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Douglas J. Tomchuk
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Emergency & Remedial Response Division
290 Broadway, 20th Floor
New York, NY 10007

RE: HUDSON RIVER MONITORING PROGRAM 1999 SUMMARY REPORT

Dear Mr. Tomchuk:

The General Electric Company (GE) is forwarding the following report entitled *"Hudson River Monitoring Program – 1999 Summary Report"*. This report has been prepared by Quantitative Environmental Analysis, LLC (QEA). Please place this report in the administrative record.

Should you have any questions, please let me know.

Sincerely,

Robert G. Gibson

RGG/bi

Enclosure

cc: Mr. William Daigle - NYSDEC
Mr. Robert Montione - NYSDOH
Mr. Jay Field – NOAA
Mr. John Haggard - GE
Mr. Mark LaRue – QEA (w/o enclosure)
Ms. Diane Achman – QEA (w/o enclosure)
Mr. Bob Wagner – NEA (w/o enclosure)

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QEA

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Hudson River Monitoring Program

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Hudson River Monitoring Program

1999 Summary Report

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1 - INTRODUCTION

This annual summary report has been prepared by Quantitative Environmental Analysis, LLC (QEA) on behalf of the General Electric Company (GE) to document the results of the 1999 Hudson River Monitoring Program (HRMP). This monitoring program was conducted by QEA, and included activities performed for the Post-Construction Remnant Deposit Monitoring Program (PCRDMP) and additional sampling and analysis programs. The monitoring was performed in accordance with the requirements of a consent decree (Consent Decree 1990; 90-CV-575) between GE and the federal government, and a Sampling and Analysis Plan (SAP; QEA 2000a). This SAP includes a Field Sampling Plan (FSP), a Quality Assurance Project Plan (QAPP), and a Health and Safety Plan (HASP).

1.1 BACKGROUND

A detailed description of the environmental history of the Hudson River is presented in a report prepared by QEA entitled "*PCBs in the Upper Hudson River, Volume 1 Historical Perspective and Model Overview*" (QEA, 1999a). A summary of this history is presented below.

Over an approximate 30 year period, ending in 1977, two GE capacitor manufacturing facilities in Fort Edward and Hudson Falls, New York discharged PCBs into the upper Hudson River (Figure 1-1). Much of the PCBs were contained in sediment deposited in the pool behind the Fort Edward Dam located at Hudson River Mile (HRM)[1] 194.9 (Figure 1-2). Removal of the 100-year-old dam by Niagara Mohawk Power Corporation in 1973 dropped water levels in the pool.

[1] For reference, the HRM system begins at the southern tip of Manhattan (the battery) in New York City, and increases travelling upstream.

As a result, an estimated 1.5 million cubic yards of sediment deposits (referred to as the Remnant Deposits) were left along the banks of the River up to 1.5 miles upstream of Fort Edward (NUS 1984).

Five discrete Remnant Deposits (Figure 1-2) were identified upstream of Fort Edward (NUS 1984). Remnant Site 1 originally appeared as an island; however, floods in 1976 and 1983 reportedly scoured much of the sediment associated with this deposit, submerging portions of the island during high flow periods (NUS 1984). Remnant Site 1 currently consists of several small islands spread out over approximately 1,500 feet, centered at HRM 196.1. Remnant Site 2 occupies approximately eight acres along the west bank of the River at HRM 195.7. Remnant Site 3 is located along the east bank of the River at HRM 195.5 and encompasses approximately 19 acres. Remnant Site 4 occupies 21 acres located on the west and south banks of the River where the River bends sharply to the east. Remnant Site 5 is located immediately upstream of the old Fort Edward Dam on the north bank of the Hudson River occupying approximately four acres (NUS 1984). Several limited remedial activities were performed on the Remnant Deposits by New York State between 1974 and 1978 (NUS 1984).

A feasibility study (FS) of the Hudson River Superfund Site, which included Hudson River sediment and the Remnant Deposits, was performed by NUS (1984) for the United States Environmental Protection Agency (USEPA). The purpose of the FS was to examine potential remedial alternatives and recommend one that met the goals and objectives established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

In September 1984, USEPA issued a Record of Decision (ROD; USEPA 1984) for the Hudson River, which specified no action for Hudson River sediment. Additionally, the ROD contained plans for in-place containment of Remnant Sites 2, 3, 4, and 5 by application of soil

cover, vegetation of the cover and bank stabilization (USEPA 1984). No action was selected for Site 1. The consent decree (Consent Decree, 1990) with the federal government specified the scope of the remediation work to be done, and required post-construction monitoring. In-place containment of the Remnant Deposits was completed by GE during the fall of 1990 (O'Brien & Gere 1996a; JL Engineering 1992). The objectives of this containment were to control the release of PCBs from the Remnant Deposits to the Hudson River, and to minimize potential human exposure to PCBs as a result of direct contact or volatilization (Consent Decree, 1990). Post-construction monitoring has been conducted since 1991.

1.2 ADDITIONAL REMEDIAL ACTIVITIES

GE has performed additional remedial activities at the GE Hudson Falls Plant Site and the adjacent abandoned Allen Mill located on Bakers Falls in Hudson Falls, N.Y. During the post-construction monitoring performed by GE, a significant increase in water column PCB loading was detected after mid-September 1991. This loading originated upstream of the Fort Edward and downstream of the Bakers Falls Bridge monitoring stations (Figure 1-2). Within a week's time, PCB levels within the River increased from less than 100 ng/L to approximately 4000 ng/L (O'Brien & Gere, 1993). After an extensive investigation, the source of the increased water column PCB loading was attributed to the collapse of a wooden gate structure within an abandoned paper mill (Allen Mill) located adjacent to the Hudson Falls capacitor plant on Bakers Falls (O'Brien & Gere, 1994a; Figure 1-2). The gate had kept water from flowing through a tunnel cut into bedrock beneath the Mill, presumably since the Mill's closure in the early 1900s. The tunnel contained dense non-aqueous phase liquid (DNAPL) PCBs that had migrated from beneath the Hudson Falls Plant Site through subsurface bedrock fractures and into the tunnel.

In January 1993, with the cooperation of Adirondack Hydro Development Corporation (AHDC) and the New York State Department of Environmental Conservation (NYSDEC), the water flow through the Mill was largely controlled. By spring 1993, two of the three waterways within the Mill were isolated from the River and the removal of PCB containing material from within the Allen Mill commenced. Removal activities continued until the fall of 1995. Approximately 45 tons of PCBs were contained in the 3,430 tons of sediment removed from the Allen Mill (O'Brien & Gere, 1996b).

In 1994, during the construction of the new dam at Bakers Falls, PCB DNAPL was observed seeping from bedrock fractures in the portion of the Falls adjacent to the Hudson Falls Plant Site. A number of remedial actions have been taken to contain and control these PCB seeps including grouting of bedrock fractures, manual collection of PCB oils when accessible, and the installation and operation of pumping wells to hydraulically control the seeps (HSI GeoTrans, 1999). The release of PCB DNAPL through these bedrock seeps has declined significantly in response to mitigation efforts. In an additional effort to control the seeps, sediment and debris from the Hudson River in the vicinity of the original wastewater outfall was removed in 1998. The original outfall was located immediately upstream of the dam and the area where the seeps are concentrated.

In addition to the activities to control riverbed PCB seeps and PCB movement from the Allen Mill, GE has conducted an intensive investigation and remedial program at the Hudson Falls Plant Site. DNAPL PCBs have been discovered in the fractured bedrock below the Site. As of October 11, 2000, over 5,000 gallons of DNAPL have been removed from the subsurface (GE, 2000). A ground water recovery system has been installed to create a hydraulic barrier between the Site and the River, not only to collect PCB-containing ground water but also DNAPL (HSI GeoTrans, 1999). The effectiveness of this system in reducing PCB flux from the

Site to the River is being assessed through the measurement of PCB levels in the River adjacent to and downstream of the Site.

1.3 PREVIOUS MONITORING ACTIVITIES SUMMARY

1.3.1 Construction Phase Monitoring

An environmental monitoring program was initiated prior to, and continued throughout the in-place containment construction activities performed on the Remnant Deposits. Between 1989 and 1991, this environmental monitoring was conducted and documented by Harza Engineering Company (Harza, 1990, 1992a, 1992b). The environmental activities performed by Harza included the collection and analysis of water, sediment, air, and aquatic biota samples employing various techniques. The results of this monitoring indicate that there was little, if any, measurable concentrations of PCB leaving the Remnant Deposit areas.

1.3.2 Post-Construction Monitoring

Beginning in 1991, the water column of the Hudson River has been monitored for PCBs utilizing capillary column analytical techniques with a total PCB method detection limit (MDL) of 11 ng/L (O'Brien & Gere, 1992a,b). The PCRDMP was initiated by O'Brien & Gere in 1992, and has been performed on an annual basis since. Annual reports have been prepared summarizing the results of each year's activities (O'Brien & Gere, 1993, 1994b, 1995, 1996a, 1997, 1998b; QEA 2000b). QEA began monitoring activities on the Hudson River in February of 1999.

1.4 PROJECT OBJECTIVES

The objectives of the HRMP are to:

- monitor the effectiveness of the remedial action performed on the Remnant Deposits;
- monitor the effectiveness of remediation activities conducted at, and adjacent to, the GE Hudson Falls Plant Site;
- provide data to evaluate the significance of other sources of PCBs to the Hudson River; and
- allow continued evaluation of long term trends in PCB concentrations and composition in Hudson River water.

1.5 REPORT ORGANIZATION

This remainder of this report is organized as follows:

Section 2 - presents the methods and materials used to perform the monitoring program.

Section 3 - presents the results of the monitoring program including a discussion of the spatial and temporal trends in the data.

Section 4 – presents a summary of the results of the 1999 monitoring program.

Appendix A – presents the results of data verification and validation for data collected during 1999.

Appendix B – presents copies of original field notes prepared during sample collection.

Exhibit A – presents congener-specific laboratory data (bound separately from this report).

Exhibit B – presents total suspended solids laboratory data (bound separately from this report).

2 - METHODS

2.1 ROUTINE WATER SAMPLING LOCATIONS

Water column samples were obtained on a weekly basis from seven stations on the River during 1999. The routine HRMP sampling stations are described in detail in Table 2-1, illustrated in Figure 1-2, and are summarized in the table below. The station descriptions are generally consistent with the nomenclature used in the GE Hudson River Database.

Sampling Station	Approximate RKM HRM	Significance
Bakers Falls Bridge	197.0	Upstream (background).
Plunge Pool	196.9	Immediately downstream of GE Hudson Falls Plant Site area, indicator of source activity.
Boat Launch	196.9	Immediately downstream of GE Hudson Falls Plant Site area, adjacent to Allen Mill tailrace tunnel outlet, indicator of source activity.
Route 197 Bridge	194.2	First monitoring station downstream of the Remnant Deposit reach of the Hudson River.
TID-WEST	188.5	Sampled historically to monitor PCB concentrations in water flowing out of Thompson Island Pool. Data collected from this station are biased high. Sampling continues to provide continuity in database.
TID-PRW2	188.49	Sampling initiated at this location in 1997 to provide more representative data in vicinity of Thompson Island Dam.
Schuylerville	181.4	Furthest downstream station routinely monitored.

2.1.1 Sampling Bias at TID-WEST

Concerns regarding the representativeness of the TID-WEST sampling station are summarized in Table 2-1, and discussed in detail in a report entitled "*Thompson Island Pool Sediment PCB Sources*" (QEA, 1998). The results of several investigations conducted throughout Thompson Island Pool (TIP), and adjacent to and downstream of Thompson Island Dam (TID), indicated that the PCB concentrations in samples collected from the western dam abutment of TID (TID-WEST) are biased high compared to the bulk of the flow over the dam. Concerns regarding the sampling bias have resulted in the addition of the sampling station at a

location downstream of the dam (TID-PRW2; Figure 1-2) considered to be more representative of cross-sectional average conditions. Therefore, data from the TID-PRW2 sampling station have been used for much of the interpretation presented later in this report. However, the sampling program has continued to include the TID-WEST station to provide data that are comparable to historical data collected at this location, facilitating evaluation of long term trends in PCB concentration.

2.2 ROUTINE SAMPLE COLLECTION PROCEDURES

Sample collection procedures are summarized for each sampling location in Table 2-1. Samples consisted of either depth integrated composites, near-bottom grabs, or surface grabs, depending on the River characteristics and access. Depth integrated stratified composites were collected at all of the routine sampling locations except the plunge pool (near bottom grab), boat launch (near bottom grab), and TID-WEST (surface grab) stations. Duplicate samples were collected at the routine sampling stations and archived to provide a reserve sample in the event that the handling or analysis compromised the integrity of the original sample. Laboratory analyses were conducted in accordance with the procedures discussed in Section 2.8.

Sample collection activities were restricted during portions of the winter due to River ice conditions, particularly at the TID-PRW2 and plunge pool stations. The affected dates and locations are documented in Section 3.

2.3 ADDITIONAL WATER SAMPLING PROGRAMS

2.3.1 April 1999 High Flow Sampling

Additional water sampling was conducted on the upper Hudson River during a high flow event that occurred between April 4, 1999 and April 7, 1999. This event was triggered by a storm system that included warm temperatures and rainfall throughout much of the drainage basin and resulted in significant melting of the snow pack. Flow in the River increased from approximately 12,500 cfs on April 3, 1999 to a maximum of approximately 18,000 cfs on April 5, 1999. Flow receded to below 15,000 cfs by April 7, 1999. Nine rounds of sampling were conducted during this period at the Route 197 Bridge sampling station. Less frequent sampling (3 rounds) was conducted at Bakers Falls Bridge. Laboratory analyses were consistent with the procedures presented in Section 2.8.

2.3.2 Sampling Upstream of Bakers Falls Bridge

Due to the detection of low levels of PCBs at the Bakers Falls Bridge sampling station on several occasions, the potential for the presence of upstream PCB sources was evaluated in 1999. This evaluation consisted of performing a sampling program using Semi-Permeable Membrane Devices (SPMDs) to evaluate background PCB conditions in the Hudson River upstream of Bakers Falls, and the collection of water samples upstream of the Bakers Falls Bridge sampling station. The scope and results of the SPMD sampling program are presented in the *SPMD Sampling Program – Data Summary Report* (QEA, 1999c).

The water samples were collected on June 16, 1999 at locations designated as US-1 and US-2. These stations were located near the center of the channel, approximately 50 and 100 yards upstream of Bakers Falls Bridge, respectively (Figure 2-1). Laboratory analyses were consistent with the procedures presented in Section 2.8.

2.3.3 Additional Plunge Pool Area Sampling

As described in Section 2.1, water samples were collected from two locations in the plunge pool (Plunge Pool and Boat Launch) on a routine basis throughout 1999. In addition to these routine locations, water samples were collected from other locations in the plunge pool on three occasions (March 3, May 12, and August 11) during 1999. These samples were collected to more fully characterize PCB concentrations in Hudson River water within the plunge pool area and to identify potential source areas of PCB DNAPL. These additional sampling events included sample collection at all, or at a subset of, the locations depicted in Figure 2-2, including:

- HR-1,
- HR-2,
- HR-5,
- HR-6,
- HR-7,
- HR-8,
- HR-9,
- HR-10, and
- HR-11.

The collection methods used to obtain samples at these locations were consistent with those used to collect the boat launch and plunge pool samples. Samples collected in the plunge pool area were obtained approximately 1-2 ft above the River bed. Laboratory analyses were consistent with the procedures presented in Section 2.8.

2.3.4 Rogers Island Area Sampling

Additional samples were also collected from the Hudson River adjacent to Rogers Island in November – December, 1999 at the locations illustrated in Figure 2-3. These samples were collected to monitor PCB concentrations upstream and downstream of remedial activities that were being conducted along the eastern shoreline of Roger's Island, and were designated as HRRI1, HRRI2, HRRI3, and HRRI4. Samples collected during this program consisted of surface grab samples. Laboratory analyses were consistent with the procedures presented in Section 2.8.

2.3.5 Additional Sampling at TID-WEST

An additional sample was collected on three occasions from the TID-WEST sampling station in 1999. These samples were collected approximately 20 feet east of the routine sampling station by using a telescoping pole, and were designated as TID-WEST_1. The purpose of collecting these samples was to evaluate whether more representative samples could be collected from shore at TID-WEST, potentially eliminating the need for the TID-PRW2 sampling station. Samples were collected at the routine TID-WEST and TID-PRW2 stations each time samples were collected at the TID-WEST_1 location to provide data for comparison purposes.

2.4 FLOW MONITORING

The flow rate in the Hudson River is measured to assess the affects of flow on water column PCB concentrations, and to allow the evaluation of PCB mass loading in the River. The use of flow data to estimate PCB loading is discussed in Section 3. Flow was monitored at the United States Geological Survey (USGS) gaging station located in Fort Edward (station no. 01327750). This gaging station is located approximately 0.4 miles upstream of the Route 197

Bridge in Fort Edward, near the location of the former Fort Edward Dam (Figure 1-2). Instantaneous flows are estimated when samples are collected from the Route 197 Bridges by contacting the telemetry equipment located at the gaging station and obtaining the River stage. The stage is then converted to flow in cubic feet per second (cfs) based on the rating table developed by USGS. Provisional flow data are also obtained electronically from USGS. Provisional data are made available by USGS prior to quality assurance review; therefore, the data may change when USGS issues finalized data. Flow data presented in this report after October 1, 1999 are provisional data. The data include instantaneous flows recorded every 15 minutes and daily mean flow for the River at Fort Edward. These data are presented in Section 3, and are included in the GE Hudson River Database.

2.5 FIELD DATA

Field data were recorded on field log forms at the time of sample collection. The field log forms are included in Appendix A. The data recorded on the field log forms included:

- sample location,
- date and time of sample collection,
- sample type,
- sampling method,
- water temperature,
- depths of sample collection,
- QA/QC samples collected, including the location of blind duplicate samples,
- flow rate at Fort Edward USGS gaging station,
- observations of flow over Bakers Falls,
- weather data, and
- other observations and comments.

2.6 EQUIPMENT DECONTAMINATION

New sampling equipment, including a "whale" pump and polyethylene tubing, was used to collect the near-bottom grab samples from the boat launch and the plunge pool during each sampling event; therefore, decontamination was not required. Sampling equipment used for the other routine HRMP sampling locations were decontaminated between uses according to procedures specified in the QAPP (QEA, 2000a). These procedures included rinsing the portions of the equipment that come in contact with samples with acetone, then hexane, and finally distilled water. Waste solvent was containerized and delivered to the laboratory for appropriate disposal.

2.7 SAMPLE HANDLING PROCEDURES

Upon collection, the samples were placed in appropriate containers, chilled to approximately 4°C with ice, and transported to the analytical laboratory in accordance with appropriate chain of custody procedures. Each sample was assigned a unique sample designation identifying sample location, date, and time. Chain of custody procedures and container specifications are presented in the QAPP (QEA, 2000a).

2.8 ANALYTICAL TESTING PROGRAM FOR ROUTINE SAMPLING

Laboratory analyses were performed by Northeast Analytical Inc. (NEA). Water samples were analyzed for congener-specific PCBs using Method NE013_04. (NEA, 1999) and total suspended solids (TSS) using USEPA method 160.2. Specific analytical methods and protocols are presented in the QAPP (QEA, 2000a). The method detection limit (MDL) and the practical quantitation limit (PQL) for the congener-specific PCB analyses are 11 ng/L and 44 ng/L,

respectively (QEA, 2000a). PCB homolog and congener distributions in samples containing total PCBs at concentrations between the MDL and PQL are considered estimates due to the decreased sensitivity of the method for lower chlorinated congeners at these concentrations. PCB concentrations falling between the MDL and PQL are reported with a "P" qualifier.

The congener-specific PCB analytical method and data management procedures address analytical calibration errors and coelution biases that have been identified with the method (HydroQual, 1997). An error was detected in the original calibration of the Green Bay mixed Aroclor standard used by NEA for DB-1 analyses (USEPA, 1987). The congener distribution of the Green Bay standard was apparently miscalculated, predominantly for components of DB-1 Peak 5, and a revision to the calibration was later published (USEPA, 1994). NEA has revised the congener-specific PCB analytical method to incorporate the use of this revised calibration (NEA, 1999).

A coelution error resulted from the assumptions developed for deconvolution of peaks containing multiple congeners with different chlorination levels (mixed peaks). Originally, deconvolution of these peaks were based on mass spectrometry analysis of Aroclor mixtures (Frame et al., 1996). As mixed-peak congener mass ratios in Hudson River environmental samples deviate from those of commercial Aroclors, measurement errors are introduced into the quantitation of these peaks. Coelution correction factors were developed using Hudson River data; therefore, these factors are specific to the Hudson River project and represent an additional level of data interpretation beyond the purview of the laboratory. Specifically, DB-1 capillary column peaks 5, 8 and 14 were adjusted using media-specific coelution correction factors (HydroQual, 1997) prior to presentation in this report and inclusion in the GE Hudson River Database.

2.8.1 Data Reporting

A data reporting program has been developed that generally conforms to the guidelines presented in the NYSDEC ASP Superfund PCB/Pesticide requirements and provides the information required for validation of the data (Section 2.9). The data have been organized into a compilation of laboratory-generated data in both bound and electronic file format. Laboratory data reports are presented in Exhibit A (congener-specific PCB data) and Exhibit B (total suspended solids data). These exhibits are bound separately from this report.

The data reduction and handling activities included integration of the data electronically into the GE Hudson River Database, which was updated and provided to USEPA, NYSDEC, GE and other data users on a regular basis throughout 1999.

2.9 QUALITY ASSURANCE/QUALITY CONTROL

Quality assurance/quality control (QA/QC) procedures have been designed to provide data of sufficient quality to facilitate monitoring the effectiveness of the remedial action performed on the remnant deposits in accordance with the requirements of the consent decree (Consent Decree, 1990). In addition to following the sample collection procedures specified in the QAPP (QEA, 2000a), the QA/QC procedures included the collection and analysis of field QA/QC samples. These field QA/QC samples were collected during each routine sampling event, and included matrix spike, blind duplicate, and equipment blank samples.

The results of the laboratory analyses performed on the field QA/QC samples were evaluated as part of the data validation process. The results of the data validation are presented

in Appendix B to this report. These results indicate that over 99% of the data are useable for quantitative purposes. Data qualifiers assigned as a result of data validation are included in the data summary tables presented in this report. Data that were assigned a qualifier of "R" were not used in any quantitative assessments for this program.

3 - RESULTS AND DISCUSSION

3.1 INTRODUCTION

In this section, the results from the 1999 Hudson River routine water column monitoring are presented and discussed by sampling location, in upstream to downstream order. For each station, a discussion of PCB and TSS concentrations and PCB loading and composition data is provided. This section concludes with a discussion of short- and long-term temporal trends, spatial trends across the monitored reach, and the various sources of PCB loading to the River. Data that were rejected (qualified with an "R") during data validation (Appendix B) were not included in the evaluations presented in this report.

Temporal profiles (i.e., plots of parameters in chronological order throughout 1999) are presented for River flow, TSS, and PCB concentration and mass loading, at each station. In general, data points are connected by lines on these figures to facilitate trend analysis. A break in the line indicates a lapse in sampling for one or more weeks. Data points not connected to the line indicate blind duplicate results. Data points indicating a concentration less than the MDL are represented as open symbols, plotted at the MDL. PCB concentrations less than the MDL were set to the MDL of 11 ng/L for PCB mass loading calculations. This is a conservative approach, and likely overestimates PCB mass loading under these conditions.

Estimating PCB loading requires assigning a representative flow rate to a representative PCB concentration over a selected period of time. It is important to recognize that the short-term temporal variability typically observed in both flow rate and PCB concentrations affects the accuracy of the estimated loading. The use of daily average flow for each day that a PCB concentration was obtained has been adopted, and the PCB concentration has been assumed to be

constant for the entire day. The relatively large size of the database is expected to minimize the impact of the uncertainty associated with individual load estimates. For the high flow sampling, where multiple PCB concentrations are available on a single day, loading has been calculated using the 15-minute flow data from the Fort Edward gaging station at the time each sample was collected at the Route 197 Bridge sampling station, and then integrated to obtain a daily mean load.

Loadings were calculated using 1999 USGS daily average flow data from the Fort Edward gaging station. USGS flow data recorded after October 1, 1999 are provisional data. As discussed in Section 2.4, provisional data have not undergone USGS quality assurance review, and may change when finalized. The Fort Edward flow data (both daily average and instantaneous) were adjusted by proration factors[2] for stations located downstream of Fort Edward, to account for flow increases that arise from tributary inputs and direct drainage. The proration factors used in loading calculations were based on the upper Hudson River flow balance presented in QEA (1999b) and are 1.043 and 1.167 for TID and Schuylerville, respectively.

The water column PCB composition for each station was assessed by examining the average mass percent of each PCB homolog represented in the samples collected from a given station. The variability in PCB composition throughout the year is represented by error bars that correspond to ± 2 standard errors of the mean (2 SEM). Water column PCB homolog composition was compared to that of Aroclor 1242 (Frame et al., 1996), which was the predominant Aroclor used at GE's Hudson Falls and Fort Edward facilities.

[2] Proration factors represent the ratio of flow at a downstream station to that at an upstream station.

3.2 BAKERS FALLS BRIDGE (BACKGROUND) MONITORING STATION

A total of 64 water column samples were collected in 1999 from the Bakers Falls Bridge monitoring station, which is upstream (i.e., indicative of background PCB levels) of the GE Hudson Falls Plant Site area and the Remnant Deposit region of the River (Figure 1-2). PCB and TSS data for this sampling station are presented in Table 3-1, and temporal profiles of flow, TSS concentration, PCB concentration, and PCB mass loading at Bakers Falls Bridge are plotted in Figure 3-1.

During routine monitoring in 1999, TSS concentrations at Bakers Falls Bridge ranged from less than 1 mg/L to 4.4 mg/L (mean 1.6 mg/L). Three samples were collected from the Bakers Falls Bridge sampling station during the April 1999 high flow event[3]. Only two of these samples were analyzed for TSS, with resulting concentrations of 4.3 and 4.4 mg/L. PCB concentrations at the Bakers Falls Bridge monitoring station were below the MDL of 11 ng/L for 86% of the routine monitoring samples collected in 1999 (Figure 3-1), and were also below the MDL for the high flow event samples. Seven of the 64 samples collected had PCB concentrations greater than the MDL, at levels between 11 and 16 ng/L. Because PCB concentrations at Bakers Falls Bridge are usually below the MDL, PCB loadings are generally not calculable. Moreover, the less than detectable concentrations preclude analysis of PCB composition. However, the presence of occasional detectable PCB concentrations indicates that a small upstream source may be present (Figure 3-1). PCB concentrations in the Hudson River upstream of the Bakers Falls Bridge sampling station were evaluated further during 1999, as described below.

[3] As discussed in Section 2, monitoring of PCBs and TSS was performed during the April 1999 flood event, but not as part of the Hudson River routine monitoring program. The high flow results have been included in this section for completeness. However, since the sampling frequency for the high flow event differed from the routine program, the data are plotted separately in this report.

3.2.1 Additional Background Sampling

Possible PCB sources upstream of Bakers Falls Bridge were evaluated through further water sampling efforts (Section 2.3.2) which included the collection of two water samples upstream of the Bakers Falls Bridge sampling station on June 16, 1999. One of these samples was collected approximately 50 yards upstream of the routine sampling station, while the other sample was collected approximately 100 yards upstream of the routine sampling station. PCB data for these samples are presented in Table 3-1. PCB concentrations in both of these samples were less than the 11 ng/L MDL. GE also conducted a sampling program using Semi-Permeable Membrane Devices (SPMDs; QEA, 1999c) to evaluate background PCB conditions in the Hudson River upstream of Bakers Falls. The results of both the SPMD and additional background sampling programs do not indicate that significant sources of PCBs exist in this region of the Hudson River.

3.3 HUDSON FALLS PLANT SITE MONITORING STATIONS

In 1999, HSI Geotrans personnel collected routine water column samples from two locations at the base of Bakers Falls. These locations, designated as BOATLAUNCH and PLUNGEPOOL are illustrated in Figure 2-2. This monitoring is not required by the PCRDMP Consent Decree (Consent Decree, 1990) or the Consent Decree for the GE Hudson Falls plant site area; however, the data from these monitoring stations are documented by this report.

Quantitative estimates of Plant Site loadings using measured PCB concentrations at these locations is precluded by the complex hydrodynamics produced by the Falls and operation of the hydroelectric facility within this region of the River. The amount of water and associated PCBs leaving the plunge pool cannot be determined directly. However, PCB data from these two

sampling locations can be used as qualitative indicators of the activity of the Hudson Falls Plant Site area source[4].

The 1999 PCB and TSS data collected from both the plunge pool and boat launch monitoring stations are presented in Table 3-2, and Figures 3-2 and 3-3, respectively. Thirty-six samples were collected at the plunge pool sampling station in 1999. TSS concentrations in these samples ranged from less than 1.0 to 7.6 mg/L, and PCB concentrations ranged from less than 11 to 52 ng/L (Figure 3-2). PCBs were detectable, although variable throughout the spring and early summer of 1999. However, with one exception (30 ng/L on November 3) PCB concentrations were below the detection limit after the first part of August (Figure 3-2). The mean PCB concentration at the plunge pool sampling location decreased from 39 ng/L in 1998 to approximately 17 ng/L in 1999.

Fifty-three water column samples were collected from the boat launch sampling station in 1999. TSS concentrations ranged from less than 1 to 21 mg/L, and PCB concentrations ranged from 11 to 1,005 ng/L (Figure 3-3). The highest TSS concentration was measured on September 22 during a low flow period, and corresponded with the highest PCB concentration measured at the boat launch in 1999. The elevated PCB concentration may have been related to the elevated suspended solids concentration (21 mg/L) in the sample. A single sample was collected from the boat launch on April 5, 1999 on the falling limb of the hydrograph during the high flow event. The PCB concentration in this sample was 82 ng/L. While there may be some correlation between flow and PCB concentrations measured in the plunge pool area, the complex hydrodynamics in the area described above preclude quantitative assessment of these data.

[4] Previous studies indicate that the monitoring data generated at the station in Fort Edward (Section 3.3) provide a better basis upon which to estimate the magnitude of the Hudson Falls Plant Site loadings than these two stations (O'Brien and Gere, 1996c).

However, the mean PCB concentration at the boat launch decreased from 193 ng/L in 1998 to approximately 68 ng/L in 1999.

PCB composition data collected at the boat launch and plunge pool demonstrate that water column PCBs in the vicinity of the Hudson Falls Plant Site continue to resemble the unaltered Aroclor 1242 pattern observed in previous years (Figure 3-4; QEA, 2000b). The similarity of PCB homolog composition to Aroclor 1242, in conjunction with the increased concentrations observed relative to the background station (Bakers Falls Bridge), indicate that the GE Hudson Falls Plant Site area source continued to contribute PCBs to the water column during 1999. However, this source is greatly reduced in magnitude from previous years, and continues to decrease. This decrease is also evident in data collected from the Rt. 197 Bridge sampling station (Section 3.4). This correlation indicates that the boat launch and plunge pool sampling stations are useful as qualitative indicators of the magnitude of the GE Hudson Falls Plant Site area source.

The value of the plunge pool and boat launch sampling stations as indicators of source activity is also indicated in Figure 3-5. In this figure, PCB concentrations measured at the boat launch, plunge pool, and Rt. 197 Bridge sampling stations are compared. The trends identified at the Rt. 197 Bridge station generally track those observed within the plunge pool.

3.3.1 Additional Plunge Pool Area Sampling

In addition to the routine plunge pool and boat launch sampling, HSI Geotrans personnel conducted three rounds of sampling at stations located along the eastern and northern limits of the plunge pool (Figure 2-1). In total, 23 samples were collected as part of this program. These

sampling locations were selected to further characterize PCB concentrations in the plunge pool, and to identify potential PCB source areas.

The data generated for these samples are presented in Table 3-2. TSS concentrations were not quantified for these samples. PCB levels in the additional plunge pool samples during the three rounds of sampling ranged from 32 to 67 ng/L, <11 to 105 ng/L, and <11 to 125 ng/L, respectively. These data indicate that PCB concentrations are variable in the plunge pool area, and confirm that the PCB sources to the plunge pool are located primarily along the northern and eastern limits of the pool. The highest concentration measured during each round was at location HR-5, which is located near the northwest corner of the abandoned Bakers Falls power house, adjacent to the tailrace tunnel outlet (Figure 2-1).

As discussed in Section 3.2, the complex hydrodynamics that exist within the plunge pool prevent performing a quantitative PCB loading analysis from this area; however, these data support the conclusion that the GE Hudson Falls Plant Site area source(s), while greatly reduced in magnitude from previous years, continued to contribute PCBs to the water column during 1999.

3.4 ROUTE 197 BRIDGE (FORT EDWARD) MONITORING STATION

The Route 197 Bridge sampling station in Fort Edward is downstream of the Remnant Deposits region of the River at HRM 194.2 (Figure 1-2). There are four potential sources of the PCBs observed at the Route 197 Bridge:

- source(s) upstream of Bakers Falls,
- the Hudson Falls Plant Site area,
- the five Remnant Deposits between Hudson Falls and Rogers Island, and

- the former 004 Outfall area in the vicinity of the Fort Edward Plant Site.

Figure 1-2 illustrates the position of the Route 197 Bridge sampling station with respect to the Plant Site area, Remnant Deposits, and former 004 outfall.

As discussed in Section 2.1, samples collected at the Route 197 Bridge station typically consist of equal-volume composites from the east and west channels of Rogers Island. Additional samples were collected from the Rt. 197 Bridge in conjunction with the Rogers Island Area Sampling (Section 2.3.3). PCB and TSS concentrations were quantified individually for both the east and west channels of Rogers Island on four occasions in November-December, 1999. These samples are denoted as HRM 194.2E and HRM 194.2W, respectively.

In 1999, a total of 71 composite samples and 4 rounds of separate east and west channel discrete samples were collected from the Route 197 Bridge; PCB and TSS data are presented in Table 3-3. Temporal profiles of flow, TSS concentration, PCB concentration, and PCB mass loading are plotted in Figure 3-6. Results from the time-intensive sampling conducted during the April 1999 high flow event are plotted in Figure 3-7. TSS results from Fort Edward during 1999 ranged from less than 1.0 to 7.7 mg/L (mean 2.0 mg/L), with the higher concentrations observed during high flow. Qualitative comparison between flow and TSS generally indicates a positive relationship (Figure 3-6).

