppm are equivalent, hence one mg/kg equals one ppm.

collected to further evaluate the extent of contamination surrounding a specific routine sample that may be particularly elevated, for example greater than the 2.0 mg/kg mercury goal for sediment.

**Sediment:**

Analytical results for the 2009 routine annual sediment monitoring indicated that none of the 30 samples had a mercury concentration greater than or equal to 2.0 mg/kg. The 15 routine sediment sampling stations located on BNL property had a 2009 average mercury concentration in the sediment of 0.40 mg/kg (vs an average limit of 1.0 mg/kg). Offsite, the 14<sup>3</sup> routine sediment sampling stations located between the BNL boundary and the downstream extent of the Manor Road cleanup area, had a 2009 average of 0.26 mg/kg (vs a average limit of 0.75 mg/kg) (Table 2-1).

A routine 2008 sediment sample collected at station PR-SS-38 had a mercury concentration of 2.1 mg/kg. When a routine sediment sample exceeds 2.0 mg/kg of mercury, BNL/DOE collects five supplemental sediment samples within an 80-100 square foot area surrounding and including the original sample to evaluate whether the result represents an area of mercury concentration greater than 2.0 mg/kg. The PR-SS-38 supplemental sediment samples were collected on August 6, 2009. Figure 2-2 shows all post-clean up PR-SS-38 sediment mercury data. The results for the five supplemental samples ranged from 0.35 mg/kg mercury to 3.1 mg/kg mercury. The average of these five samples was 1.37 mg/kg mercury with only one sample greater than 2.0 mg/kg. The average for all eight mercury samples collected within five feet of PR-SS-38 since the cleanup was completed in 2004 is 1.43 mg/kg.

**Recommendation 1:** BNL/DOE recommends that the PR-SS-38 area does not require additional action other than continued routine annual sediment monitoring through the Five Year Review in 2011.

Two supplemental sediment sample (PR-WC-06-SS-01) were collected in 2009 at the same location as the PR-WC-06 water column sampling station to evaluate the sediment as a potential source for the elevated surface water mercury results for samples collected in 2006

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<sup>3</sup> The Donahue's Pond sample at PR-DP-01 (0.0026 mg/kg) was excluded from the offsite average because it is downstream of the cleanup area.

(1,360 ng/L) and 2008 (876 ng/L). Both sediment results were greater than 2.0 mg/kg mercury (8.8 mg/kg and 7.2 mg/kg).

To determine whether the two supplemental sediment samples collected in June and July of 2009 indicate a potentially larger area of sediment with mercury concentrations greater than 2.0 mg/kg, BNL/DOE collected five supplemental sediment mercury samples within the 80 – 100 square foot area surrounding and including the PR-WC-06-SS-01 station area. The mercury concentration of the five samples ranged between 0.5 mg/kg and 15.8 mg/kg with four of the five samples equal to or greater than 7.7 mg/kg (Figure 2-3). The average mercury concentration for the five supplemental samples was 8.28 mg/kg.

On January 28, 2010 a total of 45 additional supplemental mercury samples were collected along seven transects between 150 feet upstream and 150 feet downstream of the PR-WC-06-SS-01 surface water and sediment monitoring stations. Five of the 45 sediment mercury samples (one sample in each of five transects) exceeded the 2.0 mg/kg goal. The maximum January 2010 mercury concentration was 15 mg/kg, and the average mercury concentration for all 45 January transect samples was 1.37 mg/kg. The average mercury concentration for all 52 samples (including the seven (7) 2009 sediment samples collected within five (5) feet of the PR-WC-06 water column sampling station) was 2.29 mg/kg, with a maximum of 15.8 mg/kg.

**Recommendation 2:** BNL/DOE recommend that further action in the PR-WC-06 area be evaluated with EPA, DEC, and SCDHS.

#### **Surface Water:**

The water column concentrations of total mercury trended (with fluctuations) gradually downward from a June and July maximum of 127 ng/L and 116 ng/L, respectively at the STP outfall (STP-EFF-UVG) to an onsite low of 38.2 ng/L in June at PR-WC-07 and 22.8 ng/L at PR-WC-06 in July. Downstream of the PR-SS-15-U1 area the mercury concentrations continued to decline until reaching PR-WC-01 (8.37 ng/L, 7.59 ng/L, 2.98 mi.) at Schultz Road. In the next 1.79 mile section of the river between PR-WC-01 and PR-WCS-04, the June and July mercury concentrations remained between approximately 5.97 ng/L and 15.4 ng/L. Finally, in the 2.46 mile section of the river downstream of PR-WCS-04 (15.4 ng/L, 8.81 ng/L, 4.77 mi.), the June and July mercury concentrations were within the range of 3.17 ng/L to 3.84 ng/L, which

is below the historical maximum total mercury concentration at the Connetquot River reference station.

The 2009 sample results for methylmercury were also generally quite low. The single most elevated pair of methylmercury observations at the same station, other than the PR-SS-15-U1 area, was at PR-WC-05 (3.97 ng/L-June, 8.08 ng/L - July, 1.46 mi.). Downstream of the PR-SS-15-U1 area the maximum methylmercury concentration (June 17, 2.33 ng/L at PR-WC-03, 2.1 miles downstream of the STP) trended downwards over the next 5.13 miles, with minor fluctuations. The three stations between PR-WCS-05 (downstream of the cranberry bogs) and Connecticut Avenue (PR-WCS-07) had methylmercury concentrations less than the 0.89 ng/L historic maximum of all methylmercury measurements at the Connetquot River reference station.

The PR-SS-15-U1 transect is located 50 feet upstream of the BNL border. Because elevated mercury concentration were previously identified in the sediment at supplemental sediment sampling stations PR-SS-15-U1-L40 and PR-SS-15-U1-L65, BNL/DOE monitors the water column four times annually at two stations located 15 feet upstream and 15 feet downstream of the two elevated sediment mercury stations. Station PR-SS-15-U1-WC4 in this area had the highest 2009 June (367 ng/L) and July (169 ng/L) total mercury concentrations and highest methylmercury concentrations in June (7.96 ng/l) and July (11.1 ng/L) among all stations. The 2009 supplemental water column monitoring data indicate that the sediment at PR-SS-15-U1-L40 and PR-SS-15-U1-L65 had little impact on raising the total mercury and methylmercury concentrations in the water column in this section of the river and was not observed to substantially impact offsite transport.

**Recommendation 3:** BNL/DOE recommends that water column monitoring stations PR-SS-15-U1-WC1 through PR-SS-15-U1-WC4 continue to be monitored four times annually, as water levels permit, for total mercury, methylmercury and TSS through completion of cleanup activities in the PR-SS-15-U1 section of the Peconic River.

Extensive supplemental sampling between 2006 and 2008 has shown that a narrow section of the river sediment between 50 feet upstream of PR-SS-10 and 100 feet downstream of PR-SS-10 contains mercury concentrations between 2.1 mg/kg and 4.6 mg/kg. There are no sufficiently close routine water column sampling stations to evaluate the water column concentration of mercury and methylmercury in this area, to evaluate the potential exposure of

fish in this area to potentially elevated methylmercury concentrations and to evaluate the potential downstream transport of total mercury and methylmercury from this area.

**Recommendation 4:** BNL/DOE recommends that total mercury, methylmercury and TSS in the water column be monitored at two supplemental stations upstream and two supplemental stations downstream of transects PR-SS-10-U1 and PR-SS-10-D2 at the locations with mercury concentrations greater than 2.0 mg/kg. The stations will be monitored four times annually, as water levels permit, to evaluate the water column concentration of mercury and methylmercury in this area, to evaluate the potential exposure of fish in this area to potentially elevated methylmercury concentrations and to evaluate the potential downstream transport of total mercury and methylmercury from this area.

**Fish:**

Approximately 47 percent of the 231 fish caught were bottom feeders (109 brown bullheads) and 53 percent of the catch were predators (Table 4-3). Among the carnivores (122 fish), pumpkinseeds and bluegills composed 23 percent and 18 percent, respectively, of the total catch. Black crappie, chain pickerel and largemouth bass represented the remaining 11 percent of the catch. The average age of all fish analyzed for mercury was 3.6 years. Mercury concentrations were highest among fish collected in the most upstream locations and decreased with increasing distance downstream.

The average concentration of mercury for 93 fish tissue samples (individual fish and composites) from fish collected between the BNL STP and Donahue's Pond was 0.27 mg/kg. The 2009 average mercury concentration is significantly less than the 0.58 mg/kg average mercury concentration of pre-cleanup fish of the same species collected from the same or similar sections of the river by DEC in 1996 and 2001. For PCBs, 52 samples consisting of 12 individual fish samples and 40 composite fish samples were analyzed for seven PCB isomers. Three hundred sixty two (362) of the 364 analyses (seven (7) isomers times 52 samples) had values less than or equal to the detections limit. There were two detections of Aroclor 1254 at 13.7 and 18.9 ug/kg, with detection limits slightly less than 10 ug/kg. In general PCB concentrations were substantially improved over pre- cleanup limits.

The 2009 cesium-137 activities in Peconic River fish were low and ranged from below the detection limit to 0.511 pCi/g for an age two largemouth bass. The average cesium-137

concentration for all 61 fish samples was 0.17 pCi/g. The 2009 onsite average cesium-137 activity was 0.24 pCi/g. Offsite, the 2009 Peconic River fish had an average cesium-137 activity of 0.10 pCi/g.

### **Sediment Trap and Accelerated Sediment Removal**

As Recommendation 9 of the 2008 Peconic River Monitoring Report, BNL/DOE requested, and received, permission from NYSDEC to remove the sediment trap from the Peconic River. The sediment trap is located upstream of stream gauging station HQ near the site boundary. Because ideal low-water conditions did not occur during 2009 the sediment trap was not removed during 2009. BNL/DOE recommends that the sediment trap be removed during calendar year 2010. BNL/DOE further recommends that the sediment trap removal be coordinated with the accelerated removal of sediment with elevated mercury concentrations identified during post-cleanup sediment and surface water monitoring conducted in 2006, 2007, 2008 and 2009. Specific areas to be remediated will be identified through discussion between the EPA, SCDHS, NYSDEC and BNL/DOE. These discussions began on September 18, 2009 and January 29, 2010.

**Recommendation 5:** BNL/DOE will remove the sediment trap in coordination with the accelerated removal of sediment with elevated mercury concentrations. Both the sediment trap removal and the accelerated sediment removal are scheduled to be conducted in 2010.

**Table E-1. Recommendations and Requests Summary - 2009 Peconic River Post-Cleanup Monitoring**

Media	Recommendations Summary
<b>Sediment</b>	
1	<b>Recommendation 1:</b> BNL/DOE recommends that the PR-SS-38 area does not require additional action other than continued routine annual sediment monitoring through the Five Year Review in 2011.
2	<b>Recommendation 2:</b> BNL/DOE recommend that further action in the PR-WC-06 area be evaluated with EPA, DEC, and SCDHS
<b>Surface Water</b>	
3	<b>Recommendation 3:</b> BNL/DOE recommends that water column monitoring stations PR-SS-15-U1-WC-1 through PR-SS-15-U1-WC4 continue to be monitored four times annually, as water levels permit, for total mercury, methylmercury and TSS through completion of cleanup activities in the PR-SS-15-U1 section of the Peconic River.
4	<b>Recommendation 4:</b> BNL/DOE recommends that total mercury, methylmercury and TSS in the water column be monitored at two supplemental stations upstream and two supplemental stations downstream of transects PR-SS-10-U1 and PR-SS-10-D2 at the locations with mercury concentrations greater than 2.0 mg/kg. The stations will be monitored four times annually, as water levels permit, to evaluate the water column concentration of mercury and methylmercury in this area, to evaluate the potential exposure of fish in this area to potentially elevated methylmercury concentrations and to evaluate the potential downstream transport of total mercury and methylmercury from this area.
<b>Sediment Trap and Accelerated Sediment Removal</b>	
5	<b>Recommendation 5:</b> BNL/DOE recommends that the sediment trap be removed in coordination with the accelerated removal of sediment with elevated mercury concentrations. Both the sediment trap removal and the accelerated sediment removal are scheduled to be conducted in 2010.

## **SECTION 1 – INTRODUCTION**

### **1.1 Introduction**

Brookhaven National Laboratory (BNL) is a multi-disciplinary research facility located in Suffolk County, New York. Wastewaters at BNL are directed to the Sewage Treatment Plant (STP), and are treated and discharged in accordance with State Pollutant Discharge Elimination System (SPDES) limits into the western branch of the Peconic River. Historical discharges from the STP have resulted in elevated concentrations of heavy metals, polychlorinated biphenyls (PCBs) and radionuclides in the Peconic River sediments. The Final Operable Unit V Record of Decision (ROD) for Area of Concern 30 (Peconic River) specifies the cleanup limits and long-term monitoring requirements. Remediation of river sediments occurred in 2004 and 2005, and consisted of two phases of sediment excavation and removal, and post-excavation sampling. The sections of the river that were remediated are shown in Figures 1-1, 1-2 and 1-3.

The following three bullets excerpted from page iii of the ROD summarize the Peconic River cleanup goals which provide the basis for the annual monitoring program discussed in this report.

- The on-Laboratory cleanup areas are shown in Figure 1-2. On Laboratory property, this alternative would focus on sediment in designated depositional areas. For the sections of the river on Laboratory property, the average mercury concentration after remediation will be less than 1 ppm<sup>4</sup>, with a goal that all mercury concentrations in the remediated areas are less than 2 ppm following the cleanup. The 1 ppm limit is expected to protect human health and the environment under current conditions.
  
- The outside Laboratory cleanup areas are shown in Figures 1-2 and 1-3. This remedy would focus on a more stringent cleanup target concentration outside BNL property. This alternative would also allow the greatest flexibility in the uses of the area as County parkland or any potential future development. Sediment would be removed from the ponded areas where methylation leading to bioaccumulation is most likely to occur, as well as other areas containing higher

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<sup>4</sup> The ROD states the cleanup requirements in terms of ppm (parts per million). This report states all concentrations in terms of the units of contaminant per unit of environmental matrix in which the contaminant is found, for example milligrams per kilogram (mg/kg). For mercury in sediment the concentration is expressed as mg of mercury per kg of sediment. The terms mg/kg and ppm are equivalent, hence one mg/kg equals one ppm.

concentrations of contamination between the Laboratory property line and Connecticut Avenue. The average mercury concentration within the sediment outside Laboratory property will be less than 0.75 ppm, with a goal that all mercury concentrations in the remediated areas are less than 2 ppm following the cleanup.

- A monitoring program has been implemented to demonstrate the effectiveness of the cleanup. This includes near-term monitoring to establish the basis for the long-term monitoring program. As part of this program, the Department of Energy (DOE) will continue to evaluate all available data to determine if additional remediation is required to ensure the protection of human health and the environment. This program includes methylmercury water column sampling, sediment sampling, and fish sampling, and cover areas of interest both on and off BNL property.

In May 2004, BNL initiated a two-phased remediation effort to address contaminated sediments in the Peconic River. Phase 1, conducted between May and September 2004, removed approximately 13,000 cubic yards of river sediments from BNL property. Following the on-site cleanup, 788 post-excavation sediment monitoring points (located both within and outside the remediation areas) were sampled to evaluate the effectiveness of the Phase 1 activities. The Phase 1 activities resulted in a 96% reduction in average mercury concentration in river sediments on BNL property, from about 4.6 milligrams per kilogram (mg/kg) to 0.2 mg/kg (Envirocon, 2005). Phase 2, conducted between September 2004 and May 2005, removed approximately 8,200 cubic yards of river sediments situated outside of BNL property in Suffolk County parklands. Following the off-site cleanup, 1,442 and 149 post-excavation confirmation sediment sampling points were sampled (within and outside the cleanup areas) to evaluate the effectiveness of the Phase 2 activities in the section of the river from the BNL property line to Schultz Road, and within the Manor Road cleanup area, respectively. The Phase 2 activities resulted in a 95% reduction in average mercury concentration in river sediments downstream of the BNL property line, from 1.8 mg/kg to 0.09 mg/kg (excluding the Manor Road area). In the

Manor Road area, an 83% reduction in mercury sediment concentrations was realized (from 1.08 mg/kg to 0.19 mg/kg) (Envirocon, 2005).

The long-term effectiveness of the cleanup is monitored once annually for mercury, PCBs and cesium-137 in Peconic River sediment, and mercury and radionuclides in fish tissue. Fish collected on the laboratory property are additionally analyzed for PCBs. Fish are collected from sections of the river located on BNL property when samples can be collected without negatively impacting the well being of the fish population. Surface water monitoring for total mercury and methylmercury is performed twice annually (June and July or August, depending on river-water depths at the water column monitoring stations). Details of the sampling plan are described in the Operable Unit I Soils and Operable Unit V Long-Term Monitoring and Maintenance Plan (LTMM Plan). The 2009 Peconic River sampling was conducted in accordance with the long-term sampling requirements stated in the Peconic River Record of Decision. This document summarizes the results of the 2009 Peconic River monitoring. Sampling locations are shown on Figures 1-4, 1-5 and 1-6.

Of the analytes for which the ROD requires monitoring (mercury, methylmercury, PCBs, cesium-137), there is only cleanup goal for mercury in sediment. Analytes without ROD-required cleanup goals (methylmercury, PCBs, and cesium-137) are compared to their respective pre-cleanups concentrations to demonstrate the concentration trends of these contaminants since the cleanup. Additional chemical parameters that are part of the water quality monitoring are provided in the appendices. These parameters are only discussed in the text when they are relevant as supporting data for the goals of the monitoring program. Examples in the 2009 report include, but are not limited to: 1) chlorophyll-a and total organic carbon (TOC) concentrations that may indicate biologically active sections of the river and may influence the rate of conversion of total mercury to methylmercury and/or contribute to elevated Total Suspended Solids (TSS) measurements; 2) TSS measurements that may indicate potential inclusion of suspended sediment in the water column and a potential contribution to the mercury concentration of specific surface water samples; and, 3) dissolved oxygen (DO) that may influence the distribution and abundance of fish in various sections of the river.

## **1.2 Report Organization**

Sediment monitoring results are discussed in Section 2, water column monitoring results are discussed in Section 3, and fish monitoring results are discussed in Section 4. At the end of each section, recommendations are provided for that environmental medium (e.g. sediment, surface water, and fish).

The complete set of analytical data collected during the 2009 Peconic River Monitoring is provided in the Appendices.

## **SECTION 2 - 2009 SEDIMENT MONITORING RESULTS**

### **2.1 Introduction**

The Peconic River ROD requires that the long-term effectiveness of the cleanup be monitored once annually for mercury, PCBs and cesium-137 in sediment. The annual routine long-term sediment sampling began in June 2006 and was repeated in 2007, 2008 and 2009 according to the procedures discussed in Section 3.0 of Appendix C of the LTMM Plan (BNL, 2006). The locations of the annual sediment and surface water stations, listed in order from upstream of the STP to downstream of Connecticut Avenue, are shown in Figures 1-4, 1-5, and 1.6. The station labels, e.g. PR-SS-38/0.36, indicate the station name (PR-SS-38) and the distance of the station in miles upstream (negative number) or downstream (positive number) from the STP (e.g., 0.36 miles downstream for PR-SS-38)<sup>5</sup>.

For the on-site sections of the river, the Peconic River ROD required that the average mercury concentration in sediment samples collected after remediation be less than 1 part per million (ppm or mg/kg), with a goal that no individual mercury concentrations from sediment samples in the remediated areas exceeded 2 ppm mercury. The ROD also stated that the average mercury concentration in off-site sediment samples be less than 0.75 ppm, with a goal that no individual sediment sample exceeded 2 ppm mercury following the cleanup.

Ten percent of the samples were also analyzed for silver and copper. These analytes do not have cleanup goals specified in the ROD, and are therefore compared to pre-cleanup sediment concentrations to assess cleanup effectiveness.

The 2009 sediment samples were collected to: 1) evaluate potential changes in the annual concentrations of mercury in the sediment at the 30 routine sediment monitoring stations sampled each year; and, 2) collect supplemental mercury distribution data for routine sediment station PR-SS-38, which had a slightly elevated sediment mercury concentration in 2008 and for supplemental sediment monitoring station PR-WC-06-SS-01 which had an elevated water column mercury concentration in 2006 and 2008. The 2009 routine annual sediment sampling

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<sup>5</sup> Manor Road and Donahue's Pond sediment sampling stations are identified with an "MR" or "DP" rather than with an "SS": The water columns sampling stations are also identified on these maps, with "WC" replacing the "SS" to identify locations where surface water samples are collected (see Chapter 3). PR-WC-01 identifies the first water column sampling station upstream of Schultz Road, and PR-WCS-01 identifies the first water column sampling station downstream of Schultz Road.

results are discussed in Section 2.2, and the 2009 supplemental sampling results are discussed in Section 2.3 (PR-SS-38) and Section 2.4 (PR-WC-06-SS-01).

## **2.2 2009 Routine Sediment Monitoring Results**

As part of the Peconic River routine annual long-term monitoring program, sediment samples were collected at the 30 routine sediment monitoring stations shown on Figures 1-4, 1-5 and 1-6. Routine sediment monitoring stations are monitored on an annual basis. Monitoring stations that are sampled to gain additional information about a specific routine monitoring station sample result, or the area in which the routine monitoring station is located, are referred to as supplemental monitoring stations. The 2009 routine sediment monitoring results are summarized in Table 2-1 and plotted in Figure 2-1. All 30 routine sediment monitoring stations are located downstream of the STP and therefore have positive distances. Each sediment sample was analyzed for mercury, PCBs and cesium-137. BNL also routinely analyzes 10% of the samples for silver and copper.

Overall, in 2009 the 30 routine sediment monitoring stations had an average mercury concentration of 0.32 mg/kg. The sediment sampling stations located on BNL property had a 2009 average mercury concentration in the sediment of 0.40 mg/kg. The sediment sampling stations located outside BNL to and including Manor Road had a 2009 average of 0.26 mg/kg (Table 2-1). PR-DP-01, Donahue's Pond, was non-detect for mercury in 2009, but was excluded from the off-site average because it is located approximately two miles downstream of the most downstream cleanup area (Manor Road).

Figure 2-1 shows the 2009 routine sediment mercury results for the onsite, offsite and Manor Road monitoring stations. Also plotted are the pre-cleanup average mercury concentrations and the 2009 average mercury concentrations for the routine onsite sediment monitoring stations, the routine offsite monitoring stations to Schultz Road and the routine offsite monitoring stations at Manor Road. Note that the 2009 onsite average mercury concentration (0.40 mg/kg) had a 91.3 percent reduction relative to the pre-cleanup average (4.60 mg/kg). Similarly, the 2009 average mercury concentration for the offsite section of the river between the BNL boundary and Schultz Road (0.28 mg/kg) had an 84.4 percent reduction

relative to the pre-clean-up average (1.79 mg/kg) and the 2009 Manor Road area average (0.13 mg/kg) had an 88.0 percent reduction relative to the pre-clean-up average<sup>6</sup>.

Silver, copper, PCBs and cesium-137 are co-located with mercury in depositional areas. These co-located contaminants do not have clean-up goals, and were therefore compared with their pre-clean-up averages (Table 2-1). The 2009 silver, copper, PCB and cesium-137 concentrations were substantially lower than the pre-clean-up averages, and most of the 2009 PCB results were non-detect or close to the detection limits. Refer to Appendix A, B and C for detailed metal, PCB, and radionuclide analytical results, respectively.

### 2.3 2009 PR-SS-38 Supplemental Sediment Monitoring Results

The June 2008 mercury sediment concentration at PR-SS-38 was 2.1 mg/kg. Recommendation <sup>7</sup> of the 2008 Peconic River Monitoring Report was to collect five supplemental sediment mercury samples at and in the area surrounding PR-SS-38. The intent of this intensive sampling (5 samples within an 80-100 square foot area) was to determine whether the slightly elevated mercury concentration of 2.1 mg/kg was indicative of a larger area of sediment with mercury concentrations greater than 2.0 mg/kg.

The results of the 2009 PR-SS-38 supplemental sediment sampling and the 2006, 2007 and 2008 and 2009 routine PR-SS-38 mercury sampling are shown in Figure 2-2. As shown in the bottom of the data table within the figure, the average mercury concentrations for 2006, 2007 and 2008 (1.5 mg/kg, 0.97 mg/kg and 2.1 mg/kg, respectively) was 1.52mg/kg. The five 2009 supplemental sediment sampling results had an average mercury concentration of 1.37 mg/kg and ranged between 0.35 mg/kg and 3.1 mg/kg, with only one sample exceeding the 2.0 mg/kg goal. Finally, the average mercury concentration for all eight PR-SS-38 area samples collected between 2006 and 2009 was 1.43 mg/kg. Per the protocols established in the Data Quality Objectives (DQOs) of the Environmental Monitoring Plan Triennial Update, when the average mercury concentration of the supplemental sediment sample collected at the original sample

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<sup>6</sup> The pre-clean-up averages were obtained from Tables 8, 10 and 12 of the Final Closeout Report, Peconic River Remediation, Phases 1 and 2, Brookhaven National Laboratory prepared for Brookhaven Science Associates by Envirocon, Inc. August 25, 2005.

<sup>7</sup> **Recommendation 1 (of 2008 Peconic River Monitoring Report):** Per the protocols established in the Data Quality Objectives (DQOs) of the LTMM plan, BNL/DOE recommends that one additional sample be collected at the location of the PR-SS-38 sediment station (2008 concentration = 2.1 mg/kg) and that four sediment samples be collected at 5-foot intervals upstream, downstream, to the left, and to the right (facing upstream) of the PR-SS-38 station. The intent of the sampling is to determine whether the slightly elevated mercury concentration of 2.1 mg/kg is indicative of a larger area of sediment with mercury concentrations greater than 2.0 mg/kg.

location (PR-SS-38-O) and the four supplemental samples collected five feet upstream, downstream, to the left and to the right of the original location is less than the 2.0 mg/kg maximum individual sample goal, no additional action is required. The five 2009 supplemental sediment samples had an average mercury concentration of 1.37 mg/kg.

**Recommendation 1:** DOE/BNL recommends that no additional action is required for PR-SS-38 other than continued routine annual sampling through the Five Year Review in 2011.

## **2.4 2009 and 2010 PR-WC-06-SS-01 Supplemental and Transect Sediment Monitoring Results**

Supplemental sediment sampling at station PR-WC-06 was recommended in the Final 2008 Peconic River Monitoring Report (2008 Recommendation 6<sup>8</sup>) to evaluate the sediment as a potential source of the elevated mercury concentration detected at water column sampling station PR-WC-06 in June 2008 and August 2006. In June and July, 2009, as part of the 2009 routine water column sampling, a supplemental sediment sample was collected at PR-WC-06 immediately after collecting the routine water column sample. The site ID for this supplemental sediment station is PR-WC-06-SS-01. The top table in Figure 2-3 shows the June and July sediment mercury concentrations measured at supplemental sediment sampling station (PR-WC-06-SS-01) together with the water column concentrations of total mercury and TSS. Because the concentrations of mercury in the sediment (8.8 mg/kg, June 18, 2009 and 7.2 mg/kg, July 16, 2009) exceeded the 2.0 mg/kg cleanup goal for mercury, BNL implemented the process of confirming that the two sample results indicated an area of contamination rather than an elevated concentration of mercury at the specific sample point. As specified in the BNL Environmental Monitoring Plan, this involves characterizing the 80-100 square foot area surround the sample point with the mercury concentration greater than or equal to 2.0 mg/kg.

On December 1, 2009 BNL/DOE characterized the 80-100 square foot area surrounding PR-WC-06-SS-01 by collecting a supplemental sediment mercury sample at the location of the

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<sup>8</sup> **2008 Recommendation 6** – PR-WC-06 has shown markedly elevated total mercury and TSS concentrations on two occasions: June 2008 (876 ng/L total mercury, and 79.1 mg/L TSS) and August 2006 (1,360 ng/L total mercury and 116 mg/L TSS). These two sample results merit further investigation of a potential sediment source at the sample location. BNL/DOE recommends that a sediment sample be collected at water column sampling station PR-WC-06 as part of the June 2009 and July/August 2009 mercury, methylmercury and TSS water column monitoring rounds. The sediment sample at the PR-WC-06 station will be collected after the routine mercury, methylmercury and TSS water column and water quality samples and field data are collected.

original PR-WC-06 sediment sample and four additional supplemental sediment samples, each at a five foot distance upstream, downstream, to the left and to the right of the original station. These results are shown in Figure 2-3. The five results ranged between 0.5 mg/kg mercury and 15.8 mg/kg mercury in the sediment. The average mercury concentration was 8.24 mg/kg.

The Environmental Monitoring Plan specifies that when the average mercury concentration for the five supplemental samples collected within five feet of the original sample is greater than or equal to 2.0 mg/kg, BNL/DOE will characterize the river bed from bank to bank with mercury sediment samples collected at 25 foot distances along each of the seven transects. The transects were spaced at 50 foot intervals from 150 feet upstream to 150 feet downstream of PR-WC-06-SS-01. The seven transects were sampled on January 28, 2010.

The 45 mercury sample results for the seven January 28 transects are shown on Figure 2-<sup>9</sup>. Five of the 45 sediment mercury samples (one sample in each of five transects) exceeded the 2.0 mg/kg goal. The maximum mercury concentration was 15 mg/kg, and the average mercury concentration for all 45 transect samples was 1.37 mg/kg. The average mercury concentration for all 52 samples (including the seven (7) 2009 supplemental sediment samples collected within five (5) feet of the PR-WC-06 water column sampling station) was 2.29 mg/kg, with a maximum of 15.8 mg/kg.

**Recommendation 2:** BNL/DOE recommends that further sediment action in the PR-WC-06 area be evaluated with EPA, DEC, and SCDHS

## 2.5 Sediment Summary and Recommendations

Analytical results for the 2009 routine annual sediment monitoring indicated that none of the 30 samples had a mercury concentration greater than or equal to 2.0 mg/kg. The 15 routine sediment sampling stations located on BNL property had a 2009 average mercury concentration in the sediment of 0.40 mg/kg (vs an average limit of 1.0 mg/kg). Offsite, the 14<sup>10</sup> routine sediment sampling stations located between the BNL boundary and the downstream extent of the Manor Road cleanup area, had a 2009 average of 0.26 mg/kg (vs a average limit of 0.75 mg/kg) (Table 2-1).

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<sup>9</sup> Table 2-2 contains all 2009 PR-WC-06 sediment mercury data collected through January 28, 2010.

<sup>10</sup> The Donahue's Pond sample at PR-DP-01 (0.0026 mg/kg) was excluded from the offsite average because it is downstream of the cleanup area.

A routine 2008 sediment sample collected at station PR-SS-38 had a mercury concentration of 2.1 mg/kg. When a routine sediment sample exceeds 2.0 mg/kg of mercury, BNL/DOE collects five supplemental sediment samples within an 80-100 square foot area surrounding and including the original sample to evaluate whether the result represents an area of mercury concentration greater than 2.0 mg/kg. The PR-SS-38 supplemental sediment samples were collected on August 6, 2009. Figure 2-2 shows all post-clean-up PR-SS-38 sediment mercury data. The results for the five supplemental samples ranged from 0.35 mg/kg mercury to 3.1 mg/kg mercury. The average of these five samples was 1.37 mg/kg mercury with only one sample greater than 2.0 mg/kg. The average for all eight mercury samples collected within five feet of PR-SS-38 since the cleanup was completed in 2004 is 1.43 mg/kg.

**Recommendation 1:** BNL/DOE recommends that the PR-SS-38 area does not require additional action other than continued routine annual sediment monitoring through the Five Year Review in 2011.

Two supplemental sediment sample (PR-WC-06-SS-01) were collected in 2009 at the same location as the PR-WC-06 water column sampling station to evaluate the sediment as a potential source for the elevated surface water mercury results for samples collected in 2006 (1,360 ng/L) and 2008 (876 ng/L). Both sediment results were greater than 2.0 mg/kg mercury (8.8 mg/kg and 7.2 mg/kg).

To determine whether the two supplemental sediment samples collected in June and July of 2009 indicate a potentially larger area of sediment with mercury concentrations greater than 2.0 mg/kg, BNL/DOE collected five supplemental sediment mercury samples within the 80 – 100 square foot area surrounding and including the PR-WC-06-SS-01 station area. The mercury concentration of the five samples ranged between 0.5 mg/kg and 15.8 mg/kg with four of the five samples equal to or greater than 7.7 mg/kg (Figure 2-3). The average mercury concentration for the five supplemental samples was 8.28 mg/kg.

On January 28, 2010 a total of 45 additional supplemental mercury samples were collected along seven transects between 150 feet upstream and 150 feet downstream of the PR-WC-06-SS-01 surface water and sediment monitoring stations. Five of the 45 sediment mercury samples (one sample in each of five transects) exceeded the 2.0 mg/kg goal. The maximum January 2010 mercury concentration was 15 mg/kg, and the average mercury concentration for all 45 January transect samples was 1.37 mg/kg. The average mercury concentration for all 52

samples (including the seven (7) 2009 supplemental sediment samples collected within five (5) feet of the PR-WC-06 water column sampling station) was 2.29 mg/kg, with a maximum of 15.8 mg/kg.

**Recommendation 2:** BNL/DOE recommend that further action in the PR-WC-06 area be evaluated with EPA, DEC, and SCDHS.

## **SECTION 3 - 2009 WATER COLUMN MONITORING RESULTS**

### **3.1 Introduction**

The LTMM Plan indicates that in June and August of each year, 23 water column monitoring stations in the Peconic River including one reference station in the Connetquot River will be sampled for total mercury, methylmercury and TSS. The reference sample from the Connetquot River was collected to provide information on total mercury and methylmercury levels in a nearby system that is not impacted by a known mercury source. It serves as a basis for comparison to data collected from the Peconic River upstream of the STP, but because it is only a single sample location, the Connetquot River reference station should not be considered to be representative of “background”.

Table 3-1 describes the water column locations, schedules and sampling frequencies. Table 3-2 provides the analytical results and the field data for the stations with conditions that permitted sampling. For stations that could not be sampled because of low water levels, Table 3-2 provides only the river depth. Tables 3-3 and 3-4 provide historical data for the 2006 -2009 post-cleanup period. Refer to the Final 2008 Peconic River Monitoring Report for detailed monitoring data prior to 2006. In future years, the historic data in these two tables will report data for the current year and the data for the previous three years.

### **3.2 Data Collection Summary**

The Peconic River water column monitoring stations and the Connetquot River station are sampled twice annually for mercury, methylmercury and TSS. Peconic River water column sample locations are shown in Figures 1-4, 1-5 and 1-6 together with the sediment sample locations. Stations whose identification number begins with a “PR-WC-” are water column stations located upstream of Schultz Road. The “PR-WC” station numbers increase from PR-WC-01 with increasing distance upstream of Schultz Road. The water column stations that are downstream of Schultz Road begin with “PR-WCS-”. The “PR-WCS-” station numbers increase from PR-WCS-01 with increasing distance downstream of Schultz Road.

Two rounds of post-remediation water column sampling have been conducted in June and August of each year between 2005 and 2007. However, during the August sampling round the Peconic River water levels have occasionally been too low to collect representative samples at

several of the stations. Field observations in 2008 and 2009 indicated that water levels in the river were decreasing sufficiently rapidly to jeopardize an August collection. In response to these observations, the second round of the 2008 and 2009 routine annual mercury, methylmercury and TSS water column monitoring was accelerated to begin in July.

In 2007, a minimum required water depth of one foot was established for the water sampling program to minimize potential re-suspension and sampling of river sediment during water column sampling. Sediment re-suspension may confound the interpretation of surface water analytical results. During 2007, 2008 and 2009, an attempt was made to relocate a sampling point to deeper water within the general area scheduled for sampling, if the water depth at a sample station was less than one foot. The stations that most frequently cannot be sampled are located upstream of where the STP effluent enters the river. The STP effluent enters the river approximately 50 feet upstream of station PR-WC-11DS, Figure 1-4.

All post-remediation total mercury (unfiltered), methylmercury (unfiltered), and TSS (unfiltered) samples were analyzed by Brooks Rand, LLC of Seattle, Washington, according to the methodologies summarized in the Operable Unit I/V LTMM Plan and described in greater detail in the Sampling Plan for Mercury and Methylmercury in the Water Column of the Peconic River (QEA, 2003) and the 2004 Sampling Plan for Mercury and Methylmercury in the Water Column of the Peconic River between Schultz Road and Connecticut Avenue (QEA, 2004a). These two sampling plans are based on United States Environmental Protection Agency (EPA) Method 1669.<sup>11</sup> In addition, river flow and water quality parameters such as water temperature, dissolved oxygen, and pH, were measured at each location.

Quality assurance and quality control (QA/QC) samples included collection of field blanks, field replicates and pairs of matrix spike/matrix spike duplicates (MS/MSD). Equipment blanks were not necessary, since disposable sampling equipment was used at each sampling location.

The standard method for collecting Peconic River water column samples for total mercury, methylmercury and TSS analysis consists of collecting a single, large (2-liter) volume water sample at each sampling location. The collected sample is then analyzed at the Brooks Rand laboratory for analysis of the three analytes. This methodology ensures that the analytical

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<sup>11</sup> U.S. EPA, 1996. *Method 1669, Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, July 1996, Office of Science and Technology, Office of Water, Engineering and Analysis Division (4303) U.S. Environmental Protection Agency, Washington DC 20460.

results for each water sampling location represent the same water mass. This aids the interpretation of potentially anomalous results.

In addition to the routine mercury, methylmercury and TSS sampling, routine water quality sampling was also conducted to assist in the interpretation of the mercury and methylmercury data. This program collects water quality samples from eight stations distributed throughout the remediated sections of the river approximately two to three weeks prior to, during, and after the June and July mercury, methylmercury and TSS sampling (Table 3-1). A total of five water quality rounds were conducted in 2009. Three of the five rounds (the “short” rounds) were stand-alone water quality surveys (i.e. mercury and methylmercury samples were not collected). Eight stations, water level permitting, are sampled during the short rounds. Two rounds (the “long” rounds) of water quality monitoring are performed concurrent with the mercury, methylmercury and TSS water column sampling. Twenty three river stations<sup>12</sup> the STP effluent are sampled, water levels permitting, during the long rounds.

### **3.3 Monitoring Results**

Analytical results and field data for each mercury, methylmercury and TSS water sample collected in June 2009 and July 2009 are summarized in Table 3-2 and are detailed in Appendix D. Comparisons of the June and July 2009 results to those obtained in previous June post-cleanup sampling rounds (2006 through 2008) are presented on Table 3-4 (June) and Table 3-5 (July). The locations of the sampling stations are shown in Figure 1-4 (PR-WC-15 to PR-WC-05), Figure 1-5 (PR-WC-05 to PR-WCS-02) and Figure 1-6 (PR-WCS-03 to PR-WCS-07). Total mercury, TSS, methylmercury, and percent methylmercury concentrations are plotted on Figures 3-1, 3-2, 3-3, and 3-4, respectively. During the June and July 2009 long round, samples were collected at 21<sup>13</sup> and 18<sup>14</sup>, respectively of the 24<sup>10</sup> routine water column monitoring stations.

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<sup>12</sup> The 23 river stations include the 22 Peconic River stations and one Connetquot River station (Table 3-1). In addition to the river monitoring stations, a grab sample is also routinely collected from the STP effluent. This sample is collected from within the Ultra Violet (UV) chamber adjacent to the former chlorine house. The total number of routine water column stations thus equals 24.

<sup>13</sup> Three (PR-WC-14, PR-WC-13 and PR-WC-04) of the 24 stations were not sampled due to water levels less than 12 inches.

<sup>14</sup> Six (PR-WC-15, PR-WC-14, PR-WC-13, PR-WC-11DS, PR-WC-04, and PR-WC-02) of the 24 stations were not sampled due to water levels less than 12 inches.

The Peconic River remediation was completed onsite in September 2004 and was completed offsite in May 2005. Post-cleanup monitoring began in 2006. Consequently, 2009 was the fourth year of post-remediation surface water monitoring.

### 3.4 Total Mercury

Figure 3-1 shows the mercury concentrations at each sample station (Site ID) and the distance of the sample station upstream (negative distance) or downstream (positive distance) from the BNL STP. For the 18 stations that were sampled in both June and July, the June and July total mercury concentrations were generally very similar, as shown in Figure 3-1.

Because of the general similarity of the June and July total mercury results for the 18 sample stations that had sufficient water depth to be sampled during both sampling events, the sample results for both months will be discussed together. For the 18 cases that were sampled in both June and July, the results will be identified in the text in parentheses with the distance of the sample station from the STP. For example PR-WC-12-D7 (the June result, the July result, and the distance upstream or downstream from the STP would be represented as PR-WC-12-D7 (11.8 ng/L, 8.92 ng/L, -0.04mi.). Stations that were sampled only once will be identified with the sample month and sample station in the text and the concentration and distance in parentheses. For example, “The June total mercury concentration for PR-WC-15 (13.1 ng/L) was the most upstream sample collected during the June 2009 water column sampling.”

The two most upstream sample stations with sufficient water depth to collect a sample in June were PR-WC-15 (13.1 ng/L, -0.17 mi.), and PR-WC-12-D7 (11.8 ng/L, 8.92 ng/L, -0.04mi.), which could be sampled in both June and July. The total mercury concentrations for these two stations were substantially lower than STP-EFF-UVG (127 ng/L, 115 ng/L, 0.0 mi). Downstream of STP-EFF-UVG, the concentration decreased sharply at PR-WC-11DS in June (56 ng/L, 0.01 mi.) and then increased at PR-WC-10 (73.4 ng/L, 110 ng/L, 0.3 mi.)<sup>15</sup>. The total mercury concentrations at PR-WC-09 (98.7 ng/L, 100 ng/L, 0.56 mi.) were similar to PR-WC-10. The total mercury concentrations at the next two stations [PR-WC-08 (20.6 ng/L, 44.4 ng/L, 0.78 mi.) and PR-WC-07 (38.2, 44.7, 0.96 mi.)] decreased substantially, relative to PR-WC-10.

<sup>15</sup> The STP EFF-UVG sample is collected from a vault in the Ultraviolet (UV) chamber through which the effluent passes for UV sterilization prior to being discharged to the river. The decrease in total mercury concentration is most likely caused by dilution of the STP effluent by mixing with the lower mercury concentration flow from upstream (PR-WC-12-D7, 11.8 ng/L, -0.01mi.) from upstream of the STP.

At PR-WC-06 the June and July 2009 total mercury concentrations (43.7 ng/L, 93.6 ng/L, 1.1 mi.) in the water column were both substantially lower than the June 2008 (876 ng/L) concentration. As discussed in Section 2-4 a June and a July sediment sample (PR-WC-06-SS-01) was collected at the time and location of the June and July water column samples. These data are shown in Figure 2-3 and Table 3-2, respectively. As noted in the Final 2008 Peconic River monitoring Report, the potential sources of the elevated surface water mercury concentrations at PR-WC-06 include downstream transport of mercury in the water column and suspension of mercury-containing sediment from the river bottom at PR-WC-06.

Downstream of PR-WC-06, the 2009 total mercury concentrations decreased substantially between PR-WC-05 (70.2 ng/L, 22.9 ng/L, 1.46 mi.) and PR-WC-01 (8.37 ng/L, 7.59 ng/L, 2.98 mi.) then stabilized at concentrations slightly greater than the Connetquot River historical maximum (4.52 ng/L) between station PR-WC-01 and station PR-WCS-03 (8.78 ng/L, 6.87 ng/L, 4.44 mi.) before increasing at PR-WCS-04 (15.4 ng/L, 8.81ng/L, 4.77 mi.). Between PR-WCS-05 (3.56 ng/L, 3.84 ng/L, 6.04 mi.) and the most downstream station, PR-WCS-07, (3.81 ng/L, 3.53 ng/L, 7.23 mi.), the total mercury concentrations decreased to concentrations less than the Connetquot River historical maximum total mercury concentration.

### **3.5 Total Suspended Solids (TSS)**

The June and July 2009 TSS measurements are notable in two ways: First, among the eighteen out of twenty four routine sampling stations with sufficient depth for both a June and a July measurement, the TSS values were remarkably similar. Station PR-WC-05 had the maximum difference (8.1 mg/L) between the June and July TSS measurements (June, 11.5 mg/L – July 3.4 mg/L) (Table 3-2, Figure 3-2). Second, the 2009 sampling season contained the second and third lowest average TSS concentrations of all summer sampling events since water column monitoring began in 2003. More importantly, the mean TSS value for all samples collected in 2009 (3.88 mg/L) was substantially lower than for any other sampling season. Most importantly, the 2009 sampling season also had the lowest average (9.85 mg/L) of the maximum TSS concentration from each of the two annual sampling rounds (June maximum = 12.4 mg/L, July maximum =7.3 mg/L). The importance of the low 2009 TSS concentrations is related to the relationship between elevated mercury concentrations in the surface water and elevated TSS concentrations at stations with elevated concentrations of mercury in the sediment. Historically, the maximum total mercury concentrations in the water column were associated with high TSS

measurements. The 2009 annual average Peconic River mercury concentration (29.88 ng/L) is the lowest annual average mercury concentration since the initiation of water column sampling in 2003.

### **3.6 Methylmercury and Percent Methylmercury**

Methylmercury is the biologically toxic form of mercury that is created by conversion of inorganic mercury to methylmercury by bacteria.<sup>16</sup> The percent methylmercury is an indication of the suitability of the environment to convert inorganic mercury to methylmercury. Percent methylmercury was calculated by dividing the methylmercury concentration by the total mercury concentration, then multiplying the resulting ratio by 100. Therefore the magnitude of the percent methylmercury value represents the percent of the total mercury that is in the methyl form. Large percent methylmercury values indicate areas in which the conditions are more appropriate for converting inorganic mercury to methylmercury than locations with low percent methylmercury. Large percent methylmercury values do not necessarily represent large masses of methylmercury unless the total mercury concentrations are also large. The June and July 2009 methylmercury data are shown on Table 3-2 (upper and lower panels, respectively) and are plotted on Figure 3-3. Percent methylmercury data are plotted on Figure 3-4.

Upstream of the BNL STP methylmercury samples were collected at two locations in June, PR-WC-15 (1.99 ng/L, -0.17 mi.) and PR-WC-12-D7 (2.71 ng/L, -0.04 mi.) and one location in July, PR-WC-12-D7 ( 2.63 ng/L, -0.04 mi.). All sampling stations between the STP outfall and PR-WC-06 (2.44 ng/L, 1.79 ng/L, 1.1 mi.) had methylmercury concentrations within, or lower than the range of methylmercury concentrations (1.99 ng/L to 2.71 ng/L) of the two stations upstream of the STP Table 2, Figure 3-3). The June and July methylmercury data for the next station downstream, (PR-WC-05, 1.46 mi.) shows a considerable increase in methylmercury concentration from June (3.97 ng/L) to July (8.08 ng/L). The marked increase in the July percent methylmercury between June (6 percent) to July (35 percent) indicates a substantial improvement in conditions suitable for conversion of mercury to methylmercury in the section of the river where PR-WC-05 is located. The June and July field data (Table 3-2) show that the dissolved oxygen concentration dropped from 8.45 mg/L to 0.37 mg/L between June and July 2009. Decreased dissolved oxygen concentration in the water column is associated with

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<sup>16</sup> Because methylmercury is in a dissolved form, the mass of mercury contained in methylmercury is included in the total mercury measurement.

increased methylmercury concentration in the water column. Low flow conditions (0.03 feet per second) at PR-WC-05 minimized or prevented downstream migration of methylmercury from the PR-WC-05 area, allowing methylmercury to accumulate in the PR-WC-05 section of the river. Because there was little to no flow entering or leaving the PR-WC-05 area during the July monitoring period, methylmercury that was produced in this area is likely to have accumulated over time. This as well as the improved conditions for methylation and the elevated mercury concentrations in the sediment in the area<sup>17</sup>, are the likely causes of the elevated July methylmercury concentration.

The June and July methylmercury concentrations at PR-WC-03 (2.33 ng/L, 1.66 ng/L, 2.1 mi.) and the June methylmercury concentration at PR-WC-02 (2.47 ng/L, 2.52 mi.) are also within or slightly less than the methylmercury range of the two stations upstream of the STP-EFF-UVG. The methylmercury concentrations of the next five stations between and including PR-WC-01 (2.98 mi.) and PR-WCS-04 (4.77 mi.) are between 1.01 ng/L and 1.32 ng/L. The June and July 2009 methylmercury concentrations of the three most downstream samples are very similar to each other, PR-WCS-05 (0.884 ng/L, 0.778 ng/L, 6.04 mi.), PR-WCS-06 (0.786 ng/L, 0.663 ng/L, 6.75 mi.) and PR-WCS-07 (0.88 ng/L, 0.654 ng/L, 7.23 mi.), and all are less, or slightly less than the historical Connetquot River maximum (0.89 ng/L).

### **3.7 Water Column Mercury Concentrations at Transect PR-SS-15-U1**

In 2006 routine sediment sampling station PR-SS-15 had a mercury concentration of 14.2 mg/kg. Subsequent supplemental sampling in 2007 - 2009 indicated an area of elevated mercury in the sediment along transect PR-SS-15-U1 located 50 feet upstream of routine sediment sampling station PR-SS-15. In 2008 BNL/DOE started monitoring the water column to evaluate the potential for downstream transport of mercury from the section of the PR-SS-15-U1 transect with elevated mercury in the sediment. The 2009 water column data did not substantiate significant downstream transport.

To make the water column sampling more representative of annual flow conditions, Recommendation 5<sup>18</sup> of the Final 2008 Peconic River Monitoring Report increased the frequency

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<sup>17</sup> PR-WC-05 is located in the PR-SS-15 section of the Peconic River. See Section 2-4 of the Final 2008 Peconic River Monitoring Report for details on the elevated mercury concentrations in the PR-SS-15 area.

<sup>18</sup> **Recommendation 5** – 2008 Final Peconic River Monitoring Report , page 11“BNL/DOE recommends that monitoring the upstream and downstream concentration of total mercury, methylmercury and TSS at water column

of surface water monitoring upstream and downstream of the PR-SS-15-U1 transect from two times per year to four times per year through 2010, as water levels permitted. Recommendation 5 was implemented on March 12, April 23, June 17 and July 15, 2009. As part of an analytical laboratory evaluation, the March and April samples were split and analyzed by two independent contractor laboratories. The March total mercury samples were analyzed by both laboratories as both filtered and unfiltered sub-samples. The 2009 total mercury, methylmercury and TSS data are shown in Figures 3-5, 3-6, and 3-7, respectively and Table 3-5.

Figures 3-5 to 3-7, show the spatial relationships of each of the four water column stations PR-SS-15-U1-WC-1, PR-SS-15-U1-WC-2, PR-SS-15-U1-WC-3 and PR-SS-15-U1-WC-4. For brevity these stations IDs are abbreviated as WC-1, WC-2, WC-3 and WC-4, respectively. Note that WC-4 and WC-3 are each 30 feet upstream of stations WC-1 and WC-2, respectively and that WC-1 and WC-2 are each 15 feet downstream of sediment sampling stations PR-SS-15-U1-L40 and PR-SS-15-U1-L65. The initial (2007), average and maximum mercury concentrations in the sediment at PR-SS-15-U1-L40 are 9.8 mg/kg, 6.3 mg/kg and 19 mg/kg and at PR-SS-15-U1-L65 are 34.5 mg/kg, 20.4 mg/kg and 36.8 mg/kg<sup>19</sup>.

On March 12, 2009 two filtered samples and two unfiltered samples were collected and provided to Lab 1 and Lab 2 for independent analysis (Table 3-5). For both Lab 1 and Lab 2, the total mercury concentrations for the two downstream filtered samples, WC-1, and WC-2, were only marginally higher than the total mercury concentrations for the two respective upstream stations, WC-4 and WC-3, respectively. This indicates that there was minimal, if any, increase in dissolved mercury concentration between the upstream and downstream stations. The March 12 Lab 1 unfiltered total mercury samples increased substantially between the two upstream stations, (WC-4, 57.2 ng/L and WC-3, 47 ng/L), and the two respective downstream stations, (WC-1, 91.6 ng/L and WC-2, 68 ng/L). These data, with the TSS data, indicated that a substantial proportion of the total mercury may have been attached to filterable suspended particles, as the TSS nearly doubled between WC-4 (6.1 mg/L) and WC-1 (12.1 ng/L) and the TSS between WC-3 (5.9 mg/L) and WC-2 (7.1 mg/L), increased by 1.2 mg/L, approximately 20.3 percent.

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monitoring stations PR-SS-15-U1-WC-1, PR-SS-15-U1-WC-2, PR-SS-15-U1-WC-3, and PR-SS-15-U1-WC-4 occur four times annually, as flow permits, through 2010 to evaluate potential downstream transport of mercury and methylmercury from sediment in the PR-SS-15-U1 area.”

<sup>19</sup> See Section 2-4 of the Final 2008 Peconic River Monitoring Report, September 30, 2009 for more detail on PR-SS-15-U1-L40 and PR-SS-15-U1-L65.

The April 23 samples were also split for analysis by Lab 1 and Lab 2, but only unfiltered samples were analyzed. For the WC4 and WC1 upstream/downstream pair of stations there was only a minor increase (3 to 4.3 ng/L) in total mercury in concentration for both Lab 1 and Lab 2.

Although the mercury and TSS concentrations for WC1, WC-2, WC-3 and WC-4 in June and July<sup>20</sup> were approximately the same or higher than in March and April, they do not indicate that the PR-SS-15-U1 area is a substantial source for downstream transport of mercury. For both June 17 and July 15 the upstream station WC-4 had mercury concentrations (367 ng/L, 169 ng/L) were substantially higher than at downstream station WC-1 (44.3 ng/L and 54.7 ng/L, respectively), located 30 feet downstream of WC-4. Similarly, at the upstream station WC-3 the July 15 total mercury concentration (104 ng/L) was substantially higher than at the downstream station WC-2 (53.5 ng/L), which is located 30 feet downstream of station WC-3 (Table 3-5). However, the June 17 total mercury concentration at WC-3 (54.8 ng/L) was similar to the June 17 total mercury concentration at WC-2 (53.1 ng/L).

TSS concentrations at WC-4 on June 17 and July 15 (30.4 ng/L, 25.4 ng/L, respectively) were also substantially larger than at Station WC-1 (8.56 mg/L, 7 mg/L), respectively. TSS concentrations at WC-3 on June 17 and July 15 (11.9 ng/L, 10.6 ng/L, respectively) were only slightly larger than at Station WC-2 (8.56 mg/L, 7 mg/L), respectively.

Two significant observations can be made: First, the elevated mercury concentrations in the sediment at PR-SS-15-U1-L40 and PR-SS-15-L65 sediment areas do not increase the water column concentration of mercury and TSS. If they did, the total mercury concentrations at the two downstream stations (WC-1 and WC-2) would routinely be substantially higher than at the upstream stations (WC-4 and WC-3, respectively). This was not the case for total mercury concentrations that were greater than 100 ng/L. The total mercury concentrations at the upstream stations are generally similar to or substantially higher at the upstream stations than at the respective downstream station. At total mercury concentrations less than 100 ng/L the relationships between the concentrations at the upstream stations (WC-4, WC-3) and the downstream stations (WC-1, WC-2) are somewhat variable.

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<sup>20</sup> Note that the spatial relationships of PR-WC-1 through PR-WC-4 for total mercury, methylmercury and TSS in the water column relative to each other and relative to elevated concentrations of mercury in the sediment are shown in Figures 3-5 and 3-7, respectively. Also note that the June 17 and July 15 samples were analyzed only as unfiltered samples and were also analyzed only by Lab 1 (Table 3-5).

The second significant WC-1, WC-2, WC-3 WC-4 area observation is that it appears that all three of the total mercury concentrations elevated above 100 ng/L may be associated with the suspension of sediment, potentially during the collection process. All three samples with mercury concentrations that were greater than 100 ng/L also had TSS concentrations that were greater than or equal to 10.6 mg/L. This premise is supported by the association with low water depths. Two of the three samples with total mercury greater than 100 ng/L (June 17 and July 15, WC-4) had water depths at the 1.0 foot level; the third sample (July 15, WC-3) had a river depth of 1.1 feet. Samples are not collected when the depth is less than 1.0 foot to avoid suspending sediment and associated mercury. As the amount of data for the WC-1, WC-2, WC-3, and WC-4 areas increase over the next two years these observations may be re-examined.

The methylmercury concentrations at stations WC-1 through WC-4 were substantially more elevated in June and July (7.38 to 11.1 ng/L range) than in March and April (0.625 to 1.48 ng/L range). Water column sampling station PR-WC-05, (RM 1.46) is located approximately 220 feet upstream of WC-4 and WC-3 and approximately 250 feet upstream of WC-01 and WC-02. The methylmercury concentrations at PR-WC-05 were 3.97 ng/L on June 17 and 8.08 ng/L on July 15 (Table 3-3). Assuming that on June 17 WC-04 and WC-03 received approximately 3.97 ng/L of methylmercury in downstream flow, then it appears that the mercury in the sediment between PR-WC-05 and WC-4 (7.96 ng/L) and WC-3 (7.94 ng/L) increased the methylmercury burden in the water column by approximately 4 ng/L. Likewise, assuming that on July 15, WC-04 and WC-03 received approximately 8.08 ng/L of methylmercury in downstream flow, then it appears that the methylmercury in the sediment between PR-WC-05 and WC-4 (11.1 ng/L) and WC-3 (8.68 ng/L) increased the methylmercury burden in the water column by approximately 0.68 to 3 ng/L. It is noteworthy that in the July sample the methylmercury concentration appears to have decreased substantially (11.1 ng/L to 9.15 ng/L) between WC-4 and WC-1 and decreased very slightly (8.68 ng/L to 8 ng/L) between WC-3 and WC-2. The apparent June decreases in methylmercury concentration were minor.

In summary, the 2009 supplemental water column monitoring data indicate that the sediment at PR-SS-15-U1-L40 and PR-SS-15-U1-L65 had little impact on raising the total mercury and methylmercury concentrations in the water column and was not observed to substantially impact the offsite transport of mercury.

### **3.8 Water Column Summary and Recommendations**

The water column concentrations of total mercury trended (with fluctuations) gradually downward from a June 19 and July 16 maximum of 127 ng/L and 116 ng/L, respectively at the STP outfall (STP-EFF-UVG) to an onsite low of 38.2 ng/L in June at PR-WC-07 and 22.8 ng/L at PR-WC-06 in July. Downstream of the PR-SS-15-U1 area the mercury concentrations continued to decline until reaching PR-WC-01 (8.37 ng/L, 7.59 ng/L, 2.98 mi.) at Schultz Road. In the next 1.79 mile section of the river between PR-WC-01 and PR-WCS-04, the June and July mercury concentrations remained between approximately 5.97 ng/L and 15.4 ng/L. Finally, in the 2.46 mile section of the river downstream of PR-WCS-04 (15.4 ng/L, 8.81 ng/L, 4.77 mi.), the June and July mercury concentrations were within the range of 3.17 ng/L to 3.84 ng/L, which is below the historical maximum total mercury concentration at the Connetquot River reference station.

The 2009 sample results for methylmercury were also generally quite low. The single most elevated pair of methylmercury observations, other than the PR-SS-15-U1 area, was at PR-WC-05 (3.97 ng/L, 8.08 ng/L, 1.46 mi.). Downstream of the PR-SS-15-U1 area the maximum methylmercury concentration (June 17, 2.33 ng/L at PR-WC-03, 2.1 miles downstream of the STP) trended downwards over the next 5.13 miles, with minor fluctuations. The three stations between PR-WCS-05 (downstream of the cranberry bogs) and Connecticut Avenue (PR-WCS-07) had methylmercury concentrations less than the 0.89 ng/L historic maximum of all methylmercury measurements at the Connetquot River reference station.

The PR-SS-15-U1 transect is located 50 feet upstream of the BNL border. Because elevated mercury concentration were previously identified in the sediment at supplemental sediment sampling stations PR-SS-15-U1-L40 and PR-SS-15-U1-L65, BNL/DOE monitor the water column four times annually at two stations located 15 feet upstream and 15 feet downstream of the two elevated sediment mercury stations. Station PR-SS-15-U1-WC4 in this area had the highest 2009 June (367 ng/L) and July (169 ng/L) total mercury concentrations and highest methylmercury concentrations in June (7.96 ng/l) and July (11.1 ng/L) among all stations. The 2009 supplemental water column monitoring data collected between the upstream pair of stations (WC-4 and WC-3) and their respective downstream set of stations (WC-1 and WC-2, respectively) indicate that the sediment at PR-SS-15-U1-L40 and PR-SS-15-U1-L65 had

little impact on raising the total mercury and methylmercury concentrations in the water column and was not observed to substantially impact offsite transport.

**Recommendation 3:** BNL/DOE recommends that water column monitoring stations PR-SS-15-U1-WC1 through PR-SS-15-U1-WC4 continue to be monitored four times annually, as water levels permit, for total mercury, methylmercury and TSS through completion of cleanup activities in the PR-SS-15-U1 section of the Peconic River.

Extensive 2006 -2008 supplemental sampling has shown that a narrow section of the river sediment between 50 feet upstream of PR-SS-10 and 100 feet downstream of PR-SS-10 contains mercury concentrations between 2.1 mg/kg and 4.6 mg/kg. There are no sufficiently close routine water column sampling stations to evaluate the water column concentration of mercury and methylmercury in this area, to evaluate the potential exposure of fish in this area to potentially elevated methylmercury concentrations and to evaluate the potential downstream transport of total mercury and methylmercury from this area.

To evaluate the potential downstream transport of total mercury and methylmercury from this area BNL/DOE will monitor total mercury, methylmercury and TSS at two supplemental water column monitoring stations located 30 feet upstream of the location of the 3.2 mg/kg and 3.5 mg/kg mercury sample points in transect PR-SS-10-U1 and two additional stations located 30 feet downstream of the 4.3 mg/kg sediment mercury station at transect PR-SS-10-D2. These stations will be monitored four times annually, water level permitting.

**Recommendation 4:** BNL/DOE recommends that total mercury, methylmercury and TSS in the water column be monitored at two supplemental stations upstream and two supplemental stations downstream of transects PR-SS-10-U1 and PR-SS-10-D2 at the locations with mercury concentrations greater than 2.0 mg/kg. The stations will be monitored four times annually, as water levels permit, to evaluate the water column concentration of mercury and methylmercury in this area, to evaluate the potential exposure of fish in this area to potentially elevated methylmercury concentrations and to evaluate the potential downstream transport of total mercury and methylmercury from this area

## **SECTION 4 - 2009 FISH MONITORING RESULTS**

### **4.1 Introduction**

The purpose of the Peconic River fish sampling program is to monitor the effectiveness of the Peconic River cleanup and to ensure that contaminants related to BNL operations do not create a potential human health or environmental risk from fish consumption. Per the Peconic River ROD, fish must be monitored once annually for mercury and cesium-137. Fish caught on BNL property must also be monitored once annually for PCBs. Fish will be sampled in sections of the river on laboratory property when samples can be collected without negatively impacting the well-being of the fish population. The LTMM Plan states that to the extent possible, five individual fish of sufficient size to obtain an edible fillet will be collected from each of two feeding guilds within each of the five collection areas (Area A, Area D [North Street], Area P [Schultz Road], Manor Road, and Donahue's Pond) indicated on Table 4-1 and Figures 1-4, 1-5 and 1-6. The two feeding guilds are the top carnivore guild (e.g. chain pickerel and largemouth bass) and the bottom feeder guild (e.g. brown bullheads and creek chubsuckers). The LTMM Plan specifies alternate locations when conditions do not allow sampling the five indicated areas. Area C, an alternate location for Area D, was also sampled in 2007, 2008 and 2009 to supplement the on-site fish data. BNL also routinely samples fish at other locations as part of the BNL environmental surveillance monitoring program. The environmental surveillance monitoring data are reported each year in the BNL Site Environmental Report.

#### **Fish Collection:**

With the support of fishery biologists from NYSDEC Region 1 and the Cold Spring Harbor Fish Hatchery, fish were collected in the following areas between March 19 and June 2, 2009 (Table 4-2): Area A (downstream of the BNL STP), Area C, Area D at North Street, Area P upstream of Schultz Road, Manor Road, and Donahue's Pond. Fishery biologists from the NYSDEC collected fish at Schultz Road and Manor Road, and fishery biologists from the Cold Spring Harbor Fish Hatchery collected fish samples from Donahue's Pond. The BNL field team collected fish from Area A, Area C and Area D, and assisted the Cold Spring Harbor fishery biologists and the DEC fishery biologists with their collections. The 2009 sampling was initiated

approximately 1 month earlier than in 2008 at Area A and Area C to approximately 3 months earlier than in 2008 at Donahue's Pond. The intent of accelerating the collection was to complete the fish sampling before routine seasonal decreases in water elevation in May, June and July caused the fish to leave the collection areas to avoid seasonally decreasing dissolved oxygen concentrations in Area D, Area P and Manor Road. Also influencing the earlier 2009 collection start was the earlier availability of support from DEC and the Cold Spring Harbor Fish Hatchery.

The gear used and the water chemistry results are shown on Table 4-2. The 2009 water temperatures at the four most upstream stations at which water temperature was collected were approximately 7.2 degrees C (Area C) to 21.7 degrees C (Manor Road) lower than the 2008 water temperature measurements. The dissolved oxygen concentrations of 13.67 mg/L at Area A and 10.63 and 15.19 mg/L at Area C were similar to or higher than the 2008 measurements (Area A, 12.3 mg/L) and Area C (10.7 mg/L). Both the 2009 and the 2008 dissolved oxygen concentrations in the upstream sections of the river at Area A and Area C were very supportive conditions for successful fish habitat. The 2009 dissolved oxygen concentrations at Area D ranged between 6.40 and 6.62 on May 5 and 7, respectively, and 5.08 on June 2, 2009. The dissolved oxygen concentrations during the April collections at Area P and Manor Road and the March collection at Donahue's Pond were also quite high in 2009, ranging between 9.98 (Area P) and 10.57 at Donahue's Pond in March 2009.

The total number of fish collected in 2009 (231 fish) was similar to the 2008 catch (200 fish) and the 2007 catch (195 fish). The distribution of fish collected from each sampling area was generally similar to the catch in 2008, with notable exceptions. In 2009 60 fish were collected from Area A versus 23 fish in 2008. Both the 2009 collection and the 2008 collection were completed with only one sampling event, so the fishing effort was similar. This indicates that the 2009 population density may have been substantially higher at Area A than the 2008 Area A population density. In 2009 two sampling events were conducted at Donahue's Pond versus one sampling event in 2008, and the 2009 catch of 42 fish was approximately double the 2008 catch. The Area P (Schultz Road) catch and effort relationship was the opposite of Donahue's Pond. In 2009 two sampling events at Area P produced a total of 4 fish versus 43 fish in 2008 from one sampling event.

Approximately 47 percent of the 231 fish caught were bottom feeders<sup>21</sup> (109 brown bullheads) and 53 percent of the catch were predators (Table 4-3). Among the carnivores (122 fish), pumpkinseeds and bluegills composed 23 percent and 18 percent, respectively, of the total catch. Black crappie, chain pickerel and largemouth bass represented the remaining 11 percent of the catch.

Overall, the number of fish collected was larger than the number of analytical fish samples due to the need to composite some of the fish in order to achieve the required fish tissue sample mass specified by the analytical laboratory (see below).

### **Fish Preparation:**

The BNL sample team measured the total length and weight of each individual fish, filleted each fish and weighed the fillets of each fish, labeled and bagged each fillet and then froze the fillets. The sampling team then grouped appropriate fillets of the same species into composites and sent the frozen samples via overnight delivery to the analytical laboratory (GEL, Inc.) for processing and analysis.

### **Fish Tissue Compositing:**

The Peconic River ROD requires that mercury, PCBs and radionuclides be evaluated for fish collected on BNL property, and that mercury and radionuclides be evaluated for fish collected outside BNL property. All fish samples consist only of edible tissue that was removed from the fish (filleted) by the BNL field team. The required wet weight tissue mass for mercury, PCB and radionuclide analysis are 5 g, 120 g, and 50 g, respectively. Because the proportion of edible fish tissue to total body weight is highly variable depending on fish size and other factors, the filleted tissue from two or more fish must be composited together to obtain sufficient sample mass to obtain mercury, PCB and radionuclide analyses across the size range of Peconic River Fish. Table 4-4 shows the composition of the 51 composites analyzed in 2009.

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<sup>21</sup> Brown bullheads are the only bottom dwelling fish in the studied section of the Peconic River. Although brown bullheads represent bottom feeders they also are piscivorous (eat fish).

BNL/DOE followed EPA guidance<sup>22</sup> in limiting composites to fish of the same species, fish of similar lengths, and fish collected within a week of each other. To the extent practicable, the total length of the smallest fish was also generally equal to or greater than 75 percent of the total length of the largest fish in that composite.

For each area from which fish were collected, Table 4-4 identifies the Chain of Custody (COC) for each fish collected and each composite for that area. The Composite ID consists of the respective COC number (for example “25791”) followed by a unique identifier (for example “-bc1”) for each fish that was included in a composite. Table 4-4 also identifies the Fish ID (for example 09-101) for each fish that was included in each of the 21 fish composites, as well as the species, the total length, and the age of each fish. The Fish ID consists of the collection year (“09”) followed by a hyphen (“-”) and the sequential order in which the fish was collected, e.g. “101”). Hence “09-101” represents the 101<sup>st</sup> fish collected in 2009 a 214 mm age 3M brown bullhead. Finally, the average age of all fish within each composite is calculated as the average of the numeric ages of each fish within the composite. The five brown bullheads that were grouped into composite 27077-bc6 ranged in total length between 211 and 220 mm and had an average age of 3.0 years.

### **Fish Ageing:**

In 2008, BNL initiated the ageing of fish to help explain potential age-related relationships between fish contaminant concentrations and the completion of the cleanup. In September 2004, the onsite river cleanup was completed, and in April 2005 the off-site river cleanup was completed. Fish of age three or four years could have been born in a cleaned up area. However, there are no year-round barriers to migration between the various sections of the river located upstream of Donahue’s Pond (approximately river mile seven). None of the seasonal barriers to fish migration (e.g. the sediment trap) are sufficient to prevent fish migration during periods of high water. Therefore, it is safer to assume that four-year-old fish were born during the year that remediation was completed, and five-year-old fish were born prior to remediation being completed.

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<sup>22</sup> U.S. EPA 2000. Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories. Volume 1 Fish Sampling and Analysis, Third Edition, EPA-823-B-00-007, November 2007.

As fish grow, growth rings (similar to tree growth rings) called “annuli” are left on the fish scales and otoliths. Counting the annuli provides an estimate of fish age. Otoliths are calcified sensory organs that function in hearing and balance. Because otolith removal and preparation for ageing are very labor intensive, fish ageing is typically done on scales for scale-bearing fish (e.g. bass and sunfish). Otolith aging is typically done for fish that do not have scales, such as catfish. For the 2009 Peconic River fish, all species except brown bullheads (a type of catfish) were aged based on scale interpretation. Brown bullheads were aged by otolith interpretation.