PCB concentrations at the Route 197 Bridge during routine monitoring (low flow) in 1999 ranged from less than 11 to 32 ng/L (mean 14 ng/L), and ranged between 20 and 238 ng/L during the April high flow event. A slight seasonal trend is apparent in the low flow Fort Edward PCB data, with concentrations increasing after the April high flow event, and decreasing in mid-summer. PCB concentrations were largely below the method detection limit from the

first part of August through the end of 1999. PCBs were detected (less than 20 ng/L) in three samples collected in November/December during the remedial activities conducted on Rogers Island by USEPA. Under low flow conditions, PCB mass loadings observed at the Route 197 Bridge during 1999 were generally less than 0.5 lb/d, except during April, following the high flow event, and in November/December during the remedial activities on Rogers Island. PCB loading during these periods was between approximately 0.5 and 1.0 lb/d (Figure 3-6).

During high flows, PCB loading at Fort Edward was higher than during low flow periods (Figures 3-6 and 3-7). Estimates of instantaneous loading during the April event ranged between 1.0 and 19.5 lb/d. PCB loading increased rapidly during the rising limb of the hydrograph, followed by a rapid decrease, although flow rates remained elevated (Figure 3-7). PCB loading was reduced to approximately 1.0 lb/day within approximately 48 hours of the onset of the high flow event (Figure 3-7).

The average water column PCB composition at Fort Edward closely resembles the PCB composition in samples collected at the boat launch and plunge pool (Figure 3-8). This similarity suggests that the PCB loading observed at the Route 197 Bridge is largely derived from PCBs entering the River in the vicinity of Bakers Falls. The PCB composition at Fort Edward during the April high flow period was generally consistent with that observed during the balance of the year (Figure 3-9).

PCB concentrations measured at the Route 197 Bridge sampling station in 1999 were lower than those measured during 1998, and were generally consistent with 1997 data. The annual mean was approximately 14 ng/L in 1999 compared to 19 ng/L in 1998, and 13 ng/L in 1997 (Figure 3-10). Even though PCB concentrations were less than the MDL for much of the year, PCB concentrations are assumed to be at the MDL of 11 ng/L for PCB mass loading

calculations. This is a conservative approach, and likely overestimates PCB mass loading under these conditions.

These data are consistent with the trends in PCB concentrations measured at the plunge pool and boat launch sampling stations over the three years, indicating that the reductions in PCB loading from the Hudson Falls Plant Site area were observed at the Rt. 197 Bridge sampling station. As described in Section 3.2, quantifying PCB loading to the Hudson River from the GE Hudson Falls Plant Site area and Bakers Falls is not possible due to the complex hydrodynamics in the area.

3.4.1 Rogers Island Area Sampling

Hudson River water was sampled on four occasions in 1999 in the vicinity of remedial activities conducted by USEPA on Rogers Island (Figure 2-3). These remedial activities focused on the removal of soil containing PCBs and lead from residences located along the eastern shore of the island. A total of 14 samples were collected from stations located upstream and downstream of the construction area to qualitatively assess whether the remedial activities had a localized effect on PCB concentrations in the Hudson River. The data from these sampling activities are presented in Table 3-3.

The data indicate that on 3 of the 4 sampling events (November 17, November 23, and December 8), PCB concentrations in the River were less than 11 ng/L in all samples except the Rt. 197 Bridge composite sample collected on December 8 (Table 3-3). However, the discrete samples collected from both the east and west channel (HRM 194.2E and HRM 194.2W) on that day were less than the method detection limit. Therefore, it appears that the remedial activities had no measurable impact on PCB concentrations in water on those dates. Some impact may have been experienced on December 1, 1999, when low levels of PCBs were detected at all of

the sampling stations on Rogers Island, with the exception of the discrete sample collected from the west channel from the Rt. 197 Bridge. Concentrations ranged from 12 to 17 ng/L, with the higher concentrations measured directly downstream of the construction area.

3.5 THOMPSON ISLAND DAM MONITORING STATIONS

Routine monitoring was conducted at TID during 1999 to evaluate water column PCB loading across TIP. This monitoring is not required by the PCRDMP Consent Decree (Consent Decree, 1990). However, the data from these monitoring stations are documented by this report.

Sampling at TID historically has been conducted from the west wing wall of the dam at the western channel of Thompson Island (TID-WEST). However, studies conducted in 1996-97 indicated that this sampling location is not representative of the actual PCB load passing TID (QEA, 1998; O'Brien and Gere, 1998a). Beginning in October 1997, a sampling location downstream of the dam was added to the routine monitoring program, (TID-PRW2; Figure 1-2). This sampling location was found to produce water column samples which more accurately represent average PCB concentrations exiting TIP (QEA, 1998). As discussed in Section 2.2, sampling at TID-WEST has been continued to provide continuity with the historical database.

3.5.1 TID-WEST

In 1999, 62 routine samples were collected from TID-WEST. PCB and TSS analytical results for TID-WEST are presented in Table 3-4. Temporal profiles of flow, TSS concentration, and PCB concentration are presented in Figure 3-11. TID-WEST data cannot be used to accurately estimate PCB loading, as samples collected from this station are not considered to be representative of average PCB concentrations exiting TIP (QEA, 1998). Therefore, evaluation of

PCB loading at TID utilizes data collected from the TID-PRW2 station whenever data is available for this station.

During routine monitoring in 1999, TSS concentrations at TID-WEST ranged from less than 1 mg/L to 17 mg/L (mean 2.2 mg/L; Figure 3-11). Similar to the upstream stations, qualitative comparison of TSS and flow data suggests a positive relationship, with higher TSS concentrations normally being observed at higher flows. PCB concentrations at TID-WEST during routine monitoring 1999 ranged from less than 11 ng/L to 814 ng/L (mean 125 ng/L; Figure 3-11).

A seasonal trend in PCB concentration at TID-WEST can be observed in 1999 (Figure 3-11). This trend consists of low concentrations throughout the winter months, an increase beginning in mid April to a peak in early June, followed by a decline until an increase was observed in late fall prior to decreasing at the end of the year. This trend is consistent with data collected in past years at the same location (QEA, 2000b). As shown in Figure 3-11, the highest PCB concentrations at TID-WEST occurred during May and June.

The water column PCB composition for TID-WEST samples collected in 1999 continues to exhibit the altered Aroclor 1242 homolog signature observed in previous years (Figure 3-12; QEA, 2000b). On average, the mono- and di- homolog fraction of samples collected at TID-WEST made up approximately 55% of the total PCB mass, compared to approximately 15% in Aroclor 1242. The composition of PCBs in water at TID is discussed in detail in the *Thompson Island Pool Sediment PCB Sources* Report (QEA, 1998).

3.5.2 Additional Sampling at TID-WEST

Three samples (designated as TID-WEST_1) were collected approximately 20 feet east of the routine TID-WEST sampling station in June of 1999. These samples were collected to evaluate whether more representative samples could be collected from shore at the TID-WEST station. The data from this sampling are presented in Table 3-4. The results of this sampling indicated that samples collected approximately 20 feet further out in the River provided data that were generally consistent with the TID-WEST station, and were higher than PCB concentrations measured at TID-PRW2. Therefore, additional sampling at the TID-WEST_1 location is not recommended.

3.5.3 TID-PRW2

Analytical results for TID-PRW2 in 1999 are presented in Table 3-4 and Figure 3-11. A total of 49 samples were collected during 1999 from the TID-PRW2. Due to safety considerations, sampling in 1999 did not occur at this location from January 5 through February 10, March 10 and March 31. TSS concentrations at TID-PRW2 during 1999 ranged from less than 1 mg/L to 5.1 mg/L (mean 1.8 mg/L). TSS concentrations observed at TID-PRW2 are similar to those at TID-WEST, and therefore exhibit a similar correlation with flow, particularly during higher flow periods.

During routine monitoring at TID-PRW2 in 1999, PCB concentrations ranged from less than 11 ng/L to 166 ng/L (mean 49 ng/L). PCB mass loading ranged from less than 0.2 to approximately 2.25 lb/d (mean 0.86 lb/day). Variability in flow rate had little impact on PCB mass loading at TID-PRW2 during 1999; however, the same seasonal trend in PCB concentration that is observed in the TID-WEST monitoring data is also present at this location (Figure 3-11). Flow rates in 1999 were lower than normal (flows only exceeded 10,000 cfs

during the April high flow event). PCB mass loadings at TID-PRW2 (Figure 3-11) are larger than those at Fort Edward (Figure 3-6). The incremental loading across the TIP is discussed further in Section 3.9. Little correlation between PCB concentration and TSS is apparent (Figure 3-13). Loading mechanisms are discussed further in QEA, 1999b and in Section 3.9 of this report.

The average homolog pattern observed in samples collected at TID-PRW2 is similar to that from TID-WEST (Figure 3-12). On average, mono- and di- chlorobiphenyls made up more than 50% of the total PCB mass in 1999 TID-PRW2 samples. This homolog signature is consistent with PCBs derived from surface sediments in TIP (QEA, 1999a).

3.5.4 Comparison between TID-WEST and TID-PRW2

As plotted in Figures 3-11 and 3-13, TSS concentrations at the two TID stations were similar in 1999. As shown in Figure 3-12, the PCB composition at the two stations was similar in 1999, with TID-WEST samples containing a slightly larger proportion of mono- and di- PCB homologs than those collected from TID-PRW2. PCB data collected during 1999 are consistent with the sampling bias observed at TID-WEST, as documented in QEA (1998). Figure 3-13 also presents a comparison of PCB concentrations at TID-PRW2 and TID-WEST. All but three samples collected at TID-WEST resulted in a higher PCB concentration than samples collected from TID-PRW2 on the same day. The PCB concentration at TID-WEST ranged from approximately 22% lower to 95% higher than TID_PRW2. On average, the PCB concentration at TID-PRW2 was approximately 47% of that measured at TID-WEST.

Although the PCB concentrations at TID-WEST are statistically higher than those at TID-PRW2, the variability in this high bias (Figure 3-13) precludes the development of a

statistically robust technique for predicting unbiased TID concentrations based on the TID-WEST data. To account for the bias in their PCB fate modeling effort, USEPA developed correction factors to predict the unbiased concentration at TID as a function of PCB concentration at Fort Edward, PCB concentration at TID, and the flow at Fort Edward (USEPA, 1998; USEPA 1999). The statistical robustness of the stratified data regression technique is not adequate to estimate PCB loadings at TID because of both within-year and year-to-year variability in the bias at TID-WEST. Moreover, the flow component of the bias is uncertain, as sampling TID-PRW2 at elevated flows is not possible due to limited accessibility. As discussed in QEA (1998), the results from TID-PRW2 are considered to be most representative of the PCB load passing TID.

3.6 ROUTE 29 BRIDGE (SCHUYLERVILLE) MONITORING STATION

The Route 29 Bridge sampling location in Schuylerville is located approximately seven miles downstream of TID at HRM 181.4. The Route 29 Bridge is the furthest downstream station routinely sampled in GE's Hudson River Monitoring Program. Monitoring at this station is not required by the PCRDMP Consent Decree (Consent Decree, 1990). However, the data from this monitoring station are documented in this report.

Fifty-four samples were collected from the Route 29 Bridge in 1999. PCB and TSS analytical data from Schuylerville are presented in Table 3-5. Temporal profiles of flow, TSS concentration, PCB concentration, and PCB mass loading at Schuylerville are presented in Figure 3-14. TSS results ranged from less than 1.0 mg/L to 16 mg/L (mean 2.3 mg/L) during routine monitoring at the Route 29 Bridge (Figure 3-14). One round of sampling was conducted when flow rates exceeded 10,000 cfs on April 7, 1999. On this date, the TSS concentration at Schuylerville was 3.2 mg/L, with a duplicate result of 3.6 mg/L. As with the upstream stations,

the higher TSS concentrations during routine monitoring at Schuylerville occurred during periods of higher River flow (Figure 3-14).

PCB concentrations ranged from 18 to 285 ng/L (mean 70 ng/L) during 1999 routine monitoring at Schuylerville, and calculated PCB mass loadings ranged from approximately 0.5 to 5.0 lbs/d (Figure 3-14). This range does not include an estimated loading of approximately 24 lbs/day on April 7, 1999. This loading was calculated from a duplicate sample (285 ng/L) that had a PCB concentration greater than 35% higher than the original sample (60 ng/L). Therefore, these data were qualified as "approximate" as a result of the data validation procedure (Appendix B). The PCB loading estimate using the data from the original sample collected on this date resulted in the second highest PCB loading at the Rt. 29 Bridge sampling station (5.1 lbs/day). The concentration of this sample was more consistent with PCB concentrations that would normally be expected at the Rt. 29 Bridge sampling station for the flow conditions and upstream PCB concentrations identified on this date, and therefore is considered to be more representative of conditions in the River.

Comparison of Figures 3-14 and 3-11 indicates that PCB loadings at Schuylerville are higher than those observed at TID-PRW2. A seasonal trend in PCB concentration and mass loading, similar to that observed at Thompson Island Dam, is evident in the data from Schuylerville. The increase in PCB concentration between winter and early summer at Schuylerville is similar in magnitude to that at TID. Similar to the 1999 data from TID, the PCB loading at Schuylerville correlates with flow and TSS but this correlation is not apparent for PCB concentration due to the elevated concentrations observed at low flows.

On average, the PCB homolog composition at Schuylerville closely resembles the altered Aroclor 1242 signature seen at TID (Figure 3-15). This water column PCB homolog

composition is consistent with the current understanding of PCB sources to this reach of the River (i.e. upstream load passing TID and surface sediment PCB sources between TID and Schuylerville). A discussion of PCB loading and sources for each monitoring station is presented in Sections 3.8 and 3.9, respectively.

3.7 TEMPORAL TRENDS IN HUDSON RIVER WATER COLUMN PCBS

The temporal trends in 1999 Hudson River Monitoring data during both routine monitoring and high-flow periods are generally consistent with previous years' results and the conceptual model of PCB fate and transport in the upper Hudson River (QEA, 1999a).

3.7.1 PCBs During Routine Monitoring

Temporal trends in 1999 PCB concentration and PCB mass loading for routine monitoring at all sampling locations except TID-WEST are presented in Figures 3-16 and 3-17, respectively. Loading calculations were not performed for TID-WEST due to the bias in the data at this location. This comparison between the stations illustrates the increase in magnitude in both PCB concentration and mass loading from upstream to downstream. The figures also demonstrate the seasonal trend observed at the sampling locations downstream of the Route 197 Bridge. As discussed in Section 3.5, the strong seasonal patterns observed at Thompson Island Dam and Schuylerville share nearly the same fourfold increase in PCBs between early April and mid June. This seasonality is consistent with the trend observed since September 1997, as shown in Figure 3-18, which compares the temporal trends in total PCBs observed at Fort Edward, TID-PRW2, and Schuylerville. The TID-PRW2 and Schuylerville sampling stations were not routinely sampled until September of 1997.

3.7.2 High Flow PCBs

During the April 1999 high flow event, PCB concentrations at the Rt. 197 Bridge sampling station were quantified several times on the rising limb of the hydrograph, during peak flow, and after peak flow (Section 2.3.1). One round of sampling was conducted on April 7 (after peak flow) at all of the routine sampling stations. PCB concentrations increased at the Route 197 Bridge sampling station in response to the rapid rise in River flow, which mobilized PCBs from the vicinity of the Hudson Falls Plant Site area. PCB concentrations were highest during peak flow, and then decreased rapidly after peak flow along the falling limb of the hydrograph. A temporal chart of flow, PCB concentrations, and calculated PCB loading rates at the Route 197 Bridge sampling station during the April 1999 high flow event is plotted in Figure 3-7.

Samples collected at TID-WEST on April 7, 1999 (after peak flow) indicated a small increase in PCB concentration (Figure 3-7). There appears to have been a slight increase in PCB loading on April 7 at TID based on data collected at TID-PRW2 (Figure 3-17). PCB loading at Schuylerville increased from approximately 1.0 lb/day to slightly over 5.0 lbs/day on April 7, 1999. Use of the PCB concentration measured in a duplicate sample collected from the Rt. 29 Bridge sampling station on April 7 to estimate loading resulted in a much higher loading rate (24 lbs/day). However, as discussed in Section 3.6, this concentration does not appear to be as representative as the concentration measured in the original sample; therefore, the duplicate sample data has not been used to estimate loading on this date.

3.7.3 PCB Composition

Temporal trends in 1999 average total chlorines per biphenyl (Cl/BP) are presented in Figure 3-19. Chlorination levels observed at the Route 197 Bridge were relatively constant during 1999, and are consistent with an Aroclor 1242 source. As discussed above, the lower Cl/BP levels at TID and Schuylerville indicate the water column PCBs at these stations are derived through partitioning and diffusion processes from surface sediment sources. The 1999 temporal profiles of Cl/BP for TID and Schuylerville also exhibit a slight seasonality characterized by higher chlorination levels in the winter and spring months and decreases in the early summer and mid-autumn months. The decline in chlorination levels coincides with increases in PCB concentration at these stations. Samples collected at TID-WEST are slightly less chlorinated than samples collected from TID-PRW2 (Figure 3-19; QEA, 1998). As with PCB concentration and mass loading, the 1999 total chlorines per biphenyl data are consistent with those observed in previous years (Figure 3-20). Moreover, the seasonal variation in Cl/BP observed in 1999 is also apparent in the data from previous years. Mechanisms potentially responsible for the observed seasonality in PCB composition downstream of Fort Edward are discussed in QEA (1999b).

3.8 SPATIAL TRENDS IN WATER COLUMN PCBS DURING 1999

Spatial trends in PCB concentrations, loadings at low flows, and PCB composition are discussed for 1999 in this section.

3.8.1 Monthly-Average PCB Concentrations

Monthly-average spatial profiles of routine monitoring PCB data collected in 1999 are presented in Figure 3-21. In this plot, the average PCB concentration (± 2 SEM) is plotted for

each month's data against River mile, for the four routine monitoring stations (i.e., Bakers Falls, Fort Edward, TID-PRW2, and Schuylerville). A general increase in PCB concentration from upstream to downstream is observed in all months. The relative magnitude of the increase in PCBs with downstream distance is greatest in May and June (approximate eightfold increase from Fort Edward to Schuylerville), and lowest in January-March (increase of less than threefold between Fort Edward and Schuylerville). The PCB concentration increase between Bakers Falls and Fort Edward is smaller than that between Fort Edward and TID and between TID and Schuylerville. This suggests that sediment PCB sources downstream of Fort Edward are largely responsible for the upstream-to-downstream increase in 1999 monthly average PCB concentrations. As discussed in Section 3.9.2, modeling (QEA, 1999b) and data analyses indicate that the PCB loadings to the water column downstream of Fort Edward are consistent with transport of PCBs from the surficial sediment (i.e., top few cm) layer.

3.8.2 Low Flow PCB Loadings

Figure 3-22 presents a spatial profile of the average low-flow[5] PCB mass loading for 1999. The trend shown is a near-linear increase in PCB mass loading with distance downstream, from Fort Edward to Schuylerville. This trend is consistent with the current understanding of a surface sediment PCB loading source within TIP and in the reach from TID to Schuylerville (QEA, 1999a). As only one data point during high flow (after peak flow) is available at sampling stations downstream of the Rt. 197 Bridge during 1999, it is not possible to evaluate spatial trends during high flow.

[5] Low flow is defined as less than 10,000 cfs measured by the USGS at the Fort Edward gaging station.

3.8.3 PCB Composition

A spatial comparison of the average (± 2 SEM) 1999 ortho, meta + para, and total chlorines per biphenyl for the routine monitoring data, and for Aroclor 1242 is shown in Figure 3-23. The average ortho chlorine per biphenyl level in 1999 was relatively constant from upstream to downstream, and was generally consistent with the level present in Aroclor 1242. This trend is expected since ortho-substituted chlorines are largely resistant to environmental degradation processes (QEA, 1999a). Meta + para and total chlorine per biphenyl data indicate higher chlorination levels at the Plunge Pool, Boat Launch, and Route 197 Bridge stations, consistent with an Aroclor 1242 source. Total and meta + para chlorines per biphenyl observed at downstream locations (i.e., TID and Schuylerville) are substantially lower than those at upstream stations, consistent with homolog patterns discussed in Sections 3.5 and 3.6 and our current understanding of PCB fate within the system. These lower chlorination levels indicate inputs from surface sediment PCBs, which are less chlorinated than Aroclor 1242 due to biologically-mediated dechlorination and preferential partitioning of the lower-chlorinated congeners to the aqueous phase (QEA, 1999a).

3.9 PCB LOADINGS

Data collected at TID and the Route 29 Bridge were insufficient to evaluate loading under high flow conditions; however, an evaluation of the average low-flow PCB loading sources within the monitored reach of the River in 1999 is presented in Figure 3-24. In general, PCB concentrations at the Bakers Falls Bridge sampling station are below the MDL, precluding estimating loading at this location. Data from the plunge pool are general indicators of PCB sources, but River hydrodynamics in this area are too complex to accurately quantify the mass loading. Therefore, the input loading generated from the Hudson Falls Plant Site is best

measured from data collected at the Route 197 Bridge. However, to estimate loading at the Route 197 Bridge requires the use of numerous data that are below the MDL. A conservative approach has been adopted for this calculation which uses the MDL of 11 ng/L to calculate loading for days when the PCB concentration is less than 11 ng/L. Therefore, the loading estimates at the Route 197 Bridge are biased high. However, using this conservative approach, the average 1999 low-flow PCB loading measured at Fort Edward is approximately 0.3 lb/d (Figure 3-24), which is lower than 1998 loading levels, and consistent with 1997 levels.

Also shown in Figure 3-24 are the average 1999 low-flow water column delta loadings[6] computed for TIP and the reach from TID to Schuylerville. The water column PCB delta loading was calculated as the difference between water column PCB mass loading at Fort Edward and the unbiased TID-PRW2 location for TIP, and the difference between mass loading at TID-PRW2 and the Route 29 Bridge for the reach between TID and Schuylerville. The increase in loading observed in TIP and from TID to Schuylerville is greater than the mean load entering the pool at Fort Edward. The magnitude of this increase in loading is consistent with our understanding of sediment-water exchange processes within the Hudson River (QEA, 1999b). The large degree of variability in the delta loadings shown in Figure 3-24 is mainly due to the seasonality in low-flow delta loads.

As shown in Figure 3-25, the delta loading for both reaches (i.e., TIP and TID to Schuylerville) is less than 1.0 lb/d in the winter. The delta loadings increase in late spring to early summer, and peaks at approximately 1.8 and 1.1 lb/d for TIP and TID to Schuylerville, respectively. The 1999 delta loadings decrease throughout the mid to late summer and early fall,

[6] A delta loading is the difference in PCB mass loading between a downstream station and an upstream station. A positive delta loading represents a net mass input to the water column, and a negative delta loading represents a net loss of water column mass. Delta loadings in this report were computed from paired flow and concentration data at the two stations, by event, and averages were calculated for all events.

exhibit a slight increase to approximately 1 lb/d in mid fall, and then decrease in late fall to the lower wintertime levels. The similar magnitudes and seasonal patterns of the low-flow delta loadings calculated for TIP and TID to Schuylerville suggests that similar mechanisms are likely responsible for sediment PCB flux within these reaches.

3.10 PCB SOURCES

3.10.1 PCB Sources Upstream of Fort Edward

Potential PCB sources upstream of Fort Edward include the Hudson Falls Plant Site DNAPL releases in the Bakers Falls area, the Remnant Deposits, and the former outfall 004 area near the Fort Edward Plant Site. The monitoring near Hudson Falls (i.e., the plunge pool and boat launch locations) indicates that sources in this area were active in 1999. Loadings upstream of Fort Edward increased with increasing flow, as evidenced by the large difference in the mean low-flow loading of 0.3 lb/d and the estimated loading rates during the April 1999 high flow event, which ranged from approximately 1 to nearly 20 lbs/day. The composition of the PCBs at Fort Edward in 1999 was consistently similar to Aroclor 1242, suggesting water column PCBs upstream of Fort Edward were primarily derived from the Hudson Falls Plant Site PCB DNAPL sources.

3.10.2 Evaluation of Sediment PCB Sources

PCB congener patterns were used to evaluate potential sources of TIP water column PCB loading. Congener patterns are typically examined on a weight percent basis, in which each PCB congener's mass is represented as a percent of the total PCB in the sample. By plotting weight percent against the ordinal congener number (which increases with chlorination level), a

"signature" or "chemical fingerprint" of the PCB composition is created for a given sample. Congener patterns have been useful for evaluation of upper Hudson River sediment PCB sources because deeper sediments typically contain a higher weight percent of the less chlorinated congeners than surface sediments (QEA, 1999a). In addition, differences in physicochemical properties among the PCB congeners result in differential transport under different loading mechanisms (i.e., PCB loadings from pore water diffusion and sediment resuspension result in different water column PCB compositions). Therefore, PCB congener patterns from 1999 water column loading data were evaluated in conjunction with sediment congener patterns to examine potential sediment PCB sources and loading mechanisms.

The composition of the 1999 summer (June-August) low-flow water column PCB delta load from TIP was used to infer the nature of the sediment PCB source (i.e., deep versus surface). Based on the mean water column congener composition and the assumption of a pore water source in equilibrium with surface sediment PCBs, the composition of the sediment source required to produce the water column PCB congener delta loadings observed from the TIP in 1999 was calculated. The calculated sediment source composition closely matches the average surface sediment PCB composition from the 0-2 cm data collected from the TIP in 1998 (O'Brien & Gere, 1999a; Figure 3-26). This analysis indicates that the primary source of the low-flow water column PCB delta load within TIP appears to be consistent with PCBs that are partitioned from surface sediments to the aqueous phase. Similarities in PCB congener composition at Schuylerville and TID suggests that the surface sediment sources within this reach contribute to the water PCB delta loading between these two stations *via* a similar mechanism.

3.11 LONG TERM TRENDS IN WATER COLUMN PCBS

A plot of PCB concentration at Fort Edward and TID-WEST from 1991 to 1999 is presented in Figure 3-27. Long term trends in PCB concentration at Bakers Falls are not presented because PCBs have been largely below the MDL for this period. PCB concentrations at Schuylerville and TID-PRW2 are not shown because these stations were not routinely sampled for most of this period. Therefore, although the TID-WEST data are biased high, these data are useful as an indicator of longer term temporal trends in PCB concentrations.

As shown in Figure 3-27, PCB concentrations at Fort Edward have decreased significantly since the early 1990's. Mean concentrations on the order of 200-300 ng/L in the early 1990's were reduced to approximately 50 ng/L in the mid-1990's, and continued to decrease to approximately 13 ng/L in 1997. The average PCB concentration was higher in 1998 at 19 ng/L than in 1997; however, the mean concentration decreased again in 1999 to 14 ng/L. The higher levels and variability in PCB concentrations at Fort Edward in the early 1990's signify active Plant Site sources (e.g., the 1991 Allen Mill event discussed in Section 1.2). In later years (i.e., 1996-99), the reduction in variability in PCB concentrations is due primarily to mitigation of the Hudson Falls Plant Site area sources. Post-1997, PCB concentrations at Fort Edward have exhibited some correlation with flow, as increases in concentrations within a given year typically coincided with high-flow events.

Since the early 1990's, PCB concentrations at TID-WEST have declined in response to reduced PCB inputs from upstream. Annual average PCB concentrations at TID-WEST of approximately 300-400 ng/L in 1991-92 decreased to approximately 100-150 ng/L in 1993-95, and ranged between 70 and 90 ng/L from 1996 through 1998. The mean concentration at TID-WEST in 1999 increased to approximately 125 ng/L; however, this increase is likely related to the relatively low flows experienced throughout most of 1999 as compared to previous years

(Figure 3-27). Lower flows would result in an increase in water column PCB concentrations in 1999, assuming that PCB loading rates were similar.

3.11.1 PCB Loading

Estimated PCB loading rates for the Route 197 Bridge sampling station have decreased significantly since the early 1990's, declining from over 5 lbs/day in 1991 to less than 0.5 lbs/day throughout most of 1999 (Figure 3-6). As PCB data collected at TID-WEST are biased, evaluation of PCB loading at this location is not considered to be a representative analysis. PCB data have only been available at TID-PRW2 and Schuylerville since the fall of 1997; therefore, evaluation of longer term trends in PCB loading downstream of Fort Edward are not possible.

4 - SUMMARY

The 1999 HRMP has resulted in the collection and laboratory analysis of approximately 439 water samples. These samples were collected for the following sampling activities:

- routine monitoring,
- high flow monitoring,
- additional plunge pool area sampling,
- sampling upstream of Bakers Falls Bridge,
- additional sampling at TID-WEST, and
- sampling performed adjacent to the remediation activities conducted on Rogers Island by USEPA.

The data produced as a result of these analyses have been evaluated to satisfy the following program objectives:

- monitor the effectiveness of the remedial action performed on the Remnant Deposits;
- monitor the effectiveness of remediation activities conducted at, and adjacent to, the GE Hudson Falls Plant Site;
- provide data to evaluate the significance of other sources of PCBs to the Hudson River; and
- allow continued evaluation of long term trends in PCB concentrations in Hudson River water.

4.1 EFFECTIVENESS OF THE REMEDIAL ACTION PERFORMED ON THE REMNANT DEPOSITS

The remedial action performed on the Remnant Deposits continued to be an effective measure for controlling the migration of PCBs to the Hudson River during 1999. The primary evidence for this is that when PCBs were detected at the Route 197 Bridge monitoring station, they appeared to originate from the GE Hudson Falls Plant Site area, and not from the Remnant Deposit reach of the River. The similar PCB composition observed in samples collected near the GE Hudson Falls Plant Site area when compared to the Route 197 Bridge samples indicates that the GE Hudson Falls Plant Site area is the dominant PCB source in the Remnant Deposit reach of the River (Section 3.7.3). If the Remnant Deposits were a significant source of PCBs to the River, the PCB composition would be expected to be altered at the Route 197 Bridge monitoring station. Because the Remnant Deposits have been stabilized and capped, PCB releases to the River are limited to dissolved phase loadings (e.g., leachate from rainwater infiltration and groundwater flow). These loadings would consist of PCBs that partitioned from the capped sediments, and would therefore exhibit an altered (i.e., less chlorinated) composition due to the differential partitioning of the PCB congeners[7]. Such alterations were not observed in sampling conducted downstream of the Remnant Deposits at the Rt. 197 Bridge sampling station.

Additionally, the timing of the remedial actions performed at, and adjacent to, the GE Hudson Falls plant beginning in 1993 has coincided with significant reductions in PCB loading measured at the Route 197 Bridge, while the PCB composition has remained similar. This is a further indication that the PCB loading measured at the Route 197 Bridge originates upstream of the Remnant Deposits in the GE Hudson Falls Plant Site area.

[7] In general, the partitioning of PCB congeners is inversely proportional to chlorination level. Therefore, aqueous phase PCBs in equilibrium with sediment phase PCBs consist of a higher mass fraction of the lighter (i.e., less chlorinated) congeners (QEA, 1999a).

4.2 EFFECTIVENESS OF GE HUDSON FALLS PLANT SITE REMEDIATION

Remediation of the GE Hudson Falls Plant Site area has been effective in reducing the PCB loading entering the Hudson River, as measured at the Route 197 Bridge. Annual mean PCB loading decreased approximately 85% between 1993 (when remediation was initiated) and 1997. PCB loading from the Plant Site did increase slightly in 1998 from 1997 levels; however, PCB concentrations in 1999 decreased and were consistent with 1997 levels.

4.3 SIGNIFICANCE OF OTHER PCB SOURCES TO THE HUDSON RIVER

The significance of other PCB sources to the Hudson River has been evaluated based on data collected during 1999 and previous years (Sections 3.8 and 3.9). The results of this evaluation confirm the conclusions presented previously (QEA, 1999a), and include the following:

- The primary source of PCBs in the Remnant Deposit reach of the River (as measured at the Route 197 Bridge) is the GE Hudson Falls Plant Site area;
- The primary source of PCBs across the TIP is the surface sediment (i.e., top few cm; QEA, 1999a) between the Route 197 Bridge and Thompson Island Dam; and
- The primary source of PCBs between Thompson Island Dam and Schuylerville is from surface sediment in this reach of the River.

4.4 LONG TERM TRENDS IN PCB CONCENTRATIONS IN THE HUDSON RIVER

Evaluation of Hudson River water column PCB data from 1991 through 1999 indicates that PCB loading to the River has decreased significantly. PCB loading from the GE Hudson Falls Plant Site area, as measured by PCBs at the Route 197 Bridge sampling station, has

decreased since 1993 due to the remedial activities that have been conducted at the GE Hudson Falls Plant Site area. This decrease is evidenced by the approximate 80% decline in yearly average PCB concentrations since 1993. The remedial activities at Hudson Falls were also instrumental in reducing the mean annual PCB concentrations at Thompson Island Dam, as measured at the TID-WEST sampling station, by approximately 60% between 1991-92 and 1993-94. Since 1995, PCB concentrations at TID-WEST have been approximately 30% of those measured in 1991-92.

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TABLES

Quantitative Environmental Analysis, LLC

TABLE 3-1. 1999 Hudson River water column monitoring results for Bakers Falls Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temperature (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
								Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
01/20/99	197	U	3,200	3,540	1.0	<1.0	<11	--	--	--	--	--	--	--
01/27/99	197	UJ	6,700	6,840	1.0	1.6	<11	--	--	--	--	--	--	--
02/03/99	197	U	6,200	6,780	4.0	1.4	<11	--	--	--	--	--	--	--
02/10/99	197	U	7,700	7,040	1.0	<1.1	<11	--	--	--	--	--	--	--
02/17/99	197	U	6,900	6,450	1.0	3.3	<11	--	--	--	--	--	--	--
	197	U, BD			1.0	NS	<11	--	--	--	--	--	--	--
02/24/99	197	U	6,450	5,600	1.0	1.5	<11	--	--	--	--	--	--	--
03/03/99	197	U	5,400	4,870	1.0	1.2	<11	--	--	--	--	--	--	--
03/10/99	197	U	5,300	5,340	1.0	<1.0	<11	--	--	--	--	--	--	--
03/18/99	197	U	5,700	5,010	3.0	1.6	<11	--	--	--	--	--	--	--
	197	U, BD			3.0	1.4	<11	--	--	--	--	--	--	--
03/25/99	197	U	6,500	6,760	2.0	2.0	<11	--	--	--	--	--	--	--
03/31/99	197	U	7,700	7,040	5.0	1.1	<11	--	--	--	--	--	--	--
04/04/99	197	U	15,050	12,800	4.0	NS	<11	--	--	--	--	--	--	--
04/05/99	197	U	18,000	15,200	2.0	4.3	<11	--	--	--	--	--	--	--
04/06/99	197	U	15,620	14,200	3.0	4.4	<11	--	--	--	--	--	--	--
04/07/99	197	U	14,700	13,600	5.0	1.9	<11	--	--	--	--	--	--	--
04/14/99	197	U	9,310	8,040	6.0	<1.0	<11	--	--	--	--	--	--	--
	197	U, BD			6.0	<1.0	<11	--	--	--	--	--	--	--
04/21/99	197	P	7,460	6,800	8.0	<1.0	11	0.0	15.8	33.1	25.8	19.2	6.2	0.0
04/28/99	197	P	4,160	3,600	10.0	1.6	14	0.0	10.0	46.2	29.9	9.7	4.1	0.0

322421

TABLE 3-1. 1999 Hudson River water column monitoring results for Bakers Falls Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temperature (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
								Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
05/05/99	197	U	4,670	3,720	15.0	1.1	<11	--	--	--	--	--	--	--
	197	U, BD			15.0	1.4	<11	--	--	--	--	--	--	--
05/12/99	197	P	3,700	3,110	16.0	1.0	11	0.0	9.5	40.6	29.4	16.2	4.4	0.0
	197	U, BD			16.0	1.1	<11	--	--	--	--	--	--	--
05/19/99	197	P	3,150	2,440	18.0	2.3	16	0.0	11.1	39.3	18.9	23.0	7.7	0.0
05/26/99	197	U	3,898	3,280	15.0	1.7	<11	----	----	----	----	----	----	----
06/02/99	197	U	2,735	2,220	23.0	1.7	<11	----	----	----	----	----	----	----
	197	U, BD			23.0	1.9	<11	----	----	----	----	----	----	----
06/09/99	197	UJ	2,980	2,420	23.0	2.0	<11	----	----	----	----	----	----	----
06/16/99	197.2	U	2,680	2,220	24	1.8	<11	----	----	----	----	----	----	----
	197.1	U			24.0	1.8	<11	----	----	----	----	----	----	----
	197	P			22.0	1.8	13	0.0	12.4	45.1	15.9	22.8	3.8	0.0
06/23/99	197	U	2,550	2,160	24.0	2.0	<11	----	----	----	----	----	----	----
06/30/99	197	U	3,010	2,000	23.0	1.7	<11	----	----	----	----	----	----	----
07/07/99	197	U	5,400	2,970	26.0	2.7	<11	----	----	----	----	----	----	----
07/14/99	197	U	1,870	2,870	24.0	2.4	<11	----	----	----	----	----	----	----
	197	UJ, BD				2.3	<11	----	----	----	----	----	----	----
07/21/99	197	U	1,680	1,880	25	1.9	<11	----	----	----	----	----	----	----
07/28/99	197	U	2,250	2,060	26	1.4	<11	----	----	----	----	----	----	----
08/04/99	197	U	1,050	1,780	24	1.9	<11	----	----	----	----	----	----	----
08/11/99	197	U	1,920	1,900	23	1.4	<11	----	----	----	----	----	----	----
08/18/99	197	U	1,990	1,850	25	1.7	<11	----	----	----	----	----	----	----

322422

TABLE 3-1. 1999 Hudson River water column monitoring results for Bakers Falls Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temperature (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
								Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
08/25/99	197	U	1,780	1,920	24	<1.0	<11	----	----	----	----	----	----	----
09/01/99	197	U	1,720	2,020	24	1.5	<11	----	----	----	----	----	----	----
09/08/99	197	U	2,100	2,270	24	1.3	<11	----	----	----	----	----	----	----
09/15/99	197	U	1,870	1,900	23	<1.0	<11	----	----	----	----	----	----	----
09/22/99	197	U	1,720	3,270	23	2.8	<11	----	----	----	----	----	----	----
09/29/99	197	U	1,850	2,520	23	<1.0	<11	----	----	----	----	----	----	----
	197	U			23	<1.0	<11	----	----	----	----	----	----	----
10/06/99	197	U	3,900	3,460	14	<1.0	<11	----	----	----	----	----	----	----
10/13/99	197	U	6,330	2,780	13	1.1	<11	----	----	----	----	----	----	----
	197	U, BD			13	<1.0	<11	----	----	----	----	----	----	----
10/20/99	197	U	6,930	5,480	11	1.1	<11	----	----	----	----	----	----	----
10/27/99	197	P	6,690	6,230	10	1.6	12.1	0.0	6.9	30.7	35.1	24.4	2.85302	0
11/03/99	197	U	5,140	5,304	10	1.4	<11	----	----	----	----	----	----	----
	197	U, BD			10	1.4	<11	----	----	----	----	----	----	----
11/10/99	197	U	4,671	5,210	9	1.2	<11	----	----	----	----	----	----	----
11/17/99	197	P	4,850	5,090	4	<1.0	12.8	0.0	8.1	22.5	37.7	27.8	3.89	0
	197	U, BD			5	<1.0	<11	----	----	----	----	----	----	----
11/23/99	197	U	4,920	5,120	5	1.7	<11	----	----	----	----	----	----	----
12/01/99	197	U	7,540	7,740	4	2.3	<11	----	----	----	----	----	----	----

322423

TABLE 3-1. 1999 Hudson River water column monitoring results for Bakers Falls Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temperature (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
								Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
12/08/99	197	U	5,660	5,670	4	1.7	<11	----	----	----	----	----	----	----
12/15/99	197	U	3,650	3,630	3	1.6	<11	----	----	----	----	----	----	----
12/22/99	197	U	4,400	3,770	2	<1.0	<11	----	----	----	----	----	----	----
12/29/99	197	U	1,830	2,440	1	<1.0	<11	----	----	----	----	----	----	----

(1) Samples analyzed by capillary column using Method NE013_04.SOP unless otherwise noted. Method NE013_04.SOP data have been adjusted for analytical bias, as described in the report Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database (O'Brien & Gere Engineers, Inc., September 1997).

(2) HRM = Hudson River Mile. HRM 0.0 is located at the Battery in New York City.

(3) Comments reflect PCB data qualifiers and additional information regarding sampling and analytical methods. Data qualifier definitions from USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94).

(4) Instantaneous Flows recorded during sampling for the Fort Edward gaging station are presented.

(5) Daily flow is presented as mean daily flow for the Fort Edward gaging station provided by USGS. Flow data is provisional after 10/1/99.

(6) Homolog groups octa-, nona-, and deca-chlorinated biphenyls were not detected greater than 0.02%.

Key:

BD Blind Duplicate.

U Indicates that the sample was analyzed, but the compound of interest (PCBs) was not detected above the method detection limit (MDL) of the procedure. The sample result is still considered useable for evaluation purposes.

P Indicates that PCBs were detected in the sample at a concentration below the practical quantitation limit (PQL; 44 ng/L). The sample result is still considered useable for evaluation purposes.

J Indicates that the result is considered approximate. This qualifier denotes that the identity of the compound is accurate; however, there is limited confidence in the accuracy of the PCB concentration. The sample result is still considered useable for evaluation purposes.

UJ Indicates that the MDL and sample result is considered approximate. The sample result is still considered useable for evaluation purposes.

R Indicates that the sample result or detection limit has been rejected due to serious deficiencies during the analytical process and/or inability to meet quality control criteria. The sample result is therefore considered unusable for quantitative evaluations.

TABLE 3-2. 1999 Hudson River water column monitoring results for Boatlaunch, Plungepool, and Plungepool area samples (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average (cfs) Flow (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
01/05/99	196.9	P, J	BOATLAUNCH	3,000	2,890	0.0	<1.0	27	0.00	20.59	51.10	18.97	7.49	1.86	0.00
01/13/99	196.9	P, J	BOATLAUNCH	2,500	2,780	0.0	1.3	13	0.00	12.01	44.90	22.54	15.37	5.18	0.00
01/20/99	196.9	P	BOATLAUNCH	3,200	3,540	1.0	<1.0	15	0.00	11.96	38.64	27.87	16.22	5.32	0.00
01/27/99	196.9		BOATLAUNCH	6,700	6,840	0.0	1.1	90	0.00	13.71	44.14	31.09	9.49	1.57	0.00
02/03/99	196.9		BOATLAUNCH	6,200	6,780	1.0	1.2	50	0.00	15.27	48.63	28.91	6.16	1.03	0.00
02/10/99	196.9		BOATLAUNCH	7,700	7,040	0.0	<1.0	235	0.00	9.1	47.3	36.11	6.47	.945	0.0
02/17/99	196.9		BOATLAUNCH	6,900	6,450	0.0	<1.0	248	0.00	7.87	46.78	37.30	7.00	1.05	0.00
02/24/99	196.9		BOATLAUNCH	6,450	5,600	0.0	<1.0	141	0.00	10.71	46.31	35.50	6.33	1.15	0.00
03/03/99	196.9	P	PLUNGEPOOL	5,400	4,870	0.0	1.2	15	0.00	17.56	38.63	24.32	15.21	4.29	0.00
	196.9		BOATLAUNCH			0.0	1.8	66	5.49	13.03	44.53	29.06	6.69	1.21	0.00
	196.9	(EPA 8082)	HR-1			0.0	NS	34	--	--	--	--	--	--	--
	196.9	(EPA 8082)	HR-2			0.0	NS	32	--	--	--	--	--	--	--
	196.9	(EPA 8082)	HR-5			0.0	NS	67	--	--	--	--	--	--	--
	196.9	(EPA 8082)	HR-6			0.0	NS	50	--	--	--	--	--	--	--
	196.9	(EPA 8082)	HR-7			0.0	NS	37	--	--	--	--	--	--	--
03/10/99	196.9		BOATLAUNCH	5,300	5,340	0.0	<1.0	54	0.00	14.44	46.72	31.79	5.91	1.15	0.00
03/17/99	196.9	P	PLUNGEPOOL	5,500	4,930	1.0	1.8	15	0.00	14.40	41.75	29.54	11.44	2.88	0.00
	196.9		BOATLAUNCH			1.0	1.6	46	0.00	18.39	50.06	24.41	6.19	0.95	0.00
03/25/99	196.9	P	PLUNGEPOOL	6,500	6,760	1.0	1.8	14	0.00	10.63	40.85	32.87	12.15	3.50	0.00
	196.9		BOATLAUNCH			1.0	1.8	62	0.00	8.32	47.72	37.00	5.87	1.09	0.00
03/31/99	196.9	P	PLUNGEPOOL	7,700	7,040	3.0	<1.0	16	0.00	5.53	42.05	38.35	12.02	2.05	0.00
	196.9		BOATLAUNCH			3.0	<1.0	73	0.00	11.65	47.69	33.08	6.34	1.24	0.00

322425

TABLE 3-2. 1999 Hudson River water column monitoring results for Boatlaunch, Plungepool, and Plungepool area samples (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average (cfs) Flow (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
04/05/99	196.9		BOATLAUNCH	18,000	15,200	3.3	5.5	82	0.00	8.41	44.34	36.43	8.83	1.99	0.00
04/07/99	196.9		BOATLAUNCH	14,700	13,600	4.0	4.0	52	0.00	9.18	44.92	35.78	8.87	1.25	0.00
04/14/99	196.9	P	BOATLAUNCH	9,310	8,040	4.0	<1.0	15	0.00	9.85	44.60	22.69	15.96	6.91	0.00
04/21/99	196.9	P	PLUNGEPOOL	7,460	6,800	7.0	<1.0	14	0.00	7.61	39.36	35.42	12.64	4.96	0.00
	196.9		BOATLAUNCH			7.0	1.9	136	37.10	6.81	27.98	23.25	4.10	0.77	0.00
04/28/99	196.9		BOATLAUNCH	4,160	3,600	7.0	1.7	113	0.00	10.90	47.01	34.10	6.50	1.49	0.00
	196.9		PLUNGEPOOL			7.0	1.9	51	0.00	14.18	44.94	32.66	6.58	1.65	0.00
05/05/99	196.9		BOATLAUNCH	4,670	3,720	13.0	1.4	102	31.81	9.04	33.74	19.65	4.80	0.95	0.00
	196.9	P	PLUNGEPOOL			13.0	1.2	19	0.00	7.86	36.34	35.79	15.40	4.61	0.00
05/12/99	196.9	P	BOATLAUNCH	3,700	3,110	14.0	1.1	32	0.00	21.83	47.36	24.45	5.09	1.27	0.00
	196.9	P	PLUNGEPOOL			14.0	1.5	12	0.00	10.45	43.10	29.75	13.75	2.95	0.00
	196.9	(EPA 8082)	HR-1			14.0	NS	29	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-2			14.0	NS	<11	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-5			14.0	NS	105	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-6			14.0	NS	24	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-7			14.0	NS	<11	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-8			14.0	NS	<11	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-9			14.0	NS	33	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-10			14.0	NS	27	----	----	----	----	----	----	----
	196.9	(EPA 8082)	HR-11			14.0	NS	24	----	----	----	----	----	----	----

322426

TABLE 3-2. 1999 Hudson River water column monitoring results for Boatlaunch, Plungepool, and Plungepool area samples (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average (cfs) Flow (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
05/19/99	196.9		BOATLAUNCH	3,150	2,440	17.0	2.9	66	0.00	13.74	49.98	29.05	5.96	1.28	0.00
	196.9	P	PLUNGEPOOL			17.0	7.6	30	0.00	4.54	39.56	40.42	12.73	2.75	0.00
05/26/99	197.0	P	BOATLAUNCH	3,898	3,280	16.0	1.3	23	0.00	10.69	52.86	28.58	6.81	1.06	0.00
	197.0	U	PLUNGEPOOL			16.0	2.0	<11	----	----	----	----	----	----	----
06/02/99	196.9	P	BOATLAUNCH	2,735	2,220	20.0	4.8	36	0.00	9.04	49.50	31.00	8.73	1.73	0.00
	196.9	P	PLUNGEPOOL			20.0	1.5	16	0.00	9.94	48.12	27.87	11.52	2.55	0.00
06/09/99	197.0		BOATLAUNCH	2,980	2,420	23.0	1.7	72	0.00	11.98	49.48	30.47	6.78	1.28	0.00
	197.0	P	PLUNGEPOOL			23.0	1.8	16	0.00	11.80	45.71	28.30	11.03	3.16	0.00
06/16/99	197.0		BOATLAUNCH	2,680	2,200	23.0	1.3	64	0.00	11.57	44.53	35.17	7.68	1.05	0.00
	197.0	P	PLUNGEPOOL			23.0	1.9	25	0.00	19.84	44.62	25.47	9.07	1.01	0.00
06/23/99	197.0	P, J	PLUNGEPOOL	2,550	2,160	24.0	2.9	22	0.00	9.37	45.18	35.50	8.55	1.39	0.00
	197.0		BOATLAUNCH			24.0	1.5	48	0.00	14.81	41.68	36.20	6.34	0.98	0.00
06/30/99	197.0	P	BOATLAUNCH	3,010	2,000	24.0	2.4	27	0.00	12.03	45.59	30.94	10.47	0.97	0.00
	197.0		PLUNGEPOOL			24.0	2.1	52	0.00	8.09	40.24	41.66	8.84	1.17	0.00
07/07/99	197.0		BOATLAUNCH	5,400	2,970	25.0	2.4	47	0.00	16.90	38.32	35.42	8.00	1.36	0.00
	197.0	P	PLUNGEPOOL			26.0	5.1	20	0.00	11.55	42.36	33.55	10.66	1.87	0.00
07/14/99	197.0	P	BOATLAUNCH	1,870	2,870	25.0	1.9	19	0.00	14.35	57.50	22.15	4.63	1.37	0.00
	197.0	P	PLUNGEPOOL			24.0	1.8	12	0.00	17.29	38.44	34.93	7.88	1.45	0.00
07/21/99	197.0		BOATLAUNCH	1,680	1,880	25.0	2.0	72	0.00	19.79	45.14	30.93	3.68	0.45	0.00
	197.0	P	PLUNGEPOOL			25.0	2.1	15	0.00	12.01	40.42	39.33	7.03	1.21	0.00
07/28/99	197.0		BOATLAUNCH	2,250	2,060	26.0	<1.0	158	0.00	16.84	44.34	33.00	4.99	0.83	0.00
	197.0	P	PLUNGEPOOL			26.0	1.1	33	0.00	5.83	39.44	47.72	5.42	1.59	0.00

322427

TABLE 3-2. 1999 Hudson River water column monitoring results for Boatlaunch, Plungepool, and Plungepool area samples (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average (cfs) Flow (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
08/04/99	197.0	P	BOATLAUNCH	1,050	1,780	24.0	1.4	24	0.00	21.26	48.59	24.14	4.81	1.20	0.00
	197.0	U	PLUNGEPOOL			24.0	1.3	<11	----	----	----	----	----	----	----
08/11/99	197.0		BOATLAUNCH	1,920	1,900	23.0	1.6	57	0.00	19.68	56.58	20.62	2.63	0.49	0.00
	197.0	U	PLUNGEPOOL			23.0	<1.0	<11	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-2			23.0	*NS*	16	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-5			23.0	*NS*	125	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-6			23.0	*NS*	113	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-7			23.0	*NS*	19	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-8			23.0	*NS*	<11	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-9			23.0	*NS*	37	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-10			23.0	*NS*	11	----	----	----	----	----	----	----
	197.0	(EPA 8082)	HR-11			23.0	*NS*	18	----	----	----	----	----	----	----
08/18/99	197.0	P	BOATLAUNCH	1,990	1,850	25.0	1.4	33	0.00	9.71	58.53	27.13	3.72	0.91	0.00
	197.0	P	PLUNGEPOOL			25.0	1.2	11	0.00	10.27	43.48	30.70	13.42	2.13	0.00
08/25/99	197.0	P	BOATLAUNCH	1,780	1,920	24.0	<1.0	15	0.00	8.56	50.95	29.23	8.52	2.75	0.00
	197.0	U	PLUNGEPOOL			24.0	1.1	<11	----	----	----	----	----	----	----
09/01/99	197.0	P	BOATLAUNCH	1,720	2,020	23.0	1.3	22	0.00	8.72	57.19	23.99	8.64	1.46	0.00
	197.0	U	PLUNGEPOOL			23.0	1.3	<11	----	----	----	----	----	----	----
09/08/99	197.0	P	BOATLAUNCH	2,100	2,270	24.0	2.8	19	0.00	5.45	51.95	32.44	8.25	1.91	0.00
	197.0	U	PLUNGEPOOL			24.0	1.5	<11	----	----	----	----	----	----	----

322428

TABLE 3-2. 1999 Hudson River water column monitoring results for Boatlaunch, Plungepool, and Plungepool area samples (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average (cfs) Flow (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/15/99	197.0	U	BOATLAUNCH	1,870	1,900	22.0	<1.0	<11	----	----	----	----	----	----	----
	197.0	U	PLUNGEPOOL			22.0	1.0	<11	----	----	----	----	----	----	----
09/22/99	197.0		BOATLAUNCH	1,720	3,270	23.0	21.0	1004	0.00	3.35	30.27	45.04	15.49	4.79	0.97
	197.0	U	PLUNGEPOOL			23.0	1.3	<11	----	----	----	----	----	----	----
09/29/99	197.0	P	BOATLAUNCH	1,850	2,520	15.0	<1.0	30	0.00	12.15	55.06	27.49	4.40	0.90	0.00
	197.0	U	PLUNGEPOOL			15.0	<1.0	<11	----	----	----	----	----	----	----
10/06/99	197.0	P	BOATLAUNCH	3,900	3,460	15.0	<1.0	12	0.00	1.70	35.63	36.37	22.41	3.89	0.00
	197.0	U	PLUNGEPOOL			15.0	1.4	<11	----	----	----	----	----	----	----
10/13/99	197.0	P	BOATLAUNCH	6,330	2,780	13.0	<1.0	15	0.00	11.14	47.91	31.52	7.10	2.33	0.00
	197.0	U	PLUNGEPOOL			13.0	<1.0	<11	----	----	----	----	----	----	----
10/20/99	197.0	P	BOATLAUNCH	6,930	5,480	11.0	<1.0	13	0.00	8.48	43.80	35.44	10.32	1.96	0.00
	197.0	UJ	PLUNGEPOOL			11.0	<1.0	<11	----	----	----	----	----	----	----
10/27/99	197.0		BOATLAUNCH	6,690	6,230	10.0	1.9	63	0.00	7.78	35.60	42.41	11.23	2.97	0.00
	197.0	U	PLUNGEPOOL			10.0	1.2	<11	----	----	----	----	----	----	----
11/03/99	197.0	P	PLUNGEPOOL	5,140	5,304	10.0	<1.0	30	0.00	11.85	42.51	35.28	9.06	1.30	0.00
	197.0	P	BOATLAUNCH			10.0	<1.0	22	0.00	10.93	48.92	29.34	8.56	2.24	0.00
11/10/99	197.0	U	PLUNGEPOOL	4,671	5,210	9.0	<1.0	<11	----	----	----	----	----	----	----
	197.0	P	BOATLAUNCH			9.0	1.1	16	0.00	11.93	61.70	15.96	8.48	1.93	0.00
11/17/99	197.0	P	BOATLAUNCH	4,850	5,090	4.0	<1.0	23	0.00	23.35	48.78	23.44	3.49	0.95	0.00
	197.0	U	PLUNGEPOOL			5.0	<1.0	<11	----	----	----	----	----	----	----
11/23/99	197.0	P	BOATLAUNCH	4,920	5,120	5.0	1	42	0.00	31.91	53.39	11.33	2.74	0.63	0.00
	197.0	U	PLUNGEPOOL			5.0	<1.0	<11	----	----	----	----	----	----	----

322429

TABLE 3-2. 1999 Hudson River water column monitoring results for Boatlaunch, Plungepool, and Plungepool area samples (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average (cfs) Flow (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
12/1/99	197.0	P	BOATLAUNCH	7,540	7,740	4.0	2.3	20	0.00	5.35	39.19	41.55	10.61	3.30	0.00
12/08/99	197.0	P	BOATLAUNCH	5,660	5,670	4.0	<1.0	17	0.00	13.73	50.15	28.07	6.62	1.43	0.00
12/15/99	197.0	J	BOATLAUNCH	3,650	3,630	3.0	<1.0	64	0.00	16.77	50.94	27.11	4.13	1.04	0.00
12/22/99	197.0		BOATLAUNCH	4,400	3,770	2.0	<1.0	73	0.00	10.49	47.03	35.36	6.03	1.08	0.00
12/29/99	197.0		BOATLAUNCH	1,830	2,440	1.0	<1.0	111	0.00	18.23	49.14	27.42	4.30	0.90	0.00

(1) Samples analyzed by capillary column using Method NE013_04.SOP unless otherwise noted. Method NE013_04.SOP data have been adjusted for analytical bias, as described in the report Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database (O'Brien & Gere Engineers, Inc., September 1997).

(2) HRM = Hudson River Mile. HRM 0.0 is located at the Battery in New York City.

(3) Comments reflect PCB data qualifiers and additional information regarding sampling and analytical methods. Data qualifier definitions from USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94).

(4) Instantaneous Flows recorded during sampling for the Fort Edward gaging station are presented.

(5) Daily flow is presented as mean daily flow for the Fort Edward gaging station provided by USGS. Flow data is provisional after 10/1/99.

(6) Homolog groups octa-, nona-, and deca-chlorinated biphenyls were not detected greater than 0.02%.

Key:

BD Blind Duplicate.

U Indicates that the sample was analyzed, but the compound of interest (PCBs) was not detected above the method detection limit (MDL) of the procedure. The sample result is still considered useable for evaluation purposes.

P Indicates that PCBs were detected in the sample at a concentration below the practical quantitation limit (PQL; 44 ng/L). The sample result is still considered useable for evaluation purposes.

J Indicates that the result is considered approximate. This qualifier denotes that the identity of the compound is accurate; however, there is limited confidence in the accuracy of the PCB concentration. The sample result is still considered useable for evaluation purposes.

UJ Indicates that the MDL and sample result is considered approximate. The sample result is still considered useable for evaluation purposes.

R Indicates that the sample result or detection limit has been rejected due to serious deficiencies during the analytical process and/or inability to meet quality control criteria. The sample result is therefore considered unusable for quantitative evaluations.

322430

TABLE 3-3. 1999 Hudson River water column monitoring results for the Route 197 Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
01/05/99	194.2	NS	Rt. 197 Br.	3,000	2,890	--	--	--	--	--	--	--	--	--	--
01/13/99	194.2	NS	Rt. 197 Br.	2,500	2,780	--	--	--	--	--	--	--	--	--	--
01/20/99	194.2	P	Rt. 197 Br.	3,200	3,540	1.0	<1.0	13	0.00	11.04	37.49	29.60	16.67	5.21	0.00
01/27/99	194.2	U	Rt. 197 Br.	6,700	6,840	2.0	1.3	<11	--	--	--	--	--	--	--
	194.2	P, BD	Rt. 197 Br.			2.0	1.5	12	0.00	6.63	35.81	32.58	18.96	6.01	0.00
02/03/99	194.2	U	Rt. 197 Br.	6,200	6,780	--	1.1	<11	--	--	--	--	--	--	--
02/10/99	194.2	U	Rt. 197 Br.	7,700	7,040	1.0	<1.0	<11	--	--	--	--	--	--	--
	194.2	U, BD	Rt. 197 Br.			1.0	<1.0	<11	--	--	--	--	--	--	--
02/17/99	194.2	U	Rt. 197 Br.	6,904	6,450	1.0	1.2	<11	--	--	--	--	--	--	--
02/24/99	194.2	U	Rt. 197 Br.	6,450	5,600	1.0	<1.0	<11	--	--	--	--	--	--	--
	194.2	U, BD	Rt. 197 Br.	6,450	5,600	1.0	<1.0	<11	--	--	--	--	--	--	--
03/03/99	194.2	U	Rt. 197 Br.	5,400	4,870	1.0	1.2	<11	--	--	--	--	--	--	--
03/10/99	194.2	U	Rt. 197 Br.	5,303	5,340	1.0	<1.0	<11	--	--	--	--	--	--	--
03/18/99	194.2	U	Rt. 197 Br.	5,700	5,010	3.0	1.3	<11	--	--	--	--	--	--	--
03/25/99	194.2	U	Rt. 197 Br.	6,503	6,760	2.0	1.8	<11	--	--	--	--	--	--	--
	194.2	U, BD	Rt. 197 Br.			2.0	2.0	<11	--	--	--	--	--	--	--
03/31/99	194.2	U	Rt. 197 Br.	7,703	7,040	5.0	1.4	<11	--	--	--	--	--	--	--
04/04/99	194.4	P	Rt. 197 Br.	14,050	12,800	4.0	4.3	20	0.00	3.77	32.57	47.65	13.88	2.13	0.00
	194.4		Rt. 197 Br.	15,050	12,800	4.0	4.7	47	0.00	3.61	37.36	46.74	9.78	2.52	0.00
	194.4		Rt. 197 Br.	17,080	12,800	4.0	4.0	79	0.00	2.40	34.85	48.43	11.41	2.92	0.00
	194.4		Rt. 197 Br.	16,040	12,800	7.0	7.7	82	0.00	3.96	37.36	46.07	10.32	2.28	0.00

TABLE 3-3. 1999 Hudson River water column monitoring results for the Route 197 Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
04/05/99	194.4	P	Rt. 197 Br.	15,760	15,200	3.0	5.7	40	0.00	6.27	43.01	39.09	9.34	2.29	0.00
	194.4	J	Rt. 197 Br.	17,960	15,200	2.0	4.0	238	0.00	9.07	44.19	36.23	8.92	1.59	0.00
	194.4	P	Rt. 197 Br.	17,470	15,200	6.0	3.9	38	0.00	8.23	43.83	36.02	10.23	1.69	0.00
	194.4	P, BD	Rt. 197 Br.	17,470	15,200	6.0	6.9	26	0.00	6.80	45.36	36.99	9.05	1.80	0.00
04/06/99	194.4	P	Rt. 197 Br.	15,620	14,200	3.0	3.6	21	0.00	6.78	39.75	38.27	13.34	1.86	0.00
04/07/99	194.2	P	Rt. 197 Br.	14,703	13,600	5.0	2.1	14	0.00	7.24	46.13	31.87	12.30	2.46	0.00
04/14/99	194.2	U	Rt. 197 Br.	9,310	8,040	7.0	<1.0	<11	--	--	--	--	--	--	--
04/21/99	194.2	P	Rt. 197 Br.	7,460	6,800	9.0	<1.0	17	0.00	6.28	28.52	36.15	20.44	8.62	0.00
	194.2	P, BD	Rt. 197 Br.			9.0	1.0	20	0.00	10.34	24.08	29.53	24.22	11.82	0.00
04/28/99	194.2	P, J	Rt. 197 Br.	4,160	3,600	11.0	1.3	32	0.00	10.25	32.39	35.40	16.54	5.41	0.00
05/05/99	194.2	P	Rt. 197 Br.	4,670	3,720	15.0	1.2	15	0.00	8.06	28.49	38.60	18.25	6.60	0.00
05/12/99	194.4	P	Rt. 197 Br.	3,700	3,110	16.0	1.2	14	0.00	10.30	38.19	32.91	14.35	4.26	0.00
05/19/99	194.4	P	Rt. 197 Br.	3,150	2,400	18.0	2.9	18	0.00	12.61	45.02	27.91	11.99	2.47	0.00
	194.4	P, BD	Rt. 197 Br.	3,150	2,440	18.0	2.4	18	0.00	7.69	37.00	31.02	20.64	3.65	0.00
05/26/99	194.4	P	Rt. 197 Br.	3,898	3,280	15.0	2.1	15	0.00	7.59	39.05	35.40	14.68	3.29	0.00
06/02/99	194.4	P	Rt. 197 Br.	2,735	2,220	23.0	2.2	16	0.00	3.96	50.22	29.24	13.21	3.37	0.00
06/09/99	194.4	P	Rt. 197 Br.	2,980	2,420	23.0	1.8	19	0.00	8.94	41.38	35.76	11.60	2.32	0.00
	194.4	P, BD	Rt. 197 Br.	2,980	2,420	23.0	2.0	20	0.00	7.71	38.09	37.99	13.77	2.43	0.00
06/16/99	194.4	P	Rt. 197 Br.	2,680	2,200	22.0	1.8	26	0.00	7.56	46.57	32.43	12.35	1.09	0.00
06/23/99	194.4	P	Rt. 197 Br.	2,550	2,160	24.0	2.2	19	0.00	11.35	40.36	35.48	10.96	1.85	0.00
06/30/99	194.4	P	Rt. 197 Br.	3,010	2,000	23.0	1.9	14	0.00	22.13	34.70	29.17	12.74	1.26	0.00
	194.4	P, BD	Rt. 197 Br.	3,010	2,000	23.0	2.2	19	0.00	16.23	34.91	35.93	11.48	1.45	0.00

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TABLE 3-3. 1999 Hudson River water column monitoring results for the Route 197 Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
07/07/99	194.4	P	Rt. 197 Br.	5,400	2,970	26.0	2.9	15	0.00	16.13	39.18	33.44	10.59	0.67	0.00
07/14/99	194.4	U	Rt. 197 Br.	1,870	2,870	25.0	2.2	<11	----	----	----	----	----	----	----
07/21/99	194.4	U	Rt. 197 Br.	1,680	1,880	25.0	2.3	<11	----	----	----	----	----	----	----
	194.4	U, BD	Rt. 197 Br.				2.6	<11	----	----	----	----	----	----	----
07/28/99	194.4	P	Rt. 197 Br.	2,250	2,060	26.0	1.8	13	0.00	15.72	32.51	39.48	9.46	2.83	0.00
08/04/99	194.4	U	Rt. 197 Br.	1,050	1,780	24.0	1.3	<11	----	----	----	----	----	----	----
08/11/99	194.4	U	Rt. 197 Br.	1,920	1,900	23.0	2.4	<11	----	----	----	----	----	----	----
08/18/99	194.4	U	Rt. 197 Br.	1,990	1,850	25.0	1.6	<11	----	----	----	----	----	----	----
08/25/99	194.4	U	Rt. 197 Br.	1,780	1,920	24.0	1.2	<11	----	----	----	----	----	----	----
09/01/99	194.4	U	Rt. 197 Br.	1,720	2,020	23.0	1.7	<11	----	----	----	----	----	----	----
	194.4	U, BD	Rt. 197 Br.			23.0	1.6	<11	----	----	----	----	----	----	----
09/08/99	194.4	U	Rt. 197 Br.	2,100	2,270	24.0	1.6	<11	----	----	----	----	----	----	----
09/15/99	194.4	U	Rt. 197 Br.	1,870	1,900	23.0	<1.0	<11	----	----	----	----	----	----	----
09/22/99	194.4	U	Rt. 197 Br.	1,720	3,270	23.0	1.8	<11	----	----	----	----	----	----	----
	194.4	U, BD	Rt. 197 Br.			23.0	1.7	<11	----	----	----	----	----	----	----
09/29/99	194.4	U	Rt. 197 Br.	1,850	2,520	23.0	<1.0	<11	----	----	----	----	----	----	----
10/06/99	194.4	U	Rt. 197 Br.	3,900	3,460	14.0	<1.0	<11	----	----	----	----	----	----	----
10/06/99	194.4	U, BD	Rt. 197 Br.	3,900	3,460	14.0	<1.0	<11	----	----	----	----	----	----	----
10/13/99	194.4	U	Rt. 197 Br.	6,330	2,780	13.0	<1.0	<11	----	----	----	----	----	----	----
10/20/99	194.4	U	Rt. 197 Br.	6,930	5,480	11.0	1.1	<11	----	----	----	----	----	----	----
	194.4	UJ	Rt. 197 Br.			11.0	<1.0	<11	----	----	----	----	----	----	----
10/27/99	194.4	U	Rt. 197 Br.	6,690	6,230	10.0	1.6	<11	----	----	----	----	----	----	----
11/03/99	194.4	U	Rt. 197 Br.	4,030	5,301	10.0	1.6	<11	----	----	----	----	----	----	----
11/10/99	194.4	U	Rt. 197 Br.	4,671	5,210	9.0	1.4	<11	----	----	----	----	----	----	----

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TABLE 3-3. 1999 Hudson River water column monitoring results for the Route 197 Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
11/17/99	194.2	U	Rt. 197 Br.	4,850	5,090	5.0	1.8	<11	----	----	----	----	----	----	----
	194.2	U	HRM 194.2E			5.0	1.1	<11	----	----	----	----	----	----	----
	194.2	U	HRM 194.2W			5.0	1.1	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 1			5.0	1	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 4			5.0	<1.0	<11	----	----	----	----	----	----	----
11/23/99	194.2	U	Rt. 197 Br.	4,920	5,120	5.0	1.2	<11	----	----	----	----	----	----	----
	194.2	U	HRM 194.2E			5.0	1.1	<11	----	----	----	----	----	----	----
	194.2	U	HRM 194.2W			5.0	1	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 1			5.0	1.3	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 1			5.0	<1.0	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 2			5.0	1	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 4			5.0	1.1	<11	----	----	----	----	----	----	----
12/01/99	194.2	P	HRM 194.2E	7,540	7,740	4.0	2.6	16	0.00	1.29	40.46	41.81	13.85	2.58	0.00
	194.2	U	HRM 194.2W			4.0	2.3	<11	----	----	----	----	----	----	----
	194.2	P	HRRIL 1			4.0	3.4	12	0.00	1.90	36.28	41.53	17.12	3.17	0.00
	194.2	P	HRRIL 2			4.0	2.6	17	0.00	6.10	39.44	41.01	10.63	2.82	0.00
	194.2	P, BD	HRRIL 2			4.0	2.5	17	0.00	3.22	36.61	44.23	13.60	2.34	0.00
	194.2	P	HRRIL 4			4.0	2.2	15	0.00	6.15	39.40	38.61	13.44	2.40	0.00
12/08/99	194.2	P	Rt. 197 Br.	5,660	5,670	4.0	2.2	19	0.00	8.67	34.07	34.61	19.95	2.69	0.00
	194.2	U	HRM 194.2E			4.0	1.7	<11	----	----	----	----	----	----	----
	194.2	U	HRM 194.2W			4.0	2.0	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 1			4.0	1.2	<11	----	----	----	----	----	----	----

TABLE 3-3. 1999 Hudson River water column monitoring results for the Route 197 Bridge (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
12/08/99	194.2	U	HRRIL 2	6,140	5,670	4.0	1.3	<11	----	----	----	----	----	----	----
	194.2	U, BD	HRRIL 4			4.0	<1.0	<11	----	----	----	----	----	----	----
	194.2	U	HRRIL 4			4.0	<1.0	<11	----	----	----	----	----	----	----
12/15/99	194.4	U	Rt. 197 Br.	3,650	3,630	3.0	1.2	<11	----	----	----	----	----	----	----
12/22/99	194.4	P	Rt. 197 Br.	4,400	3,770	2.0	2.2	12	0.00	12.10	45.66	25.13	13.97	3.15	0.00
12/29/99	194.4	U	Rt. 197 Br.	1,830	2,440	1.0	1.0	<11	----	----	----	----	----	----	----

(1) Samples analyzed by capillary column using Method NE013_04.SOP unless otherwise noted. Method NE013_04.SOP data have been adjusted for analytical bias, as described in the report Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database (O'Brien & Gere Engineers, Inc., September 1997).