Under contract to BNL, an independent experienced fish biologist performed the otolith removal. The brown bullheads were transferred to the fish biologist via COC. The contractor removed the otoliths and returned the otoliths and brown bullheads to BNL custody. The otoliths and the scales were then transferred to a second independent contractor (Ecologic, LLC) under separate COCs to prepare the scales and otoliths for age interpretation. Scales were first cleaned and then pressed into a clear cellulose acetate plastic slide material to make a lasting impression. The slides were then placed into scale envelopes labeled with the BNL Fish ID.

Otoliths were cleaned and embedded in epoxy, sectioned into thin slices, then fixed onto a glass slide with clear epoxy and labeled. The ageing process was conducted using a double blind QA/QC process in which two Ecologic, LLC fishery biologists independently interpreted the ages of each of the fish scales and otoliths. After completing the ageing, the two biologists met to resolve any differences.

The protocol for age interpretation is described below<sup>23</sup>:

- For fish with no scale growth beyond the outermost annulus, ages were interpreted to be equal to the number of annuli. For example, if there were two annuli and no discernible scale growth between the outermost annulus and the outer margin of the scale, the assigned age would be two years.
- For fish with discernible growth beyond the outermost annulus, the interpreted age was based on the number of annuli with a plus sign (+) to indicate growth beyond the outermost annulus, for example 2+.
- If the scale growth from the outermost annulus to the scale margin (“M”) was roughly equivalent to the scale growth shown in the previous year between the two previous annuli, then the age was based on the number of annuli plus one year, followed by an

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<sup>23</sup> BNL/DOE thanks Charles Guthrie, NYSDEC Region 1 Regional Fishery Manager for explanation of the following age interpretation convention.

“M.” For example, the age of a fish whose scale had two discernible annuli plus scale growth beyond the second annulus that was roughly equal to the growth between annulus 1 and annulus 2, would be expressed as 3M. An example of this would be a fish that was born in the late spring and had completed three years of growth, but the formation of the third annulus had not yet been completed.

Appendix F shows the age interpretation data for each of the two fishery biologists, the notes they recorded for a given set of scales or otoliths, and the final agreed-upon age. The analytical data in Appendices G, H, and I, can be cross referenced with the age data in Appendix F by Fish ID or composite ID (Table 4-4). Whenever the assigned ages were used in calculations (such as when calculating the average age of the fish within a composite), the ages that had been assigned by the age interpreters were converted from the alpha numeric ageing code described above to a whole number. When the age of a composite sample was calculated, the result of the calculation was expressed with one decimal place. For example, if a composite consisted of fish with interpreted ages of 3M, 3, 3+ and 4M, the ages used in the calculation would be 3, 3, 3 and 4, respectively, and the average age of fish in the composite would be expressed as 3.3.

## 4.2 2009 Fish Monitoring Results

The detailed analytical results for each of the fish or composites in the 2009 collection are shown in Appendix G (mercury), Appendix H (PCBs) and Appendix I (cesium-137 and potassium-40<sup>24</sup>). The analytical data are discussed in two formats.

In the first format, the average analytical values for each fish sample collected between the BNL STP and Donahue’s Pond is discussed without regard to species or age (Figures 4-1 and 4-2). Note that the locations for each of the fish sample stations are identified on Figures 1-4, 1-5 and 1-6. The average concentration across the entire sampled population is indicative of the average for the entire population within this stretch of the river. The data are representative of the general population in the river between the BNL STP and Donahue’s Pond, subject to the selectivity of the collection equipment and techniques. In a similar manner, but to a lesser

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<sup>24</sup> BNL/DOE routinely report radiological results for fauna (fish, deer, etc.) as pCi/g wet-weight. To confirm that the analytical laboratory has reported the radiological data for fish on a wet-weight basis, BNL/DOE also analyzes fish and select other fauna for potassium-40, a naturally occurring radionuclide. The potassium-40 activity in fish is typically in the 1 pCi/g to 4 pCi/g range. Potassium-40 analytical results greater than 10 pCi/g indicate that the results have been reported on a dry-weight basis.

extent, the average ages, sizes and contaminant concentrations of the fish in each of the areas represent the respective ages, sizes and contaminant concentrations for the subpopulations inhabiting those sections of the river at the times of the respective collections. However, because movement can occur between the various sections, depending on the water level in the river, it cannot be confidently inferred that the derived subpopulation statistics permanently apply to a given subsection of the river (for example, Area A, Area C, Area D, Schultz Road, etc.) at times other than during the collection period.

In the second format, concentration statistics and age and length data are compared on a species-specific basis for the entire sampled population. From these data, species-specific, age-specific and size-specific trends can be derived (Figures 4-1 through 4-9).

### **4.3 Mercury**

The 2009 mercury analyses (Appendix G) were performed on 93 fish samples. Table 4-4 details the fish included in each fish composite. These 93 fish samples included 51 composite samples composed of the fillets from 189 fish (Table 4-7a) and 42 individual single fish fillet samples (Table 4- 7d). Thus the 93 fish mercury samples represent 231 fish.

BNL/DOE does not have a specific cleanup goal associated with mercury concentrations in fish tissue, but for reference purposes BNL has included the EPA water quality criterion for mercury (0.3 mg of methylmercury per kg of fish tissue, U.S. EPA, 2001) on each of the species-specific fish mercury figures. The total body burden of mercury within fish tissue, for which BNL/DOE analyzes, is routinely assumed to be equal to the concentration of methylmercury in the tissue. All analyses are reported on a wet weight basis.

#### **Population and Subpopulation Mercury Trends:**

Figure 4-1 shows the mercury concentrations in edible fish tissue for the entire set of fish samples collected in 2009. The data used in this figure are shown, grouped by fish collection area, in Table 4-8. Figure 4-1 is sorted by species, collection area and age. The average (or mean) mercury concentration for all 93 fish samples analyzed in 2009 for mercury was 0.27 mg/kg. The figure shows much variation associated with the various species, ages, sizes and locations. Although four species have individuals with mercury concentrations greater than 0.3 mg/kg (brown bullhead, chain pickerel, largemouth bass, and pumpkinseed), the plot shows that

the majority of the largemouth bass exceed 0.30 mg/kg mercury. It is also notable that several of these largemouth bass with concentrations greater than 0.3 mg/kg are age 2 fish. (Species-specific relationships are discussed in greater detail in the next section, and are plotted in Figures 4-3 to 4-7.)

Figure 4-2 summarizes the data shown in Figure 4-1 by plotting the mean<sup>25</sup> mercury concentration for all fish within each of the six collection areas. The six mean concentrations are plotted as vertical blue bars in Figure 4-2. The six black error bars in Figure 4-2 show the 95 percent confidence intervals for the mean mercury concentrations for each of the six collection areas. Note that the lower error bars for the Area A and Manor Road mean fish mercury concentrations do not overlap the Donahue's Pond black upper bar for the mean fish mercury concentration for Donahue's Pond. This indicates that the Donahue's Pond fish are statistically lower in mercury concentration than both the Area A fish and the Manor Road fish, at p=0.05. This supports the appearance of a downward trend in mercury concentration for fish collected from the stations downstream of Area D and Schultz Road.

The white error bars show the 95 percent confidence interval for the mean of all 93 mercury samples. The 95 percent confidence interval for all six of the area-specific means overlaps the confidence interval for the all-fish mean mercury concentration, indicating that the area-specific fish mercury mean concentrations are not significantly different than the mean for the entire 2009 collection, at p=0.05.

### **Species-Specific Mercury Trends:**

Tables 4-7a and 4-7d (mercury), 4-7b and 4-7e (PCBs) and 4-7c and 4-7f (cesium-137) for composites and individual fish samples, respectively, provide detailed summaries of the relationships between species, age and fish tissue contaminant concentrations. Total length is provided as an indicator of the overlap in size for fish of different ages. These data are plotted on a species-specific basis on Figures 4-3 through 4-7 (mercury), 4-8 (PCBs) and 4-9 (cesium-137).

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<sup>25</sup> “Mean” is another term for “average” and is more often used in statistical discussions.

Table 4-8a groups the mercury analytical results for composite and individual samples by collection area and Table 4-9c lists the minimum, maximum and average mercury concentration for each species within each area. Table 4-9c also lists the total number of individual fish (176) by species and by area, including both composite and individual samples, which were analyzed for mercury.

The mercury concentrations for each 2009 fish sample are also plotted in the species-specific Figures 4-3a to 4-7a (sorted within species by age, area and length) and also in the species-specific Figures 4-3b to 4-7b (sorted within species by area, age and length)<sup>26</sup>. Each of these figures identifies the fish sample with the area from which it was collected, the total length (in millimeters (mm)), and the average age of the fish in the sample. All samples with fractional lengths (e.g., L=300.5) are composites. Each of these figures plots the individual fish samples. The fish samples are identified by a BNL Fish ID, e.g. 09-141 or a Composite ID in Tables 4-4, 4-7a – 4-7f and 4-8a – 4-8c. Composite samples are identified by a composite ID containing the COC number and a “-bc” followed by a unique number, e.g. 27022-bc1. Detailed data about the individual fish that compose a composite are provided in Table 4-4.

Eleven bluegill samples, consisting of one individual bluegill sample and ten composite samples, were analyzed for mercury in 2009. Figure 4-3 plots the mercury concentrations for each of the bluegills. Bluegill average age ranged between 2 years and 6 years. The average mercury concentration of bluegills was 0.12 mg/kg and all samples were considerably less than the EPA 0.3 mg.kg mercury criterion.

Forty three brown bullhead samples were analyzed for mercury in 2009. The average mercury concentration of the 43 samples was 0.21 mg/kg. The samples consisted of 16 individual fish samples and 27 composite samples. Generally, if an age class included Area A fish, some of the most elevated mercury concentrations within that age class occurred within the Area A samples. For example, as shown on Figure 4-4, an Area A 168.7 mm age 2 brown bullhead had a mercury concentration of 0.279 mg/kg, whereas an age 2, Donahue’s Pond fish of twice the length (338.5 mm) had a 0.077mg/kg mercury concentration. Among age 4 fish; the highest mercury concentrations occurred within the Manor Road sub-population and the Area A samples had the second most elevated mercury concentrations. Finally, the three oldest brown

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<sup>26</sup> The mercury fish plots were sorted by both age-area- length and area-age-length to evaluate whether either age-specific or area-specific trends in mercury concentration were apparent. The plots do not support clear trends. This may be caused by mixing of the population when fish can migrate throughout the sample area during periods of high water or the absence of an area-mercury trend or by the true absence of a trend in the 2009 fish samples.

bullheads (age 7) were of approximately the same length (312 mm - Manor Road, 315 mm – Manor Road, and 345 mm – Donahue’s Pond). The mercury concentrations for these three fish were, respectively, 0.496, 0.534, and 0.091 mg/kg.

Figure 4-5 shows the mercury concentrations of the 8 chain pickerel samples that were analyzed for mercury in 2009. The four fish with mercury concentrations less than the 0.3 mg/kg) EPA mercury were an Age 1 Area A fish, an age 2 Manor Road fish, and an age 3 and age 4 Donahue’s Pond fish. The fish with the maximum mercury concentration (0.624 mg/kg) was an age 5 Donahue’s Pond fish. The average mercury concentration for the chain pickerel samples was 0.33 mg/kg.

Figure 4-6 shows the mercury concentrations for the 13 largemouth bass samples that were analyzed for mercury in 2009. Mercury concentrations ranged from 0.186 mg/kg for an age 3, 310 mm Donahue’s Pond bass to 1.63 mg/kg for an age 7, 423 mm, Area D<sup>27</sup>; fish. The average mercury concentration of 2009 largemouth bass collection is 0.61 mg/kg.

Figure 4-7 shows the mercury concentrations for the 13 pumpkinseed samples that were analyzed for mercury in 2009. Mercury concentrations for the four age 1 pumpkinseeds ranged between 0.081 mg/kg for an individual fish of 111 mm collected for Area D, to 0.557 mg/kg for an age 3, 174.5 mm Area A pumpkinseed composite sample. The average mercury concentration for all 13 pumpkinseeds was 0.26 mg/kg.

### **Fish Tissue Mercury Concentrations – 2009 Data Compared to Pre-clean-up Data**

BNL/DOE has evaluated available Peconic River fish data collected prior to the 2004 - 2005 sediment remediation to serve as a basis of comparison to the 2009 post-clean-up fish mercury concentrations. No single fish collection prior to the 2004 - 2005 remediation was identified that included the entire section of the river (BNL STP to Donahue’s Pond) that is routinely sampled during BNL post-clean-up fish monitoring. The most comparable data set consisted of 55 fish samples from collections made by the NYSDEC (Table 4-10). The species that were selected from the 1996 and 2001 data were limited to those species (brown bullhead, chain pickerel, largemouth bass and pumpkinseed) that were also represented in the 2009 fish

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<sup>27</sup> The two largemouth bass with the highest two concentrations 27142-005 [age 7, 423 mm, Area D, 1.63 mg/kg] and 27142-006 [age 2, 184 mm, Area D, 1.56 mg/kg] were reanalyzed for mercury on November 25, 2009. The re-analyzed mercury results were 27142-005, 1.61 mg/kg and 27142-006, 0.799 mg/kg. The re-analysis results confirmed the original 27142-005 result and were not sufficient to replace the 27142-006 result.

collection. Fifty of the 55 samples were for individual fish and five of the samples were for composites. Offsite fish samples (Area D to Donahue's Pond) were collected in 1996 and 2001 and processed only as individual fish by NYSDEC. Analyses were made by laboratories selected by NYSDEC. The 1996 and 2001 fish tissue samples consisted of both fillet samples and samples from which the head and viscera (internal organs) had been removed, abbreviated as HV. HV fish are similar to fillets in that the samples are of edible tissue, but HV samples include the skeleton.

Onsite fish samples were also collected by NYSDEC in 1996. The onsite fish samples were processed as HV individual fish samples and HV composite fish samples by the BNL field team and analyzed by an independent analytical laboratory. The onsite data are reported in the Final Peconic River Remedial Investigation Report.<sup>28</sup>

The 1996 onsite and the 1996 and 2001 Area D to Donahue's Pond data sets were combined to represent pre-clean-up fish mercury concentrations for the section of the Peconic River between the BNL STP and Donahue's Pond. These combined data will be referred to as the "pre-clean-up" data. Like the 2009 Peconic River fish samples, the combined 1996 and 2001 fish samples were analyzed as both individuals and as composites. It is important to note that an HV fish tissue sample from which the head and viscera have been removed, but not the spine and ribs, is likely to weigh slightly more than fillets collected from the same fish. Because mercury is more concentrated in muscle (fillets) than in other parts of the body, a mercury analysis of an HV sample may be reported as having a slightly smaller mercury concentration than a comparable fillet analysis. That is, relative to a fillet sample, an HV sample may slightly underestimate the mercury concentration. Therefore, comparing average mercury concentration for a data set consisting of both HV samples and fillets (such as the pre-clean-up data) with the average mercury concentration for a data set consisting entirely of fillets (such as the post-clean-up 2009 fish data) is likely to underestimate the decrease in mercury concentration that has occurred if the post-clean-up concentration is less than the pre-clean-up concentration.

Frequency distributions are helpful in evaluating whether different data sets have similar distributions of variables, such as mercury concentrations and more specifically, whether these variables are normally distributed. Table 4-11 shows the number of samples (the frequency) of the pre-clean-up 1996 and 2001 fish and the post-clean-up 2009 fish that fall within

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<sup>28</sup> Final Operable Unit V Remedial Investigation Report, Volume 5, Appendix F3, Fish Bioaccumulation Report Operable Unit V, December 9, 1996. Prepared by International Technology Corporation, May 27, 1998.

specified mercury concentration classes. As the table shows the pre-cleanup data set had 55 samples and the post-cleanup 2009 data set had 93 samples. Table 4-11 also shows that summing the frequencies of fish in the first two classes (that is all fish with a mercury concentration less than 0.3 mg/kg) for each data set will yield the number of fish less than or equal to the EPA mercury criterion. For these two data sets eight of the 55 (15 percent) pre-cleanup fish and 58 of the 93 (62 percent) post-cleanup fish had mercury concentrations less than the 0.3 mg/kg EPA mercury criterion. These frequency distribution data are plotted in Figure 4-10.

Figure 4-10 shows that the shape of the pre-cleanup (1996 and 2001) frequency distribution only roughly approximates the shape of a normal or Gaussian distribution. It also shows that the distribution has a few samples with a substantially higher concentration than the EPA 0.3 mg/kg mercury criterion. The shape of the frequency distribution for the post-cleanup 2009 fish is distinctly different from the shape of the pre-cleanup fish distribution and does not resemble a normal or Gaussian distribution. The data are highly skewed to the left, further indicating that the majority of the fish in the 2009 population have a low mercury concentration. However, like the pre-cleanup fish distribution, there are a small number of fish with elevated mercury concentrations. The pre-cleanup fish had 3 of 55 samples (5 percent) with mercury concentrations greater than 1.0 mg/kg (1.33 mg/kg, 1.4 mg/kg and 1.6 mg/kg). The post-cleanup fish had 2 of 93 samples (2 percent) with mercury concentrations greater than 1.0 mg/kg (1.56 mg/kg and 1.63 mg/kg).

Table 4-12 shows descriptive statistics for the pre-cleanup and post-cleanup fish. The mean (average) mercury concentration for the post-cleanup fish is 0.27 mg/kg, which is less than half (48 percent) of the mean pre-cleanup fish mercury concentration (0.58 mg/kg). The table also shows that although the maximum mercury concentrations for the two data sets are very similar (1.60 mg/kg, for pre-cleanup and 1.63 mg/kg for post-cleanup) the minimum concentrations are quite different (0.14 mg/kg for pre-cleanup and 0.022 mg/kg for post-cleanup). Table 4-12 also shows two statistics (skewness and kurtosis) which describe the shape of a frequency distribution. A normal or Gaussian distribution has a value of 0 for both kurtosis and skewness.

Neither of the two frequency distributions (Table 4-11 and Figure 4-10) is distributed normally. The Table 4-12 skewness (1.258) and kurtosis (2.219) for the pre-cleanup data are slightly elevated from the 0 value of a true normal distribution. However the skewness (3.389)

and elevated kurtosis (16.25) of the post-cleanup frequency distribution indicate that the post-cleanup data set is markedly different than a normal distribution.

Because of the large departure from normality by the 2009 post-cleanup data set, it is not appropriate to compare the two populations with true parametric tests (such as t tests) that are based on normality. Consequently to evaluate the statistical significance of the difference between the pre-cleanup mean mercury concentration (0.58 mg/kg) and the post-cleanup mercury concentration (0.27 mg/kg), the two distributions will be compared by plotting the mean mercury concentration of each data set with error bars indicating the 95 percent confidence limits for the mean. The 95 percent confidence limit for the mean of each data set is shown in the bottom row of Table 4-12. The error bars have been calculated and plotted by adding and subtracting the confidence limits to the mean at each sample point.

The mercury concentrations for the each sample in the pre-cleanup 1996 and the 2001 data set and the post-cleanup 2009 mercury concentrations for each data set and the means of both data sets with their 95 percent confidence limit error bars are shown in Figure 4-11 and Figure 4-12, respectively. The non-overlap of the 95 percent confidence limit error bars indicates that the mean mercury concentrations for the pre-cleanup fish and the post-cleanup fish are statistically significantly different.

#### **4.4 PCBs**

The Peconic River ROD requires PCBs as an analyte for fish collected on BNL property. BNL/DOE does not have a cleanup goal for PCBs in fish. The large mass (120 g) of tissue required for PCB analysis limits the number of samples that can be analyzed and mercury samples were given preferential treatment. Table 4-7b and 4-7e show the detailed analytical results for each of the 40 composite samples and each of the 12 individual fish samples, respectively. Each sample was analyzed for the seven Aroclor isomers (Aroclor 1016, Aroclor 1021, Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, and Aroclor 1260); hence 364 PCB analyses were performed (52 samples times seven (7) isomers).

Three hundred sixty two (362)<sup>29</sup> of the 364 PCB analyses had values less than or equal to the detection limit. Two fish within Area A had Aroclor 1254 detections of 18.9 ug/kg (an age 4 brown bullhead) and 13.7 ug/kg (an age 3.3 pumpkinseed composite). A third fish (26985-008), appeared to have elevated concentrations of Aroclor 1242, Aroclor 1254 and Aroclor 1260 before the analytical laboratory (GEL) subsequently determined that there had been a sample switch at GEL and the sample was not a BNL sample and/or the sample had been contaminated within the analytical lab. GEL's Corrective Action is included at the back of Appendix H.

The PCB analytical results are provided in Table 4-7b and 4-7e for the 40 composite samples and 12 individual fish samples analyzed for PCBs. Table 4-4 details the fish included in each fish composite. Table 4-8a groups the PCBs analytical results for composite and individual samples by collection area and Table 4-9c lists the minimum, maximum and average PCB concentration for each PCB isomer by species within each area. Table 4-9c also lists the total number of individual fish (120) by species by area, including composite samples and individual samples, which were analyzed for PCBs.

Aroclor 1254 was the PCB isomer of principal concern prior to the cleanup. Figure 4-8 shows the distribution of the 52 Aroclor 1254 analytical results, by area, species and age. The 2009 Aroclor 1254 data were quite low. Fifty (50) of the 52 Aroclor 1254 samples had values less than or equal to the detection limit. The two samples with Aroclor 1254 values greater than the detection limit were only slightly greater than the detection limit. These samples were 13.7 ug/kg (detection limit equals 9.77 ug/kg) for an Area A age 3 pumpkinseed and 18.9 ug/kg (detection limit equals 9.95 ug/kg) for an Area A age 4 brown bullhead. Figure 4-8 shows the Aroclor 1254 concentration for all Peconic River fish analyzed for PCBs.

#### **4.5 Cesium-137 Results**

A total of 61 fish samples were analyzed for cesium-137 in 2009. Cesium-137 analytical results are provided on Table 4-7c and 4-7f for the 42 composite samples and 19 individual fish samples analyzed for cesium-137. Refer to Table 4-4 details the fish included in each fish

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<sup>29</sup> Three hundred fifty eight (358) of the 364 samples were non-detects with a laboratory qualifier of "U". Four (4) of the 364 samples had analytical values less than the reporting limit, and were qualified with a "J". The remaining two samples had low concentration detection of Aroclor 1254, as discussed above. See Appendix H for details and qualifier definitions.

composite. Table 4-8c groups the cesium-137 analytical results for composite and individual samples by collection area and Table 4-9c lists the minimum, maximum and average cesium-137 activity for each species within each area. Table 4-9c also lists the total number of individual fish (176) by species by Area, including composite samples and individual samples, which were analyzed for cesium-137. Figure 4-8 shows the distribution of the 61 2009 cesium-137 analytical results, by area, species and age. In 2009 the average cesium-137 activity for all fish was 0.17 pCi/g. Onsite fish (Areas A, C, D) had a 0.24 pCi/g average and offsite fish (Schultz Road, Manor Road, Donahue's Pond) had a 0.10 pCi/g average. All cesium-137 data are shown in Figure 4-9, sorted by species, area and age.

#### **4.6 Fish Summary and Recommendation**

Approximately 47 percent of the 231 fish caught were bottom feeders (109 brown bullheads) and 53 percent of the catch were predators (Table 4-3). Among the carnivores (122 fish), pumpkinseeds and bluegills composed 23 percent and 18 percent, respectively, of the total catch. Black crappie, chain pickerel and largemouth bass represented the remaining 11 percent of the catch. The average age of all fish analyzed for mercury was 3.6 years. Mercury concentrations were highest among fish collected in the most upstream locations and decreased with increasing distance downstream.

The average concentration of mercury for 93 fish tissue samples (individual fish and composites) from fish collected between the BNL STP and Donahue's Pond was 0.27 mg/kg. The 2009 average mercury concentration is significantly less than the 0.58 mg/kg average mercury concentration of pre-cleanup fish of the same species collected from the same or similar sections of the river by DEC in 1996 and 2001. For PCBs, 52 samples consisting of 12 individual fish samples and 40 composite fish samples were analyzed for seven PCB isomers. Three hundred sixty two (362) of the 364 analyses (seven (7) isomers times 52 samples) had values less than or equal to the detections limit. There were two detections of Aroclor 1254 at 13.7 and 18.9 ug/kg, with detection limits slightly less than 10 ug/kg. In general PCB concentrations were substantially improved over pre-cleanup limits.

The 2009 cesium-137 activities in Peconic River fish were low and ranged from below the detection limit to 0.511 pCi/g for an age two largemouth bass. The average cesium-137 concentration for all 61 fish samples was 0.17 pCi/g. The 2009 onsite average cesium-137 activity was 0.24 pCi/g. Offsite, the 2009 Peconic River fish had an average cesium-137 activity of 0.10 pCi/g.

## **5.0 Sediment Trap and Accelerated Sediment Removal**

As Recommendation 9 of the 2008 Peconic River Monitoring Report, BNL/DOE requested and received permission from NYSDEC to remove the sediment trap from the Peconic River. The sediment trap is located upstream of stream gauging station HQ near the site boundary. Because ideal low-water conditions did not occur during 2009 the sediment trap was not removed during 2009. BNL/DOE recommends that the sediment trap be removed during calendar year 2010. BNL/DOE further recommends that the sediment trap removal be coordinated with the accelerated removal of sediment with elevated mercury concentrations identified during post-cleanup sediment and surface water monitoring conducted in 2006, 2007, 2008 and 2009. Specific areas to be remediated will be identified through discussion between the EPA, SCDHS, NYSDEC and BNL/DOE. These discussions began on September 18, 2009 and January 29, 2010.

**Recommendation 5:** BNL/DOE recommends that the sediment trap be removed in coordination with the accelerated removal of sediment with elevated mercury concentrations. Both the sediment trap removal and the accelerated sediment removal are scheduled to be conducted in 2010.

## **SECTION 6 - REFERENCES**

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**Table 2-1 - 2009 Peconic River Annual Sediment Sampling Data Summary**

Sample ID	COC Site ID	Sample Date	Distance from STP (miles)	Mercury*	Silver*	Copper*	PCBs*	Cs-137*
<b>On BNL Property (15 samples)</b>								
27431-008	PR-SS-38-O	8/6/2009	0.36	0.92			ND 7 of 7	1.24
27431-007	PR-SS-37	8/6/2009	0.47	0.38			ND 7 of 7	0.82
27431-005	PR-SS-33	8/6/2009	0.49	0.33			ND 7 of 7	8.07
27431-006	PR-SS-35	8/6/2009	0.49	0.15			ND 7 of 7	0.8
27431-004	PR-SS-31	8/6/2009	0.67	0.13	3.3	42.6	ND 7 of 7	0.082
27431-002	PR-SS-29	8/6/2009	0.69	0.55			ND 7 of 7	1.18
27431-003	PR-SS-30	8/6/2009	0.69	0.099			ND 7 of 7	0.304
27431-001	PR-SS-26	8/6/2009	0.75	0.21			ND 7 of 7	0.517
27423-010	PR-SS-24	8/5/2009	0.8	0.15			ND 7 of 7	1.47
27423-009	PR-SS-23	8/5/2009	0.85	0.076			ND 7 of 7	0.38
27423-008	PR-SS-21	8/5/2009	0.91	0.12			ND 7 of 7	0.335
27423-007	PR-SS-19	8/5/2009	1.2	0.43			ND 7 of 7	1.37
27423-006	PR-SS-18	8/5/2009	1.27	0.17			ND 7 of 7	0.8
27423-005	PR-SS-17	8/5/2009	1.33	0.45			ND 7 of 7	0.78
27423-004	PR-SS-16	8/5/2009	1.4	1.8	20.1	72	ND 7 of 7	0.627
2009 average on BNL Property				0.40	11.7	57.3	0.06	1.25
Pre-clean up average				4.6	61.8	310.9	133	5.7
<b>Outside BNL Property (15 samples)</b>								
27423-003	PR-SS-15	8/5/2009	1.52	0.31			ND 7 of 7	1.38
27423-002	PR-SS-14	8/5/2009	1.56	0.26			ND 7 of 7	1.11
27423-001	PR-SS-12	8/5/2009	1.66	0.034			ND 7 of 7	0.393
27416-009	PR-SS-10	8/4/2009	1.84	1.7			ND 7 of 7	0.52
27416-008	PR-SS-09	8/4/2009	1.93	0.42			ND 7 of 7	0.158
27416-007	PR-SS-07	8/4/2009	2.02	0.016			ND 7 of 7	0.2
27416-006	PR-SS-06	8/4/2009	1230	0.051			ND 7 of 7	0.148
27416-005	PR-SS-05	8/4/2009	2.32	0.059			ND 7 of 7	0.281
27416-004	PR-SS-04	8/4/2009	2.52	0.062			ND 7 of 7	0.083
27416-003	PR-SS-03	8/4/2009	2.65	0.16			ND 7 of 7	0.148
27416-002	PR-SS-02	8/4/2009	2.76	0.14			ND 7 of 7	0.76
27416-001	PR-SS-01	8/4/2009	2.9	0.18	0.67	5.1	ND 7 of 7	0.68
2009 average (BNL Border - Schultz Road)				0.28	0.67	5.1	0.08	0.52
Pre-clean up average (BNL Border - Schultz Road)				1.79	35	142	48	5.4
27417-001	PR-MR-01	8/4/2009	4.28	0.18	0.88	6	ND 7 of 7	0.284
27417-002	PR-MR-02	8/4/2009	4.5	0.073			ND 7 of 7	0.179
	DONAHUE'S POND	6/9/2009	6.75	0.00528 U	0.133	0.399	Not Sampled	0.014
2009 average (BNL Border - Manor Road)				0.26				
2009 average (Manor Road Area)				0.13	0.88	6	0.19	0.23
Pre-clean up average (Manor Road Area)				1.08	9.48	44.95	Not Sampled	2.88
2009 average (All Samples)				0.32	5.02	25.22		0.84

Notes : mg/kg = milligrams/kilogram = parts per million, ug/kg = micrograms/kilogram = parts per billion, pCi/g = picocuries/gram.

'U' is a laboratory assigned qualifier indicating non-detection (ND).

\* Silver and copper were analyzed to 10 percent of the onsite and offsite samples. 2 samples and 3 samples respectively.

\* Averages do not include Donahue's Pond, which is located downstream of the remediated area.

**Table 2-2 PR-WC-06 Sediment Mercury Data<sup>1</sup>**

(All data collected between June 14, 2009 and January 28, 2010)

Site ID	Sample Date	Analyte	Value	Detlim	Units	Lab Qual	Method	Matrix
PR-WC-06-D1-L102-R2	1/28/2010	Mercury	0.16	0.082	MG/KG	J	7471A	S
PR-WC-06-D1-L30	1/28/2010	Mercury	1.1	0.067	MG/KG	J	7471A	S
PR-WC-06-D1-L5	1/28/2010	Mercury	0.32	0.078	MG/KG	J	7471A	S
PR-WC-06-D1-L55	1/28/2010	Mercury	6.1	0.18	MG/KG	J	7471A	S
PR-WC-06-D1-L80	1/28/2010	Mercury	0.39	0.047	MG/KG	J	7471A	S
PR-WC-06-D2-L32	1/28/2010	Mercury	1.6	0.055	MG/KG	J	7471A	S
PR-WC-06-D2-L57	1/28/2010	Mercury	1.1	0.048	MG/KG	J	7471A	S
PR-WC-06-D2-L7	1/28/2010	Mercury	1.3	0.13	MG/KG	J	7471A	S
PR-WC-06-D2-L82-R9	1/28/2010	Mercury	0.23	0.05	MG/KG	J	7471A	S
PR-WC-06-D3-L28	1/28/2010	Mercury	3.1	0.064	MG/KG	J	7471A	S
PR-WC-06-D3-L3	1/28/2010	Mercury	0.25	0.075	MG/KG	J	7471A	S
PR-WC-06-D3-L53	1/28/2010	Mercury	1.1	0.059	MG/KG	J	7471A	S
PR-WC-06-D3-L78	1/28/2010	Mercury	0.35	0.046	MG/KG	J	7471A	S
PR-WC-06-D3-L95-R1	1/28/2010	Mercury	0.081	0.049	MG/KG	J	7471A	S
PR-WC-06-L105	1/28/2010	Mercury	0.22	0.046	MG/KG	J	7471A	S
PR-WC-06-L130	1/28/2010	Mercury	0.28	0.047	MG/KG	J	7471A	S
PR-WC-06-L141-R1	1/28/2010	Mercury	0.19	0.11	MG/KG	J	7471A	S
PR-WC-06-L30	1/28/2010	Mercury	0.2	0.051	MG/KG	J	7471A	S
PR-WC-06-L5	1/28/2010	Mercury	0.15	0.06	MG/KG	J	7471A	S
PR-WC-06-L55	1/28/2010	Mercury	1.8	0.28	MG/KG		7471A	S
PR-WC-06-L80	1/28/2010	Mercury	1	0.049	MG/KG	J	7471A	S
PR-WC-06-O-L49	1/28/2010	Mercury	14.7	0.83	MG/KG		7471A	S
PR-WC-06-SS-01	6/18/2009	Mercury	8.8	0.21	MG/KG		7471A	S
PR-WC-06-SS-01	7/16/2009	Mercury	7.2	0.19	MG/KG		7471A	S
PR-WC-06-SS-01-D	12/1/2009	Mercury	15.8	0.56	MG/KG	J	7471A	S
PR-WC-06-SS-01-L	12/1/2009	Mercury	0.5	0.062	MG/KG	J	7471A	S
PR-WC-06-SS-01-O	12/1/2009	Mercury	8.9	0.46	MG/KG	J	7471A	S
PR-WC-06-SS-01-R	12/1/2009	Mercury	8.5	0.43	MG/KG	J	7471A	S
PR-WC-06-SS-01-U	12/1/2009	Mercury	7.7	0.56	MG/KG	J	7471A	S
PR-WC-06-U1-101	1/28/2010	Mercury	0.29	0.045	MG/KG	J	7471A	S
PR-WC-06-U1-126	1/28/2010	Mercury	0.16	0.054	MG/KG	J	7471A	S

**Table 2-2 PR-WC-06 Sediment Mercury Data<sup>1</sup>**

(All data collected between June 14, 2009 and January 28, 2010)

Site ID	Sample Date	Analyte	Value	Detlim	Units	Lab Qual	Method	Matrix
PR-WC-06-U1-L1	1/28/2010	Mercury	0.088	0.067	MG/KG	J	7471A	S
PR-WC-06-U1-L151-R3	1/28/2010	Mercury	0.16	0.067	MG/KG	J	7471A	S
PR-WC-06-U1-L26	1/28/2010	Mercury	1.2	0.053	MG/KG	J	7471A	S
PR-WC-06-U1-L51	1/28/2010	Mercury	0.59	0.057	MG/KG	J	7471A	S
PR-WC-06-U1-L76	1/28/2010	Mercury	0.21	0.044	MG/KG	J	7471A	S
PR-WC-06-U2-L105	1/28/2010	Mercury	0.14	0.056	MG/KG	J	7471A	S
PR-WC-06-U2-L130	1/28/2010	Mercury	0.085	0.044	MG/KG	J	7471A	S
PR-WC-06-U2-L155	1/28/2010	Mercury	0.15	0.047	MG/KG	J	7471A	S
PR-WC-06-U2-L162-R4	1/28/2010	Mercury	0.14	0.079	MG/KG	J	7471A	S
PR-WC-06-U2-L30	1/28/2010	Mercury	0.97	0.049	MG/KG	J	7471A	S
PR-WC-06-U2-L5	1/28/2010	Mercury	0.16	0.05	MG/KG	J	7471A	S
PR-WC-06-U2-L55	1/28/2010	Mercury	15	1.6	MG/KG		7471A	S
PR-WC-06-U2-L80	1/28/2010	Mercury	0.21	0.047	MG/KG	J	7471A	S
PR-WC-06-U3-L102	1/28/2010	Mercury	0.56	0.064	MG/KG	J	7471A	S
PR-WC-06-U3-L127	1/28/2010	Mercury	0.078	0.045	MG/KG	J	7471A	S
PR-WC-06-U3-L152	1/28/2010	Mercury	0.12	0.043	MG/KG	J	7471A	S
PR-WC-06-U3-L170-R3	1/28/2010	Mercury	0.2	0.05	MG/KG	J	7471A	S
PR-WC-06-U3-L2	1/28/2010	Mercury	0.11	0.077	MG/KG	J	7471A	S
PR-WC-06-U3-L27	1/28/2010	Mercury	0.14	0.047	MG/KG	J	7471A	S
PR-WC-06-U3-L52	1/28/2010	Mercury	4.1	0.47	MG/KG		7471A	S
PR-WC-06-U3-L77	1/28/2010	Mercury	1.1	0.046	MG/KG	J	7471A	S

<sup>1</sup> The locations of these data values are shown on Figure 2-5.

**Table 3-1****2009 Peconic River Water Quality Sampling Stations and Scheduled Sampling Frequency**

		Sampling Frequency of Water Quality Survey Relative to Methylmercury (MeHg) Water Quality Survey sampling				
Site ID	Distance Downstream of STP (miles)	May 20 - 21= 3 weeks before	June 16 -19 = MeHg <sup>1</sup> Sampling	July 7 = 2 weeks after and before	July 14 - 16 = MeHg <sup>1</sup> Sampling	July 29 = 2 weeks after
Connetquot River <sup>2</sup>			X		X	
PR-WC-15	-0.17		X		X	
PR-WC-14	-0.13		X		X	
PR-WC-13	-0.07		X		X	
PR-WC-12D7 <sup>3</sup>	-0.04		X		X	
PR-WC-11DS	0.01		X		X	
PR-WC-10	0.30	X	X	X	X	X
PR-WC-09	0.56	X	X	X	X	X
PR-WC-08	0.78	X	X	X	X	X
PR-WC-07	0.96		X		X	
PR-WC-06	1.10	X	X	X	X	X
PR-WC-05	1.46		X		X	
PR-WC-04	1.70	X	X	X	X	X
PR-WC-03	2.10	X	X	X	X	X
PR-WC-02	2.52		X		X	
PR-WC-01	2.98	X	X	X	X	X
PR-WCS-01	3.42		X		X	
PR-WCS-02	3.99		X		X	
PR-WCS-03	4.44		X		X	
PR-WCS-04	4.77	X	X	X	X	X
PR-WCS-05	6.04		X		X	
PR-WCS-06	6.75		X		X	
PR-WCS-07	7.23		X		X	

<sup>1</sup> MeHg is an abbreviation for methylmercury. Total mercury and TSS were also analyzed.

<sup>2</sup> The Connetquot River sample station is located more than 20 miles to the southwest of the BNL STP and is not hydrologically connected with the Peconic River.

<sup>3</sup> Due to low water conditions at PR-12-DS, the sample was collected seven feet downstream of the 2007 PR-WC-12-DS location and identified as PR-WC-12D7.

Table 3-2 : Results from 2009 Water Column Sampling												
6/3/2009 - 6/19/2009				Laboratory Results			Field Data					
Site ID	Date	Station Description	Dist from STP (miles)	Mercury (ng/L)	Methyl Mercury (ng/L)	TSS (mg/L)	River Depth at Sample (feet)	Flow (feet per second)	Water Temp (deg C)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)
CONNETQUOT	6/19/2009	Connetquot		2.88	0.663	0.9	2	0.47	14.37	6.06	6.4	0
PR-WC-15	6/19/2009	Upstream of Forest Path	-0.17	13.1	1.99	1.4	1	0.4	15.77	4.91	4.93	0.5
PR-WC-14	6/19/2009	Upstream of STP	-0.13	Not sampled - Depth less than 1 foot			0.75					
PR-WC-13	6/19/2009	Upstream of STP	-0.07	Not sampled - Depth less than 1 foot			0.5					
PR-WC-12-D7	6/19/2009	Downstream of Sump	-0.04	11.8	2.71	4.3	1.5	0.34	15.6	5.51	5.54	1.4
STP-EFF-UVG	6/19/2009	Grab Sample	0	127	0.491	0.5 U	N/S	0	19.5	8.12	6.73	0
PR-WC-11DS	6/19/2009	50' downstream of outfall	0.01	56	1.05	1.8	1	0.6	17.25	6.65	6.35	6.2
PR-WC-10	6/19/2009	West of HMN	0.3	73.4	2.04	6.7	2	0.16	16.85		6.29	1.8
PR-WC-09	6/18/2009	Downstream of HMN	0.56	98.7	1.71	6.84	1	0.8	17.39	8.61	6.87	2.8
PR-WC-08	6/18/2009	South of Area B	0.78	50.6	1.88	4.48	2	0.02	18.54	8.62	6.98	2.2
PR-WC-07	6/18/2009	South of Area C	0.96	38.2	1.29	4.97	1.5	0.2	18.45	8.46	6.91	1.4
PR-WC-06	6/18/2009	South of Area D	1.1	43.7	2.44	5.34	1.6	0.2	18.5	8.43	6.7	6.6
PR-WC-05	6/17/2009	Downstream of HQ	1.46	70.2	3.97	11.5	1.2	0.02	20.96	8.45	6.83	1.8
PR-WC-04	6/17/2009	2nd downstream of HQ	1.7	Not sampled - Depth less than 1 foot			0.5					
PR-WC-03	6/17/2009	3rd west of Schultz Rd.	2.1	19.8	2.33	1.3	2.4	0.03	18.62	9.38	7.06	0
PR-WC-02	6/17/2009	2nd west of Schultz Rd.	2.52	19.9	2.47	1.8	1.2	0.03	17.27	8.19	7.3	0
PR-WC-01	6/16/2009	Schultz Rd. (West)	2.98	8.37	1.21	1.73	1.5	0.45	17.48	8.86	6.41	1
PR-WCS-01	6/16/2009	East of Schultz Rd.	3.42	9.08	1.13	3.57	1.5	0.52	16.56	5.8	6.1	1.8
PR-WCS-02	6/16/2009	West of Manor Rd.	3.99	8.32	1.18	3.62	3.2	0.3	16.21	4.67	6.17	5.2
PR-WCS-03	6/16/2009	Manor Rd.	4.44	8.78	1.09	12.4	2.5	0.92	16.23	4.05	6.12	2.5
PR-WCS-04	6/16/2009	West of Cranberry Bogs	4.77	15.4	1.32	3.5	2	1.3	16.41	3.46	6.13	19
PR-WCS-05	6/18/2009	East of Cranberry Bogs	6.04	3.56	0.884	2.64	3.2	1.11	16.67	3.76	6.1	1.5
PR-WCS-06	6/18/2009	Middle of Donahue's Pond	6.75	3.55	0.786	1.73	3.5	0.02	17.17	4.03	6.05	0
PR-WCS-07	6/18/2009	Downstream of Connecticut Ave.	7.23	3.81	0.88	3.6	1.3	1.3	18.65	6.77	6.29	1.3

Table 3-2 : Results from 2009 Water Column Sampling												
7/1/2009 - 7/16/2009				Laboratory Results			Field Data					
Site ID	Date	Station Description	Dist from STP (miles)	Mercury (ng/L)	Methyl Mercury (ng/L)	TSS (mg/L)	River Depth at Sample (feet)	Flow (feet per second)	Water Temp (deg C)	Dissolved Oxygen (mg/L)	pH	Turbidity (NTU)
CONNETQUOT	7/16/2009	Connetquot		2.09	0.104	1.8	1.5	0.14	18.09	9.5	6.67	0.6
PR-WC-15	7/16/2009	Upstream of Forest Path	-0.17	Not sampled - Depth less than 1 foot			0.5					
PR-WC-14	7/16/2009	Upstream of STP	-0.13	Not sampled - Depth less than 1 foot			0.5					
PR-WC-13	7/16/2009	Upstream of STP	-0.07	Not sampled - Depth less than 1 foot			0.5					
PR-WC-12-D7	7/16/2009	Downstream of Sump	-0.04	8.92	2.63	2.7	3	0.01	18.27	5.59	5.9	2.8
STP-EFF-UVG	7/16/2009	Grab Sample	0	115	0.024	0.4	N/S					
PR-WC-11DS	7/16/2009	50' downstream of outfall	0.01	Not sampled - Depth less than 1 foot			0.6					
PR-WC-10	7/16/2009	West of HMN	0.3	110	0.965	1.2	1.2	0.1	22.3	6.78	6.87	1.1
PR-WC-09	7/16/2009	Downstream of HMN	0.56	100	1.27	1.3	1	0.075	22.3	7.87	7.26	3.4
PR-WC-08	7/16/2009	South of Area B	0.78	44.4	0.853	2.1	1.9	0.01	24.37	10.83	8.5	2.9
PR-WC-07	7/16/2009	South of Area C	0.96	44.7	1.24	4.6	1	0.25	23.23	6.13	7.16	2.9
PR-WC-06	7/16/2009	South of Area D	1.1	93.6	1.79	4	1.5	0.02	22.71	3.51	6.82	4.9
PR-WC-05	7/15/2009	Downstream of HQ	1.46	22.9	8.08	3.4	1.1	0.03	21.28	0.37	6.49	1.8
PR-WC-04	7/7/2009	2nd downstream of HQ	1.7	Not sampled - Depth less than 1 foot			0.5					
PR-WC-03	7/15/2009	3rd west of Schultz Rd.	2.1	18.7	1.66	3.5	1	0.03	27.53	8.99	6.82	2.2
PR-WC-02	7/15/2009	2nd west of Schultz Rd.	2.52	Not sampled - Depth less than 1 foot			0.8					
PR-WC-01	7/15/2009	Schultz Rd. (West)	2.98	7.59	1.31	2.6	1.5	0.25	21.41	6.57	6.18	2.2
PR-WCS-01	7/15/2009	East of Schultz Rd.	3.42	6.51	1.2	5.3	1.9	0.32	19.22	4.64	6.25	4.2
PR-WCS-02	7/15/2009	West of Manor Rd.	3.99	5.97	1.05	7.3	2.9	0.35	18.2	4.46	6.32	6.6
PR-WCS-03	7/14/2009	Manor Rd.	4.44	6.87	1.04	5.6	2	0.3	19.04	3.67	6.09	6.9
PR-WCS-04	7/14/2009	West of Cranberry Bogs	4.77	8.81	1.01	7.1	2.5	0.63	20.09	6.04	6.16	8.6
PR-WCS-05	7/14/2009	East of Cranberry Bogs	6.04	3.84	0.778	5.5						
PR-WCS-06	7/14/2009	Middle of Donahue's Pond	6.75	3.17	0.663	4.7	3.5	0	22.33	5.95	6.28	4
PR-WCS-07	7/14/2009	Downstream of Connecticut Ave.	7.23	3.53	0.654	3.6	1	1	22.23	7.4	6.78	7.2

**Table 3-3 : Comparison of Pre-Remediation and Post-Remediation Water Column Sampling Results (June Survey)**

Site ID	Station Description	Dist from STP (miles)	2006			2007			2008			2009		
			Mercury (ng/L) <sup>b</sup>	Methyl Mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>	Mercury (ng/L) <sup>b</sup>	Methyl- mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>	Mercury (ng/L) <sup>b</sup>	Methyl- mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>	Mercury (ng/L) <sup>b</sup>	Methyl- mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>
Connetquot	Reference Station		0.87	0.13	1.7	1.11	0.34	0.7	4.52	0.223	16.3	2.88	0.663	0.9
PR-WC-15	Upstream of Forest Path	-0.17	c	c	c	20.3	10.7	3.9	d	d	d	13.1	1.99	1.4
PR-WC-14	Upstream of STP <sup>a</sup>	-0.13	19.1	11.2	8.8	20.1	10.5	3.3	d	d	d	d	d	d
PR-WC-13	Upstream of STP <sup>a</sup>	-0.07	9	9	9	19.7	9.86	3.1	d	d	d	d	d	d
PR-WC-12-D7	Upstream of STP <sup>a</sup>	-0.04	c	c	c	c	c	c	c	c	c	11.8	2.71	4.3
PR-WC-12	Upstream of STP <sup>a</sup>	-0.04	21.7	12.4	9.8	20.1	11	3.1	c	c	c	c	c	c
PR-WC-12DS	Downstream of Sump	-0.04	c	c	c	19.6	10.8	3.5	25.2	10.9	23.1	c	c	c
STP-EFF-UVC	24-hour composite	0	c	c	c	c	c	c	116	0.022	0.4	c	c	c
STP-EFF-UVG	Grab Sample	0	c	c	c	c	c	c	115	1.16	0.4	127	0.491	0.5
PR-WC-11	STP Outfall	0	43.5	7.03	3.1	23.9	9.89	2.3	c	c	c	c	c	c
PR-WC-11DS	50 ft downstream of outfall	0.01	c	c	c	c	c	c	103	0.3	1.4	56	1.05	1.8
PR-WC-10	West of HMN	0.3	36.5	8.91	4	42.6	10.2	2.1	114	1.22	2.4	73.4	2.04	6.7
PR-WC-09	Downstream of HMN	0.56	46.7	7.35	3	36.9	9.06	2.8	d	d	d	98.7	1.71	6.84
PR-WC-08	South of Area B	0.78	34.1	5.6	1.5	35.8	8.33	2.6	111	2.79	14.3	50.6	1.88	4.48
PR-WC-07	South of Area C	0.96	41.6	6.06	2.3	29.4	6.87	1.9	d	d	d	38.2	1.29	4.97
PR-WC-06	South of Area D	1.1	26.6	6.27	1.9	50.7	7.08	3.5	876	4.67	79.1	43.7	2.44	5.34
PR-WC-05	Downstream of HQ	1.46	34.9	4.62	2.7	33.7	5.9	2.9	140	8.4	48	70.2	3.97	11.5
PR-WC-04	2nd downstream of HQ	1.7	28.4	6.67	1	28.8	4.42	4.8	c	c	c	c	c	c
PR-WC-03	3rd west of Schultz Rd.	2.1	33	7.62	2.7	38.8	4	5	17.2	2.7	2.9	19.8	2.33	1.3
PR-WC-02	2nd west of Schultz Rd.	2.52	47.8	9.72	8	32.8	2.44	2.2				19.9	2.47	1.8
PR-WC-01	Schultz Rd. (West)	2.98	23.7	10.1	7.6	13.3	3.35	1.4	16.7	3.2	7.5	8.37	1.21	1.73
PR-WCS-01	East of Schultz Rd.	3.44	22.7	9.29	9	16.6	2.6	4.1	17.6	2.71	10.5	9.08	1.13	3.57
PR-WCS-02	West of Manor Rd.	3.99	14.8	7.61	12	12.4	5.8	4.2	13.5	2.26	9.6	8.32	1.18	3.62
PR-WCS-03	Manor Rd.	4.44	13.6	8.05	14	9.75	2.64	5.4	11.6	2.23	8	8.78	1.09	12.4
PR-WCS-04	West of Cranberry Bogs	4.77	24.7	9.12	22	14.2	3.27	8.4	12.4	2.8	9.1	15.4	1.32	3.5
PR-WCS-05	East of Cranberry Bogs	6.04	9.46	4.09	3.7	c	c	c	4.06	1.22	4.4	3.56	0.884	2.64
PR-WCS-06	Middle of Donahue's Pond	6.75	10.38	4.53	20	c	c	c	4.11	1.31	1.9	3.55	0.786	1.73
PR-WCS-07	Downstream of Connecticut Ave	7.23	7.13	2.7	3	6.55	2.61	1.4	4.76	0.75	5.7	3.81	0.88	3.6

Notes:

a STP = Sewage Treatment Plant, ND = non-detect, detection limits: 0.1 ng/L for total mercury, 0.045ng/L for methylmercury, 1 mg/L for TSS.

b Units: mg/L = milligrams per liter, ng/L = nannograms per liter.

c Not measured or not applicable.

d Samples not collected, depth < 1.0 foot.

Table 3-4 : Comparison of Pre-Remediation and Post-Remediation Water Column Sampling Results (July Survey)

Site ID	Station Description	Dist from STP (miles)	2006			2007			2008			2009		
			Mercury (ng/L) <sup>b</sup>	Methyl Mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>	Mercury (ng/L) <sup>b</sup>	Methyl Mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>	Mercury (ng/L) <sup>b</sup>	Methyl Mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>	Mercury (ng/L) <sup>b</sup>	Methyl Mercury (ng/L) <sup>b</sup>	TSS (mg/L) <sup>b</sup>
Connetquot	Connetquot River Reference Station		0.93	0.11	ND <sup>a</sup>	1.06	0.1	1.2	1.16	0.152	5.3	2.09	0.104	1.8
PR-WC-15	Upstream of Forest Path - Unfiltered	-0.17	c	c	c	9.18	2.33	5.7	c	c	c	d	d	d
			c	c	c	35.3	4.27	45	d	d	d	d	d	d
PR-WC-15	Upstream of Forest Path - Filtered	-0.17	c	c	c	1.97	0.41	127	d	d	d	d	d	d
PR-WC-14	Upstream of STP <sup>a</sup>	-0.13	d	d	d	c	c	c	d	d	d	d	d	d
PR-WC-13	Upstream of STP <sup>a</sup>	-0.07	d	d	d	c	c	c	d	d	d	d	d	d
PR-WC-12-D7	Upstream of STP <sup>a</sup>	-0.04	c	c	c	c	c	c	c	c	c	8.92	2.63	2.7
PR-WC-12	Upstream of STP <sup>a</sup>	-0.04	d	d	d	9.92	2.42	3.7	d	d	d	c	c	c
PR-WC-12DS	Downstream of Sump	-0.04	c	c	c	10.2	2.52	5.5	d	d	d	c	c	c
STP-EFF-UVC	24-hour composite	0	c	c	c	96.4	0.02	0.9	86.7	0.02 U	0.3 U	c	c	c
STP-EFF-UVG	Grab Sample	0	c	c	c	94.8	0.02	0.3	94.1	0.02 U	0.6	115	0.024	0.4
PR-WC-11	STP outfall <sup>1</sup>	0	d	d	d	102	1.41	10.6	c	c	c	c	c	c
PR-WC-11DS	50 ft. downstream of STP Outfall	0.01	c	c	c	c	c	c	d	d	d	d	d	d
PR-WC-10	West of HMN	0.3	57	1.31	2.7	73.3	1.23	2.8	94.4	0.61	1.4	110	0.965	1.2
PR-WC-09	Downstream of HMN	0.56	d	d	d	84.6	1.4	4.9	d	d	d	100	1.27	1.3
PR-WC-08	South of Area B	0.78	91	2.08	25.2	111	c	c	68.3	3.48	29	44.4	0.853	2.1
			c	c	c	42.1	2.9	7.8	d	d	d	c	c	c
PR-WC-07	South of Area C	0.96	58.7	2.26	9.1	36.4	1.49	4	d	d	d	44.7	1.24	4.6
PR-WC-06	North of Area D	1.1	1360	13.2	116	47.4	2.61	7.6	d	d	d	93.6	1.79	4
PR-WC-05	Downstream of HQ	1.46	28.6	9.76	9.3	41.7	6.03	19	d	d	d	22.9	8.08	3.4
PR-WC-04	2nd Downstream of HQ	1.7	d	d	d	d	d	d	d	d	d	d	d	d
PR-WC-03	3rd west of Schultz Rd.	2.1	61	9.03	25.1	53.6	3.41	24.9	374	4.18	165	18.7	1.66	3.5
PR-WC-02	2nd west of Schultz Rd.	2.52	d	d	d	21.3	3.73	10.3	d	d	d	d	d	d
PR-WC-01	Schultz Rd. (West)	2.98	6.57	1.65	2.8	16.1	6.62	16	d	d	d	7.59	1.31	2.6
PR-WCS-01	East of Schultz Rd.	3.44	6.71	1.37	5.3	11.7	2.39	7.5	d	d	d	6.51	1.2	5.3
PR-WCS-02	West of Manor Rd.	3.99	6.12	1.55	5.7	8.56	2.39	5.4	4.3	0.55	8	5.97	1.05	7.3
PR-WCS-03	Manor Rd.	4.44	6.28	1.27	5.7	15.7	3.81	30	3.1	0.57	4.4	6.87	1.04	5.6
PR-WCS-04	West of Cranberry Bogs	4.77	17.5	1.81	17.6	24.7	3.87	39	4.99	0.77	5.6	8.81	1.01	7.1
PR-WCS-05	East of Cranberry Bogs	6.04	1.66	0.8	5.5	2.57	0.228	7.1	6.22	0.39	9.7	3.84	0.778	5.5
PR-WCS-06	Middle of Donahue's Pond	6.75	2.76	1.37	23	3.23	0.499	25	2.43	0.4	3.3	3.17	0.663	4.7
PR-WCS-07	Downstream of Connecticut Ave	7.23	0.93	0.57	5	4.65	1.28	10.1	c	c	c	3.53	0.654	3.6

Notes:

a STP = Sewage Treatment Plant, ND = non-detect, detection limits: 0.1 ng/L for total mercury, 0.045ng/L for methylmercury, 1 mg/L for TSS.

b Units: mg/L = milligrams per liter, ng/L = nannograms per liter.

c Not measured or not applicable.

d Samples not collected, depth < 1.0 foot.

**Table 3-5: PR-SS-15-U1-WC1 to PR-SS-15-U1-WC4 Sample Results**

Sample Date	Filtered / Unfiltered	Laboratory	Sample Time	Sample Station	Total Mercury (ng/L)	Methyl Mercury (ng/L)	TSS (mg/L)	Sample Time	Sample Station	Total Mercury (ng/L)	Methyl Mercury (ng/L)	TSS (mg/L)
3/12/2009	Filtered	BROOKS	1100	WC-4	20.2	N/A	N/A	1050	WC-3	20.9	N/A	N/A
			1032	WC-1	20.7	N/A	N/A	1045	WC-2	21	N/A	N/A
3/12/2009	Unfiltered	BROOKS	1100	WC-4	57.2	1.02	6.1	1050	WC-3	47	1	5.9
			1032	WC-1	91.6	1.48	12.1	1045	WC-2	68	0.625	7.1
3/12/2009	Filtered	CAL	1100	WC-4	20	N/A	N/A	1050	WC-3	20	N/A	N/A
			1032	WC-1	23	N/A	N/A	1045	WC-2	22	N/A	N/A
3/12/2009	Unfiltered	CAL	1100	WC-4	44	0.874	3	1050	WC-3	41	0.937	3
			1032	WC-1	73	1.05	6	1045	WC-2	39	0.789	3
4/23/2009	Unfiltered	BROOKS	1110	WC-4	47.3	0.89	8.9	1105	WC-3	46.5	0.873	9.3
			1050	WC-1	51.6	1.14	9	1100	WC-2	48.5	0.951	9.1
4/23/2009	Unfiltered	CAL	1110	WC-4	44	0.833	3	1105	WC-3	58	0.963	3
			1050	WC-1	47	0.935	2	1100	WC-2	49	0.958	3
6/17/2009	Unfiltered	BROOKS	1305	WC-4	367	7.96	30.4	1300	WC-3	54.8	7.94	11.9
			1245	WC-1	44.3	7.54	8.56	1250	WC-2	53.1	7.38	10
7/15/2009	Unfiltered	BROOKS	1255	WC-4	169	11.1	25.4	1250	WC-3	104	8.68	10.6
			1240	WC-1	54.7	9.15	7	1245	WC-2	53.5	8	7.8

**Table 4-1. Peconic River Fish Collection Locations**

<b>Remediation Area</b>	<b>Approximate Distance Downstream of BNL STP (miles)*</b>	<b>Location Description</b>
Area A	0.3	Between stream gauging stations HE and HMN.
Area C	0.8	From approximately 260 feet downstream of PR-WC-07 to approximately 225 feet upstream of PR-SS-29. This is an alternate location for Area D that may be sampled when fish population size allows.
Area D (North Street)	1.6	Along North Street in the ponded sections of the river upstream and downstream of stream gauging station HQ. If water level or fish population size is not sufficient for fish collection the ponded section of the river in remediation Area C may be substituted.
Area P (Schultz Road.)	2.9	Upstream of Schultz Road. If water level or fish population size is not sufficient for fish collection Ice Pond, in remediation Area P may be substituted.
Manor Road	4.4	Within the section of the Peconic River between approximately 100 yards upstream and downstream of Manor Road.
Donahue's Pond	7.0	Donahue's Pond is an impounded section of the Peconic River at the Peconic River Sportsman's Club. Donahue's Pond is approximately 2 miles downstream of the Manor Road cleanup area.

\* Distance is from BNL STP to the approximate mid-point of the respective fish collection area.

**Table 4-2 : 2009 Fish Collection Summary Gear and Water Chemistry**

	Area A	Area C	Area D (North Street)	Area P (Schultz Rd.)	Manor Road	Donahue's Pond
Date	4/15/2009		5/5/2009			
		4/16/2009	5/7/2009	4/9/2009	4/7/2009	3/19/2009
		4/17/2009	6/2/2009	4/10/2009	4/8/2009	3/20/2009
Fish Collected By	BNL	BNL	BNL	DEC	DEC	Cold Spring Harbor Fish Hatchery
Gear Used	electrofishing	electrofishing	electrofishing	fyke nets	fyke nets	gill nets and hook and line
Time	1000-1330	1030-1205	nr	1015	nr	1000- 4:30
		0930-1130	0950-1200 and 1300-1530	900	nr	1030-1445
Water Temperature (degrees C)	9.71	10.61	13.96	10.26	6.32	8.6
		10.74	16.19	6.99	6.61	nr
			18.06			
Conductivity (mmho/cm <sup>3</sup> )	281	239	183.00	51	56	65
		242	211.00	52	55	nr
			216.00			
Dissolved Oxygen (mg/L)	13.67	10.63	6.40	10.08	10.01	10.57
		15.19	6.62	9.98	10.02	nr
			5.08			
pH	8.15	8.71	7.09	6.51	6.2	7.8
		8.76	7.00	6.73	6.21	nr
			6.78			
Turbidity	0.3	12.5	4.20	2.2	0.6	6.5
		10.7	0.60	0.6	0.8	nr
			7.50			

\* mmho/cm<sup>3</sup> - milli mhos per cubic centimeter.

nr = parameter not measured or not recorded.

**Table 4-3 : 2009 Peconic River Fish Catch**

**Total Fish Catch**

Species	DEC Species Code	Area A	Area C	Area D (North Street)	Area P (Schultz Rd.)	Manor Road	Donahue's Pond
<b>Single Fish</b>							
Black Crappie	603		1				
Bluegill	598					1	
Brown Bullhead	444			2	2	9	3
Chain Pickerel	349	2			1	1	4
Largemouth Bass	601	1	2	4	1	2	1
Pumpkinseed	596		2	3			
<b>Total Catch Per Area</b>							
Total Catch (Single Fish)	42						
<b>Composites</b>							
Bluegill	598		18				22
Brown Bullhead	444	40	4	22		19	8
Brown Trout	328						
Largemouth Bass	601		8				
Pumpkinseed	596	17	15	7		5	4
<b>Total Catch Per Area</b>							
Total Catch (Composites)	189						

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
AREA A	27077	228191	27077-bc1	4M	Brown Bullhead	301	'09-84A	27077-001
				4M	Brown Bullhead	300	'09-85A	27077-001
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 300</i>								
AREA A	27077	228191	27077-bc2	4M	Brown Bullhead	286	'09-86	27077-002
				4M	Brown Bullhead	285	'09-87	27077-002
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 286</i>								
AREA A	27077	228191	27077-bc3	4M	Brown Bullhead	266	'09-88	27077-003
				4M	Brown Bullhead	260	'09-89	27077-003
				4M	Brown Bullhead	255	'09-90	27077-003
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 260</i>								
AREA A	27077	228191	27077-bc4	4M	Brown Bullhead	254	'09-91	27077-004
				4M	Brown Bullhead	251	'09-92	27077-004
				4M	Brown Bullhead	246	'09-93	27077-004
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 250</i>								
AREA A	27077	228191	27077-bc5	3M	Brown Bullhead	210	'09-94	27077-005
				4M	Brown Bullhead	250	'09-95	27077-005
				4M	Brown Bullhead	250	'09-96	27077-005

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
				3M	Brown Bullhead	224	'09-97	27077-005
<i>Average Age of fish : 3.5</i>								
<i>Average Length of fish : 234</i>								
AREA A	27077	228191	27077-bc6	3M	Brown Bullhead	219	'09-100	27077-006
				3M	Brown Bullhead	214	'09-101	27077-006
				3M	Brown Bullhead	211	'09-102	27077-006
				3M	Brown Bullhead	220	'09-98	27077-006
				3M	Brown Bullhead	220	'09-99	27077-006
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 217</i>								
AREA A	27077	228191	27077-bc7	3M	Brown Bullhead	211	'09-103	27077-007
				3M	Brown Bullhead	211	'09-104	27077-007
				3M	Brown Bullhead	210	'09-105	27077-007
				3M	Brown Bullhead	210	'09-106	27077-007
				3M	Brown Bullhead	210	'09-107	27077-007
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 210</i>								
AREA A	27077	228191	27077-bc8	3M	Brown Bullhead	201	'09-108	27077-008
				3M	Brown Bullhead	200	'09-109	27077-008
				3M	Brown Bullhead	200	'09-110	27077-008
				3M	Brown Bullhead	199	'09-111	27077-008
				3M	Brown Bullhead	199	'09-112	27077-008
<i>Average Age of fish : 3.0</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
<i>Average Length of fish : 200</i>								
AREA A	27077	228191	27077-bc9	3M	Brown Bullhead	198	'09-113	27077-009
				3M	Brown Bullhead	195	'09-114	27077-009
				3M	Brown Bullhead	194	'09-115	27077-009
				3M	Brown Bullhead	185	'09-116	27077-009
				3M	Brown Bullhead	181	'09-117	27077-009
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 191</i>								
AREA A	27077	228191	27077-bc10	3M	Brown Bullhead	179	'09-118	27077-010
				3M	Brown Bullhead	175	'09-119	27077-010
				3M	Brown Bullhead	172	'09-120	27077-010
				3M	Brown Bullhead	171	'09-121	27077-010
				2M	Brown Bullhead	170	'09-122	27077-010
				3M	Brown Bullhead	145	'09-123	27077-010
<i>Average Age of fish : 2.8</i>								
<i>Average Length of fish : 169</i>								
AREA A	27077	228191	27077-bc11	2+	Pumpkinseed	180	'09-124	27077-011
				4M	Pumpkinseed	175	'09-125	27077-011
				4M	Pumpkinseed	172	'09-126	27077-011
				3+	Pumpkinseed	171	'09-127	27077-011
<i>Average Age of fish : 3.2</i>								
<i>Average Length of fish : 174</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
AREA A	27077	228191	27077-bc12	3+	Pumpkinseed	171	'09-128	27077-012
				2+	Pumpkinseed	170	'09-129	27077-012
				3+	Pumpkinseed	165	'09-130	27077-012
				2+	Pumpkinseed	165	'09-131	27077-012
				3M	Pumpkinseed	162	'09-132	27077-012
<i>Average Age of fish : 2.6</i>								
<i>Average Length of fish : 167</i>								
AREA A	27077	228191	27077-bc13	3M	Pumpkinseed	160	'09-133	27077-013
				2M	Pumpkinseed	150	'09-134	27077-013
				2M	Pumpkinseed	132	'09-135	27077-013
				2	Pumpkinseed	124	'09-136	27077-013
				1M	Pumpkinseed	120	'09-137	27077-013
<i>Average Age of fish : 2.0</i>								
<i>Average Length of fish : 137</i>								
AREA A	27077	228191	27077-bc14	1M	Pumpkinseed	114	'09-138	27077-014
				2M	Pumpkinseed	111	'09-139	27077-014
				1	Pumpkinseed	105	'09-140	27077-014
<i>Average Age of fish : 1.3</i>								
<i>Average Length of fish : 110</i>								
AREA C	27080	228249	27080-bc1	3M	Pumpkinseed	182	'09-144	27080-001
				3+	Pumpkinseed	179	'09-145	27080-001
				3+	Pumpkinseed	178	'09-146	27080-001

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
				4+	Pumpkinseed	172	'09-147	27080-001
				4	Pumpkinseed	179	'09-148	27080-001
<i>Average Age of fish : 3.4</i>								
<i>Average Length of fish : 178</i>								
AREA C	27080	228249	27080-bc2	3+	Pumpkinseed	168	'09-149	27080-002
				4M	Pumpkinseed	166	'09-150	27080-002
				4M	Pumpkinseed	163	'09-151	27080-002
				3M	Pumpkinseed	162	'09-152	27080-002
				3M	Pumpkinseed	152	'09-153	27080-002
<i>Average Age of fish : 3.4</i>								
<i>Average Length of fish : 162</i>								
AREA C	27080	228249	27080-bc3	3M	Pumpkinseed	160	'09-154	27080-003
				4+	Pumpkinseed	160	'09-155	27080-003
				2M	Pumpkinseed	153	'09-156	27080-003
				2M	Pumpkinseed	157	'09-157	27080-003
				2M	Pumpkinseed	146	'09-158	27080-003
<i>Average Age of fish : 2.6</i>								
<i>Average Length of fish : 155</i>								
AREA C	27080	228249	27080-bc6	4	Bluegill	200	'09-161	27080-006
				4M	Bluegill	190	'09-162	27080-006
				2M	Bluegill	146	'09-163	27080-006
<i>Average Age of fish : 3.3</i>								
<i>Average Length of fish : 179</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
AREA C	27080	228249	27080-bc7	2M	Bluegill	140	'09-164	27080-007
				2M	Bluegill	139	'09-165	27080-007
				2M	Bluegill	138	'09-166	27080-007
				2M	Bluegill	138	'09-167	27080-007
				2M	Bluegill	133	'09-168	27080-007
<i>Average Age of fish : 2.0</i>								
<i>Average Length of fish : 138</i>								
AREA C	27080	228249	27080-bc8	2M	Bluegill	133	'09-169	27080-008
				2M	Bluegill	133	'09-170	27080-008
				2M	Bluegill	130	'09-171	27080-008
				2M	Bluegill	130	'09-172	27080-008
				2M	Bluegill	130	'09-173	27080-008
<i>Average Age of fish : 2.0</i>								
<i>Average Length of fish : 131</i>								
AREA C	27080	228249	27080-bc9	2M	Bluegill	124	'09-174	27080-009
				2M	Bluegill	122	'09-175	27080-009
				2M	Bluegill	121	'09-176	27080-009
				2M	Bluegill	118	'09-177	27080-009
				2M	Bluegill	113	'09-178	27080-009
<i>Average Age of fish : 2.0</i>								
<i>Average Length of fish : 120</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
AREA C	27080	228249	27080-bc10	3M	Largemouth Bass	226	'09-179	27080-010
				2+	Largemouth Bass	216	'09-180	27080-010
				2M	Largemouth Bass	196	'09-181	27080-010
<i>Average Age of fish : 2.3</i>								
<i>Average Length of fish : 213</i>								
AREA C	27080	228249	27080-bc12	4M	Brown Bullhead	209	'09-183	27080-012
				4M	Brown Bullhead	300	'09-184	27080-012
				3M	Brown Bullhead	250	'09-185	27080-012
				3M	Brown Bullhead	190	'09-186	27080-012
<i>Average Age of fish : 3.5</i>								
<i>Average Length of fish : 237</i>								
AREA C	27080	228249	27080-bc13	2+	Largemouth Bass	250	'09-187	27080-013
				2+	Largemouth Bass	222	'09-188	27080-013
				2+	Largemouth Bass	205	'09-189	27080-013
				3M	Largemouth Bass	204	'09-190	27080-013
				2+	Largemouth Bass	195	'09-191	27080-013
<i>Average Age of fish : 2.2</i>								
<i>Average Length of fish : 215</i>								
AREA D - Downstream of HQ	27142	229223	27142-bc1	4M	Brown Bullhead	310	'09-194	27142-001
				4M	Brown Bullhead	300	'09-195	27142-001
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 305</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
AREA D - Downstream of HQ	27142	229223	27142-bc2	4M	Brown Bullhead	275	'09-196	27142-002
				4M	Brown Bullhead	270	'09-197	27142-002
				4M	Brown Bullhead	260	'09-198	27142-002
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 268</i>								
AREA D - Downstream of HQ	27142	229223	27142-bc3	3M	Brown Bullhead	220	'09-199	27142-003
				3M	Brown Bullhead	200	'09-200	27142-003
				3M	Brown Bullhead	193	'09-201	27142-003
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 204</i>								
AREA D - Downstream of HQ	27150	229483	27150-bc1	4M	Brown Bullhead	335	'09-206	27150-001
				4M	Brown Bullhead	305	'09-207	27150-001
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 320</i>								
AREA D - Downstream of HQ	27150	229483	27150-bc2	4M	Brown Bullhead	291	'09-208	27150-002
				4M	Brown Bullhead	284	'09-209	27150-002
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 288</i>								
AREA D - Downstream of HQ	27216	230874	27216-bc1	4M	Brown Bullhead	265	'09-215	27216-001
				4M	Brown Bullhead	249	'09-216	27216-001

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
				3M	Brown Bullhead	226	'09-217	27216-001
<i>Average Age of fish : 3.7</i>								
<i>Average Length of fish : 247</i>								
AREA D - Downstream of HQ	27216	230874	27216-bc2	3M	Brown Bullhead	215	'09-218	27216-002
				3M	Brown Bullhead	212	'09-219	27216-002
				3M	Brown Bullhead	210	'09-220	27216-002
				3M	Brown Bullhead	206	'09-221	27216-002
				3M	Brown Bullhead	206	'09-222	27216-002
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 210</i>								
AREA D - Downstream of HQ	27216	230874	27216-bc3	3M	Brown Bullhead	201	'09-223	27216-003
				3M	Brown Bullhead	154	'09-224	27216-003
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 178</i>								
AREA D - Downstream of HQ	27216	230874	27216-bc4	6	Pumpkinseed	153	'09-225	27216-004
				4+	Pumpkinseed	152	'09-226	27216-004
				4+	Pumpkinseed	131	'09-227	27216-004
<i>Average Age of fish : 4.7</i>								
<i>Average Length of fish : 145</i>								
AREA D - Downstream of HQ	27216	230874	27216-bc6	1+	Pumpkinseed	89	'09-229	27216-006
				1+	Pumpkinseed	81	'09-230	27216-006

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
<i>Average Age of fish : 1.0</i>								
<i>Average Length of fish : 85</i>								
AREA D - Downstream of HQ	27216	230874	27216-bc7	1+	Pumpkinseed	79	'09-231	27216-007
				1+	Pumpkinseed	81	'09-232	27216-007
<i>Average Age of fish : 1.0</i>								
<i>Average Length of fish : 80</i>								
MANOR ROAD	27053	227694	27053-bc5	4M	Brown Bullhead	266	'09-49	27053-005
				5M	Brown Bullhead	251	'09-50	27053-005
				7M	Brown Bullhead	246	'09-51	27053-005
<i>Average Age of fish : 5.3</i>								
<i>Average Length of fish : 254</i>								
MANOR ROAD	27053	227694	27053-bc6	4M	Brown Bullhead	250	'09-52	27053-006
				4M	Brown Bullhead	248	'09-53	27053-006
				4M	Brown Bullhead	247	'09-54	27053-006
				4M	Brown Bullhead	242	'09-55	27053-006
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 247</i>								
MANOR ROAD	27053	227694	27053-bc7	4M	Brown Bullhead	238	'09-56	27053-007
				3M	Brown Bullhead	226	'09-57	27053-007
				4M	Brown Bullhead	223	'09-58	27053-007
				3M	Brown Bullhead	222	'09-59	27053-007

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
<i>Average Age of fish : 3.5</i>								
<i>Average Length of fish : 227</i>								
MANOR ROAD	27053	227694	27053-bc8	3M	Brown Bullhead	210	'09-60	27053-008
				3M	Brown Bullhead	210	'09-61	27053-008
				3M	Brown Bullhead	202	'09-62	27053-008
				3M	Brown Bullhead	200	'09-63	27053-008
				3M	Brown Bullhead	199	'09-64	27053-008
				3M	Brown Bullhead	199	'09-65	27053-008
				3M	Brown Bullhead	197	'09-66	27053-008
				3M	Brown Bullhead	195	'09-67	27053-008
<i>Average Age of fish : 3.0</i>								
<i>Average Length of fish : 202</i>								
MANOR ROAD	27053	227694	27053-bc15	3+	Pumpkinseed	155	'09-74	27053-015
				4+	Pumpkinseed	144	'09-75	27053-015
				3+	Pumpkinseed	170	'09-77	27053-015
				3+	Pumpkinseed	156	'09-78	27053-015
				3M	Pumpkinseed	146	'09-79	27053-015
<i>Average Age of fish : 3.2</i>								
<i>Average Length of fish : 154</i>								
DONAHUE'S POND	26972	226656	26972-bc3	14M	Brown Bullhead	347	'09-03	26972-003
				4M	Brown Bullhead	330	'09-09	26972-003
<i>Average Age of fish : 9.0</i>								
<i>Average Length of fish : 338</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
DONAHUE'S POND	26972	226656	26972-bc4	8M	Brown Bullhead	305	'09-04	26972-004
				5M	Brown Bullhead	305	'09-05	26972-004
<i>Average Age of fish : 6.5</i>								
<i>Average Length of fish : 305</i>								
DONAHUE'S POND	26972	226656	26972-bc5	5M	Brown Bullhead	327	'09-07	26972-005
				4M	Brown Bullhead	335	'09-08	26972-005
<i>Average Age of fish : 4.5</i>								
<i>Average Length of fish : 331</i>								
DONAHUE'S POND	26985	226760	26985-bc1	5M	Brown Bullhead	317	'09-06	26985-001
				7M	Brown Bullhead	335	'09-14	26985-001
<i>Average Age of fish : 6.0</i>								
<i>Average Length of fish : 326</i>								
DONAHUE'S POND	26985	226760	26985-bc2	5M	Bluegill	220	'09-10	26985-002
				6M	Bluegill	224	'09-11	26985-002
				5M	Bluegill	212	'09-12	26985-002
<i>Average Age of fish : 5.3</i>								
<i>Average Length of fish : 219</i>								
DONAHUE'S POND	26985	226760	26985-bc9	6M	Bluegill	222	'09-20	26985-009
				7M	Bluegill	227	'09-25	26985-009

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
				5M	Bluegill	220	'09-28	26985-009
				6M	Bluegill	225	'09-31	26985-009
<i>Average Age of fish : 6.0</i>								
<i>Average Length of fish : 224</i>								
DONAHUE'S POND	26985	226760	26985-bc10	4M	Bluegill	200	'09-21	26985-010
				4M	Bluegill	203	'09-29	26985-010
				4M	Bluegill	200	'09-32	26985-010
				4M	Bluegill	200	'09-37	26985-010
<i>Average Age of fish : 4.0</i>								
<i>Average Length of fish : 201</i>								
DONAHUE'S POND	26985	226760	26985-bc11	4M	Bluegill	213	'09-22	26985-011
				4M	Bluegill	217	'09-23	26985-011
				5M	Bluegill	218	'09-27	26985-011
				6M	Bluegill	218	'09-30	26985-011
<i>Average Age of fish : 4.8</i>								
<i>Average Length of fish : 216</i>								
DONAHUE'S POND	26985	226760	26985-bc12	4M	Bluegill	203	'09-24	26985-012
				5M	Bluegill	205	'09-33	26985-012
				4M	Bluegill	203	'09-36	26985-012
<i>Average Age of fish : 4.3</i>								
<i>Average Length of fish : 204</i>								

**Table 4-4 : Composition of the 2009 Fish Composites**

<u>Area</u>	<u>COC</u>	<u>SDG*</u>	<u>Composite ID</u>	<u>Individual Fish Age</u>	<u>Individual Fish species</u>	<u>Total Length (mm)</u>	<u>Fish ID</u>	<u>UIDs*</u>
DONAHUE'S POND	26985	226760	26985-bc13	5M	Bluegill	212	'09-26	26985-013
				5M	Bluegill	210	'09-34	26985-013
				5M	Bluegill	215	'09-35	26985-013
				4M	Bluegill	217	'09-38	26985-013
<i>Average Age of fish : 4.8</i>								
<i>Average Length of fish : 214</i>								
DONAHUE'S POND	26985	226760	26985-bc14	6M	Pumpkinseed	187	'09-39	26985-014
				4M	Pumpkinseed	188	'09-40	26985-014
				7M	Pumpkinseed	188	'09-41	26985-014
				4M	Pumpkinseed	188	'09-42	26985-014
<i>Average Age of fish : 5.2</i>								
<i>Average Length of fish : 188</i>								

**Table 4-5 : Peconic River Fish Mercury Concentrations by Fish Location**

Fish Collection Area *	Number of Mercury Samples	Average Mercury Concentration (mg/kg)	Minimum Mercury Concentration (mg/kg)	Maximum Mercury Concentration (mg/kg)
All Fish Samples (Area A to Donahue's Pond)	231	0.251	0.0219	1.63
AREA A	60	0.286	0.116	0.557
AREA C	50	0.269	0.0881	0.593
AREA D - Downstream of HQ	38	0.267	0.0663	1.63
SCHULTZ ROAD	4	0.347	0.228	0.445
MANOR ROAD	37	0.294	0.0219	0.534
DONAHUE'S POND	42	0.12	0.0245	0.624

\* Distance is from BNL STP to the approximate mid-point of the respective fish collection area.

**Table 4-6 : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

<u>Species</u>	<u>Number of Fish</u>	<u>Average<sup>1</sup> Length (mm)</u>	<u>Minimum<sup>1</sup> Length (mm)</u>	<u>Maximum<sup>1</sup> Length (mm)</u>	<u>Number of Analytical Samples</u>	<u>Average Mercury Concentration (mg/kg)<sup>2</sup></u>	<u>Minimum Mercury Concentration (mg/kg)<sup>2</sup></u>	<u>Maximum Mercury Concentration (mg/kg)<sup>2</sup></u>
<b>Bluegill</b>	1	178	178	178	1	0.152	0.152	0.152
Age 3M	1	178	178	178	1	0.152	0.152	0.152
<b>Brown Bullhead</b>	16	246	144	346	16	0.225	0.022	0.534
Age 7M	3	324	312	345	3	0.374	0.091	0.534
Age 5M	1	340	340	340	1	0.061	0.061	0.061
Age 4M	3	330	320	346	3	0.035	0.022	0.058
Age 3M	9	181	144	190	9	0.257	0.066	0.386
<b>Chain Pickerel</b>	8	368	143	537	8	0.332	0.167	0.624
Age 6M	1	537	537	537	1	0.427	0.427	0.427
Age 5M	1	507	507	507	1	0.624	0.624	0.624
Age 4+	1	475	475	475	1	0.281	0.281	0.281
Age 3M	1	405	405	405	1	0.262	0.262	0.262
Age 2+	2	303	275	330	2	0.272	0.214	0.329
Age 2M	1	272	272	272	1	0.349	0.349	0.349
Age 1M	1	143	143	143	1	0.167	0.167	0.167
<b>Largemouth Bass</b>	11	254	145	423	11	0.626	0.186	1.63
Age 10M	1	460	460	460	1	0.395	0.395	0.395
Age 7M	1	423	423	423	1	1.63	1.63	1.63
Age 5	1	309	309	309	1	0.451	0.451	0.451
Age 5+	1	350	350	350	1	0.051	0.051	0.051
Age 4	1	255	255	255	1	0.047	0.047	0.047
Age 4+	2	321	301	340	2	0.4	0.356	0.445
Age 3	3	268	240	310	3	0.059	0.055	0.066
Age 3M	2	278	245	310	2	0.257	0.186	0.328
Age 2+	3	185	165	205	3	0.864	0.507	1.56
Age 2M	2	157	145	169	2	0.447	0.393	0.501

**Table 4-6 : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

<u>Species</u>	<u>Number of Fish</u>	<u>Average<sup>1</sup> Length (mm)</u>	<u>Minimum<sup>1</sup> Length (mm)</u>	<u>Maximum<sup>1</sup> Length (mm)</u>	<u>Number of Analytical Samples</u>	<u>Average Mercury Concentration (mg/kg)<sup>2</sup></u>	<u>Minimum Mercury Concentration (mg/kg)<sup>2</sup></u>	<u>Maximum Mercury Concentration (mg/kg)<sup>2</sup></u>
Pumpkinseed	4	133	110	192	4	0.211	0.081	0.367
Age 5+	1	192	192	192	1	0.367	0.367	0.367
Age 2+	1	120	120	120	1	0.308	0.308	0.308
Age 2M	1	110	110	110	1	0.088	0.088	0.088
Age 1+	1	111	111	111	1	0.081	0.081	0.081

<sup>1</sup> Average length, minimum length and maximum length were calculated for all aged fish.

<sup>2</sup> The average, minimum and maximum concentrations and the average ages in this table represent only the fish that were analyzed for mercury.

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA A - Brown Bullhead								
Composite : 27077-bc1	2	301	300	301	1			
Mercury						0.308	0.0038	N
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc2	2	286	285	286	1			
Mercury						0.239	0.0034	N
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc3	3	260	255	266	1			
Mercury						0.276	0.0037	N
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc4	3	250	246	254	1			
Mercury						0.116	0.0035	N
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc5	4	234	210	250	1			
Mercury						0.319	0.004	N
Average Age of Composited Fish : 3.5 years								
AREA A - Brown Bullhead								

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Composite : 27077-bc6	5	217	211	220	1			
Mercury						0.196	0.0038	N
Average Age of Composited Fish : 3.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc7	5	210	210	211	1			
Mercury						0.273	0.0037	N
Average Age of Composited Fish : 3.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc8	5	200	199	201	1			
Mercury						0.214	0.0035	N
Average Age of Composited Fish : 3.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc9	5	191	181	198	1			
Mercury						0.187	0.0034	N
Average Age of Composited Fish : 3.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc10	6	169	145	179	1			
Mercury						0.279	0.004	N
Average Age of Composited Fish : 2.8 years								
AREA A - Pumpkinseed								
Composite : 27077-bc11	4	175	171	180	1			

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Mercury						0.557	0.0041	N
Average Age of Composited Fish : 3.3 years								
AREA A - Pumpkinseed								
Composite : 27077-bc12	5	167	162	171	1			
Mercury						0.472	0.0036	N
Average Age of Composited Fish : 2.6 years								
AREA A - Pumpkinseed								
Composite : 27077-bc13	5	137	120	160	1			
Mercury						0.236	0.0038	N
Average Age of Composited Fish : 2.0 years								
AREA A - Pumpkinseed								
Composite : 27077-bc14	3	110	105	114	1			
Mercury						0.319	0.0041	N
Average Age of Composited Fish : 1.3 years								
AREA C - Pumpkinseed								
Composite : 27080-bc1	5	178	172	182	1			
Mercury						0.327	0.0035	
Average Age of Composited Fish : 3.4 years								
AREA C - Pumpkinseed								
Composite : 27080-bc2	5	162	152	168	1			
Mercury						0.383	0.0039	

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Average Age of Composited Fish : 3.4 years								
AREA C - Pumpkinseed								
Composite : 27080-bc3	5	155	146	160	1			
Mercury						0.347	0.0034	
Average Age of Composited Fish : 2.6 years								
AREA C - Bluegill								
Composite : 27080-bc6	3	179	146	200	1			
Mercury						0.134	0.0037	
Average Age of Composited Fish : 3.3 years								
AREA C - Bluegill								
Composite : 27080-bc7	5	138	133	140	1			
Mercury						0.0925	0.004	
Average Age of Composited Fish : 2.0 years								
AREA C - Bluegill								
Composite : 27080-bc8	5	131	130	133	1			
Mercury						0.135	0.0034	
Average Age of Composited Fish : 2.0 years								
AREA C - Bluegill								
Composite : 27080-bc9	5	120	113	124	1			
Mercury						0.122	0.0041	

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Average Age of Composited Fish : 2.0 years								
AREA C - Largemouth Bass								
Composite : 27080-bc10	3	213	196	226	1			
Mercury						0.593	0.0077	
Average Age of Composited Fish : 2.3 years								
AREA C - Brown Bullhead								
Composite : 27080-bc12	4	237	190	300	1			
Mercury						0.145	0.0039	
Average Age of Composited Fish : 3.5 years								
AREA C - Largemouth Bass								
Composite : 27080-bc13	5	215	195	250	1			
Mercury						0.497	0.0038	
Average Age of Composited Fish : 2.2 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27142-bc1	2	305	300	310	1			
Mercury						0.304	0.0035	
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27142-bc2	3	268	260	275	1			

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Mercury						0.225	0.0037	
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27142-bc3	3	204	193	220	1			
Mercury						0.133	0.004	
Average Age of Composited Fish : 3.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27150-bc1	2	320	305	335	1			
Mercury						0.208	0.004	*EN
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27150-bc2	2	288	284	291	1			
Mercury						0.224	0.0037	*EN
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27216-bc1	3	247	226	265	1			
Mercury						0.156	0.0041	EN
Average Age of Composited Fish : 3.7 years								

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27216-bc2	5	210	206	215	1			
Mercury						0.102	0.0036	EN
Average Age of Composited Fish : 3.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27216-bc3	2	178	154	201	1			
Mercury						0.0833	0.0035	EN
Average Age of Composited Fish : 3.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Composite : 27216-bc4	3	145	131	153	1			
Mercury						0.261	0.004	EN
Average Age of Composited Fish : 4.7 years								
AREA D - Downstream of HQ - Pumpkinseed								
Composite : 27216-bc6	2	85	81	89	1			
Mercury						0.137	0.0036	EN
Average Age of Composited Fish : 1.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Composite : 27216-bc7	2	80	79	81	1			

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Mercury						0.114	0.0036	EN
Average Age of Composited Fish : 1.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc5	3	254	246	266	1			
Mercury						0.461	0.0037	
Average Age of Composited Fish : 5.3 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc6	4	247	242	250	1			
Mercury						0.22	0.0035	
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc7	4	227	222	238	1			
Mercury						0.376	0.0038	
Average Age of Composited Fish : 3.5 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc8	8	202	195	210	1			
Mercury						0.262	0.0034	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Pumpkinseed								
Composite : 27053-bc15	5	154	144	170	1			
Mercury						0.245	0.0034	

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Average Age of Composited Fish : 3.2 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26972-bc3	2	339	330	347	1			
Mercury						0.0771	0.0039	
Average Age of Composited Fish : 9.0 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26972-bc4	2	305	305	305	1			
Mercury						0.0571	0.0035	
Average Age of Composited Fish : 6.5 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26972-bc5	2	331	327	335	1			
Mercury						0.0276	0.0038	
Average Age of Composited Fish : 4.5 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26985-bc1	2	326	317	335	1			
Mercury						0.0616	0.0038	N
Average Age of Composited Fish : 6.0 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc2	3	219	212	224	1			
Mercury						0.177	0.0037	N

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Average Age of Composited Fish : 5.3 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc9	4	224	220	227	1			
Mercury						0.148	0.0034	N
Average Age of Composited Fish : 6.0 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc10	4	201	200	203	1			
Mercury						0.0774	0.0037	N
Average Age of Composited Fish : 4.0 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc11	4	217	213	218	1			
Mercury						0.0868	0.0039	N
Average Age of Composited Fish : 4.8 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc12	3	204	203	205	1			
Mercury						0.0651	0.0038	N
Average Age of Composited Fish : 4.3 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc13	4	214	210	217	1			
Mercury						0.0817	0.0037	N

**Table 4-7a : Peconic River Fish Mercury Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
Average Age of Composited Fish : 4.8 years								
DONAHUE'S POND - Pumpkinseed								
Composite : 26985-bc14	4	188	187	188	1			
Mercury						0.0847	0.0036	N
Average Age of Composited Fish : 5.3 years								

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
AREA A - Brown Bullhead								
Composite : 27077-bc1	2	301	300	301	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0042	0.0097	J
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc2	2	286	285	286	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc3	3	260	255	266	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0067	0.0099	J
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc4	3	250	246	254	1			
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.0189	0.01	
Aroclor 1260						0.01	0.01	U
Average Age of Composited Fish : 4.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc5	4	234	210	250	1			
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.0035	0.01	J
Aroclor 1260						0.01	0.01	U

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Average Age of Composited Fish : 3.5 years								
AREA A - Brown Bullhead								
Composite : 27077-bc6	5	217	211	220	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 3.0 years								
AREA A - Brown Bullhead								
Composite : 27077-bc7	5	210	210	211	1			
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.01	0.01	U
Aroclor 1260						0.01	0.01	U
Average Age of Composited Fish : 3.0 years								
AREA A - Pumpkinseed								
Composite : 27077-bc11	4	175	171	180	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0137	0.0098	
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 3.3 years								
AREA A - Pumpkinseed								
Composite : 27077-bc12	5	167	162	171	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0045	0.0098	J
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 2.6 years								
AREA C - Pumpkinseed								
Composite : 27080-bc1	5	178	172	182	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 3.4 years								
AREA C - Pumpkinseed								
Composite : 27080-bc2	5	162	152	168	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 3.4 years								
AREA C - Pumpkinseed								
Composite : 27080-bc3	5	155	146	160	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 2.6 years								
AREA C - Bluegill								
Composite : 27080-bc6	3	179	146	200	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 3.3 years								
AREA C - Bluegill								
Composite : 27080-bc7	5	138	133	140	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 2.0 years								
AREA C - Bluegill								

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Composite : 27080-bc8	5	131	130	133	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 2.0 years								
AREA C - Largemouth Bass								
Composite : 27080-bc10	3	213	196	226	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 2.3 years								
AREA C - Brown Bullhead								
Composite : 27080-bc12	4	237	190	300	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 3.5 years								
AREA C - Largemouth Bass								
Composite : 27080-bc13	5	215	195	250	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 2.2 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27142-bc1	2	305	300	310	1			
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.01	0.01	U
Aroclor 1260						0.01	0.01	U

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27142-bc2	3	268	260	275	1			
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.01	0.01	U
Aroclor 1260						0.01	0.01	U
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27150-bc1	2	320	305	335	1			
Aroclor 1016						0.0095	0.0095	U
Aroclor 1221						0.0095	0.0095	U
Aroclor 1232						0.0095	0.0095	U
Aroclor 1242						0.0095	0.0095	U
Aroclor 1248						0.0095	0.0095	U
Aroclor 1254						0.0095	0.0095	U
Aroclor 1260						0.0095	0.0095	U
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27150-bc2	2	288	284	291	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 4.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27216-bc1	3	247	226	265	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 3.7 years								

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
AREA D - Downstream of HQ - Brown Bullhead								
Composite : 27216-bc2	5	210	206	215	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composed Fish : 3.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc5	3	254	246	266	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composed Fish : 5.3 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc6	4	247	242	250	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composed Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc7	4	227	222	238	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composed Fish : 3.5 years								
MANOR ROAD - Brown Bullhead								
Composite : 27053-bc8	8	202	195	210	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Pumpkinseed								
Composite : 27053-bc15	5	154	144	170	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 3.2 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26972-bc3	2	339	330	347	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 9.0 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26972-bc4	2	305	305	305	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 6.5 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26972-bc5	2	331	327	335	1			
Aroclor 1016						0.0095	0.0095	U
Aroclor 1221						0.0095	0.0095	U
Aroclor 1232						0.0095	0.0095	U
Aroclor 1242						0.0095	0.0095	U
Aroclor 1248						0.0095	0.0095	U
Aroclor 1254						0.0095	0.0095	U
Aroclor 1260						0.0095	0.0095	U
Average Age of Composited Fish : 4.5 years								
DONAHUE'S POND - Brown Bullhead								
Composite : 26985-bc1	2	326	317	335	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 6.0 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc2	3	219	212	224	1			
Aroclor 1016						0.0096	0.0096	U
Aroclor 1221						0.0096	0.0096	U
Aroclor 1232						0.0096	0.0096	U
Aroclor 1242						0.0096	0.0096	U
Aroclor 1248						0.0096	0.0096	U
Aroclor 1254						0.0096	0.0096	U
Aroclor 1260						0.0096	0.0096	U
Average Age of Composited Fish : 5.3 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc9	4	224	220	227	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 6.0 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc10	4	201	200	203	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 4.0 years								
DONAHUE'S POND - Bluegill								
Composite : 26985-bc11	4	217	213	218	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 4.8 years								

**Table 4-7b : Peconic River Fish PCB Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
<b>DONAHUE'S POND - Bluegill</b>								
Composite : 26985-bc12	3	204	203	205	1			
Aroclor 1016						0.0096	0.0096	U
Aroclor 1221						0.0096	0.0096	U
Aroclor 1232						0.0096	0.0096	U
Aroclor 1242						0.0096	0.0096	U
Aroclor 1248						0.0096	0.0096	U
Aroclor 1254						0.0096	0.0096	U
Aroclor 1260						0.0096	0.0096	U
Average Age of Composited Fish : 4.3 years								
<b>DONAHUE'S POND - Bluegill</b>								
Composite : 26985-bc13	4	214	210	217	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 4.8 years								
<b>DONAHUE'S POND - Pumpkinseed</b>								
Composite : 26985-bc14	4	188	187	188	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 5.3 years								

**Table 4-7c : Peconic River Fish Cs-137 Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA A - Brown Bullhead									
Composite : 27077-bc1	2	301	300	301	1				
Cesium-137						0.232	0.0276	0.0144	
Average Age of Composited Fish : 4.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc2	2	286	285	286	1				
Cesium-137						0.221	0.0274	0.014	
Average Age of Composited Fish : 4.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc3	3	260	255	266	1				
Cesium-137						0.295	0.0361	0.022	
Average Age of Composited Fish : 4.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc4	3	250	246	254	1				
Cesium-137						0.232	0.0286	0.0161	
Average Age of Composited Fish : 4.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc5	4	234	210	250	1				
Cesium-137						0.205	0.0306	0.0195	
Average Age of Composited Fish : 3.5 years									
AREA A - Brown Bullhead									
Composite : 27077-bc6	5	217	211	220	1				
Cesium-137						0.258	0.0289	0.0146	
Average Age of Composited Fish : 3.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc8	5	200	199	201	1				
Cesium-137						0.206	0.0268	0.0158	
Average Age of Composited Fish : 3.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc9	5	191	181	198	1				
Cesium-137						0.247	0.03	0.0155	
Average Age of Composited Fish : 3.0 years									
AREA A - Brown Bullhead									
Composite : 27077-bc10	6	169	145	179	1				
Cesium-137						0.205	0.0382	0.027	

**Table 4-7c : Peconic River Fish Cs-137 Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Average Age of Composited Fish : 2.8 years									
AREA A - Pumpkinseed									
Composite : 27077-bc11	4	175	171	180	1				
Cesium-137						0.265	0.0357	0.0227	
Average Age of Composited Fish : 3.3 years									
AREA A - Pumpkinseed									
Composite : 27077-bc12	5	167	162	171	1				
Cesium-137						0.201	0.0247	0.0135	
Average Age of Composited Fish : 2.6 years									
AREA A - Pumpkinseed									
Composite : 27077-bc13	5	137	120	160	1				
Cesium-137						0.256	0.034	0.0145	
Average Age of Composited Fish : 2.0 years									
AREA C - Pumpkinseed									
Composite : 27080-bc1	5	178	172	182	1				
Cesium-137						0.285	0.0822	0.0689	
Average Age of Composited Fish : 3.4 years									
AREA C - Pumpkinseed									
Composite : 27080-bc2	5	162	152	168	1				
Cesium-137						0.219	0.0438	0.0332	
Average Age of Composited Fish : 3.4 years									
AREA C - Pumpkinseed									
Composite : 27080-bc3	5	155	146	160	1				
Cesium-137						0.207	0.038	0.0275	
Average Age of Composited Fish : 2.6 years									
AREA C - Bluegill									
Composite : 27080-bc6	3	179	146	200	1				
Cesium-137						0.188	0.0396	0.0289	
Average Age of Composited Fish : 3.3 years									
AREA C - Bluegill									
Composite : 27080-bc9	5	120	113	124	1				
Cesium-137						0.176	0.0357	0.0225	
Average Age of Composited Fish : 2.0 years									

**Table 4-7c : Peconic River Fish Cs-137 Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA C - Brown Bullhead									
Composite : 27080-bc12	4	237	190	300	1				
Cesium-137						0.213	0.0319	0.0228	
Average Age of Composited Fish : 3.5 years									
AREA C - Largemouth Bass									
Composite : 27080-bc13	5	215	195	250	1				
Cesium-137						0.511	0.0627	0.0267	
Average Age of Composited Fish : 2.2 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27142-bc1	2	305	300	310	1				
Cesium-137						0.298	0.0456	0.0274	
Average Age of Composited Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27142-bc2	3	268	260	275	1				
Cesium-137						0.232	0.0262	0.0126	
Average Age of Composited Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27142-bc3	3	204	193	220	1				
Cesium-137						0.22	0.0303	0.0148	
Average Age of Composited Fish : 3.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27150-bc1	2	320	305	335	1				
Cesium-137						0.224	0.0257	0.0159	
Average Age of Composited Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27150-bc2	2	288	284	291	1				
Cesium-137						0.237	0.0281	0.0166	
Average Age of Composited Fish : 4.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27216-bc1	3	247	226	265	1				
Cesium-137						0.0929	0.0251	0.0268	

**Table 4-7c : Peconic River Fish Cs-137 Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Average Age of Composited Fish : 3.7 years									
AREA D - Downstream of HQ - Brown Bullhead									
Composite : 27216-bc2	5	210	206	215	1				
Cesium-137						0.154	0.0268	0.0181	
Average Age of Composited Fish : 3.0 years									
AREA D - Downstream of HQ - Pumpkinseed									
Composite : 27216-bc4	3	145	131	153	1				
Cesium-137						0.135	0.0255	0.0196	
Average Age of Composited Fish : 4.7 years									
MANOR ROAD - Brown Bullhead									
Composite : 27053-bc5	3	254	246	266	1				
Cesium-137						0.0891	0.018	0.0141	
Average Age of Composited Fish : 5.3 years									
MANOR ROAD - Brown Bullhead									
Composite : 27053-bc6	4	247	242	250	1				
Cesium-137						0.187	0.0249	0.0149	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Composite : 27053-bc7	4	227	222	238	1				
Cesium-137						0.0822	0.027	0.0149	
Average Age of Composited Fish : 3.5 years									
MANOR ROAD - Brown Bullhead									
Composite : 27053-bc8	8	202	195	210	1				
Cesium-137						0.14	0.0304	0.0267	
Average Age of Composited Fish : 3.0 years									
DONAHUE'S POND - Brown Bullhead									
Composite : 26972-bc3	2	339	330	347	1				
Cesium-137						0.0948	0.0239	0.0199	
Average Age of Composited Fish : 9.0 years									
DONAHUE'S POND - Brown Bullhead									
Composite : 26972-bc4	2	305	305	305	1				
Cesium-137						0.096	0.0221	0.0215	

**Table 4-7c : Peconic River Fish Cs-137 Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Average Age of Composited Fish : 6.5 years									
DONAHUE'S POND - Brown Bullhead									
Composite : 26972-bc5	2	331	327	335	1				
Cesium-137						0.053	0.0247	0.029	
Average Age of Composited Fish : 4.5 years									
DONAHUE'S POND - Brown Bullhead									
Composite : 26985-bc1	2	326	317	335	1				
Cesium-137						0.06	0.0235	0.0201	
Average Age of Composited Fish : 6.0 years									
DONAHUE'S POND - Bluegill									
Composite : 26985-bc2	3	219	212	224	1				
Cesium-137						0.0487	0.0261	0.0214	
Average Age of Composited Fish : 5.3 years									
DONAHUE'S POND - Bluegill									
Composite : 26985-bc9	4	224	220	227	1				
Cesium-137						0.0495	0.0275	0.0292	
Average Age of Composited Fish : 6.0 years									
DONAHUE'S POND - Bluegill									
Composite : 26985-bc10	4	201	200	203	1				
Cesium-137						0.046	0.0228	0.0202	
Average Age of Composited Fish : 4.0 years									
DONAHUE'S POND - Bluegill									
Composite : 26985-bc11	4	217	213	218	1				
Cesium-137						0.0867	0.022	0.0167	
Average Age of Composited Fish : 4.8 years									
DONAHUE'S POND - Bluegill									
Composite : 26985-bc12	3	204	203	205	1				
Cesium-137						0.0706	0.0329	0.0356	
Average Age of Composited Fish : 4.3 years									
DONAHUE'S POND - Bluegill									
Composite : 26985-bc13	4	214	210	217	1				
Cesium-137						0.0699	0.0271	0.0208	
Average Age of Composited Fish : 4.8 years									

**Table 4-7c : Peconic River Fish Cs-137 Concentrations by Species and Age (Composites)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
DONAHUE'S POND - Pumpkinseed									
Composite : 26985-bc14	4	188	187	188	1				
Cesium-137						0.0212	0.0201	0.015	
Average Age of Composited Fish : 5.3 years									

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA A - Chain Pickerel								
Fish ID : '09-141	1	272	272	272	1			
Mercury						0.349	0.0038	N
Average Age of Composited Fish : 2.0 years								
AREA A - Chain Pickerel								
Fish ID : '09-142	1	143	143	143	1			
Mercury						0.167	0.0038	N
Average Age of Composited Fish : 1.0 years								
AREA A - Largemouth Bass								
Fish ID : '09-143	1	245	245	245	1			
Mercury						0.328	0.0036	N
Average Age of Composited Fish : 3.0 years								
AREA C - Pumpkinseed								
Fish ID : '09-160	1	110	110	110	1			
Mercury						0.0881	0.0038	
Average Age of Composited Fish : 2.0 years								
AREA C - Largemouth Bass								
Fish ID : '09-192	1	169	169	169	1			
Mercury						0.501	0.0038	
Average Age of Composited Fish : 2.0 years								
AREA C - Largemouth Bass								
Fish ID : '09-193	1	145	145	145	1			
Mercury						0.393	0.0039	
Average Age of Composited Fish : 2.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '09-202	1	190	190	190	1			
Mercury						0.112	0.0038	
Average Age of Composited Fish : 3.0 years								
AREA D - Downstream of HQ - Largemouth Bass								
Fish ID : '09-203	1	423	423	423	1			
Mercury						1.63	0.039	
Average Age of Composited Fish : 7.0 years								

**Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
AREA D - Downstream of HQ - Largemouth Bass								
Fish ID : '09-204	1	184	184	184	1			
Mercury						1.56	0.0372	
Average Age of Composited Fish : 2.0 years								
AREA D - Downstream of HQ - Largemouth Bass								
Fish ID : '09-205	1	165	165	165	1			
Mercury						0.507	0.0037	
Average Age of Composited Fish : 2.0 years								
AREA D - Downstream of HQ - Brown Bullhead								
Fish ID : '09-211	1	181	181	181	1			
Mercury						0.0663	0.0041	*EN
Average Age of Composited Fish : 3.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Fish ID : '09-212	1	192	192	192	1			
Mercury						0.367	0.004	*EN
Average Age of Composited Fish : 5.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Fish ID : '09-213	1	111	111	111	1			
Mercury						0.0813	0.0041	*EN
Average Age of Composited Fish : 1.0 years								
AREA D - Downstream of HQ - Largemouth Bass								
Fish ID : '09-214	1	205	205	205	1			
Mercury						0.526	0.0075	*EN
Average Age of Composited Fish : 2.0 years								
AREA D - Downstream of HQ - Pumpkinseed								
Fish ID : '09-228	1	120	120	120	1			
Mercury						0.308	0.0038	EN
Average Age of Composited Fish : 2.0 years								

**Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
SCHULTZ ROAD - Brown Bullhead								
Fish ID : '09-82	1	144	144	144	1			
Mercury						0.386	0.0038	
Average Age of Composited Fish : 3.0 years								
SCHULTZ ROAD - Brown Bullhead								
Fish ID : '09-83	1	174	174	174	1			
Mercury						0.228	0.004	
Average Age of Composited Fish : 3.0 years								
SCHULTZ ROAD - Chain Pickerel								
Fish ID : '09-84	1	275	275	275	1			
Mercury						0.329	0.0041	
Average Age of Composited Fish : 2.0 years								
SCHULTZ ROAD - Largemouth Bass								
Fish ID : '09-85	1	301	301	301	1			
Mercury						0.445	0.0037	
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-45	1	346	346	346	1			
Mercury						0.0583	0.0034	
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-46	1	325	325	325	1			
Mercury						0.0219	0.0034	
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-47	1	315	315	315	1			
Mercury						0.534	0.004	
Average Age of Composited Fish : 7.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-48	1	312	312	312	1			
Mercury						0.496	0.0041	
Average Age of Composited Fish : 7.0 years								

**Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
MANOR ROAD - Brown Bullhead								
Fish ID : '09-68	1	190	190	190	1			
Mercury						0.232	0.0036	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-69	1	188	188	188	1			
Mercury						0.296	0.0037	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-70	1	187	187	187	1			
Mercury						0.334	0.0037	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-71	1	187	187	187	1			
Mercury						0.356	0.0034	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-72	1	185	185	185	1			
Mercury						0.302	0.0041	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Chain Pickerel								
Fish ID : '09-73	1	330	330	330	1			
Mercury						0.214	0.0037	
Average Age of Composited Fish : 2.0 years								
MANOR ROAD - Bluegill								
Fish ID : '09-76	1	178	178	178	1			
Mercury						0.152	0.004	
Average Age of Composited Fish : 3.0 years								
MANOR ROAD - Largemouth Bass								
Fish ID : '09-80	1	340	340	340	1			
Mercury						0.356	0.0037	
Average Age of Composited Fish : 4.0 years								

**Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
MANOR ROAD - Largemouth Bass								
Fish ID : '09-81	1	309	309	309	1			
Mercury						0.451	0.0039	
Average Age of Composited Fish : 5.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '09-01	1	340	340	340	1			
Mercury						0.0611	0.0039	
Average Age of Composited Fish : 5.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '09-02	1	320	320	320	1			
Mercury						0.0245	0.0037	
Average Age of Composited Fish : 4.0 years								
DONAHUE'S POND - Brown Bullhead								
Fish ID : '09-13	1	345	345	345	1			
Mercury						0.0911	0.0036	N
Average Age of Composited Fish : 7.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '09-15	1	537	537	537	1			
Mercury						0.427	0.004	N
Average Age of Composited Fish : 6.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '09-16	1	507	507	507	1			
Mercury						0.624	0.0071	N
Average Age of Composited Fish : 5.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '09-17	1	475	475	475	1			
Mercury						0.281	0.0041	N
Average Age of Composited Fish : 4.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '09-18	1	405	405	405	1			
Mercury						0.262	0.0038	N
Average Age of Composited Fish : 3.0 years								

**Table 4-7d : Peconic River Fish Mercury Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual
DONAHUE'S POND - Largemouth Bass								
Fish ID : '09-19	1	310	310	310	1			
Mercury						0.186	0.0034	N
Average Age of Composited Fish : 3.0 years								

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-7e : Peconic River Fish PCB Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
AREA D - Downstream of HQ - Largemouth Bass								
Fish ID : '09-203	1	423	423	423	1			
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.01	0.01	U
Aroclor 1260						0.01	0.01	U
Average Age of Composited Fish : 7.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-45	1	346	346	346	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Brown Bullhead								
Fish ID : '09-46	1	325	325	325	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Largemouth Bass								
Fish ID : '09-80	1	340	340	340	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 4.0 years								
MANOR ROAD - Largemouth Bass								
Fish ID : '09-81	1	309	309	309	1			

**Table 4-7e : Peconic River Fish PCB Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Aroclor 1016						0.01	0.01	U
Aroclor 1221						0.01	0.01	U
Aroclor 1232						0.01	0.01	U
Aroclor 1242						0.01	0.01	U
Aroclor 1248						0.01	0.01	U
Aroclor 1254						0.01	0.01	U
Aroclor 1260						0.01	0.01	U
Average Age of Composited Fish : 5.0 years								
<b>DONAHUE'S POND - Brown Bullhead</b>								
Fish ID : '09-01	1	340	340	340	1			
Aroclor 1016						0.0096	0.0096	U
Aroclor 1221						0.0096	0.0096	U
Aroclor 1232						0.0096	0.0096	U
Aroclor 1242						0.0096	0.0096	U
Aroclor 1248						0.0096	0.0096	U
Aroclor 1254						0.0096	0.0096	U
Aroclor 1260						0.0096	0.0096	U
Average Age of Composited Fish : 5.0 years								
<b>DONAHUE'S POND - Brown Bullhead</b>								
Fish ID : '09-02	1	320	320	320	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 4.0 years								
<b>DONAHUE'S POND - Brown Bullhead</b>								
Fish ID : '09-13	1	345	345	345	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 7.0 years								
<b>DONAHUE'S POND - Chain Pickerel</b>								
Fish ID : '09-15	1	537	537	537	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U

**Table 4-7e : Peconic River Fish PCB Concentrations by Species and Age (Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (ug/kg)	MDL (ug/kg)	Lab Qual
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 6.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '09-16	1	507	507	507	1			
Aroclor 1016						0.0097	0.0097	U
Aroclor 1221						0.0097	0.0097	U
Aroclor 1232						0.0097	0.0097	U
Aroclor 1242						0.0097	0.0097	U
Aroclor 1248						0.0097	0.0097	U
Aroclor 1254						0.0097	0.0097	U
Aroclor 1260						0.0097	0.0097	U
Average Age of Composited Fish : 5.0 years								
DONAHUE'S POND - Chain Pickerel								
Fish ID : '09-17	1	475	475	475	1			
Aroclor 1016						0.0098	0.0098	U
Aroclor 1221						0.0098	0.0098	U
Aroclor 1232						0.0098	0.0098	U
Aroclor 1242						0.0098	0.0098	U
Aroclor 1248						0.0098	0.0098	U
Aroclor 1254						0.0098	0.0098	U
Aroclor 1260						0.0098	0.0098	U
Average Age of Composited Fish : 4.0 years								
DONAHUE'S POND - Largemouth Bass								
Fish ID : '09-19	1	310	310	310	1			
Aroclor 1016						0.0099	0.0099	U
Aroclor 1221						0.0099	0.0099	U
Aroclor 1232						0.0099	0.0099	U
Aroclor 1242						0.0099	0.0099	U
Aroclor 1248						0.0099	0.0099	U
Aroclor 1254						0.0099	0.0099	U
Aroclor 1260						0.0099	0.0099	U
Average Age of Composited Fish : 3.0 years								

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-7f : Peconic River Fish Cs-137 Concentrations by Species and Age  
(Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
AREA A - Largemouth Bass									
Fish ID : '09-143	1	245	245	245	1				
Cesium-137						0.19	0.0227	0.0159	
Average Age of Composited Fish : 3.0 years									
AREA D - Downstream of HQ - Largemouth Bass									
Fish ID : '09-203	1	423	423	423	1				
Cesium-137						0.432	0.0445	0.016	
Average Age of Composited Fish : 7.0 years									
AREA D - Downstream of HQ - Brown Bullhead									
Fish ID : '09-210	1	260	260	260	1				
Cesium-137						0.241	0.0276	0.0139	
Average Age of Composited Fish : 4.0 years									
AREA D - Downstream of HQ - Pumpkinseed									
Fish ID : '09-212	1	192	192	192	1				
Cesium-137						0.242	0.0372	0.0249	
Average Age of Composited Fish : 5.0 years									
SCHULTZ ROAD - Chain Pickerel									
Fish ID : '09-84	1	275	275	275	1				
Cesium-137						0.137	0.0257	0.0167	
Average Age of Composited Fish : 2.0 years									
SCHULTZ ROAD - Largemouth Bass									
Fish ID : '09-85	1	301	301	301	1				
Cesium-137						0.0823	0.0184	0.0151	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : '09-45	1	346	346	346	1				
Cesium-137						0.117	0.0251	0.0224	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : '09-46	1	325	325	325	1				
Cesium-137						0.192	0.024	0.015	
Average Age of Composited Fish : 4.0 years									

**Table 4-7f : Peconic River Fish Cs-137 Concentrations by Species and Age  
(Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
MANOR ROAD - Brown Bullhead									
Fish ID : '09-47	1	315	315	315	1				
Cesium-137						0.239	0.0261	0.0152	
Average Age of Composited Fish : 7.0 years									
MANOR ROAD - Brown Bullhead									
Fish ID : '09-48	1	312	312	312	1				
Cesium-137						0.123	0.019	0.0145	
Average Age of Composited Fish : 7.0 years									
MANOR ROAD - Chain Pickerel									
Fish ID : '09-73	1	330	330	330	1				
Cesium-137						0.106	0.0191	0.0143	
Average Age of Composited Fish : 2.0 years									
MANOR ROAD - Largemouth Bass									
Fish ID : '09-80	1	340	340	340	1				
Cesium-137						0.0676	0.017	0.0205	
Average Age of Composited Fish : 4.0 years									
MANOR ROAD - Largemouth Bass									
Fish ID : '09-81	1	309	309	309	1				
Cesium-137						0.0907	0.0172	0.0149	
Average Age of Composited Fish : 5.0 years									
DONAHUE'S POND - Brown Bullhead									
Fish ID : '09-01	1	340	340	340	1				
Cesium-137						0.0727	0.0163	0.0165	
Average Age of Composited Fish : 5.0 years									
DONAHUE'S POND - Brown Bullhead									
Fish ID : '09-02	1	320	320	320	1				
Cesium-137						0.066	0.0236	0.0284	
Average Age of Composited Fish : 4.0 years									
DONAHUE'S POND - Chain Pickerel									
Fish ID : '09-15	1	537	537	537	1				
Cesium-137						0.148	0.0199	0.0137	
Average Age of Composited Fish : 6.0 years									
DONAHUE'S POND - Chain Pickerel									
Fish ID : '09-16	1	507	507	507	1				
Cesium-137						0.264	0.0303	0.0165	

**Table 4-7f : Peconic River Fish Cs-137 Concentrations by Species and Age  
(Individual Fish)**

Species	Number of Fish	Average <sup>1</sup> Length (mm)	Minimum <sup>2</sup> Length (mm)	Maximum <sup>3</sup> Length (mm)	Number of Analytical Samples	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual
Average Age of Composited Fish : 5.0 years									
DONAHUE'S POND - Chain Pickerel									
Fish ID : '09-17	1	475	475	475	1				
Cesium-137						0.13	0.0207	0.0146	
Average Age of Composited Fish : 4.0 years									
DONAHUE'S POND - Chain Pickerel									
Fish ID : '09-18	1	405	405	405	1				
Cesium-137						0.105	0.0202	0.0141	
Average Age of Composited Fish : 3.0 years									

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-8a - Peconic River Fish Samples - Mercury by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27077-001	A	27077-bc1	Mercury	0.308	0.004	N		Brown Bullhead	300.5	414	119	4
27077-002	A	27077-bc2	Mercury	0.239	0.003	N		Brown Bullhead	285.5	341	90	4
27077-003	A	27077-bc3	Mercury	0.276	0.004	N		Brown Bullhead	260.33	258.67	66.67	4
27077-004	A	27077-bc4	Mercury	0.116	0.003	N		Brown Bullhead	250.33	238.67	64	4
27077-005	A	27077-bc5	Mercury	0.319	0.004	N		Brown Bullhead	233.5	197	53	3
27077-006	A	27077-bc6	Mercury	0.196	0.004	N		Brown Bullhead	216.8	136	38.8	3
27077-007	A	27077-bc7	Mercury	0.273	0.004	N		Brown Bullhead	210.4	122	27.6	3
27077-008	A	27077-bc8	Mercury	0.214	0.004	N		Brown Bullhead	199.8	103.6	23.6	3
27077-009	A	27077-bc9	Mercury	0.187	0.003	N		Brown Bullhead	190.6	92.8	20	3
27077-010	A	27077-bc10	Mercury	0.279	0.004	N		Brown Bullhead	168.67	59.67	12.33	2
27077-011	A	27077-bc11	Mercury	0.557	0.004	N		Pumpkinseed	174.5	137.5	49	3
27077-012	A	27077-bc12	Mercury	0.472	0.004	N		Pumpkinseed	166.6	114	40.8	2
27077-013	A	27077-bc13	Mercury	0.236	0.004	N		Pumpkinseed	137.2	64	23.6	2
27077-014	A	27077-bc14	Mercury	0.319	0.004	N		Pumpkinseed	110	28	10	1
27077-015	A	'09-141	Mercury	0.349	0.004	N		Chain Pickerel	272	108	40	2
27077-016	A	'09-142	Mercury	0.167	0.004	N		Chain Pickerel	143	16	8	1
27077-017	A	'09-143	Mercury	0.328	0.004	N		Largemouth Bass	245	216	88	3
27080-001	C	27080-bc1	Mercury	0.327	0.004			Pumpkinseed	178	120.4	42.4	3
27080-002	C	27080-bc2	Mercury	0.383	0.004			Pumpkinseed	162.2	100	42.4	3
27080-003	C	27080-bc3	Mercury	0.347	0.003			Pumpkinseed	155.2	76.4	38	2
27080-004	C	'09-159	Mercury	0.095	0.004			Pumpkinseed	110	24	18	
27080-005	C	'09-160	Mercury	0.088	0.004			Pumpkinseed	110	24	18	2
27080-006	C	27080-bc6	Mercury	0.134	0.004			Bluegill	178.67	133.33	59.33	3
27080-007	C	27080-bc7	Mercury	0.093	0.004			Bluegill	137.6	50.4	26.8	2
27080-008	C	27080-bc8	Mercury	0.135	0.003			Bluegill	131.2	43.2	25.6	2
27080-009	C	27080-bc9	Mercury	0.122	0.004			Bluegill	119.6	32.8	20.8	2
27080-010	C	27080-bc10	Mercury	0.593	0.008			Largemouth Bass	212.67	110.67	50	2
27080-011	C	'09-182	Mercury	0.1	0.004			Black Crappie	174	68	36	
27080-012	C	27080-bc12	Mercury	0.145	0.004			Brown Bullhead	237.25	240.5	59	3
27080-013	C	27080-bc13	Mercury	0.497	0.004			Largemouth Bass	215.2	133.6	40	2
27080-014	C	'09-192	Mercury	0.501	0.004			Largemouth Bass	169	54	14	2
27080-015	C	'09-193	Mercury	0.393	0.004			Largemouth Bass	145	40	10	2
27142-001	D	27142-bc1	Mercury	0.304	0.003			Brown Bullhead	305	377	475.5	4

**Table 4-8a - Peconic River Fish Samples - Mercury by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27142-002	D	27142-bc2	Mercury	0.225	0.004			Brown Bullhead	268.33	270	55.33	4
27142-003	D	27142-bc3	Mercury	0.133	0.004			Brown Bullhead	204.33	122.67	26.33	3
27142-004	D	'09-202	Mercury	0.112	0.004			Brown Bullhead	190	76	17	3
27142-005	D	'09-203	Mercury	1.63	0.039			Largemouth Bass	423	1144	392	7
27142-006	D	'09-204	Mercury	1.56	0.037		J	Largemouth Bass	184	68	24	2
27142-007	D	'09-205	Mercury	0.507	0.004			Largemouth Bass	165	50	16	2
27150-001	D	27150-bc1	Mercury	0.208	0.004	*EN		Brown Bullhead	320	410	112.5	4
27150-002	D	27150-bc2	Mercury	0.224	0.004	*EN		Brown Bullhead	287.5	366	84	4
27150-004	D	'09-211	Mercury	0.066	0.004	*EN		Brown Bullhead	181	80	19	3
27150-005	D	'09-212	Mercury	0.367	0.004	*EN		Pumpkinseed	192	180	63	5
27150-006	D	'09-213	Mercury	0.081	0.004	*EN		Pumpkinseed	111	26	10	1
27150-007	D	'09-214	Mercury	0.526	0.008	*EN		Largemouth Bass	205	92	25	2
27216-001	D	27216-bc1	Mercury	0.156	0.004	EN		Brown Bullhead	246.67	232.67	58.33	3
27216-002	D	27216-bc2	Mercury	0.102	0.004	EN		Brown Bullhead	209.8	141.2	37.4	3
27216-003	D	27216-bc3	Mercury	0.083	0.004	EN		Brown Bullhead	177.5	90	24.5	3
27216-004	D	27216-bc4	Mercury	0.261	0.004	EN		Pumpkinseed	145.33	71.33	22.67	4
27216-005	D	'09-228	Mercury	0.308	0.004	EN		Pumpkinseed	120	38	11	2
27216-006	D	27216-bc6	Mercury	0.137	0.004	EN		Pumpkinseed	85	10	3	1
27216-007	D	27216-bc7	Mercury	0.114	0.004	EN		Pumpkinseed	80	10	2.5	1
27057-001	SR	'09-82	Mercury	0.386	0.004			Brown Bullhead	144	36	8	3
27057-002	SR	'09-83	Mercury	0.228	0.004			Brown Bullhead	174	58	14	3
27057-003	SR	'09-84	Mercury	0.329	0.004			Chain Pickerel	275	132	58	2
27057-004	SR	'09-85	Mercury	0.445	0.004			Largemouth Bass	301	365	104	4
27053-001	MR	'09-45	Mercury	0.058	0.003			Brown Bullhead	346	576	176	4
27053-002	MR	'09-46	Mercury	0.022	0.003			Brown Bullhead	325	555	186	4
27053-003	MR	'09-47	Mercury	0.534	0.004			Brown Bullhead	315	416	112	7
27053-004	MR	'09-48	Mercury	0.496	0.004			Brown Bullhead	312	363	94	7
27053-005	MR	27053-bc5	Mercury	0.461	0.004			Brown Bullhead	254.33	216.67	60.67	5
27053-006	MR	27053-bc6	Mercury	0.22	0.003			Brown Bullhead	246.75	181.5	49	4
27053-007	MR	27053-bc7	Mercury	0.376	0.004			Brown Bullhead	227.25	150	40.5	3
27053-008	MR	27053-bc8	Mercury	0.262	0.003			Brown Bullhead	201.5	102.25	23.25	3
27053-009	MR	'09-68	Mercury	0.232	0.004			Brown Bullhead	190	89	20	3
27053-010	MR	'09-69	Mercury	0.296	0.004			Brown Bullhead	188	86	20	3

**Table 4-8a - Peconic River Fish Samples - Mercury by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (mg/kg)	MDL (mg/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27053-011	MR	'09-70	Mercury	0.334	0.004			Brown Bullhead	187	83	18	3
27053-012	MR	'09-71	Mercury	0.356	0.003			Brown Bullhead	187	75	18	3
27053-013	MR	'09-72	Mercury	0.302	0.004			Brown Bullhead	185	80	20	3
27053-014	MR	'09-73	Mercury	0.214	0.004			Chain Pickerel	330	209	88	2
27053-015	MR	27053-bc15	Mercury	0.245	0.003			Pumpkinseed	154.2	84.6	22	3
27053-016	MR	'09-76	Mercury	0.152	0.004			Bluegill	178	138	44	3
27053-017	MR	'09-80	Mercury	0.356	0.004			Largemouth Bass	340	543	182	4
27053-018	MR	'09-81	Mercury	0.451	0.004			Largemouth Bass	309	410	146	5
26972-001	DP	'09-01	Mercury	0.061	0.004			Brown Bullhead	340	656	190	5
26972-002	DP	'09-02	Mercury	0.025	0.004			Brown Bullhead	320	512	180	4
26972-003	DP	26972-bc3	Mercury	0.077	0.004			Brown Bullhead	338.5	548	137	2
26972-004	DP	26972-bc4	Mercury	0.057	0.004			Brown Bullhead	305	417	107	6
26972-005	DP	26972-bc5	Mercury	0.028	0.004			Brown Bullhead	331	503	139	4
26985-001	DP	26985-bc1	Mercury	0.062	0.004	N		Brown Bullhead	326	491	143	6
26985-002	DP	26985-bc2	Mercury	0.177	0.004	N		Bluegill	218.67	196	60	5
26985-003	DP	'09-13	Mercury	0.091	0.004	N		Brown Bullhead	345	345	136	7
26985-004	DP	'09-15	Mercury	0.427	0.004	N		Chain Pickerel	537	1002	334	6
26985-005	DP	'09-16	Mercury	0.624	0.007	N		Chain Pickerel	507	820	326	5
26985-006	DP	'09-17	Mercury	0.281	0.004	N		Chain Pickerel	475	606	230	4
26985-007	DP	'09-18	Mercury	0.262	0.004	N		Chain Pickerel	405	354	132	3
26985-008	DP	'09-19	Mercury	0.186	0.003	N		Largemouth Bass	310	420	152	3
26985-009	DP	26985-bc9	Mercury	0.148	0.003	N		Bluegill	223.5	245	81	6
26985-010	DP	26985-bc10	Mercury	0.077	0.004	N		Bluegill	200.75	173	54	4
26985-011	DP	26985-bc11	Mercury	0.087	0.004	N		Bluegill	216.5	223.5	68.5	4
26985-012	DP	26985-bc12	Mercury	0.065	0.004	N		Bluegill	203.67	173.33	59.33	4
26985-013	DP	26985-bc13	Mercury	0.082	0.004	N		Bluegill	213.5	208.5	64	4
26985-014	DP	26985-bc14	Mercury	0.085	0.004	N		Pumpkinseed	187.75	147	42.5	5

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27077-001	A	27077-bc1	Aroclor 1016	9.66	9.66	U		Brown Bullhead	300.5	414	119	4
27077-001	A	27077-bc1	Aroclor 1221	9.66	9.66	U		Brown Bullhead	300.5	414	119	4
27077-001	A	27077-bc1	Aroclor 1232	9.66	9.66	U		Brown Bullhead	300.5	414	119	4
27077-001	A	27077-bc1	Aroclor 1242	9.66	9.66	U		Brown Bullhead	300.5	414	119	4
27077-001	A	27077-bc1	Aroclor 1248	9.66	9.66	U		Brown Bullhead	300.5	414	119	4
27077-001	A	27077-bc1	Aroclor 1254	4.2	9.66	J		Brown Bullhead	300.5	414	119	4
27077-001	A	27077-bc1	Aroclor 1260	9.66	9.66	U		Brown Bullhead	300.5	414	119	4
27077-002	A	27077-bc2	Aroclor 1016	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-002	A	27077-bc2	Aroclor 1221	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-002	A	27077-bc2	Aroclor 1232	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-002	A	27077-bc2	Aroclor 1242	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-002	A	27077-bc2	Aroclor 1248	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-002	A	27077-bc2	Aroclor 1254	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-002	A	27077-bc2	Aroclor 1260	9.92	9.92	U		Brown Bullhead	285.5	341	90	4
27077-003	A	27077-bc3	Aroclor 1016	9.91	9.91	U		Brown Bullhead	260.33	258.67	66.67	4
27077-003	A	27077-bc3	Aroclor 1221	9.91	9.91	U		Brown Bullhead	260.33	258.67	66.67	4
27077-003	A	27077-bc3	Aroclor 1232	9.91	9.91	U		Brown Bullhead	260.33	258.67	66.67	4
27077-003	A	27077-bc3	Aroclor 1242	9.91	9.91	U		Brown Bullhead	260.33	258.67	66.67	4
27077-003	A	27077-bc3	Aroclor 1248	9.91	9.91	U		Brown Bullhead	260.33	258.67	66.67	4
27077-003	A	27077-bc3	Aroclor 1254	6.7	9.91	J		Brown Bullhead	260.33	258.67	66.67	4
27077-003	A	27077-bc3	Aroclor 1260	9.91	9.91	U		Brown Bullhead	260.33	258.67	66.67	4
27077-004	A	27077-bc4	Aroclor 1016	9.95	9.95	U		Brown Bullhead	250.33	238.67	64	4
27077-004	A	27077-bc4	Aroclor 1221	9.95	9.95	U		Brown Bullhead	250.33	238.67	64	4
27077-004	A	27077-bc4	Aroclor 1232	9.95	9.95	U		Brown Bullhead	250.33	238.67	64	4
27077-004	A	27077-bc4	Aroclor 1242	9.95	9.95	U		Brown Bullhead	250.33	238.67	64	4
27077-004	A	27077-bc4	Aroclor 1248	9.95	9.95	U		Brown Bullhead	250.33	238.67	64	4
27077-004	A	27077-bc4	Aroclor 1254	18.9	9.95			Brown Bullhead	250.33	238.67	64	4
27077-004	A	27077-bc4	Aroclor 1260	9.95	9.95	U		Brown Bullhead	250.33	238.67	64	4
27077-005	A	27077-bc5	Aroclor 1016	9.99	9.99	U		Brown Bullhead	233.5	197	53	3
27077-005	A	27077-bc5	Aroclor 1221	9.99	9.99	U		Brown Bullhead	233.5	197	53	3
27077-005	A	27077-bc5	Aroclor 1232	9.99	9.99	U		Brown Bullhead	233.5	197	53	3
27077-005	A	27077-bc5	Aroclor 1242	9.99	9.99	U		Brown Bullhead	233.5	197	53	3
27077-005	A	27077-bc5	Aroclor 1248	9.99	9.99	U		Brown Bullhead	233.5	197	53	3
27077-005	A	27077-bc5	Aroclor 1254	3.5	9.99	J		Brown Bullhead	233.5	197	53	3

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27077-005	A	27077-bc5	Aroclor 1260	9.99	9.99	U		Brown Bullhead	233.5	197	53	3
27077-006	A	27077-bc6	Aroclor 1016	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-006	A	27077-bc6	Aroclor 1221	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-006	A	27077-bc6	Aroclor 1232	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-006	A	27077-bc6	Aroclor 1242	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-006	A	27077-bc6	Aroclor 1248	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-006	A	27077-bc6	Aroclor 1254	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-006	A	27077-bc6	Aroclor 1260	9.77	9.77	U		Brown Bullhead	216.8	136	38.8	3
27077-007	A	27077-bc7	Aroclor 1016	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-007	A	27077-bc7	Aroclor 1221	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-007	A	27077-bc7	Aroclor 1232	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-007	A	27077-bc7	Aroclor 1242	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-007	A	27077-bc7	Aroclor 1248	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-007	A	27077-bc7	Aroclor 1254	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-007	A	27077-bc7	Aroclor 1260	9.98	9.98	U		Brown Bullhead	210.4	122	27.6	3
27077-011	A	27077-bc11	Aroclor 1016	9.77	9.77	U		Pumpkinseed	174.5	137.5	49	3
27077-011	A	27077-bc11	Aroclor 1221	9.77	9.77	U		Pumpkinseed	174.5	137.5	49	3
27077-011	A	27077-bc11	Aroclor 1232	9.77	9.77	U		Pumpkinseed	174.5	137.5	49	3
27077-011	A	27077-bc11	Aroclor 1242	9.77	9.77	U		Pumpkinseed	174.5	137.5	49	3
27077-011	A	27077-bc11	Aroclor 1248	9.77	9.77	U		Pumpkinseed	174.5	137.5	49	3
27077-011	A	27077-bc11	Aroclor 1254	13.7	9.77			Pumpkinseed	174.5	137.5	49	3
27077-011	A	27077-bc11	Aroclor 1260	9.77	9.77	U		Pumpkinseed	174.5	137.5	49	3
27077-012	A	27077-bc12	Aroclor 1016	9.82	9.82	U		Pumpkinseed	166.6	114	40.8	2
27077-012	A	27077-bc12	Aroclor 1221	9.82	9.82	U		Pumpkinseed	166.6	114	40.8	2
27077-012	A	27077-bc12	Aroclor 1232	9.82	9.82	U		Pumpkinseed	166.6	114	40.8	2
27077-012	A	27077-bc12	Aroclor 1242	9.82	9.82	U		Pumpkinseed	166.6	114	40.8	2
27077-012	A	27077-bc12	Aroclor 1248	9.82	9.82	U		Pumpkinseed	166.6	114	40.8	2
27077-012	A	27077-bc12	Aroclor 1254	4.5	9.82	J		Pumpkinseed	166.6	114	40.8	2
27077-012	A	27077-bc12	Aroclor 1260	9.82	9.82	U		Pumpkinseed	166.6	114	40.8	2
27080-001	C	27080-bc1	Aroclor 1016	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3
27080-001	C	27080-bc1	Aroclor 1221	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3
27080-001	C	27080-bc1	Aroclor 1232	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3
27080-001	C	27080-bc1	Aroclor 1242	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3
27080-001	C	27080-bc1	Aroclor 1248	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27080-001	C	27080-bc1	Aroclor 1254	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3
27080-001	C	27080-bc1	Aroclor 1260	9.73	9.73	U		Pumpkinseed	178	120.4	42.4	3
27080-002	C	27080-bc2	Aroclor 1016	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-002	C	27080-bc2	Aroclor 1221	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-002	C	27080-bc2	Aroclor 1232	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-002	C	27080-bc2	Aroclor 1242	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-002	C	27080-bc2	Aroclor 1248	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-002	C	27080-bc2	Aroclor 1254	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-002	C	27080-bc2	Aroclor 1260	9.84	9.84	U		Pumpkinseed	162.2	100	42.4	3
27080-003	C	27080-bc3	Aroclor 1016	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-003	C	27080-bc3	Aroclor 1221	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-003	C	27080-bc3	Aroclor 1232	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-003	C	27080-bc3	Aroclor 1242	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-003	C	27080-bc3	Aroclor 1248	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-003	C	27080-bc3	Aroclor 1254	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-003	C	27080-bc3	Aroclor 1260	9.68	9.68	U		Pumpkinseed	155.2	76.4	38	2
27080-006	C	27080-bc6	Aroclor 1016	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-006	C	27080-bc6	Aroclor 1221	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-006	C	27080-bc6	Aroclor 1232	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-006	C	27080-bc6	Aroclor 1242	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-006	C	27080-bc6	Aroclor 1248	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-006	C	27080-bc6	Aroclor 1254	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-006	C	27080-bc6	Aroclor 1260	9.91	9.91	U		Bluegill	178.67	133.33	59.33	3
27080-007	C	27080-bc7	Aroclor 1016	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-007	C	27080-bc7	Aroclor 1221	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-007	C	27080-bc7	Aroclor 1232	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-007	C	27080-bc7	Aroclor 1242	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-007	C	27080-bc7	Aroclor 1248	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-007	C	27080-bc7	Aroclor 1254	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-007	C	27080-bc7	Aroclor 1260	9.89	9.89	U		Bluegill	137.6	50.4	26.8	2
27080-008	C	27080-bc8	Aroclor 1016	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2
27080-008	C	27080-bc8	Aroclor 1221	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2
27080-008	C	27080-bc8	Aroclor 1232	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2
27080-008	C	27080-bc8	Aroclor 1242	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27080-008	C	27080-bc8	Aroclor 1248	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2
27080-008	C	27080-bc8	Aroclor 1254	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2
27080-008	C	27080-bc8	Aroclor 1260	9.92	9.92	U		Bluegill	131.2	43.2	25.6	2
27080-010	C	27080-bc10	Aroclor 1016	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-010	C	27080-bc10	Aroclor 1221	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-010	C	27080-bc10	Aroclor 1232	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-010	C	27080-bc10	Aroclor 1242	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-010	C	27080-bc10	Aroclor 1248	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-010	C	27080-bc10	Aroclor 1254	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-010	C	27080-bc10	Aroclor 1260	9.77	9.77	U		Largemouth Bass	212.67	110.67	50	2
27080-012	C	27080-bc12	Aroclor 1016	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-012	C	27080-bc12	Aroclor 1221	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-012	C	27080-bc12	Aroclor 1232	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-012	C	27080-bc12	Aroclor 1242	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-012	C	27080-bc12	Aroclor 1248	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-012	C	27080-bc12	Aroclor 1254	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-012	C	27080-bc12	Aroclor 1260	9.82	9.82	U		Brown Bullhead	237.25	240.5	59	3
27080-013	C	27080-bc13	Aroclor 1016	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27080-013	C	27080-bc13	Aroclor 1221	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27080-013	C	27080-bc13	Aroclor 1232	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27080-013	C	27080-bc13	Aroclor 1242	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27080-013	C	27080-bc13	Aroclor 1248	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27080-013	C	27080-bc13	Aroclor 1254	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27080-013	C	27080-bc13	Aroclor 1260	9.75	9.75	U		Largemouth Bass	215.2	133.6	40	2
27142-001	D	27142-bc1	Aroclor 1016	10	10	U		Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Aroclor 1221	10	10	U		Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Aroclor 1232	10	10	U		Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Aroclor 1242	10	10	U		Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Aroclor 1248	10	10	U		Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Aroclor 1254	10	10	U		Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Aroclor 1260	10	10	U		Brown Bullhead	305	377	475.5	4
27142-002	D	27142-bc2	Aroclor 1016	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4
27142-002	D	27142-bc2	Aroclor 1221	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4
27142-002	D	27142-bc2	Aroclor 1232	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27142-002	D	27142-bc2	Aroclor 1242	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4
27142-002	D	27142-bc2	Aroclor 1248	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4
27142-002	D	27142-bc2	Aroclor 1254	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4
27142-002	D	27142-bc2	Aroclor 1260	9.97	9.97	U		Brown Bullhead	268.33	270	55.33	4
27142-005	D	'09-203	Aroclor 1016	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Aroclor 1221	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Aroclor 1232	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Aroclor 1242	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Aroclor 1248	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Aroclor 1254	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Aroclor 1260	9.96	9.96	U		Largemouth Bass	423	1144	392	7
27150-001	D	27150-bc1	Aroclor 1016	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-001	D	27150-bc1	Aroclor 1221	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-001	D	27150-bc1	Aroclor 1232	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-001	D	27150-bc1	Aroclor 1242	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-001	D	27150-bc1	Aroclor 1248	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-001	D	27150-bc1	Aroclor 1254	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-001	D	27150-bc1	Aroclor 1260	9.54	9.54	U		Brown Bullhead	320	410	112.5	4
27150-002	D	27150-bc2	Aroclor 1016	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27150-002	D	27150-bc2	Aroclor 1221	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27150-002	D	27150-bc2	Aroclor 1232	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27150-002	D	27150-bc2	Aroclor 1242	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27150-002	D	27150-bc2	Aroclor 1248	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27150-002	D	27150-bc2	Aroclor 1254	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27150-002	D	27150-bc2	Aroclor 1260	9.89	9.89	U		Brown Bullhead	287.5	366	84	4
27216-001	D	27216-bc1	Aroclor 1016	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Aroclor 1221	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Aroclor 1232	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Aroclor 1242	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Aroclor 1248	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Aroclor 1254	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Aroclor 1260	9.78	9.78	U		Brown Bullhead	246.67	232.67	58.33	3
27216-002	D	27216-bc2	Aroclor 1016	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3
27216-002	D	27216-bc2	Aroclor 1221	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27216-002	D	27216-bc2	Aroclor 1232	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3
27216-002	D	27216-bc2	Aroclor 1242	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3
27216-002	D	27216-bc2	Aroclor 1248	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3
27216-002	D	27216-bc2	Aroclor 1254	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3
27216-002	D	27216-bc2	Aroclor 1260	9.81	9.81	U		Brown Bullhead	209.8	141.2	37.4	3
27053-001	MR	'09-45	Aroclor 1016	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Aroclor 1221	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Aroclor 1232	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Aroclor 1242	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Aroclor 1248	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Aroclor 1254	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Aroclor 1260	9.82	9.82	U		Brown Bullhead	346	576	176	4
27053-002	MR	'09-46	Aroclor 1016	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Aroclor 1221	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Aroclor 1232	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Aroclor 1242	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Aroclor 1248	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Aroclor 1254	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Aroclor 1260	9.73	9.73	U		Brown Bullhead	325	555	186	4
27053-005	MR	27053-bc5	Aroclor 1016	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Aroclor 1221	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Aroclor 1232	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Aroclor 1242	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Aroclor 1248	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Aroclor 1254	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Aroclor 1260	9.82	9.82	U		Brown Bullhead	254.33	216.67	60.67	5
27053-006	MR	27053-bc6	Aroclor 1016	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Aroclor 1221	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Aroclor 1232	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Aroclor 1242	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Aroclor 1248	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Aroclor 1254	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Aroclor 1260	9.78	9.78	U		Brown Bullhead	246.75	181.5	49	4
27053-007	MR	27053-bc7	Aroclor 1016	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27053-007	MR	27053-bc7	Aroclor 1221	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3
27053-007	MR	27053-bc7	Aroclor 1232	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3
27053-007	MR	27053-bc7	Aroclor 1242	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3
27053-007	MR	27053-bc7	Aroclor 1248	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3
27053-007	MR	27053-bc7	Aroclor 1254	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3
27053-007	MR	27053-bc7	Aroclor 1260	9.77	9.77	U		Brown Bullhead	227.25	150	40.5	3
27053-008	MR	27053-bc8	Aroclor 1016	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Aroclor 1221	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Aroclor 1232	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Aroclor 1242	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Aroclor 1248	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Aroclor 1254	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Aroclor 1260	9.92	9.92	U		Brown Bullhead	201.5	102.25	23.25	3
27053-015	MR	27053-bc15	Aroclor 1016	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-015	MR	27053-bc15	Aroclor 1221	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-015	MR	27053-bc15	Aroclor 1232	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-015	MR	27053-bc15	Aroclor 1242	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-015	MR	27053-bc15	Aroclor 1248	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-015	MR	27053-bc15	Aroclor 1254	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-015	MR	27053-bc15	Aroclor 1260	9.73	9.73	U		Pumpkinseed	154.2	84.6	22	3
27053-017	MR	'09-80	Aroclor 1016	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Aroclor 1221	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Aroclor 1232	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Aroclor 1242	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Aroclor 1248	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Aroclor 1254	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Aroclor 1260	9.74	9.74	U		Largemouth Bass	340	543	182	4
27053-018	MR	'09-81	Aroclor 1016	9.96	9.96	U		Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Aroclor 1221	9.96	9.96	U		Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Aroclor 1232	9.96	9.96	U		Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Aroclor 1242	9.96	9.96	U		Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Aroclor 1248	9.96	9.96	U		Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Aroclor 1254	9.96	9.96	U		Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Aroclor 1260	9.96	9.96	U		Largemouth Bass	309	410	146	5