(2) HRM = Hudson River Mile. HRM 0.0 is located at the Battery in New York City.

(3) Comments reflect PCB data qualifiers and additional information regarding sampling and analytical methods. Data qualifier definitions from USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94).

(4) Instantaneous Flows recorded during sampling for the Fort Edward gaging station are presented.

(5) Daily flow is presented as mean daily flow for the Fort Edward gaging station provided by USGS. Flow data is provisional after 10/1/99.

(6) Homolog groups octa-, nona-, and deca-chlorinated biphenyls were not detected greater than 0.02%.

Key:

BD Blind Duplicate.

NS Not Sampled.

U Indicates that the sample was analyzed, but the compound of interest (PCBs) was not detected above the method detection limit (MDL) of the procedure. The sample result is still considered useable for evaluation purposes.

P Indicates that PCBs were detected in the sample at a concentration below the practical quantitation limit (PQL; 44 ng/L). The sample result is still considered useable for evaluation purposes.

J Indicates that the result is considered approximate. This qualifier denotes that the identity of the compound is accurate; however, there is limited confidence in the accuracy of the PCB concentration. The sample result is still considered useable for evaluation purposes.

UJ Indicates that the MDL and sample result is considered approximate. The sample result is still considered useable for evaluation purposes.

R Indicates that the sample result or detection limit has been rejected due to serious deficiencies during the analytical process and/or inability to meet quality control criteria. The sample result is therefore considered unusable for quantitative evaluations.

TABLE 3-4. 1999 Hudson River water column monitoring results for TID-WEST and TID-PRW2 (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) '(5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
01/20/99	188.5	P	TID-WEST	3,200	3,540	1	2.1	18	0.00	30.67	33.43	20.60	12.08	3.23	0.00
	188.5	P, BD	TID-WEST			1	1.2	18	0.00	37.78	30.33	20.00	9.28	2.61	0.00
01/27/99	188.5	P	TID-WEST	6,700	6,840	4	2.3	22	21.33	25.15	21.77	19.58	9.40	2.77	0.00
02/03/99	188.5	P	TID-WEST	6,200	6,780	--	2.2	17	0.00	28.43	26.75	25.73	14.47	4.63	0.00
	188.5	P, BD	TID-WEST			--	2.3	16	0.00	32.39	28.20	24.26	11.52	3.62	0.00
02/10/99	188.5	P	TID-WEST	7,700	7,040	1.0	<1.0	22	14.2	31.6	29.2	14.1	8.2	2.7	0.0
	188.4	NS	TID-PRW2			--	--	--	--	--	--	--	--	--	--
02/17/99	188.5	P	TID-WEST	6,905	6,450	1.0	1.2	17	14.01	27.73	23.99	15.65	13.36	5.26	0.00
	188.4	P	TID-PRW2			1.0	1.4	18	19.05	26.66	21.79	13.22	14.21	5.08	0.00
02/24/99	188.5	U	TID-WEST	6,450	5,600	1.0	1.3	<11	--	--	--	--	--	--	--
	188.4	P	TID-PRW2			1.0	1.0	13	0.00	6.75	33.55	27.15	23.98	8.57	0.00
03/03/99	188.5	P	TID-WEST	5,400	4,870	1	3.2	26	29.43	26.09	20.80	10.51	10.04	3.13	0.00
	188.5	P, BD	TID-WEST			1	3.2	23	20.15	32.02	18.27	15.60	10.62	3.33	0.00
	188.4	P	TID-PRW2			1.0	2.7	12	31.64	5.59	25.39	16.16	16.86	4.36	0.00
03/10/99	188.5	P	TID-WEST	5,304	5,340	1.0	<1.0	20	20.91	26.25	24.90	14.95	10.39	2.61	0.0
03/17/99	188.5	P	TID-WEST	5,700	4,930	2	1.5	24	10.60	33.48	29.23	16.86	7.42	2.41	0.00
	188.4	U	TID-PRW2			2	1.4	<11	--	--	--	--	--	--	--
03/25/99	188.5	P	TID-WEST	6,505	6,760	2	7.9	30	14.23	17.50	30.11	23.58	12.33	2.27	0.00
	188.4	P	TID-PRW2			2	5.1	16	19.70	13.79	26.80	24.44	12.29	2.99	0.00
03/31/99	188.5	P	TID-WEST	7,704	7,040	5.0	3.2	23	12.45	28.72	24.62	18.82	11.63	3.75	0.00
	188.5	P, BD	TID-WEST			5.0	4	22	13.76	17.50	27.26	25.45	13.83	2.20	0.00

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TABLE 3-4. 1999 Hudson River water column monitoring results for TID-WEST and TID-PRW2 (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) '(5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
04/07/99	188.5		TID-WEST	14,704	13,600	5	2.5	51	43.42	14.86	22.78	12.26	4.82	1.86	0.00
	188.4	P	TID-PRW2			5	2.7	18	0.00	16.20	41.43	28.49	10.42	3.46	0.00
04/14/99	188.5	P	TID-WEST	9,310	8,040	7	1	31	21.62	19.92	22.62	17.59	13.10	5.15	0.00
	188.4	P	TID-PRW2			7	1.3	17	16.78	16.45	25.27	20.63	15.51	5.37	0.00
04/21/99	188.5		TID-WEST	7,460	6,800	9	<1.0	45	33.60	22.51	22.78	14.10	5.34	1.67	0.00
	188.4		TID-PRW2			9	<1.0	55	55.77	14.61	13.64	10.60	3.78	1.59	0.00
04/28/99	188.5		TID-WEST	4,160	3,600	10	6	262	12.27	23.72	31.94	22.03	8.01	2.02	0.00
	188.5	BD	TID-WEST			10	7.1	251	14.37	23.90	31.09	21.91	7.15	1.58	0.00
	188.4	P	TID-PRW2			10	1.5	33	26.28	32.97	21.57	11.46	6.21	1.51	0.00
05/05/99	188.5		TID-WEST	4,670	3,720	15	1.3	147	30.90	36.66	18.39	9.71	3.52	0.82	0.00
	188.4		TID-PRW2			15	1.7	61	25.78	27.13	17.12	15.89	10.14	3.94	0.00
05/12/99	188.5		TID-WEST	3,700	3,110	16	17	814	11.32	23.27	29.83	23.51	8.43	2.69	0.88
	188.4		TID-PRW2			16	1	71	29.67	37.87	17.63	10.65	3.50	0.66	0.00
05/19/99	188.5		TID-WEST	3,150	2,440	18	2.2	272	32.00	41.30	16.41	7.78	2.31	0.20	0.00
	188.4		TID-PRW2			18	2.4	114	27.95	37.45	21.32	9.77	3.10	0.41	0.00
05/26/99	188.5		TID-WEST	3,898	3,280	15	1.2	221	31.82	38.87	17.93	8.82	2.29	0.27	0.00
	188.5	BD	TID-WEST			15	1.4	236	33.96	37.72	17.45	8.48	2.10	0.30	0.00
	188.4		TID-PRW2			15	2.4	107	28.44	36.72	18.13	12.77	2.91	1.03	0.00
06/02/99	188.5		TID-WEST	2,735	2,220	23	1.7	262	27.61	42.85	18.41	8.63	2.20	0.30	0.00
	188.4		TID-PRW2			23	2.3	136	25.18	39.36	19.90	10.93	4.07	0.57	0.00

TABLE 3-4. 1999 Hudson River water column monitoring results for TID-WEST and TID-PRW2 (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) '(5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
06/09/99	188.5		TID-WEST	2,980	2,420	23	1.7	297	28.90	37.17	20.19	9.56	3.54	0.64	0.00
	188.5		TID-WEST_1			23	1.8	286	29.22	39.13	19.04	9.55	2.77	0.28	0.00
	188.4		TID-PRW2			23	3.2	166	28.49	37.96	20.29	9.25	3.50	0.51	0.00
06/16/99	188.5	J	TID-WEST	2,680	2,270	24	2	234	27.36	37.90	21.14	10.14	3.13	0.34	0.00
	188.5	BD	TID-WEST			24	1.9	246	26.16	40.25	20.50	10.08	2.63	0.39	0.00
	188.5		TID-WEST_1			24	2	231	29.03	37.88	20.27	9.68	2.87	0.27	0.00
	188.4		TID-PRW2			24	2.3	140	25.49	37.92	22.53	10.65	3.02	0.40	0.00
06/23/99	188.5		TID-WEST	2,550	2,160	24	1.7	181	24.03	37.60	22.65	12.45	2.88	0.39	0.00
	188.5		TID-WEST_1			23	1.5	152	21.80	40.16	22.63	12.16	2.87	0.38	0.00
	188.4		TID-PRW2			24	1.9	114	20.48	36.36	24.90	14.00	3.67	0.58	0.00
06/30/99	188.5		TID-WEST	3,010	2,000	22	1.4	200	21.42	39.50	23.58	11.44	3.64	0.41	0.00
	188.4		TID-PRW2			22	1.8	107	18.53	38.37	24.88	14.03	3.83	0.36	0.00
07/07/99	188.5		TID-WEST	5,400	2,970	27	2	174	14.71	40.80	25.92	14.72	3.43	0.42	0.00
	188.5	BD	TID-WEST			27	1.3	131	7.50	41.36	29.36	16.92	4.16	0.69	0.00
	188.4		TID-PRW2			27	3.9	82	8.58	43.41	27.12	15.88	4.21	0.80	0.00
07/14/99	188.5		TID-WEST	1,870	2,870	25	1.7	138	16.23	44.13	22.83	13.44	3.09	0.29	0.00
	188.4		TID-PRW2			25	1.7	54	5.59	44.84	27.32	17.82	4.03	0.39	0.00
07/21/99	188.5		TID-WEST	1,680	1,880	26	1.6	115	16.32	40.00	25.88	13.15	4.07	0.59	0.00
	188.4		TID-PRW2			26	2	55	14.50	39.14	27.67	14.77	3.36	0.56	0.00
07/28/99	188.5		TID-WEST	2,250	2,060	26	1.4	114	4.86	43.19	29.90	17.21	4.13	0.70	0.00
	188.5	BD	TID-WEST				1.1	113	6.13	43.35	28.95	16.87	4.05	0.63	0.00
	188.4		TID-PRW2			26	1.6	71	2.36	41.54	29.96	20.45	4.82	0.86	0.00

322438

TABLE 3-4. 1999 Hudson River water column monitoring results for TID-WEST and TID-PRW2 (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) '(5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
08/04/99	188.5		TID-WEST	1,050	1,780	26	1.3	89	15.14	42.83	25.61	12.77	2.95	0.70	0.00
	188.4		TID-PRW2			26	1.3	72	11.30	43.86	27.53	13.98	2.82	0.52	0.00
08/11/99	188.5		TID-WEST	1,920	1,900	23	1.5	74	18.69	43.55	23.87	10.78	2.75	0.36	0.00
	188.4		TID-PRW2			23	1.5	57	20.30	39.18	23.95	13.28	2.66	0.63	0.00
	188.4	BD	TID-PRW2			23	1.4	57	20.98	38.70	24.35	12.82	2.83	0.32	0.00
08/18/99	188.5	U	TID-WEST	1,990	1,850	25	1.3	114	17.99	38.22	26.27	13.97	3.21	0.34	0.00
	188.4	BD	TID-PRW2			25	1.2	56	12.69	41.60	27.03	14.65	3.50	0.53	0.00
	188.4		TID-PRW2			25	2.3	50	6.53	43.82	30.57	15.01	3.47	0.60	0.00
08/25/99	188.4	P	TID-PRW2	1,780	1,920	24	1	44	18.82	32.94	26.39	16.62	4.25	0.97	0.00
	188.5		TID-WEST			24	<1.0	76	11.43	41.21	29.28	13.85	3.64	0.59	0.00
09/01/99	188.5		TID-WEST	1,720	2,020	23	1.3	61	14.02	38.43	27.19	15.63	4.08	0.65	0.00
	188.4	P	TID-PRW2			23	1.5	26	7.47	28.73	35.71	20.70	4.31	3.08	0.00
09/08/99	188.5		TID-WEST	2,100	2,270	24	1.4	84	12.85	42.53	28.18	12.23	3.67	0.55	0.00
	188.5	BD	TID-WEST			24	<1.0	82	11.97	41.59	28.39	14.18	3.45	0.41	0.00
	188.4	P	TID-PRW2			24	1.4	28	9.78	40.79	25.40	17.98	5.26	0.79	0.00
09/15/99	188.5		TID-WEST	1,870	1,900	23	<1.0	82	13.53	42.67	26.87	13.24	3.31	0.38	0.00
	188.5	BD	TID-WEST			23	<1.0	85	12.78	43.62	26.86	13.14	3.26	0.34	0.00
	188.4		TID-PRW2			23	<1.0	46	12.09	45.51	25.08	12.86	3.42	1.04	0.00
09/22/99	188.5		TID-WEST	1,720	3,270	23	1.5	50	18.34	41.13	23.02	14.37	2.60	0.54	0.00
	188.4	P	TID-PRW2			23	2.6	29	13.70	41.19	24.22	15.14	4.64	1.11	0.00
09/29/99	188.5		TID-WEST	1,850	2,520	23	<1.0	81	24.33	39.94	20.43	11.44	3.49	0.37	0.00
	188.4	P	TID-PRW2			23	<1.0	32	16.87	36.00	26.68	13.71	5.45	1.28	0.00

322439

TABLE 3-4. 1999 Hudson River water column monitoring results for TID-WEST and TID-PRW2 (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) '(5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
10/06/99	188.5		TID-WEST	3,900	3,460	14	<1.0	56	23.37	39.37	19.55	11.77	4.39	1.54	0.00
	188.4	P	TID-PRW2			14	1	29	18.33	31.64	21.94	18.80	7.79	1.49	0.00
10/13/99	188.5		TID-WEST	6,330	2,780	13	1.3	51	32.15	36.91	16.30	10.08	3.96	0.61	0.00
	188.4	P	TID-PRW2			13	1.4	23	15.08	44.13	20.12	13.48	6.20	0.99	0.00
10/20/99	188.5		TID-WEST	6,930	5,480	11	1.1	53	34.54	38.32	15.86	7.30	3.41	0.56	0.00
	188.4	P	TID-PRW2			11	2	27	28.12	32.30	19.92	13.47	5.10	1.09	0.00
10/27/99	188.5		TID-WEST	6,690	6,230	10	5.6	279	13.80	30.53	29.20	18.39	6.48	1.42	0.18
	188.4	P	TID-PRW2			10	1.7	32	32.66	34.12	17.61	9.83	4.22	1.56	0.00
	188.4	P, BD	TID-PRW2			10	1.6	33	26.63	40.45	17.74	9.82	4.25	1.11	0.00
11/03/99	188.4		TID-WEST	4,030	5,301	10	1.9	92	31.84	39.04	17.56	8.70	2.55	0.31	0.00
	188.4	P	TID-PRW2			10	1.9	42	27.20	39.51	17.68	11.15	3.78	0.69	0.00
11/10/99	188.5		TID-WEST	4,671	5,210	9	1.3	104	38.83	37.25	14.34	7.10	2.04	0.44	0.00
	188.4	P	TID-PRW2			9	1.2	20	17.45	42.95	20.98	9.49	6.97	2.16	0.00
11/17/99	188.5		TID-WEST	4,850	5,090	5	<1.0	68	28.27	37.91	20.89	8.74	3.32	0.88	0.00
	188.4	P	TID-PRW2			5	<1.0	23	33.57	26.81	16.94	14.90	6.27	1.52	0.00
11/23/99	188.5		TID-WEST	4,920	5,120	5	1.4	88	33.71	41.15	15.18	6.82	2.81	0.34	0.00
	188.4	P	TID-PRW2			5	1.8	24	28.87	27.42	24.50	13.23	4.58	1.40	0.00
12/01/99	188.5		TID-WEST	7,540	7,740	4	5.1	237	10.24	22.18	33.17	22.64	8.76	2.29	0.72
	188.4	P	TID-PRW2			4	3.5	19	0.00	6.66	41.43	37.97	12.27	1.66	0.00
12/08/99	188.5		TID-WEST	5,660	5,670	4	1.9	55	22.92	41.10	20.61	11.11	3.51	0.75	0.00
	188.4	P	TID-PRW2			4	2	17	27.95	25.15	23.23	15.66	6.62	1.40	0.00

TABLE 3-4. 1999 Hudson River water column monitoring results for TID-WEST and TID-PRW2 (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) '(5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
12/15/99	188.4		TID-WEST	3,650	3,630	3	2.7	380	33.14	35.89	19.22	8.74	2.56	0.45	0.00
	188.4	BD	TID-WEST			3	2.5	331	33.44	35.03	18.92	9.07	2.92	0.62	0.00
	188.5	P	TID-PRW2			3	1.5	19	19.98	30.04	26.19	15.24	5.99	2.57	0.00
12/22/99	188.4		TID-WEST	4,400	3,770	2	2.6	311	35.22	36.11	17.74	8.13	2.37	0.43	0.00
	188.4	P	TID-PRW2			2	1.8	17	0.00	17.61	35.97	33.95	11.41	1.06	0.00
	188.4	P, BD	TID-PRW2			2	3.1	16	0.00	18.32	31.06	35.59	12.52	2.52	0.00
12/29/99	188.5	P	TID-WEST	1,830	2,440	1	<1.0	24	23.53	37.56	20.47	13.60	3.54	1.29	0.00
	188.4	U	TID-PRW2			1	<1.0	<11	----	----	----	----	----	----	----
	188.4	U, BD	TID-PRW2			1	1	<11	----	----	----	----	----	----	----

(1) Samples analyzed by capillary column using Method NE013_04.SOP unless otherwise noted. Method NE013_04.SOP data have been adjusted for analytical bias, as described in the report Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database (O'Brien & Gere Engineers, Inc., September 1997).

(2) HRM = Hudson River Mile. HRM 0.0 is located at the Battery in New York City.

(3) Comments reflect PCB data qualifiers and additional information regarding sampling and analytical methods. Data qualifier definitions from USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94).

(4) Instantaneous Flows recorded during sampling for the Fort Edward gaging station are presented.

(5) Daily flow is presented as mean daily flow for the Fort Edward gaging station provided by USGS. Flow data is provisional after 10/1/99.

(6) Homolog groups octa-, nona-, and deca-chlorinated biphenyls were not detected greater than 0.02%.

Key:

BD Blind Duplicate.

U Indicates that the sample was analyzed, but the compound of interest (PCBs) was not detected above the method detection limit (MDL) of the procedure. The sample result is still considered useable for evaluation purposes.

P Indicates that PCBs were detected in the sample at a concentration below the practical quantitation limit (PQL; 44 ng/L). The sample result is still considered useable for evaluation purposes.

J Indicates that the result is considered approximate. This qualifier denotes that the identity of the compound is accurate; however, there is limited confidence in the accuracy of the PCB concentration. The sample result is still considered useable for evaluation purposes.

UJ Indicates that the MDL and sample result is considered approximate. The sample result is still considered useable for evaluation purposes.

R Indicates that the sample result or detection limit has been rejected due to serious deficiencies during the analytical process and/or inability to meet quality control criteria. The sample result is therefore considered unusable for quantitative evaluations.

322441

TABLE 3-5. 1999 Hudson River water column monitoring results for Schuylerville (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
01/27/99	181.4	P	Rt. 29 Br.	6,700	6,840	3	5.9	23	10.94	21.99	29.65	24.06	11.40	1.97	0.00
02/03/99	181.4	P	Rt. 29 Br.	6,200	6,780	----	16	19	0.00	25.73	26.94	28.97	14.82	3.54	0.00
02/10/99	181.4	P	Rt. 29 Br.	7,700	7,040	1.0	1.7	20	16.3	18.4	30.7	19.4	11.1	4.07	0.0
02/17/99	181.4	P	Rt. 29 Br.	6,907	6,450	1.0	1.6	19	15.17	23.04	26.42	20.22	12.25	2.89	0.00
02/24/99	181.4	P	Rt. 29 Br.	6,450	5,600	1.0	1.4	30	6.63	30.33	29.47	17.05	12.88	3.64	0.00
03/03/99	181.4	P	Rt. 29 Br.	5,400	4,870	2.0	4.1	39	19.37	22.42	31.10	16.11	8.41	2.58	0.00
03/10/99	181.4	P	Rt. 29 Br.	5,306	5,340	1.0	1.3	27	24.78	27.18	20.93	14.29	9.84	2.99	0.0
	181.4	P, BD	Rt. 29 Br.			1.0	1.1	22	23.95	24.95	20.74	15.00	13.00	2.36	0.0
03/17/99	181.4	P	Rt. 29 Br.	5,700	4,930	3	1.4	18	0.00	28.03	31.79	23.91	13.08	3.20	0.00
03/25/99	181.4	P	Rt. 29 Br.	6,507	6,760	3.0	6.1	28	24.61	11.24	26.35	24.42	11.37	2.01	0.00
03/31/99	181.4	P	Rt. 29 Br.	7,707	7,040	6.0	3.2	24	11.35	20.02	29.59	25.70	10.83	2.51	0.00
04/07/99	181.4	P, J	Rt. 29 Br.	14,706	13,600	6	3.2	60	30.06	10.50	28.35	22.26	7.45	1.37	0.00
	181.4	R, BD	Rt. 29 Br.			6	3.6	285	6.30	26.27	43.61	20.20	2.89	0.72	0.00
04/14/99	181.4	P	Rt. 29 Br.	9,310	8,040	7	1.4	27	25.82	13.25	25.30	19.41	12.11	4.12	0.00
04/21/99	181.4	P	Rt. 29 Br.	7,460	6,800	9	1	38	18.39	27.18	27.23	16.89	7.73	2.59	0.00
04/28/99	181.4		Rt. 29 Br.	4,160	3,600	11	1.9	70	41.37	24.37	17.17	11.88	4.06	1.15	0.00
05/05/99	181.4		Rt. 29 Br.	4,670	3,720	15	1.6	97	27.79	35.16	18.04	13.22	4.63	1.16	0.00
05/12/99	181.4		Rt. 29 Br.	3,700	3,110	17	2.2	108	30.19	34.55	19.72	10.12	4.35	1.07	0.00
05/19/99	181.4		Rt. 29 Br.	3,150	2,440	18	3.2	156	21.14	42.69	20.81	11.40	3.40	0.56	0.00
05/26/99	181.4		Rt. 29 Br.	3,898	3,280	15	3.8	169	30.79	35.69	18.65	11.54	3.01	0.32	0.00

322442

TABLE 3-5. 1999 Hudson River water column monitoring results for Schuylerville (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
06/02/99	181.4		Rt. 29 Br.	2,735	2,220	23	3.3	163	15.96	42.11	25.10	12.40	3.73	0.70	0.00
06/09/99	181.4	J	Rt. 29 Br.	2,980	2,420	23	2.5	188	22.47	39.63	22.53	11.51	3.45	0.41	0.00
06/16/99	181.4		Rt. 29 Br.	2,680	2,200	24	3	211	19.16	38.01	25.13	13.29	3.69	0.73	0.00
06/23/99	181.4	J	Rt. 29 Br.	2,550	2,160	24	2	118	18.07	41.36	24.40	12.45	3.27	0.46	0.00
	181.4	BD	Rt. 29 Br.			24	1.9	146	18.22	40.50	24.32	13.23	3.27	0.47	0.00
06/30/99	181.4		Rt. 29 Br.	3,010	2,000	23	3.1	138	13.44	42.26	25.79	13.76	4.10	0.64	0.00
07/07/99	181.4		Rt. 29 Br.	5,400	2,970	27	2.4	157	17.41	39.92	24.20	13.94	4.01	0.53	0.00
07/14/99	181.4		Rt. 29 Br.	1,870	2,870	25	2	88	5.59	44.42	28.08	16.52	4.71	0.68	0.00
07/21/99	181.4		Rt. 29 Br.	1,680	1,880	26	2.3	81	7.80	41.87	28.95	15.60	4.78	0.99	0.00
07/28/99	181.4		Rt. 29 Br.	2,250	2,060	26	<1.0	83	3.58	41.69	31.93	18.51	3.42	0.88	0.00
08/04/99	181.4		Rt. 29 Br.	1,050	1,780	26	1.8	80	6.57	42.66	28.97	17.63	3.53	0.64	0.00
	181.4	BD	Rt. 29 Br.			26	1.6	91	6.55	39.68	30.49	18.76	3.72	0.81	0.00
08/11/99	181.4		Rt. 29 Br.	1,920	1,900	23	1.6	80	12.68	39.44	28.89	15.19	3.13	0.67	0.00
08/18/99	181.4		Rt. 29 Br.	1,990	1,850	25	1.7	65	4.22	42.20	31.52	16.50	4.85	0.71	0.00
08/25/99	181.4		Rt. 29 Br.	1,780	1,920	24	1	60	11.74	39.18	29.08	15.45	3.95	0.61	0.00
	181.4	BD	Rt. 29 Br.			24	<1.0	60	11.20	39.18	29.62	15.55	3.67	0.78	0.00
09/01/99	181.4	P	Rt. 29 Br.	1,720	2,020	23	1.3	44	5.82	38.51	33.99	15.99	4.58	1.11	0.00
09/08/99	181.4		Rt. 29 Br.	2,100	2,270	24	1.6	57	9.17	38.28	30.49	16.37	4.90	0.79	0.00
09/15/99	181.4		Rt. 29 Br.	1,870	1,900	23	<1.0	69	10.82	40.61	28.07	16.50	3.50	0.50	0.00
09/22/99	181.4	P	Rt. 29 Br.	1,720	3,270	23	2.5	26	8.45	40.30	29.71	16.25	4.38	0.91	0.00
09/29/99	181.4	P	Rt. 29 Br.	1,850	2,520	23	<1.0	41	11.05	36.63	31.15	15.29	4.41	1.47	0.00
10/06/99	181.4	P	Rt. 29 Br.	3,900	3,460	14	<1.0	35	16.16	39.61	22.35	14.64	5.53	1.71	0.00

322443

TABLE 3-5. 1999 Hudson River water column monitoring results for Schuylerville (1)

Date Collected	Approx. HRM (2)	Comments QA/QC (3)	Location	Instantaneous Flow (cfs) (4)	Daily Average Flow (cfs) (5)	Water Temp. (C)	TSS (mg/L)	Total PCB (ng/L)	Homolog Distribution (weight percent) (6)						
									Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
10/13/99	181.4	P	Rt. 29 Br.	6,330	2,780	13	1.6	38	17.78	40.07	20.25	14.86	5.00	2.04	0.00
10/20/99	181.4	P	Rt. 29 Br.	6,930	5,480	11	1.7	36	18.46	39.46	24.32	12.51	4.66	0.59	0.00
10/27/99	181.4	P	Rt. 29 Br.	6,690	6,230	10	1.9	36	17.75	46.98	20.29	9.13	4.67	1.17	0.00
11/03/99	181.4	P	Rt. 29 Br.			10	2.2	40	13.90	47.65	23.84	10.42	3.03	1.15	0.00
11/10/99	181.4	P	Rt. 29 Br.	4,671	5,210	9	1.1	44	23.56	46.23	19.00	6.88	3.36	0.97	0.00
	181.4	P, BD	Rt. 29 Br.			9	1.2	46	19.06	46.20	18.83	10.94	4.18	0.79	0.00
11/17/99	181.4	P, J	Rt. 29 Br.	4,850	5,090	5	<1.0	39	18.19	37.97	22.10	14.92	6.04	0.78	0.00
11/23/99	181.4		Rt. 29 Br.	4,920	5,120	5	1.3	55	25.08	43.86	18.65	8.89	2.87	0.66	0.00
12/01/99	181.4	P, J	Rt. 29 Br.	7,540	7,740	4	3.8	33	9.56	23.64	29.74	25.59	10.50	0.97	0.00
12/08/99	181.4	J	Rt. 29 Br.	5,660	5,670	4	1.5	44	31.19	34.29	19.85	9.67	4.09	0.90	0.00
12/15/99	181.4	P	Rt. 29 Br.	3,650	3,630	3	1.5	34	25.65	34.77	22.22	12.48	3.70	1.18	0.00
12/22/99	181.4		Rt. 29 Br.	4,400	3,770	2	1.8	52	29.33	29.83	20.94	14.79	4.22	0.89	0.00

(1) Samples analyzed by capillary column using Method NE013_04.SOP unless otherwise noted. Method NE013_04.SOP data have been adjusted for analytical bias, as described in the report Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database (O'Brien & Gere Engineers, Inc., September 1997).

(2) HRM = Hudson River Mile. HRM 0.0 is located at the Battery in New York City.

(3) Comments reflect PCB data qualifiers and additional information regarding sampling and analytical methods. Data qualifier definitions from USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94).

(4) Instantaneous Flows recorded during sampling for the Fort Edward gaging station are presented.

(5) Daily flow is presented as mean daily flow for the Fort Edward gaging station provided by USGS. Flow data is provisional after 10/1/99.

(6) Homolog groups octa-, nona-, and deca-chlorinated biphenyls were not detected greater than 0.02%.

Key:

BD Blind Duplicate.

U Indicates that the sample was analyzed, but the compound of interest (PCBs) was not detected above the method detection limit (MDL) of the procedure. The sample result is still considered useable for evaluation purposes.

P Indicates that PCBs were detected in the sample at a concentration below the practical quantitation limit (PQL; 44 ng/L). The sample result is still considered useable for evaluation purposes.

J Indicates that the result is considered approximate. This qualifier denotes that the identity of the compound is accurate; however, there is limited confidence in the accuracy of the PCB concentration. The sample result is still considered useable for evaluation purposes.

UJ Indicates that the MDL and sample result is considered approximate. The sample result is still considered useable for evaluation purposes.

R Indicates that the sample result or detection limit has been rejected due to serious deficiencies during the analytical process and/or inability to meet quality control criteria. The sample result is therefore considered unusable for quantitative evaluations.

FIGURES

QEA
Quantitative Environmental Analysis, LLC.

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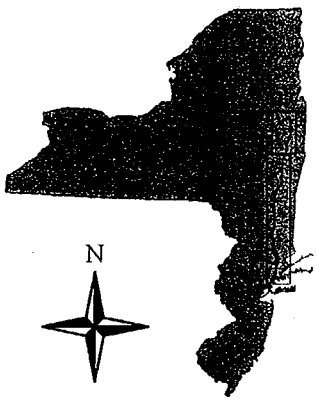
LOCATION MAP OF THE HUDSON RIVER



Upper Hudson Scale

3 0 3 Miles

Lower Hudson Scale

7 0 7 14 Miles

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Hudson River Monitoring Program
1999 Annual Summary Report

Figure 1-1.

Hudson River location map.