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
26972-001	DP	'09-01	Aroclor 1016	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Aroclor 1221	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Aroclor 1232	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Aroclor 1242	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Aroclor 1248	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Aroclor 1254	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Aroclor 1260	9.61	9.61	U		Brown Bullhead	340	656	190	5
26972-002	DP	'09-02	Aroclor 1016	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Aroclor 1221	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Aroclor 1232	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Aroclor 1242	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Aroclor 1248	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Aroclor 1254	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Aroclor 1260	9.65	9.65	U		Brown Bullhead	320	512	180	4
26972-003	DP	26972-bc3	Aroclor 1016	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Aroclor 1221	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Aroclor 1232	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Aroclor 1242	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Aroclor 1248	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Aroclor 1254	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Aroclor 1260	9.87	9.87	U		Brown Bullhead	338.5	548	137	2
26972-004	DP	26972-bc4	Aroclor 1016	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Aroclor 1221	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Aroclor 1232	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Aroclor 1242	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Aroclor 1248	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Aroclor 1254	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Aroclor 1260	9.92	9.92	U		Brown Bullhead	305	417	107	6
26972-005	DP	26972-bc5	Aroclor 1016	9.47	9.47	U		Brown Bullhead	331	503	139	4
26972-005	DP	26972-bc5	Aroclor 1221	9.47	9.47	U		Brown Bullhead	331	503	139	4
26972-005	DP	26972-bc5	Aroclor 1232	9.47	9.47	U		Brown Bullhead	331	503	139	4
26972-005	DP	26972-bc5	Aroclor 1242	9.47	9.47	U		Brown Bullhead	331	503	139	4
26972-005	DP	26972-bc5	Aroclor 1248	9.47	9.47	U		Brown Bullhead	331	503	139	4
26972-005	DP	26972-bc5	Aroclor 1254	9.47	9.47	U		Brown Bullhead	331	503	139	4

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
26972-005	DP	26972-bc5	Aroclor 1260	9.47	9.47	U		Brown Bullhead	331	503	139	4
26985-001	DP	26985-bc1	Aroclor 1016	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Aroclor 1221	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Aroclor 1232	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Aroclor 1242	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Aroclor 1248	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Aroclor 1254	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Aroclor 1260	9.76	9.76	U		Brown Bullhead	326	491	143	6
26985-002	DP	26985-bc2	Aroclor 1016	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Aroclor 1221	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Aroclor 1232	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Aroclor 1242	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Aroclor 1248	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Aroclor 1254	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Aroclor 1260	9.61	9.61	U		Bluegill	218.67	196	60	5
26985-003	DP	'09-13	Aroclor 1016	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-003	DP	'09-13	Aroclor 1221	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-003	DP	'09-13	Aroclor 1232	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-003	DP	'09-13	Aroclor 1242	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-003	DP	'09-13	Aroclor 1248	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-003	DP	'09-13	Aroclor 1254	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-003	DP	'09-13	Aroclor 1260	9.67	9.67	U		Brown Bullhead	345	345	136	7
26985-004	DP	'09-15	Aroclor 1016	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Aroclor 1221	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Aroclor 1232	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Aroclor 1242	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Aroclor 1248	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Aroclor 1254	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Aroclor 1260	9.78	9.78	U		Chain Pickerel	537	1002	334	6
26985-005	DP	'09-16	Aroclor 1016	9.73	9.73	U		Chain Pickerel	507	820	326	5
26985-005	DP	'09-16	Aroclor 1221	9.73	9.73	U		Chain Pickerel	507	820	326	5
26985-005	DP	'09-16	Aroclor 1232	9.73	9.73	U		Chain Pickerel	507	820	326	5
26985-005	DP	'09-16	Aroclor 1242	9.73	9.73	U		Chain Pickerel	507	820	326	5
26985-005	DP	'09-16	Aroclor 1248	9.73	9.73	U		Chain Pickerel	507	820	326	5

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
26985-005	DP	'09-16	Aroclor 1254	9.73	9.73	U		Chain Pickerel	507	820	326	5
26985-005	DP	'09-16	Aroclor 1260	9.73	9.73	U		Chain Pickerel	507	820	326	5
26985-006	DP	'09-17	Aroclor 1016	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Aroclor 1221	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Aroclor 1232	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Aroclor 1242	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Aroclor 1248	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Aroclor 1254	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Aroclor 1260	9.83	9.83	U		Chain Pickerel	475	606	230	4
26985-008	DP	'09-19	Aroclor 1016	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-008	DP	'09-19	Aroclor 1221	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-008	DP	'09-19	Aroclor 1232	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-008	DP	'09-19	Aroclor 1242	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-008	DP	'09-19	Aroclor 1248	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-008	DP	'09-19	Aroclor 1254	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-008	DP	'09-19	Aroclor 1260	9.89	9.89	U		Largemouth Bass	310	420	152	3
26985-009	DP	26985-bc9	Aroclor 1016	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Aroclor 1221	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Aroclor 1232	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Aroclor 1242	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Aroclor 1248	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Aroclor 1254	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Aroclor 1260	9.87	9.87	U		Bluegill	223.5	245	81	6
26985-010	DP	26985-bc10	Aroclor 1016	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Aroclor 1221	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Aroclor 1232	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Aroclor 1242	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Aroclor 1248	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Aroclor 1254	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Aroclor 1260	9.94	9.94	U		Bluegill	200.75	173	54	4
26985-011	DP	26985-bc11	Aroclor 1016	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4
26985-011	DP	26985-bc11	Aroclor 1221	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4
26985-011	DP	26985-bc11	Aroclor 1232	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4
26985-011	DP	26985-bc11	Aroclor 1242	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4

**Table 4-8b - Peconic River Fish Samples - PCBs by Area**

Sample ID	Area	BNL Fish ID or Compsite ID	Analyte	Value (ug/kg)	MDL (ug/kg)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
26985-011	DP	26985-bc11	Aroclor 1248	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4
26985-011	DP	26985-bc11	Aroclor 1254	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4
26985-011	DP	26985-bc11	Aroclor 1260	9.93	9.93	U		Bluegill	216.5	223.5	68.5	4
26985-012	DP	26985-bc12	Aroclor 1016	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Aroclor 1221	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Aroclor 1232	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Aroclor 1242	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Aroclor 1248	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Aroclor 1254	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Aroclor 1260	9.6	9.6	U		Bluegill	203.67	173.33	59.33	4
26985-013	DP	26985-bc13	Aroclor 1016	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Aroclor 1221	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Aroclor 1232	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Aroclor 1242	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Aroclor 1248	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Aroclor 1254	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Aroclor 1260	9.83	9.83	U		Bluegill	213.5	208.5	64	4
26985-014	DP	26985-bc14	Aroclor 1016	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Aroclor 1221	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Aroclor 1232	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Aroclor 1242	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Aroclor 1248	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Aroclor 1254	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Aroclor 1260	9.87	9.87	U		Pumpkinseed	187.75	147	42.5	5

**Table 4-8c - Peconic River Fish Samples - Cesium-137 and Potassium-40 by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27077-001	A	27077-bc1	Cesium-137	0.232	0.0276	0.0144			Brown Bullhead	300.5	414	119	4
27077-002	A	27077-bc2	Cesium-137	0.221	0.0274	0.014			Brown Bullhead	285.5	341	90	4
27077-003	A	27077-bc3	Cesium-137	0.295	0.0361	0.022			Brown Bullhead	260.33	258.67	66.67	4
27077-004	A	27077-bc4	Cesium-137	0.232	0.0286	0.0161			Brown Bullhead	250.33	238.67	64	4
27077-005	A	27077-bc5	Cesium-137	0.205	0.0306	0.0195			Brown Bullhead	233.5	197	53	3
27077-006	A	27077-bc6	Cesium-137	0.258	0.0289	0.0146			Brown Bullhead	216.8	136	38.8	3
27077-008	A	27077-bc8	Cesium-137	0.206	0.0268	0.0158			Brown Bullhead	199.8	103.6	23.6	3
27077-009	A	27077-bc9	Cesium-137	0.247	0.03	0.0155			Brown Bullhead	190.6	92.8	20	3
27077-010	A	27077-bc10	Cesium-137	0.205	0.0382	0.027			Brown Bullhead	168.67	59.67	12.33	2
27077-011	A	27077-bc11	Cesium-137	0.265	0.0357	0.0227			Pumpkinseed	174.5	137.5	49	3
27077-012	A	27077-bc12	Cesium-137	0.201	0.0247	0.0135			Pumpkinseed	166.6	114	40.8	2
27077-013	A	27077-bc13	Cesium-137	0.256	0.034	0.0145			Pumpkinseed	137.2	64	23.6	2
27077-017	A	'09-143	Cesium-137	0.19	0.0227	0.0159			Largemouth Bass	245	216	88	3
27080-001	C	27080-bc1	Cesium-137	0.285	0.0822	0.0689			Pumpkinseed	178	120.4	42.4	3
27080-002	C	27080-bc2	Cesium-137	0.219	0.0438	0.0332			Pumpkinseed	162.2	100	42.4	3
27080-003	C	27080-bc3	Cesium-137	0.207	0.038	0.0275			Pumpkinseed	155.2	76.4	38	2
27080-006	C	27080-bc6	Cesium-137	0.188	0.0396	0.0289			Bluegill	178.67	133.33	59.33	3
27080-009	C	27080-bc9	Cesium-137	0.176	0.0357	0.0225			Bluegill	119.6	32.8	20.8	2
27080-012	C	27080-bc12	Cesium-137	0.213	0.0319	0.0228			Brown Bullhead	237.25	240.5	59	3
27080-013	C	27080-bc13	Cesium-137	0.511	0.0627	0.0267			Largemouth Bass	215.2	133.6	40	2
27142-001	D	27142-bc1	Cesium-137	0.298	0.0456	0.0274			Brown Bullhead	305	377	475.5	4
27142-001	D	27142-bc1	Potassium-40	4.12	0.52	0.301			Brown Bullhead	305	377	475.5	4
27142-002	D	27142-bc2	Cesium-137	0.232	0.0262	0.0126			Brown Bullhead	268.33	270	55.33	4
27142-002	D	27142-bc2	Potassium-40	3.1	0.365	0.144			Brown Bullhead	268.33	270	55.33	4
27142-003	D	27142-bc3	Cesium-137	0.22	0.0303	0.0148			Brown Bullhead	204.33	122.67	26.33	3
27142-003	D	27142-bc3	Potassium-40	3.92	0.421	0.155			Brown Bullhead	204.33	122.67	26.33	3
27142-005	D	'09-203	Cesium-137	0.432	0.0445	0.016			Largemouth Bass	423	1144	392	7
27142-005	D	'09-203	Potassium-40	3.39	0.45	0.158			Largemouth Bass	423	1144	392	7
27150-001	D	27150-bc1	Cesium-137	0.224	0.0257	0.0159			Brown Bullhead	320	410	112.5	4
27150-002	D	27150-bc2	Cesium-137	0.237	0.0281	0.0166			Brown Bullhead	287.5	366	84	4
27150-003	D	'09-210	Cesium-137	0.241	0.0276	0.0139			Brown Bullhead	260	254	56	4
27150-005	D	'09-212	Cesium-137	0.242	0.0372	0.0249			Pumpkinseed	192	180	63	5
27216-001	D	27216-bc1	Cesium-137	0.0929	0.0251	0.0268			Brown Bullhead	246.67	232.67	58.33	3
27216-001	D	27216-bc1	Potassium-40	3.04	0.499	0.271			Brown Bullhead	246.67	232.67	58.33	3
27216-002	D	27216-bc2	Cesium-137	0.154	0.0268	0.0181			Brown Bullhead	209.8	141.2	37.4	3
27216-002	D	27216-bc2	Potassium-40	3.54	0.482	0.182			Brown Bullhead	209.8	141.2	37.4	3
27216-004	D	27216-bc4	Cesium-137	0.135	0.0255	0.0196			Pumpkinseed	145.33	71.33	22.67	4

**Table 4-8c - Peconic River Fish Samples - Cesium-137 and Potassium-40 by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
27216-004	D	27216-bc4	Potassium-40	2.94	0.47	0.202			Pumpkinseed	145.33	71.33	22.67	4
27057-003	SR	'09-84	Cesium-137	0.137	0.0257	0.0167			Chain Pickerel	275	132	58	2
27057-003	SR	'09-84	Potassium-40	3.19	0.439	0.191			Chain Pickerel	275	132	58	2
27057-004	SR	'09-85	Cesium-137	0.0823	0.0184	0.0151			Largemouth Bass	301	365	104	4
27057-004	SR	'09-85	Potassium-40	2.74	0.429	0.177			Largemouth Bass	301	365	104	4
27053-001	MR	'09-45	Cesium-137	0.117	0.0251	0.0224			Brown Bullhead	346	576	176	4
27053-001	MR	'09-45	Potassium-40	3.43	0.514	0.233			Brown Bullhead	346	576	176	4
27053-002	MR	'09-46	Cesium-137	0.192	0.024	0.015			Brown Bullhead	325	555	186	4
27053-002	MR	'09-46	Potassium-40	2.9	0.421	0.172			Brown Bullhead	325	555	186	4
27053-003	MR	'09-47	Cesium-137	0.239	0.0261	0.0152			Brown Bullhead	315	416	112	7
27053-003	MR	'09-47	Potassium-40	3.17	0.469	0.156			Brown Bullhead	315	416	112	7
27053-004	MR	'09-48	Cesium-137	0.123	0.019	0.0145			Brown Bullhead	312	363	94	7
27053-004	MR	'09-48	Potassium-40	3.13	0.437	0.153			Brown Bullhead	312	363	94	7
27053-005	MR	27053-bc5	Cesium-137	0.0891	0.018	0.0141			Brown Bullhead	254.33	216.67	60.67	5
27053-005	MR	27053-bc5	Potassium-40	2.1	0.363	0.142			Brown Bullhead	254.33	216.67	60.67	5
27053-006	MR	27053-bc6	Cesium-137	0.187	0.0249	0.0149			Brown Bullhead	246.75	181.5	49	4
27053-006	MR	27053-bc6	Potassium-40	2.9	0.401	0.156			Brown Bullhead	246.75	181.5	49	4
27053-007	MR	27053-bc7	Cesium-137	0.0822	0.027	0.0149			Brown Bullhead	227.25	150	40.5	3
27053-007	MR	27053-bc7	Potassium-40	2.95	0.398	0.179			Brown Bullhead	227.25	150	40.5	3
27053-008	MR	27053-bc8	Cesium-137	0.14	0.0304	0.0267			Brown Bullhead	201.5	102.25	23.25	3
27053-008	MR	27053-bc8	Potassium-40	3.49	0.541	0.264			Brown Bullhead	201.5	102.25	23.25	3
27053-014	MR	'09-73	Cesium-137	0.106	0.0191	0.0143			Chain Pickerel	330	209	88	2
27053-014	MR	'09-73	Potassium-40	3.61	0.434	0.174			Chain Pickerel	330	209	88	2
27053-017	MR	'09-80	Cesium-137	0.0676	0.017	0.0205			Largemouth Bass	340	543	182	4
27053-017	MR	'09-80	Potassium-40	2.66	0.452	0.199			Largemouth Bass	340	543	182	4
27053-018	MR	'09-81	Cesium-137	0.0907	0.0172	0.0149			Largemouth Bass	309	410	146	5
27053-018	MR	'09-81	Potassium-40	3.43	0.42	0.153			Largemouth Bass	309	410	146	5
26972-001	DP	'09-01	Cesium-137	0.0727	0.0163	0.0165			Brown Bullhead	340	656	190	5
26972-001	DP	'09-01	Potassium-40	2.87	0.446	0.202			Brown Bullhead	340	656	190	5
26972-002	DP	'09-02	Cesium-137	0.066	0.0236	0.0284			Brown Bullhead	320	512	180	4
26972-002	DP	'09-02	Potassium-40	3.33	0.487	0.289			Brown Bullhead	320	512	180	4
26972-003	DP	26972-bc3	Cesium-137	0.0948	0.0239	0.0199			Brown Bullhead	338.5	548	137	2
26972-003	DP	26972-bc3	Potassium-40	3.06	0.516	0.226			Brown Bullhead	338.5	548	137	2
26972-004	DP	26972-bc4	Cesium-137	0.096	0.0221	0.0215			Brown Bullhead	305	417	107	6
26972-004	DP	26972-bc4	Potassium-40	2.59	0.518	0.226			Brown Bullhead	305	417	107	6
26972-005	DP	26972-bc5	Cesium-137	0.053	0.0247	0.029			Brown Bullhead	331	503	139	4
26972-005	DP	26972-bc5	Potassium-40	3.03	0.45	0.292			Brown Bullhead	331	503	139	4

**Table 4-8c - Peconic River Fish Samples - Cesium-137 and Potassium-40 by Area**

Sample ID	Area	BNL Fish ID or Composite ID	Analyte	Value (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual	Rev Qual	Species	Avg Length (mm)	Individual or Composite Avg Weight Whole(g)	Individual or Composite Avg Weight Fillet(g)	Avg Age
26985-001	DP	26985-bc1	Cesium-137	0.06	0.0235	0.0201			Brown Bullhead	326	491	143	6
26985-001	DP	26985-bc1	Potassium-40	2.65	0.518	0.242			Brown Bullhead	326	491	143	6
26985-002	DP	26985-bc2	Cesium-137	0.0487	0.0261	0.0214			Bluegill	218.67	196	60	5
26985-002	DP	26985-bc2	Potassium-40	2.63	0.506	0.225			Bluegill	218.67	196	60	5
26985-004	DP	'09-15	Cesium-137	0.148	0.0199	0.0137			Chain Pickerel	537	1002	334	6
26985-004	DP	'09-15	Potassium-40	3.05	0.411	0.155			Chain Pickerel	537	1002	334	6
26985-005	DP	'09-16	Cesium-137	0.264	0.0303	0.0165			Chain Pickerel	507	820	326	5
26985-005	DP	'09-16	Potassium-40	2.35	0.373	0.181			Chain Pickerel	507	820	326	5
26985-006	DP	'09-17	Cesium-137	0.13	0.0207	0.0146			Chain Pickerel	475	606	230	4
26985-006	DP	'09-17	Potassium-40	3.35	0.43	0.148			Chain Pickerel	475	606	230	4
26985-007	DP	'09-18	Cesium-137	0.105	0.0202	0.0141			Chain Pickerel	405	354	132	3
26985-007	DP	'09-18	Potassium-40	2.52	0.366	0.19			Chain Pickerel	405	354	132	3
26985-009	DP	26985-bc9	Cesium-137	0.0495	0.0275	0.0292			Bluegill	223.5	245	81	6
26985-009	DP	26985-bc9	Potassium-40	2	0.473	0.302			Bluegill	223.5	245	81	6
26985-010	DP	26985-bc10	Cesium-137	0.046	0.0228	0.0202			Bluegill	200.75	173	54	4
26985-010	DP	26985-bc10	Potassium-40	1.78	0.381	0.231			Bluegill	200.75	173	54	4
26985-011	DP	26985-bc11	Cesium-137	0.0867	0.022	0.0167			Bluegill	216.5	223.5	68.5	4
26985-011	DP	26985-bc11	Potassium-40	2.43	0.411	0.193			Bluegill	216.5	223.5	68.5	4
26985-012	DP	26985-bc12	Cesium-137	0.0706	0.0329	0.0356			Bluegill	203.67	173.33	59.33	4
26985-012	DP	26985-bc12	Potassium-40	1.63	0.576	0.362			Bluegill	203.67	173.33	59.33	4
26985-013	DP	26985-bc13	Cesium-137	0.0699	0.0271	0.0208			Bluegill	213.5	208.5	64	4
26985-013	DP	26985-bc13	Potassium-40	2.09	0.42	0.222			Bluegill	213.5	208.5	64	4
26985-014	DP	26985-bc14	Cesium-137	0.0212	0.0201	0.015			Pumpkinseed	187.75	147	42.5	5
26985-014	DP	26985-bc14	Potassium-40	2.02	0.356	0.172			Pumpkinseed	187.75	147	42.5	5

**Table 4-9a : Minimum, Maximum and Average Mercury Concentrations in Fish  
(Individual & Composites)**

Species	Number of Fish	Minimum Value (mg/kg)	Maximum Value (mg/kg)	Average Value (mg/kg)	
AREA A					
Brown Bullhead - Mercury	40	0.116	0.319	0.23925	
Chain Pickerel - Mercury	2	0.167	0.349	0.258	
Largemouth Bass - Mercury	1	0.328	0.328	0.328	
Pumpkinseed - Mercury	17	0.236	0.557	0.39559	
AREA C					
Black Crappie - Mercury	1	0.0998	0.0998	0.0998	
Bluegill - Mercury	18	0.0925	0.135	0.11942	
Brown Bullhead - Mercury	4	0.145	0.145	0.145	
Largemouth Bass - Mercury	10	0.393	0.593	0.5158	
Pumpkinseed - Mercury	17	0.0881	0.383	0.32166	
AREA D - Downstream of HQ					
Brown Bullhead - Mercury	24	0.0663	0.304	0.1612	
Largemouth Bass - Mercury	4	0.507	1.63	1.05575	
Pumpkinseed - Mercury	10	0.0813	0.367	0.20413	
SCHULTZ ROAD					
Brown Bullhead - Mercury	2	0.228	0.386	0.307	
Chain Pickerel - Mercury	1	0.329	0.329	0.329	
Largemouth Bass - Mercury	1	0.445	0.445	0.445	
MANOR ROAD					
Bluegill - Mercury	1	0.152	0.152	0.152	
Brown Bullhead - Mercury	28	0.0219	0.534	0.30333	
Chain Pickerel - Mercury	1	0.214	0.214	0.214	
Largemouth Bass - Mercury	2	0.356	0.451	0.4035	
Pumpkinseed - Mercury	5	0.245	0.245	0.245	
DONAHUE'S POND					
Bluegill - Mercury	22	0.0651	0.177	0.10463	
Brown Bullhead - Mercury	11	0.0245	0.0911	0.05668	
Chain Pickerel - Mercury	4	0.262	0.624	0.3985	
Largemouth Bass - Mercury	1	0.186	0.186	0.186	
Pumpkinseed - Mercury	4	0.0847	0.0847	0.0847	

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-9b : Minimum, Maximum and Average PCB Concentrations in Fish  
(Individuals & Composites)**

Species	Number of Fish	Minimum Value (ug/kg)	Maximum Value (ug/kg)	Average Value (ug/kg)	
AREA A					
Brown Bullhead - Aroclor 1016	24	4.83	0.005	0.00496	
Brown Bullhead - Aroclor 1221	24	4.83	0.005	0.00496	
Brown Bullhead - Aroclor 1232	24	4.83	0.005	0.00496	
Brown Bullhead - Aroclor 1242	24	4.83	0.005	0.00496	
Brown Bullhead - Aroclor 1248	24	4.83	0.005	0.00496	
Brown Bullhead - Aroclor 1254	24	1.75	0.0189	0.00572	
Brown Bullhead - Aroclor 1260	24	4.83	0.005	0.00496	
Pumpkinseed - Aroclor 1016	9	4.885	0.0049	0.0049	
Pumpkinseed - Aroclor 1221	9	4.885	0.0049	0.0049	
Pumpkinseed - Aroclor 1232	9	4.885	0.0049	0.0049	
Pumpkinseed - Aroclor 1242	9	4.885	0.0049	0.0049	
Pumpkinseed - Aroclor 1248	9	4.885	0.0049	0.0049	
Pumpkinseed - Aroclor 1254	9	2.25	0.0137	0.00734	
Pumpkinseed - Aroclor 1260	9	4.885	0.0049	0.0049	
AREA C					
Bluegill - Aroclor 1016	13	4.945	0.00495	0.00495	
Bluegill - Aroclor 1221	13	4.945	0.00495	0.00495	
Bluegill - Aroclor 1232	13	4.945	0.00495	0.00495	
Bluegill - Aroclor 1242	13	4.945	0.00495	0.00495	
Bluegill - Aroclor 1248	13	4.945	0.00495	0.00495	
Bluegill - Aroclor 1254	13	4.945	0.00495	0.00495	
Bluegill - Aroclor 1260	13	4.945	0.00495	0.00495	
Brown Bullhead - Aroclor 1016	4	4.91	0.0049	0.0049	
Brown Bullhead - Aroclor 1221	4	4.91	0.0049	0.0049	
Brown Bullhead - Aroclor 1232	4	4.91	0.0049	0.0049	
Brown Bullhead - Aroclor 1242	4	4.91	0.0049	0.0049	
Brown Bullhead - Aroclor 1248	4	4.91	0.0049	0.0049	
Brown Bullhead - Aroclor 1254	4	4.91	0.0049	0.0049	
Brown Bullhead - Aroclor 1260	4	4.91	0.0049	0.0049	
Largemouth Bass - Aroclor 1016	8	4.875	0.0049	0.0049	
Largemouth Bass - Aroclor 1221	8	4.875	0.0049	0.0049	
Largemouth Bass - Aroclor 1232	8	4.875	0.0049	0.0049	
Largemouth Bass - Aroclor 1242	8	4.875	0.0049	0.0049	
Largemouth Bass - Aroclor 1248	8	4.875	0.0049	0.0049	
Largemouth Bass - Aroclor 1254	8	4.875	0.0049	0.0049	
Largemouth Bass - Aroclor 1260	8	4.875	0.0049	0.0049	

**Table 4-9b : Minimum, Maximum and Average PCB Concentrations in Fish  
(Individuals & Composites)**

Species	Number of Fish	Minimum Value (ug/kg)	Maximum Value (ug/kg)	Average Value (ug/kg)
Pumpkinseed - Aroclor 1016	15	4.84	0.0049	0.00487
Pumpkinseed - Aroclor 1221	15	4.84	0.0049	0.00487
Pumpkinseed - Aroclor 1232	15	4.84	0.0049	0.00487
Pumpkinseed - Aroclor 1242	15	4.84	0.0049	0.00487
Pumpkinseed - Aroclor 1248	15	4.84	0.0049	0.00487
Pumpkinseed - Aroclor 1254	15	4.84	0.0049	0.00487
Pumpkinseed - Aroclor 1260	15	4.84	0.0049	0.00487
AREA D - Downstream of HQ				
Brown Bullhead - Aroclor 1016	17	4.77	0.005	0.00492
Brown Bullhead - Aroclor 1221	17	4.77	0.005	0.00492
Brown Bullhead - Aroclor 1232	17	4.77	0.005	0.00492
Brown Bullhead - Aroclor 1242	17	4.77	0.005	0.00492
Brown Bullhead - Aroclor 1248	17	4.77	0.005	0.00492
Brown Bullhead - Aroclor 1254	17	4.77	0.005	0.00492
Brown Bullhead - Aroclor 1260	17	4.77	0.005	0.00492
Largemouth Bass - Aroclor 1016	1	4.98	0.005	0.005
Largemouth Bass - Aroclor 1221	1	4.98	0.005	0.005
Largemouth Bass - Aroclor 1232	1	4.98	0.005	0.005
Largemouth Bass - Aroclor 1242	1	4.98	0.005	0.005
Largemouth Bass - Aroclor 1248	1	4.98	0.005	0.005
Largemouth Bass - Aroclor 1254	1	4.98	0.005	0.005
Largemouth Bass - Aroclor 1260	1	4.98	0.005	0.005
MANOR ROAD				
Brown Bullhead - Aroclor 1016	21	4.865	0.00495	0.00492
Brown Bullhead - Aroclor 1221	21	4.865	0.00495	0.00492
Brown Bullhead - Aroclor 1232	21	4.865	0.00495	0.00492
Brown Bullhead - Aroclor 1242	21	4.865	0.00495	0.00492
Brown Bullhead - Aroclor 1248	21	4.865	0.00495	0.00492
Brown Bullhead - Aroclor 1254	21	4.865	0.00495	0.00492
Brown Bullhead - Aroclor 1260	21	4.865	0.00495	0.00492
Largemouth Bass - Aroclor 1016	2	4.87	0.005	0.00493
Largemouth Bass - Aroclor 1221	2	4.87	0.005	0.00493
Largemouth Bass - Aroclor 1232	2	4.87	0.005	0.00493
Largemouth Bass - Aroclor 1242	2	4.87	0.005	0.00493
Largemouth Bass - Aroclor 1248	2	4.87	0.005	0.00493

**Table 4-9b : Minimum, Maximum and Average PCB Concentrations in Fish  
(Individuals & Composites)**

Species	Number of Fish	Minimum Value (ug/kg)	Maximum Value (ug/kg)	Average Value (ug/kg)	
Largemouth Bass - Aroclor 1254	2	4.87	0.005	0.00493	
Largemouth Bass - Aroclor 1260	2	4.87	0.005	0.00493	
Pumpkinseed - Aroclor 1016	5	4.865	0.00485	0.00485	
Pumpkinseed - Aroclor 1221	5	4.865	0.00485	0.00485	
Pumpkinseed - Aroclor 1232	5	4.865	0.00485	0.00485	
Pumpkinseed - Aroclor 1242	5	4.865	0.00485	0.00485	
Pumpkinseed - Aroclor 1248	5	4.865	0.00485	0.00485	
Pumpkinseed - Aroclor 1254	5	4.865	0.00485	0.00485	
Pumpkinseed - Aroclor 1260	5	4.865	0.00485	0.00485	
<hr/>					
DONAHUE'S POND					
Bluegill - Aroclor 1016	22	4.8	0.00495	0.0049	
Bluegill - Aroclor 1221	22	4.8	0.00495	0.0049	
Bluegill - Aroclor 1232	22	4.8	0.00495	0.0049	
Bluegill - Aroclor 1242	22	4.8	0.00495	0.0049	
Bluegill - Aroclor 1248	22	4.8	0.00495	0.0049	
Bluegill - Aroclor 1254	22	4.8	0.00495	0.0049	
Bluegill - Aroclor 1260	22	4.8	0.00495	0.0049	
Brown Bullhead - Aroclor 1016	11	4.735	0.00495	0.00487	
Brown Bullhead - Aroclor 1221	11	4.735	0.00495	0.00487	
Brown Bullhead - Aroclor 1232	11	4.735	0.00495	0.00487	
Brown Bullhead - Aroclor 1242	11	4.735	0.00495	0.00487	
Brown Bullhead - Aroclor 1248	11	4.735	0.00495	0.00487	
Brown Bullhead - Aroclor 1254	11	4.735	0.00495	0.00487	
Brown Bullhead - Aroclor 1260	11	4.735	0.00495	0.00487	
Chain Pickerel - Aroclor 1016	3	4.865	0.0049	0.00488	
Chain Pickerel - Aroclor 1221	3	4.865	0.0049	0.00488	
Chain Pickerel - Aroclor 1232	3	4.865	0.0049	0.00488	
Chain Pickerel - Aroclor 1242	3	4.865	0.0049	0.00488	
Chain Pickerel - Aroclor 1248	3	4.865	0.0049	0.00488	
Chain Pickerel - Aroclor 1254	3	4.865	0.0049	0.00488	
Chain Pickerel - Aroclor 1260	3	4.865	0.0049	0.00488	
Largemouth Bass - Aroclor 1016	1	4.945	0.00495	0.00495	
Largemouth Bass - Aroclor 1221	1	4.945	0.00495	0.00495	
Largemouth Bass - Aroclor 1232	1	4.945	0.00495	0.00495	
Largemouth Bass - Aroclor 1242	1	4.945	0.00495	0.00495	
Largemouth Bass - Aroclor 1248	1	4.945	0.00495	0.00495	
Largemouth Bass - Aroclor 1254	1	4.945	0.00495	0.00495	

**Table 4-9b : Minimum, Maximum and Average PCB Concentrations in Fish  
(Individuals & Composites)**

Species	Number of Fish	Minimum Value (ug/kg)	Maximum Value (ug/kg)	Average Value (ug/kg)	
Largemouth Bass - Aroclor 1260	1	4.945	0.00495	0.00495	
Pumpkinseed - Aroclor 1016	4	4.935	0.00495	0.00495	
Pumpkinseed - Aroclor 1221	4	4.935	0.00495	0.00495	
Pumpkinseed - Aroclor 1232	4	4.935	0.00495	0.00495	
Pumpkinseed - Aroclor 1242	4	4.935	0.00495	0.00495	
Pumpkinseed - Aroclor 1248	4	4.935	0.00495	0.00495	
Pumpkinseed - Aroclor 1254	4	4.935	0.00495	0.00495	
Pumpkinseed - Aroclor 1260	4	4.935	0.00495	0.00495	

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-9c : Minimum, Maximum and Average Cs-137 Concentrations in Fish (Individuals & Composites)**

Species	Number of Fish	Minimum Value (pCi/g)	Maximum Value (pCi/g)	Average Value (pCi/g)	Average Error (pCi/g)
AREA A					
Brown Bullhead - Cesium-137	35	0.205	0.295	0.2312	0.031
Largemouth Bass - Cesium-137	1	0.19	0.19	0.19	0.0227
Pumpkinseed - Cesium-137	14	0.201	0.265	0.23893	0.0312
AREA C					
Bluegill - Cesium-137	8	0.176	0.188	0.1805	0.0372
Brown Bullhead - Cesium-137	4	0.213	0.213	0.213	0.0319
Largemouth Bass - Cesium-137	5	0.511	0.511	0.511	0.0627
Pumpkinseed - Cesium-137	15	0.207	0.285	0.237	0.0547
AREA D - Downstream of HQ					
Brown Bullhead - Cesium-137	21	0.0929	0.298	0.19827	0.0288
Largemouth Bass - Cesium-137	1	0.432	0.432	0.432	0.0445
Pumpkinseed - Cesium-137	4	0.135	0.242	0.16175	0.0284
SCHULTZ ROAD					
Chain Pickerel - Cesium-137	1	0.137	0.137	0.137	0.0257
Largemouth Bass - Cesium-137	1	0.0823	0.0823	0.0823	0.0184
MANOR ROAD					
Brown Bullhead - Cesium-137	23	0.0822	0.239	0.13631	0.026
Chain Pickerel - Cesium-137	1	0.106	0.106	0.106	0.0191
Largemouth Bass - Cesium-137	2	0.0676	0.0907	0.07915	0.0171
DONAHUE'S POND					
Bluegill - Cesium-137	22	0.046	0.0867	0.0621	0.0261
Brown Bullhead - Cesium-137	10	0.053	0.096	0.07463	0.0228
Chain Pickerel - Cesium-137	4	0.105	0.264	0.16175	0.0228
Pumpkinseed - Cesium-137	4	0.0212	0.0212	0.0212	0.0201

Notes :

1 - Average length is the average for all aged fish.

2 - Minimum/Maximum is the minimum/maximum for all aged fish.

**Table 4-10 Combined 1996 and 2001 Individual and Composite Fish Mercury Concentrations**

Area	Individual ID or DEC Tag No. <sup>1</sup>	Composite/Sample/Lab ID <sup>2</sup>	Species	Length <sup>3</sup> (mm)	Collected by	Sample Date	Sample Type <sup>4</sup>	Mercury (mg/kg)	Data Source or DEC File <sup>5</sup>
A	PR-02-2		Chain Pickerel	184	DEC/BNL	09/05/96			F3
A	PR-02-3		Chain Pickerel	133	DEC/BNL	09/05/96			F3
A	PR-02-9		Chain Pickerel	105	DEC/BNL	09/05/96			F3
A		AOC-4-PR02-FT01	Chain Pickerel	141	DEC/BNL	09/05/96	HVC	1.4	F3
A									
A	PR-02-1		Chain Pickerel	125	DEC/BNL	09/05/96			F3
A	PR-02-4		Chain Pickerel	105	DEC/BNL	09/05/96			F3
A	PR-02-5		Chain Pickerel	114	DEC/BNL	09/05/96			F3
A	PR-02-6		Chain Pickerel	100	DEC/BNL	09/05/96			F3
A	PR-02-7		Chain Pickerel	119	DEC/BNL	09/05/96			F3
A	PR-02-8		Chain Pickerel	105	DEC/BNL	09/05/96			F3
A	PR-02-10		Chain Pickerel	111	DEC/BNL	09/05/96			F3
A	PR-02-11		Chain Pickerel	105	DEC/BNL	09/05/96			F3
A	PR-02-12		Chain Pickerel	105	DEC/BNL	09/05/96			F3
A		AOC-4-PR02-FT02	Chain Pickerel	110	DEC/BNL	09/05/96	HVC	1.6	F3
A									
A	PR-02-13		Brown Bullhead	75	DEC/BNL	09/05/96			F3
A	PR-02-14		Brown Bullhead	79	DEC/BNL	09/05/96			F3
A		AOC-4-PR02-FT03	Brown Bullhead	77	DEC/BNL	09/05/96	HVC	0.99	F3
B	PR-22-1		Pumpkinseed	107	DEC/BNL	09/05/96			F3
B	PR-22-2		Pumpkinseed	105	DEC/BNL	09/05/96			F3
B		AOC-4-PR22-FT01	Pumpkinseed	106	DEC/BNL	09/05/96	HVC	0.58	F3
B	PR-22-3	AOC-4-PR22-FT02	Brown Bullhead	80	DEC/BNL	09/05/96	HV	0.46	F3
B									
B	PR-22-10		Pumpkinseed	63	DEC/BNL	09/05/96	HVC		F3
B	PR-22-11		Pumpkinseed	57	DEC/BNL	09/05/96	HVC		F3
B		AOC-4-PR22-FT04	Pumpkinseed	60	DEC/BNL	09/05/96	HVC	0.14	F3
B	PR-22-12	AOC-4-PR22-FT05	Brown Bullhead	94	DEC/BNL	09/05/96	HV	0.21	F3
C	PR-06-2	AOC-4-PR06-FT02	Chain Pickerel	151	DEC/BNL	09/05/96	HV	0.24	F3
D	129324	011307H	Largemouth Bass	279	DEC	6/22/2001	SF	0.66	HG200112
D	134767	011305H	Brown Bullhead	292	DEC	6/22/2001	SF	0.24	HG200112
D	134770	011306H	Brown Bullhead	252	DEC	6/22/2001	SF	0.33	HG200112
D	R15807	011309H	Pumpkinseed	117	DEC	6/22/2001	HV	0.51	HG200112
D	R15991	011311H	Pumpkinseed	126	DEC	6/22/2001	HV	0.4	HG200112
E	129622	011312H	Pumpkinseed	135	DEC	7/16/2001	HV	0.93	HG200112
E	9747365	011324H	Brown Bullhead	165	DEC	7/16/2001	HV	0.43	HG200112
E	9747367	011325H	Brown Bullhead	146	DEC	7/16/2001	HV	0.51	HG200112
E	9747368	011326H	Brown Bullhead	161	DEC	7/16/2001	HV	0.43	HG200112
E	9747381	011314H	Pumpkinseed	138	DEC	7/16/2001	HV	0.79	HG200112
E	9747382	011316H	Pumpkinseed	134	DEC	7/16/2001	HV	0.82	HG200112
E	9747383	011320H	Chain Pickerel	220	DEC	7/16/2001	HV	0.51	HG200112
E	9747384	011313H	Pumpkinseed	138	DEC	7/16/2001	HV	0.54	HG200112
E	9747385	011315H	Pumpkinseed	134	DEC	7/16/2001	HV	0.54	HG200112
E	9747387	011322H	Chain Pickerel	280	DEC	6/22/2001	SF	0.72	HG200112
E	9747389	011317H	Pumpkinseed	133	DEC	7/17/2007	HV	0.39	HG200112
E	9747390	011319H	Pumpkinseed	130	DEC	6/22/2001	HV	0.87	HG200112
E	9747393	011323H	Chain Pickerel	320	DEC	6/22/2001	SF	0.59	HG200112
E	9747395	011321H	Chain Pickerel	320	DEC	6/22/2001	SF	0.6	HG200112

**Table 4-10 Combined 1996 and 2001 Individual and Composite Fish Mercury Concentrations**

Area	Individual ID or DEC Tag No. <sup>1</sup>	Composite/Sample/Lab ID <sup>2</sup>	Species	Length <sup>3</sup> (mm)	Collected by	Sample Date	Sample Type <sup>4</sup>	Mercury (mg/kg)	Data Source or DEC File <sup>5</sup>
E	9747399	011318H	Pumpkinseed	131	DEC	7/16/2001	HV	0.78	HG200112
SR	129321	011332H	Pumpkinseed	137	DEC	7/16/2001	HV	0.49	HG200112
SR	129327	011328H	Pumpkinseed	147	DEC	7/16/2001	HV	0.69	HG200112
SR	129331	011334H	Pumpkinseed	153	DEC	7/16/2001	HV	0.7	HG200112
SR	129471	011327H	Pumpkinseed	150	DEC	7/16/2001	HV	0.8	HG200112
SR	129623	011341H	Brown Bullhead	262	DEC	7/16/2001	HV	1.33	HG200112
SR	129625	011338H	Chain Pickerel	325	DEC	7/16/2001	SF	0.79	HG200112
SR	134769	011337H	Chain Pickerel	342	DEC	7/16/2001	SF	0.76	HG200112
SR	134771	011336H	Chain Pickerel	314	DEC	7/16/2001	SF	0.54	HG200112
SR	134802	011335H	Pumpkinseed	146	DEC	7/16/2001	HV	0.38	HG200112
SR	134803	011329H	Pumpkinseed	149	DEC	7/16/2001	HV	0.91	HG200112
SR	134804	011333H	Pumpkinseed	148	DEC	7/16/2001	HV	0.32	HG200112
SR	134805	011331H	Pumpkinseed	142	DEC	7/16/2001	HV	0.34	HG200112
SR	134806	011330H	Pumpkinseed	154	DEC	7/16/2001	HV	0.86	HG200112
SR	9747388	011339H	Chain Pickerel	304	DEC	7/16/2001	SF	0.77	HG200112
SR	9747396	011343H	Brown Bullhead	196	DEC	7/16/2001	HV	0.5	HG200112
SR	9747397	011340H	Chain Pickerel	306	DEC	7/16/2001	SF	0.78	HG200112
SR	9747398	011342H	Brown Bullhead	210	DEC	7/16/2001	HV	0.33	HG200112
DP	134756	087196H	Pumpkinseed	184	DEC	8/27/1996	SF	0.45	FOREGEDON
DP	134757	087296H	Pumpkinseed	180	DEC	8/27/1996	SF	0.51	FOREGEDON
DP	134758	087396H	Pumpkinseed	180	DEC	8/27/1996	SF	0.43	FOREGEDON
DP	134760	087596H	Pumpkinseed	181	DEC	8/27/1996	SF	0.23	FOREGEDON
DP	134762	087896H	Brown Bullhead	330	DEC	8/27/1996	SF	0.22	FOREGEDON
DP	134763	087996H	Brown Bullhead	340	DEC	8/27/1996	SF	0.25	FOREGEDON
DP	134765	088696H	Brown Bullhead	345	DEC	8/29/1996	SF	0.43	FOREGEDON
DP	134794	087696H	Pumpkinseed	182	DEC	8/27/1996	SF	0.36	FOREGEDON
DP	134796	088796H	Brown Bullhead	350	DEC	8/29/1996	SF	0.33	FOREGEDON
DP	134799	088296H	Brown Bullhead	329	DEC	8/29/1996	SF	0.27	FOREGEDON

<sup>1</sup> Fish samples that begin with PR are for individual fish processed by BNL. All other fish IDs in this column are DEC tag numbers for individual fish and were processed by DEC.

<sup>2</sup> BNL Composite samples begin with "AOC". Composite samples do not have a "PR" in the cell to the left of the "AOC". The fish that were composited are identified in the previous rows by their "PR" IDs. BNL individual fish samples are identified with both a "PR" in column 2 and an :AOC" in column 3. All other fish IDs in this column are DEC tag numbers for individual fish and were processed by DEC.

<sup>3</sup> All fish were measure to a total length expressed in millimeters. For composite samples the average length for all fish in the composite was calculated and rounded to the nearest millimeter.

<sup>4</sup>Preparation type: SF is a Standard Fillet tissue sample. HV is an individual fish sample from which the head and the viscera (internal organs) were removed. HVC is a fish composite sample from which the head and the viscera of each fish were removed..

<sup>5</sup> Data indicated with an "F3" are from *Final Operable Unit V Remedial Investigation Report, Volume 5, Appendix F3, Fish Bioaccumulation Report Operable Unit V*, December 9, 1996. Prepared by International Technology Corporation May 27, 1998. The DEC data used in this table are from the "HG 200112 "or "ORGEDON" electronic files, as indicated .

**Table 4-11 Frequency Distribution for Mercury Concentration of Combined 1996 and 2001 Fish and 2009 Fish**

Class	Minimum	Maximum	Midpoint	Pre-cleanup 1996 & 2001 <sup>1</sup>	Post-cleanup 2009 <sup>2</sup>
1	0	0.15	0.08	1	32
2	0.151	0.3	0.23	7	26
3	0.301	0.45	0.38	14	21
4	0.451	0.6	0.53	13	11
5	0.601	0.75	0.68	4	1
6	0.751	0.9	0.83	10	0
7	0.901	1.05	0.98	3	0
8	1.051	1.2	1.13	0	0
9	1.201	1.35	1.28	1	0
10	1.351	1.5	1.43	1	0
11	1.501	1.65	1.58	1	2
	Sum			55	93

<sup>1</sup> Statistics based on data presented in Table 4-10

<sup>2</sup> Statistics based on data presented in Table 4-8a

**Table 4-12 Combined 1996 and 2001 Pre-cleanup Fish Mercury and 2009 Post-cleanup Fish Mercury Summary Sample Statistics**

	<b>Pre-cleanup Combined 1996 &amp; 2001 Fish Mercury (mg/kg)<sup>1</sup></b>	<b>Post-cleanup 2009 Fish Mercury (mg/kg)<sup>2</sup></b>
Mean	0.58	0.27
Standard Error of Mean	0.04	0.03
Median	0.51	0.23
Standard Deviation	0.30	0.25
Sample Variance	0.09	0.06
Skewness	2.12	3.39
Kurtosis	1.26	16.25
Minimum	0.14	0.02
Maximum	1.60	1.63
Number	55.00	93.00
Confidence Limits (a=0.05)	0.08	0.05

<sup>1</sup> Statistics based on data presented in Table 4-10

<sup>2</sup> Statistics based on data presented in Table 4-8a

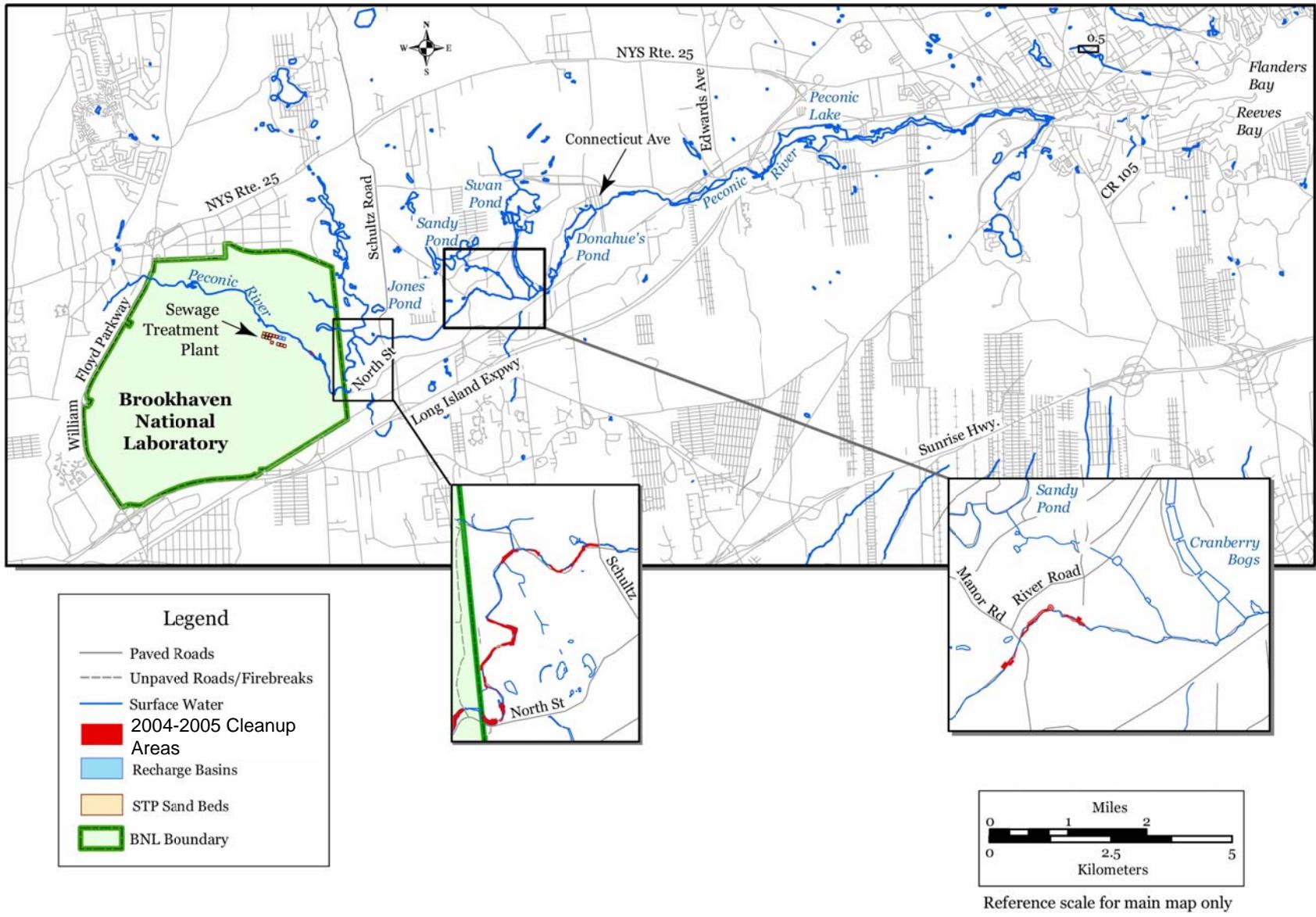
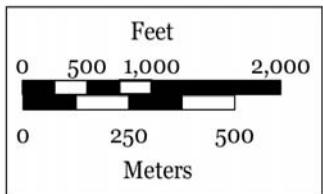
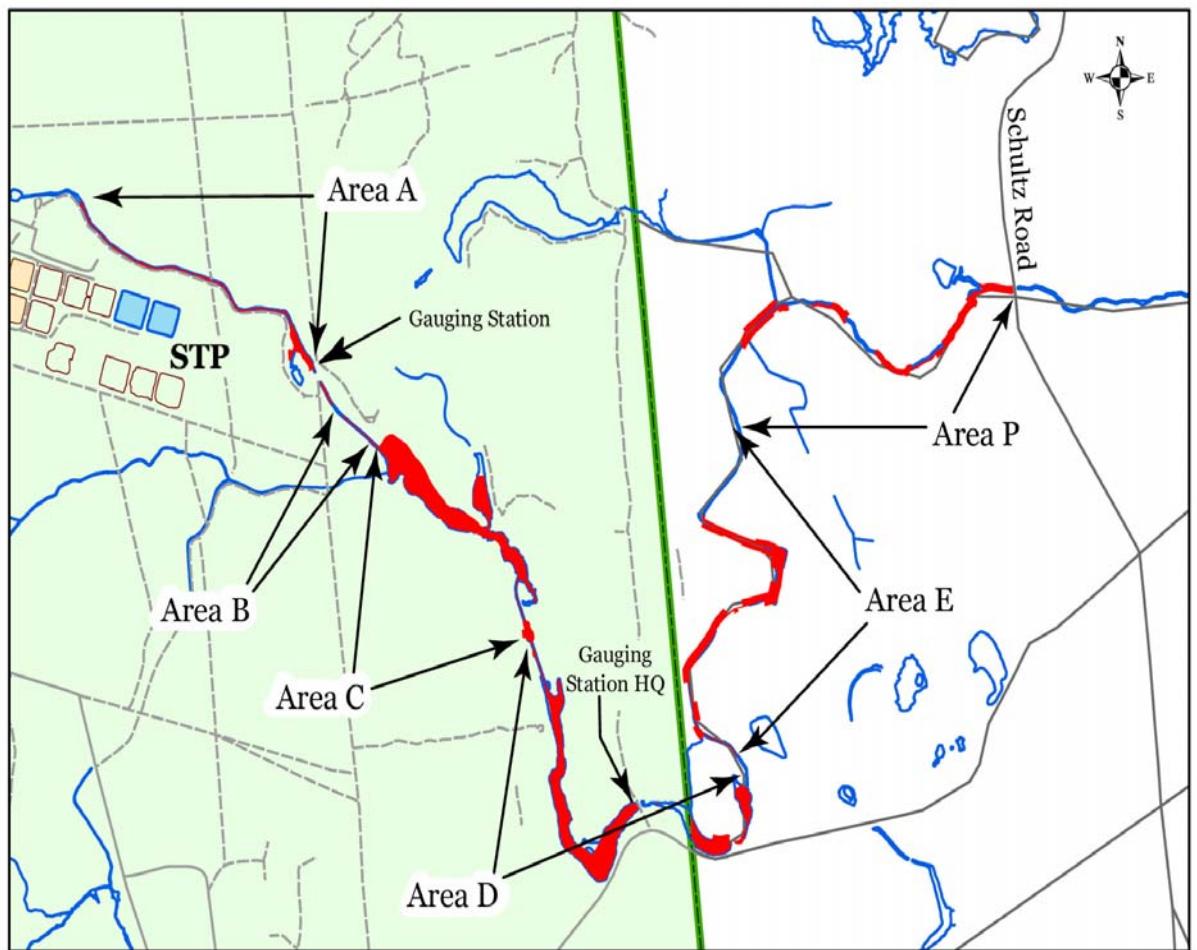
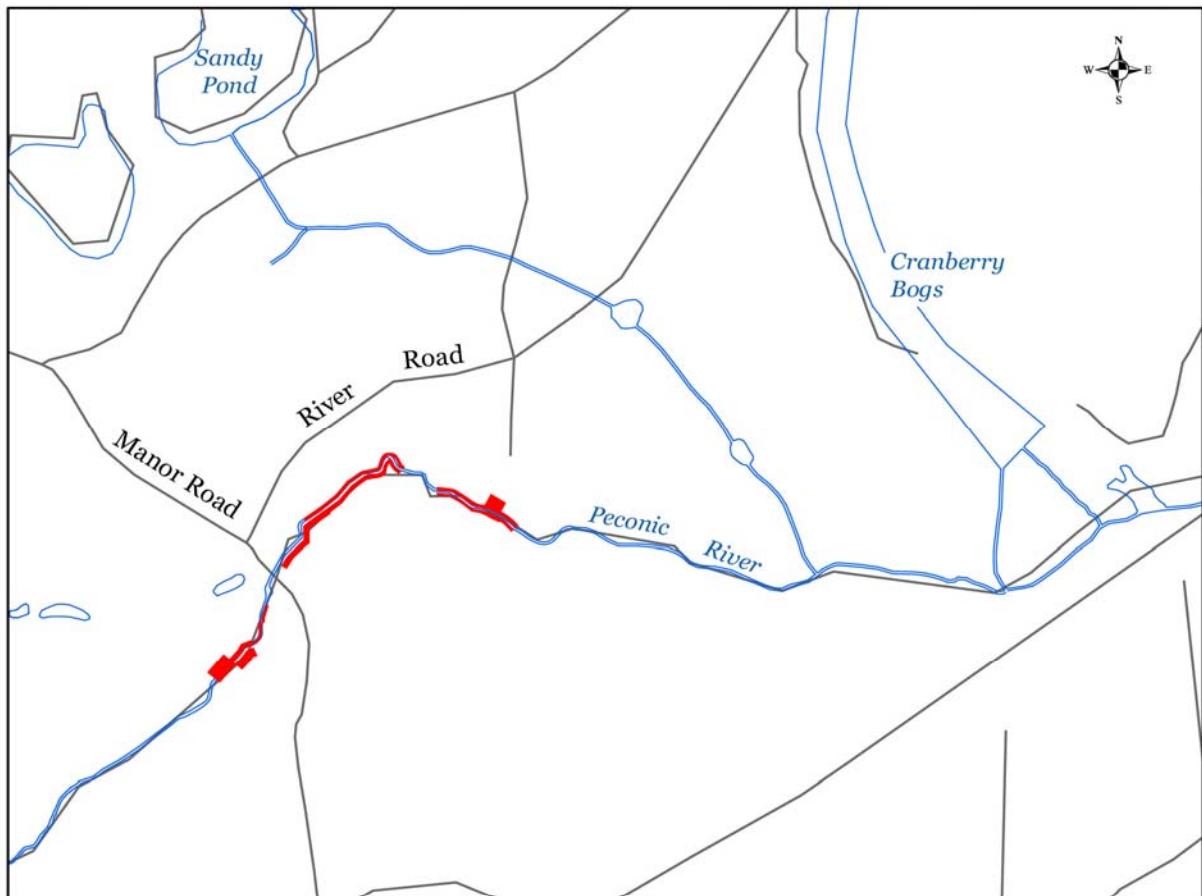


Figure 1-1. The Peconic River. The sections of the river that were remediated are indicated in the two call-out boxes, These two sections are shown in detail in Figures 1-2 and 1-3.

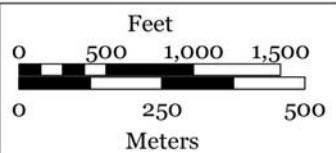


**Figure 1-2. Peconic River Cleanup Areas between the BNL Sewage Treatment Plant and Schultz Road.**

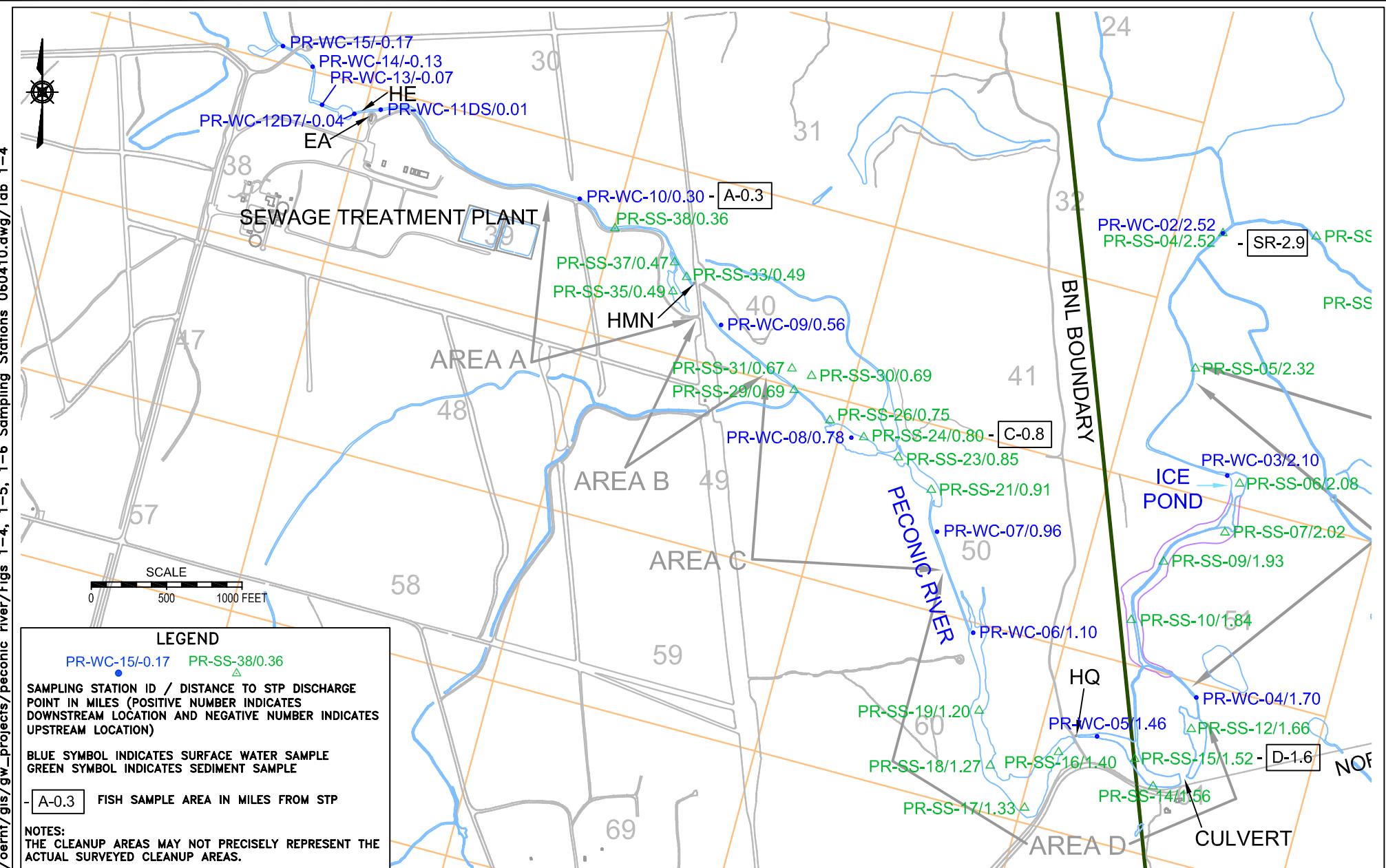


#### Legend

- Paved Roads
- - - Unpaved Roads/Firebreaks
- Surface Water
- 2004-2005 Cleanup Areas



**Figure 1-3. Peconic River Cleanup Areas Adjacent to Manor Road**

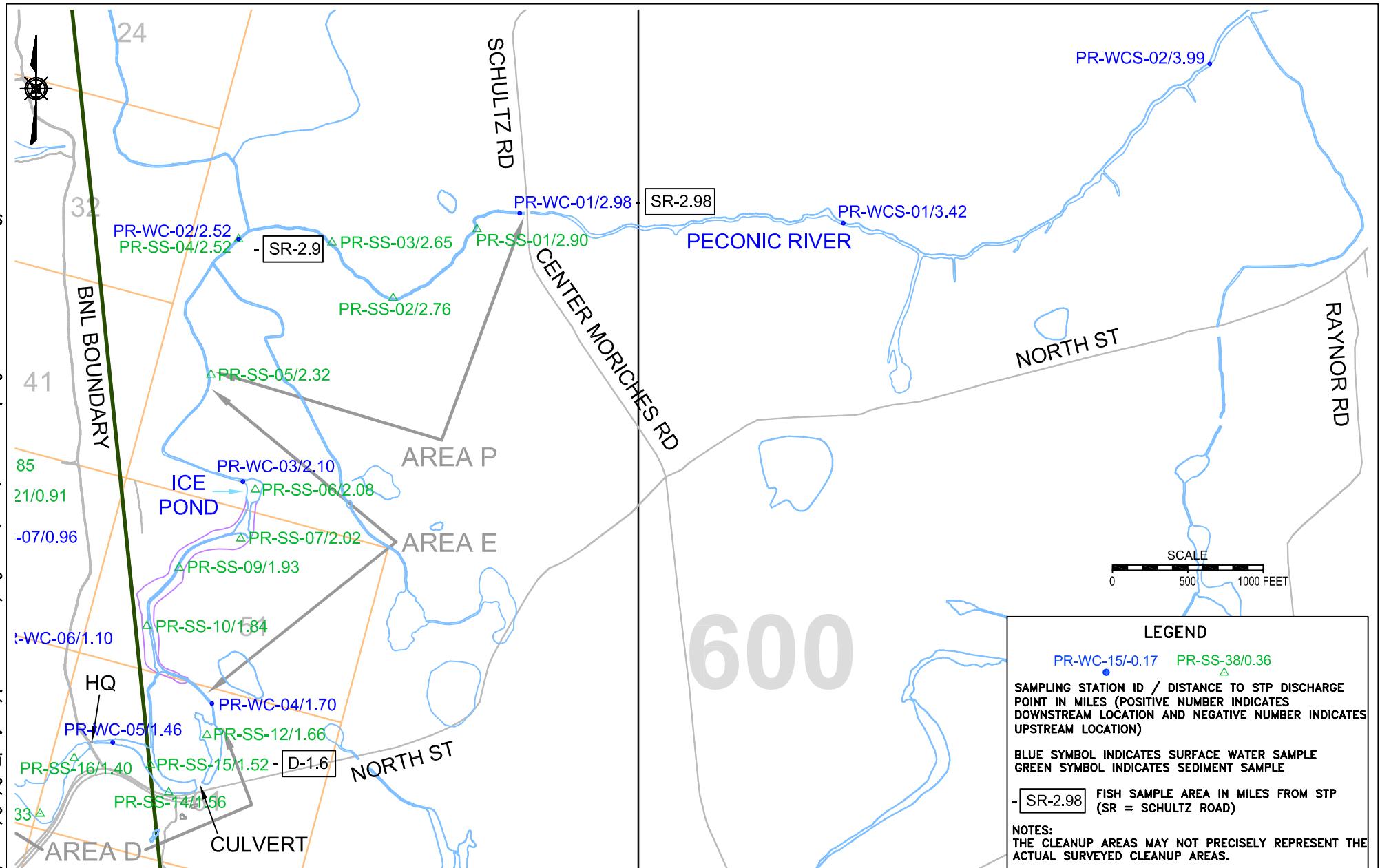


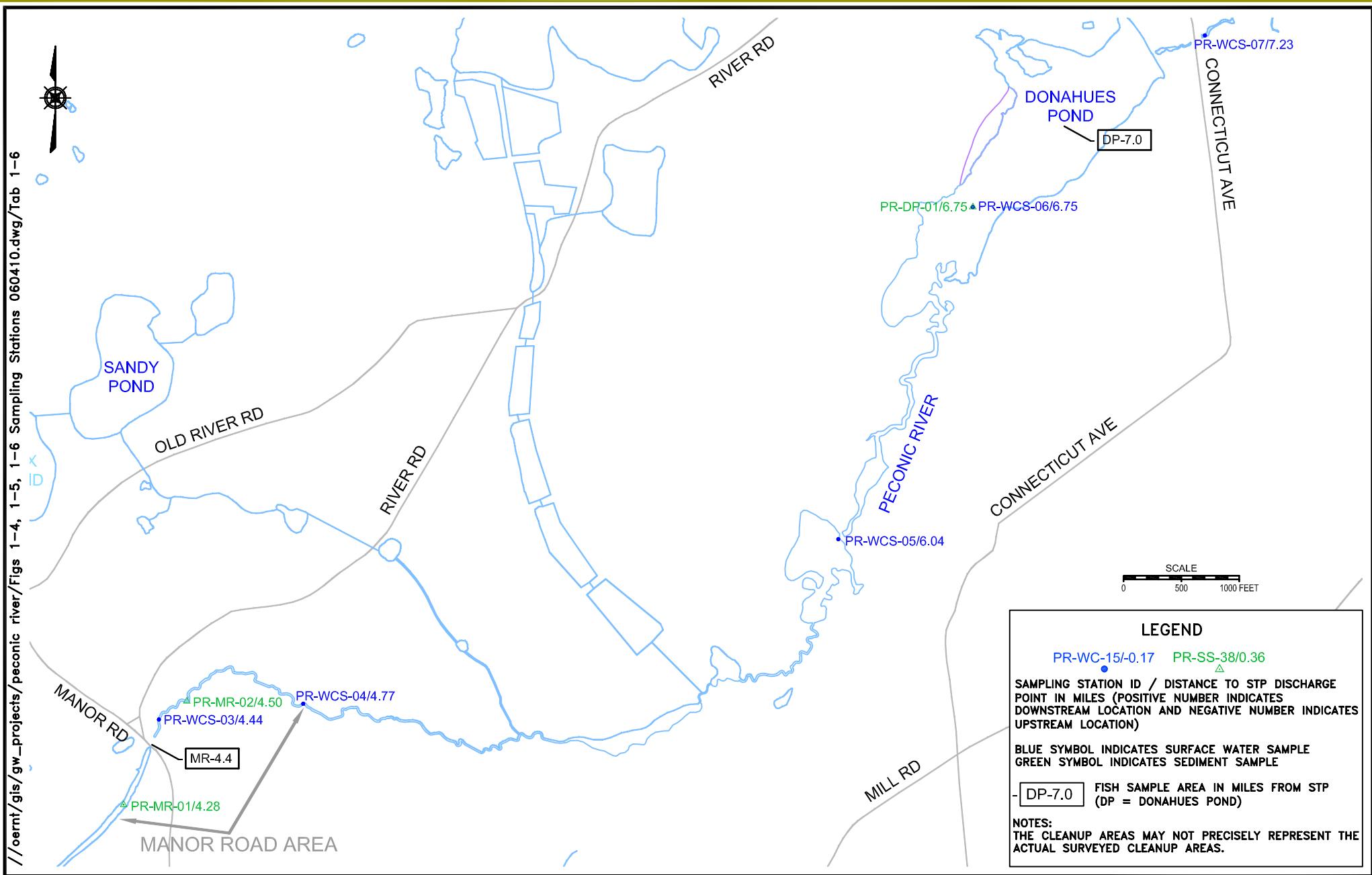
**BROOKHAVEN**  
NATIONAL LABORATORY

## ENVIRONMENTAL PROTECTION DIVISION

**FIGURE 1-4**  
**WATER, SEDIMENT AND FISH SAMPLING STATIONS**  
**BETWEEN PR-WC-15 AND BNL BOUNDARY**  
**MERCURY SAMPLING STATIONS**  
**PECONIC RIVER STUDY**

DWN: <b>AJZ</b>	VT: HZ.: —	DATE: <b>06/04/10</b>	PROJECT NO.: —
CHKD: <b>WM</b>	APPD: —	REV.: —	NOTES: —
MAP NO.:		<b>1-4</b>	





# BROOKHAVEN NATIONAL LABORATORY

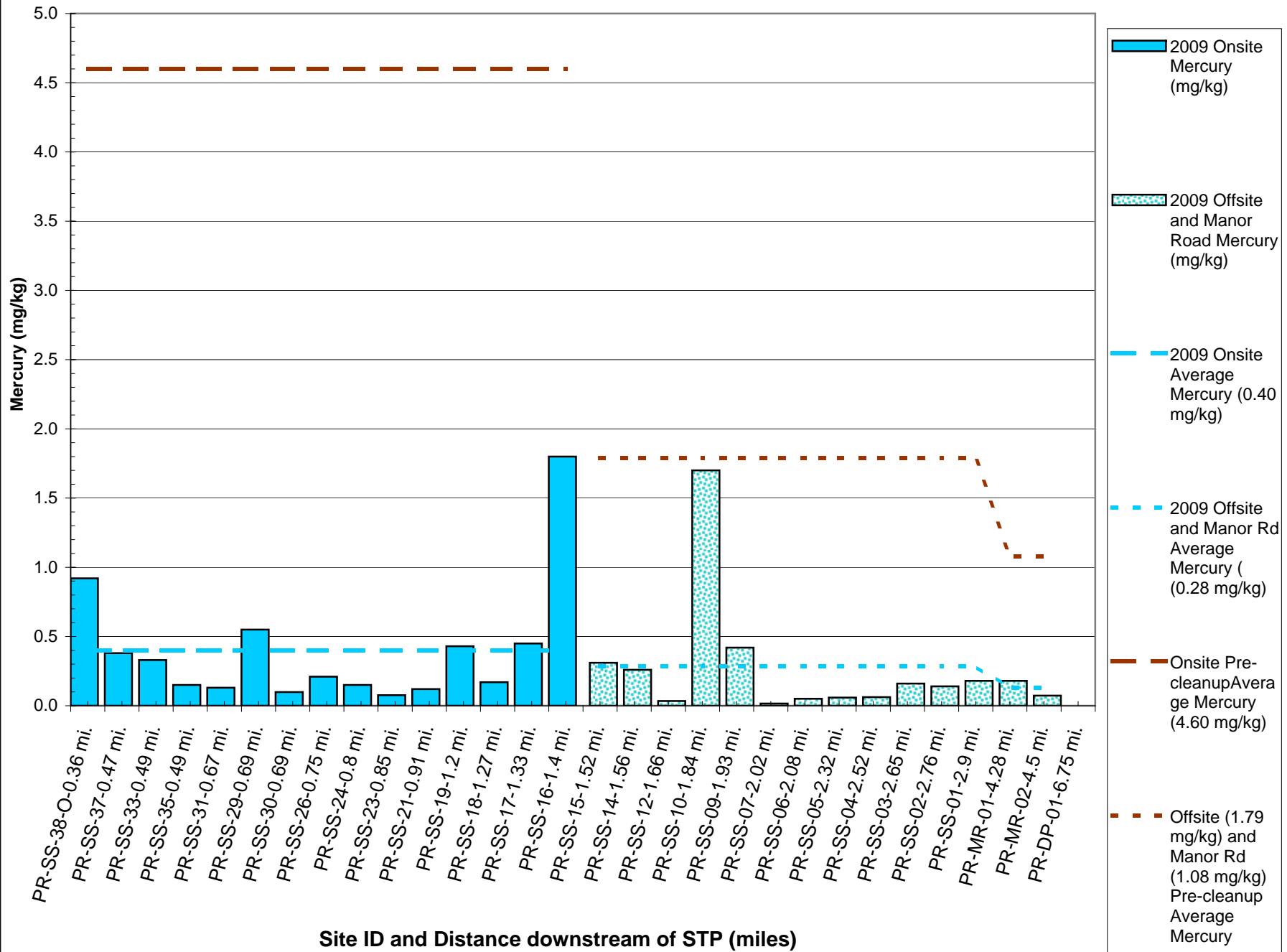
## ENVIRONMENTAL PROTECTION DIVISION

**TITLE:**

FIGURE 1-6  
WATER, SEDIMENT AND FISH SAMPLING STATIONS  
BETWEEN MANOR RD AND CONNECTICUT AVE  
MERCURY SAMPLING STATIONS  
PECONIC RIVER STUDY

DWN: <b>AJZ</b>	VT: HZ.: —	DATE: <b>06/04/10</b>	PROJECT NO.: —
CHKD: <b>WM</b>	APPD: —	REV.: —	NOTES: —
MAP NO.: <b>1-6</b>			

**Figure 2-1 2009 Peconic River Sediment Mercury Results**  
**Routine Sediment Monitoring Stations**



PECONIC RIVER

PR-SS-38 1.5  
0.97 / 2.1

FLOW

ROADWAY

3.1

0.35

1.4

1.1

0.92

SCALE

0 25 FEET

### Mercury Concentration at PR-SS-38 - 2006 - 2009

Site ID	Sample Date	Analyte	Value (mg/kg)	Detlim	Lab Qual <sup>2</sup>
PR-SS-38	6/26/2006	Mercury	1.5	0.056	
PR-SS-38	7/26/2007	Mercury	0.97	0.0196	N
PR-SS-38	6/26/2008	Mercury	2.1	0.0204	*
PR-SS-38-O <sup>1</sup>	8/6/2009	Mercury	0.92	0.08	
PR-SS-38-U <sup>1</sup>	8/6/2009	Mercury	0.35	0.051	
PR-SS-38-D <sup>1</sup>	8/6/2009	Mercury	1.4	0.06	
PR-SS-38-L <sup>1</sup>	8/6/2009	Mercury	1.1	0.051	
PR-SS-38-R <sup>1</sup>	8/6/2009	Mercury	3.1	0.091	

Average 2006 - 2008 Mercury = 1.52 mg/kg

Average 2009 PR-SS-38 Mercury = 1.37 mg/kg

Average 2006 - 2009 PR-SS-38 Mercury = 1.43 mg/kg

\* - A quality control analyte recovery is outside of specified acceptance criteria.

N - The matrix spike sample recovery is not within specified control limits.

<sup>1</sup> - PR-SS-38-O was collected at the Original PR-SS-38 sampling station location, sampled in 2006 -2008. PR-SS-38-U, -D, -L and -R are supplemental samples that were collected approximately five feet upstream and downstream, to the left and to the right, respectively, of PR-SS-38-O.

PR-SS-38 1.5	2006 ORIGINAL SAMPLE LOCATION AND MERCURY CONCENTRATION IN mg/kg
0.97/2.1	2007/2008 MERCURY CONCENTRATION IN mg/kg
0.92	2009 SAMPLE POINT AND MERCURY CONCENTRATION IN mg/kg
TREE LINE	
SURFACE WATER OR STREAM AS PER BASEMAP	

### Mercury and TSS Concentrations at PR-WC-06

June and July 2009

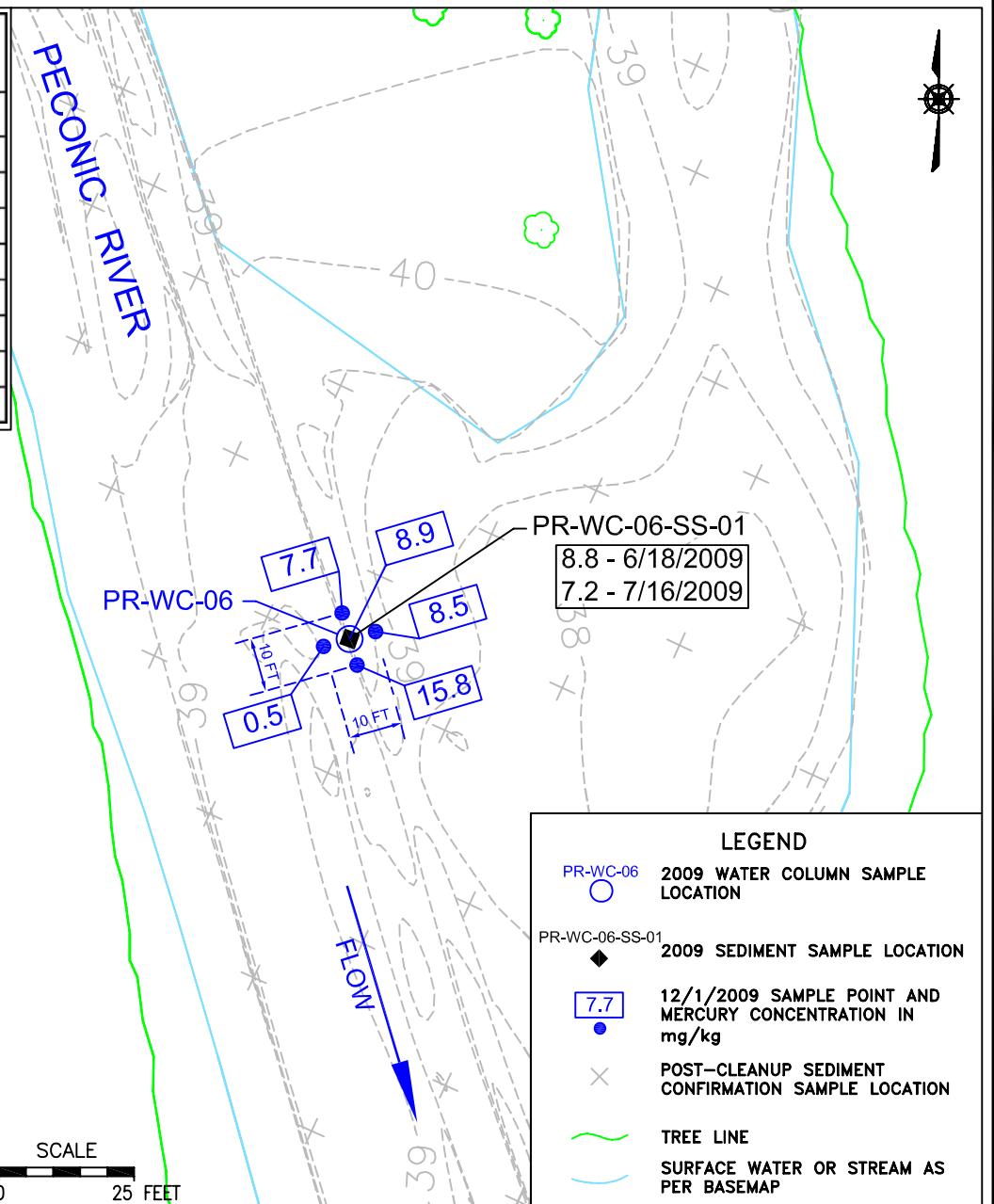
Matrix	Site ID	Analyte	Value	Detlim	Units	Lab Qual
6/18/2009 Collection						
Water Column	PR-WC-06	Total Mercury	43.7	0.15	ng/L	
Water Column	PR-WC-06	TSS	5.34	0.6	mg/L	
Sediment	PR-WC-06-SS-01	Mercury	8.8	0.21	mg/kg	
7/16/2009 Collection						
Water Column	PR-WC-06	Total Mercury	93.6	0.15	ng/L	
Water Column	PR-WC-06	TSS	4	0.7	mg/L	
Sediment	PR-WC-06-SS-01	Mercury	7.2	0.19	mg/kg	

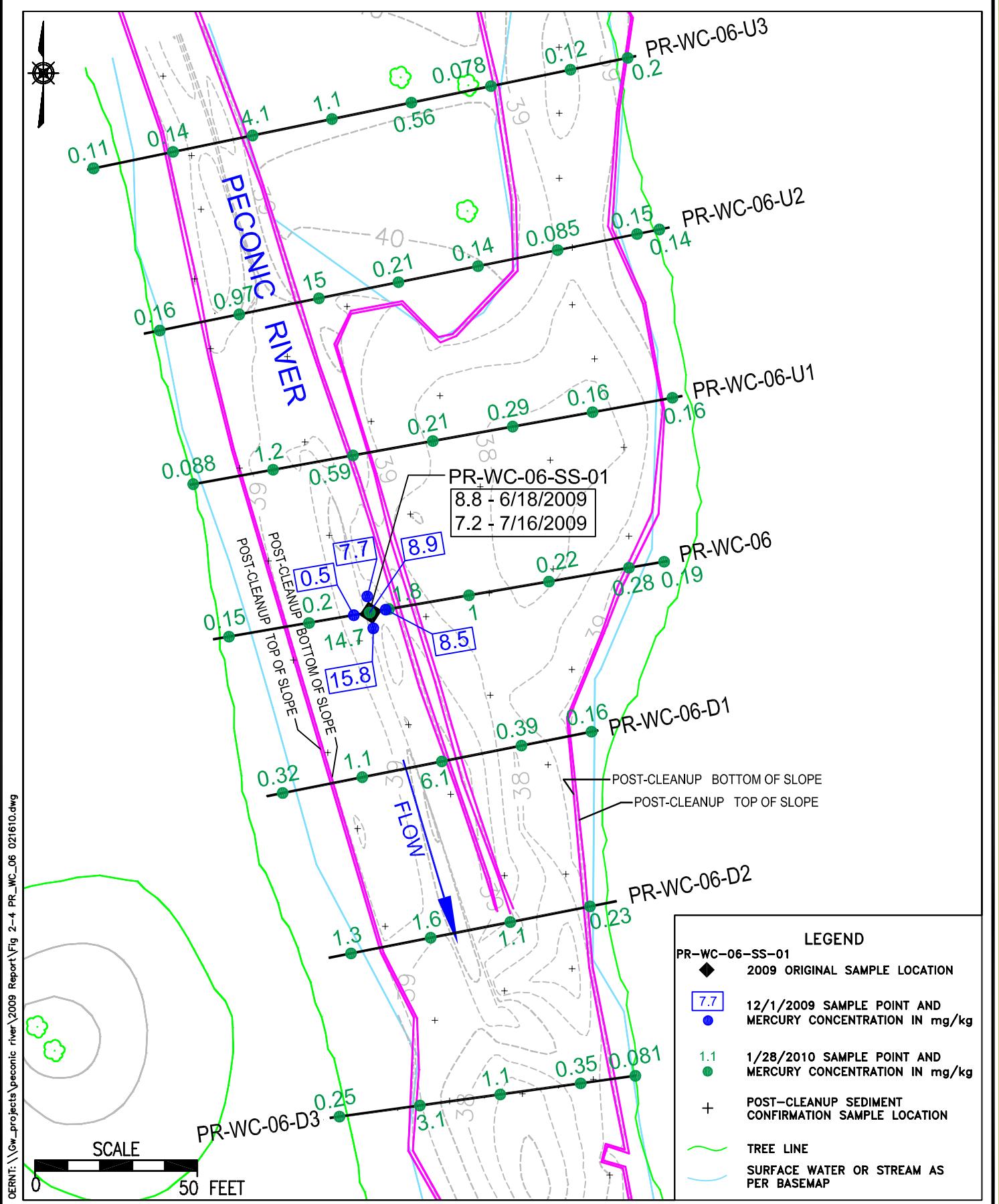
### Sediment Mercury Concentrations at PR-WC-06

Site ID	Sample Date	Mercury (mg/kg)	Detlim	Lab Qual
PR-WC-06-SS-01-O	12/1/2009 <sup>1</sup>	8.9	0.46	J
PR-WC-06-SS-01-U	12/1/2009 <sup>1</sup>	7.7	0.56	J
PR-WC-06-SS-01-D	12/1/2009 <sup>1</sup>	15.8	0.56	J
PR-WC-06-SS-01-L	12/1/2009 <sup>1</sup>	0.5	0.062	J
PR-WC-06-SS-01-R	12/1/2009 <sup>1</sup>	8.5	0.43	J

J Method blank contamination. The associated method blank contains the target analyte at a reportable limit.

<sup>1</sup> PR-WC-06-SS-01 was collected at the original location of the routine PR-WC-06 water column sampling station (2006 -2009) and the 6/18/2009 and 7/16/2009 PR-WC-06-SS-01 supplemental sediment sampling station. PR-WC-06-SS-01-U, -D, -L, and -R were collected approximately five feet upstream, downstream, to the left and to the right, respectively, of PR-WC-06-SS-01.





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**TITLE:**

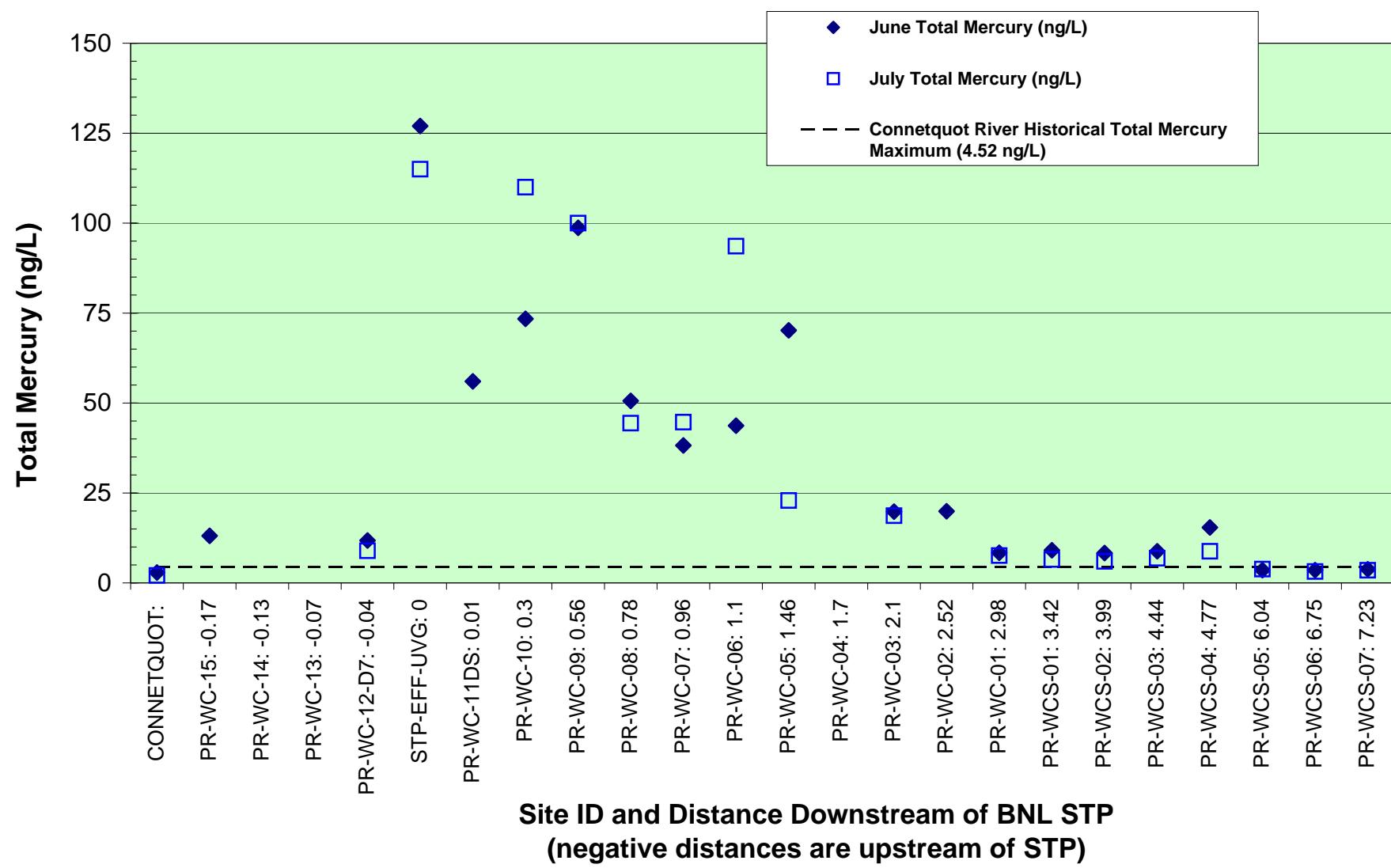
2009 AND 2010 PR-WC-06  
SUPPLEMENTARY AND TRANSECT  
SEDIMENT MERCURY DATA  
MERCURY SAMPLING PECONIC RIVER

DWN:	VT:HZ.:	DATE:	PROJECT NO.:
AJZ	-	02/16/10	-

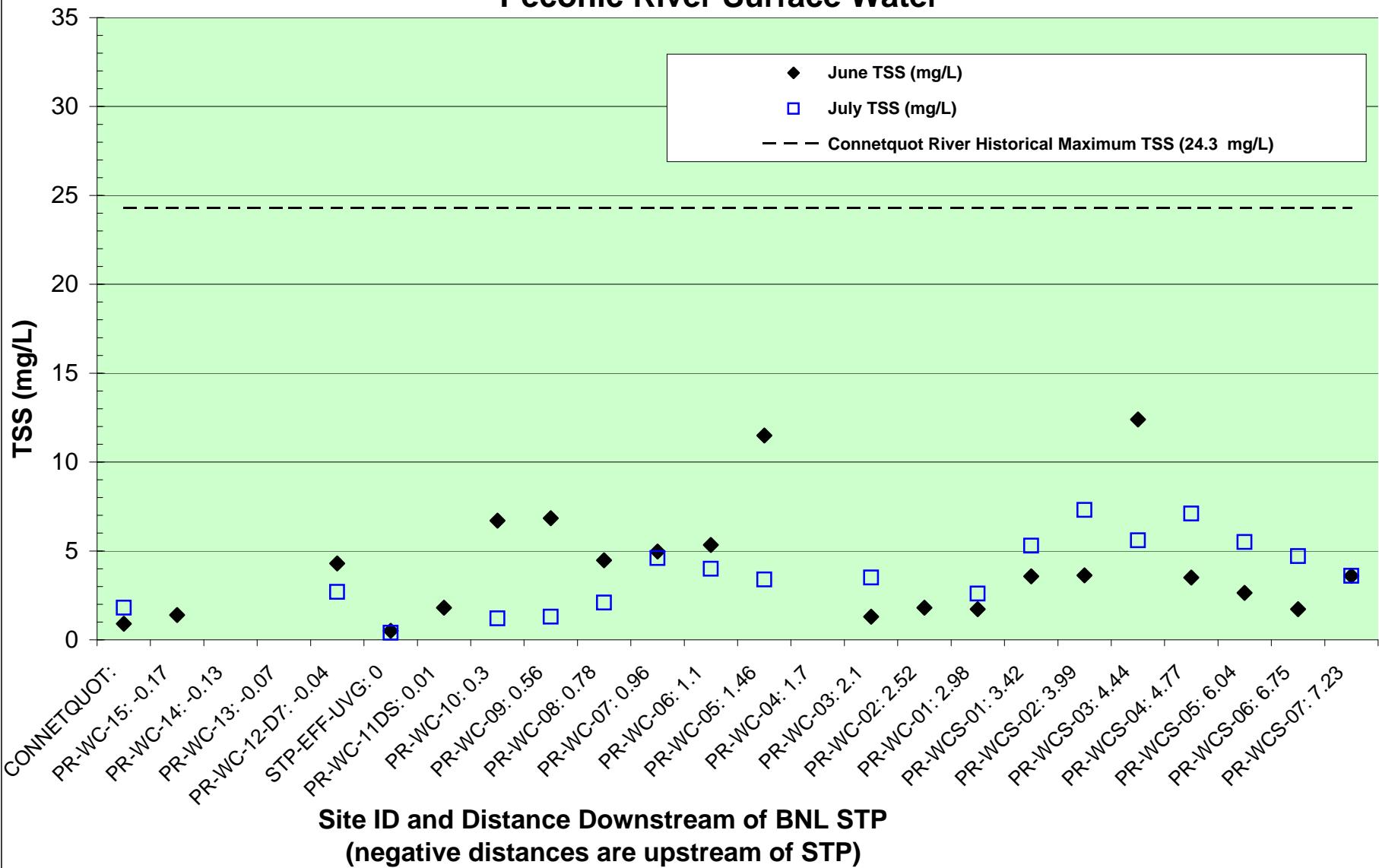
CHKD: <b>WM</b>	APPD: —	REV.: —	NOTES: —
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FIGURE NO.: 3-4

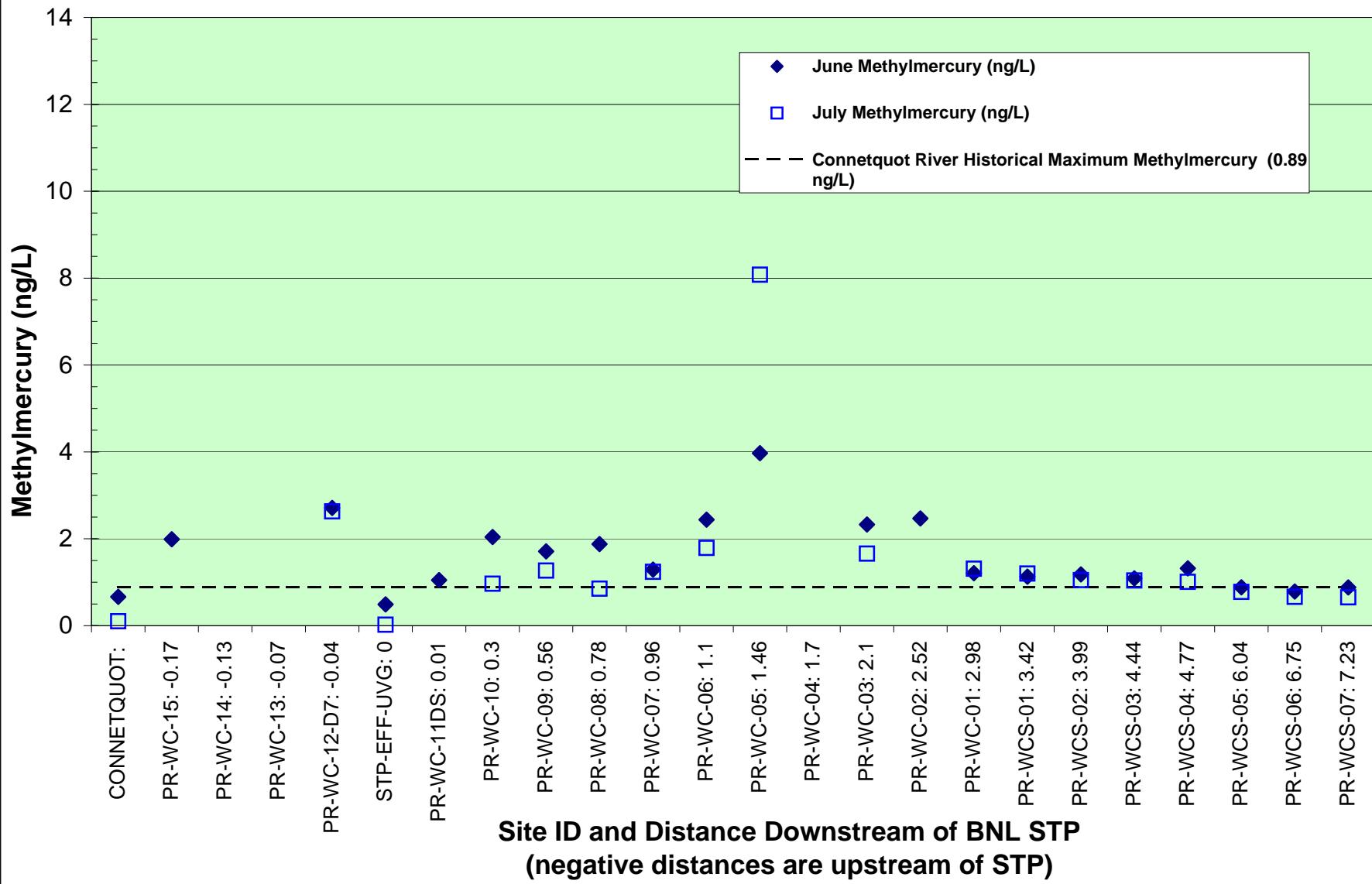
**Figure 3-1 2009 Total Mercury in Peconic River Surface Water**



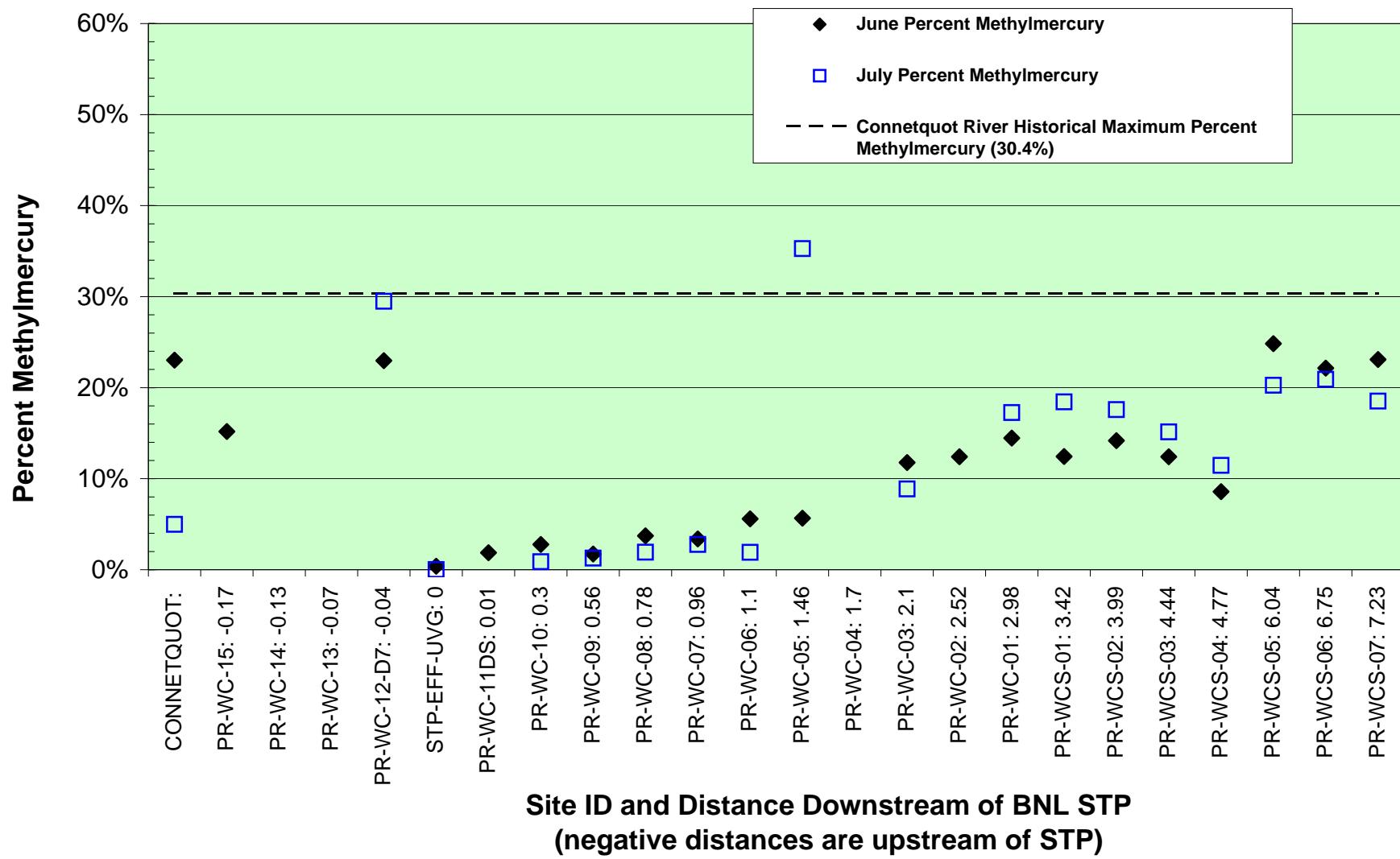
**Figure 3-2 2009 Total Suspended Solids (TSS) in Peconic River Surface Water**

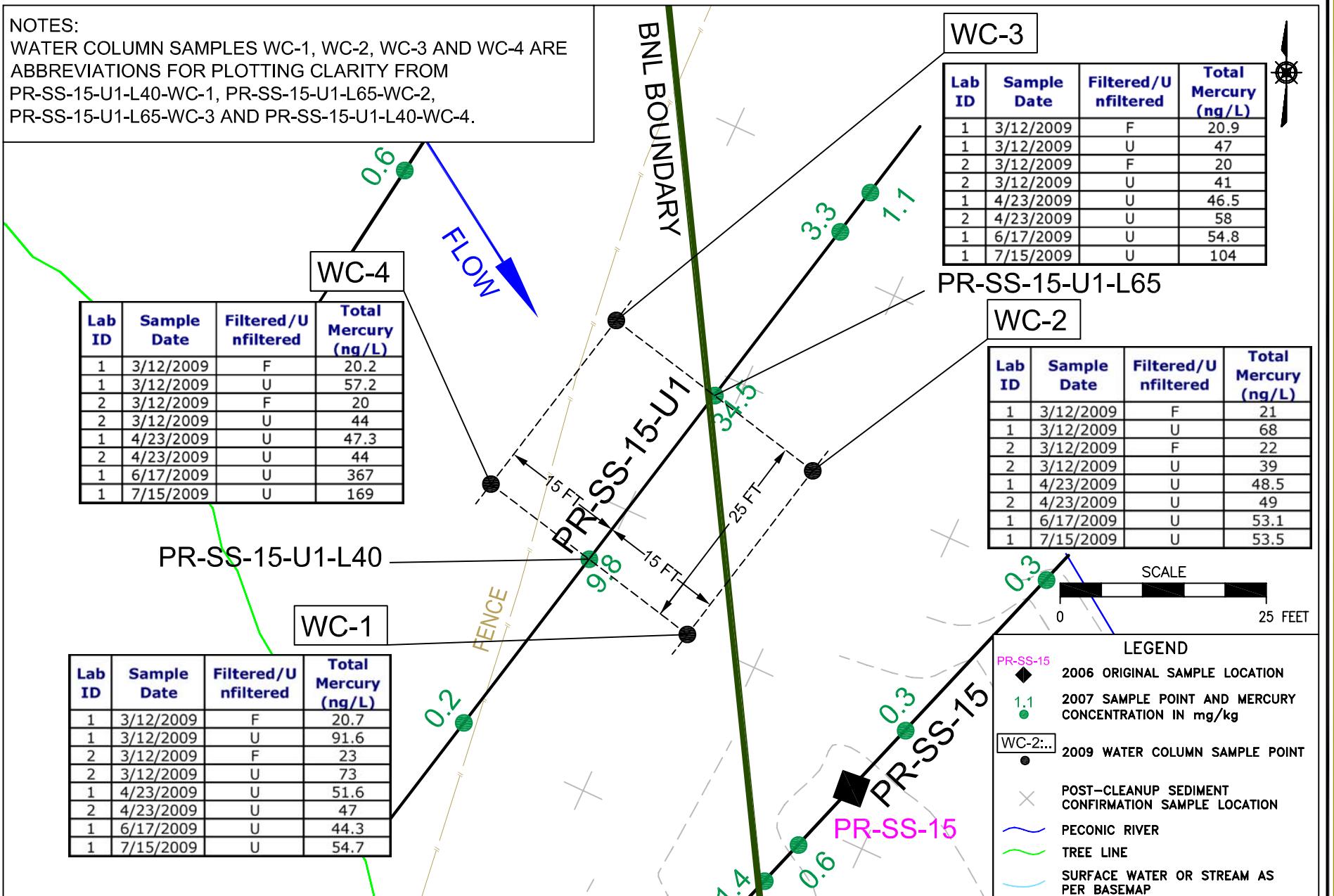


**Figure 3-3 2009 Methylmercury in Peconic River Surface Water**



**Figure 3-4 2009 Percent Methylmercury in Peconic River Surface Water**





## NOTES:

WATER COLUMN SAMPLES WC-1, WC-2, WC-3 AND WC-4 ARE ABBREVIATIONS FOR PLOTTING CLARITY FROM PR-SS-15-U1-L40-WC-1, PR-SS-15-U1-L65-WC-2, PR-SS-15-U1-L65-WC-3 AND PR-SS-15-U1-L40-WC-4.

Lab ID	Sample Date	Filtered/U nfiltered	Methyl mercury (ng/L)
1	3/12/2009	U	1.02
2	3/12/2009	U	0.874
1	4/23/2009	U	0.89
2	4/23/2009	U	0.833
1	6/17/2009	U	7.96
1	7/15/2009	U	11.1

WC-4

FLOW

Lab ID	Sample Date	Filtered/U nfiltered	Methyl mercury (ng/L)
1	3/12/2009	U	1.48
2	3/12/2009	U	1.05
1	4/23/2009	U	1.14
2	4/23/2009	U	0.935
1	6/17/2009	U	7.54
1	7/15/2009	U	9.15

WC-1

FENCE

BNL BOUNDARY

PR-SS-15-U1

PR-SS-15-U1

PR-SS-15

WC-3

Lab ID	Sample Date	Filtered/U nfiltered	Methyl mercury (ng/L)
1	3/12/2009	U	1
2	3/12/2009	U	0.937
1	4/23/2009	U	0.873
2	4/23/2009	U	0.963
1	6/17/2009	U	7.94
1	7/15/2009	U	8.68

PR-SS-15-U1-L65

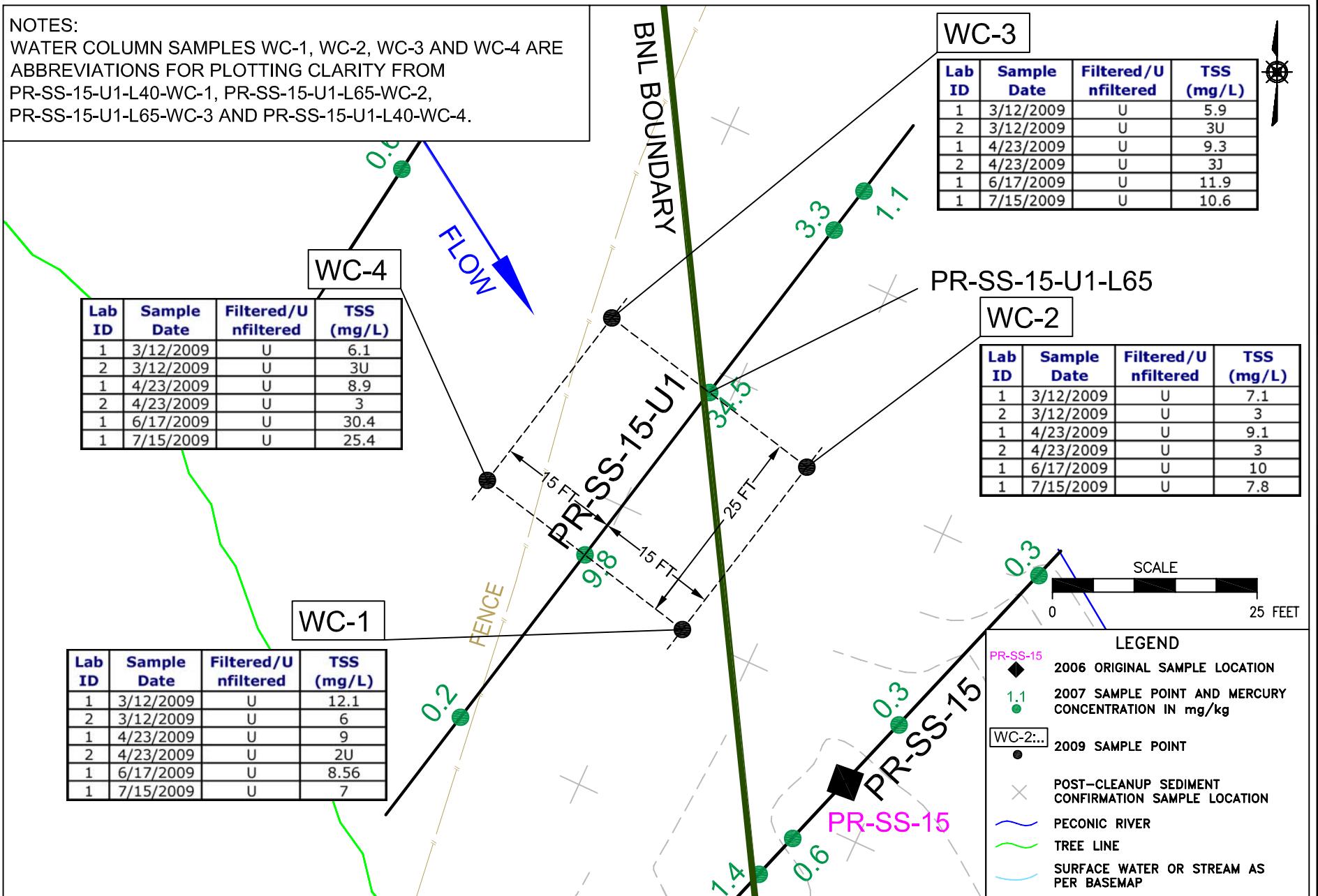
WC-2

Lab ID	Sample Date	Filtered/U nfiltered	Methyl mercury (ng/L)
1	3/12/2009	U	0.625
2	3/12/2009	U	0.789
1	4/23/2009	U	0.951
2	4/23/2009	U	0.958
1	6/17/2009	U	7.38
1	7/15/2009	U	8

SCALE  
0 25 FEET

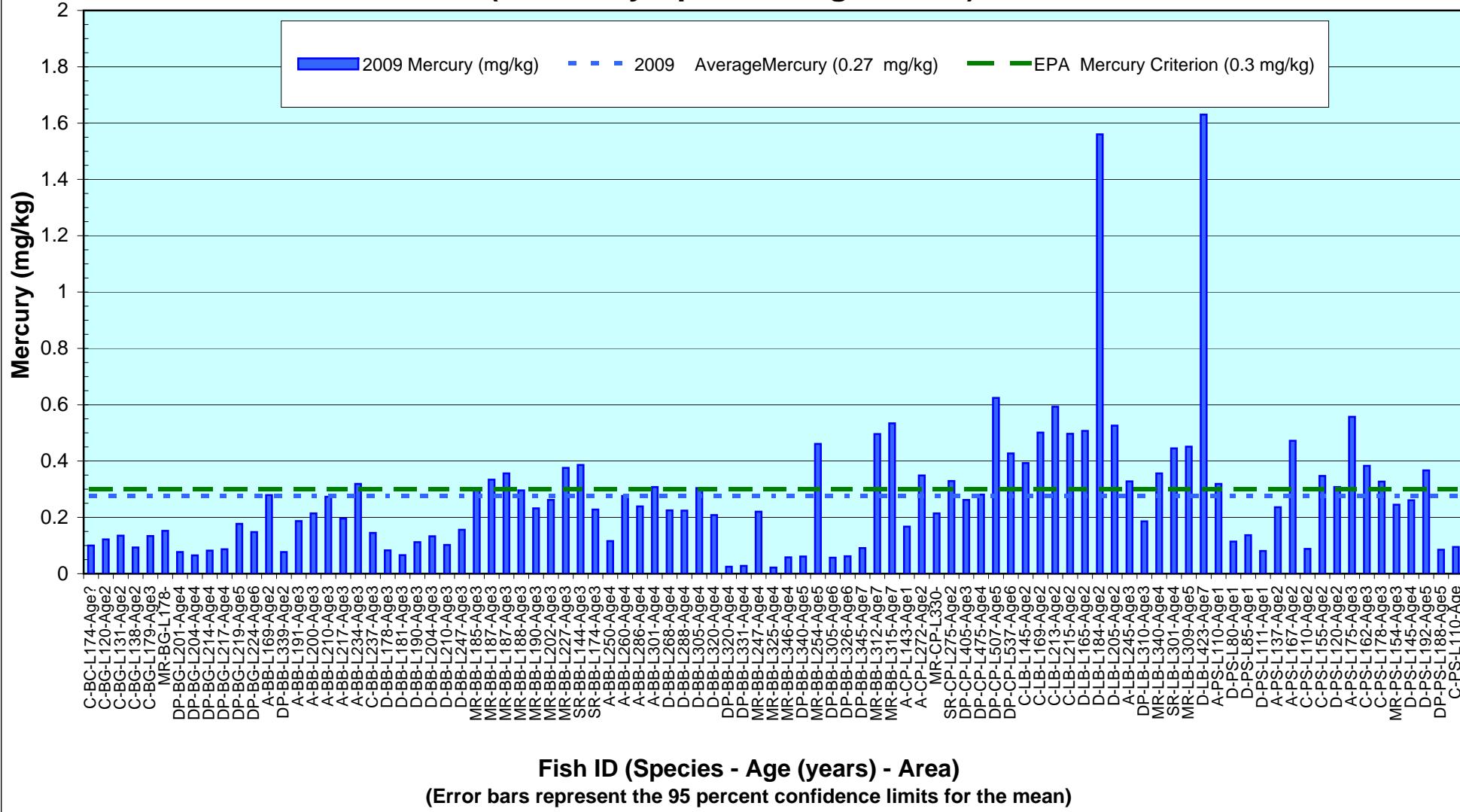
LEGEND

- PR-SS-15 ◆ 2006 ORIGINAL SAMPLE LOCATION
- 1.1 ● 2007 SAMPLE POINT AND MERCURY CONCENTRATION IN mg/kg
- WC-2... ● 2009 SAMPLE POINT
- × POST-CLEANUP SEDIMENT CONFIRMATION SAMPLE LOCATION
- PECONIC RIVER
- TREE LINE
- SURFACE WATER OR STREAM AS PER BASEMAP

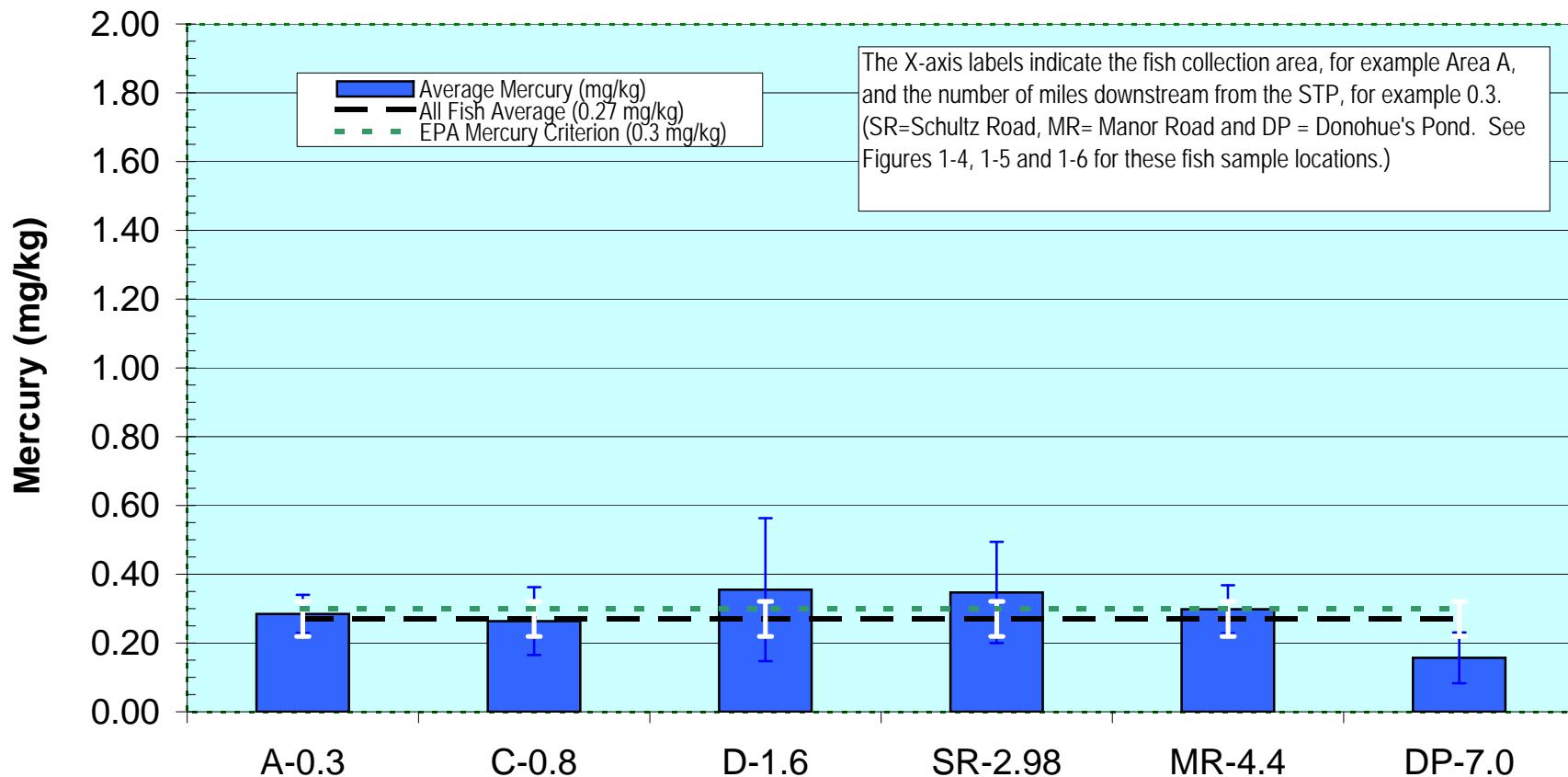


<b>BROOKHAVEN</b> NATIONAL LABORATORY  ENVIRONMENTAL PROTECTION DIVISION	TITLE:  2009 WATER COLUMN SAMPLES TSS RESULTS AT WC-1 THROUGH WC-4 MERCURY SAMPLING PECONIC RIVER	DWN: AJZ	VT: HZ.: —	DATE: 11/30/09	PROJECT NO.: —
		CHKD: WM	APPD: —	REV.: —	NOTES: —
FIGURE NO.: 3-7					

## Figure 4-1 2009 Peconic River Fish Fillet Mercury Results - All Fish (Sorted by Species - Age - Area)



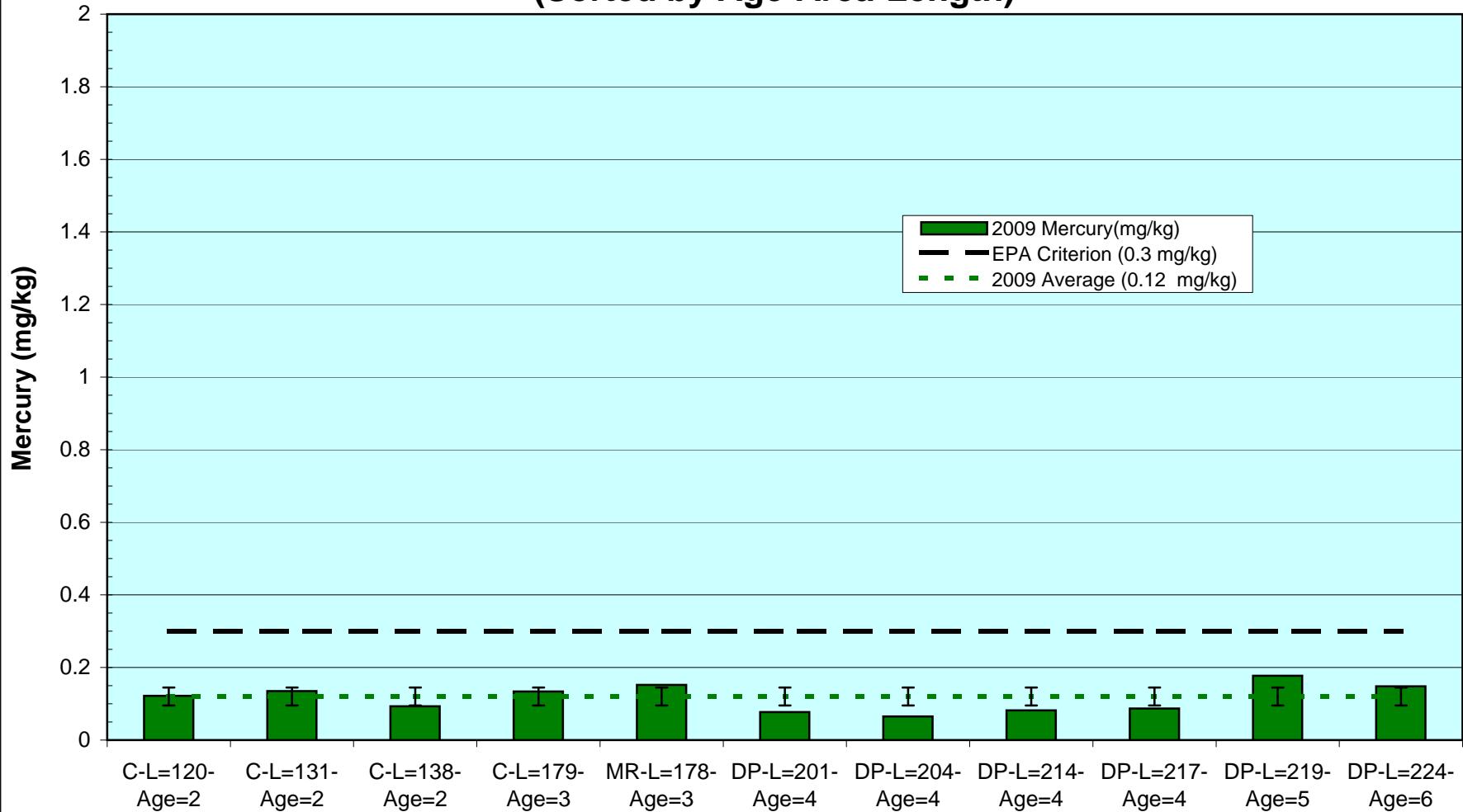
**Figure 4-2 2009 Peconic River Mercury Averages by Fish Collection Area (mg/kg)**



**Fish Collection area and Distance Downstream of STP (miles)**

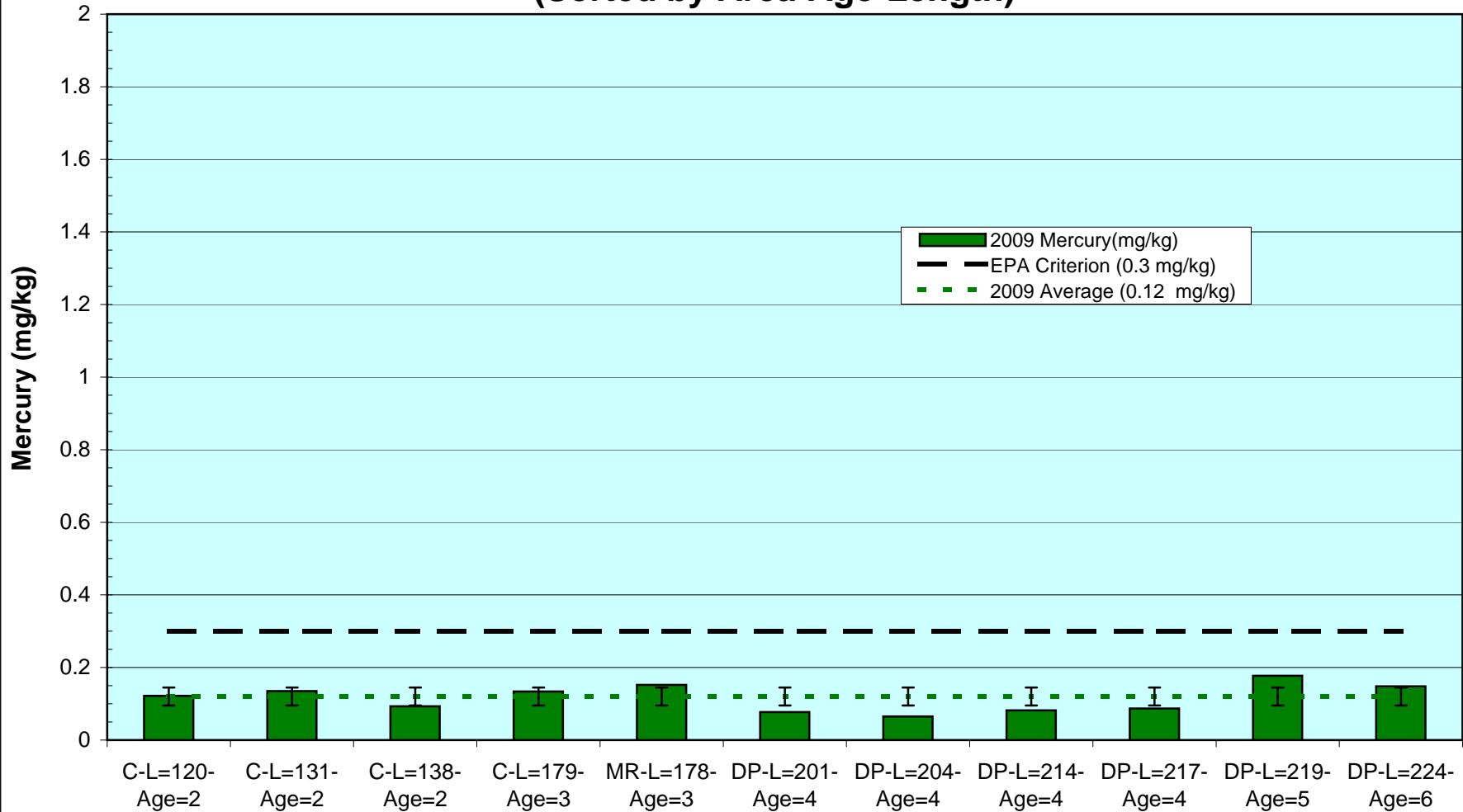
(Error bars represent the 95% Confidence Interval for the mean mercury concentration for each of the collection areas(black) and on all of the 2009 fish (white).)

**Figure 4-3a 2009 Mercury in Peconic River Bluegill Fillets  
(Sorted by Age-Area-Length)**



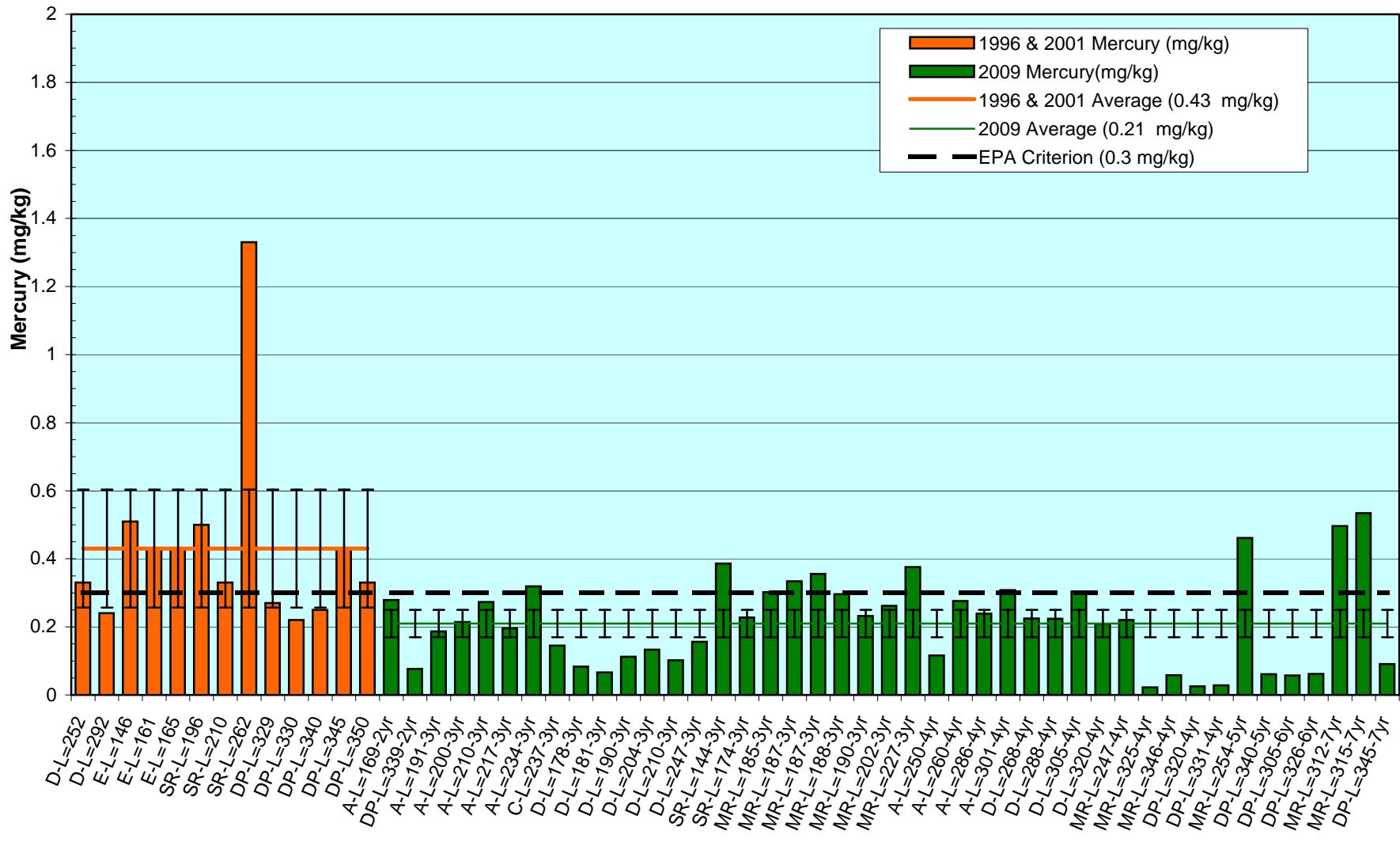
Error bars represent the mean mercury concentration +/- the 95% confidence limit.

**Figure 4-3b 2009 Mercury in Peconic River Bluegill Fillets  
(Sorted by Area-Age-Length)**

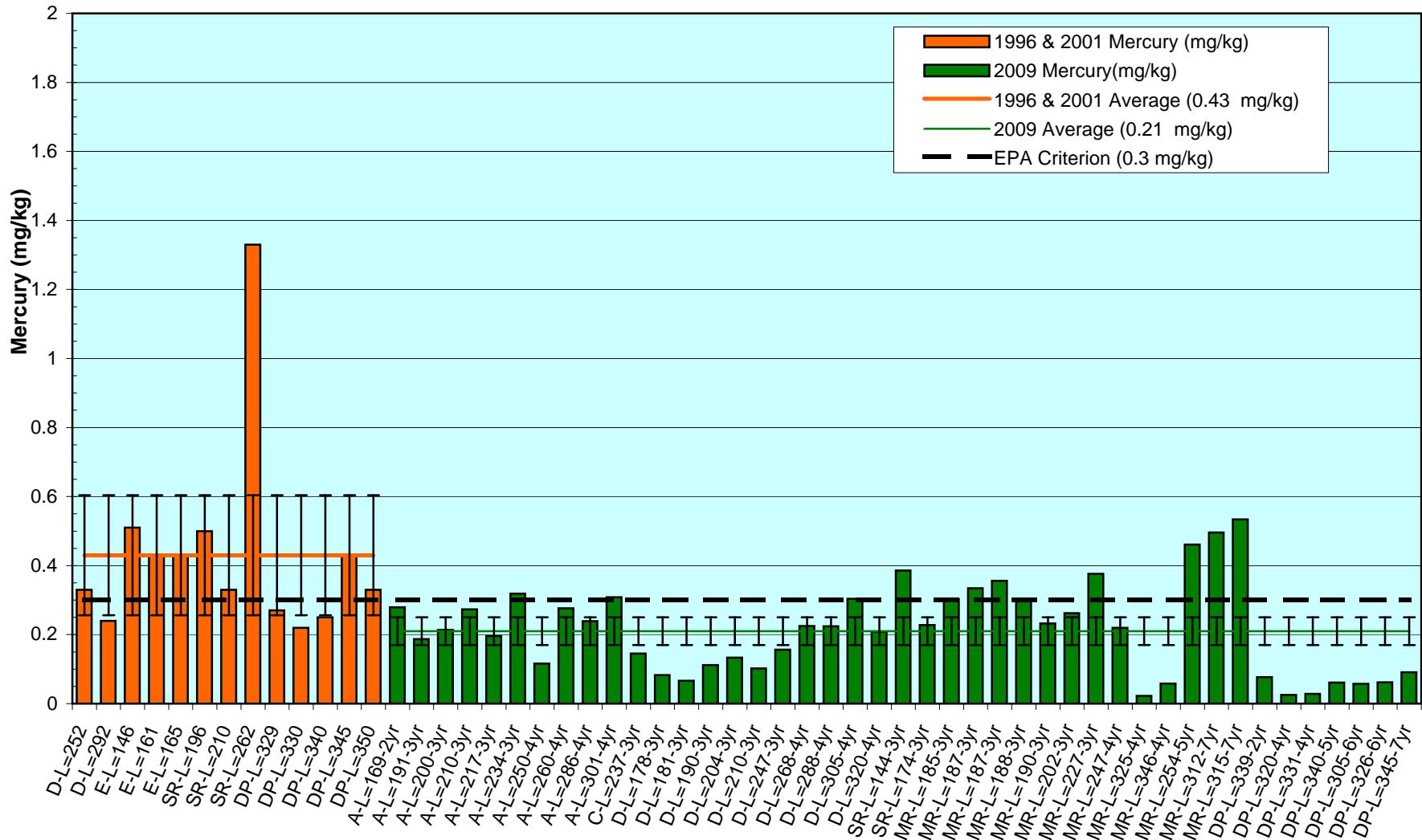


Error bars represent the mean mercury concentration +/- the 95% confidence limit.