Note: Numbers along river indicate river miles measured from the Battery

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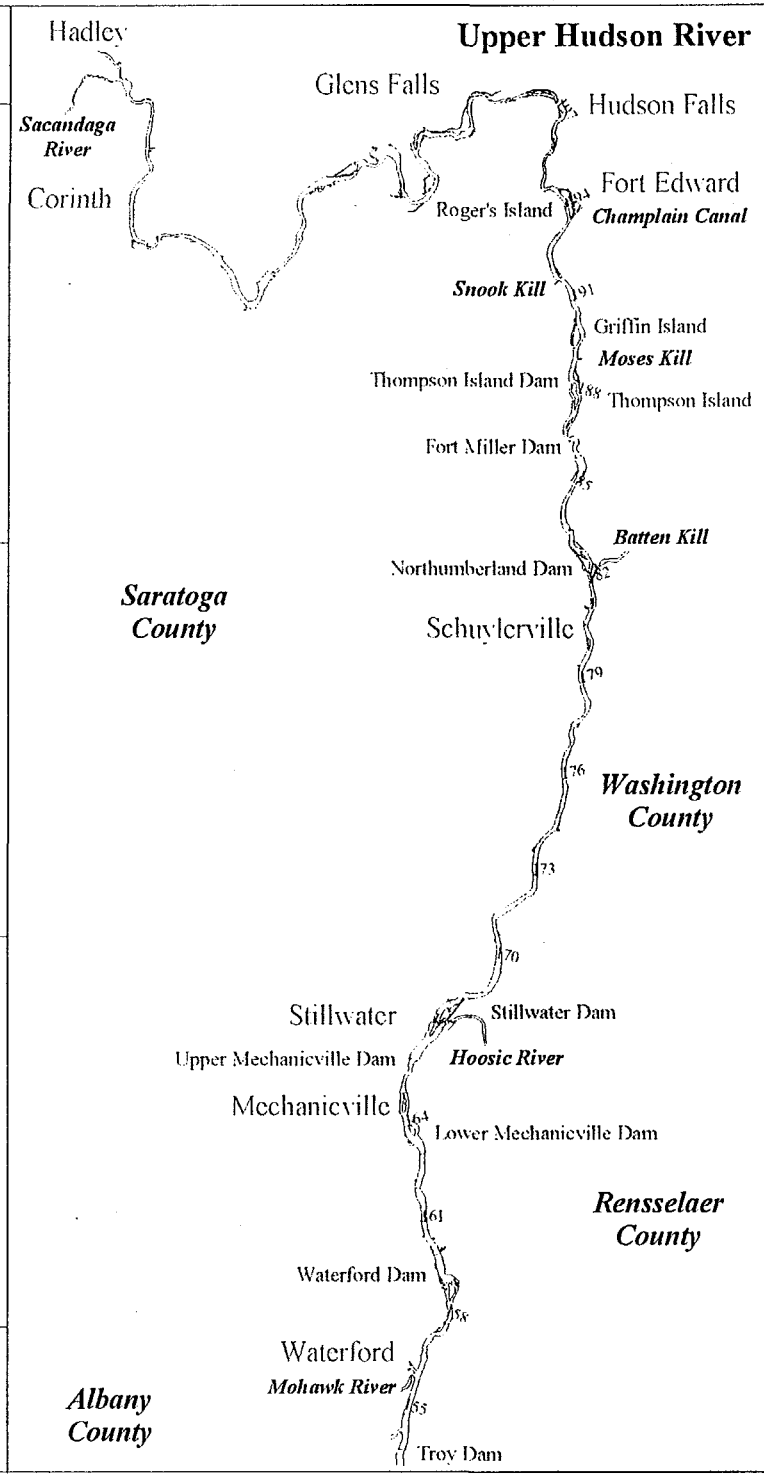
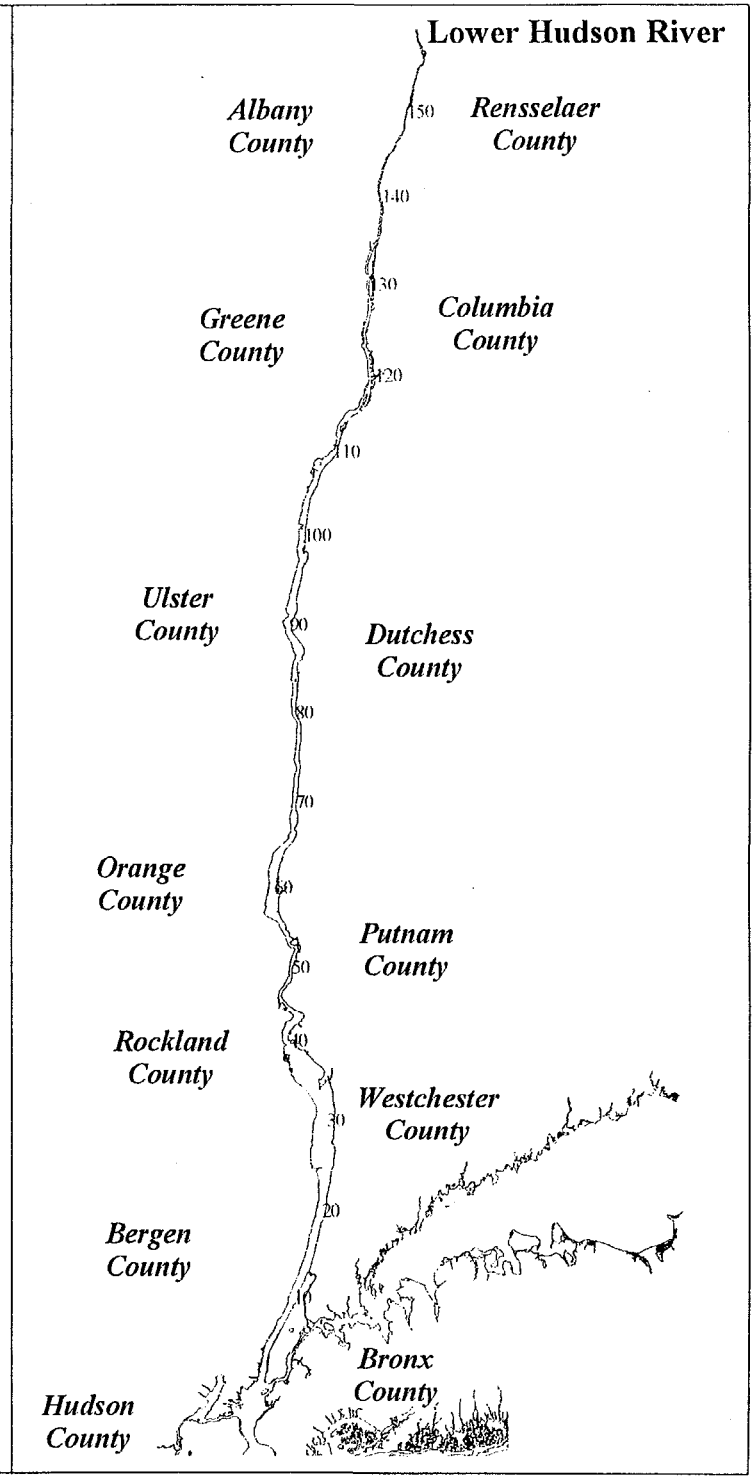
Quantitative Environmental Analysis, LLC.

Project: GENhrm 131 January 2001

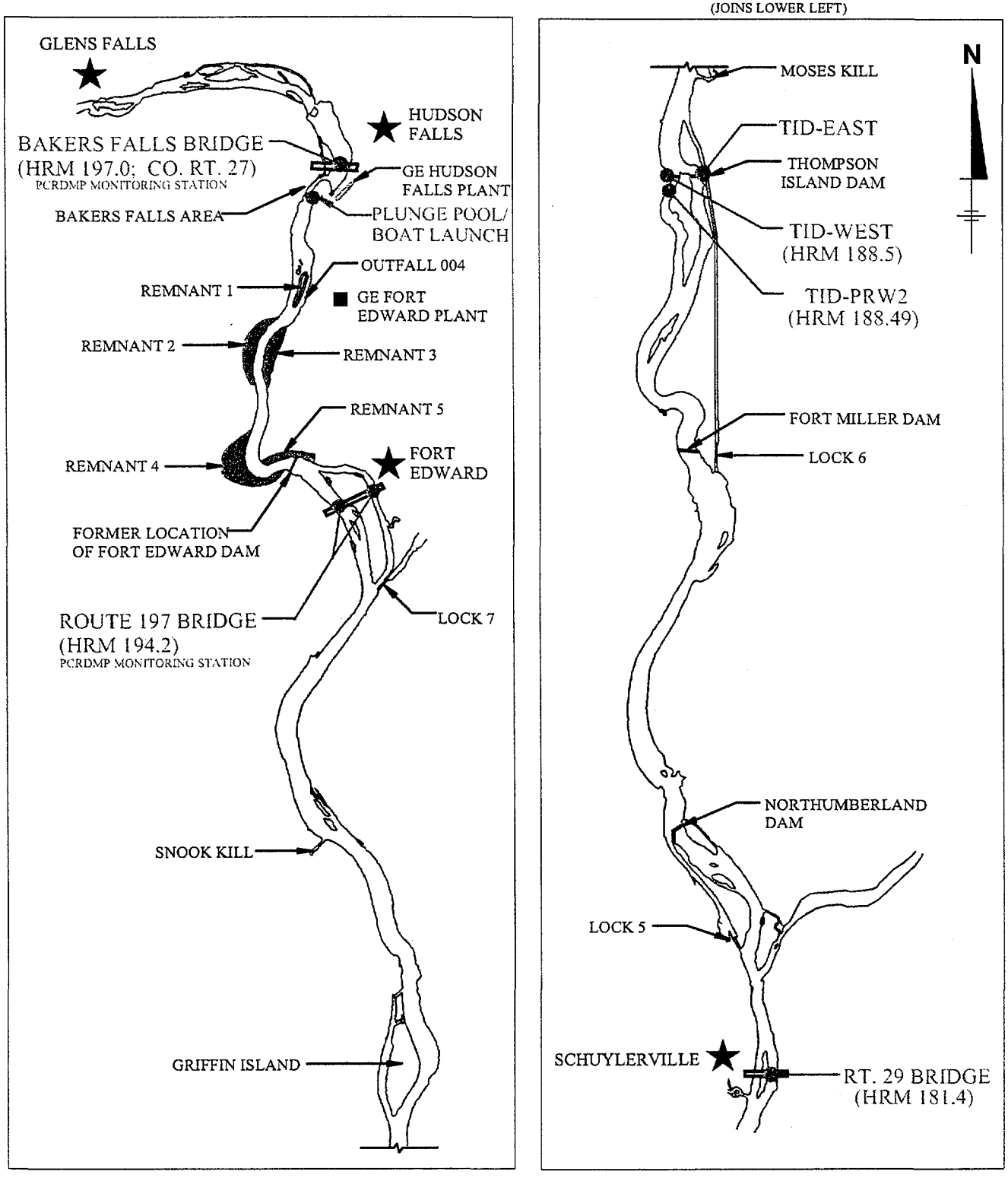
Upper Hudson River



Lower Hudson River



322446



GENERAL ELECTRIC COMPANY
HUDSON RIVER MONITORING PROGRAM
ROUTINE SAMPLE LOCATION MAP

99rpt_sample_location_map.TCW

FIGURE 1-2	
SCALE: 1 in. = 1 mile	
FINAL	GENhrm 131 JANUARY 2001

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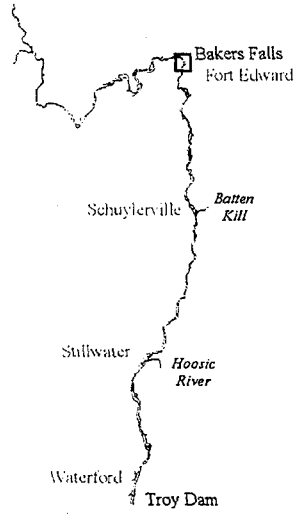
LOCATION MAP



SCALE

300 0 300 600 Feet

LEGEND

- Routine Monitoring Locations
- Additional Sampling Locations
- Dams / Locks
- River Miles
- Shoreline

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1999 Annual Summary Report

Figure 2-1.

Bakers Falls area sampling locations.

Note: Numbers along river indicate river miles measured from the Battery

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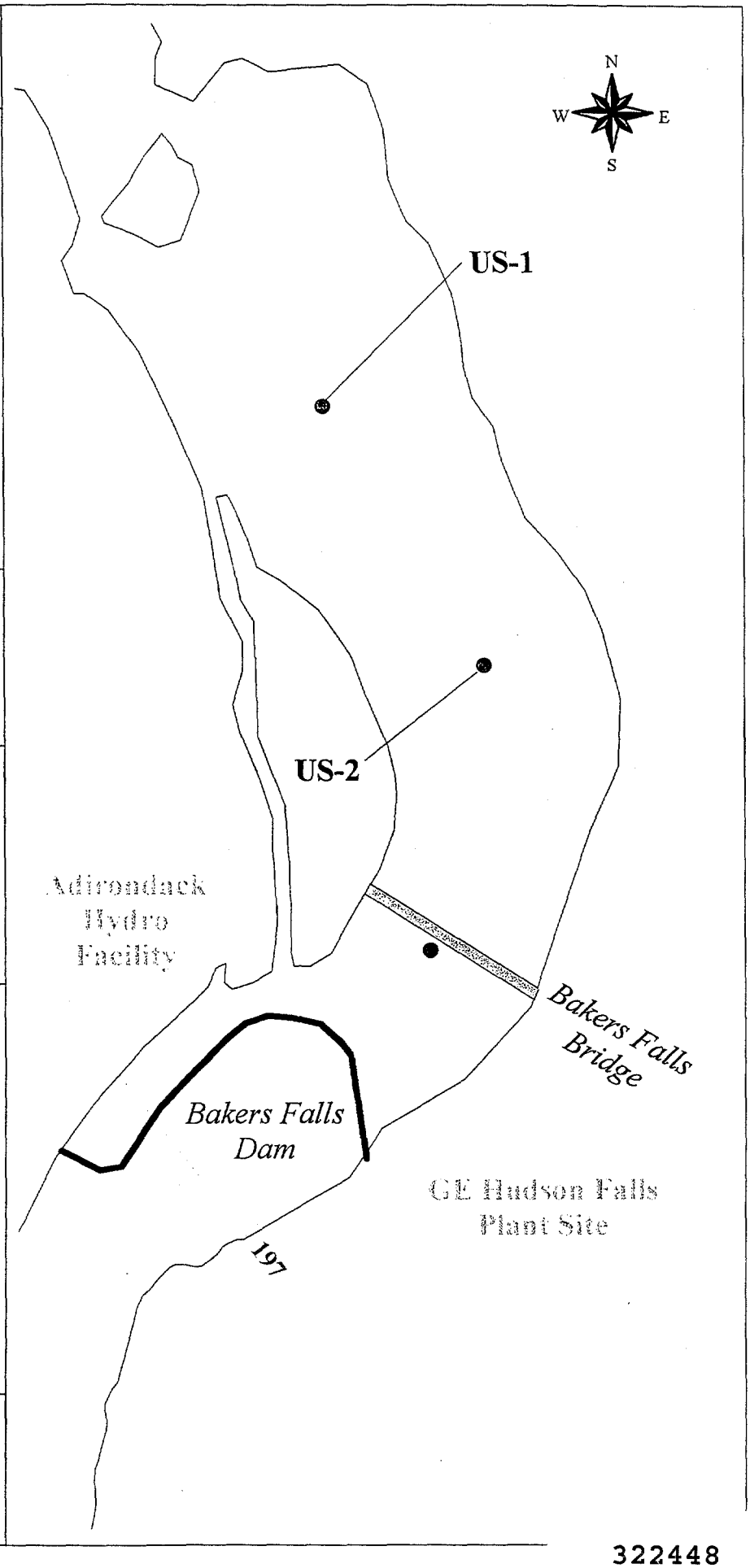
QEA
Quantitative Environmental Analysis, LLC

Project: GENhrm 131 January 2001



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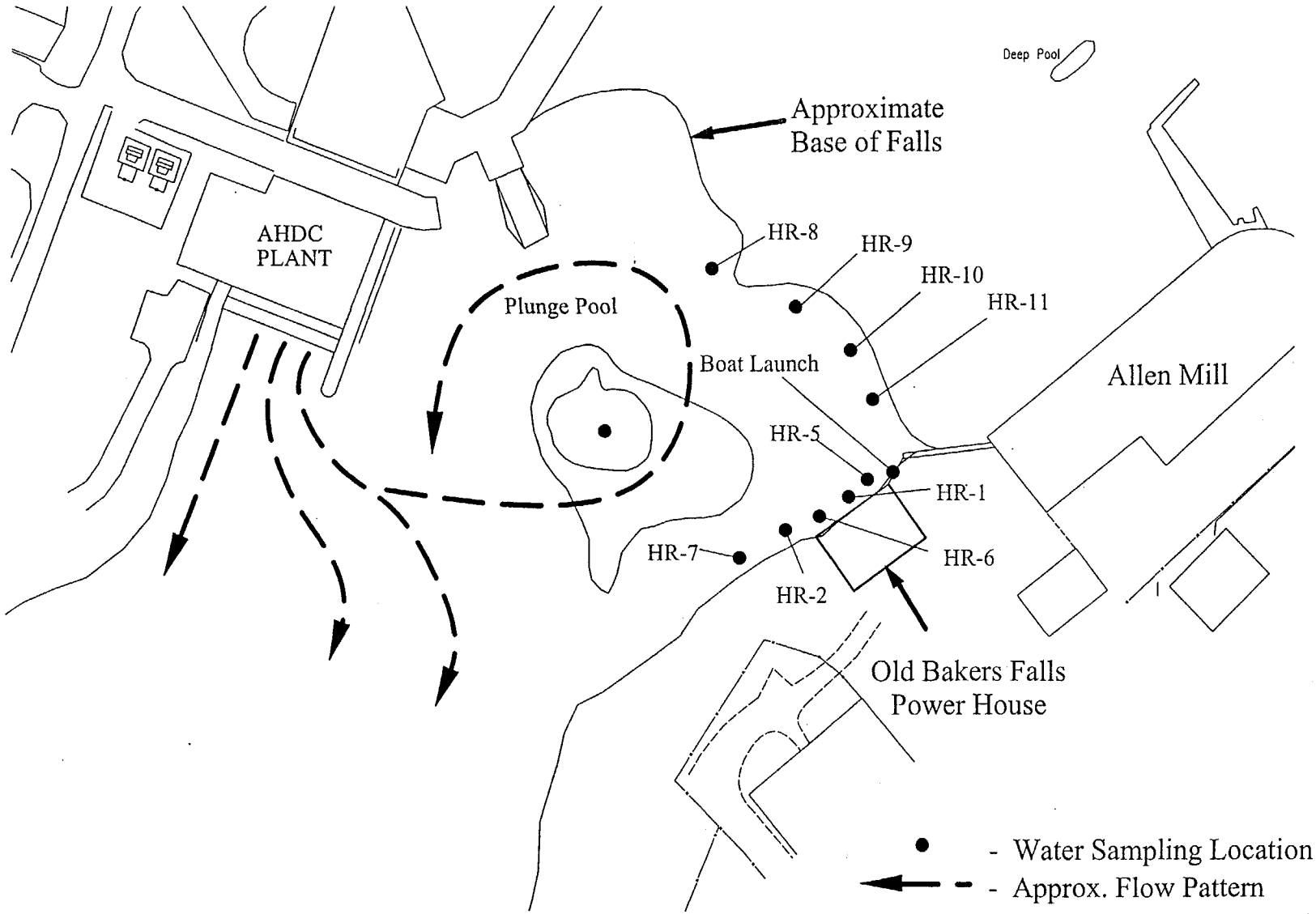

GENERAL ELECTRIC COMPANY
HUDSON RIVER MONITORING PROGRAM
PLUNGE POOL AREA SAMPLING LOCATIONS

HSI Transect.TCW

FIGURE 2-2	
SCALE 1 IN. = 120 FT.	
FINAL	GENhrm 131

QEA Quantitative Environmental Analysis, LLC

January 2001

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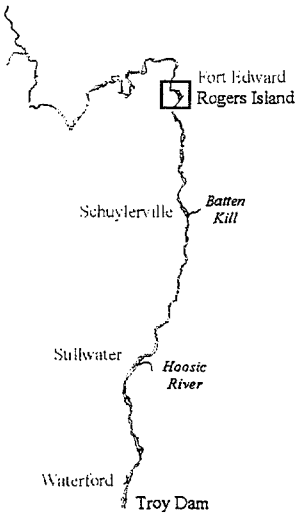
LOCATION MAP



SCALE

1000 0 1000 2000 Feet

LEGEND

- Routine Monitoring Locations
- Additional Sampling Locations
- Dams / Locks
- River Miles
- Shoreline

GENERAL ELECTRIC COMPANY
Hudson River Monitoring Program
1999 Annual Summary Report

Figure 2-3.

Rogers Island area sampling locations.

Note: Numbers along river indicate river miles measured from the Battery

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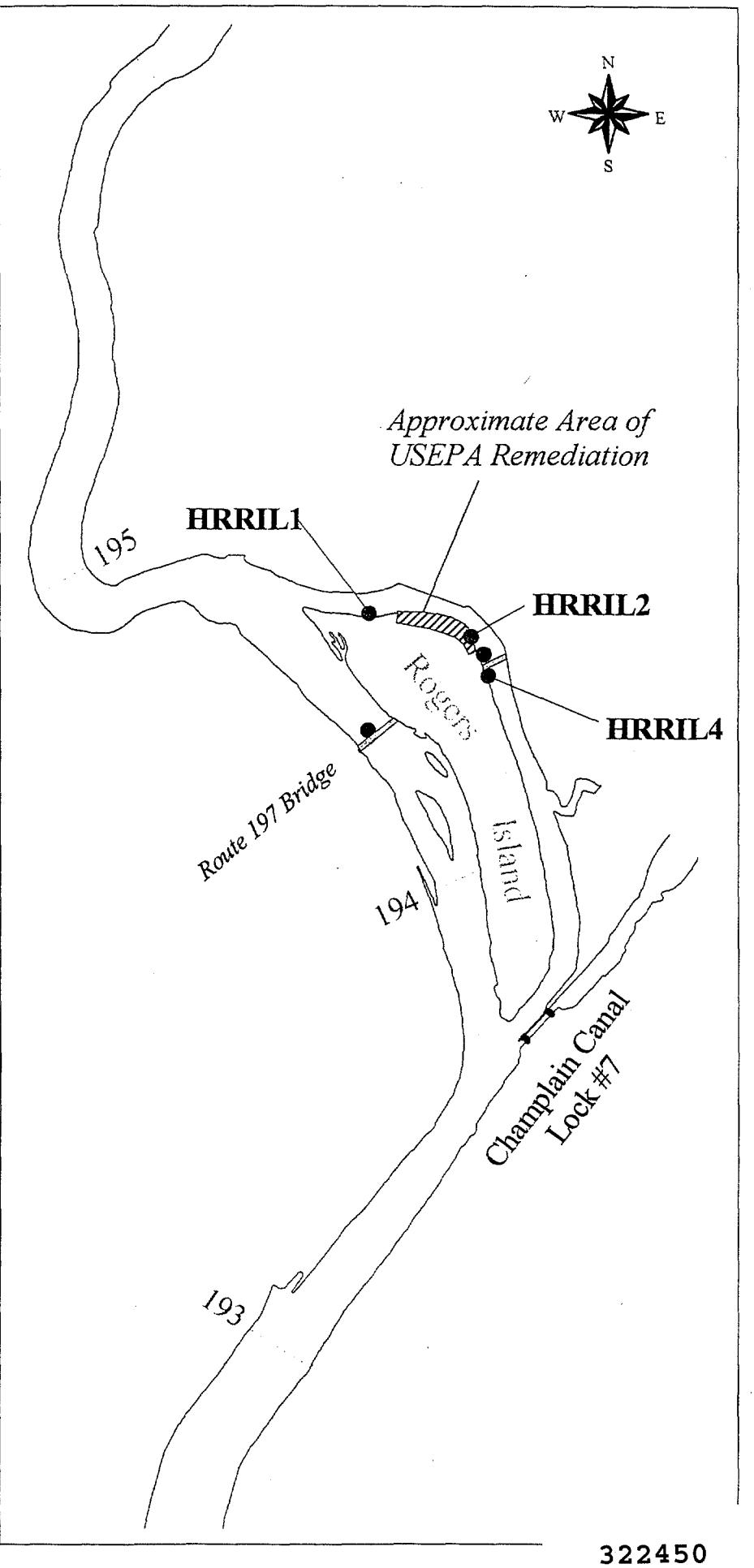
Project: GENhrm 131 January 2001



322450

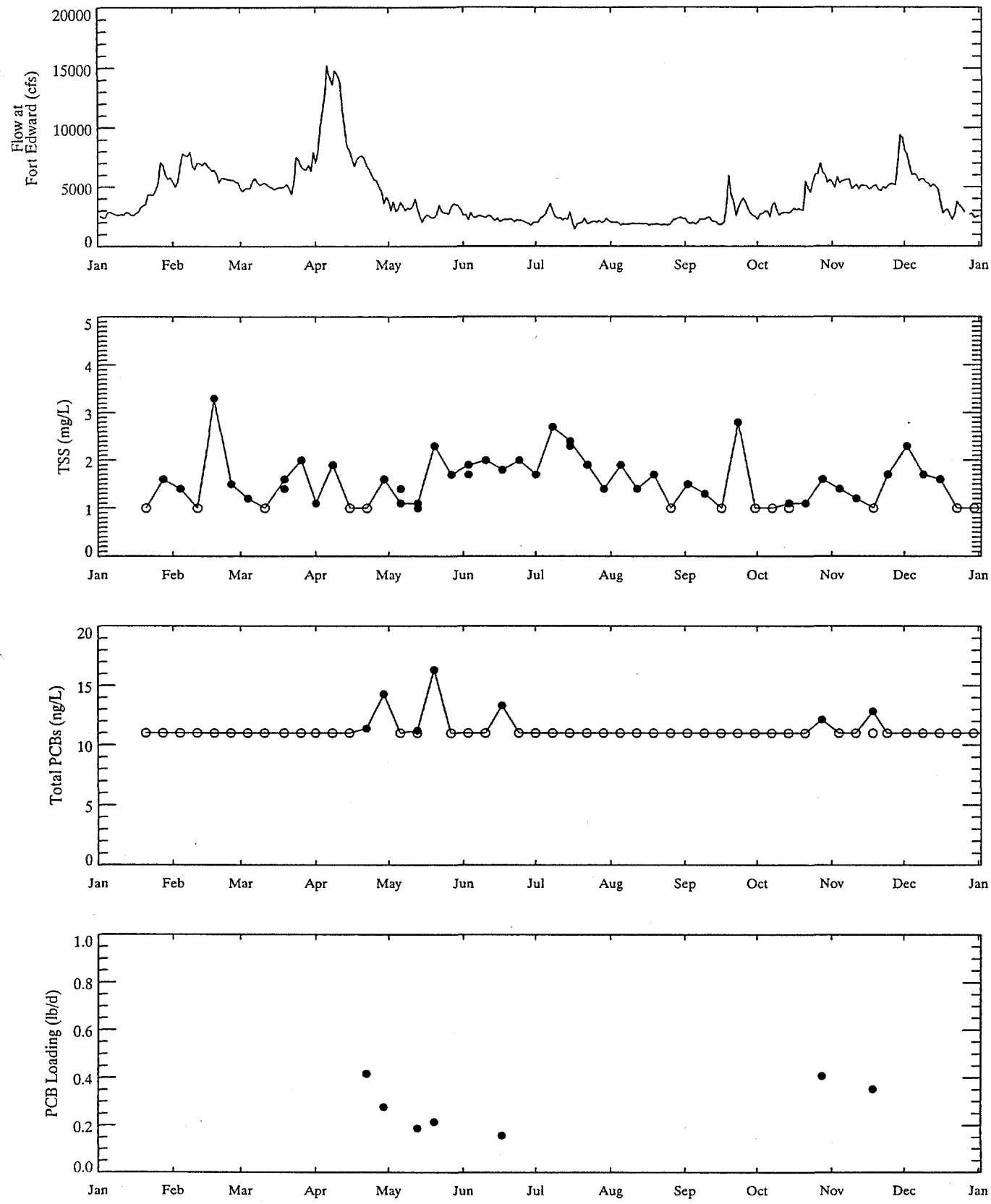


Figure 3-1. Temporal profiles of 1999 routine monitoring data collected at Bakers Falls Bridge.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted and used in loading calculations are USGS provisional daily averages. High flow monitoring data not shown.

H - D:\GENhrm\routine_reporting\yearly\1999 annual report\bakers falls\fig3_1_bftemp99.pro
Jan 19 08:27:59 2001

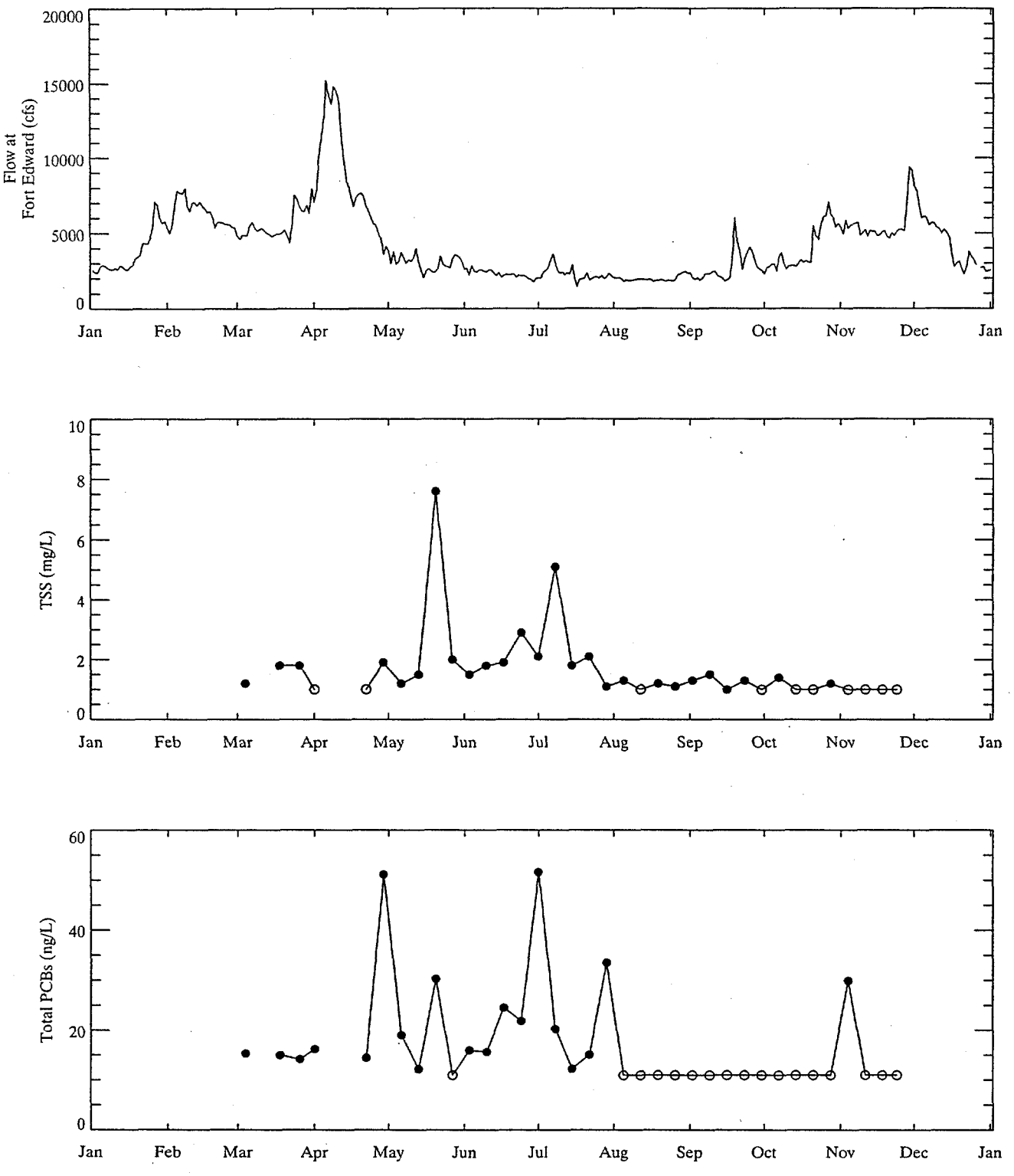


Figure 3-2. Temporal profiles of 1999 routine monitoring data collected at the plunge pool.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted after 10/1/99 are USGS provisional daily averages. Breaks in line indicate a gap in the data.

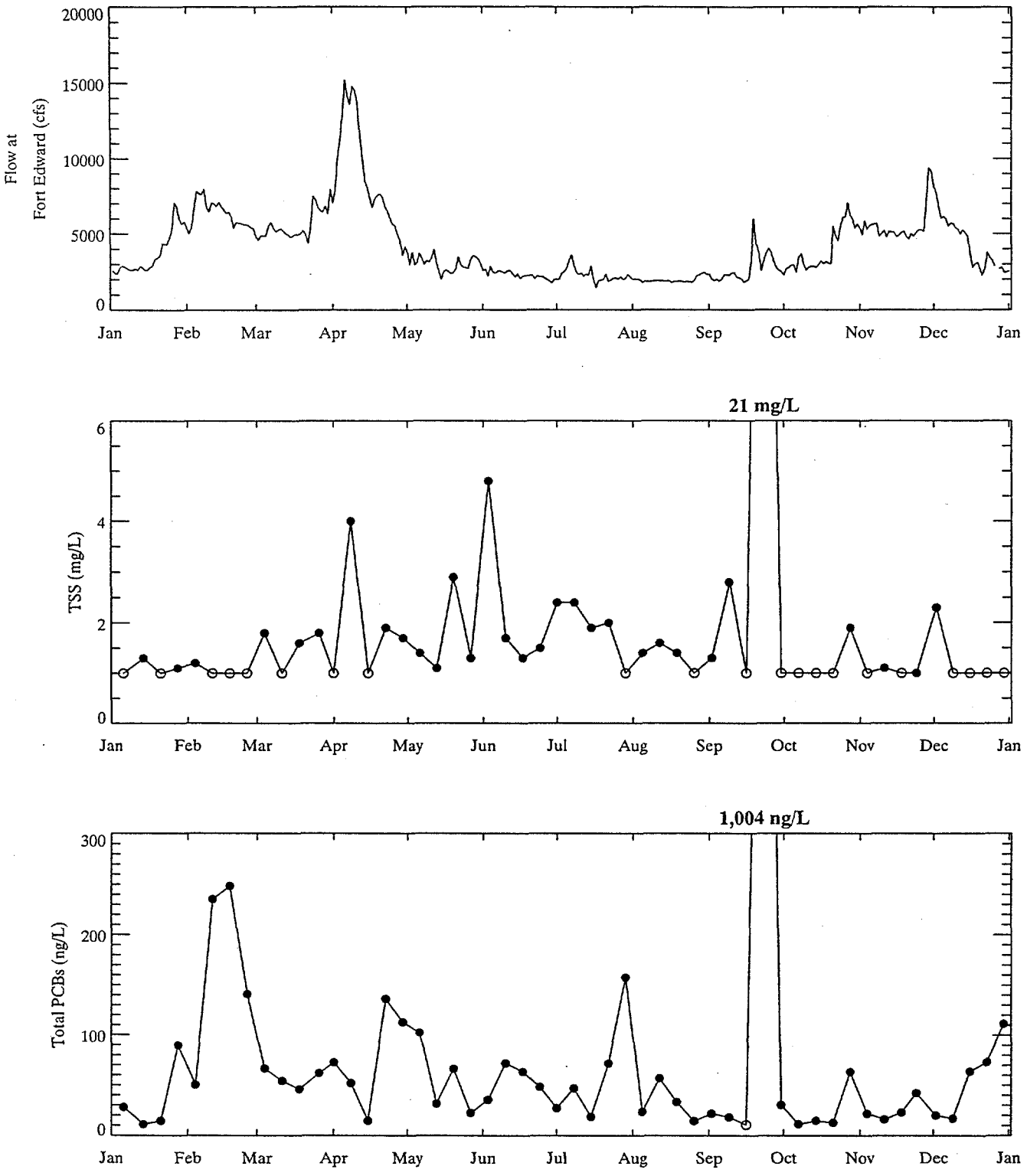


Figure 3-3. Temporal profiles of 1999 routine monitoring data collected at the boat launch.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted are USGS provisional daily averages. Breaks in line indicate a gap in the data. High flow monitoring data not shown.

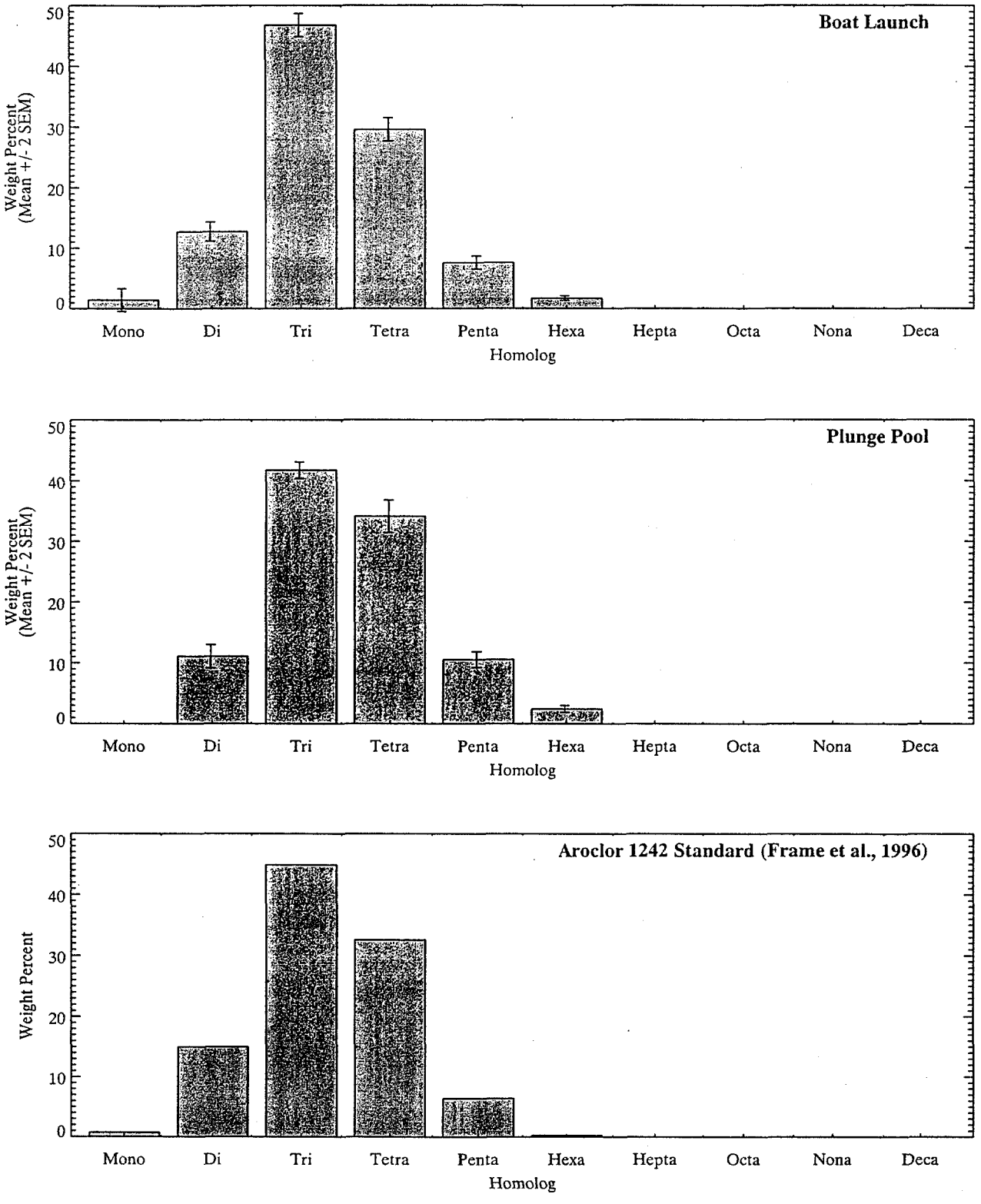


Figure 3-4. Comparison of the average homolog composition for 1999 routine monitoring data collected in the vicinity of the Hudson Falls Plant Site with an Aroclor 1242 standard.

Notes: Non-detects not included in data averages. April high flow monitoring data not included.

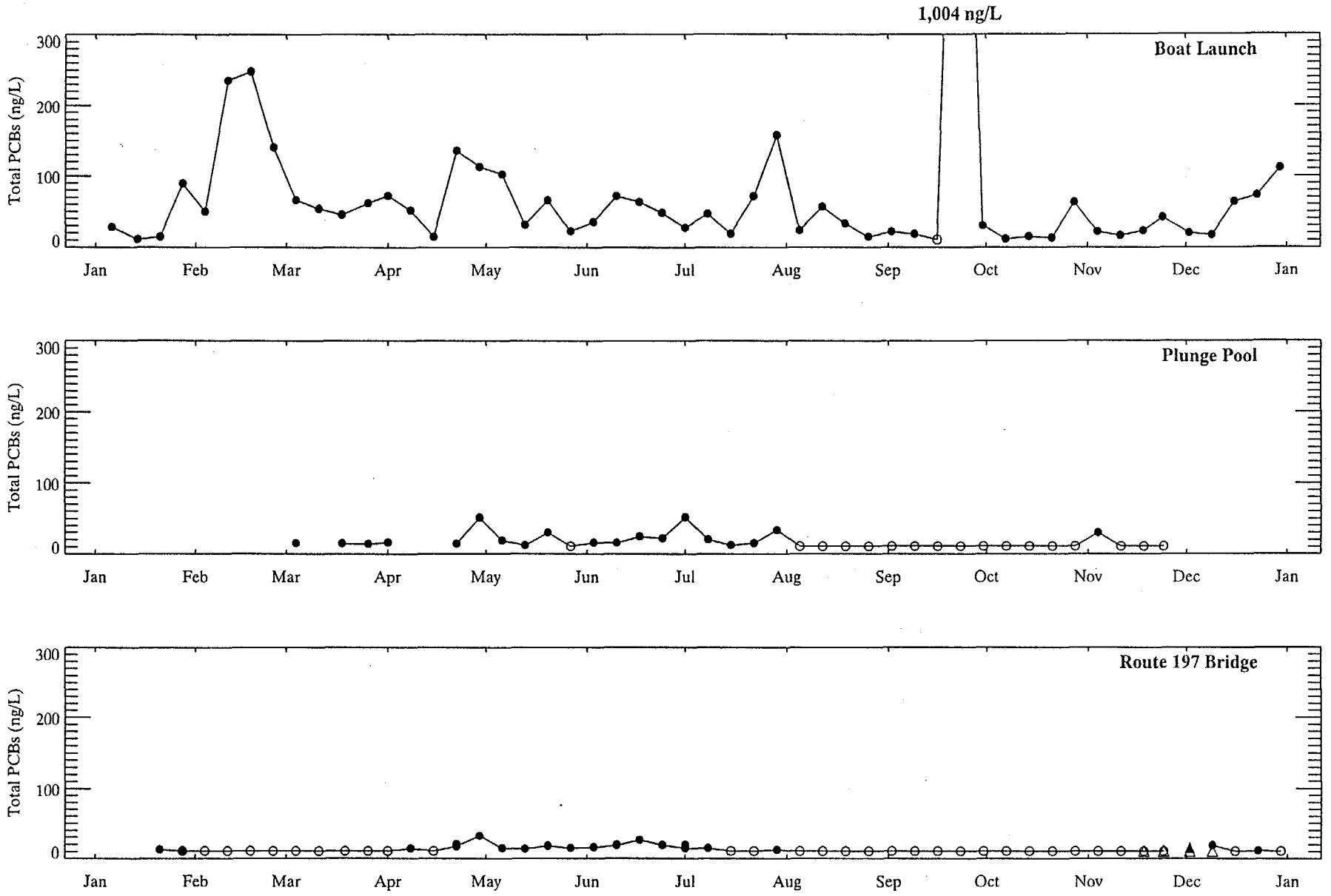


Figure 3-5. Comparison of 1999 PCB concentrations: Boat Launch, Plungepool, and Route 197 Bridge.

Note: Non-detects plotted as open symbols at MDL. Samples not plotted on lines are blind duplicate results. Breaks in line indicate a gap in the data. April high flow monitoring data not shown. Triangles represent the average of samples collected from HRM 194.2E and HRM 194.2W.

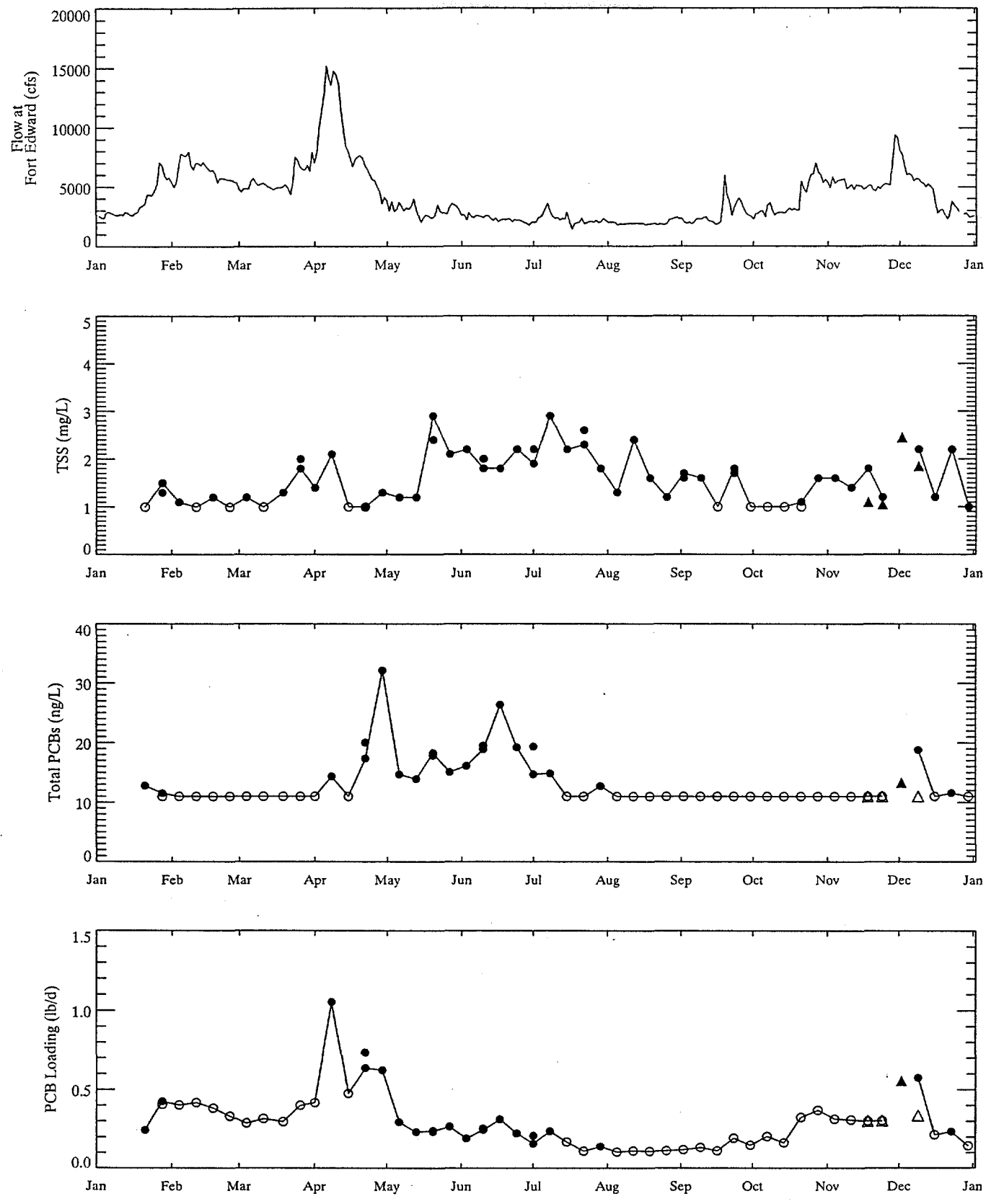


Figure 3-6. Temporal profiles of 1999 routine monitoring data collected at Route 197 Bridge.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted and used in loading calculations are USGS provisional daily averages. Samples not plotted on lines are blind duplicate results. High flow monitoring data not shown. Triangles represent the average of samples collected from HRM 194.2E and HRM 194.2W.

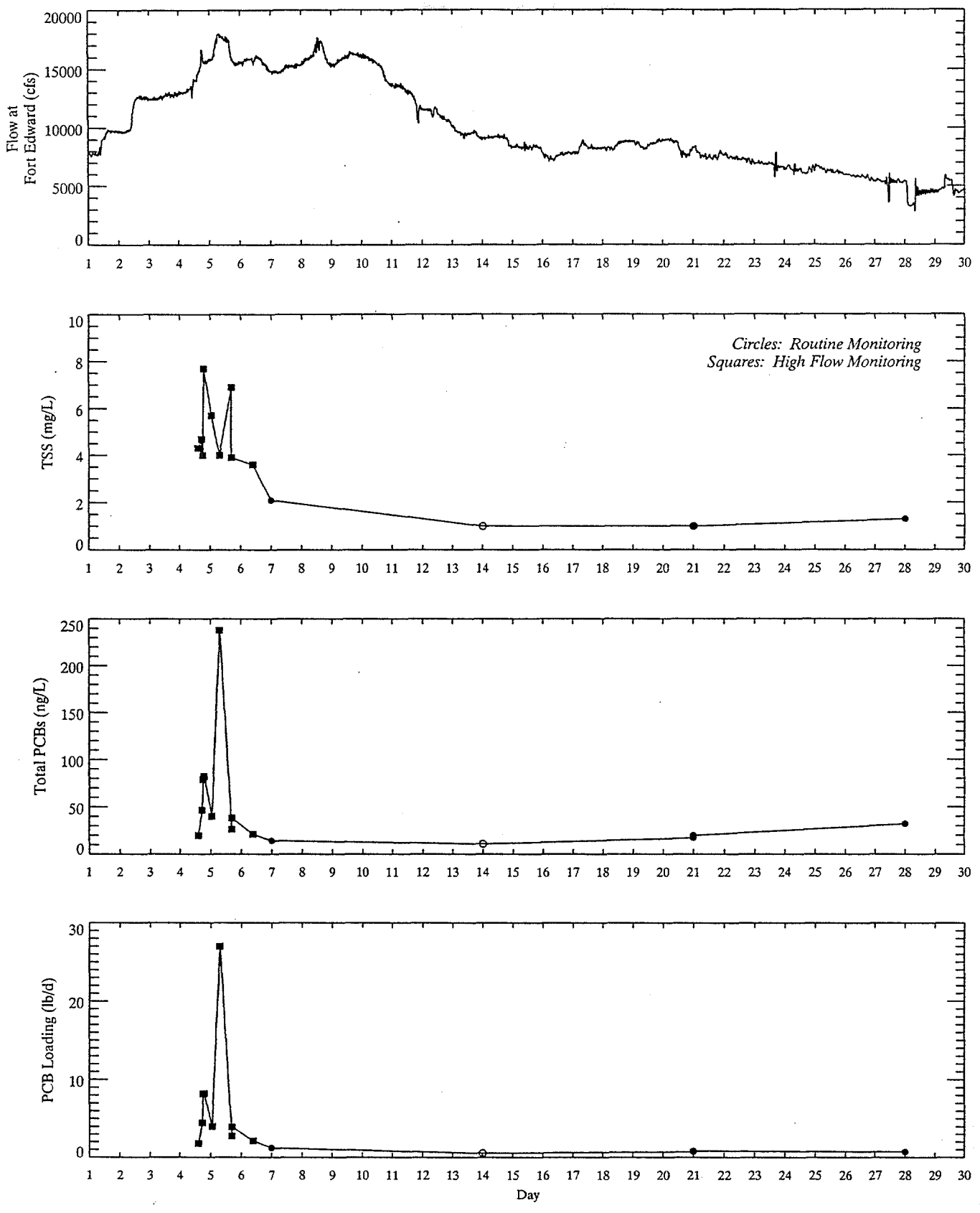


Figure 3-7. Temporal profiles of April 1999 routine and high flow data collected at Fort Edward.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted is USGS 15-minute flow data. High flow loadings calculated using 15-minute flow data. Routine monitoring loadings calculated using daily average flow data.

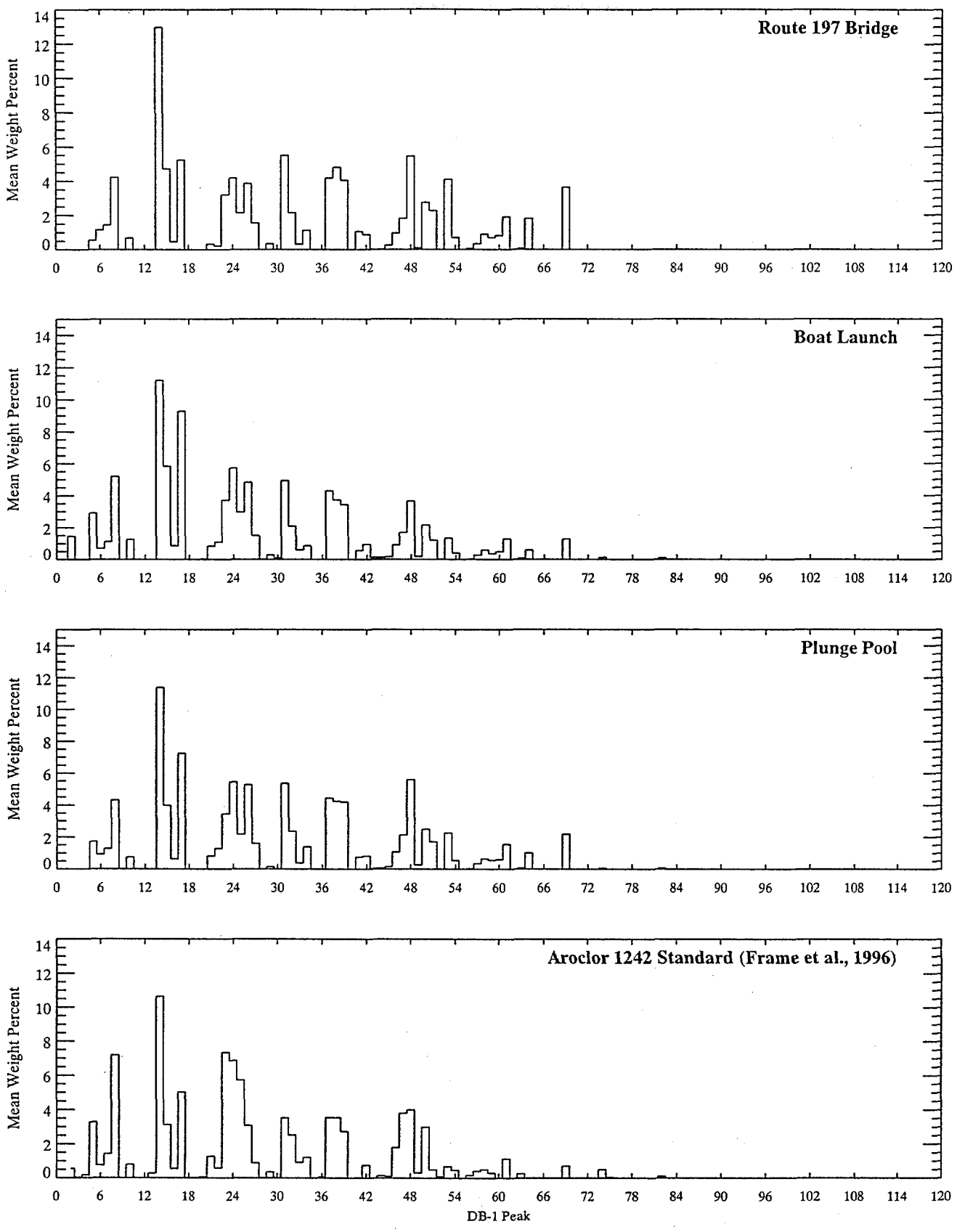


Figure 3-8. Comparison of the average congener composition for 1999 routine monitoring data collected at theRoute 197 Bridge with the average composition in the vicinity of the Hudson Falls Plant Site and an Aroclor 1242 standard.

Notes: Non-detects not included in data averages. April high flow monitoring data not included.

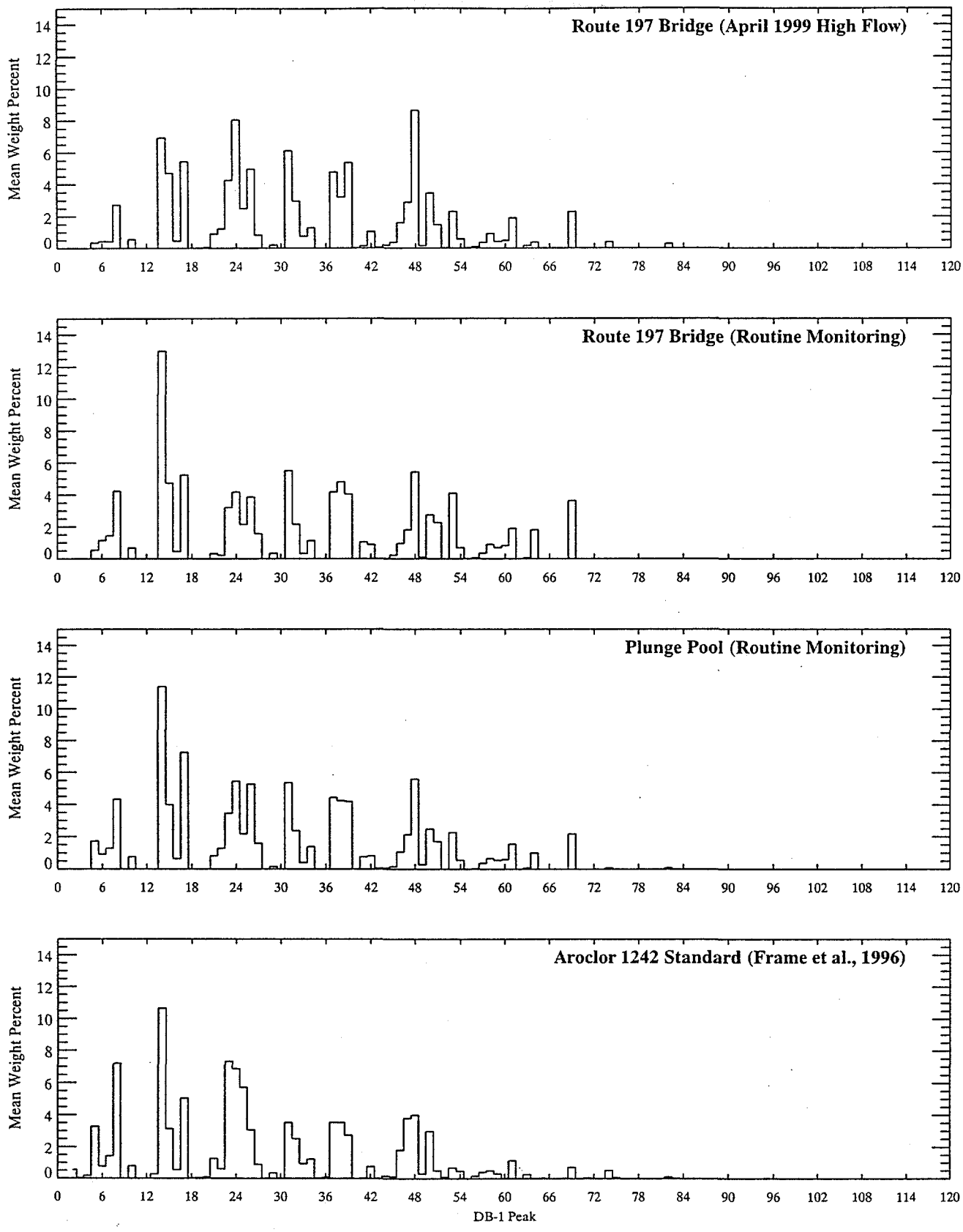
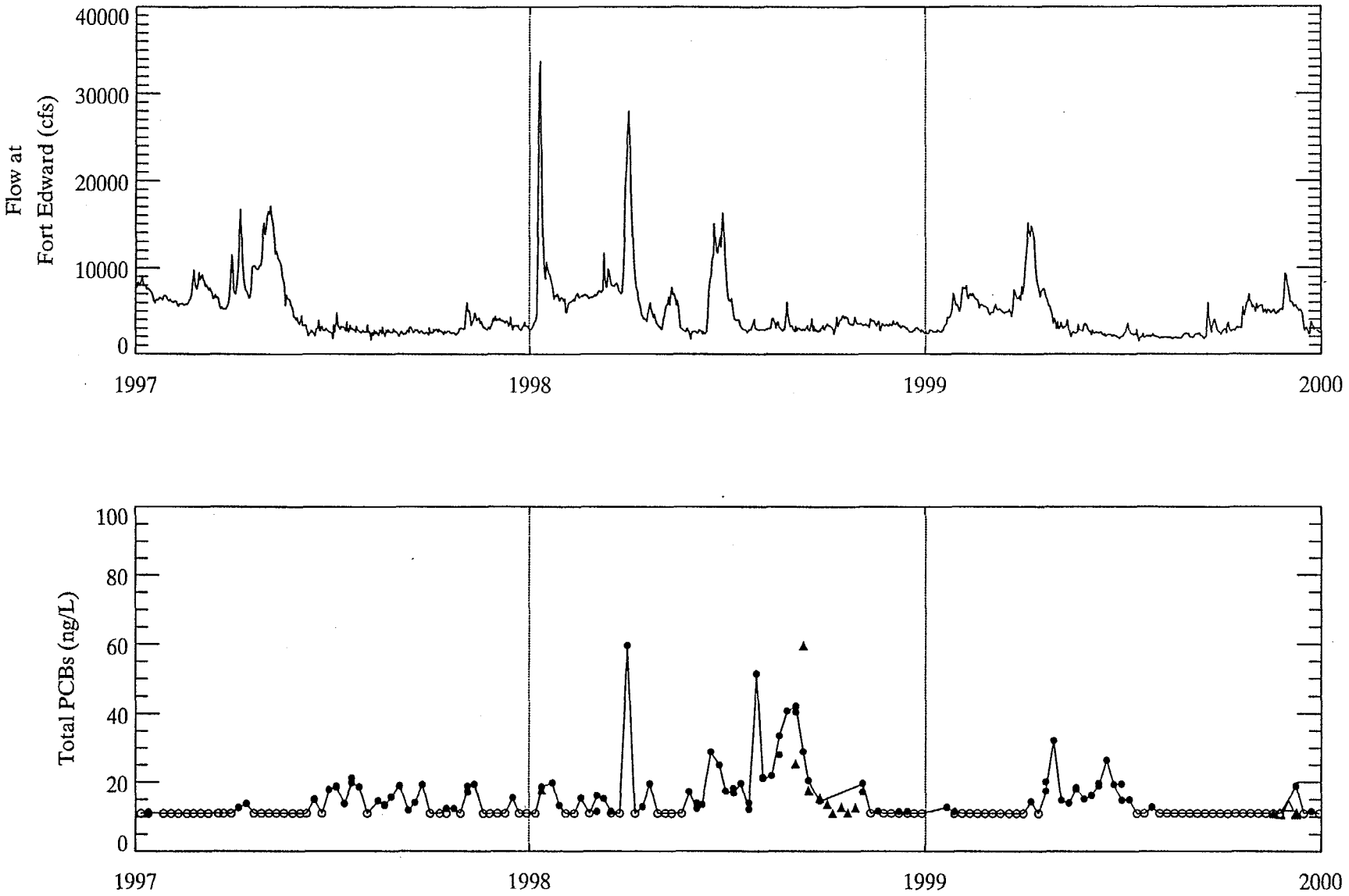


Figure 3-9. Comparison of the average congener composition for 1999 data collected at Route 197 Bridge during April high flow with routine monitoring data and an Aroclor 1242 standard.

Notes: Non-detects not included in data averages. Samples collected at HRM 194.2E and 194.2W included in average.



322460

Figure 3-10. Temporal profiles of PCB monitoring results at Fort Edward 1997 through 1999.

Notes: Non-detect PCB concentrations plotted at the MDL (11 ng/L.). Flow data shown are USGS daily averages. Flow data collected after 10/1/99 are provisional. Triangles represent the average of samples collected from HRM 194.2E and HRM 194.2W

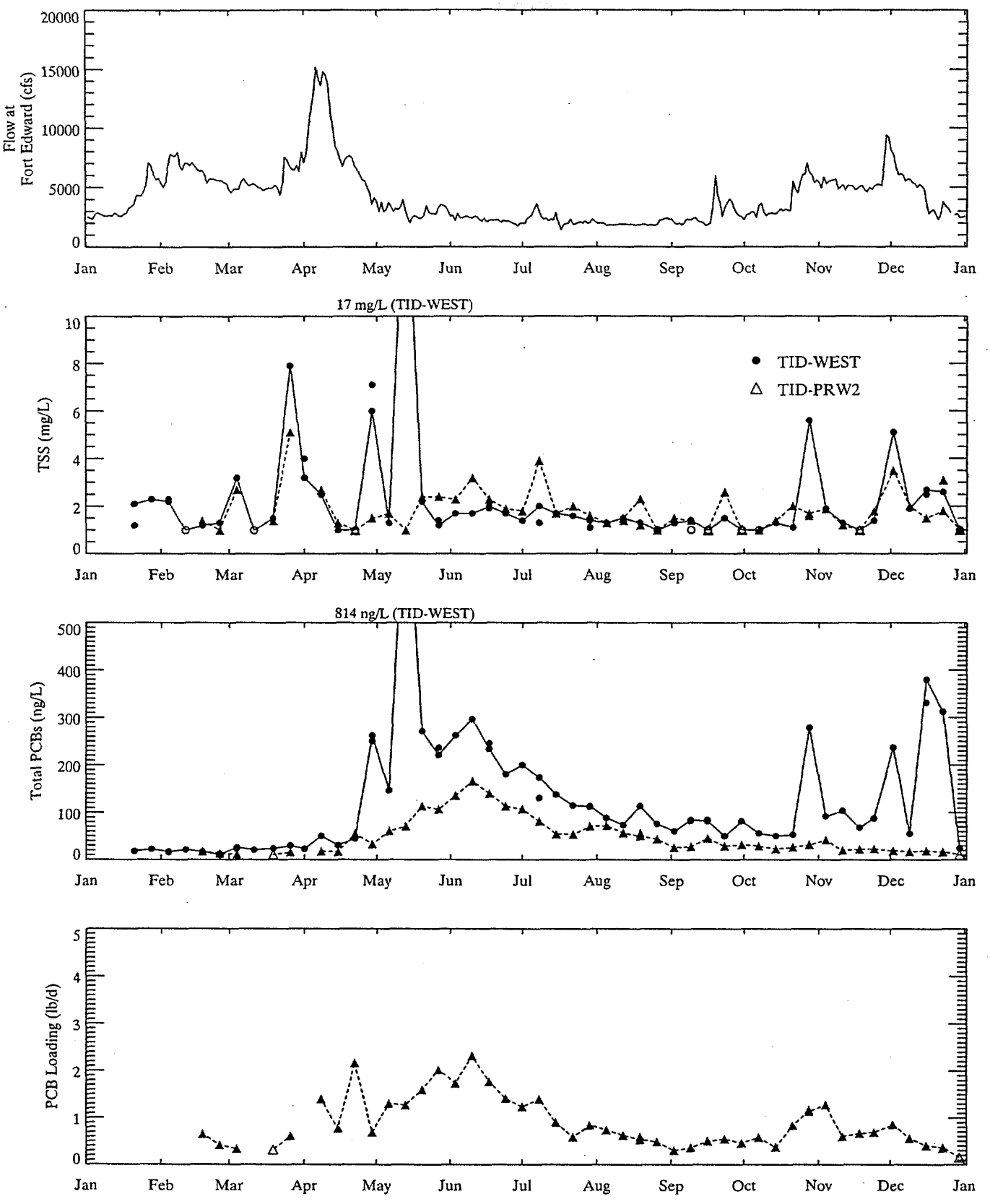


Figure 3-11. Temporal profiles of 1999 routine monitoring data collected at Thompson Island Dam.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted and used in loading calculations are USGS provisional daily averages. Samples not plotted on lines are blind duplicate results. Breaks in line indicate a gap in the data. Flow at Fort Edward prorated by a factor of 1.043 to calculate TID loading.