**Figure 4-4a Mercury in Brown Bullhead Fillets  
(Sorted by Age-Area-Length)**

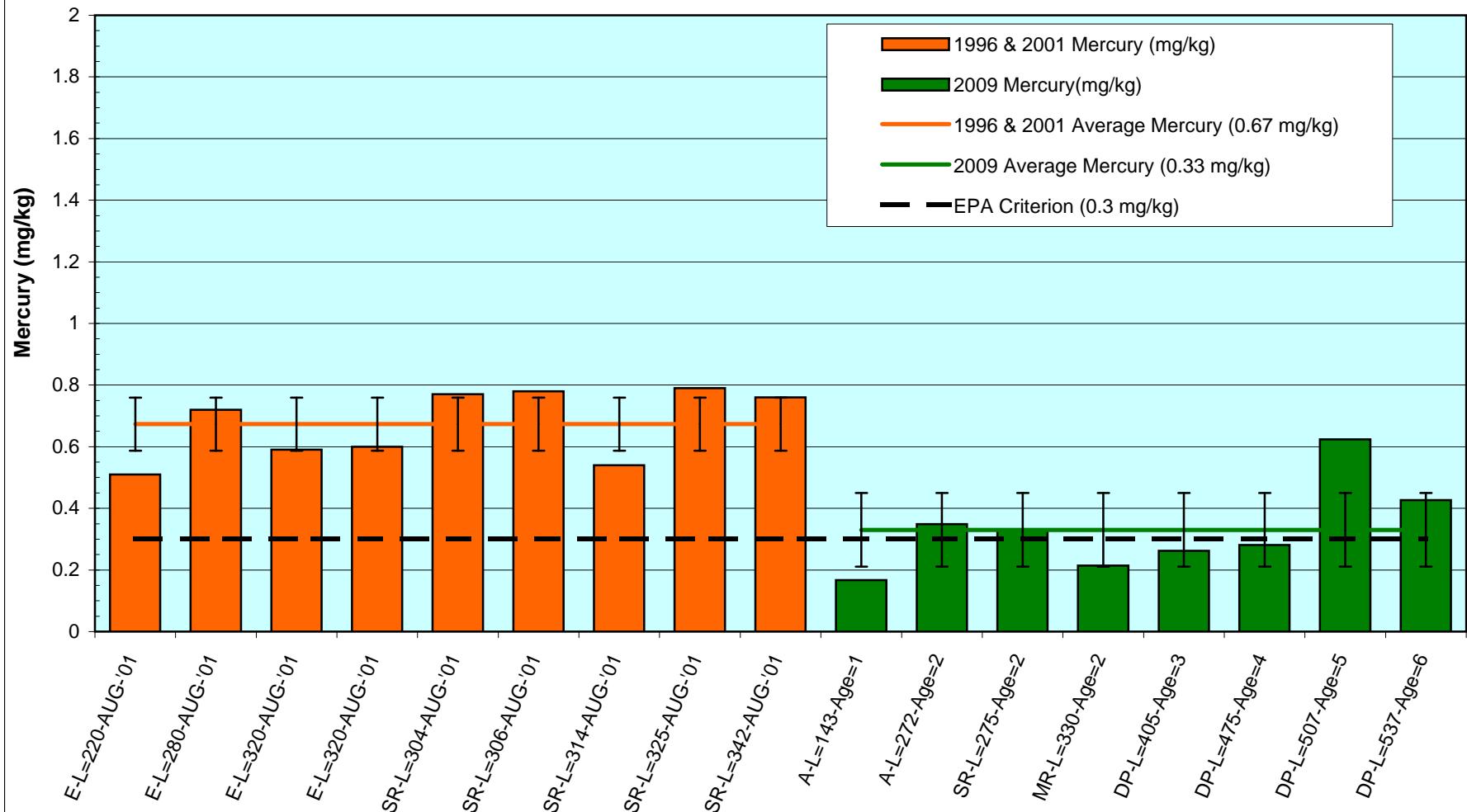


**Figure 4-4b Mercury in Brown Bullhead Fillets**  
 (Sorted by Area-Age-Length)



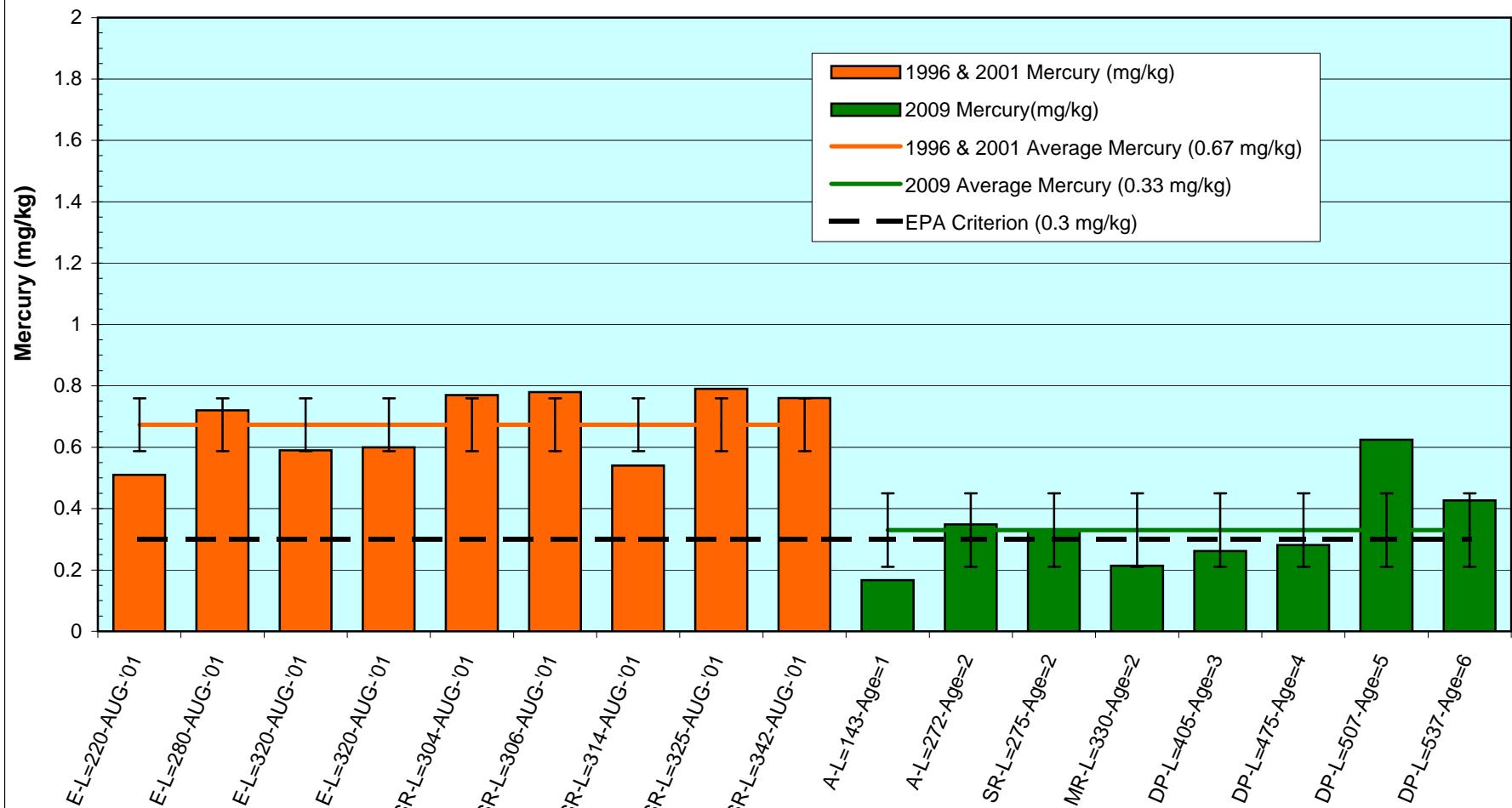
Error bars represent the mean mercury concentration +/- the 95% confidence limit.

**Figure 4-5a Mercury in Chain Pickerel Fillets  
(Sorted by Age-Area-Length)**



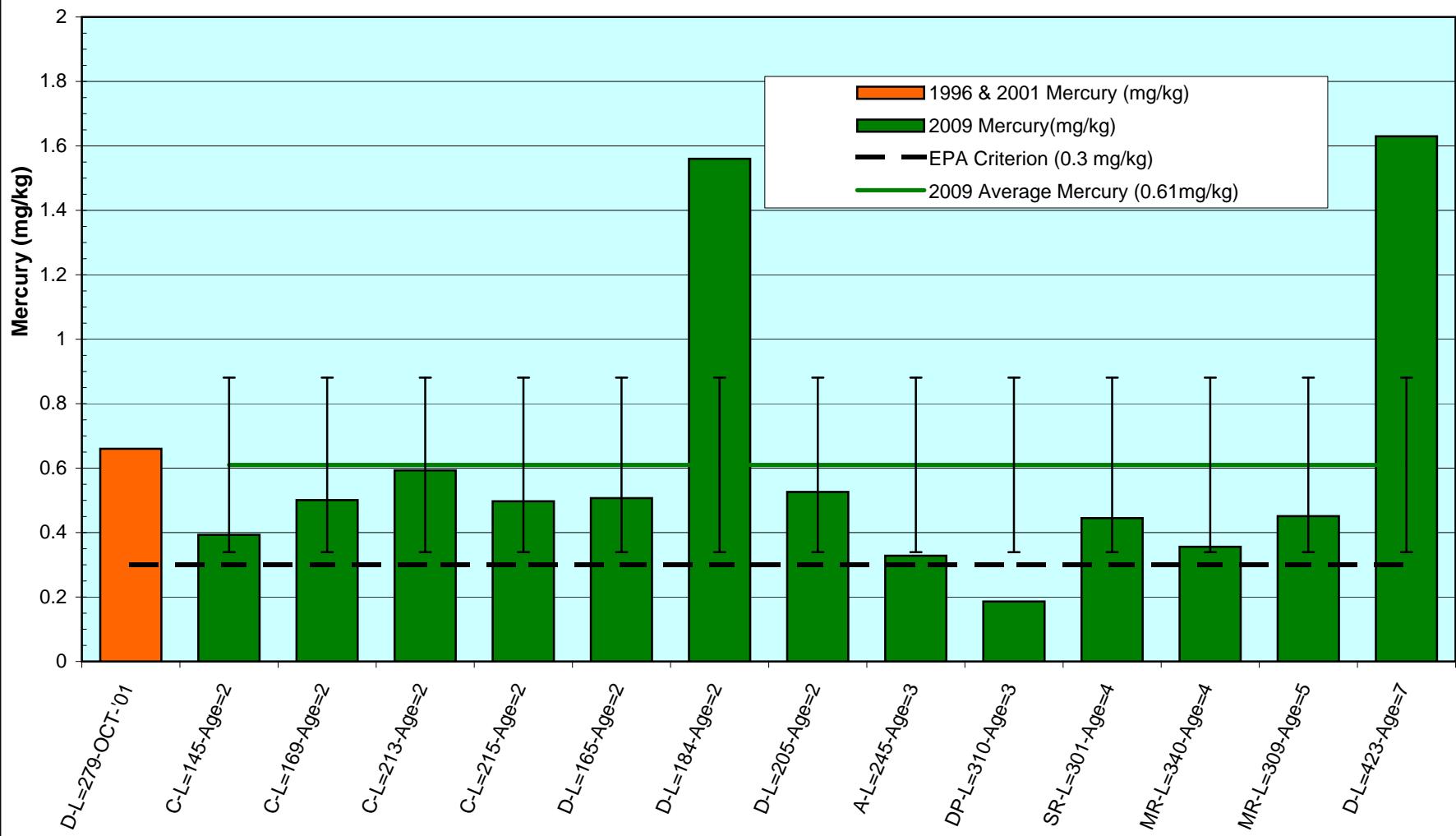
Error bars represent the mean mercury concentration +/- the 95% confidence limit.

**Figure 4-5b Mercury in Chain Pickerel Fillets  
(Sorted by Area-Age-Length)**

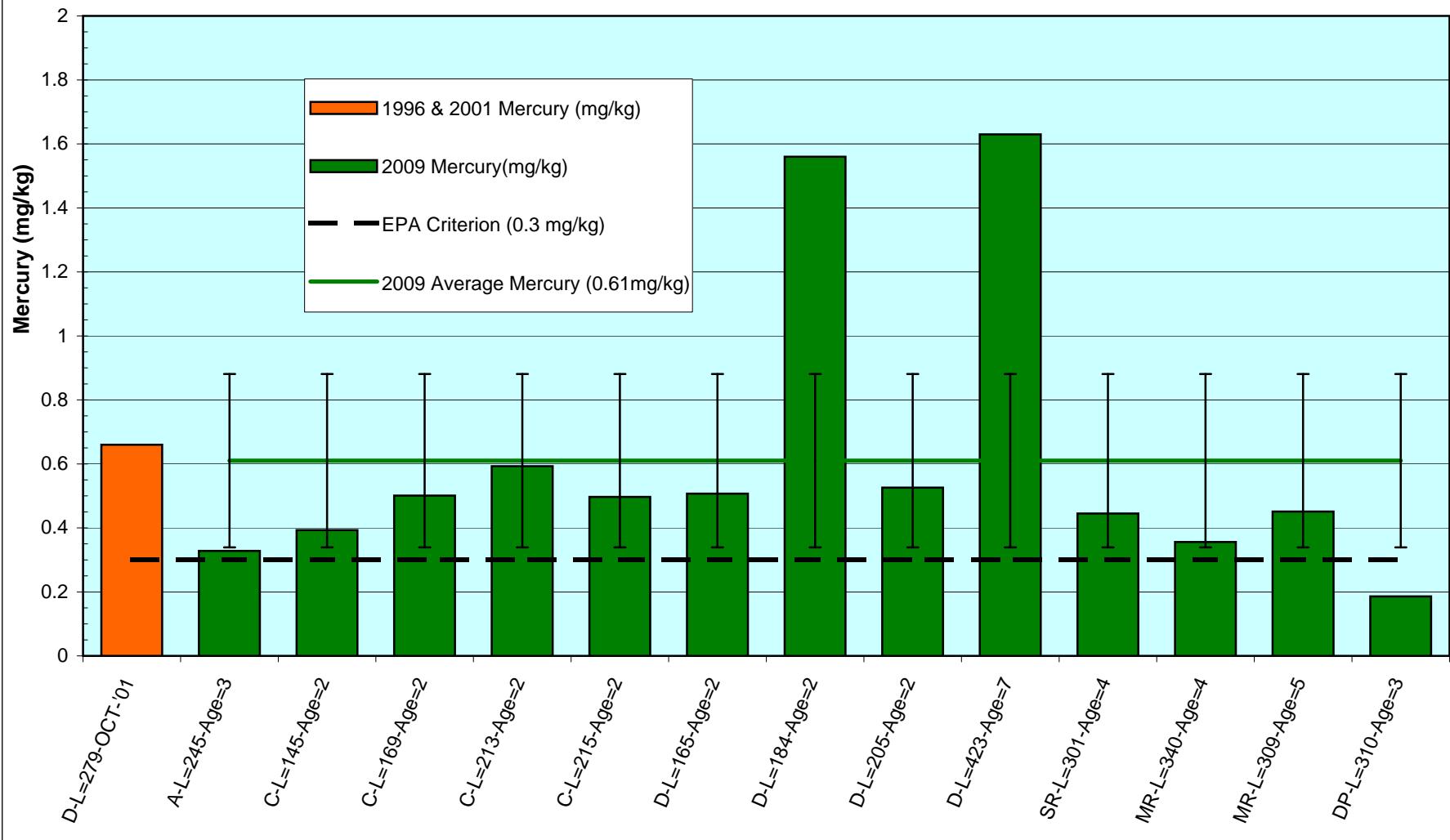


Error bars represent the mean mercury concentration +/- the 95% confidence limit.

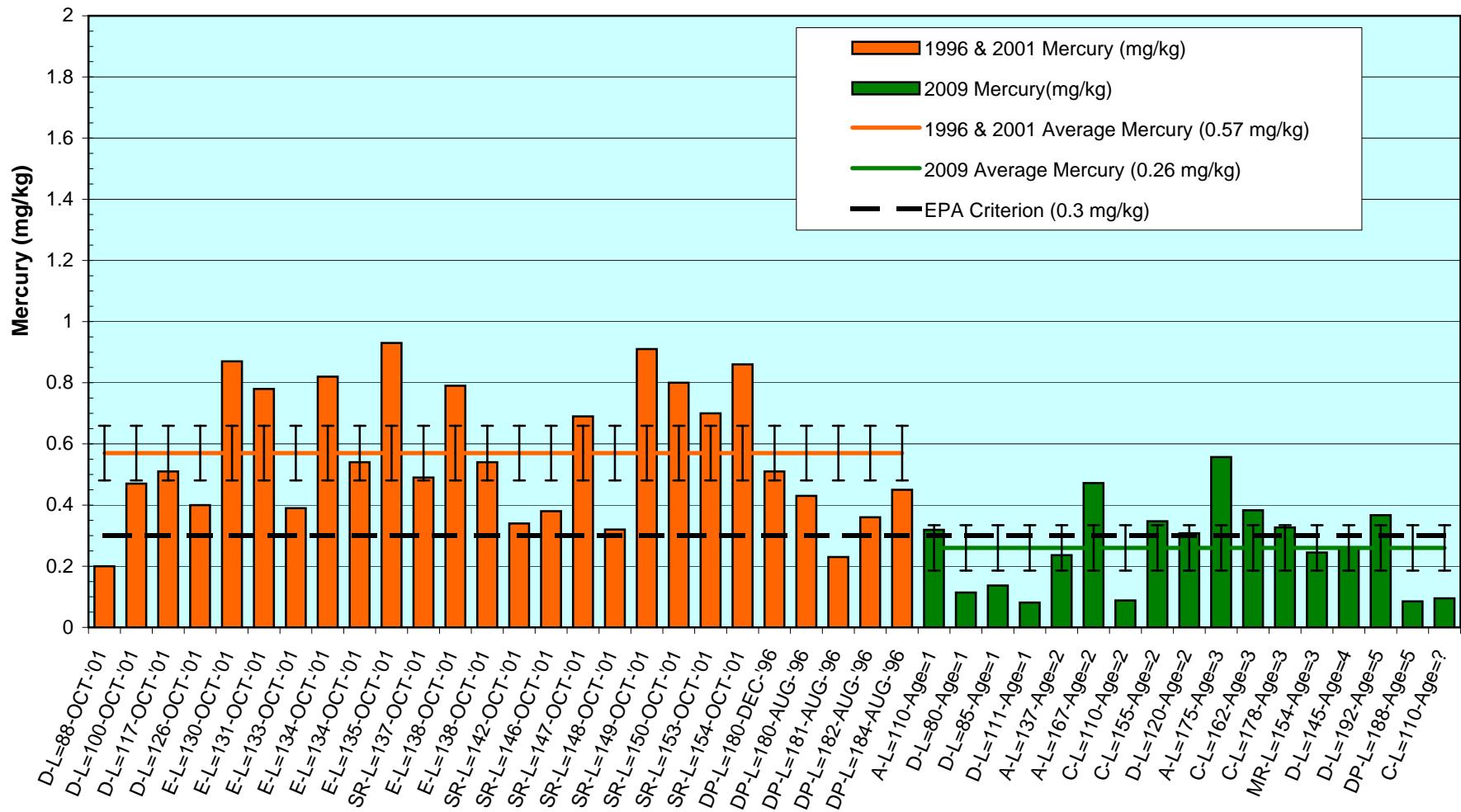
**Figure 4-6a Mercury in Largemouth Bass Fillets  
(Sorted by Age-Area-Length)**



**Figure 4-6b Mercury in Largemouth Bass Fillets  
(Sorted by Area-Age-Length)**

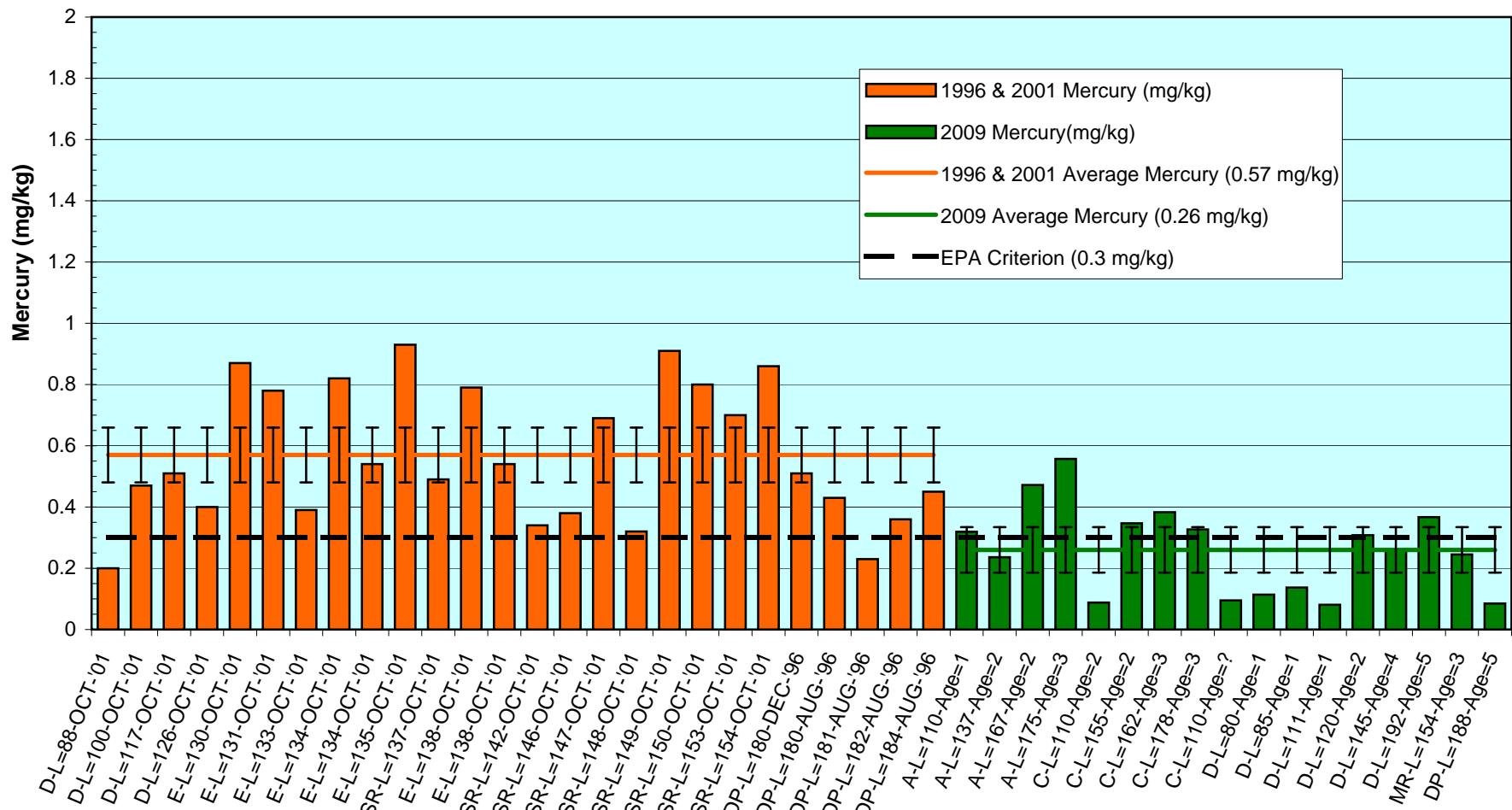


**Figure 4-7a Mercury in Pumpkinseed Fillets  
(Sorted by Age-Area-Length)**



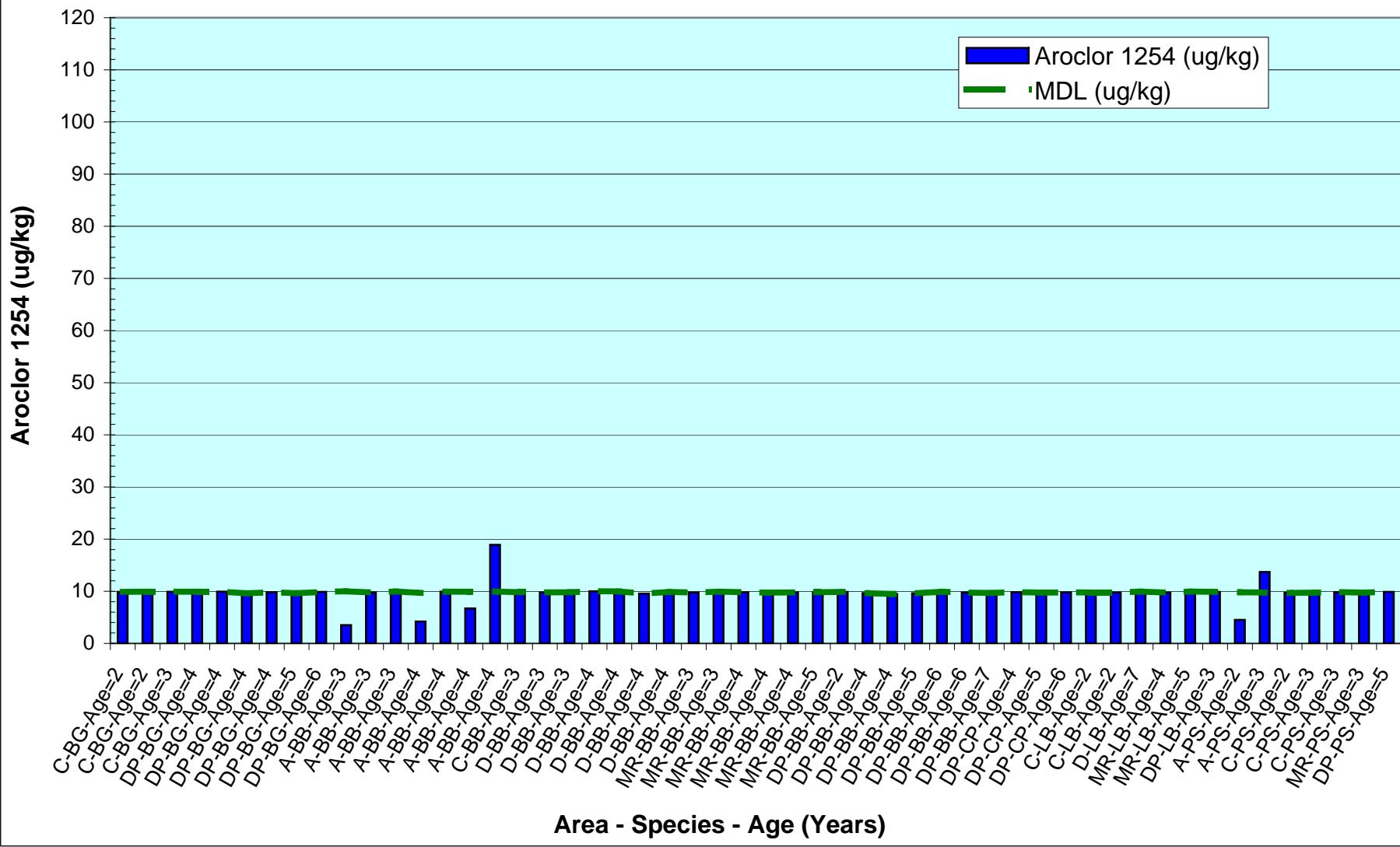
Error bars represent the mean mercury concentration +/- the 95% confidence limit.

**Figure 4-7b Mercury in Pumpkinseed Fillets  
(Sorted by Area-Age-Length)**

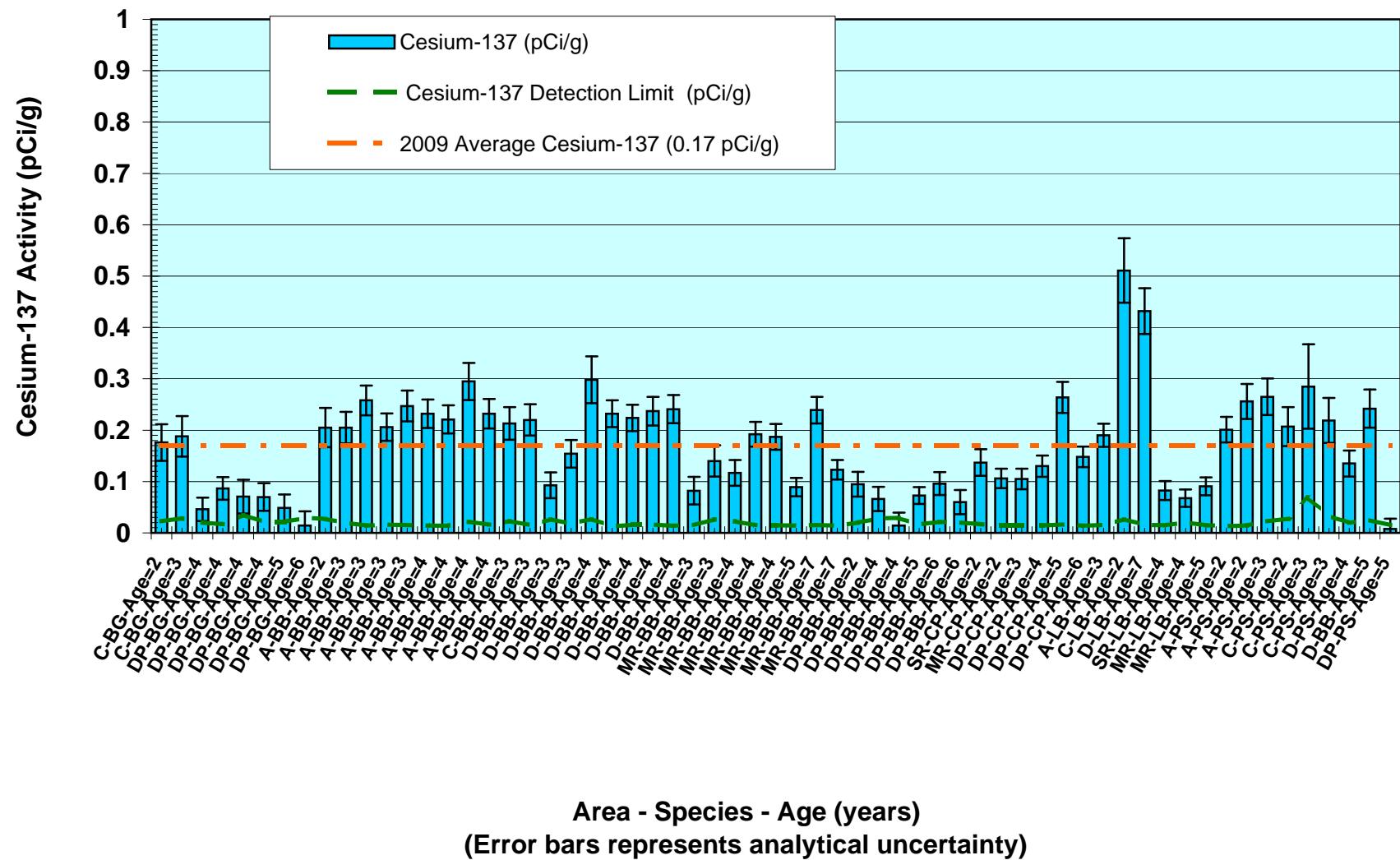


Error bars represent the mean mercury concentration +/- the 95% confidence limit.

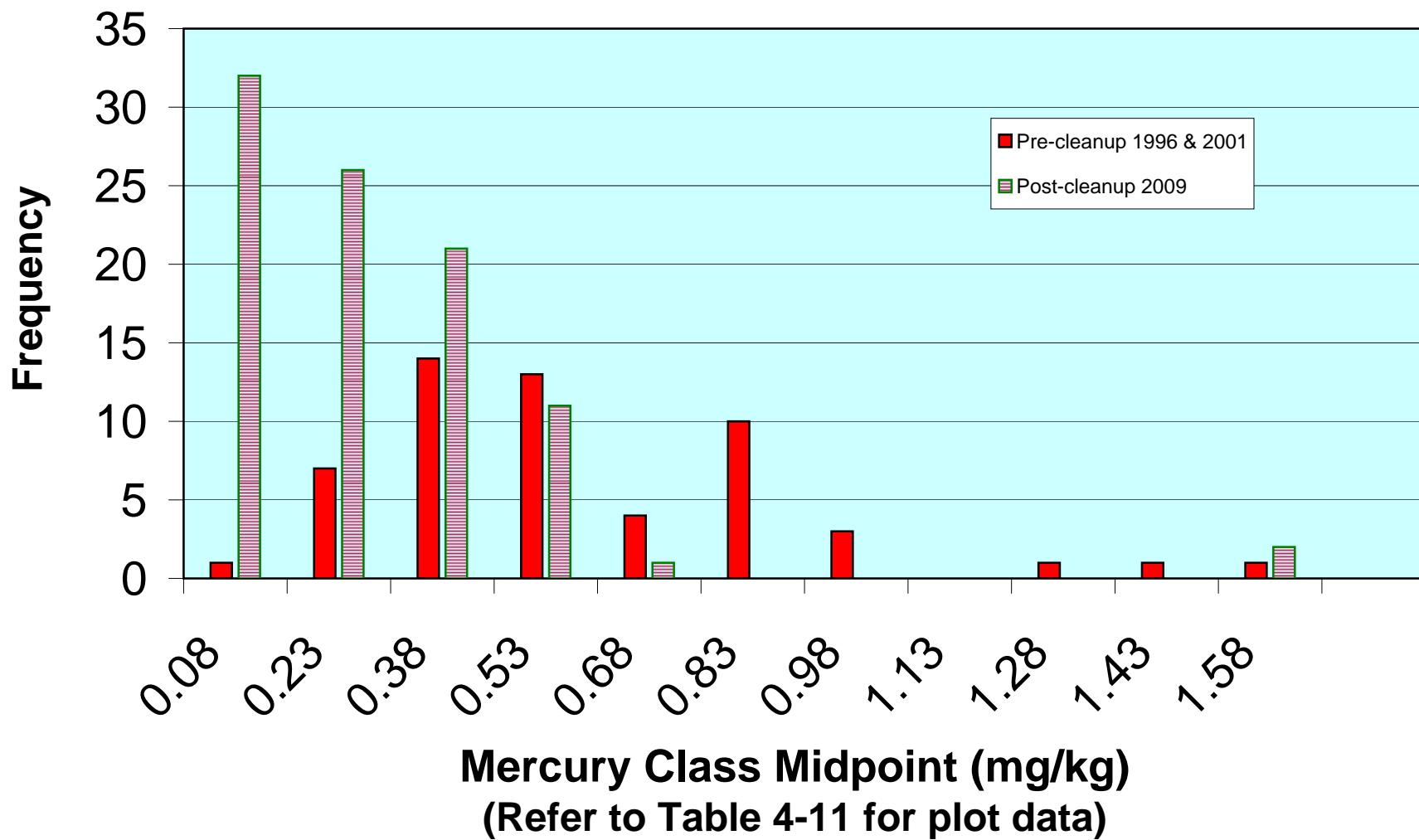
## **Figure 4-8 2009 Aroclor 1254 (Sorted by Species - Area - Age)**



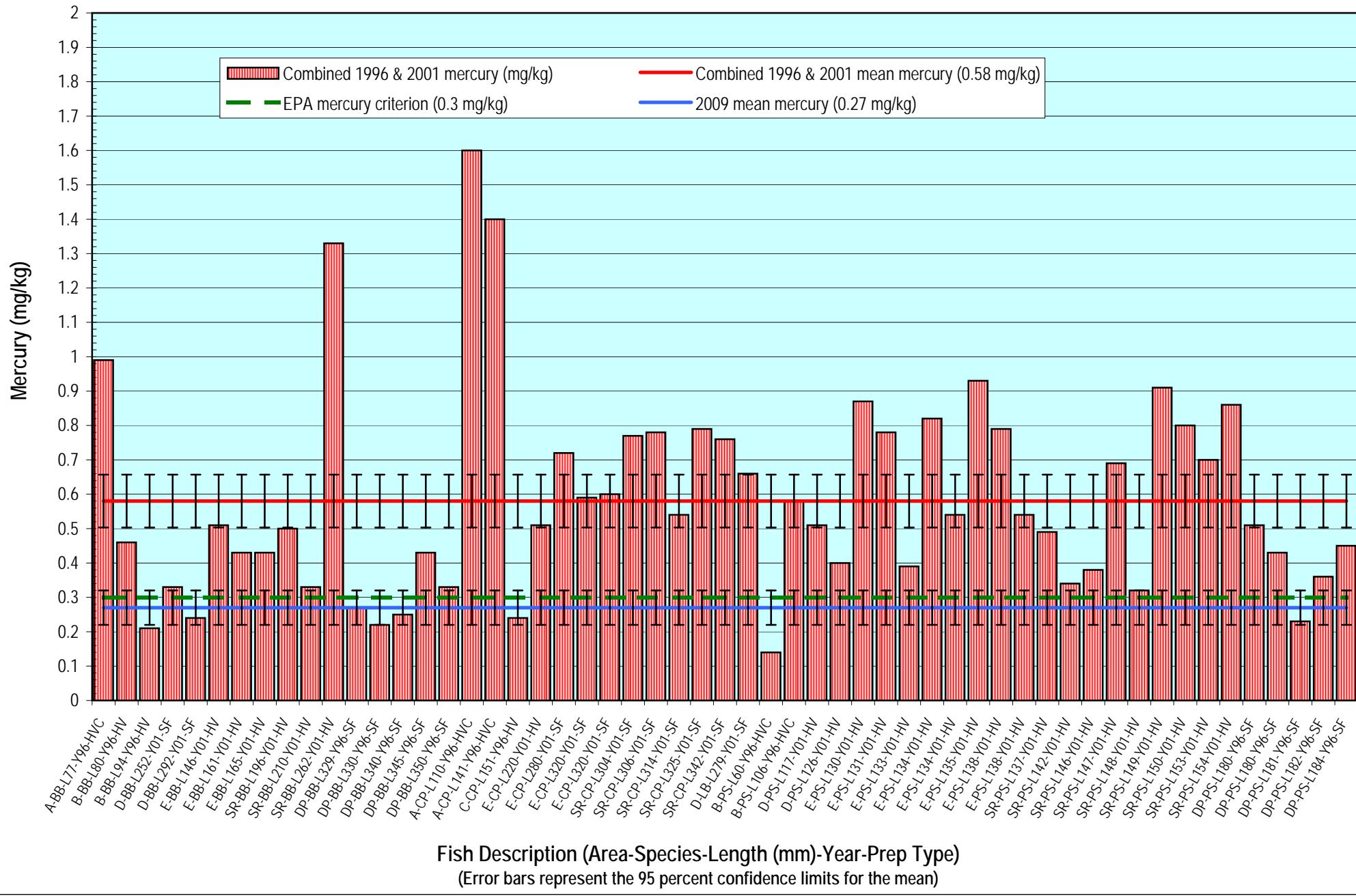
**Figure 4-9 2009 Cesium-137 in Fish  
(Sorted by Species - Area - Age)**



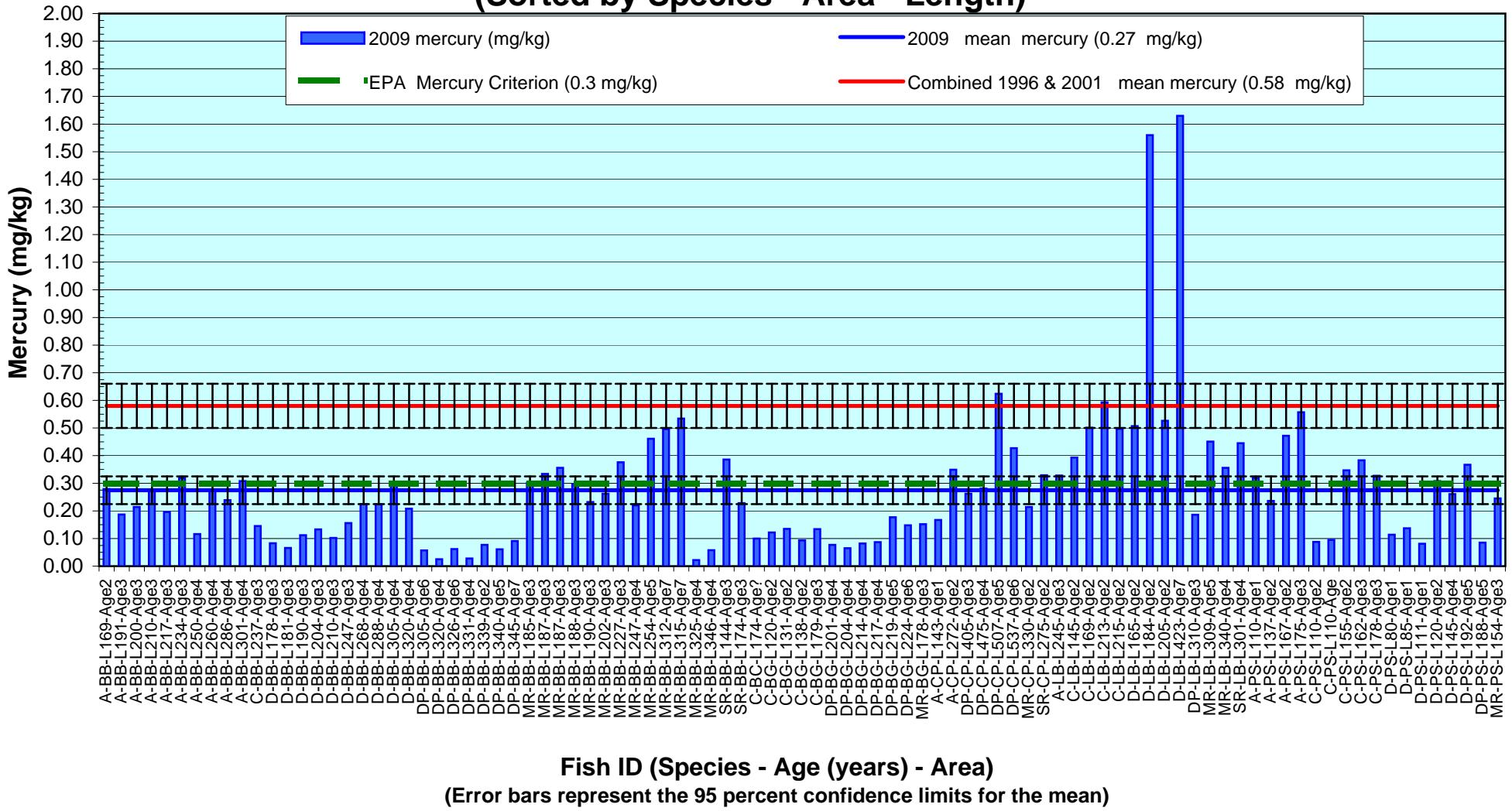
**Figure 4-10 Pre- and Post-cleanup Fish Mercury Frequency Distribution**



**Figure 4-11 Pre-Cleanup 1996 and 2001 Peconic River Fish Tissue Mercury  
Sorted by Species - Area - Length**



## **Figure 4-12 2009 Post-cleanup Peconic River Fish Fillet Mercury Results - All Fish (Sorted by Species - Area - Length)**



**Appendix A - 2009 Peconic River Sediment Samples**

Metals

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27431-008	PR-SS-38-O	8/6/2009	1045	7471A	Mercury	0.92	0.08	MG/KG			0.36
27431-007	PR-SS-37	8/6/2009	1035	7471A	Mercury	0.38	0.051	MG/KG			0.47
27431-006	PR-SS-35	8/6/2009	1030	7471A	Mercury	0.15	0.051	MG/KG			0.49
27431-005	PR-SS-33	8/6/2009	1020	7471A	Mercury	0.33	0.055	MG/KG			0.49
27431-004	PR-SS-31	8/6/2009	1005	7471A	Mercury	0.13	0.055	MG/KG			0.67
27431-003	PR-SS-30	8/6/2009	955	7471A	Mercury	0.099	0.051	MG/KG			0.69
27431-002	PR-SS-29	8/6/2009	950	7471A	Mercury	0.55	0.09	MG/KG			0.69
27431-001	PR-SS-26	8/6/2009	935	7471A	Mercury	0.21	0.069	MG/KG			0.75
27423-010	PR-SS-24	8/5/2009	1120	7471A	Mercury	0.15	0.066	MG/KG	J		0.8
27423-009	PR-SS-23	8/5/2009	1110	7471A	Mercury	0.076	0.047	MG/KG	J		0.85
27423-008	PR-SS-21	8/5/2009	1100	7471A	Mercury	0.12	0.048	MG/KG	J		0.91
27423-007	PR-SS-19	8/5/2009	1029	7471A	Mercury	0.43	0.046	MG/KG	J		1.2
27423-006	PR-SS-18	8/5/2009	1025	7471A	Mercury	0.17	0.049	MG/KG	J		1.27
27423-005	PR-SS-17	8/5/2009	1010	7471A	Mercury	0.45	0.049	MG/KG	J		1.33
27423-004	PR-SS-16	8/5/2009	1055	7471A	Mercury	1.8	0.1	MG/KG	J		1.4
27423-003	PR-SS-15	8/5/2009	940	7471A	Mercury	0.31	0.056	MG/KG	J		1.52
27423-002	PR-SS-14	8/5/2009	935	7471A	Mercury	0.26	0.05	MG/KG	J		1.56
27423-001	PR-SS-12	8/5/2009	925	7471A	Mercury	0.034	0.047	MG/KG	B J		1.66
27416-009	PR-SS-10	8/4/2009	1300	7471A	Mercury	1.7	0.087	MG/KG	J		1.84
27416-008	PR-SS-09	8/4/2009	1245	7471A	Mercury	0.42	0.081	MG/KG	J		1.93
27416-007	PR-SS-07	8/4/2009	1240	7471A	Mercury	0.016	0.048	MG/KG	B J		2.02
27416-006	PR-SS-06	8/4/2009	1230	7471A	Mercury	0.051	0.046	MG/KG	J		2.08
27416-005	PR-SS-05	8/4/2009	1215	7471A	Mercury	0.059	0.047	MG/KG	J		2.32
27416-004	PR-SS-04	8/4/2009	1145	7471A	Mercury	0.062	0.062	MG/KG	U		2.52
27416-003	PR-SS-03	8/4/2009	1130	7471A	Mercury	0.16	0.063	MG/KG	J		2.65
27416-002	PR-SS-02	8/4/2009	1115	7471A	Mercury	0.14	0.25	MG/KG	B J		2.76
27416-001	PR-SS-01	8/4/2009	1100	7471A	Mercury	0.18	0.088	MG/KG	J		2.9
27417-002	PR-MR-02	8/4/2009	955	7471A	Mercury	0.073	0.074	MG/KG	B		4.5
27417-001	PR-MR-01	8/4/2009	1025	7471A	Mercury	0.18	0.32	MG/KG	B		4.28
27247-001	PR-DP-01	6/9/2009	1400	EPA 7471A	Mercury	0.00528	0.00528	MG/KG	U		6.75

<sup>1</sup> Qualifiers

- B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

**Appendix B - 2009 Peconic River Sediment Samples**

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1016	80	80	UG/KG	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1221	80	80	UG/KG	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1232	80	80	UG/KG	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1242	80	80	UG/KG	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1248	80	80	UG/KG	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1254	80	80	UG/KG	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	8082	Aroclor 1260	80	80	UG/KG	U		0.36
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1016	51	51	UG/KG	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1221	51	51	UG/KG	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1232	51	51	UG/KG	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1242	51	51	UG/KG	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1248	51	51	UG/KG	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1254	51	51	UG/KG	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	8082	Aroclor 1260	51	51	UG/KG	U		0.47
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1016	51	51	UG/KG	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1221	51	51	UG/KG	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1232	51	51	UG/KG	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1242	51	51	UG/KG	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1248	51	51	UG/KG	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1254	51	51	UG/KG	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	8082	Aroclor 1260	51	51	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1016	55	55	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1221	55	55	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1232	55	55	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1242	55	55	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1248	55	55	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1254	55	55	UG/KG	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	8082	Aroclor 1260	55	55	UG/KG	U		0.49
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1016	55	55	UG/KG	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1221	55	55	UG/KG	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1232	55	55	UG/KG	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1242	55	55	UG/KG	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1248	55	55	UG/KG	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1254	55	55	UG/KG	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	8082	Aroclor 1260	55	55	UG/KG	U		0.67

**Appendix B - 2009 Peconic River Sediment Samples**

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1016	51	51	UG/KG	U		0.69
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1221	51	51	UG/KG	U		0.69
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1232	51	51	UG/KG	U		0.69
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1242	51	51	UG/KG	U		0.69
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1248	51	51	UG/KG	U		0.69
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1254	51	51	UG/KG	U		0.69
27431-003	PR-SS-30	8/6/2009	955	8082	Aroclor 1260	51	51	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1016	90	90	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1221	90	90	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1232	90	90	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1242	90	90	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1248	90	90	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1254	90	90	UG/KG	U		0.69
27431-002	PR-SS-29	8/6/2009	950	8082	Aroclor 1260	90	90	UG/KG	U		0.69
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1016	69	69	UG/KG	U		0.75
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1221	69	69	UG/KG	U		0.75
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1232	69	69	UG/KG	U		0.75
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1242	69	69	UG/KG	U		0.75
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1248	69	69	UG/KG	U		0.75
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1254	69	69	UG/KG	U		0.75
27431-001	PR-SS-26	8/6/2009	935	8082	Aroclor 1260	69	69	UG/KG	U		0.75
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1016	66	66	UG/KG	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1221	66	66	UG/KG	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1232	66	66	UG/KG	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1242	66	66	UG/KG	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1248	66	66	UG/KG	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1254	66	66	UG/KG	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	8082	Aroclor 1260	66	66	UG/KG	U		0.8
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1016	47	47	UG/KG	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1221	47	47	UG/KG	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1232	47	47	UG/KG	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1242	47	47	UG/KG	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1248	47	47	UG/KG	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1254	47	47	UG/KG	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	8082	Aroclor 1260	47	47	UG/KG	U		0.85

**Appendix B - 2009 Peconic River Sediment Samples**

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1016	48	48	UG/KG	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1221	48	48	UG/KG	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1232	48	48	UG/KG	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1242	48	48	UG/KG	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1248	48	48	UG/KG	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1254	48	48	UG/KG	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	8082	Aroclor 1260	48	48	UG/KG	U		0.91
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1016	45	45	UG/KG	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1221	45	45	UG/KG	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1232	45	45	UG/KG	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1242	45	45	UG/KG	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1248	45	45	UG/KG	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1254	45	45	UG/KG	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	8082	Aroclor 1260	45	45	UG/KG	U		1.2
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1016	48	48	UG/KG	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1221	48	48	UG/KG	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1232	48	48	UG/KG	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1242	48	48	UG/KG	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1248	48	48	UG/KG	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1254	48	48	UG/KG	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	8082	Aroclor 1260	48	48	UG/KG	U		1.27
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1016	49	49	UG/KG	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1221	49	49	UG/KG	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1232	49	49	UG/KG	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1242	49	49	UG/KG	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1248	49	49	UG/KG	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1254	49	49	UG/KG	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	8082	Aroclor 1260	49	49	UG/KG	U		1.33
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1016	100	100	UG/KG	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1221	100	100	UG/KG	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1232	100	100	UG/KG	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1242	100	100	UG/KG	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1248	100	100	UG/KG	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1254	100	100	UG/KG	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	8082	Aroclor 1260	100	100	UG/KG	U		1.4

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Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1016	56	56	UG/KG	U		1.52
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1221	56	56	UG/KG	U		1.52
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1232	56	56	UG/KG	U		1.52
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1242	56	56	UG/KG	U		1.52
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1248	56	56	UG/KG	U		1.52
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1254	56	56	UG/KG	U		1.52
27423-003	PR-SS-15	8/5/2009	940	8082	Aroclor 1260	56	56	UG/KG	U		1.52
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1016	49	49	UG/KG	U		1.56
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1221	49	49	UG/KG	U		1.56
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1232	49	49	UG/KG	U		1.56
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1242	49	49	UG/KG	U		1.56
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1248	49	49	UG/KG	U		1.56
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1254	49	49	UG/KG	U		1.56
27423-002	PR-SS-14	8/5/2009	935	8082	Aroclor 1260	49	49	UG/KG	U		1.56
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1016	46	46	UG/KG	U		1.66
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1221	46	46	UG/KG	U		1.66
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1232	46	46	UG/KG	U		1.66
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1242	46	46	UG/KG	U		1.66
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1248	46	46	UG/KG	U		1.66
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1254	46	46	UG/KG	U		1.66
27423-001	PR-SS-12	8/5/2009	925	8082	Aroclor 1260	46	46	UG/KG	U		1.66
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1016	86	86	UG/KG	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1221	86	86	UG/KG	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1232	86	86	UG/KG	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1242	86	86	UG/KG	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1248	86	86	UG/KG	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1254	86	86	UG/KG	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	8082	Aroclor 1260	86	86	UG/KG	U		1.84
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1016	80	80	UG/KG	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1221	80	80	UG/KG	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1232	80	80	UG/KG	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1242	80	80	UG/KG	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1248	80	80	UG/KG	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1254	80	80	UG/KG	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	8082	Aroclor 1260	80	80	UG/KG	U		1.93

**Appendix B - 2009 Peconic River Sediment Samples**

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1016	48	48	UG/KG	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1221	48	48	UG/KG	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1232	48	48	UG/KG	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1242	48	48	UG/KG	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1248	48	48	UG/KG	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1254	48	48	UG/KG	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	8082	Aroclor 1260	48	48	UG/KG	U		2.02
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1016	46	46	UG/KG	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1221	46	46	UG/KG	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1232	46	46	UG/KG	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1242	46	46	UG/KG	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1248	46	46	UG/KG	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1254	46	46	UG/KG	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	8082	Aroclor 1260	46	46	UG/KG	U		2.08
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1016	46	46	UG/KG	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1221	46	46	UG/KG	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1232	46	46	UG/KG	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1242	46	46	UG/KG	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1248	46	46	UG/KG	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1254	46	46	UG/KG	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	8082	Aroclor 1260	46	46	UG/KG	U		2.32
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1016	62	62	UG/KG	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1221	62	62	UG/KG	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1232	62	62	UG/KG	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1242	62	62	UG/KG	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1248	62	62	UG/KG	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1254	62	62	UG/KG	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	8082	Aroclor 1260	62	62	UG/KG	U		2.52
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1016	62	62	UG/KG	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1221	62	62	UG/KG	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1232	62	62	UG/KG	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1242	62	62	UG/KG	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1248	62	62	UG/KG	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1254	62	62	UG/KG	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	8082	Aroclor 1260	62	62	UG/KG	U		2.65

**Appendix B - 2009 Peconic River Sediment Samples**

PCBs

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1016	250	250	UG/KG	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1221	250	250	UG/KG	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1232	250	250	UG/KG	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1242	250	250	UG/KG	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1248	250	250	UG/KG	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1254	250	250	UG/KG	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	8082	Aroclor 1260	250	250	UG/KG	U		2.76
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1016	87	87	UG/KG	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1221	87	87	UG/KG	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1232	87	87	UG/KG	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1242	87	87	UG/KG	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1248	87	87	UG/KG	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1254	87	87	UG/KG	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	8082	Aroclor 1260	87	87	UG/KG	U		2.9
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1016	74	74	UG/KG	U		4.5
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1221	74	74	UG/KG	U		4.5
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1232	74	74	UG/KG	U		4.5
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1242	74	74	UG/KG	U		4.5
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1248	74	74	UG/KG	U		4.5
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1254	74	74	UG/KG	U		4.5
27417-002	PR-MR-02	8/4/2009	955	8082	Aroclor 1260	74	74	UG/KG	U		4.5
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1016	310	310	UG/KG	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1221	310	310	UG/KG	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1232	310	310	UG/KG	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1242	310	310	UG/KG	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1248	310	310	UG/KG	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1254	310	310	UG/KG	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	8082	Aroclor 1260	310	310	UG/KG	U		4.28

<sup>1</sup> Qualifiers

U - Indicates that the analyte was analyzed for but not detected.

**Appendix C - 2009 Peconic River Sediment Samples**

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	241	0.35	0.16	0.19	PCI/G	J		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Beryllium-7	-0.004	0.4	0.73	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Cesium-134	-0.0001	0.042	0.078	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Cesium-137	1.24	0.16	0.03	PCI/G			0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Co-60	-0.0002	0.072	0.14	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Cobalt-57	0.008	0.028	0.048	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Europium-152	0	0.082	0.3	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Europium-154	-0.03	0.33	0.62	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Europium-155	0.07	0.12	0.2	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Manganese-54	0	0.035	0.069	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Potassium-40	4.5	1.2	0.7	PCI/G			0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Sodium-22	-0.0009	0.052	0.1	PCI/G	U		0.36
27431-008	PR-SS-38-O	8/6/2009	1045	GA-01-R MOD	Zinc-65	0.007	0.09	0.18	PCI/G	U		0.36
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Actinium-228	0.67	0.18	0.09	PCI/G			0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	241	-0.02	0.11	0.19	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Beryllium-7	-0.02	0.29	0.52	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Cesium-134	-0.018	0.043	0.074	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Cesium-137	0.82	0.11	0.05	PCI/G			0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Co-60	0.0001	0.041	0.079	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Cobalt-57	0.001	0.028	0.048	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Europium-152	0	0.36	0.66	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Europium-154	0.09	0.25	0.45	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Europium-155	0.043	0.096	0.16	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Manganese-54	0	0.039	0.072	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Potassium-40	4.86	0.97	0.77	PCI/G			0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Sodium-22	0	0.04	0.077	PCI/G	U		0.47
27431-007	PR-SS-37	8/6/2009	1035	GA-01-R MOD	Zinc-65	0	0.26	0.44	PCI/G	U		0.47
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	241	0.019	0.084	0.14	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Beryllium-7	-0.06	0.31	0.56	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Bismuth-214	0.51	0.11	0.06	PCI/G			0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Cesium-134	-0.023	0.048	0.081	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Cesium-137	0.8	0.12	0.04	PCI/G			0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Co-60	0	0.077	0.14	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Cobalt-57	-0.01	0.024	0.04	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Europium-152	-0.05	0.38	0.69	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Europium-154	0.02	0.29	0.54	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Europium-155	-0.003	0.086	0.15	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Lead-214	0.53	0.11	0.08	PCI/G			0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Manganese-54	0.007	0.037	0.068	PCI/G	U		0.49
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Sodium-22	-0.002	0.04	0.077	PCI/G	U		0.49

**Appendix C - 2009 Peconic River Sediment Samples**

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27431-006	PR-SS-35	8/6/2009	1030	GA-01-R MOD	Zinc-65	-0.003	0.087	0.17	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	241	0.15	0.16	0.26	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Beryllium-7	-0.09	0.72	1.3	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Cesium-134	0.028	0.043	0.073	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Cesium-137	8.07	0.64	0.12	PCI/G			0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Co-60	0.064	0.079	0.14	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Cobalt-57	-0.035	0.053	0.087	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Europium-152	0	0.11	0.39	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Europium-154	0.11	0.41	0.76	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Europium-155	0.03	0.19	0.33	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Manganese-54	-0.0009	0.059	0.11	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Sodium-22	0	0.016	0.06	PCI/G	U		0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Thallium-208	0.41	0.11	0.08	PCI/G			0.49
27431-005	PR-SS-33	8/6/2009	1020	GA-01-R MOD	Zinc-65	0.005	0.22	0.4	PCI/G	U		0.49
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Actinium-228	1.31	0.25	0.15	PCI/G			0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	241	0.08	0.12	0.21	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Beryllium-7	-0.11	0.4	0.71	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Bismuth-214	1	0.22	0.17	PCI/G			0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Cesium-134	-0.023	0.062	0.11	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Cesium-137	0.082	0.07	0.11	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Co-60	0	0.015	0.054	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Cobalt-57	0.001	0.033	0.058	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Europium-152	0	0.76	1.4	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Europium-154	0	0.54	1	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Europium-155	0.168	0.082	0.28	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Lead-212	1.1	0.19	0.16	PCI/G			0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Manganese-54	0.017	0.038	0.068	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Sodium-22	0.02	0.066	0.12	PCI/G	U		0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Thallium-208	0.39	0.087	0.054	PCI/G			0.67
27431-004	PR-SS-31	8/6/2009	1005	GA-01-R MOD	Zinc-65	-0.07	0.18	0.32	PCI/G	U		0.67
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Actinium-228	0.85	0.16	0.09	PCI/G			0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	241	0.052	0.089	0.15	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Beryllium-7	0.01	0.24	0.45	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Cesium-134	-0.007	0.04	0.071	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Cesium-137	0.304	0.07	0.044	PCI/G			0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Co-60	-0.002	0.04	0.076	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Cobalt-57	0.015	0.022	0.036	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Europium-152	-0.05	0.31	0.56	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Europium-154	0.08	0.28	0.5	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Europium-155	0.08	0.11	0.18	PCI/G	U		0.69

**Appendix C - 2009 Peconic River Sediment Samples**

Radionuclides

Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Lead-212	0.68	0.13	0.12	PCI/G			0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Manganese-54	-0.011	0.04	0.071	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Potassium-40	4.23	0.9	0.6	PCI/G			0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Sodium-22	-0.012	0.041	0.075	PCI/G	U		0.69
27431-003	PR-SS-30	8/6/2009	955	GA-01-R MOD	Zinc-65	-0.04	0.11	0.2	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Actinium-228	1.38	0.31	0.12	PCI/G			0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	241	0.08	0.17	0.29	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Beryllium-7	-0.13	0.44	0.76	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Bismuth-214	0.72	0.16	0.13	PCI/G			0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Cesium-134	0	0.16	0.28	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Cesium-137	1.18	0.15	0.05	PCI/G			0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Co-60	0	0.011	0.04	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Cobalt-57	0.021	0.037	0.061	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Europium-152	0	0.49	0.9	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Europium-154	-0.08	0.43	0.78	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Europium-155	0.12	0.15	0.24	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Lead-214	0.9	0.19	0.15	PCI/G			0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Manganese-54	0.021	0.049	0.085	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Potassium-40	9.1	1.5	0.8	PCI/G			0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Sodium-22	0	0.015	0.039	PCI/G	U		0.69
27431-002	PR-SS-29	8/6/2009	950	GA-01-R MOD	Zinc-65	-0.02	0.14	0.24	PCI/G	U		0.69
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Actinium-228	0.78	0.17	0.1	PCI/G			0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	241	0.0531	0.0997	0.17	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Beryllium-7	0.07	0.28	0.5	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Cesium-134	-0.005	0.097	0.17	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Cesium-137	0.517	0.097	0.057	PCI/G			0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Co-60	0.004	0.048	0.089	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Cobalt-57	0.012	0.028	0.047	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Europium-152	-0.1	0.4	0.71	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Europium-154	0.002	0.3	0.57	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Europium-155	0.1	0.11	0.17	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Manganese-54	0.006	0.034	0.063	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Potassium-40	4.7	1.1	0.9	PCI/G			0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Sodium-22	0	0.045	0.086	PCI/G	U		0.75
27431-001	PR-SS-26	8/6/2009	935	GA-01-R MOD	Zinc-65	-0.005	0.12	0.22	PCI/G	U		0.75
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	241	0.13	0.13	0.21	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Beryllium-7	-0.03	0.42	0.77	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Bismuth-214	0.76	0.19	0.14	PCI/G			0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Cesium-134	-0.008	0.17	0.29	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Cesium-137	1.47	0.19	0.04	PCI/G			0.8

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<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>Error</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Co-60	0.025	0.061	0.11	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Cobalt-57	-0.007	0.037	0.065	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Europium-152	0.01	0.46	0.89	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Europium-154	-0.04	0.4	0.76	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Europium-155	0.12	0.14	0.22	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Lead-212	0.93	0.17	0.15	PCI/G			0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Lead-214	0.83	0.2	0.16	PCI/G			0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Manganese-54	-0.032	0.068	0.12	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Potassium-40	7.7	1.7	1.4	PCI/G			0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Sodium-22	0	0.078	0.15	PCI/G	U		0.8
27423-010	PR-SS-24	8/5/2009	1120	901.1 MOD	Zinc-65	0	0.31	0.55	PCI/G	U		0.8
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	241	0.04	0.087	0.15	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Beryllium-7	-0.17	0.34	0.58	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Cesium-134	-0.002	0.033	0.062	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Cesium-137	0.38	0.092	0.076	PCI/G			0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Co-60	-0.02	0.84	0.07	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Cobalt-57	0.016	0.021	0.034	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Europium-152	-0.005	0.3	0.59	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Europium-154	0	0.3	0.58	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Europium-155	0.04	0.11	0.19	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Lead-212	0.67	0.12	0.09	PCI/G			0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Manganese-54	0.005	0.042	0.078	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Sodium-22	0	0.012	0.043	PCI/G	U		0.85
27423-009	PR-SS-23	8/5/2009	1110	901.1 MOD	Zinc-65	0	0.19	0.35	PCI/G	U		0.85
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	241	0.011	0.079	0.14	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Beryllium-7	0	0.32	0.6	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Cesium-134	0	0.084	0.15	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Cesium-137	0.335	0.083	0.045	PCI/G			0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Co-60	0	0.069	0.13	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Cobalt-57	0.002	0.025	0.043	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Europium-152	0	0.57	1	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Europium-154	0.1	0.33	0.61	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Europium-155	-0.003	0.1	0.18	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Manganese-54	0	0.036	0.072	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Potassium-40	4.1	1.1	0.8	PCI/G			0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Sodium-22	0	0.11	0.2	PCI/G	U		0.91
27423-008	PR-SS-21	8/5/2009	1100	901.1 MOD	Zinc-65	0	0.34	0.59	PCI/G	U		0.91
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	241	0.04	0.12	0.2	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Beryllium-7	0.14	0.34	0.59	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Cesium-134	0.0003	0.052	0.093	PCI/G	U		1.2

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Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Cesium-137	1.37	0.16	0.05	PCI/G			1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Co-60	0.005	0.042	0.08	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Cobalt-57	-0.004	0.029	0.051	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Europium-152	0.04	0.35	0.64	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Europium-154	0	0.33	0.62	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Europium-155	0.04	0.12	0.2	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Manganese-54	0	0.028	0.055	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Sodium-22	0.0002	0.05	0.095	PCI/G	U		1.2
27423-007	PR-SS-19	8/5/2009	1029	901.1 MOD	Zinc-65	0.0005	0.13	0.24	PCI/G	U		1.2
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	241	0.022	0.095	0.16	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Beryllium-7	0.02	0.2	0.39	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Bismuth-214	0.42	0.11	0.06	PCI/G			1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Cesium-134	0.0005	0.033	0.063	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Cesium-137	0.8	0.12	0.03	PCI/G			1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Co-60	-0.021	0.062	0.11	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Cobalt-57	0.018	0.021	0.034	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Europium-152	-0.08	0.35	0.65	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Europium-154	-0.07	0.34	0.63	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Europium-155	0.04	0.1	0.17	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Manganese-54	0.0001	0.03	0.06	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Potassium-40	3.56	0.96	0.58	PCI/G			1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Sodium-22	0.001	0.037	0.075	PCI/G	U		1.27
27423-006	PR-SS-18	8/5/2009	1025	901.1 MOD	Zinc-65	0.003	0.098	0.19	PCI/G	U		1.27
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Actinium-228	0.63	0.17	0.1	PCI/G			1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	241	0	0.099	0.17	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Beryllium-7	0.14	0.32	0.54	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Cesium-134	0.002	0.022	0.042	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Cesium-137	0.78	0.12	0.05	PCI/G			1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Co-60	0.008	0.049	0.091	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Cobalt-57	0.005	0.023	0.041	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Europium-152	-0.06	0.32	0.58	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Europium-154	-0.1	0.31	0.56	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Europium-155	-0.04	0.12	0.21	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Manganese-54	0.011	0.036	0.064	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Sodium-22	0.011	0.038	0.07	PCI/G	U		1.33
27423-005	PR-SS-17	8/5/2009	1010	901.1 MOD	Zinc-65	-0.0009	0.11	0.21	PCI/G	U		1.33
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	241	-0.0008	0.12	0.21	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Beryllium-7	0.09	0.26	0.46	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Cesium-134	-0.02	0.056	0.097	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Cesium-137	0.627	0.098	0.024	PCI/G			1.4

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Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Co-60	0	0.0097	0.036	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Cobalt-57	-0.004	0.029	0.05	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Europium-152	-0.02	0.35	0.65	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Europium-154	0.003	0.28	0.54	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Europium-155	0.03	0.12	0.2	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Manganese-54	-0.007	0.044	0.079	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Potassium-40	4.39	0.99	0.68	PCI/G			1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Sodium-22	0	0.05	0.096	PCI/G	U		1.4
27423-004	PR-SS-16	8/5/2009	1055	901.1 MOD	Zinc-65	-0.04	0.13	0.23	PCI/G	U		1.4
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	241	0.037	0.094	0.16	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Beryllium-7	0	0.47	0.84	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Bismuth-214	0.55	0.13	0.08	PCI/G			1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Cesium-134	-0.038	0.064	0.11	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Cesium-137	1.38	0.18	0.05	PCI/G			1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Co-60	0	0.013	0.048	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Cobalt-57	-0.016	0.027	0.045	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Europium-152	-0.07	0.43	0.79	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Europium-154	-0.03	0.41	0.76	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Europium-155	0.021	0.09	0.16	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Lead-212	0.58	0.12	0.11	PCI/G			1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Manganese-54	-0.005	0.049	0.09	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Sodium-22	0	0.093	0.17	PCI/G	U		1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Thallium-208	0.252	0.065	0.049	PCI/G			1.52
27423-003	PR-SS-15	8/5/2009	940	901.1 MOD	Zinc-65	-0.03	0.13	0.24	PCI/G	U		1.52
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	241	0.005	0.088	0.16	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Beryllium-7	0.08	0.37	0.66	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Cesium-134	-0.002	0.038	0.072	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Cesium-137	1.11	0.15	0.07	PCI/G			1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Co-60	-0.02	0.89	0.14	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Cobalt-57	0.005	0.021	0.037	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Europium-152	0	0.082	0.3	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Europium-154	0.1	0.23	0.43	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Europium-155	0.108	0.033	0.17	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Manganese-54	0.011	0.038	0.07	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Sodium-22	0	0.012	0.046	PCI/G	U		1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Thallium-208	0.194	0.056	0.029	PCI/G			1.56
27423-002	PR-SS-14	8/5/2009	935	901.1 MOD	Zinc-65	-0.03	0.11	0.2	PCI/G	U		1.56
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	241	0.052	0.075	0.13	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Beryllium-7	-0.09	0.34	0.61	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Cesium-134	-0.002	0.035	0.067	PCI/G	U		1.66

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Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Cesium-137	0.393	0.086	0.033	PCI/G			1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Co-60	0.011	0.045	0.087	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Cobalt-57	0.016	0.02	0.034	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Europium-152	0.03	0.35	0.68	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Europium-154	0.14	0.27	0.48	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Europium-155	0.103	0.059	0.16	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Manganese-54	0	0.0091	0.034	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Sodium-22	0	0.013	0.048	PCI/G	U		1.66
27423-001	PR-SS-12	8/5/2009	925	901.1 MOD	Zinc-65	0	0.24	0.43	PCI/G	U		1.66
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	241	-0.002	0.068	0.12	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Beryllium-7	-0.0002	0.24	0.45	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Cesium-134	-0.016	0.051	0.088	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Cesium-137	0.52	0.088	0.033	PCI/G			1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Co-60	0	0.049	0.092	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Cobalt-57	-0.012	0.024	0.041	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Europium-152	-0.13	0.34	0.6	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Europium-154	-0.02	0.26	0.5	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Europium-155	0.067	0.083	0.14	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Manganese-54	0.008	0.034	0.062	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Potassium-40	3.66	0.86	0.64	PCI/G			1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Sodium-22	0	0.045	0.085	PCI/G	U		1.84
27416-009	PR-SS-10	8/4/2009	1300	901.1 MOD	Zinc-65	-0.05	0.1	0.18	PCI/G	U		1.84
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	241	0.009	0.062	0.11	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Beryllium-7	0.24	0.25	0.39	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Cesium-134	2.00E-05	0.032	0.062	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Cesium-137	0.158	0.05	0.028	PCI/G	J		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Co-60	-0.01	0.049	0.093	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Cobalt-57	0.007	0.016	0.027	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Europium-152	-0.09	0.33	0.61	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Europium-154	-0.02	0.36	0.67	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Europium-155	0.059	0.076	0.13	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Manganese-54	0	0.0079	0.029	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Sodium-22	0	0.011	0.042	PCI/G	U		1.93
27416-008	PR-SS-09	8/4/2009	1245	901.1 MOD	Zinc-65	0	0.18	0.33	PCI/G	U		1.93
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Actinium-228	0.83	0.16	0.09	PCI/G			2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	241	0.063	0.094	0.16	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Beryllium-7	0.02	0.25	0.46	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Cesium-134	-0.011	0.038	0.066	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Cesium-137	0.2	0.05	0.022	PCI/G			2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Co-60	0.02	0.034	0.058	PCI/G	U		2.02

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Sample ID	COC Site ID	Sample Date	Sample Time	Method	Analyte	Conc.	Error	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Cobalt-57	-0.002	0.022	0.038	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Europium-152	-0.08	0.33	0.59	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Europium-154	0.02	0.24	0.46	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Europium-155	0.04	0.1	0.18	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Lead-212	0.5	0.1	0.1	PCI/G			2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Manganese-54	-0.013	0.042	0.074	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Potassium-40	4.43	0.94	0.78	PCI/G			2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Sodium-22	-0.008	0.034	0.063	PCI/G	U		2.02
27416-007	PR-SS-07	8/4/2009	1240	901.1 MOD	Zinc-65	-0.021	0.086	0.16	PCI/G	U		2.02
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	241	0.03	0.088	0.15	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Beryllium-7	-0.1	0.37	0.66	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Bismuth-214	0.66	0.15	0.11	PCI/G			2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Cesium-134	0.0004	0.052	0.095	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Cesium-137	0.148	0.065	0.076	PCI/G	J		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Co-60	-0.015	0.057	0.11	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Cobalt-57	-0.007	0.022	0.038	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Europium-152	0	0.086	0.32	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Europium-154	0.06	0.35	0.67	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Europium-155	-0.001	0.11	0.2	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Manganese-54	-0.01	0.048	0.089	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Sodium-22	0.024	0.044	0.077	PCI/G	U		2.08
27416-006	PR-SS-06	8/4/2009	1230	901.1 MOD	Zinc-65	-0.07	0.17	0.29	PCI/G	U		2.08
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	241	-0.013	0.074	0.13	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Beryllium-7	0.04	0.28	0.5	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Cesium-134	-0.0002	0.042	0.076	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Cesium-137	0.281	0.07	0.04	PCI/G			2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Co-60	0.006	0.038	0.072	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Cobalt-57	-0.009	0.024	0.041	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Europium-152	-0.07	0.3	0.55	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Europium-154	0.09	0.28	0.5	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Europium-155	0.073	0.088	0.14	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Manganese-54	-0.005	0.045	0.081	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Sodium-22	0	0.047	0.089	PCI/G	U		2.32
27416-005	PR-SS-05	8/4/2009	1215	901.1 MOD	Zinc-65	-0.04	0.11	0.19	PCI/G	U		2.32
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	241	-0.016	0.074	0.13	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Beryllium-7	-0.03	0.32	0.59	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Bismuth-214	0.306	0.099	0.056	PCI/G			2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Cesium-134	0	0.037	0.071	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Cesium-137	0.083	0.048	0.059	PCI/G	J		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Co-60	0.018	0.035	0.064	PCI/G	U		2.52

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<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>Error</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Cobalt-57	-0.005	0.018	0.031	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Europium-152	0	0.57	1.1	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Europium-154	0.04	0.27	0.54	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Europium-155	0.018	0.071	0.13	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Manganese-54	0	0.0094	0.034	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Sodium-22	0	0.014	0.05	PCI/G	U		2.52
27416-004	PR-SS-04	8/4/2009	1145	901.1 MOD	Zinc-65	0	0.11	0.21	PCI/G	U		2.52
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	241	-0.03	0.1	0.17	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Beryllium-7	-0.06	0.35	0.65	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Cesium-134	-0.023	0.059	0.1	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Cesium-137	0.148	0.072	0.075	PCI/G	J		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Co-60	-0.013	0.073	0.14	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Cobalt-57	-0.002	0.023	0.041	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Europium-152	-0.004	0.34	0.7	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Europium-154	-0.01	0.4	0.78	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Europium-155	0.002	0.089	0.16	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Manganese-54	-0.014	0.047	0.087	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Sodium-22	-0.004	0.063	0.12	PCI/G	U		2.65
27416-003	PR-SS-03	8/4/2009	1130	901.1 MOD	Zinc-65	0	0.26	0.47	PCI/G	U		2.65
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	241	-0.0007	0.078	0.14	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Beryllium-7	0	0.77	1.4	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Cesium-134	-0.008	0.074	0.14	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Cesium-137	0.76	0.19	0.15	PCI/G			2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Co-60	-0.03	0.12	0.23	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Cobalt-57	-0.011	0.034	0.06	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Europium-152	-0.05	0.62	1.2	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Europium-154	-0.2	0.78	1.4	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Europium-155	0.138	0.08	0.14	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Manganese-54	-0.004	0.081	0.15	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Sodium-22	-0.03	0.13	0.25	PCI/G	U		2.76
27416-002	PR-SS-02	8/4/2009	1115	901.1 MOD	Zinc-65	-0.1	0.26	0.46	PCI/G	U		2.76
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	241	0.08	0.11	0.17	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Beryllium-7	-0.11	0.44	0.77	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Cesium-134	-0.012	0.052	0.093	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Cesium-137	0.68	0.12	0.05	PCI/G			2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Co-60	0	0.012	0.044	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Cobalt-57	0.004	0.029	0.051	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Europium-152	-0.04	0.35	0.66	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Europium-154	0	0.59	1.1	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Europium-155	0.06	0.12	0.2	PCI/G	U		2.9

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<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>Error</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Manganese-54	0	0.05	0.094	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Sodium-22	0.003	0.055	0.1	PCI/G	U		2.9
27416-001	PR-SS-01	8/4/2009	1100	901.1 MOD	Zinc-65	0	0.17	0.31	PCI/G	U		2.9
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	241	0	0.1	0.18	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Beryllium-7	0.19	0.37	0.64	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Cesium-134	-0.042	0.079	0.13	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Cesium-137	0.179	0.077	0.071	PCI/G	J		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Co-60	0.005	0.058	0.12	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Cobalt-57	-0.002	0.025	0.044	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Europium-152	0.18	0.48	0.87	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Europium-154	0.07	0.49	0.92	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Europium-155	0.03	0.11	0.2	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Manganese-54	0	0.065	0.12	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Sodium-22	0	0.017	0.061	PCI/G	U		4.5
27417-002	PR-MR-02	8/4/2009	955	901.1 MOD	Zinc-65	-0.05	0.15	0.27	PCI/G	U		4.5
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	241	-0.05	0.11	0.18	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Beryllium-7	0.08	0.34	0.62	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Cesium-134	-0.031	0.069	0.12	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Cesium-137	0.284	0.079	0.039	PCI/G			4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Co-60	0.011	0.056	0.11	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Cobalt-57	-0.0002	0.02	0.037	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Europium-152	0	0.87	1.6	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Europium-154	-0.08	0.39	0.74	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Europium-155	0.07	0.1	0.17	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Manganese-54	-0.005	0.061	0.11	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Sodium-22	0	0.016	0.058	PCI/G	U		4.28
27417-001	PR-MR-01	8/4/2009	1025	901.1 MOD	Zinc-65	0	0.14	0.26	PCI/G	U		4.28
27247-001	PR-DP-01	6/9/2009	1400	4.5.2.3	Cesium-137	0.0137	0.0251	0.0472	PCI/G	U		6.75
27247-001	PR-DP-01	6/9/2009	1400	4.5.2.3	Potassium-40	1.48	0.516	0.231	PCI/G			6.75

<sup>1</sup> Qualifiers

- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- U - Indicates that the analyte was analyzed for but not detected.