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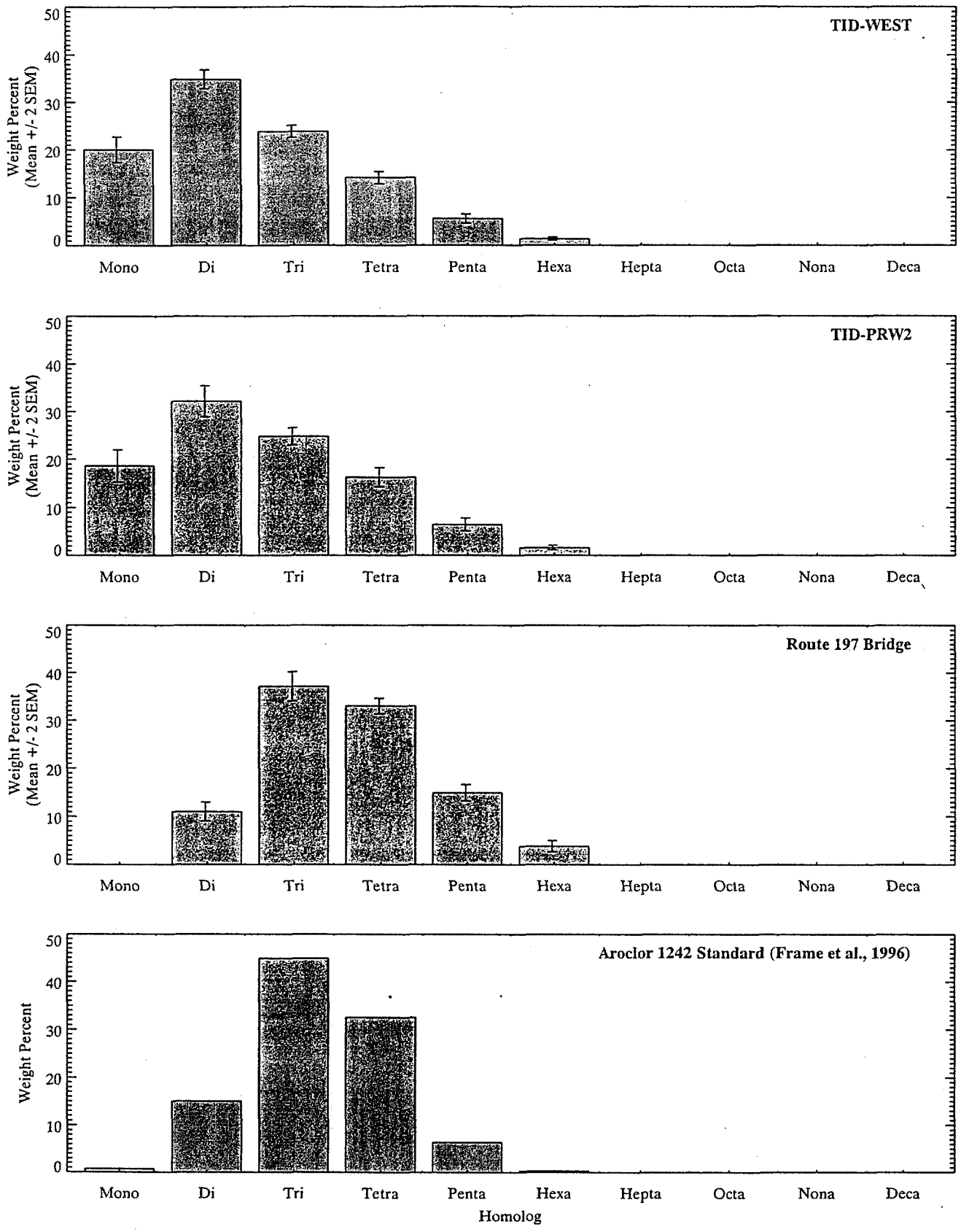

Figure 3-12. Comparison of the average homolog composition for 1999 data collected at Thompson Island Dam with that at Route 197 Bridge and an Aroclor 1242 standard.

Notes: Non-detects not included in data averages. April high flow monitoring data not included.

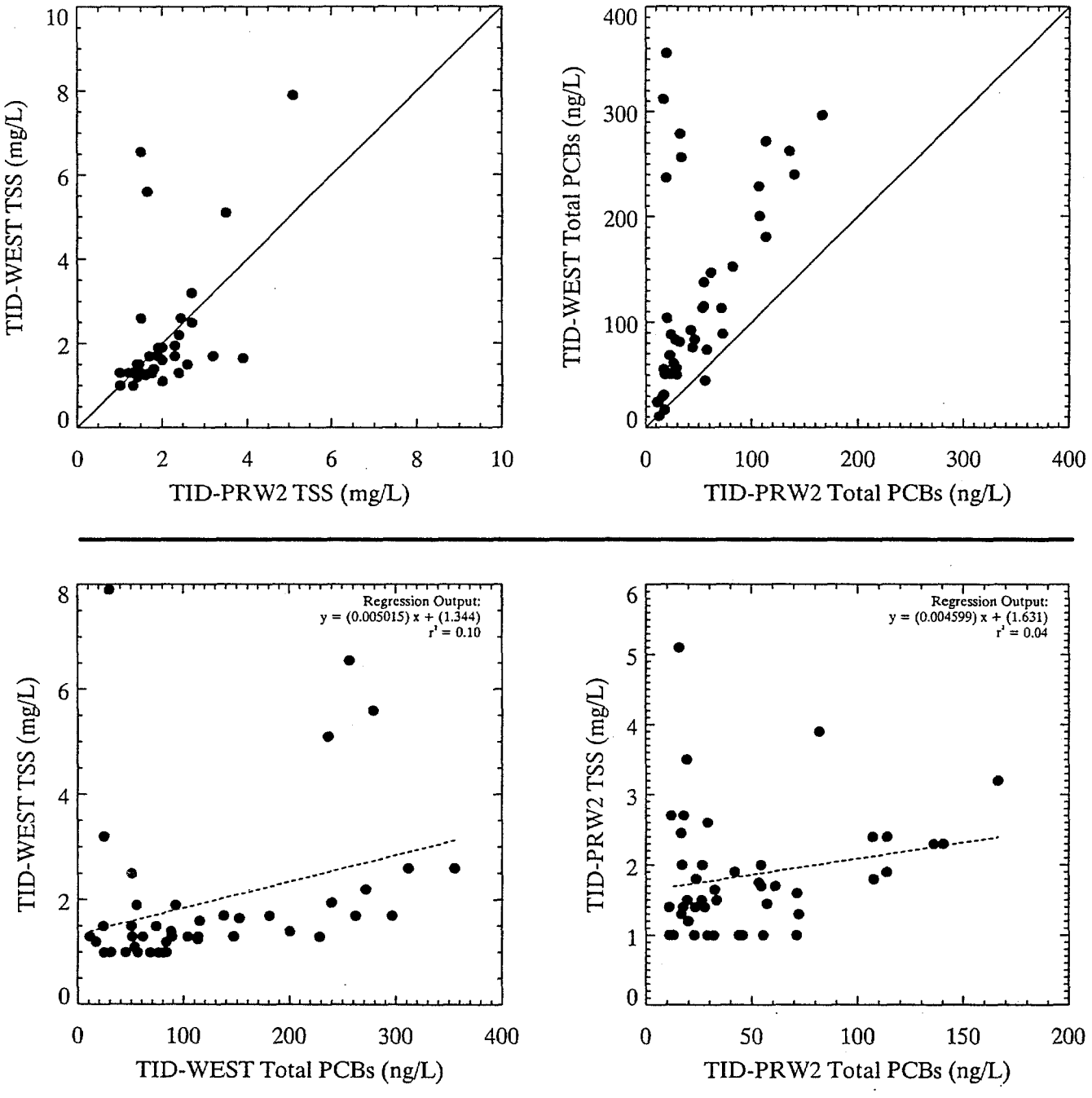

Figure 3-13. Comparison between 1999 water column TSS and total PCB data collected at TID-WEST and TID-PRW2

Notes: Duplicate samples averaged. April high flow monitoring data not included. Two outliers excluded from TSS chart. PCB outlier at TID-WEST (814 ng/L) excluded from plot. Non-detect PCB and TSS samples set to MDL

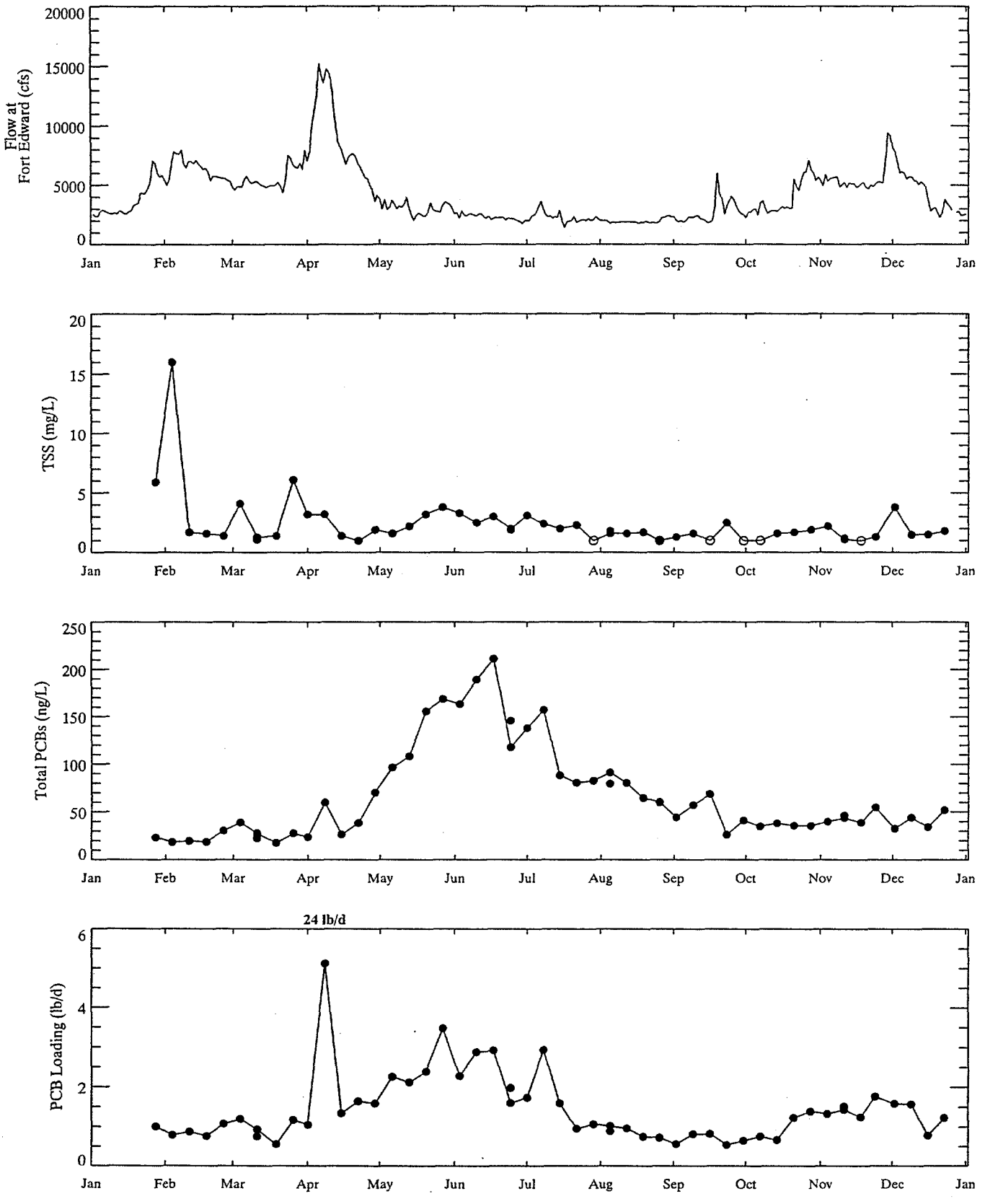

Figure 3-14. Temporal profiles of 1999 routine monitoring data collected at Schuylerville.

Notes: Non-detects plotted as open symbols at MDL. Flow data plotted and used in loading calculations are USGS provisional daily averages. Samples not plotted on lines are blind duplicate results. Flow at Fort Edward prorated by a factor of 1.167 to calculate Schuylerville loading.

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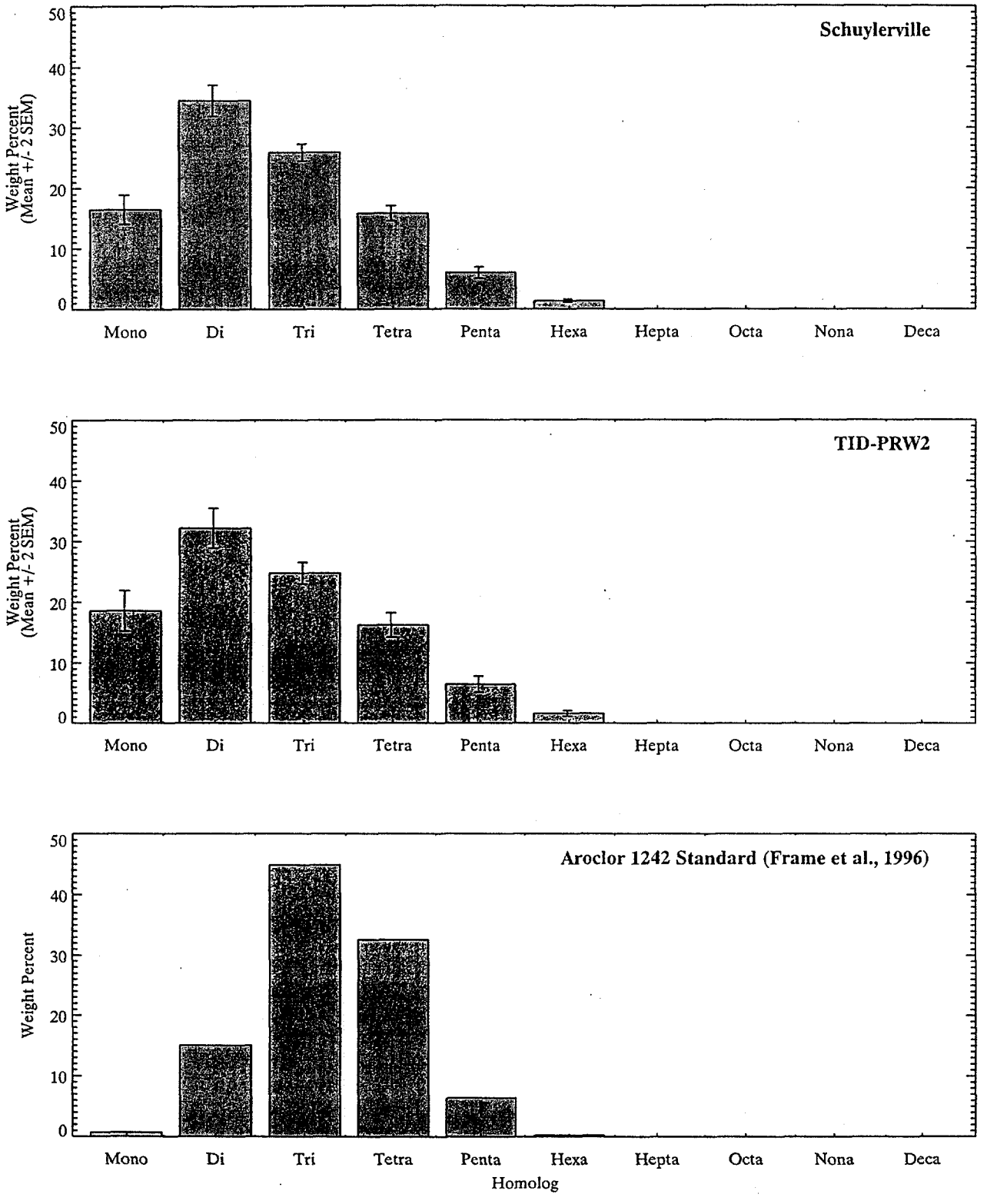

Figure 3-15. Comparison of the average homolog composition for 1999 routine monitoring data collected at Schuylerville with TID-PRW2 and an Aroclor 1242 standard.

Note: Non-detects not included in data averages.

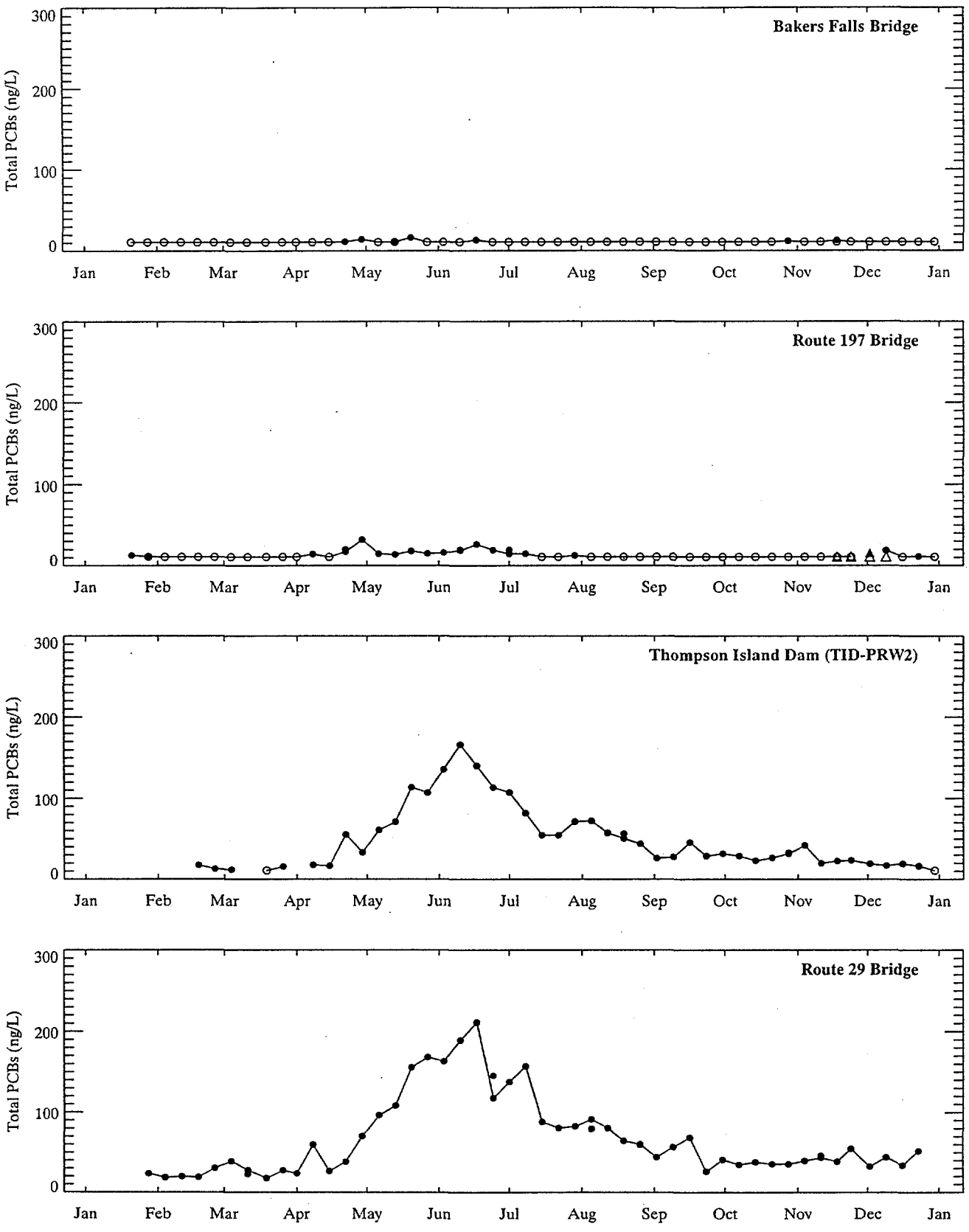

Figure 3-16. Temporal profiles of 1999 water column PCB concentrations for samples collected during routine monitoring.

Note: Non-detects plotted as open symbols at MDL. Samples not plotted on lines are blind duplicate results. Breaks in line indicate a gap in the data. April high flow monitoring data not shown. Triangles represent the average of samples collected from HRM 194.2E and HRM 194.2W.

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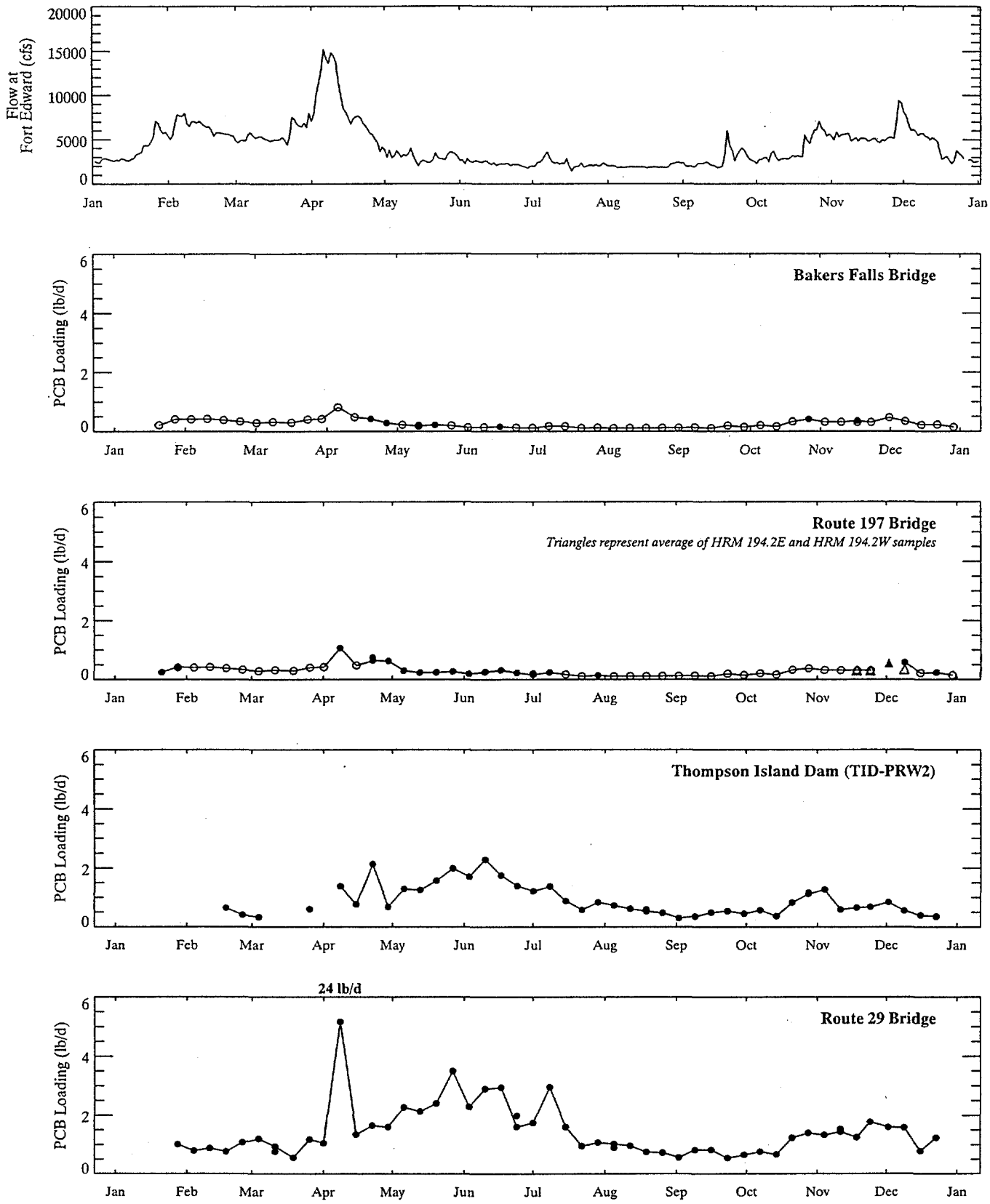

Figure 3-17. Temporal profiles of 1999 water column PCB mass loadings for samples collected during routine monitoring.

Notes: Non-detects plotted as open symbols at MDL. Flow data used in loading calculations are USGS provisional daily averages. Samples not plotted on lines are blind duplicate results. Breaks in line indicate a gap in the data. April high flow monitoring data not shown. Thompson Island Dam and Schuylerville flows have been prorated for loading calculations.

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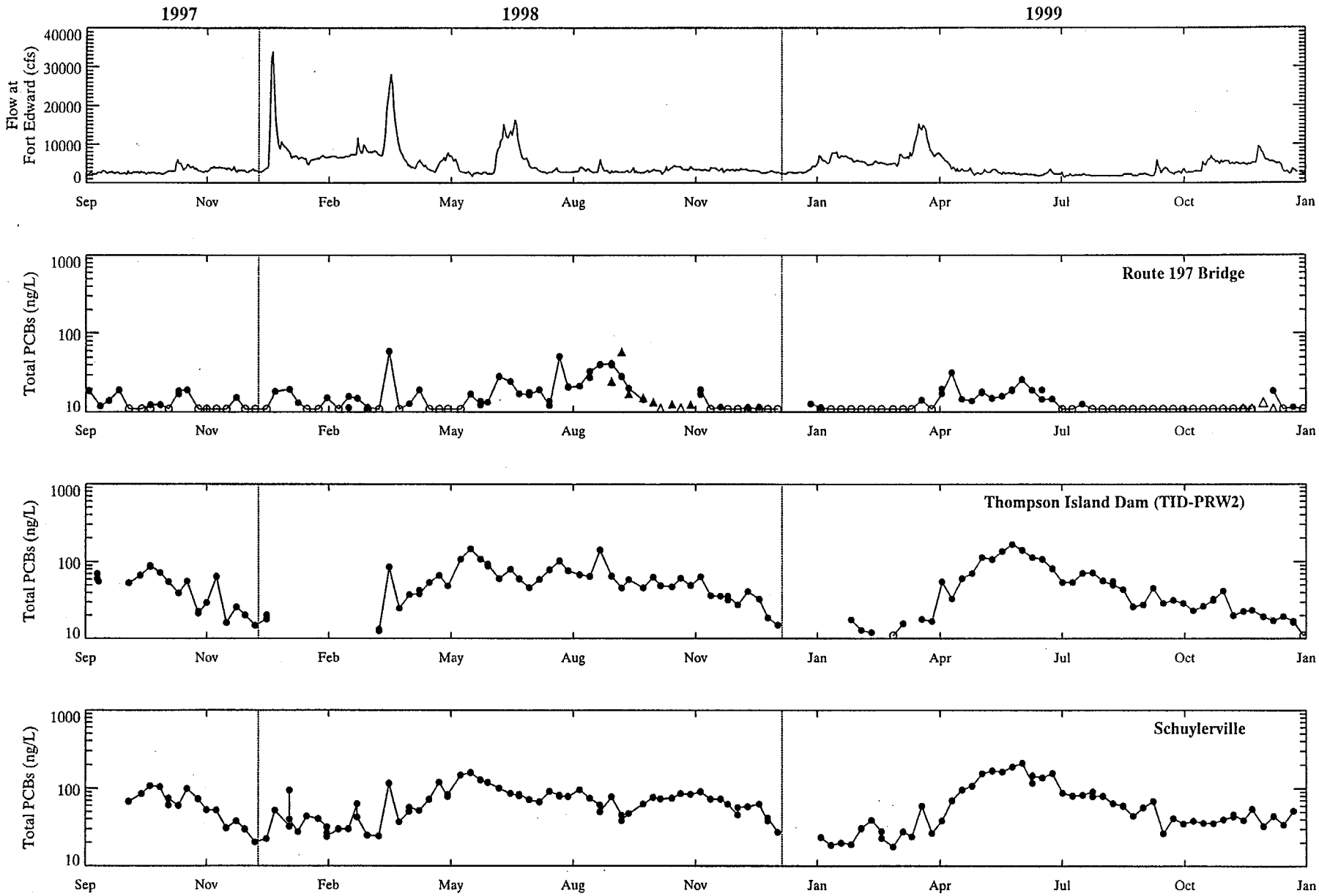

322468

Figure 3-18. Temporal profiles of 1997-1999 routine monitoring PCB data collected at Fort Edward, TID-PRW2, and Schuylerville.

Notes: Non-detect PCB concentrations plotted as open symbols at the MDL (11 ng/L.). Flow data shown are USGS daily averages. Flow data collected after 10/1/99 are provisional. Triangles represent the average of samples collected from HRM 194.2E and HRM 194.2W.

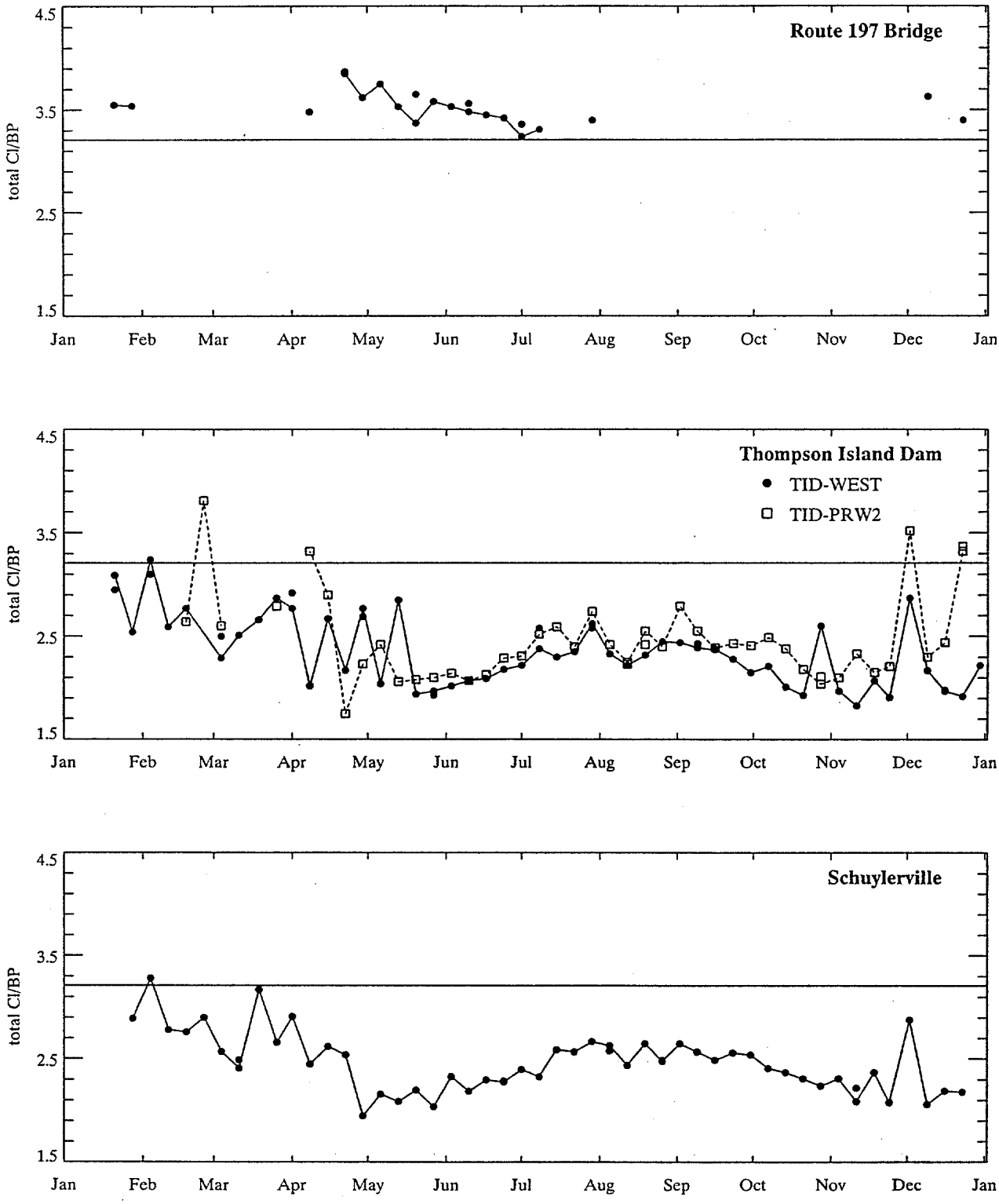

Figure 3-19. Temporal profiles of total chlorines per biphenyl for 1999 routine monitoring data.

Note: Chlorines per biphenyl not shown for samples with PCBs less than the MDL (11 ng/L). April high flow monitoring data not shown. Horizontal lines represent Aroclor 1242.

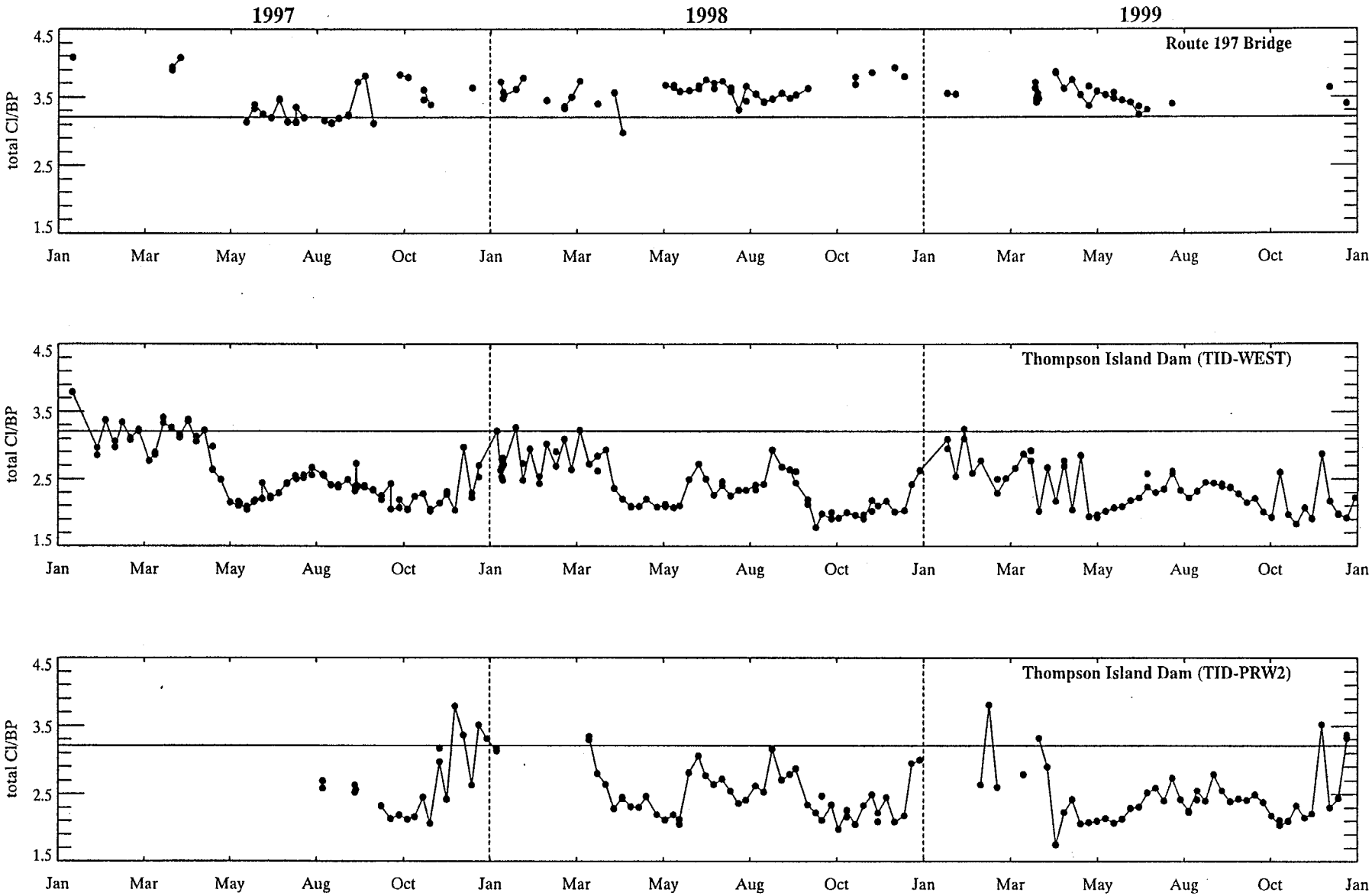

Figure 3-20. Temporal profiles of total chlorines per biphenyl for 1997-99 routine monitoring data collected at Fort Edward and Thompson Island Dam.