**Appendix D**

2009 Water Column Total Mercury, Methylmercury and TSS Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth</b>	<b>Filt.</b>	<b>Lab Code</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27275-004	PR-WC-12-D7	6/19/2009	0	U	BROOKS	EPA 1631	Mercury	11.8	0.15	ng/L			-0.04
27358-004	PR-WC-12-D7	7/16/2009	0	U	BROOKS	EPA 1631	Mercury	8.92	0.15	ng/L			-0.04
27275-002	PR-WC-11DS	6/19/2009	0	U	BROOKS	EPA 1631	Mercury	56	0.61	ng/L			0.01
27275-001	PR-WC-10	6/19/2009	0	U	BROOKS	EPA 1631	Mercury	73.4	0.15	ng/L			0.3
27358-001	PR-WC-10	7/16/2009	0	U	BROOKS	EPA 1631	Mercury	110	0.54	ng/L			0.3
27271-007	PR-WC-08	6/18/2009	0	U	BROOKS	EPA 1631	Mercury	50.6	0.15	ng/L			0.78
27360-003	PR-WC-08	7/16/2009	0	U	BROOKS	EPA 1631	Mercury	44.4	0.15	ng/L			0.78
27271-005	PR-WC-06	6/18/2009	0	U	BROOKS	EPA 1631	Mercury	43.7	0.15	ng/L			1.1
27360-001	PR-WC-06	7/16/2009	0	U	BROOKS	EPA 1631	Mercury	93.6	0.15	ng/L			1.1
27262-005	PR-WC-05	6/17/2009	0	U	BROOKS	EPA 1631	Mercury	70.2	0.31	ng/L			1.46
27353-007	PR-WC-05	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	22.9	0.31	ng/L			1.46
26949-001	PR-SS-15-U1-WC-1	3/12/2009	0	F	BROOKS	EPA 1631	Mercury	20.7	0.15	ng/L			1.5
26949-001	PR-SS-15-U1-WC-1	3/12/2009	0	U	BROOKS	EPA 1631	Mercury	91.6	1.53	ng/L			1.5
26950-001	PR-SS-15-U1-WC-1	3/12/2009	0	F	CAL	EPA 1631E (FILTERED)	Mercury	23	0.5	NG/L			1.5
26950-001	PR-SS-15-U1-WC-1	3/12/2009	0	U	CAL	EPA 1631E	Mercury	73	0.5	NG/L			1.5
27100-001	PR-SS-15-U1-WC-1	4/23/2009	0	U	BROOKS	EPA 1631	Mercury	51.6	1.53	ng/L			1.5
27101-001	PR-SS-15-U1-WC-1	4/23/2009	0	U	CAL	EPA 1631E	Mercury	47	0.2	NG/L			1.5
27262-001	PR-SS-15-U1-WC-1	6/17/2009	0	U	BROOKS	EPA 1631	Mercury	44.3	0.3	ng/L			1.5
27356-001	PR-SS-15-U1-WC-1	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	54.7	0.62	ng/L			1.5
26949-002	PR-SS-15-U1-WC-2	3/12/2009	0	F	BROOKS	EPA 1631	Mercury	21	0.15	ng/L			1.5
26949-002	PR-SS-15-U1-WC-2	3/12/2009	0	U	BROOKS	EPA 1631	Mercury	68	1.53	ng/L			1.5
26950-002	PR-SS-15-U1-WC-2	3/12/2009	0	U	CAL	EPA 1631E	Mercury	39	0.5	NG/L			1.5
26950-002	PR-SS-15-U1-WC-2	3/12/2009	0	F	CAL	EPA 1631E (FILTERED)	Mercury	22	0.5	NG/L			1.5
27100-002	PR-SS-15-U1-WC-2	4/23/2009	0	U	BROOKS	EPA 1631	Mercury	48.5	1.53	ng/L			1.5
27101-002	PR-SS-15-U1-WC-2	4/23/2009	0	U	CAL	EPA 1631E	Mercury	49	0.2	NG/L			1.5
27262-002	PR-SS-15-U1-WC-2	6/17/2009	0	U	BROOKS	EPA 1631	Mercury	53.1	0.31	ng/L			1.5
27356-002	PR-SS-15-U1-WC-2	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	53.5	0.61	ng/L			1.5
26949-003	PR-SS-15-U1-WC-3	3/12/2009	0	F	BROOKS	EPA 1631	Mercury	20.9	0.15	ng/L			1.5
26949-003	PR-SS-15-U1-WC-3	3/12/2009	0	U	BROOKS	EPA 1631	Mercury	47	1.53	ng/L			1.5
26950-003	PR-SS-15-U1-WC-3	3/12/2009	0	U	CAL	EPA 1631E	Mercury	41	0.5	NG/L			1.5
26950-003	PR-SS-15-U1-WC-3	3/12/2009	0	F	CAL	EPA 1631E (FILTERED)	Mercury	20	0.5	NG/L			1.5
27100-003	PR-SS-15-U1-WC-3	4/23/2009	0	U	BROOKS	EPA 1631	Mercury	46.5	1.53	ng/L			1.5
27101-003	PR-SS-15-U1-WC-3	4/23/2009	0	U	CAL	EPA 1631E	Mercury	58	0.2	NG/L			1.5
27262-003	PR-SS-15-U1-WC-3	6/17/2009	0	U	BROOKS	EPA 1631	Mercury	54.8	0.31	ng/L			1.5
27356-003	PR-SS-15-U1-WC-3	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	104	0.58	ng/L			1.5
26949-004	PR-SS-15-U1-WC-4	3/12/2009	0	F	BROOKS	EPA 1631	Mercury	20.2	0.15	ng/L			1.5
26949-004	PR-SS-15-U1-WC-4	3/12/2009	0	U	BROOKS	EPA 1631	Mercury	57.2	1.53	ng/L			1.5
26950-004	PR-SS-15-U1-WC-4	3/12/2009	0	F	CAL	EPA 1631E (FILTERED)	Mercury	20	0.5	NG/L			1.5
26950-004	PR-SS-15-U1-WC-4	3/12/2009	0	U	CAL	EPA 1631E	Mercury	44	0.5	NG/L			1.5
27100-004	PR-SS-15-U1-WC-4	4/23/2009	0	U	BROOKS	EPA 1631	Mercury	47.3	1.53	ng/L			1.5
27101-004	PR-SS-15-U1-WC-4	4/23/2009	0	U	CAL	EPA 1631E	Mercury	44	0.2	NG/L			1.5

**Appendix D**

2009 Water Column Total Mercury, Methylmercury and TSS Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth</b>	<b>Filt.</b>	<b>Lab Code</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27262-004	PR-SS-15-U1-WC-4	6/17/2009	0	U	BROOKS	EPA 1631	Mercury	367	1.59	ng/L			1.5
27356-004	PR-SS-15-U1-WC-4	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	169	1.52	ng/L			1.5
27258-002	PR-WC-03	6/17/2009	0	U	BROOKS	EPA 1631	Mercury	19.8	0.31	ng/L			2.1
27353-005	PR-WC-03	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	18.7	0.32	ng/L			2.1
27254-005	PR-WC-01	6/16/2009	0	U	BROOKS	EPA 1631	Mercury	8.37	0.3	ng/L			2.98
27353-003	PR-WC-01	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	7.59	0.31	ng/L			2.98
27254-004	PR-WCS-01	6/16/2009	0	U	BROOKS	EPA 1631	Mercury	9.08	0.3	ng/L			3.42
27353-002	PR-WCS-01	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	6.51	0.15	ng/L			3.42
27254-003	PR-WCS-02	6/16/2009	0	U	BROOKS	EPA 1631	Mercury	8.32	0.31	ng/L			3.99
27353-001	PR-WCS-02	7/15/2009	0	U	BROOKS	EPA 1631	Mercury	5.97	0.15	ng/L			3.99
27254-002	PR-WCS-03	6/16/2009	0	U	BROOKS	EPA 1631	Mercury	8.78	0.3	ng/L			4.44
27348-005	PR-WCS-03	7/14/2009	0	U	BROOKS	EPA 1631	Mercury	6.87	0.15	ng/L			4.44
27254-001	PR-WCS-04	6/16/2009	0	U	BROOKS	EPA 1631	Mercury	15.4	0.3	ng/L			4.77
27348-004	PR-WCS-04	7/14/2009	0	U	BROOKS	EPA 1631	Mercury	8.81	0.15	ng/L			4.77
27271-003	PR-WCS-05	6/18/2009	0	U	BROOKS	EPA 1631	Mercury	3.56	0.15	ng/L			6.04
27348-003	PR-WCS-05	7/14/2009	0	U	BROOKS	EPA 1631	Mercury	3.84	0.15	ng/L			6.04
27271-002	PR-WCS-06	6/18/2009	0	U	BROOKS	EPA 1631	Mercury	3.55	0.15	ng/L			6.75
27348-002	PR-WCS-06	7/14/2009	0	U	BROOKS	EPA 1631	Mercury	3.17	0.15	ng/L			6.75
27271-001	PR-WCS-07	6/18/2009	0	U	BROOKS	EPA 1631	Mercury	3.81	0.15	ng/L			7.23
27348-001	PR-WCS-07	7/14/2009	0	U	BROOKS	EPA 1631	Mercury	3.53	0.15	ng/L			7.23
27275-004	PR-WC-12-D7	6/19/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	2.71	0.02	ng/L			-0.04
27358-004	PR-WC-12-D7	7/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	2.63	0.02	ng/L			-0.04
27275-002	PR-WC-11DS	6/19/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.05	0.02	ng/L			0.01
27275-001	PR-WC-10	6/19/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	2.04	0.02	ng/L			0.3
27358-001	PR-WC-10	7/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.965	0.02	ng/L			0.3
27271-007	PR-WC-08	6/18/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.88	0.02	ng/L			0.78
27360-003	PR-WC-08	7/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.853	0.02	ng/L			0.78
27271-005	PR-WC-06	6/18/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	2.44	0.02	ng/L			1.1
27360-001	PR-WC-06	7/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.79	0.02	ng/L			1.1
27262-005	PR-WC-05	6/17/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	3.97	0.02	ng/L			1.46
27353-007	PR-WC-05	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	8.08	0.021	ng/L			1.46
26949-001	PR-SS-15-U1-WC-1	3/12/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.48	0.021	ng/L			1.5
26950-001	PR-SS-15-U1-WC-1	3/12/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	1.05	0.05	NG/L			1.5
27100-001	PR-SS-15-U1-WC-1	4/23/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.14	0.02	ng/L			1.5
27101-001	PR-SS-15-U1-WC-1	4/23/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.935	0.01	NG/L			1.5
27262-001	PR-SS-15-U1-WC-1	6/17/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	7.54	0.02	ng/L			1.5
27356-001	PR-SS-15-U1-WC-1	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	9.15	0.02	ng/L			1.5
26949-002	PR-SS-15-U1-WC-2	3/12/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.625	0.02	ng/L			1.5
26950-002	PR-SS-15-U1-WC-2	3/12/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.789	0.05	NG/L			1.5
27100-002	PR-SS-15-U1-WC-2	4/23/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.951	0.02	ng/L			1.5
27101-002	PR-SS-15-U1-WC-2	4/23/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.958	0.01	NG/L			1.5

**Appendix D**

## 2009 Water Column Total Mercury, Methylmercury and TSS Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth</b>	<b>Filt.</b>	<b>Lab Code</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27262-002	PR-SS-15-U1-WC-2	6/17/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	7.38	0.02	ng/L			1.5
27356-002	PR-SS-15-U1-WC-2	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	8	0.02	ng/L			1.5
26949-003	PR-SS-15-U1-WC-3	3/12/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1	0.02	ng/L			1.5
26950-003	PR-SS-15-U1-WC-3	3/12/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.937	0.05	NG/L			1.5
27100-003	PR-SS-15-U1-WC-3	4/23/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.873	0.021	ng/L			1.5
27101-003	PR-SS-15-U1-WC-3	4/23/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.963	0.01	NG/L			1.5
27262-003	PR-SS-15-U1-WC-3	6/17/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	7.94	0.02	ng/L			1.5
27356-003	PR-SS-15-U1-WC-3	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	8.68	0.02	ng/L			1.5
26949-004	PR-SS-15-U1-WC-4	3/12/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.02	0.02	ng/L			1.5
26950-004	PR-SS-15-U1-WC-4	3/12/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.874	0.05	NG/L			1.5
27100-004	PR-SS-15-U1-WC-4	4/23/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.89	0.021	ng/L			1.5
27101-004	PR-SS-15-U1-WC-4	4/23/2009	0	U	CAL	DRAFT EPA 1630	Methyl Mercury	0.833	0.01	NG/L			1.5
27262-004	PR-SS-15-U1-WC-4	6/17/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	7.96	0.02	ng/L			1.5
27356-004	PR-SS-15-U1-WC-4	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	11.1	0.02	ng/L			1.5
27258-002	PR-WC-03	6/17/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	2.33	0.019	ng/L			2.1
27353-005	PR-WC-03	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.66	0.02	ng/L			2.1
27254-005	PR-WC-01	6/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.21	0.02	ng/L			2.98
27353-003	PR-WC-01	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.31	0.02	ng/L			2.98
27254-004	PR-WCS-01	6/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.13	0.02	ng/L			3.42
27353-002	PR-WCS-01	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.2	0.02	ng/L			3.42
27254-003	PR-WCS-02	6/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.18	0.02	ng/L			3.99
27353-001	PR-WCS-02	7/15/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.05	0.02	ng/L			3.99
27254-002	PR-WCS-03	6/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.09	0.02	ng/L			4.44
27348-005	PR-WCS-03	7/14/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.04	0.02	ng/L			4.44
27254-001	PR-WCS-04	6/16/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.32	0.02	ng/L			4.77
27348-004	PR-WCS-04	7/14/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	1.01	0.02	ng/L			4.77
27271-003	PR-WCS-05	6/18/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.884	0.02	ng/L			6.04
27348-003	PR-WCS-05	7/14/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.778	0.02	ng/L			6.04
27271-002	PR-WCS-06	6/18/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.786	0.02	ng/L			6.75
27348-002	PR-WCS-06	7/14/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.663	0.02	ng/L			6.75
27271-001	PR-WCS-07	6/18/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.88	0.02	ng/L			7.23
27348-001	PR-WCS-07	7/14/2009	0	U	BROOKS	EPA 1630	Methyl Mercury	0.654	0.02	ng/L			7.23
27275-004	PR-WC-12-D7	6/19/2009	0	U	BROOKS	EPA 160.2	TSS	4.3	0.3	mg/L			-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			-0.04
27358-004	PR-WC-12-D7	7/16/2009	0	U	BROOKS	EPA 160.2	TSS	2.7	0.4	mg/L			-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	STL-MO	160.2	TSS	3	1	MG/L			-0.04
27276-002	PR-WC-11DS	6/19/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		0.01
27275-002	PR-WC-11DS	6/19/2009	0	U	BROOKS	EPA 160.2	TSS	1.8	0.3	mg/L			0.01
27184-004	PR-WC-10	5/21/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			0.3
27276-001	PR-WC-10	6/19/2009	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.3
27275-001	PR-WC-10	6/19/2009	0	U	BROOKS	EPA 160.2	TSS	6.7	0.5	mg/L			0.3

**Appendix D**

2009 Water Column Total Mercury, Methylmercury and TSS Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth</b>	<b>Filt.</b>	<b>Lab Code</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27316-004	PR-WC-10	7/7/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			0.3
27358-001	PR-WC-10	7/16/2009	0	U	BROOKS	EPA 160.2	TSS	1.2	0.3	mg/L			0.3
27361-001	PR-WC-10	7/16/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			0.3
27398-004	PR-WC-10	7/29/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L			0.3
27184-002	PR-WC-08	5/21/2009	0	U	STL-MO	160.2	TSS	5	1	MG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.78
27271-007	PR-WC-08	6/18/2009	0	U	BROOKS	EPA 160.2	TSS	4.48	0.6	mg/L			0.78
27316-002	PR-WC-08	7/7/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			0.78
27360-003	PR-WC-08	7/16/2009	0	U	BROOKS	EPA 160.2	TSS	2.1	0.3	mg/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			0.78
27398-002	PR-WC-08	7/29/2009	0	U	STL-MO	160.2	TSS	3	1	MG/L			0.78
27184-001	PR-WC-06	5/21/2009	0	U	STL-MO	160.2	TSS	6	1	MG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			1.1
27271-005	PR-WC-06	6/18/2009	0	U	BROOKS	EPA 160.2	TSS	5.34	0.6	mg/L			1.1
27316-001	PR-WC-06	7/7/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	STL-MO	160.2	TSS	48	1	MG/L			1.1
27360-001	PR-WC-06	7/16/2009	0	U	BROOKS	EPA 160.2	TSS	4	0.7	mg/L			1.1
27398-001	PR-WC-06	7/29/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			1.1
27262-005	PR-WC-05	6/17/2009	0	U	BROOKS	EPA 160.2	TSS	11.5	0.7	mg/L			1.46
27263-001	PR-WC-05	6/17/2009	0	U	STL-MO	160.2	TSS	5	1	MG/L			1.46
27354-007	PR-WC-05	7/15/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			1.46
27353-007	PR-WC-05	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	3.4	0.3	mg/L			1.46
26949-004	PR-SS-15-U1-WC-4	3/12/2009	0	U	BROOKS	EPA 160.2	TSS	6.1	0.3	mg/L			1.5
26950-004	PR-SS-15-U1-WC-4	3/12/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	3	3	MG/L	U		1.5
26949-003	PR-SS-15-U1-WC-3	3/12/2009	0	U	BROOKS	EPA 160.2	TSS	5.9	0.3	mg/L			1.5
26950-003	PR-SS-15-U1-WC-3	3/12/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	3	3	MG/L	U		1.5
26950-002	PR-SS-15-U1-WC-2	3/12/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	3	3	MG/L			1.5
26949-002	PR-SS-15-U1-WC-2	3/12/2009	0	U	BROOKS	EPA 160.2	TSS	7.1	0.7	mg/L			1.5
26950-001	PR-SS-15-U1-WC-1	3/12/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	6	6	MG/L			1.5
26949-001	PR-SS-15-U1-WC-1	3/12/2009	0	U	BROOKS	EPA 160.2	TSS	12.1	0.6	mg/L			1.5
27101-004	PR-SS-15-U1-WC-4	4/23/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	3	2	MG/L			1.5
27100-004	PR-SS-15-U1-WC-4	4/23/2009	0	U	BROOKS	EPA 160.2	TSS	8.9	0.6	mg/L			1.5
27100-003	PR-SS-15-U1-WC-3	4/23/2009	0	U	BROOKS	EPA 160.2	TSS	9.3	0.5	mg/L			1.5
27101-003	PR-SS-15-U1-WC-3	4/23/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	3	2	MG/L	J		1.5
27100-002	PR-SS-15-U1-WC-2	4/23/2009	0	U	BROOKS	EPA 160.2	TSS	9.1	0.5	mg/L			1.5
27101-002	PR-SS-15-U1-WC-2	4/23/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	3	2	MG/L			1.5
27101-001	PR-SS-15-U1-WC-1	4/23/2009	0	U	CAL	EPA 160.2 / SM2540D	TSS	2	2	MG/L	U		1.5
27100-001	PR-SS-15-U1-WC-1	4/23/2009	0	U	BROOKS	EPA 160.2	TSS	9	0.5	mg/L			1.5
27262-004	PR-SS-15-U1-WC-4	6/17/2009	0	U	BROOKS	EPA 160.2	TSS	30.4	0.6	mg/L			1.5
27262-003	PR-SS-15-U1-WC-3	6/17/2009	0	U	BROOKS	EPA 160.2	TSS	11.9	0.8	mg/L			1.5
27262-002	PR-SS-15-U1-WC-2	6/17/2009	0	U	BROOKS	EPA 160.2	TSS	10	0.8	mg/L			1.5

**Appendix D**

## 2009 Water Column Total Mercury, Methylmercury and TSS Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth</b>	<b>Filt.</b>	<b>Lab Code</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP (miles)</b>
27262-001	PR-SS-15-U1-WC-1	6/17/2009	0	U	BROOKS	EPA 160.2	TSS	8.56	0.7	mg/L			1.5
27356-004	PR-SS-15-U1-WC-4	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	25.4	0.7	mg/L			1.5
27356-003	PR-SS-15-U1-WC-3	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	10.6	0.6	mg/L			1.5
27356-002	PR-SS-15-U1-WC-2	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	7.8	0.6	mg/L			1.5
27356-001	PR-SS-15-U1-WC-1	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	7	0.6	mg/L			1.5
27178-003	PR-WC-03	5/20/2009	0	U	STL-MO	160.2	TSS	5	1	MG/L			2.1
27258-002	PR-WC-03	6/17/2009	0	U	BROOKS	EPA 160.2	TSS	1.3	0.7	mg/L	B		2.1
27259-002	PR-WC-03	6/17/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		2.1
27315-003	PR-WC-03	7/7/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L			2.1
27354-005	PR-WC-03	7/15/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			2.1
27353-005	PR-WC-03	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	3.5	0.3	mg/L			2.1
27397-003	PR-WC-03	7/29/2009	0	U	STL-MO	160.2	TSS	5	1	MG/L			2.1
27178-002	PR-WC-01	5/20/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		2.98
27254-005	PR-WC-01	6/16/2009	0	U	BROOKS	EPA 160.2	TSS	1.73	0.3	mg/L			2.98
27255-005	PR-WC-01	6/16/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		2.98
27315-002	PR-WC-01	7/7/2009	0	U	STL-MO	160.2	TSS	3	1	MG/L			2.98
27354-003	PR-WC-01	7/15/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			2.98
27353-003	PR-WC-01	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	2.6	0.4	mg/L			2.98
27397-002	PR-WC-01	7/29/2009	0	U	STL-MO	160.2	TSS	13	1	MG/L			2.98
27255-004	PR-WCS-01	6/16/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		3.42
27254-004	PR-WCS-01	6/16/2009	0	U	BROOKS	EPA 160.2	TSS	3.57	0.6	mg/L			3.42
27353-002	PR-WCS-01	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	5.3	0.7	mg/L			3.42
27354-002	PR-WCS-01	7/15/2009	0	U	STL-MO	160.2	TSS	4	1	MG/L			3.42
27254-003	PR-WCS-02	6/16/2009	0	U	BROOKS	EPA 160.2	TSS	3.62	0.5	mg/L			3.99
27255-003	PR-WCS-02	6/16/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		3.99
27353-001	PR-WCS-02	7/15/2009	0	U	BROOKS	EPA 160.2	TSS	7.3	0.6	mg/L			3.99
27354-001	PR-WCS-02	7/15/2009	0	U	STL-MO	160.2	TSS	6	1	MG/L			3.99
27255-002	PR-WCS-03	6/16/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		4.44
27254-002	PR-WCS-03	6/16/2009	0	U	BROOKS	EPA 160.2	TSS	12.4	0.6	mg/L			4.44
27347-005	PR-WCS-03	7/14/2009	0	U	STL-MO	160.2	TSS	3	1	MG/L			4.44
27348-005	PR-WCS-03	7/14/2009	0	U	BROOKS	EPA 160.2	TSS	5.6	0.7	mg/L			4.44
27178-001	PR-WCS-04	5/20/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L			4.77
27254-001	PR-WCS-04	6/16/2009	0	U	BROOKS	EPA 160.2	TSS	3.5	0.4	mg/L			4.77
27255-001	PR-WCS-04	6/16/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L			4.77
27315-001	PR-WCS-04	7/7/2009	0	U	STL-MO	160.2	TSS	9	1	MG/L			4.77
27347-004	PR-WCS-04	7/14/2009	0	U	STL-MO	160.2	TSS	6	1	MG/L			4.77
27348-004	PR-WCS-04	7/14/2009	0	U	BROOKS	EPA 160.2	TSS	7.1	0.6	mg/L			4.77
27397-001	PR-WCS-04	7/29/2009	0	U	STL-MO	160.2	TSS	31	1	MG/L			4.77
27271-003	PR-WCS-05	6/18/2009	0	U	BROOKS	EPA 160.2	TSS	2.64	0.6	mg/L			6.04
27272-003	PR-WCS-05	6/18/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L			6.04
27347-003	PR-WCS-05	7/14/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			6.04

Appendix D 2009 Water Column Total Mercury, Methylmercury and TSS Data														
Sample ID	COC Site ID	Sample Date	Depth	Filt.	Lab Code	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP (miles)	
27348-003	PR-WCS-05	7/14/2009	0	U	BROOKS	EPA 160.2	TSS	5.5	0.5	mg/L			6.04	
27272-002	PR-WCS-06	6/18/2009	0	U	STL-MO	160.2	TSS	1	1	MG/L	U		6.75	
27271-002	PR-WCS-06	6/18/2009	0	U	BROOKS	EPA 160.2	TSS	1.73	0.3	mg/L			6.75	
27348-002	PR-WCS-06	7/14/2009	0	U	BROOKS	EPA 160.2	TSS	4.7	0.6	mg/L			6.75	
27347-002	PR-WCS-06	7/14/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			6.75	
27271-001	PR-WCS-07	6/18/2009	0	U	BROOKS	EPA 160.2	TSS	3.6	0.4	mg/L			7.23	
27272-001	PR-WCS-07	6/18/2009	0	U	STL-MO	160.2	TSS	2	1	MG/L			7.23	
27348-001	PR-WCS-07	7/14/2009	0	U	BROOKS	EPA 160.2	TSS	3.6	0.4	mg/L			7.23	
27347-001	PR-WCS-07	7/14/2009	0	U	STL-MO	160.2	TSS	5	1	MG/L			7.23	

<sup>1</sup> Qualifiers

- B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
- J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- U - Indicates that the analyte was analyzed for but not detected.

**Appendix E**

## 2009 Water Quality Analytical Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth (ft.)</b>	<b>Filt.</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP</b>
<b>Round 1 : 5/20/2009 to 5/21/2009</b>												
27184-004	PR-WC-10	5/21/2009	0	U	10200 H	Chlorophyll a	24.2	10	UG/L			0.3
27184-004	PR-WC-10	5/21/2009	0	U	300.0A	Nitrate (as N)	3.5	0.2	MG/L			0.3
27184-004	PR-WC-10	5/21/2009	0	U	300.0A	Nitrite (as N)	0.016	0.02	MG/L	B		0.3
27184-004	PR-WC-10	5/21/2009	0	U	300	Nitrogen	4	0.15	MG/L			0.3
27184-004	PR-WC-10	5/21/2009	0	U	365.2	Phosphorus	645	100	UG/L			0.3
27184-004	PR-WC-10	5/21/2009	0	U	9060	TOC	4.4	1	MG/L			0.3
27184-004	PR-WC-10	5/21/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.45	0.05	MG/L	J		0.3
27184-004	PR-WC-10	5/21/2009	0	U	160.2	TSS	4	1	MG/L			0.3
27184-003	PR-WC-09	5/21/2009	0	U	10200 H	Chlorophyll a	92.9	10	UG/L			0.56
27184-003	PR-WC-09	5/21/2009	0	U	300.0A	Nitrate (as N)	3.5	0.2	MG/L			0.56
27184-003	PR-WC-09	5/21/2009	0	U	300.0A	Nitrite (as N)	0.04	0.02	MG/L			0.56
27184-003	PR-WC-09	5/21/2009	0	U	300	Nitrogen	4	0.15	MG/L			0.56
27184-003	PR-WC-09	5/21/2009	0	U	365.2	Phosphorus	600	100	UG/L			0.56
27184-003	PR-WC-09	5/21/2009	0	U	9060	TOC	4	1	MG/L			0.56
27184-003	PR-WC-09	5/21/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.44	0.05	MG/L	J		0.56
27184-003	PR-WC-09	5/21/2009	0	U	160.2	TSS	2	1	MG/L			0.56
27184-002	PR-WC-08	5/21/2009	0	U	10200 H	Chlorophyll a	121	10	UG/L			0.78
27184-002	PR-WC-08	5/21/2009	0	U	300.0A	Nitrate (as N)	1.2	0.2	MG/L			0.78
27184-002	PR-WC-08	5/21/2009	0	U	300.0A	Nitrite (as N)	0.017	0.02	MG/L	B		0.78
27184-002	PR-WC-08	5/21/2009	0	U	300	Nitrogen	1.8	0.15	MG/L			0.78
27184-002	PR-WC-08	5/21/2009	0	U	365.2	Phosphorus	481	100	UG/L			0.78
27184-002	PR-WC-08	5/21/2009	0	U	9060	TOC	7	1	MG/L			0.78
27184-002	PR-WC-08	5/21/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.59	0.05	MG/L			0.78
27184-002	PR-WC-08	5/21/2009	0	U	160.2	TSS	5	1	MG/L			0.78
27184-001	PR-WC-06	5/21/2009	0	U	10200 H	Chlorophyll a	655	10	UG/L			1.1
27184-001	PR-WC-06	5/21/2009	0	U	300.0A	Nitrate (as N)	0.45	0.02	MG/L			1.1
27184-001	PR-WC-06	5/21/2009	0	U	300.0A	Nitrite (as N)	0.01	0.02	MG/L	B		1.1
27184-001	PR-WC-06	5/21/2009	0	U	300	Nitrogen	1.2	0.15	MG/L			1.1
27184-001	PR-WC-06	5/21/2009	0	U	365.2	Phosphorus	432	100	UG/L			1.1
27184-001	PR-WC-06	5/21/2009	0	U	9060	TOC	9.1	1	MG/L			1.1
27184-001	PR-WC-06	5/21/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.05	MG/L			1.1
27184-001	PR-WC-06	5/21/2009	0	U	160.2	TSS	6	1	MG/L			1.1
27178-004	PR-WC-04	5/20/2009	0	U	10200 H	Chlorophyll a	24.4	10	UG/L			1.7
27178-004	PR-WC-04	5/20/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		1.7
27178-004	PR-WC-04	5/20/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.7
27178-004	PR-WC-04	5/20/2009	0	U	300	Nitrogen	0.73	0.15	MG/L			1.7
27178-004	PR-WC-04	5/20/2009	0	U	365.2	Phosphorus	402	100	UG/L			1.7
27178-004	PR-WC-04	5/20/2009	0	U	9060	TOC	12.3	5	MG/L			1.7
27178-004	PR-WC-04	5/20/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.73	0.05	MG/L			1.7
27178-004	PR-WC-04	5/20/2009	0	U	160.2	TSS	6	1	MG/L			1.7
27178-003	PR-WC-03	5/20/2009	0	U	10200 H	Chlorophyll a	117	10	UG/L			2.1
27178-003	PR-WC-03	5/20/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.1
27178-003	PR-WC-03	5/20/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
27178-003	PR-WC-03	5/20/2009	0	U	300	Nitrogen	0.58	0.15	MG/L			2.1
27178-003	PR-WC-03	5/20/2009	0	U	365.2	Phosphorus	325	50	UG/L			2.1
27178-003	PR-WC-03	5/20/2009	0	U	9060	TOC	8.8	1	MG/L			2.1
27178-003	PR-WC-03	5/20/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.58	0.05	MG/L			2.1
27178-003	PR-WC-03	5/20/2009	0	U	160.2	TSS	5	1	MG/L			2.1
27178-002	PR-WC-01	5/20/2009	0	U	10200 H	Chlorophyll a	110	10	UG/L			2.98
27178-002	PR-WC-01	5/20/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.98
27178-002	PR-WC-01	5/20/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
27178-002	PR-WC-01	5/20/2009	0	U	300	Nitrogen	0.25	0.15	MG/L			2.98
27178-002	PR-WC-01	5/20/2009	0	U	365.2	Phosphorus	81	50	UG/L			2.98
27178-002	PR-WC-01	5/20/2009	0	U	9060	TOC	7.1	1	MG/L			2.98
27178-002	PR-WC-01	5/20/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.25	0.05	MG/L	J		2.98
27178-002	PR-WC-01	5/20/2009	0	U	160.2	TSS	1	1	MG/L	U		2.98
27178-001	PR-WCS-04	5/20/2009	0	U	10200 H	Chlorophyll a	125	10	UG/L			4.77
27178-001	PR-WCS-04	5/20/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		4.77

**Appendix E**

## 2009 Water Quality Analytical Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth (ft.)</b>	<b>Filt.</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP</b>
27178-001	PR-WCS-04	5/20/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
27178-001	PR-WCS-04	5/20/2009	0	U	300	Nitrogen	0.34	0.15	MG/L			4.77
27178-001	PR-WCS-04	5/20/2009	0	U	365.2	Phosphorus	88.5	50	UG/L			4.77
27178-001	PR-WCS-04	5/20/2009	0	U	9060	TOC	7.7	5	MG/L			4.77
27178-001	PR-WCS-04	5/20/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.34	0.05	MG/L	J		4.77
27178-001	PR-WCS-04	5/20/2009	0	U	160.2	TSS	1	1	MG/L			4.77

**Round 2 : 6/16/2009 to 6/19/2009**

27255-005	PR-WC-01	6/16/2009	0	U	10200 H	Chlorophyll a	400	10	UG/L			2.98
27255-005	PR-WC-01	6/16/2009	0	U	300.0A	Nitrate (as N)	0.0095	0.02	MG/L	B		2.98
27255-005	PR-WC-01	6/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
27255-005	PR-WC-01	6/16/2009	0	U	300	Nitrogen	0.39	0.15	MG/L			2.98
27255-005	PR-WC-01	6/16/2009	0	U	365.2	Phosphorus	72.7	50	UG/L			2.98
27255-005	PR-WC-01	6/16/2009	0	U	9060	TOC	7.3	1	MG/L			2.98
27255-005	PR-WC-01	6/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.38	0.05	MG/L	J		2.98
27255-005	PR-WC-01	6/16/2009	0	U	160.2	TSS	1	1	MG/L	U		2.98
27255-004	PR-WCS-01	6/16/2009	0	U	10200 H	Chlorophyll a	507	10	UG/L			3.42
27255-004	PR-WCS-01	6/16/2009	0	U	300.0A	Nitrate (as N)	0.012	0.02	MG/L	B		3.42
27255-004	PR-WCS-01	6/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.42
27255-004	PR-WCS-01	6/16/2009	0	U	300	Nitrogen	0.46	0.15	MG/L			3.42
27255-004	PR-WCS-01	6/16/2009	0	U	365.2	Phosphorus	98.4	50	UG/L			3.42
27255-004	PR-WCS-01	6/16/2009	0	U	9060	TOC	7.2	1	MG/L			3.42
27255-004	PR-WCS-01	6/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.45	0.05	MG/L	J		3.42
27255-004	PR-WCS-01	6/16/2009	0	U	160.2	TSS	1	1	MG/L	U		3.42
27255-003	PR-WCS-02	6/16/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		3.99
27255-003	PR-WCS-02	6/16/2009	0	U	300.0A	Nitrate (as N)	0.011	0.02	MG/L	B		3.99
27255-003	PR-WCS-02	6/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.99
27255-003	PR-WCS-02	6/16/2009	0	U	300	Nitrogen	0.43	0.15	MG/L			3.99
27255-003	PR-WCS-02	6/16/2009	0	U	365.2	Phosphorus	110	50	UG/L			3.99
27255-003	PR-WCS-02	6/16/2009	0	U	9060	TOC	7.3	1	MG/L			3.99
27255-003	PR-WCS-02	6/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.42	0.05	MG/L	J		3.99
27255-003	PR-WCS-02	6/16/2009	0	U	160.2	TSS	1	1	MG/L	U		3.99
27255-002	PR-WCS-03	6/16/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.44
27255-002	PR-WCS-03	6/16/2009	0	U	300.0A	Nitrate (as N)	0.013	0.02	MG/L	B		4.44
27255-002	PR-WCS-03	6/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.44
27255-002	PR-WCS-03	6/16/2009	0	U	300	Nitrogen	0.45	0.15	MG/L			4.44
27255-002	PR-WCS-03	6/16/2009	0	U	365.2	Phosphorus	115	50	UG/L			4.44
27255-002	PR-WCS-03	6/16/2009	0	U	9060	TOC	7.9	1	MG/L			4.44
27255-002	PR-WCS-03	6/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.44	0.05	MG/L	J		4.44
27255-002	PR-WCS-03	6/16/2009	0	U	160.2	TSS	1	1	MG/L	U		4.44
27255-001	PR-WCS-04	6/16/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		4.77
27255-001	PR-WCS-04	6/16/2009	0	U	300.0A	Nitrate (as N)	0.011	0.02	MG/L	B		4.77
27255-001	PR-WCS-04	6/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
27255-001	PR-WCS-04	6/16/2009	0	U	300	Nitrogen	0.45	0.15	MG/L			4.77
27255-001	PR-WCS-04	6/16/2009	0	U	365.2	Phosphorus	117	50	UG/L			4.77
27255-001	PR-WCS-04	6/16/2009	0	U	9060	TOC	7.8	1	MG/L			4.77
27255-001	PR-WCS-04	6/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.44	0.05	MG/L	J		4.77
27255-001	PR-WCS-04	6/16/2009	0	U	160.2	TSS	1	1	MG/L			4.77
27263-001	PR-WC-05	6/17/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		1.46
27263-001	PR-WC-05	6/17/2009	0	U	300.0A	Nitrate (as N)	0.024	0.02	MG/L			1.46
27263-001	PR-WC-05	6/17/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.46
27263-001	PR-WC-05	6/17/2009	0	U	300	Nitrogen	1.2	0.15	MG/L			1.46
27263-001	PR-WC-05	6/17/2009	0	U	365.2	Phosphorus	502	250	UG/L			1.46
27263-001	PR-WC-05	6/17/2009	0	U	9060	TOC	8.3	2	MG/L			1.46
27263-001	PR-WC-05	6/17/2009	0	U	351.2	Total Kjeldahl Nitrogen	1.2	0.05	MG/L			1.46
27263-001	PR-WC-05	6/17/2009	0	U	160.2	TSS	5	1	MG/L			1.46
27259-002	PR-WC-03	6/17/2009	0	U	10200 H	Chlorophyll a	1960	10	UG/L			2.1
27259-002	PR-WC-03	6/17/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.1
27259-002	PR-WC-03	6/17/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
27259-002	PR-WC-03	6/17/2009	0	U	300	Nitrogen	0.42	0.15	MG/L			2.1

## Appendix E

### 2009 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP
27259-002	PR-WC-03	6/17/2009	0	U	365.2	Phosphorus	171	50	UG/L			2.1
27259-002	PR-WC-03	6/17/2009	0	U	9060	TOC	5.6	1	MG/L			2.1
27259-002	PR-WC-03	6/17/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.42	0.05	MG/L	J		2.1
27259-002	PR-WC-03	6/17/2009	0	U	160.2	TSS	1	1	MG/L	U		2.1
27259-001	PR-WC-02	6/17/2009	0	U	10200 H	Chlorophyll a	490	10	UG/L			2.52
27259-001	PR-WC-02	6/17/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.52
27259-001	PR-WC-02	6/17/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.52
27259-001	PR-WC-02	6/17/2009	0	U	300	Nitrogen	0.55	0.15	MG/L			2.52
27259-001	PR-WC-02	6/17/2009	0	U	365.2	Phosphorus	159	50	UG/L			2.52
27259-001	PR-WC-02	6/17/2009	0	U	9060	TOC	5.9	1	MG/L			2.52
27259-001	PR-WC-02	6/17/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.55	0.05	MG/L			2.52
27259-001	PR-WC-02	6/17/2009	0	U	160.2	TSS	1	1	MG/L	U		2.52
27272-008	PR-WC-09	6/18/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.56
27272-008	PR-WC-09	6/18/2009	0	U	300.0A	Nitrate (as N)	3.6	0.2	MG/L			0.56
27272-008	PR-WC-09	6/18/2009	0	U	300.0A	Nitrite (as N)	0.0076	0.02	MG/L	B		0.56
27272-008	PR-WC-09	6/18/2009	0	U	300	Nitrogen	0.73	0.15	MG/L			0.56
27272-008	PR-WC-09	6/18/2009	0	U	365.2	Phosphorus	858	250	UG/L			0.56
27272-008	PR-WC-09	6/18/2009	0	U	9060	TOC	4.6	1	MG/L			0.56
27272-008	PR-WC-09	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.72	0.05	MG/L			0.56
27272-008	PR-WC-09	6/18/2009	0	U	160.2	TSS	5	1	MG/L			0.56
27272-007	PR-WC-08	6/18/2009	0	U	10200 H	Chlorophyll a	22.1	10	UG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	300.0A	Nitrate (as N)	0.89	0.02	MG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	300.0A	Nitrite (as N)	0.0072	0.02	MG/L	B		0.78
27272-007	PR-WC-08	6/18/2009	0	U	300	Nitrogen	1.7	0.15	MG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	365.2	Phosphorus	609	50	UG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	9060	TOC	6.7	1	MG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.82	0.05	MG/L			0.78
27272-007	PR-WC-08	6/18/2009	0	U	160.2	TSS	3	1	MG/L			0.78
27272-006	PR-WC-07	6/18/2009	0	U	10200 H	Chlorophyll a	14.4	10	UG/L			0.96
27272-006	PR-WC-07	6/18/2009	0	U	300.0A	Nitrate (as N)	0.21	0.02	MG/L			0.96
27272-006	PR-WC-07	6/18/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.96
27272-006	PR-WC-07	6/18/2009	0	U	300	Nitrogen	1.2	0.15	MG/L			0.96
27272-006	PR-WC-07	6/18/2009	0	U	365.2	Phosphorus	502	250	UG/L			0.96
27272-006	PR-WC-07	6/18/2009	0	U	9060	TOC	7.9	2	MG/L			0.96
27272-006	PR-WC-07	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.82	0.05	MG/L			0.96
27272-006	PR-WC-07	6/18/2009	0	U	160.2	TSS	2	1	MG/L			0.96
27272-004	PR-WC-06	6/18/2009	0	U	10200 H	Chlorophyll a	44.9	10	UG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	300.0A	Nitrate (as N)	0.085	0.02	MG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.1
27272-004	PR-WC-06	6/18/2009	0	U	300	Nitrogen	1.3	0.15	MG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	365.2	Phosphorus	550	250	UG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	9060	TOC	8.1	2	MG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	1.2	0.05	MG/L			1.1
27272-004	PR-WC-06	6/18/2009	0	U	160.2	TSS	4	1	MG/L			1.1
27272-003	PR-WCS-05	6/18/2009	0	U	10200 H	Chlorophyll a	0.48	10	UG/L	B		6.04
27272-003	PR-WCS-05	6/18/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		6.04
27272-003	PR-WCS-05	6/18/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.04
27272-003	PR-WCS-05	6/18/2009	0	U	300	Nitrogen	0.26	0.15	MG/L			6.04
27272-003	PR-WCS-05	6/18/2009	0	U	365.2	Phosphorus	59.2	50	UG/L			6.04
27272-003	PR-WCS-05	6/18/2009	0	U	9060	TOC	6.3	1	MG/L			6.04
27272-003	PR-WCS-05	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.26	0.05	MG/L	J		6.04
27272-003	PR-WCS-05	6/18/2009	0	U	160.2	TSS	1	1	MG/L			6.04
27272-002	PR-WCS-06	6/18/2009	0	U	10200 H	Chlorophyll a	0.48	10	UG/L	B		6.75
27272-002	PR-WCS-06	6/18/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		6.75
27272-002	PR-WCS-06	6/18/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.75
27272-002	PR-WCS-06	6/18/2009	0	U	300	Nitrogen	0.32	0.15	MG/L			6.75
27272-002	PR-WCS-06	6/18/2009	0	U	365.2	Phosphorus	61.5	50	UG/L			6.75
27272-002	PR-WCS-06	6/18/2009	0	U	9060	TOC	6.8	1	MG/L			6.75
27272-002	PR-WCS-06	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.32	0.05	MG/L	J		6.75

**Appendix E**

## 2009 Water Quality Analytical Data

Sample ID	COC Site ID	Sample Date	Depth (ft.)	Filt.	Method	Analyte	Conc.	MDL	Units	Lab Qual <sup>1</sup>	Rev Qual	Distance From STP
27272-002	PR-WCS-06	6/18/2009	0	U	160.2	TSS	1	1	MG/L	U		6.75
27272-001	PR-WCS-07	6/18/2009	0	U	10200 H	Chlorophyll a	0.59	10	UG/L	B		7.23
27272-001	PR-WCS-07	6/18/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		7.23
27272-001	PR-WCS-07	6/18/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		7.23
27272-001	PR-WCS-07	6/18/2009	0	U	300	Nitrogen	0.41	0.15	MG/L			7.23
27272-001	PR-WCS-07	6/18/2009	0	U	365.2	Phosphorus	54.4	50	UG/L			7.23
27272-001	PR-WCS-07	6/18/2009	0	U	9060	TOC	7.2	1	MG/L			7.23
27272-001	PR-WCS-07	6/18/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.41	0.05	MG/L	J		7.23
27272-001	PR-WCS-07	6/18/2009	0	U	160.2	TSS	2	1	MG/L			7.23
27276-006	PR-WC-15	6/19/2009	0	U	10200 H	Chlorophyll a	0.64	10	UG/L	B		-0.17
27276-006	PR-WC-15	6/19/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		-0.17
27276-006	PR-WC-15	6/19/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.17
27276-006	PR-WC-15	6/19/2009	0	U	300	Nitrogen	0.63	0.15	MG/L			-0.17
27276-006	PR-WC-15	6/19/2009	0	U	365.2	Phosphorus	35.4	50	UG/L	B		-0.17
27276-006	PR-WC-15	6/19/2009	0	U	9060	TOC	18.9	5	MG/L			-0.17
27276-006	PR-WC-15	6/19/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.63	0.05	MG/L			-0.17
27276-006	PR-WC-15	6/19/2009	0	U	160.2	TSS	1	1	MG/L	U		-0.17
27276-003	PR-WC-12-D7	6/19/2009	0	U	10200 H	Chlorophyll a	0.61	10	UG/L	B		-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	300	Nitrogen	0.59	0.15	MG/L			-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	365.2	Phosphorus	49.6	50	UG/L	B		-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	9060	TOC	17.9	5	MG/L			-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.59	0.05	MG/L			-0.04
27276-003	PR-WC-12-D7	6/19/2009	0	U	160.2	TSS	2	1	MG/L			-0.04
27276-002	PR-WC-11DS	6/19/2009	0	U	10200 H	Chlorophyll a	0.45	10	UG/L	B		0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	300.0A	Nitrate (as N)	2	0.2	MG/L			0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	300	Nitrogen	2.6	0.15	MG/L			0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	365.2	Phosphorus	597	250	UG/L			0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	9060	TOC	10.9	2	MG/L			0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.59	0.05	MG/L			0.01
27276-002	PR-WC-11DS	6/19/2009	0	U	160.2	TSS	1	1	MG/L	U		0.01
27276-001	PR-WC-10	6/19/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		0.3
27276-001	PR-WC-10	6/19/2009	0	U	300.0A	Nitrate (as N)	2	0.2	MG/L			0.3
27276-001	PR-WC-10	6/19/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
27276-001	PR-WC-10	6/19/2009	0	U	300	Nitrogen	2.6	0.15	MG/L			0.3
27276-001	PR-WC-10	6/19/2009	0	U	365.2	Phosphorus	538	250	UG/L			0.3
27276-001	PR-WC-10	6/19/2009	0	U	9060	TOC	10.1	2	MG/L			0.3
27276-001	PR-WC-10	6/19/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.59	0.05	MG/L			0.3
27276-001	PR-WC-10	6/19/2009	0	U	160.2	TSS	3	1	MG/L			0.3
27276-008	CONNETQUOT	6/19/2009	0	U	10200 H	Chlorophyll a	10	10	UG/L	U		
27276-008	CONNETQUOT	6/19/2009	0	U	300.0A	Nitrate (as N)	3.7	0.2	MG/L			
27276-008	CONNETQUOT	6/19/2009	0	U	300.0A	Nitrite (as N)	0.072	0.02	MG/L			
27276-008	CONNETQUOT	6/19/2009	0	U	300	Nitrogen	4.4	0.15	MG/L			
27276-008	CONNETQUOT	6/19/2009	0	U	365.2	Phosphorus	33	50	UG/L	B		
27276-008	CONNETQUOT	6/19/2009	0	U	9060	TOC	3	1	MG/L			
27276-008	CONNETQUOT	6/19/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.62	0.05	MG/L			
27276-008	CONNETQUOT	6/19/2009	0	U	160.2	TSS	1	1	MG/L	U		

**Round 3 : 7/7/2009**

27316-004	PR-WC-10	7/7/2009	0	U	10200 H	Chlorophyll a	0.43	10	UG/L	B J		0.3
27316-004	PR-WC-10	7/7/2009	0	U	300.0A	Nitrate (as N)	1.8	0.04	MG/L			0.3
27316-004	PR-WC-10	7/7/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
27316-004	PR-WC-10	7/7/2009	0	U	300	Nitrogen	2.3	0.15	MG/L			0.3
27316-004	PR-WC-10	7/7/2009	0	U	365.2	Phosphorus	1160	250	UG/L			0.3
27316-004	PR-WC-10	7/7/2009	0	U	9060	TOC	4.5	1	MG/L	J		0.3
27316-004	PR-WC-10	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.52	0.05	MG/L			0.3
27316-004	PR-WC-10	7/7/2009	0	U	160.2	TSS	4	1	MG/L			0.3
27316-003	PR-WC-09	7/7/2009	0	U	10200 H	Chlorophyll a	4.7	10	UG/L	B J		0.56

**Appendix E**

## 2009 Water Quality Analytical Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth (ft.)</b>	<b>Filt.</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP</b>
27316-003	PR-WC-09	7/7/2009	0	U	300.0A	Nitrate (as N)	1.3	0.04	MG/L			0.56
27316-003	PR-WC-09	7/7/2009	0	U	300.0A	Nitrite (as N)	0.0077	0.02	MG/L	B		0.56
27316-003	PR-WC-09	7/7/2009	0	U	300	Nitrogen	1.9	0.15	MG/L			0.56
27316-003	PR-WC-09	7/7/2009	0	U	365.2	Phosphorus	1070	250	UG/L			0.56
27316-003	PR-WC-09	7/7/2009	0	U	9060	TOC	4.6	1	MG/L	J		0.56
27316-003	PR-WC-09	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.6	0.05	MG/L			0.56
27316-003	PR-WC-09	7/7/2009	0	U	160.2	TSS	5	1	MG/L			0.56
27316-002	PR-WC-08	7/7/2009	0	U	10200 H	Chlorophyll a	40.6	10	UG/L	J		0.78
27316-002	PR-WC-08	7/7/2009	0	U	300.0A	Nitrate (as N)	0.39	0.02	MG/L			0.78
27316-002	PR-WC-08	7/7/2009	0	U	300.0A	Nitrite (as N)	0.015	0.02	MG/L	B		0.78
27316-002	PR-WC-08	7/7/2009	0	U	300	Nitrogen	1.5	0.15	MG/L			0.78
27316-002	PR-WC-08	7/7/2009	0	U	365.2	Phosphorus	698	250	UG/L			0.78
27316-002	PR-WC-08	7/7/2009	0	U	9060	TOC	6.3	1	MG/L	J		0.78
27316-002	PR-WC-08	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	1.1	0.05	MG/L			0.78
27316-002	PR-WC-08	7/7/2009	0	U	160.2	TSS	4	1	MG/L			0.78
27316-001	PR-WC-06	7/7/2009	0	U	10200 H	Chlorophyll a	5.9	10	UG/L	B J		1.1
27316-001	PR-WC-06	7/7/2009	0	U	300.0A	Nitrate (as N)	0.36	0.02	MG/L			1.1
27316-001	PR-WC-06	7/7/2009	0	U	300.0A	Nitrite (as N)	0.014	0.02	MG/L	B		1.1
27316-001	PR-WC-06	7/7/2009	0	U	300	Nitrogen	1.1	0.15	MG/L			1.1
27316-001	PR-WC-06	7/7/2009	0	U	365.2	Phosphorus	653	250	UG/L			1.1
27316-001	PR-WC-06	7/7/2009	0	U	9060	TOC	8.3	1	MG/L	J		1.1
27316-001	PR-WC-06	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.74	0.05	MG/L			1.1
27316-001	PR-WC-06	7/7/2009	0	U	160.2	TSS	4	1	MG/L			1.1
27315-003	PR-WC-03	7/7/2009	0	U	10200 H	Chlorophyll a	5	10	UG/L	B J		2.1
27315-003	PR-WC-03	7/7/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.1
27315-003	PR-WC-03	7/7/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
27315-003	PR-WC-03	7/7/2009	0	U	300	Nitrogen	0.51	0.15	MG/L			2.1
27315-003	PR-WC-03	7/7/2009	0	U	365.2	Phosphorus	261	50	UG/L			2.1
27315-003	PR-WC-03	7/7/2009	0	U	9060	TOC	9	1	MG/L	J		2.1
27315-003	PR-WC-03	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.51	0.05	MG/L			2.1
27315-003	PR-WC-03	7/7/2009	0	U	160.2	TSS	1	1	MG/L			2.1
27315-002	PR-WC-01	7/7/2009	0	U	10200 H	Chlorophyll a	1.1	10	UG/L	B J		2.98
27315-002	PR-WC-01	7/7/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.98
27315-002	PR-WC-01	7/7/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
27315-002	PR-WC-01	7/7/2009	0	U	300	Nitrogen	0.37	0.15	MG/L			2.98
27315-002	PR-WC-01	7/7/2009	0	U	365.2	Phosphorus	86.1	50	UG/L			2.98
27315-002	PR-WC-01	7/7/2009	0	U	9060	TOC	9	1	MG/L	J		2.98
27315-002	PR-WC-01	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.37	0.05	MG/L	J		2.98
27315-002	PR-WC-01	7/7/2009	0	U	160.2	TSS	3	1	MG/L			2.98
27315-001	PR-WCS-04	7/7/2009	0	U	10200 H	Chlorophyll a	0.55	10	UG/L	B J		4.77
27315-001	PR-WCS-04	7/7/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		4.77
27315-001	PR-WCS-04	7/7/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
27315-001	PR-WCS-04	7/7/2009	0	U	300	Nitrogen	0.43	0.15	MG/L			4.77
27315-001	PR-WCS-04	7/7/2009	0	U	365.2	Phosphorus	154	50	UG/L			4.77
27315-001	PR-WCS-04	7/7/2009	0	U	9060	TOC	9.5	1	MG/L	J		4.77
27315-001	PR-WCS-04	7/7/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.43	0.05	MG/L	J		4.77
27315-001	PR-WCS-04	7/7/2009	0	U	160.2	TSS	9	1	MG/L			4.77

**Round 4 : 7/14/2009 to 7/16/2009**

27361-003	PR-WC-12-D7	7/16/2009	0	U	10200 H	Chlorophyll a	2.7	10	UG/L	B J		-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	300.0A	Nitrate (as N)	0.0081	0.02	MG/L	B		-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	300	Nitrogen	0.35	0.15	MG/L			-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	365.2	Phosphorus	29.4	50	UG/L	B		-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	9060	TOC	6.6	1	MG/L			-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.34	0.05	MG/L	J		-0.04
27361-003	PR-WC-12-D7	7/16/2009	0	U	160.2	TSS	3	1	MG/L			-0.04
27361-005	STP-EFF-UVG	7/16/2009	0	U	10200 H	Chlorophyll a	0.43	10	UG/L	B J		0
27361-007	STP-EFF-UVG	7/16/2009	0	U	10200 H	Chlorophyll a	0.45	10	UG/L	B J		0
27361-005	STP-EFF-UVG	7/16/2009	0	U	300.0A	Nitrate (as N)	7.2	0.4	MG/L			0

**Appendix E**

## 2009 Water Quality Analytical Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth (ft.)</b>	<b>Filt.</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP</b>
27361-007	STP-EFF-UVG	7/16/2009	0	U	300.0A	Nitrate (as N)	7.1	0.4	MG/L			0
27361-005	STP-EFF-UVG	7/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0
27361-007	STP-EFF-UVG	7/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0
27361-005	STP-EFF-UVG	7/16/2009	0	U	300	Nitrogen	7.6	0.15	MG/L			0
27361-007	STP-EFF-UVG	7/16/2009	0	U	300	Nitrogen	7.8	0.15	MG/L			0
27361-005	STP-EFF-UVG	7/16/2009	0	U	365.2	Phosphorus	1630	250	UG/L			0
27361-007	STP-EFF-UVG	7/16/2009	0	U	365.2	Phosphorus	1690	250	UG/L			0
27361-005	STP-EFF-UVG	7/16/2009	0	U	9060	TOC	2.9	1	MG/L			0
27361-007	STP-EFF-UVG	7/16/2009	0	U	9060	TOC	2.9	1	MG/L			0
27361-005	STP-EFF-UVG	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.37	0.05	MG/L	J		0
27361-007	STP-EFF-UVG	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.68	0.05	MG/L			0
27361-005	STP-EFF-UVG	7/16/2009	0	U	160.2	TSS	1	1	MG/L	U		0
27361-007	STP-EFF-UVG	7/16/2009	0	U	160.2	TSS	1	1	MG/L	U		0
27361-001	PR-WC-10	7/16/2009	0	U	10200 H	Chlorophyll a	0.96	10	UG/L	B J		0.3
27361-001	PR-WC-10	7/16/2009	0	U	300.0A	Nitrate (as N)	5.2	0.4	MG/L			0.3
27361-001	PR-WC-10	7/16/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		0.3
27361-001	PR-WC-10	7/16/2009	0	U	300	Nitrogen	5.7	0.15	MG/L			0.3
27361-001	PR-WC-10	7/16/2009	0	U	365.2	Phosphorus	1280	250	UG/L			0.3
27361-001	PR-WC-10	7/16/2009	0	U	9060	TOC	3.4	1	MG/L			0.3
27361-001	PR-WC-10	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.5	0.05	MG/L			0.3
27361-001	PR-WC-10	7/16/2009	0	U	160.2	TSS	2	1	MG/L			0.3
27362-004	PR-WC-09	7/16/2009	0	U	10200 H	Chlorophyll a	0.44	10	UG/L	B J		0.56
27362-004	PR-WC-09	7/16/2009	0	U	300.0A	Nitrate (as N)	4.8	0.4	MG/L			0.56
27362-004	PR-WC-09	7/16/2009	0	U	300.0A	Nitrite (as N)	0.018	0.02	MG/L	B		0.56
27362-004	PR-WC-09	7/16/2009	0	U	300	Nitrogen	5.3	0.15	MG/L			0.56
27362-004	PR-WC-09	7/16/2009	0	U	365.2	Phosphorus	1150	250	UG/L			0.56
27362-004	PR-WC-09	7/16/2009	0	U	9060	TOC	3.4	1	MG/L			0.56
27362-004	PR-WC-09	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.53	0.05	MG/L	J		0.56
27362-004	PR-WC-09	7/16/2009	0	U	160.2	TSS	2	1	MG/L			0.56
27362-003	PR-WC-08	7/16/2009	0	U	10200 H	Chlorophyll a	6.2	10	UG/L	B J		0.78
27362-003	PR-WC-08	7/16/2009	0	U	300.0A	Nitrate (as N)	1.5	0.4	MG/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	300.0A	Nitrite (as N)	0.027	0.02	MG/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	300	Nitrogen	2	0.15	MG/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	365.2	Phosphorus	798	250	UG/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	9060	TOC	4.2	1	MG/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.51	0.05	MG/L			0.78
27362-003	PR-WC-08	7/16/2009	0	U	160.2	TSS	2	1	MG/L			0.78
27362-002	PR-WC-07	7/16/2009	0	U	10200 H	Chlorophyll a	5.9	10	UG/L	B J		0.96
27362-002	PR-WC-07	7/16/2009	0	U	300.0A	Nitrate (as N)	0.34	0.02	MG/L			0.96
27362-002	PR-WC-07	7/16/2009	0	U	300.0A	Nitrite (as N)	0.024	0.02	MG/L			0.96
27362-002	PR-WC-07	7/16/2009	0	U	300	Nitrogen	1.1	0.15	MG/L			0.96
27362-002	PR-WC-07	7/16/2009	0	U	365.2	Phosphorus	577	250	UG/L			0.96
27362-002	PR-WC-07	7/16/2009	0	U	9060	TOC	5.5	1	MG/L			0.96
27362-002	PR-WC-07	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.78	0.05	MG/L			0.96
27362-002	PR-WC-07	7/16/2009	0	U	160.2	TSS	4	1	MG/L			0.96
27362-001	PR-WC-06	7/16/2009	0	U	10200 H	Chlorophyll a	11.1	10	UG/L	J		1.1
27362-001	PR-WC-06	7/16/2009	0	U	300.0A	Nitrate (as N)	0.29	0.02	MG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	300.0A	Nitrite (as N)	0.021	0.02	MG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	300	Nitrogen	1.6	0.15	MG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	365.2	Phosphorus	638	250	UG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	9060	TOC	6.3	1	MG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	1.3	0.05	MG/L			1.1
27362-001	PR-WC-06	7/16/2009	0	U	160.2	TSS	48	1	MG/L			1.1
27354-007	PR-WC-05	7/15/2009	0	U	10200 H	Chlorophyll a	3	10	UG/L	B J		1.46
27354-007	PR-WC-05	7/15/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		1.46
27354-007	PR-WC-05	7/15/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		1.46
27354-007	PR-WC-05	7/15/2009	0	U	300	Nitrogen	0.93	0.15	MG/L			1.46
27354-007	PR-WC-05	7/15/2009	0	U	365.2	Phosphorus	489	250	UG/L			1.46
27354-007	PR-WC-05	7/15/2009	0	U	9060	TOC	8	1	MG/L			1.46

**Appendix E**

## 2009 Water Quality Analytical Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth (ft.)</b>	<b>Filt.</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP</b>
27354-007	PR-WC-05	7/15/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.93	0.05	MG/L			1.46
27354-007	PR-WC-05	7/15/2009	0	U	160.2	TSS	2	1	MG/L			1.46
27354-005	PR-WC-03	7/15/2009	0	U	10200 H	Chlorophyll a	3.5	10	UG/L	B J		2.1
27354-005	PR-WC-03	7/15/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		2.1
27354-005	PR-WC-03	7/15/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.1
27354-005	PR-WC-03	7/15/2009	0	U	300	Nitrogen	0.43	0.15	MG/L			2.1
27354-005	PR-WC-03	7/15/2009	0	U	365.2	Phosphorus	172	50	UG/L			2.1
27354-005	PR-WC-03	7/15/2009	0	U	9060	TOC	6.9	1	MG/L			2.1
27354-005	PR-WC-03	7/15/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.43	0.05	MG/L	J		2.1
27354-005	PR-WC-03	7/15/2009	0	U	160.2	TSS	2	1	MG/L			2.1
27354-003	PR-WC-01	7/15/2009	0	U	10200 H	Chlorophyll a	0.88	10	UG/L	B J		2.98
27354-003	PR-WC-01	7/15/2009	0	U	300.0A	Nitrate (as N)	0.01	0.02	MG/L	B		2.98
27354-003	PR-WC-01	7/15/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		2.98
27354-003	PR-WC-01	7/15/2009	0	U	300	Nitrogen	0.3	0.15	MG/L			2.98
27354-003	PR-WC-01	7/15/2009	0	U	365.2	Phosphorus	63.7	50	UG/L			2.98
27354-003	PR-WC-01	7/15/2009	0	U	9060	TOC	6.5	1	MG/L			2.98
27354-003	PR-WC-01	7/15/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.29	0.05	MG/L	J		2.98
27354-003	PR-WC-01	7/15/2009	0	U	160.2	TSS	4	1	MG/L			2.98
27354-002	PR-WCS-01	7/15/2009	0	U	10200 H	Chlorophyll a	1.1	10	UG/L	B J		3.42
27354-002	PR-WCS-01	7/15/2009	0	U	300.0A	Nitrate (as N)	0.0064	0.02	MG/L	B		3.42
27354-002	PR-WCS-01	7/15/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.42
27354-002	PR-WCS-01	7/15/2009	0	U	300	Nitrogen	0.29	0.15	MG/L			3.42
27354-002	PR-WCS-01	7/15/2009	0	U	365.2	Phosphorus	85.8	50	UG/L			3.42
27354-002	PR-WCS-01	7/15/2009	0	U	9060	TOC	6.3	1	MG/L			3.42
27354-002	PR-WCS-01	7/15/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.28	0.05	MG/L	J		3.42
27354-002	PR-WCS-01	7/15/2009	0	U	160.2	TSS	4	1	MG/L			3.42
27354-001	PR-WCS-02	7/15/2009	0	U	10200 H	Chlorophyll a	1	10	UG/L	B J		3.99
27354-001	PR-WCS-02	7/15/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		3.99
27354-001	PR-WCS-02	7/15/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		3.99
27354-001	PR-WCS-02	7/15/2009	0	U	300	Nitrogen	0.26	0.15	MG/L			3.99
27354-001	PR-WCS-02	7/15/2009	0	U	365.2	Phosphorus	103	50	UG/L			3.99
27354-001	PR-WCS-02	7/15/2009	0	U	9060	TOC	6.3	1	MG/L			3.99
27354-001	PR-WCS-02	7/15/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.26	0.05	MG/L	J		3.99
27354-001	PR-WCS-02	7/15/2009	0	U	160.2	TSS	6	1	MG/L			3.99
27347-005	PR-WCS-03	7/14/2009	0	U	10200 H	Chlorophyll a	1.1	10	UG/L	B		4.44
27347-005	PR-WCS-03	7/14/2009	0	U	300.0A	Nitrate (as N)	0.011	0.02	MG/L	B		4.44
27347-005	PR-WCS-03	7/14/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.44
27347-005	PR-WCS-03	7/14/2009	0	U	300	Nitrogen	0.35	0.15	MG/L			4.44
27347-005	PR-WCS-03	7/14/2009	0	U	365.2	Phosphorus	103	50	UG/L			4.44
27347-005	PR-WCS-03	7/14/2009	0	U	9060	TOC	6.6	1	MG/L			4.44
27347-005	PR-WCS-03	7/14/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.34	0.05	MG/L	J		4.44
27347-005	PR-WCS-03	7/14/2009	0	U	160.2	TSS	3	1	MG/L			4.44
27347-004	PR-WCS-04	7/14/2009	0	U	10200 H	Chlorophyll a	1.3	10	UG/L	B		4.77
27347-004	PR-WCS-04	7/14/2009	0	U	300.0A	Nitrate (as N)	0.0093	0.02	MG/L	B		4.77
27347-004	PR-WCS-04	7/14/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		4.77
27347-004	PR-WCS-04	7/14/2009	0	U	300	Nitrogen	0.36	0.15	MG/L			4.77
27347-004	PR-WCS-04	7/14/2009	0	U	365.2	Phosphorus	103	50	UG/L			4.77
27347-004	PR-WCS-04	7/14/2009	0	U	9060	TOC	6.7	1	MG/L			4.77
27347-004	PR-WCS-04	7/14/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.35	0.05	MG/L	J		4.77
27347-004	PR-WCS-04	7/14/2009	0	U	160.2	TSS	6	1	MG/L			4.77
27347-003	PR-WCS-05	7/14/2009	0	U	10200 H	Chlorophyll a	2.1	10	UG/L	B		6.04
27347-003	PR-WCS-05	7/14/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		6.04
27347-003	PR-WCS-05	7/14/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.04
27347-003	PR-WCS-05	7/14/2009	0	U	300	Nitrogen	0.32	0.15	MG/L			6.04
27347-003	PR-WCS-05	7/14/2009	0	U	365.2	Phosphorus	56.4	50	UG/L			6.04
27347-003	PR-WCS-05	7/14/2009	0	U	9060	TOC	6.3	1	MG/L			6.04
27347-003	PR-WCS-05	7/14/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.32	0.05	MG/L	J		6.04
27347-003	PR-WCS-05	7/14/2009	0	U	160.2	TSS	2	1	MG/L			6.04
27347-002	PR-WCS-06	7/14/2009	0	U	10200 H	Chlorophyll a	4.3	10	UG/L	B		6.75

**Appendix E**

## 2009 Water Quality Analytical Data

<b>Sample ID</b>	<b>COC Site ID</b>	<b>Sample Date</b>	<b>Depth (ft.)</b>	<b>Filt.</b>	<b>Method</b>	<b>Analyte</b>	<b>Conc.</b>	<b>MDL</b>	<b>Units</b>	<b>Lab Qual<sup>1</sup></b>	<b>Rev Qual</b>	<b>Distance From STP</b>
27347-002	PR-WCS-06	7/14/2009	0	U	300.0A	Nitrate (as N)	0.02	0.02	MG/L	U		6.75
27347-002	PR-WCS-06	7/14/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		6.75
27347-002	PR-WCS-06	7/14/2009	0	U	300	Nitrogen	0.63	0.15	MG/L			6.75
27347-002	PR-WCS-06	7/14/2009	0	U	365.2	Phosphorus	61.3	50	UG/L			6.75
27347-002	PR-WCS-06	7/14/2009	0	U	9060	TOC	6.6	1	MG/L			6.75
27347-002	PR-WCS-06	7/14/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.63	0.05	MG/L			6.75
27347-002	PR-WCS-06	7/14/2009	0	U	160.2	TSS	2	1	MG/L			6.75
27347-001	PR-WCS-07	7/14/2009	0	U	10200 H	Chlorophyll a	2	10	UG/L	B		7.23
27347-001	PR-WCS-07	7/14/2009	0	U	300.0A	Nitrate (as N)	0.0086	0.02	MG/L	B		7.23
27347-001	PR-WCS-07	7/14/2009	0	U	300.0A	Nitrite (as N)	0.02	0.02	MG/L	U		7.23
27347-001	PR-WCS-07	7/14/2009	0	U	300	Nitrogen	0.45	0.15	MG/L			7.23
27347-001	PR-WCS-07	7/14/2009	0	U	365.2	Phosphorus	63.7	50	UG/L			7.23
27347-001	PR-WCS-07	7/14/2009	0	U	9060	TOC	6.8	1	MG/L			7.23
27347-001	PR-WCS-07	7/14/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.44	0.05	MG/L	J		7.23
27347-001	PR-WCS-07	7/14/2009	0	U	160.2	TSS	5	1	MG/L			7.23
27361-006	CONNETQUOT	7/16/2009	0	U	10200 H	Chlorophyll a	0.47	10	UG/L	B J		
27361-006	CONNETQUOT	7/16/2009	0	U	300.0A	Nitrate (as N)	4.4	0.4	MG/L			
27361-006	CONNETQUOT	7/16/2009	0	U	300.0A	Nitrite (as N)	0.069	0.02	MG/L			
27361-006	CONNETQUOT	7/16/2009	0	U	300	Nitrogen	4.8	0.15	MG/L			
27361-006	CONNETQUOT	7/16/2009	0	U	365.2	Phosphorus	24.4	50	UG/L	B		
27361-006	CONNETQUOT	7/16/2009	0	U	9060	TOC	1.8	1	MG/L			
27361-006	CONNETQUOT	7/16/2009	0	U	351.2	Total Kjeldahl Nitrogen	0.34	0.05	MG/L	J		
27361-006	CONNETQUOT	7/16/2009	0	U	160.2	TSS	3	1	MG/L			

<sup>1</sup> Qualifiers

B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
A	Brown Bullhead	4/15/2009	09-91	254	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-93	246	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-101	214	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-99	220	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-106	210	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-114	195	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-118	179	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-121	171	3M	2M	3M	Poor mount	
A	Brown Bullhead	4/15/2009	09-84A	301	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-86	286	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-90	255	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-92	251	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-94	210	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-110	200	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-111	199	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-112	199	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-117	181	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-119	175	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-123	145	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-85A	300	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-88	266	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-100	219	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-102	211	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-107	210	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-115	194	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-116	185	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-120	172	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-87	285	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-89	260	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-95	250	4M	4M	4M		
A	Brown Bullhead	4/15/2009	09-96	250	4M	4M	4M		

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
A	Brown Bullhead	4/15/2009	09-97	224	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-98	220	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-103	211	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-104	211	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-105	210	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-108	201	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-109	200	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-113	198	3M	3M	3M		
A	Brown Bullhead	4/15/2009	09-122	170	2M	2M	2M	Poor mount	
A	Chain Pickerel	4/15/2009	09-141	272	2M	2M	2M		
A	Chain Pickerel	4/15/2009	09-142	143	1M	1M	1M		
A	Largemouth Bass	4/15/2009	09-143	245	3M	2M	3M		
A	Pumpkinseed	4/15/2009	09-129	170	4M	2+	2+		
A	Pumpkinseed	4/15/2009	09-131	165	3M	2+	2+		
A	Pumpkinseed	4/15/2009	09-134	150	2M	2M	2M		
A	Pumpkinseed	4/15/2009	09-138	114	2M	1M	1M		
A	Pumpkinseed	4/15/2009	09-139	111	2M	2M	2M		
A	Pumpkinseed	4/15/2009	09-128	171	5M	4	3+	Annulous at OM	
A	Pumpkinseed	4/15/2009	09-132	162	3M	3	3M		
A	Pumpkinseed	4/15/2009	09-133	160	3M	2+	3M		
A	Pumpkinseed	4/15/2009	09-135	132	2M	1M	2M	Hard-to-find one near focus	
A	Pumpkinseed	4/15/2009	09-125	175	4M	3+	4M		
A	Pumpkinseed	4/15/2009	09-126	172	4M	3+	4M		
A	Pumpkinseed	4/15/2009	09-127	171	4M	3+	3+	Counted annulus near focus	
A	Pumpkinseed	4/15/2009	09-137	120	1M	1M	1M		
A	Pumpkinseed	4/15/2009	09-124	180	4M	2+	2+		
A	Pumpkinseed	4/15/2009	09-130	165	3M	2+	3+		
A	Pumpkinseed	4/15/2009	09-136	124	2M	1	2	Hard-to-find one near focus	
A	Pumpkinseed	4/15/2009	09-140	105	2M	1	1		

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
C	Black Crappie	4/16/2009	09-182	174					
C	Bluegill	4/16/2009	09-166	138	2M	2M	2M		
C	Bluegill	4/16/2009	09-173	130	2M	2M	2M	Hard to find one near focus	
C	Bluegill	4/16/2009	09-174	124	2M	2M	2M		
C	Bluegill	4/16/2009	09-175	122	2M	2M	2M		
C	Bluegill	4/16/2009	09-176	121	2M	2M	2M		
C	Bluegill	4/16/2009	09-161	200	3	3	4		
C	Bluegill	4/16/2009	09-165	139	2M	2M	2M		
C	Bluegill	4/16/2009	09-178	113	2M	1M	2M		
C	Bluegill	4/16/2009	09-167	138	2M	2M	2M		
C	Bluegill	4/16/2009	09-168	133	2	2M	2M		
C	Bluegill	4/16/2009	09-169	133	2M	2M	2M		
C	Bluegill	4/16/2009	09-172	130	2M	2M	2M		
C	Bluegill	4/16/2009	09-162	190	4M	4M	4M		
C	Bluegill	4/16/2009	09-163	146	2M	2M	2M		
C	Bluegill	4/16/2009	09-164	140	2M	2M	2M		
C	Bluegill	4/16/2009	09-170	133	2M	2M	2M		
C	Bluegill	4/16/2009	09-171	130	2M	2M	2M		
C	Bluegill	4/16/2009	09-177	118	2M	1M	2M		
C	Brown Bullhead	4/16/2009	09-183	209	4M	3M	4M		Mark between 0 and 1
C	Brown Bullhead	4/16/2009	09-184	300	4M	3M	4M		Poor mount
C	Brown Bullhead	4/16/2009	09-186	190	3M	2M	3M		
C	Brown Bullhead	4/16/2009	09-185	250	3M	3M	3M		Several marks between the annuli
C	Largemouth Bass	4/16/2009	09-179	226	3M	2+ OR 3m	3M		
C	Largemouth Bass	4/16/2009	09-188	222	4M	2+	2+		
C	Largemouth Bass	4/16/2009	09-192	169	2M	2+	2M		
C	Largemouth Bass	4/16/2009	09-187	250	3M	2+	2+	4M w/2nd indistinct	
C	Largemouth Bass	4/16/2009	09-181	196	2M	2+	2M		
C	Largemouth Bass	4/16/2009	09-190	204	4M	2+	3M		

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
C	Largemouth Bass	4/16/2009	09-180	216	3M	2+	2+		
C	Largemouth Bass	4/16/2009	09-189	205	4M	2+	2+		
C	Largemouth Bass	4/16/2009	09-191	195	3M	3+	2+		
C	Largemouth Bass	4/16/2009	09-193	145	2M	2M	2M		
C	Pumpkinseed	4/16/2009	09-144	182	3M	3M	3M		
C	Pumpkinseed	4/16/2009	09-147	172	4+	3	4+		
C	Pumpkinseed	4/16/2009	09-151	163	4M	4M	4M		
C	Pumpkinseed	4/16/2009	09-154	160	3M	2M	3M		
C	Pumpkinseed	4/16/2009	09-146	178	3+	3+	3+		
C	Pumpkinseed	4/16/2009	09-148	179	4	3M	4		
C	Pumpkinseed	4/16/2009	09-152	162	4M	3M	3M		
C	Pumpkinseed	4/16/2009	095-159	110					
C	Pumpkinseed	4/16/2009	09-149	168	4	3+	3+		
C	Pumpkinseed	4/16/2009	09-150	166	5M	4M	4M		
C	Pumpkinseed	4/16/2009	09-156	153	2M	2M	2M		
C	Pumpkinseed	4/16/2009	09-145	179	3+	3+	3+		
C	Pumpkinseed	4/16/2009	09-153	152	3M	3M	3M		
								Counted one very near focus	
C	Pumpkinseed	4/16/2009	09-155	160	4+	4+	4+		
C	Pumpkinseed	4/16/2009	09-157	157	2M	2M	2M		
C	Pumpkinseed	4/16/2009	09-158	146	2M	2M	2M		
C	Pumpkinseed	4/16/2009	09-160	110	2	2M	2M	2nd annulus right at edge	
D	Brown Bullhead	5/5/2009	09-196	275	4M	4M	4M	Poor mount; cut on angle	
D	Brown Bullhead	6/2/2009	09-220	210	3M	3M	3M	First mounted otolith could not be read with certainty, so mounted 2nd otolith	Second annulus hard to see, not well defined
D	Brown Bullhead	6/2/2009	09-223	201	3M	3M	3M		
D	Brown Bullhead	6/2/2009	09-224	154	3M	3M	3M		
D	Brown Bullhead	5/5/2009	09-194	310	4M	4M	4M	Poor mount cut on angle	Thin OM

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
D	Brown Bullhead	5/5/2009	09-195	300	4M	4M	4M		
D	Brown Bullhead	5/5/2009	09-197	270	4M	4M	4M	Poor mount; cut on angle	
D	Brown Bullhead	5/5/2009	09-202	190	3M	2M	3M		
D	Brown Bullhead	5/7/2009	09-209	284	4M	4M	4M		
D	Brown Bullhead	5/7/2009	09-210	260	4M	4M	4M		
D	Brown Bullhead	6/2/2009	09-218	215	3M	3M	3M		
D	Brown Bullhead	6/2/2009	09-219	212	3M	3M	3M		
D	Brown Bullhead	6/2/2009	09-221	206	3M	3M	3M		
D	Brown Bullhead	5/5/2009	09-198	260	4M	4M	4M	194-197 prob. 4M based on this	
D	Brown Bullhead	5/5/2009	09-200	200	3M	3M	3M	Some checks past 2nd annulus	
D	Brown Bullhead	5/5/2009	09-201	193	3M	3M	3M		2nd annulus faint
D	Brown Bullhead	5/7/2009	09-206	335	4M	3+	4M		
D	Brown Bullhead	5/7/2009	09-207	305	4M	4M	4M		
D	Brown Bullhead	6/2/2009	09-217	226	3M	3M	3M	First mounted otolith could not be read with certainty, so mounted 2nd otolith	
D	Brown Bullhead	5/5/2009	09-199	220	3M	2+	3M		
D	Brown Bullhead	5/7/2009	09-208	291	4M	4M	4M		
D	Brown Bullhead	5/7/2009	09-211	181	3M	5M	3M		
D	Brown Bullhead	6/2/2009	09-215	265	4M	4M	4M		
D	Brown Bullhead	6/2/2009	09-216	249	4M	4M	4M	First mounted otolith could not be read with certainty, so mounted 2nd otolith	
D	Brown Bullhead	6/2/2009	09-222	206	3M	3M	3M		
D	Largemouth Bass	5/5/2009	09-204	184	2+	2+	2+		
D	Largemouth Bass	5/5/2009	09-203	423	6+	7M	7M		
D	Largemouth Bass	5/5/2009	09-205	165	2+	2+	2+		
D	Largemouth Bass	5/7/2009	09-214	205	2+	2+	2+		

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
D	Pumpkinseed	5/7/2009	09-212	192	6M	5+	5+		
D	Pumpkinseed	5/7/2009	09-213	111	1+	1+	1+		
D	Pumpkinseed	6/2/2009	09-230	81	1+	1+	1+		
D	Pumpkinseed	6/2/2009	09-231	79	1+	1+	1+		
D	Pumpkinseed	6/2/2009	09-225	153	6	6	6		
D	Pumpkinseed	6/2/2009	09-226	152	4+	4+	4+		
D	Pumpkinseed	6/2/2009	09-227	131	4+	4+	4+		
D	Pumpkinseed	6/2/2009	09-228	120	2+	2+	2+		
D	Pumpkinseed	6/2/2009	09-229	89	1+	1+	1+		
D	Pumpkinseed	6/2/2009	09-232	81	1+	1+	1+		
SR	Brown Bullhead	4/9/2009	09-83	174	3M	3M	3M		
SR	Brown Bullhead	4/9/2009	09-82	144	3M	3M	3M		
SR	Chain Pickerel	4/9/2009	09-84	275	3+	2+	2+		
SR	Largemouth Bass	4/9/2009	09-85	301	4+	4+	4+		
MR	Bluegill	4/7/2009	09-76	178	3M	4M	3M		
MR	Brown Bullhead	4/7/2009	09-49	266	4M	4M	4M		
MR	Brown Bullhead	4/7/2009	09-51	246	7M	7M	7M	Counted 1 near focus	
								Did not count 1 near focus	
MR	Brown Bullhead	4/7/2009	09-58	223	3M	4M	4M		
MR	Brown Bullhead	4/7/2009	09-68	190	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-70	187	3M	2M	3M	Counted 1 near focus	Difficult to see OM
MR	Brown Bullhead	4/7/2009	09-71	187	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-55	242	4M	4M	4M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-56	238	4M	4M	4M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-57	226	3M	3M	3M	Did not count 1 near focus	
MR	Brown Bullhead	4/7/2009	09-65	199	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-72	185	3M	2M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-46	325	4M	4M	4M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-48	312	7M	7M	7M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-52	250	4M	4M	4M	Counted 1 near focus	

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
MR	Brown Bullhead	4/7/2009	09-53	248	4M	4M	4M	Did not count 1 near focus	
MR	Brown Bullhead	4/7/2009	09-59	222	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-61	210	3M	3M	3M		Mark between 1 and 2
MR	Brown Bullhead	4/7/2009	09-62	202	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-63	200	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-66	197	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-69	188	3M	2+	3M	Counted 1 near focus	Difficult to see OM
MR	Brown Bullhead	4/7/2009	09-45	346	4M	4M	4M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-47	315	7M	7M	7M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-50	251	5M	5M	5M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-54	247	4M	4M	4M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-60	210	3M	3M	3M	Did not count 1 near focus	Mark between 2 and OM
MR	Brown Bullhead	4/7/2009	09-64	199	3M	3M	3M	Counted 1 near focus	
MR	Brown Bullhead	4/7/2009	09-67	195	3M	3M	3M	Counted 1 near focus	
MR	Chain Pickerel	4/7/2009	09-73	330	2+	2+	2+		
MR	Largemouth Bass	4/7/2009	09-80	340	4+	4+	4+		
MR	Largemouth Bass	4/7/2009	09-81	309	5+	5M	5		
MR	Pumpkinseed	4/7/2009	09-79	146	3	3M	3M		
MR	Pumpkinseed	4/7/2009	09-74	155	3+	3+	3+		
MR	Pumpkinseed	4/7/2009	09-78	156	3+	3M	3+		
MR	Pumpkinseed	4/7/2009	09-75	144	4+	4+	4+		
MR	Pumpkinseed	4/7/2009	09-77	170	4+	3+	3+		
DP	Bluegill	3/20/2009	09-32	200	4M	4M	4M		
DP	Bluegill	3/20/2009	09-36	203	4M	4M	4M		
DP	Bluegill	3/20/2009	09-35	215	4M	5M	5M		
DP	Bluegill	3/20/2009	09-20	222	6M	5M	6M		
DP	Bluegill	3/20/2009	09-31	225	6M	6M	6M		
DP	Bluegill	3/20/2009	09-21	200	4M	4M	4M		
DP	Bluegill	3/20/2009	09-37	200	4M	4M	4M		

**Appendix F**

 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
DP	Bluegill	3/20/2009	09-26	212	5M	5M	5M		
DP	Bluegill	3/20/2009	09-28	220	5M	5M	5M		
DP	Bluegill	3/20/2009	09-23	217	4M	4M	4M		
DP	Bluegill	3/20/2009	09-24	203	5M	4M	4M		
DP	Bluegill	3/20/2009	09-33	205	5M	5M	5M		
DP	Bluegill	3/20/2009	09-34	210	5M	5M	5M		
DP	Bluegill	3/20/2009	09-10	220	5M	4M	5M		
DP	Bluegill	3/20/2009	09-11	224	6M	6M	6M		
DP	Bluegill	3/20/2009	09-12	212	5M	5M	5M		
DP	Bluegill	3/20/2009	09-25	227	7M	7	7M		
DP	Bluegill	3/20/2009	09-29	203	4M	4+	4M		
DP	Bluegill	3/20/2009	09-22	213	4M	4M	4M		
DP	Bluegill	3/20/2009	09-27	218	6M	5M	5M		
DP	Bluegill	3/20/2009	09-30	218	6M	6M	6M		
DP	Bluegill	3/20/2009	09-38	217	4M	4M	4M		
DP	Brown Bullhead	3/19/2009	09-05	305	5M	5M	5M		
DP	Brown Bullhead	3/19/2009	09-08	335	4M	4M	4M		
DP	Brown Bullhead	3/19/2009	09-01	340	5M	5M	5M		
DP	Brown Bullhead	3/19/2009	09-02	320	4M	4M	4M		
DP	Brown Bullhead	3/20/2009	09-13	345	7M	7M	7M		
DP	Brown Bullhead	3/19/2009	09-09	330	4M	4M	4M		
DP	Brown Bullhead	3/19/2009	09-04	305	8M	8M	8M		
DP	Brown Bullhead	3/20/2009	09-14	335	7M	7M	7M		
DP	Brown Bullhead	3/19/2009	09-03	347	14M	14M	14M		
DP	Brown Bullhead	3/19/2009	09-07	327	5M	5M	5M		
DP	Brown Bullhead	3/20/2009	09-06	317	5M	5M	5M		
DP	Chain Pickerel	3/20/2009	09-15	537	6M	6M	6M		
DP	Chain Pickerel	3/20/2009	09-17	475	4M	5	4+		
DP	Chain Pickerel	3/20/2009	09-16	507	5M	5M	5M		
DP	Chain Pickerel	3/20/2009	09-18	405	3M	3M	3M		
DP	Largemouth Bass	3/20/2009	09-19	310	4M	3M	3M		

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 2009 Peconic River Fish Scale and Otolith Age Interpretation<sup>1</sup>

<b>Area</b>	<b>Species</b>	<b>Date Collected</b>	<b>ID No.</b>	<b>Length (mm)<sup>2</sup></b>	<b>Age Interpreter 1</b>	<b>Age Interpreter 2</b>	<b>Final Agreed Age</b>	<b>Notes Interpreter 1</b>	<b>Notes Interpreter 2</b>
DP	Pumpkinseed	3/20/2009	09-42	188	4M	4M	4M		
DP	Pumpkinseed	3/20/2009	09-39	187	6M	6M	6M		
DP	Pumpkinseed	3/20/2009	09-40	188	5M	4M	4M		
DP	Pumpkinseed	3/20/2009	09-41	188	7M	7M	7M		
LL	Brown Bullhead	6/16/2009	09-233	310					
LL	Brown Bullhead	6/16/2009	09-235	305					
LL	Brown Bullhead	6/16/2009	09-234	300					
LL	Brown Trout	6/16/2009	09-245	339					
LL	Brown Trout	6/16/2009	09-247	313					
LL	Brown Trout	6/16/2009	09-242	310					
LL	Brown Trout	6/16/2009	09-248	340					
LL	Brown Trout	6/16/2009	09-249	396					
LL	Brown Trout	6/16/2009	09-250	384					
LL	Brown Trout	6/16/2009	09-243	323					
LL	Brown Trout	6/16/2009	09-244	324					
LL	Brown Trout	6/16/2009	09-246	334					
LL	Largemouth Bass	6/16/2009	09-236	240	3	3	3		
LL	Largemouth Bass	6/16/2009	09-238	255	3	3	3		
LL	Largemouth Bass	6/16/2009	09-241	460	10M	10M	10M	Probably older-outer annuli close together	Probably older
LL	Largemouth Bass	6/16/2009	09-237	255	3M	4	4		
LL	Largemouth Bass	6/16/2009	09-239	310	3	3	3		
LL	Largemouth Bass	6/16/2009	09-240	350	5+	5+	5+		

<sup>1</sup>Scale and Otolith age interpretation performed by Ecologic, LLC, Cazenovia, New York.

<sup>2</sup> Length from COC

Appendix G - 2009 Peconic River Fish Samples																
Mercury																
Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual <sup>1</sup>	Rev Qual	
A	27077-001	27077-bc1	Brown Bullhead	301	828	238	4	228191	4/15/2009	1330	EPA 7471A	0.308	0.00383	N		
A	27077-002	27077-bc2	Brown Bullhead	286	682	180	4	228191	4/15/2009	1330	EPA 7471A	0.239	0.0034	N		
A	27077-003	27077-bc3	Brown Bullhead	260	776	200	4	228191	4/15/2009	1330	EPA 7471A	0.276	0.00372	N		
A	27077-004	27077-bc4	Brown Bullhead	250	716	192	4	228191	4/15/2009	1330	EPA 7471A	0.116	0.00348	N		
A	27077-005	27077-bc5	Brown Bullhead	234	788	212	3.5	228191	4/15/2009	1330	EPA 7471A	0.319	0.00404	N		
A	27077-006	27077-bc6	Brown Bullhead	217	680	194	3	228191	4/15/2009	1330	EPA 7471A	0.196	0.00384	N		
A	27077-007	27077-bc7	Brown Bullhead	210	610	138	3	228191	4/15/2009	1330	EPA 7471A	0.273	0.00373	N		
A	27077-008	27077-bc8	Brown Bullhead	200	518	118	3	228191	4/15/2009	1330	EPA 7471A	0.214	0.00354	N		
A	27077-009	27077-bc9	Brown Bullhead	191	464	100	3	228191	4/15/2009	1330	EPA 7471A	0.187	0.0034	N		
A	27077-010	27077-bc10	Brown Bullhead	169	358	74	2.8	228191	4/15/2009	1330	EPA 7471A	0.279	0.00395	N		
A	27077-011	27077-bc11	Pumpkinseed	175	550	196	3.3	228191	4/15/2009	1330	EPA 7471A	0.557	0.00408	N		
A	27077-012	27077-bc12	Pumpkinseed	167	570	204	2.6	228191	4/15/2009	1330	EPA 7471A	0.472	0.0036	N		
A	27077-013	27077-bc13	Pumpkinseed	137	320	118	2	228191	4/15/2009	1330	EPA 7471A	0.236	0.00381	N		
A	27077-014	27077-bc14	Pumpkinseed	110	84	30	1.3	228191	4/15/2009	1330	EPA 7471A	0.319	0.00405	N		
A	27077-015	09-141	Chain Pickerel	272	108	40	2	228191	4/15/2009	1330	EPA 7471A	0.349	0.00378	N		
A	27077-016	09-142	Chain Pickerel	143	16	8	1	228191	4/15/2009	1330	EPA 7471A	0.167	0.00378	N		
A	27077-017	09-143	Largemouth Bass	245	216	88	3	228191	4/15/2009	1330	EPA 7471A	0.328	0.00359	N		
C	27080-001	27080-bc1	Pumpkinseed	178	602	212	3.4	228249	4/16/2009	1205	EPA 7471A	0.327	0.00352			
C	27080-002	27080-bc2	Pumpkinseed	162	500	212	3.4	228249	4/16/2009	1205	EPA 7471A	0.383	0.00388			
C	27080-003	27080-bc3	Pumpkinseed	155	382	190	2.6	228249	4/16/2009	1205	EPA 7471A	0.347	0.00342			
C	27080-004	09-159	Pumpkinseed	110	24	18		228249	4/16/2009	1205	EPA 7471A	0.0952	0.00392			
C	27080-005	09-160	Pumpkinseed	110	24	18	2	228249	4/16/2009	1205	EPA 7471A	0.0881	0.00378			
C	27080-006	27080-bc6	Bluegill	179	400	178	3.3	228249	4/16/2009	1205	EPA 7471A	0.134	0.00367			
C	27080-007	27080-bc7	Bluegill	138	252	134	2	228249	4/16/2009	1205	EPA 7471A	0.0925	0.00402			
C	27080-008	27080-bc8	Bluegill	131	216	128	2	228249	4/16/2009	1205	EPA 7471A	0.135	0.0034			
C	27080-009	27080-bc9	Bluegill	120	164	104	2	228249	4/16/2009	1205	EPA 7471A	0.122	0.00407			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 7471A	0.593	0.00771			
C	27080-011	09-182	Black Crappie	174	68	36		228249	4/16/2009	1205	EPA 7471A	0.0998	0.00362			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 7471A	0.145	0.00389			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 7471A	0.497	0.00382			
C	27080-014	09-192	Largemouth Bass	169	54	14	2	228249	4/16/2009	1130	EPA 7471A	0.501	0.00375			
C	27080-015	09-193	Largemouth Bass	145	40	10	2	228249	4/16/2009	1130	EPA 7471A	0.393	0.00393			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 7471A	0.304	0.00345			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 7471A	0.225	0.0037			
D	27142-003	27142-bc3	Brown Bullhead	204	368	79	3	229223	5/5/2009	1430	EPA 7471A	0.133	0.004			
D	27142-004	09-202	Brown Bullhead	190	76	17	3	229223	5/5/2009	1430	EPA 7471A	0.112	0.00381			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 7471A	1.63	0.039			
D	27142-006	09-204	Largemouth Bass	184	68	24	2	229223	5/5/2009	1430	EPA 7471A	1.56	0.0372			
D	27142-007	09-205	Largemouth Bass	165	50	16	2	229223	5/5/2009	1430	EPA 7471A	0.507	0.00366			
D	27150-001	27150-bc1	Brown Bullhead	320	820	225	4	229483	5/7/2009	1530	EPA 7471A	0.208	0.00404	*EN		
D	27150-002	27150-bc2	Brown Bullhead	288	732	168	4	229483	5/7/2009	1530	EPA 7471A	0.224	0.00374	*EN		
D	27150-004	09-211	Brown Bullhead	181	80	19	3	229483	5/7/2009	1530	EPA 7471A	0.0663	0.00408	*EN		
D	27150-005	09-212	Pumpkinseed	192	180	63	5	229483	5/7/2009	1530	EPA 7471A	0.367	0.00398	*EN		
D	27150-006	09-213	Pumpkinseed	111	26	10	1	229483	5/7/2009	1530	EPA 7471A	0.0813	0.00407	*EN		
D	27150-007	09-214	Largemouth Bass	205	92	25	2	229483	5/7/2009	1530	EPA 7471A	0.526	0.00754	*EN		
D	27216-001	27216-bc1	Brown Bullhead	247	698	175	3.7	230874	6/2/2009	1000	EPA 7471A	0.156	0.00408	EN		
D	27216-002	27216-bc2	Brown Bullhead	210	706	187	3	230874	6/2/2009	1000	EPA 7471A	0.102	0.00355	EN		
D	27216-003	27216-bc3	Brown Bullhead	178	180	49	3	230874	6/2/2009	1000	EPA 7471A	0.0833	0.00352	EN		
D	27216-004	27216-bc4	Pumpkinseed	145	214	68	4.7	230874	6/2/2009	1000	EPA 7471A	0.261	0.00399	EN		
D	27216-005	09-228	Pumpkinseed	120	38	11	2	230874	6/2/2009	1000	EPA 7471A	0.308	0.00379	EN		

Appendix G - 2009 Peconic River Fish Samples																
Mercury																
Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual <sup>1</sup>	Rev Qual	
D	27216-006	27216-bc6	Pumpkinseed	85	20	6	1	230874	6/2/2009	1000	EPA 7471A	0.137	0.00362	EN		
D	27216-007	27216-bc7	Pumpkinseed	80	20	5	1	230874	6/2/2009	1000	EPA 7471A	0.114	0.00355	EN		
SR	27057-001	09-82	Brown Bullhead	144	36	8	3	227783	4/9/2009	1015	EPA 7471A	0.386	0.00383			
SR	27057-002	09-83	Brown Bullhead	174	58	14	3	227783	4/9/2009	1015	EPA 7471A	0.228	0.00395			
SR	27057-003	09-84	Chain Pickerel	275	132	58	2	227783	4/9/2009	900	EPA 7471A	0.329	0.00408			
SR	27057-004	09-85	Largemouth Bass	301	365	104	4	227783	4/9/2009	900	EPA 7471A	0.445	0.00368			
MR	27053-001	09-45	Brown Bullhead	346	576	176	4	227694	4/7/2009	1000	EPA 7471A	0.0583	0.00344			
MR	27053-002	09-46	Brown Bullhead	325	555	186	4	227694	4/7/2009	1000	EPA 7471A	0.0219	0.0034			
MR	27053-003	09-47	Brown Bullhead	315	416	112	7	227694	4/7/2009	1000	EPA 7471A	0.534	0.00398			
MR	27053-004	09-48	Brown Bullhead	312	363	94	7	227694	4/7/2009	1000	EPA 7471A	0.496	0.00408			
MR	27053-005	27053-bc5	Brown Bullhead	254	650	182	5.3	227694	4/7/2009	1000	EPA 7471A	0.461	0.00374			
MR	27053-006	27053-bc6	Brown Bullhead	247	726	196	4	227694	4/7/2009	1000	EPA 7471A	0.22	0.00345			
MR	27053-007	27053-bc7	Brown Bullhead	227	600	162	3.5	227694	4/7/2009	1000	EPA 7471A	0.376	0.00375			
MR	27053-008	27053-bc8	Brown Bullhead	202	818	186	3	227694	4/7/2009	1000	EPA 7471A	0.262	0.0034			
MR	27053-009	09-68	Brown Bullhead	190	89	20	3	227694	4/7/2009	1000	EPA 7471A	0.232	0.00364			
MR	27053-010	09-69	Brown Bullhead	188	86	20	3	227694	4/7/2009	1000	EPA 7471A	0.296	0.00373			
MR	27053-011	09-70	Brown Bullhead	187	83	18	3	227694	4/7/2009	1000	EPA 7471A	0.334	0.00371			
MR	27053-012	09-71	Brown Bullhead	187	75	18	3	227694	4/7/2009	1000	EPA 7471A	0.356	0.0034			
MR	27053-013	09-72	Brown Bullhead	185	80	20	3	227694	4/7/2009	1000	EPA 7471A	0.302	0.00408			
MR	27053-014	09-73	Chain Pickerel	330	209	88	2	227694	4/7/2009	1000	EPA 7471A	0.214	0.00369			
MR	27053-015	27053-bc15	Pumpkinseed	154	423	110	3.2	227694	4/7/2009	1005	EPA 7471A	0.245	0.0034			
MR	27053-016	09-76	Bluegill	178	138	44	3	227694	4/7/2009	1000	EPA 7471A	0.152	0.004			
MR	27053-017	09-80	Largemouth Bass	340	543	182	4	227694	4/7/2009	1005	EPA 7471A	0.356	0.0037			
MR	27053-018	09-81	Largemouth Bass	309	410	146	5	227694	4/7/2009	1005	EPA 7471A	0.451	0.00392			
DP	26972-001	09-01	Brown Bullhead	340	656	190	5	226656	3/19/2009	1400	EPA 7471A	0.0611	0.00393			
DP	26972-002	09-02	Brown Bullhead	320	512	180	4	226656	3/19/2009	1400	EPA 7471A	0.0245	0.0037			
DP	26972-003	26972-bc3	Brown Bullhead	339	1096	274	9	226656	3/19/2009	1400	EPA 7471A	0.0771	0.00385			
DP	26972-004	26972-bc4	Brown Bullhead	305	834	214	6.5	226656	3/19/2009	1400	EPA 7471A	0.0571	0.00352			
DP	26972-005	26972-bc5	Brown Bullhead	331	1006	278	4.5	226656	3/19/2009	1400	EPA 7471A	0.0276	0.00376			
DP	26985-001	26985-bc1	Brown Bullhead	326	982	286	6	226760	3/20/2009	1400	EPA 7471A	0.0616	0.00378	N		
DP	26985-002	26985-bc2	Bluegill	219	588	180	5.3	226760	3/20/2009	1400	EPA 7471A	0.177	0.00368	N		
DP	26985-003	09-13	Brown Bullhead	345	345	136	7	226760	3/20/2009	1400	EPA 7471A	0.0911	0.00355	N		
DP	26985-004	'09-15	Chain Pickerel	537	1002	334	6	226760	3/20/2009	1400	EPA 7471A	0.427	0.00395	N		
DP	26985-005	'09-16	Chain Pickerel	507	820	326	5	226760	3/20/2009	1400	EPA 7471A	0.624	0.00707	N		
DP	26985-006	'09-17	Chain Pickerel	475	606	230	4	226760	3/20/2009	1400	EPA 7471A	0.281	0.00408	N		
DP	26985-007	'09-18	Chain Pickerel	405	354	132	3	226760	3/20/2009	1400	EPA 7471A	0.262	0.00379	N		
DP	26985-008	'09-19	Largemouth Bass	310	420	152	3	226760	3/20/2009	1400	EPA 7471A	0.186	0.0034	N		
DP	26985-009	26985-bc9	Bluegill	224	980	324	6	226760	3/20/2009	1400	EPA 7471A	0.148	0.00341	N		
DP	26985-010	26985-bc10	Bluegill	201	692	216	4	226760	3/20/2009	1400	EPA 7471A	0.0774	0.00368	N		
DP	26985-011	26985-bc11	Bluegill	217	894	274	4.8	226760	3/20/2009	1400	EPA 7471A	0.0868	0.00386	N		
DP	26985-012	26985-bc12	Bluegill	204	520	178	4.3	226760	3/20/2009	1400	EPA 7471A	0.0651	0.00382	N		
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 7471A	0.0817	0.0037	N		
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 7471A	0.0847	0.00357	N		

<sup>1</sup> Qualifiers

- \* - Indicates that the duplicate analysis is not within control limits.
- E - Used when the reported value is estimated because of the presence of interference.
- N - Indicates that the spiked sample recovery is not within control limits.
- B - Indicates that the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection

## **Appendix H - 2009 Peconic River Fish Samples**

PCBs

## **Appendix H - 2009 Peconic River Fish Samples**

PCBs

Appendix H - 2009 Peconic River Fish Samples																		
Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (years)	SDG	Sample Date	Sample Time	Method	Analyte	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual <sup>1</sup>	Rev		
C	27080-008	27080-bc8	Bluegill	131	216	128	2	228249	4/16/2009	1205	EPA 8082	Aroclor 1232	0.00992	0.00992	U			
C	27080-008	27080-bc8	Bluegill	131	216	128	2	228249	4/16/2009	1205	EPA 8082	Aroclor 1242	0.00992	0.00992	U			
C	27080-008	27080-bc8	Bluegill	131	216	128	2	228249	4/16/2009	1205	EPA 8082	Aroclor 1248	0.00992	0.00992	U			
C	27080-008	27080-bc8	Bluegill	131	216	128	2	228249	4/16/2009	1205	EPA 8082	Aroclor 1254	0.00992	0.00992	U			
C	27080-008	27080-bc8	Bluegill	131	216	128	2	228249	4/16/2009	1205	EPA 8082	Aroclor 1260	0.00992	0.00992	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1016	0.00977	0.00977	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1221	0.00977	0.00977	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1232	0.00977	0.00977	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1242	0.00977	0.00977	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1248	0.00977	0.00977	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1254	0.00977	0.00977	U			
C	27080-010	27080-bc10	Largemouth Bass	213	332	150	2.3	228249	4/16/2009	1205	EPA 8082	Aroclor 1260	0.00977	0.00977	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1016	0.00982	0.00982	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1221	0.00982	0.00982	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1232	0.00982	0.00982	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1242	0.00982	0.00982	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1248	0.00982	0.00982	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1254	0.00982	0.00982	U			
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	EPA 8082	Aroclor 1260	0.00982	0.00982	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1016	0.00975	0.00975	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1221	0.00975	0.00975	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1232	0.00975	0.00975	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1242	0.00975	0.00975	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1248	0.00975	0.00975	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1254	0.00975	0.00975	U			
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	EPA 8082	Aroclor 1260	0.00975	0.00975	U			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1016	0.01	0.01	U			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1221	0.01	0.01	U			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1232	0.01	0.01	U			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1242	0.01	0.01	U			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1248	0.01	0.01	U			
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1254	0.01	0.01	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1016	0.00997	0.00997	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1221	0.00997	0.00997	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1232	0.00997	0.00997	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1242	0.00997	0.00997	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1248	0.00997	0.00997	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1254	0.00997	0.00997	U			
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	EPA 8082	Aroclor 1260	0.00997	0.00997	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1016	0.00996	0.00996	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1221	0.00996	0.00996	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1232	0.00996	0.00996	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1242	0.00996	0.00996	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1248	0.00996	0.00996	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1254	0.00996	0.00996	U			
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	EPA 8082	Aroclor 1260	0.00996	0.00996	U			
D	27150-001	27150-bc1	Brown Bullhead	320	820	225	4	229483	5/7/2009	1530	EPA 8082	Aroclor 1016	0.00954	0.00954	U			
D	27150-001	27150-bc1	Brown Bullhead	320	820	225	4	229483	5/7/2009	1530	EPA 8082	Aroclor 1221	0.00954	0.00954	U			
D	27150-001	27150-bc1	Brown Bullhead	320	820	225	4	229483	5/7/2009	1530	EPA 8082	Aroclor 1232	0.00954	0.00954	U			

## **Appendix H - 2009 Peconic River Fish Samples**

PCBs

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PCBs

Appendix H - 2009 Peconic River Fish Samples																		
PCBs																		
Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (years)	SDG	Sample Date	Sample Time	Method	Analyte	Conc. (mg/kg)	MDL (mg/kg)	Lab Qual <sup>1</sup>	Rev	Qual	
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1016	0.00983	0.00983	U			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1221	0.00983	0.00983	U			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1232	0.00983	0.00983	U			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1242	0.00983	0.00983	U			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1248	0.00983	0.00983	U			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1254	0.00983	0.00983	U			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	EPA 8082	Aroclor 1260	0.00983	0.00983	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1016	0.00987	0.00987	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1221	0.00987	0.00987	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1232	0.00987	0.00987	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1242	0.00987	0.00987	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1248	0.00987	0.00987	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1254	0.00987	0.00987	U			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	EPA 8082	Aroclor 1260	0.00987	0.00987	U			

Qualifiers

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

U - Indicates that the analyte was analyzed for but not detected.

# Attachment 1

## BROOKHAVEN NATIONAL LABORATORY

### Data Usability Summary Report

**Brookhaven National Laboratory**

Project:	Peconic River	<u>Environmental Management Directorate</u>
Sampling Contractor:	EWMSD	Date Received: <u>2-2-10</u> File Code: <u>SS-1 045</u>
Analytical Laboratory:	Test America	<del>Peconic River, NY</del> Copies to: <u>Medaries</u> <u>1700e</u> <u>2009 Peconic River Mercury Report</u>
Analytical Method:	7471A	<u>Mercury</u>
Sample Delivery Group:	27142	
COC No. / Sample IDs:	27142-005 and 006	
Date Sampled:	5/5/2009	
Parameter(s):	Mercury	

SAMPLE ID	DATA USABILITY QUALIFIERS	EXPLANATION FOR QUALIFIERS
005	None	Mercury result for 005, originally analyzed in SDG 229223 was reanalyzed under SDG 241538. Reanalysis confirmed original results, no qualification needed.
006	J	Mercury result for 006, originally analyzed in SDG 229223 was reanalyzed under SDG 241538. The relative percent differences between the original and reanalysis was 64.5. This is slightly elevated, but not enough to reject the original analysis. Results were qualified as estimated and flagged with a J.  Since the results for reanalyses of samples 005 and 006 were close enough to confirm the original analyses, only the original analyses will appear in the database.

#### Summary:

Reviewed by: JK  
Subject Matter Expert

Date: 2/2/10

Reviewed by: AHare  
Project Manager

Date: 2/2/10

# Attachment 1

## BROOKHAVEN NATIONAL LABORATORY

### Data Usability Summary Report

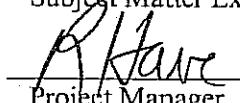
Project:	Peconic River	Brookhaven National Laboratory Environmental Management Directorate
Sampling Contractor:	EWMSD	Date Received: <u>2-2-10</u>
Analytical Laboratory:	GEL	File Code: <u>3045 - Peconic River</u>
Analytical Method:	8082	Copies to Howe <u>Mederos</u> <u>2009 Peconic River Monitoring</u> <u>Report</u>
Sample Delivery Group:	26985	
COC No. / Sample IDs:	26985-008	
Date Sampled:	3/20/2009	
Parameter(s):	PCBs	

SAMPLE ID	DATA USABILITY QUALIFIERS	EXPLANATION FOR QUALIFIERS
26985-008	R	The PCB fraction from sample 26985-008 was originally analyzed under SDG 240973 with positive PCB results. The reanalysis was performed under SDG 24151 and 240973. Both reanalyses were nondetects. The analytical laboratory believes the original results were due to a switched sample at the lab and have rejected those results. The non-detect results will be used in the database.

#### Summary:

Reviewed by:   
Subject Matter Expert

Date: 2/26/2010

Reviewed by:   
Project Manager

Date: 2/26/10

**Medeiros, William**

**From:** Ann Skradski [ann.skradski@gel.com]  
**Sent:** Wednesday, January 27, 2010 9:06 AM  
**To:** Medeiros, William  
**Subject:** Re: FW: Fish PCBs

Skip,

Good morning! I hope you are doing well. I wanted to write and follow up on the recent issue regarding PCB in fish samples. As I told GEL would be opening up a Corrective Action on the issue and provide a thorough evaluation. We have completed the corrective action which I have attached for your review. Please feel free to call or email me with questions or comment regarding the corrective action. GEL appreciates your patience.

Thank you,  
Ann

Medeiros, William wrote:

Ann  
Please update me on your evaluation of potential causes for the elevated PCBs (1242, 1254, 1260) in fish 26985-008. and the potential to reanalyze the tissue.  
Thank you  
Skip

William Medeiros  
Groundwater Protection Group  
Environmental Protection Division  
Building 51  
Brookhaven National Laboratory  
Upton, NY 11973  
Office phone: 631-344-3806  
Cell phone: 516-658-9485

Email: [Medeiros@bnl.gov](mailto:Medeiros@bnl.gov)

**From:** Medeiros, William  
**Sent:** Tuesday, November 10, 2009 1:50 PM  
**To:** 'Ann M. Skradski (Ann.Skradski@gel.com)'  
**Subject:** Fish PCBs

Ann

Can you help to explain the PCB results for the 3 year old largemouth bass that was submitted to GEL for analysis as COC number 26985-008?

**Background**

I cannot explain this fish having the highest concentrations of Aroclor 1242, Aroclor 1254 and Aroclor 1260 for either the 19 samples analyzed from this pond (COCs 26972 and 26985) representing 42 fish, or the 52 samples (approximately 175 fish) analyzed from the five mile upstream section of the river. All upstream samples were at, below or in the neighborhood of non-detect.

26985-008	DP	'09-19	Aroclor 1016	96.3	96.3	U		Largemouth Bass
26985-008	DP	'09-19	Aroclor 1221	96.3	96.3	U		Largemouth Bass
26985-008	DP	'09-19	Aroclor 1232	96.3	96.3	U		Largemouth Bass

26985-008	DP	'09-19	Aroclor 1242	1710	96.3			Largemouth Bass
26985-008	DP	'09-19	Aroclor 1248	96.3	96.3	U		Largemouth Bass
26985-008	DP	'09-19	Aroclor 1254	937	96.3			Largemouth Bass
26985-008	DP	'09-19	Aroclor 1260	231	96.3			Largemouth Bass

These results are even more unusual because this fish was collected from the cleanest section of the river. The sediment sample concentrations collected upstream of the sampling location are also at or in the vicinity of the detection limit for all Aroclors. Fish are prevented from passing downstream from the pond or upstream into the pond and restricted, but not prevented, from passing upstream from or downstream into the pond. Hence it is not likely that a sufficient PCB exposure to result in these tissue concentrations occurred.

If the PCB results were based on actual exposure, I would also expect a substantially elevated mercury concentration, the principal contaminant of concern. However, the mercury concentration of 26985-008 was only 0.186 mg/kg.

Can you provide any insight as to why the PCB analytical results for this sample were so high?

Thank you  
Skip

William Medeiros  
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Environmental Protection Division  
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Upton, NY 11973  
Office phone: 631-344-3806  
Cell phone: 516-658-9485

Email: [Medeiros@bnl.gov](mailto:Medeiros@bnl.gov)

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**COMPANY WIDE  
CORRECTIVE/PREVENTIVE ACTION REQUEST AND REPORT**

1. Date Requested: 12/9/09	2. CA Requester: Bob Pullano
3. Nonconformance, Audit Finding, Problem, Complaint or Improvement Opportunity Description:  PCB results for 26985-008 [GEL ID226760008 (original) and 240973001 (relog)] did not match. A third preparation and analysis 242151001 yielded non-detects, matching the second analysis.	

Is this issue potentially 10 CFR part 21 reportable? Yes      No <input checked="" type="checkbox"/>		4. CARR No. 091209-476
5. CA Title: BRKL Fish PCB Sample Results Did Not Confirm		
6. Leader Assigned Responsibility for Implementation: Pat Steele		
7. Team Members: Cameron Bearden, Stacey Hobbs, and Pat Steele		8. Proposed Implementation Date: Immediate
9. Quality Systems Manager Approval:		Date: 12/9/09

**BEGIN CORRECTIVE/PREVENTIVE OR IMPROVEMENT OPPORTUNITY ACTION**

Complete Items 10-17 and Return to Quality Systems for Closure.

10. Containment Actions, if any:  The original data was checked and no errors were found. The data for the first sample (226760008) was reviewed again and it was determined that the results were correctly reported (Aroclors 1242, 1254, 1260). The sample required 1:10 dilution. The MB and LCS in this batch passed all QC measures. The surrogate recoveries were low in sample 240973001 and the associated MS/MSD showed similar low surrogate recoveries, indicating matrix interference.
11. Root Cause(s):  The lab is unable to determine where or when a possible sample switch or source of contamination occurred. It is presumed that the results reported for sample 226760008 are invalid and the result of either sample mix-up or laboratory contamination.
12. Actions to Prevent Potential Occurrence or Recurrence:  Further review of instrument log books and extraction logs indicate that the original sample analyzed in April 2009 was most probably an error caused by switching the sample with another sample in another batch. All the samples in the original batch were clean (no detects) except for this sample (226760008).  The re-extractions and re-analyses of new aliquots of this sample (relogged as 240973001 and 242151001) were clean (no detects). The low surrogate recovery confirmed in the matrix spikes of this sample. Even with the low surrogate recoveries, if PCBs were present in this sample, they would have been detected because the original analysis required a 1:10 dilution to meet the linear calibration range.  Several of the samples in the original batch (Work Order 226760) were re-extracted for surrogate failure in April 2009. Unfortunately, number -008 did not have surrogate failures at the time, so it was not re-

extracted. There were no PCB detects in the original or re-extracted samples from April 2009. GEL did not re-log sample -008 for re-extract (twice) till 6-7 months later when the client advised that the result was unexpected. Only the above-mentioned sample was scheduled for re-extract.

Following the extraction and instrument logs from April 2009, it is not possible to assign the sample switch to another sample in another batch to account for the PCBs detected in the original analysis. It is not possible to determine if the switch occurred during preparation or on the analytical instrument due to the passage of time since the error is believed to have occurred.

**13. Implementation of Permanent Corrective/Preventive Actions or Improvements:**

The laboratory has notified the client that the data originally reported for sample 226760008 should not be used. Two repreps of the sample have verified that the original results are not correct.

The importance of properly verifying sample identity both in preparation and analytical activities has been reemphasized by making this issue a "Quality Topic" of the week in laboratory meetings.

**14. Verify Corrective/preventive Action(s) or Improvement(s):**

The client will be provided a copy of this corrective action investigation. This Quality Topic was presented during the week of January 25 – 29, 2010.

**15. Lessons Learned. Who can Benefit from Lessons Learned?**

All of GEL's clients benefit from knowing that the laboratory is committed to proper handling of all samples throughout the laboratory. The laboratory has a mature and sophisticated internal tracking system for documentation of samples and extracts.

**16. Preparer's Name(s):**

Nancy D. Mattern

 Date: 1/20/10

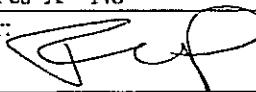
**17. Approval of Leader Responsible for implementation:**

Patricia Steele

 Date: 1/20/2010

Supplemental Pages Attached? Yes  No

**18. Reviewed and Approved by Quality Systems Manager:**



**GEL LABORATORIES LLC**  
 2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Certificate of Analysis**

Company : Brookhaven National Laboratory  
 Address : Building 51  
 Upton, New York 11973--5000

Contact: Mr. John Burke  
 Project: Hazardous & Radiochemical Analytical Services-Summary

Report Date: November 24, 2009

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Client Sample ID:	26985-008	Project:	BRKL00501
Sample ID:	226760008	Client ID:	BRKL005
Matrix:	T	COC:	26985
Collect Date:	20-MAR-09 14:00	Samp Recv.:	
Receive Date:	24-MAR-09 09:00	Client Desc.:	09-19
Collector:	Client	Vol. Recv.:	163.42

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-Volatiles-PCB Federal</b>											
<i>8082/3550B PCB soil-Fed "As Received"</i>											
Aroclor-1016	U	ND	32.1	96.3	ug/kg	10	JAOC	04/03/09	1448	854555	1
Aroclor-1221	U	ND	32.1	96.3	ug/kg	10					
Aroclor-1232	U	ND	32.1	96.3	ug/kg	10					
Aroclor-1242		1710	32.1	96.3	ug/kg	10					
Aroclor-1248	U	ND	32.1	96.3	ug/kg	10					
Aroclor-1260		231	32.1	96.3	ug/kg	10					
Aroclor-1254		937	32.1	96.3	ug/kg	10	JAOC	04/03/09	1448	854555	2

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B PCB Prep Soil FED	AXS4	03/30/09	1157	854553

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8082	
2	SW846 8082	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Decachlorobiphenyl	8082/3550B PCB soil-Fed "As Received"	9.23 ug/kg	19.3	47.9	(36%-111%)
4cmx	8082/3550B PCB soil-Fed "As Received"	9.49 ug/kg	19.3	49.3	(30%-105%)

**Notes:**

The Qualifiers in this report are defined as follows :

- \*\* Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics-Concentration of the target analyte exceeds the instrument calibration range

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*CNAK*

**Certificate of Analysis**

Company: Brookhaven National Laboratory  
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 Upton, New York 11973-5000

Contact: Mr. John Burke  
 Project: Hazardous & Radiochemical Analytical Services--Summary

Report Date: November 24, 2009

Page 1 of 2

Client Sample ID:	26985-008	Project:	BRKL00501
Sample ID:	240973001	Client ID:	BRKL005
Matrix:	F	COC:	26985
Collect Date:	20-MAR-09 14:00	Samp Recv.:	
Receive Date:	24-MAR-09 09:00	Client Desc.:	09-19
Collector:	Client	Vol. Recv.:	

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-Volatiles-PCB Federal</b>											
<i>8082/3550B PCB soil-Fed "As Received"</i>											
Aroclor-1016	U	ND	3.31	9.94	ug/kg	1	YS1	11/19/09	0801	922694	1
Aroclor-1221	U	ND	3.31	9.94	ug/kg	1					
Aroclor-1232	U	ND	3.31	9.94	ug/kg	1					
Aroclor-1242	U	ND	3.31	9.94	ug/kg	1					
Aroclor-1248	U	ND	3.31	9.94	ug/kg	1					
Aroclor-1254	U	ND	3.31	9.94	ug/kg	1					
Aroclor-1260	U	ND	3.31	9.94	ug/kg	1					

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B PCB Prep Soil FED	RXH3	11/17/09	1846	922693

**The following Analytical Methods were performed**

Method	Description	Analyst Comments
1	SW846 8082	
2	SW846 8082	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
4cmx	8082/3550B PCB soil-Fed "As Received"	3.90 ug/kg	19.9	19.6*	(34%-105%)
Dcccachlorobiphenyl	8082/3550B PCB soil-Fed "As Received"	4.68 ug/kg	19.9	23.6*	(33%-115%)

**Notes:**

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- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value

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**Certificate of Analysis**

Company : Brookhaven National Laboratory  
 Address : Building 51  
 Upton, New York 11973-5000

Contact: Mr. John Burke  
 Project: Hazardous & Radiochemical Analytical Services--Summary

Report Date: January 20, 2010

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Client Sample ID:	26985-008	Project:	BRKL00501
Sample ID:	242151001	Client ID:	BRKL005
Matrix:	T	COC:	26985
Collect Date:	20-MAR-09 14:00	Samp Recv.:	
Receive Date:	24-MAR-09 09:00	Client Desc.:	09-19
Collector:	Client	Vol. Recv.:	

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
<b>Semi-Volatiles-PCB</b>											
<i>8082/3550B PCB soil-Fed "As Received"</i>											
Aroclor-1016	U	ND	3.29	9.89	ug/kg	1	YS1	12/09/09	0848	929513	1
Aroclor-1221	U	ND	3.29	9.89	ug/kg	1					
Aroclor-1232	U	ND	3.29	9.89	ug/kg	1					
Aroclor-1242	U	ND	3.29	9.89	ug/kg	1					
Aroclor-1248	U	ND	3.29	9.89	ug/kg	1					
Aroclor-1254	U	ND	3.29	9.89	ug/kg	1					
Aroclor-1260	U	ND	3.29	9.89	ug/kg	1					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3550B	3550B PCB Prep Soil	RXH3	12/07/09	1240	929512

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 8082	
2	SW846 8082	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
4cmx	8082/3550B PCB soil-Fed "As Received"	7.05 ug/kg	19.8	35.6	(34%-105%)
Decachlorobiphenyl	8082/3550B PCB soil-Fed "As Received"	5.47 ug/kg	19.8	27.6*	(33%-115%)

Notes:

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- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Organics-Concentration of the target analytic exceeds the instrument calibration range
- F Estimated Value

**Appendix I - 2009 Peconic River Fish Samples**

Radionuclides

Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Analyte	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual <sup>1</sup>	Rev Qual
A	27077-001	27077-bc1	Brown Bullhead	301	828	238	4	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.232	0.0276	0.0144		
A	27077-010	27077-bc10	Brown Bullhead	169	358	74	2.8	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.205	0.0382	0.027		
A	27077-002	27077-bc2	Brown Bullhead	286	682	180	4	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.221	0.0274	0.014		
A	27077-003	27077-bc3	Brown Bullhead	260	776	200	4	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.295	0.0361	0.022		
A	27077-004	27077-bc4	Brown Bullhead	250	716	192	4	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.232	0.0286	0.0161		
A	27077-005	27077-bc5	Brown Bullhead	234	788	212	3.5	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.205	0.0306	0.0195		
A	27077-006	27077-bc6	Brown Bullhead	217	680	194	3	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.258	0.0289	0.0146		
A	27077-008	27077-bc8	Brown Bullhead	200	518	118	3	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.206	0.0268	0.0158		
A	27077-009	27077-bc9	Brown Bullhead	191	464	100	3	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.247	0.03	0.0155		
A	27077-017	09-143	Largemouth Bass	245	216	88	3	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.19	0.0227	0.0159		
A	27077-011	27077-bc11	Pumpkinseed	175	550	196	3.3	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.265	0.0357	0.0227		
A	27077-012	27077-bc12	Pumpkinseed	167	570	204	2.6	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.201	0.0247	0.0135		
A	27077-013	27077-bc13	Pumpkinseed	137	320	118	2	228191	4/15/2009	1330	HASL-300, 4.5.2.3	Cesium-137	0.256	0.034	0.0145		
C	27080-006	27080-bc6	Bluegill	179	400	178	3.3	228249	4/16/2009	1205	HASL-300, 4.5.2.3	Cesium-137	0.188	0.0396	0.0289		
C	27080-009	27080-bc9	Bluegill	120	164	104	2	228249	4/16/2009	1205	HASL-300, 4.5.2.3	Cesium-137	0.176	0.0357	0.0225		
C	27080-012	27080-bc12	Brown Bullhead	237	962	236	3.5	228249	4/16/2009	1130	HASL-300, 4.5.2.3	Cesium-137	0.213	0.0319	0.0228		
C	27080-013	27080-bc13	Largemouth Bass	215	668	200	2.2	228249	4/16/2009	1130	HASL-300, 4.5.2.3	Cesium-137	0.511	0.0627	0.0267		
C	27080-001	27080-bc1	Pumpkinseed	178	602	212	3.4	228249	4/16/2009	1205	HASL-300, 4.5.2.3	Cesium-137	0.285	0.0822	0.0689		
C	27080-002	27080-bc2	Pumpkinseed	162	500	212	3.4	228249	4/16/2009	1205	HASL-300, 4.5.2.3	Cesium-137	0.219	0.0438	0.0332		
C	27080-003	27080-bc3	Pumpkinseed	155	382	190	2.6	228249	4/16/2009	1205	HASL-300, 4.5.2.3	Cesium-137	0.207	0.038	0.0275		
D	27150-003	09-210	Brown Bullhead	260	254	56	4	229483	5/7/2009	1530	HASL-300, 4.5.2.3	Cesium-137	0.241	0.0276	0.0139		
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Cesium-137	0.298	0.0456	0.0274		
D	27142-001	27142-bc1	Brown Bullhead	305	754	951	4	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Potassium-40	4.12	0.52	0.301		
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Cesium-137	0.232	0.0262	0.0126		
D	27142-002	27142-bc2	Brown Bullhead	268	810	166	4	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Potassium-40	3.1	0.365	0.144		
D	27142-003	27142-bc3	Brown Bullhead	204	368	79	3	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Cesium-137	0.22	0.0303	0.0148		
D	27142-003	27142-bc3	Brown Bullhead	204	368	79	3	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Potassium-40	3.92	0.421	0.155		
D	27150-001	27150-bc1	Brown Bullhead	320	820	225	4	229483	5/7/2009	1530	HASL-300, 4.5.2.3	Cesium-137	0.224	0.0257	0.0159		
D	27150-002	27150-bc2	Brown Bullhead	288	732	168	4	229483	5/7/2009	1530	HASL-300, 4.5.2.3	Cesium-137	0.237	0.0281	0.0166		
D	27216-001	27216-bc1	Brown Bullhead	247	698	175	3.7	230874	6/2/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.0929	0.0251	0.0268		
D	27216-001	27216-bc1	Brown Bullhead	247	698	175	3.7	230874	6/2/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.04	0.499	0.271		
D	27216-002	27216-bc2	Brown Bullhead	210	706	187	3	230874	6/2/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.154	0.0268	0.0181		
D	27216-002	27216-bc2	Brown Bullhead	210	706	187	3	230874	6/2/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.54	0.482	0.182		
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Cesium-137	0.432	0.0445	0.016		
D	27142-005	09-203	Largemouth Bass	423	1144	392	7	229223	5/5/2009	1430	HASL-300, 4.5.2.3	Potassium-40	3.39	0.45	0.158		
D	27150-005	09-212	Pumpkinseed	192	180	63	5	229483	5/7/2009	1530	HASL-300, 4.5.2.3	Cesium-137	0.242	0.0372	0.0249		
D	27216-004	27216-bc4	Pumpkinseed	145	214	68	4.7	230874	6/2/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.135	0.0255	0.0196		
D	27216-004	27216-bc4	Pumpkinseed	145	214	68	4.7	230874	6/2/2009	1000	HASL-300, 4.5.2.3	Potassium-40	2.94	0.47	0.202		
SR	27057-003	09-84	Chain Pickerel	275	132	58	2	227783	4/9/2009	900	HASL-300, 4.5.2.3	Cesium-137	0.137	0.0257	0.0167		
SR	27057-003	09-84	Chain Pickerel	275	132	58	2	227783	4/9/2009	900	HASL-300, 4.5.2.3	Potassium-40	3.19	0.439	0.191		
SR	27057-004	09-85	Largemouth Bass	301	365	104	4	227783	4/9/2009	900	HASL-300, 4.5.2.3	Cesium-137	0.0823	0.0184	0.0151		
SR	27057-004	09-85	Largemouth Bass	301	365	104	4	227783	4/9/2009	900	HASL-300, 4.5.2.3	Potassium-40	2.74	0.429	0.177		
MR	27053-001	09-45	Brown Bullhead	346	576	176	4	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.117	0.0251	0.0224		
MR	27053-001	09-45	Brown Bullhead	346	576	176	4	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.43	0.514	0.233		
MR	27053-002	09-46	Brown Bullhead	325	555	186	4	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.192	0.024	0.015		
MR	27053-002	09-46	Brown Bullhead	325	555	186	4	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	2.9	0.421	0.172		
MR	27053-003	09-47	Brown Bullhead	315	416	112	7	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.239	0.0261	0.0152		
MR	27053-003	09-47	Brown Bullhead	315	416	112	7	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.17	0.469	0.156		
MR	27053-004	09-48	Brown Bullhead	312	363	94	7	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.123	0.019	0.0145		
MR	27053-004	09-48	Brown Bullhead	312	363	94	7	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.13	0.437	0.153		
MR	27053-005	27053-bc5	Brown Bullhead	254	650	182	5.3	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.0891	0.018	0.0141		
MR	27053-005	27053-bc5	Brown Bullhead	254	650	182	5.3	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	2.1	0.363	0.142		
MR	27053-006	27053-bc6	Brown Bullhead	247	726	196	4	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.187	0.0249	0.0149		
MR	27053-006	27053-bc6	Brown Bullhead	247	726	196	4	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	2.9	0.401	0.156		
MR	27053-007	27053-bc7	Brown Bullhead	227	600	162	3.5	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.0822	0.027	0.0149		

Appendix I - 2009 Peconic River Fish Samples																		
Radionuclides																		
Area	Sample ID	Fish ID or Composite ID	Species	Length (mm)	Wet Weight Whole (grams)	Wet Weight Fillet (grams)	Age (yrs)	SDG	Sample Date	Sample Time	Method	Analyte	Conc. (pCi/g)	Error (pCi/g)	MDL (pCi/g)	Lab Qual <sup>1</sup>	Rev Qual	
MR	27053-007	27053-bc7	Brown Bullhead	227	600	162	3.5	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	2.95	0.398	0.179			
MR	27053-008	27053-bc8	Brown Bullhead	202	818	186	3	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.14	0.0304	0.0267			
MR	27053-008	27053-bc8	Brown Bullhead	202	818	186	3	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.49	0.541	0.264			
MR	27053-014	09-73	Chain Pickerel	330	209	88	2	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Cesium-137	0.106	0.0191	0.0143			
MR	27053-014	09-73	Chain Pickerel	330	209	88	2	227694	4/7/2009	1000	HASL-300, 4.5.2.3	Potassium-40	3.61	0.434	0.174			
MR	27053-017	09-80	Largemouth Bass	340	543	182	4	227694	4/7/2009	1005	HASL-300, 4.5.2.3	Cesium-137	0.0676	0.017	0.0205			
MR	27053-017	09-80	Largemouth Bass	340	543	182	4	227694	4/7/2009	1005	HASL-300, 4.5.2.3	Potassium-40	2.66	0.452	0.199			
MR	27053-018	09-81	Largemouth Bass	309	410	146	5	227694	4/7/2009	1005	HASL-300, 4.5.2.3	Cesium-137	0.0907	0.0172	0.0149			
MR	27053-018	09-81	Largemouth Bass	309	410	146	5	227694	4/7/2009	1005	HASL-300, 4.5.2.3	Potassium-40	3.43	0.42	0.153			
DP	26985-010	26985-bc10	Bluegill	201	692	216	4	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.046	0.0228	0.0202			
DP	26985-010	26985-bc10	Bluegill	201	692	216	4	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	1.78	0.381	0.231			
DP	26985-011	26985-bc11	Bluegill	217	894	274	4.8	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0867	0.022	0.0167			
DP	26985-011	26985-bc11	Bluegill	217	894	274	4.8	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.43	0.411	0.193			
DP	26985-012	26985-bc12	Bluegill	204	520	178	4.3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0706	0.0329	0.0356			
DP	26985-012	26985-bc12	Bluegill	204	520	178	4.3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	1.63	0.576	0.362			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0699	0.0271	0.0208			
DP	26985-013	26985-bc13	Bluegill	214	834	256	4.8	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.09	0.42	0.222			
DP	26985-002	26985-bc2	Bluegill	219	588	180	5.3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0487	0.0261	0.0214			
DP	26985-002	26985-bc2	Bluegill	219	588	180	5.3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.63	0.506	0.225			
DP	26985-009	26985-bc9	Bluegill	224	980	324	6	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0495	0.0275	0.0292			
DP	26985-009	26985-bc9	Bluegill	224	980	324	6	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2	0.473	0.302			
DP	26972-001	09-01	Brown Bullhead	340	656	190	5	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0727	0.0163	0.0165			
DP	26972-001	09-01	Brown Bullhead	340	656	190	5	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.87	0.446	0.202			
DP	26972-002	09-02	Brown Bullhead	320	512	180	4	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.066	0.0236	0.0284			
DP	26972-002	09-02	Brown Bullhead	320	512	180	4	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Potassium-40	3.33	0.487	0.289			
DP	26972-003	26972-bc3	Brown Bullhead	339	1096	274	9	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0948	0.0239	0.0199			
DP	26972-003	26972-bc3	Brown Bullhead	339	1096	274	9	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Potassium-40	3.06	0.516	0.226			
DP	26972-004	26972-bc4	Brown Bullhead	305	834	214	6.5	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.096	0.0221	0.0215			
DP	26972-004	26972-bc4	Brown Bullhead	305	834	214	6.5	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.59	0.518	0.226			
DP	26972-005	26972-bc5	Brown Bullhead	331	1006	278	4.5	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.053	0.0247	0.029			
DP	26972-005	26972-bc5	Brown Bullhead	331	1006	278	4.5	226656	3/19/2009	1400	HASL-300, 4.5.2.3	Potassium-40	3.03	0.45	0.292			
DP	26985-001	26985-bc1	Brown Bullhead	326	982	286	6	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.06	0.0235	0.0201			
DP	26985-001	26985-bc1	Brown Bullhead	326	982	286	6	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.65	0.518	0.242			
DP	26985-004	09-15	Chain Pickerel	537	1002	334	6	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.148	0.0199	0.0137			
DP	26985-004	09-15	Chain Pickerel	537	1002	334	6	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	3.05	0.411	0.155			
DP	26985-005	09-16	Chain Pickerel	507	820	326	5	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.264	0.0303	0.0165			
DP	26985-005	09-16	Chain Pickerel	507	820	326	5	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.35	0.373	0.181			
DP	26985-006	09-17	Chain Pickerel	475	606	230	4	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.13	0.0207	0.0146			
DP	26985-006	09-17	Chain Pickerel	475	606	230	4	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	3.35	0.43	0.148			
DP	26985-007	09-18	Chain Pickerel	405	354	132	3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.105	0.0202	0.0141			
DP	26985-007	09-18	Chain Pickerel	405	354	132	3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.52	0.366	0.19			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Cesium-137	0.0212	0.0201	0.015			
DP	26985-014	26985-bc14	Pumpkinseed	188	588	170	5.3	226760	3/20/2009	1400	HASL-300, 4.5.2.3	Potassium-40	2.02	0.356	0.172			

<sup>1</sup> Qualifiers

J - The associated numerical value is an estimated quantity.

UI - (Uncertain identification for gamma spectroscopy) - Radionuclide peaks that are detected but fail to meet the positive identification criteria.