Notes: Chlorines per biphenyl not shown for samples with PCBs less than the MDL (11 ng/L). Horizontal line represents Aroclor 1242.

322470

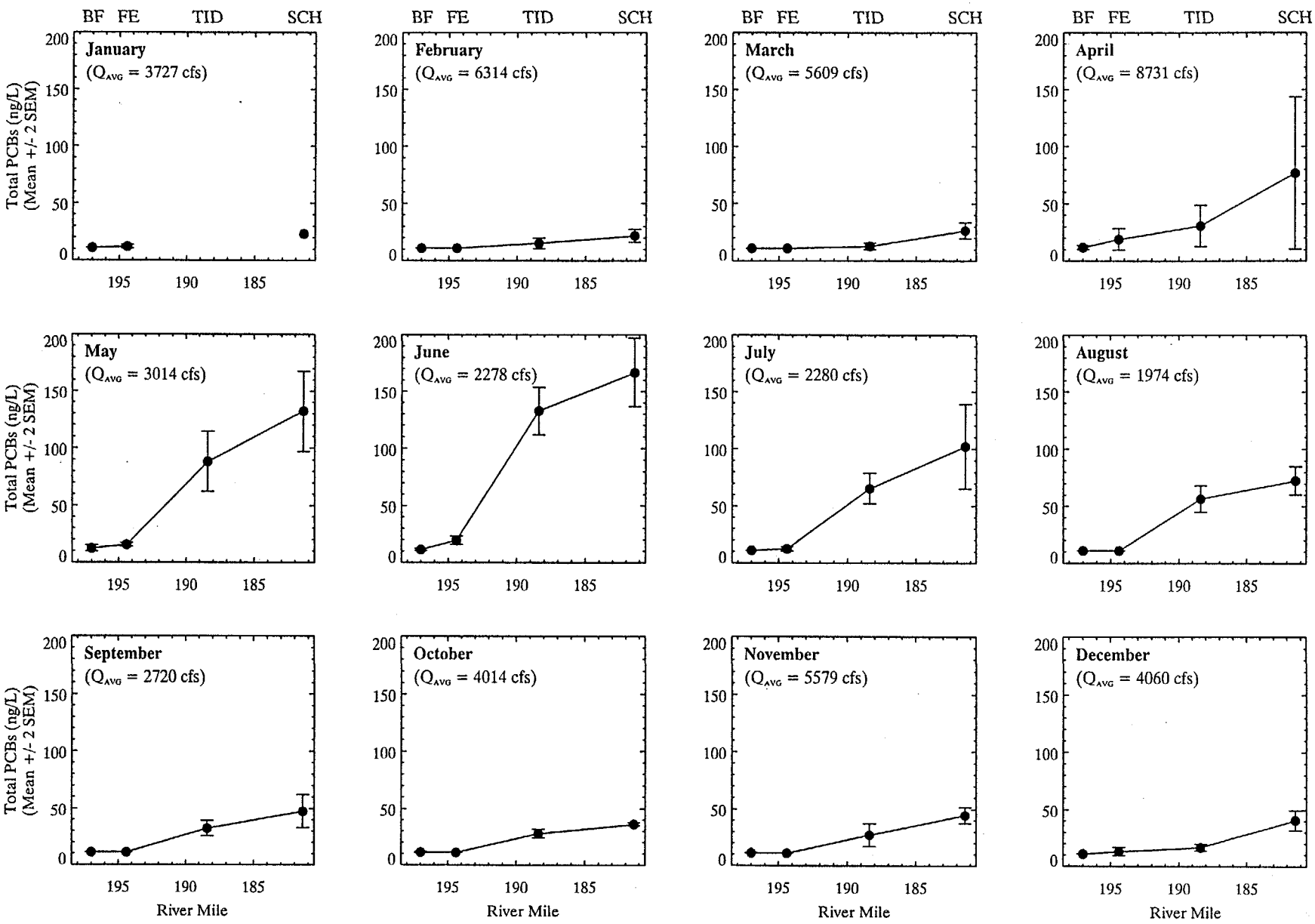

Figure 3-21. Spatial profiles of monthly average PCB concentrations for 1999 data collected during routine monitoring.

Notes: MDL of 11 ng/L for non-detects. TID data plotted are from TID-PRW2. April high flow data not included. Q_{avg} represents monthly average flow at Fort Edward.

322471

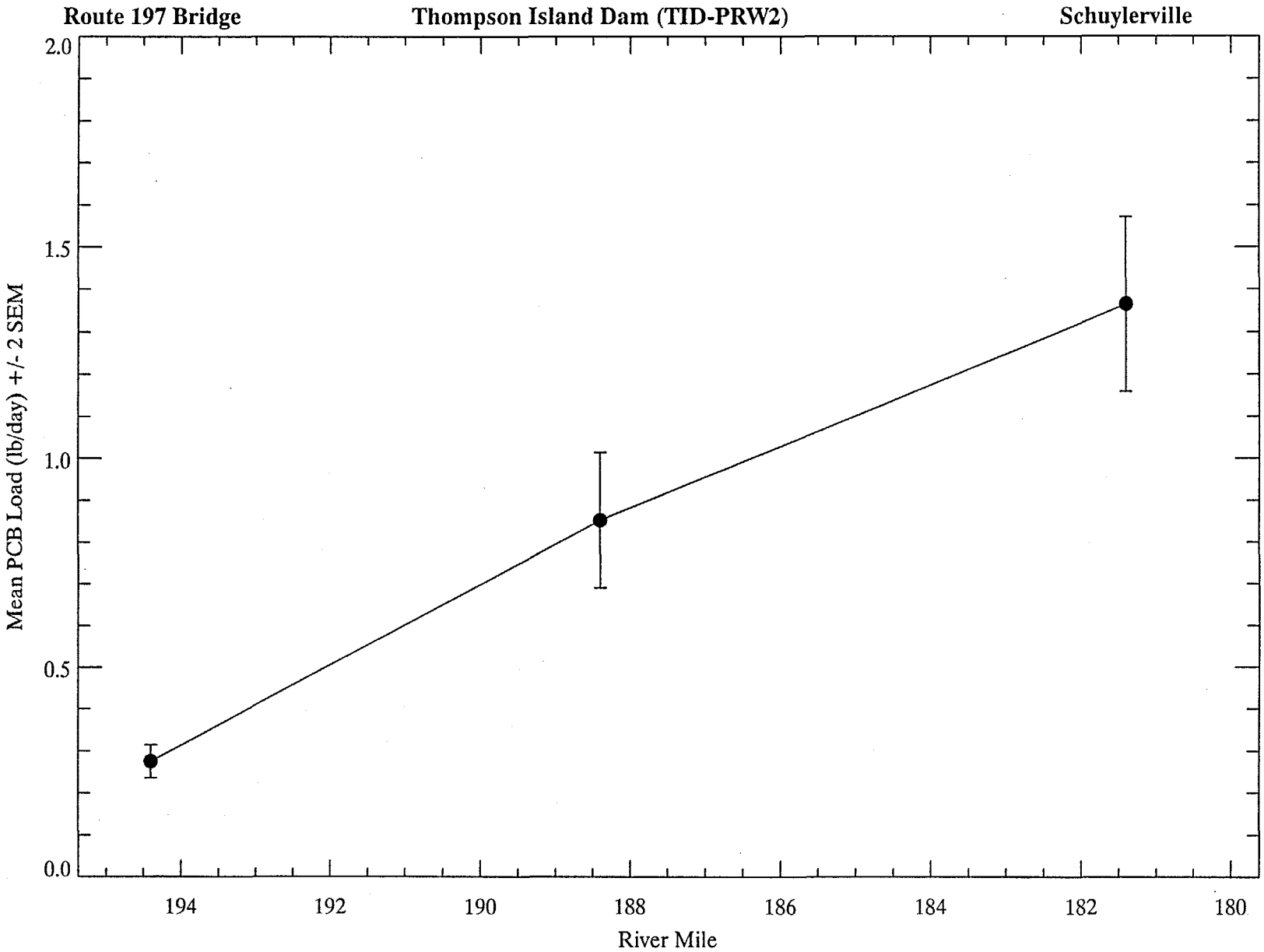

Figure 3-22. Spatial profile of average PCB loading from Fort Edward to Schuylerville for 1999 low flow data (<10,000 cfs) collected during routine monitoring.

Notes: Flow at TID and Schuylerville prorated for loading calculations. April high flow monitoring data not included.

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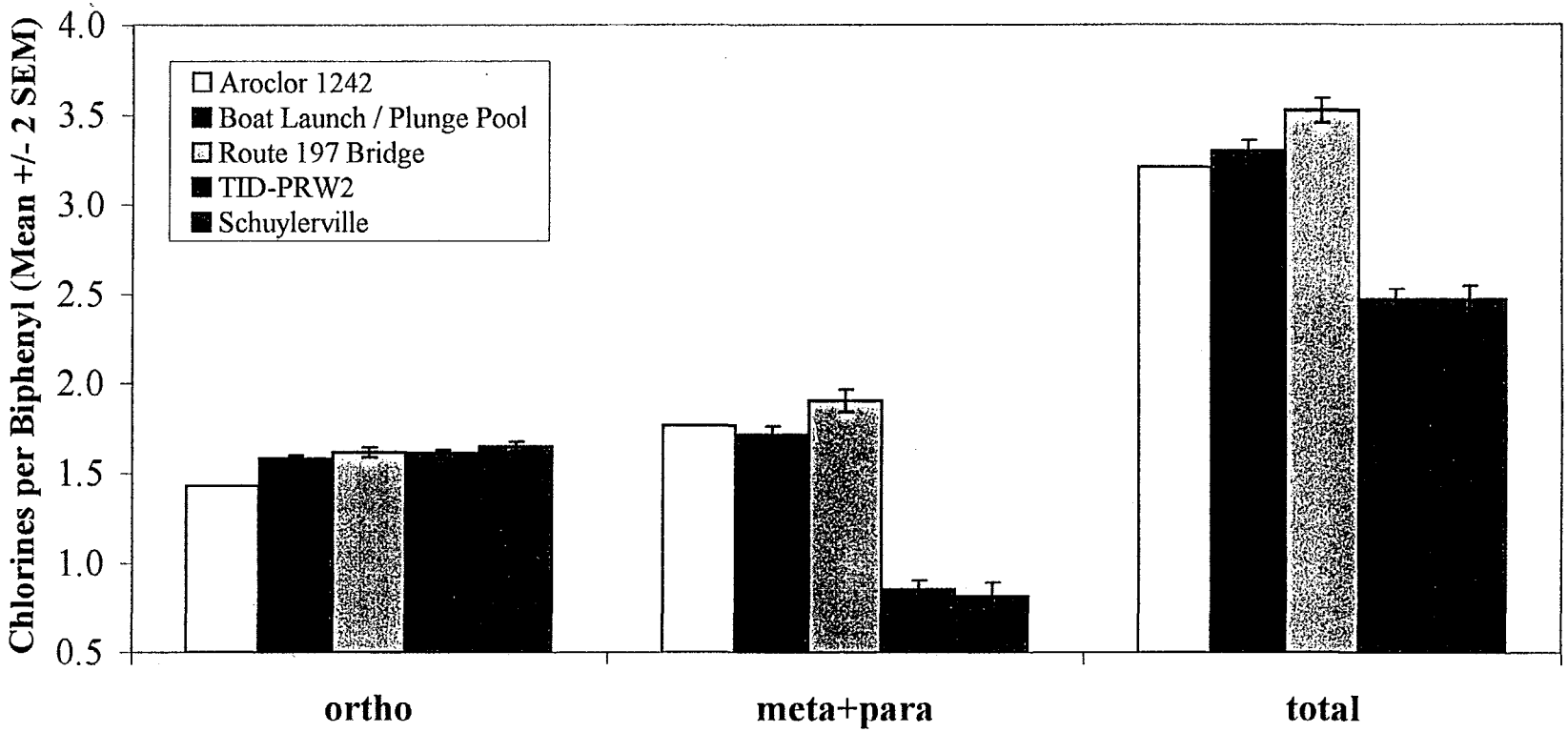

Figure 3-23. Spatial comparison between average ortho, meta+para, and total chlorines per biphenyl for 1999 data.

Notes: Non-detect samples omitted from averages; Aroclor 1242 composition based on Frame et al., 1996; Data from April high flow sampling not included.

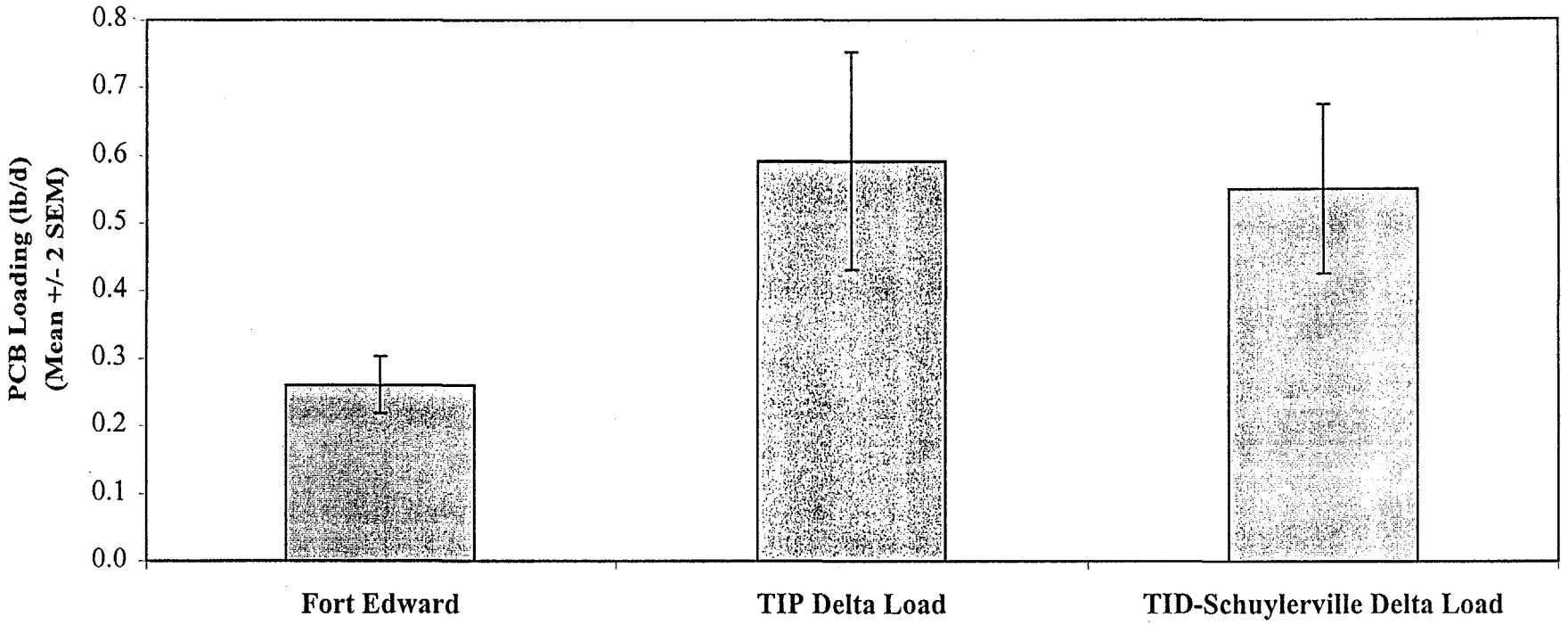

Figure 3-24. Evaluation of low flow (< 10,000 cfs) PCB loading sources within the monitored region of the upper Hudson River using 1999 routine monitoring data.

Notes: Delta loadings calculated using unbiased TID-PRW2 monitoring station.

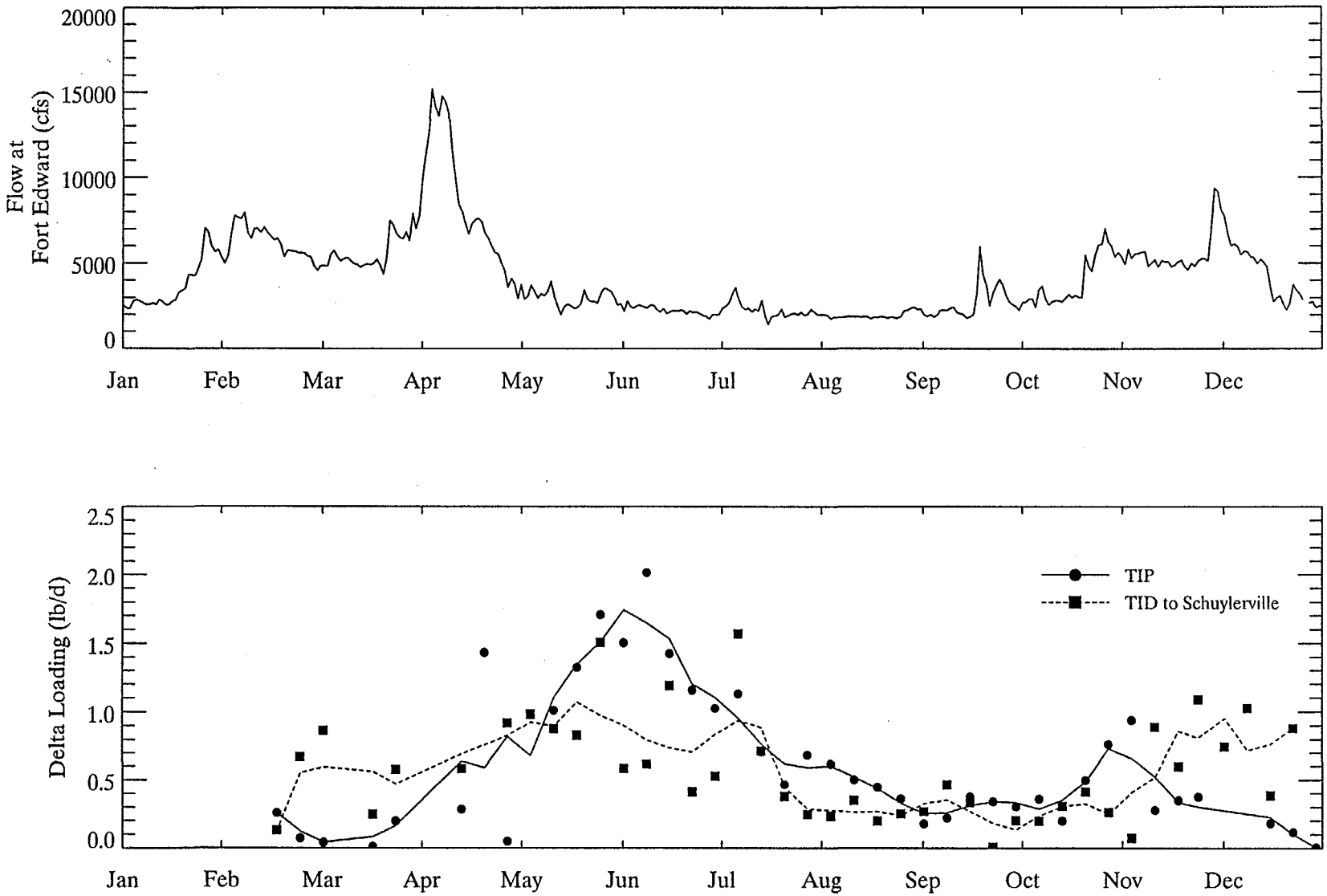

Figure 3-25. Temporal profile of 1999 computed low flow PCB delta loadings within Thompson Island Pool and from TID to Schuylerville.

Notes: Data used at Thompson Island Dam are from TID-PRW2. Plotted lines are 3-point moving average of delta loadings. Two outliers with delta loading less than zero ommitted from moving average.

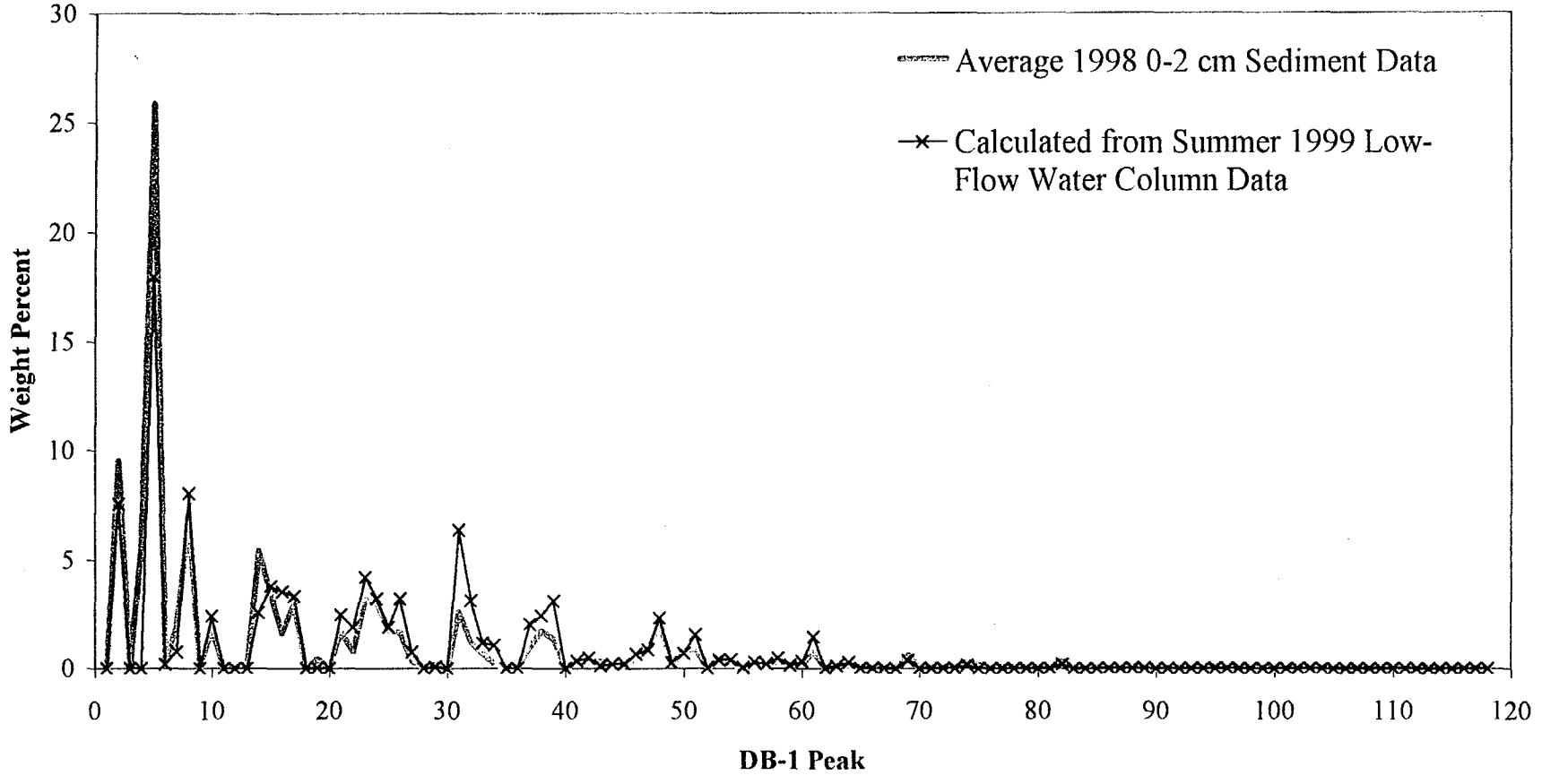

Figure 3-26. Comparison of the average 1998 0-2 cm TIP sediment PCB DB-1 peak distribution with that calculated from summer 1999 low-flow water column data based upon pore water transport and equilibrium partitioning.

Note: Recent laboratory analysis determined that a non-PCB eluting at the DB-1 Peak 4 retention time is present in the 1998 surface sediment PCB data.

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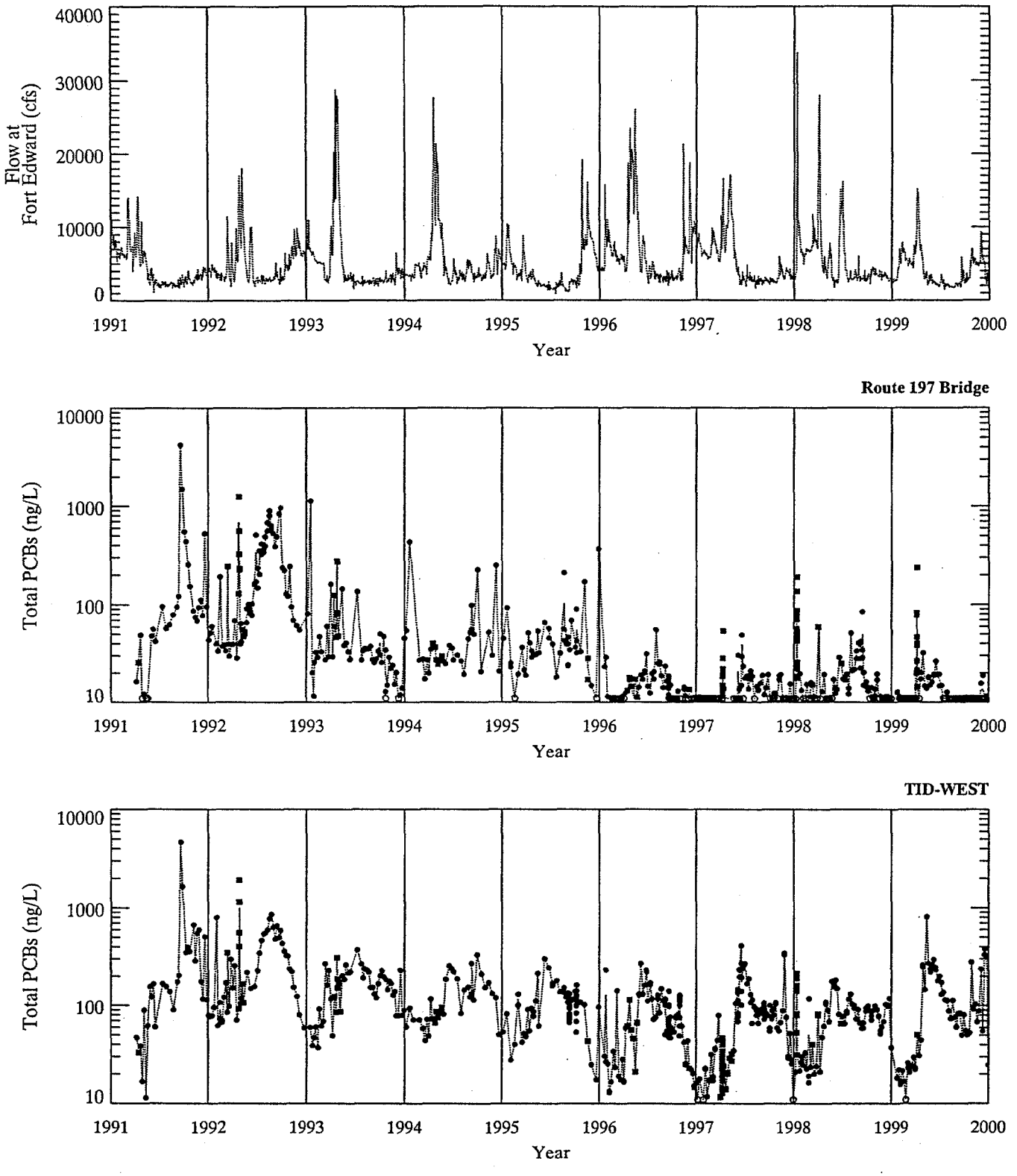

Figure 3-27. Temporal profiles of Total PCBs at Fort Edward and Thompson Island Dam since 1991.

Notes: Line connecting data points is daily average. MDL of 11 ng/L used for non-detect PCBs (open circles). Squares are high flow data (>10000 cfs).

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FINAL

Hudson River Monitoring Program

1999 Summary Report
Appendix A
Data Quality Evaluation

Prepared for:

General Electric Company
Albany, New York

Job Number:
GENhrm 131

January 2001

QEA, LLC
January 2001

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION

1.1 Introduction

This report presents the results of a quality evaluation performed on water column monitoring data collected from the upper Hudson River by Quantitative Environmental Analysis, L.L.C. (QEA) and HSI GeoTrans during 1999 on behalf of General Electric Company (GE). The sampling, laboratory analysis, and data quality evaluation has been conducted in accordance with a Sampling and Analysis Plan (SAP; QEA 2000) which includes a Field Sampling Plan (FSP), Quality Assurance Project Plan (QAPP), and Health and Safety Plan (HASP).

The samples collected for this program were analyzed for congener-specific polychlorinated biphenyls (PCBs) by Northeast Analytical, Inc. (NEA) in accordance with method NE013_04 (NEA 1999) and total suspended solids (TSS) by USEPA method 160.2. This data quality evaluation focuses on PCB data; TSS data quality has not been formally evaluated. Copies of the PCB and TSS data packages received from NEA are included as Exhibits A and B, respectively.

This data quality evaluation has been performed for water column samples collected on a routine basis from two stations on the Hudson River for the Post-Construction Remnant Deposit Monitoring Program (PCRDMP). Additionally, the quality of data generated as a result of additional routine sampling conducted as part of GE's Hudson River Monitoring Program (HRMP) has been evaluated. The objectives and scope of both the PCRDMP and HRMP are presented in the PCRDMP SAP (QEA, 2000). The quality of other, non-routine water column PCB data generated in 1999, but not formally associated with either the PCRDMP or HRMP was also evaluated. Programs besides the PCRDMP and HRMP that generated water column data in 1999 are described in Section 2.3 of the main report, and include high flow sampling, sampling

conducted in areas of the River adjacent to the GE Hudson Falls Plant Site, collection of samples upstream of Bakers Falls, and sampling performed adjacent to Rogers Island during remedial activities performed by USEPA.

The data quality evaluation was conducted in two phases. The first phase (described in Section 2) consists of verifying that the data generation process was conducted in accordance with the FSP and QAPP (QEA, 2000). The FSP and QAPP specify quality assurance (QA) procedures that pertain to the implementation of the field sampling activities and the execution of the analytical program. The second phase of the data quality evaluation (described in Section 3) consists of validation of the data. That is, determining to what extent the data are useable for their intended purpose.

1.2 Overview of PCB Analytical Methodology

The NE013_04 method employs a high-resolution fused-silica capillary chromatographic column for analyzing PCBs on a congener-specific basis. The capillary column provides the separation and resolution of 112 chromatographic peaks, representing 209 PCB congeners (NEA 1999). Water samples are liquid-liquid extracted using separatory funnels and pesticide grade methylene chloride. After extraction, the sample consisting of PCBs dissolved in methylene chloride is passed through a drying column prior to exchange to pesticide grade hexane. The samples are then reduced in volume using Turbo-Vap® technology followed by nitrogen blowdown using a micro-apparatus. The final sample extracts undergo a cleanup procedure prior to analysis which includes passage through a Florisil column, and the addition of mercury and concentrated sulfuric acid to remove sulfur and polar compounds, respectively. The sample extracts are analyzed by direct liquid injection onto the capillary gas chromatographic (GC) column and PCBs are detected by an electron capture detector (ECD) (NEA 1999).

Research conducted in 1997 identified analytical biases in the quantification of PCB congener data generated by Method NE013_04 (formerly NEA6O8CAP; HydroQual 1997). These analytical biases resulted from coeluting mixed peak de-convolution assumptions used for Hudson River samples (coelution error). Prior to distribution of the data to the data users, coelution error correction factors are applied to the PCB data by QEA to account for analytical biases inherent in Method NE013_04 (HydroQual 1997, O'Brien & Gere 1997, QEA 2000).

1.3 Objectives

The overall objective of the PCRDMP is to generate data of sufficient quality to monitor the effectiveness of the remedial action performed on the remnant deposits, in accordance with the requirements of the consent decree (Consent Decree, 1990). Satisfying this objective requires assessment of PCB flux from the remnant deposits to the Hudson River on a quantitative basis; therefore, the sampling and analysis program has been designed to provide data of sufficient quality and quantity to facilitate this type of analysis (QEA, 2000).

The objective of this data quality evaluation is to assess whether the data were generated in accordance with the QAPP, and to evaluate the usability of the data for their intended use. This evaluation was performed by comparing the data to the pre-determined method and project criteria presented in the QAPP (QEA, 2000).

SECTION 2 - DATA VERIFICATION

2.1 Data Verification

Data verification consists of evaluating the data generation process, including sample collection, sample handling, laboratory analysis, and data reporting for the following:

- Assessment of whether the tasks specified in the SAP were performed (compliance),
- Evaluating whether the tasks were performed correctly (correctness),
- Identifying whether the tasks were consistently performed at all data collection points (consistency), and
- Evaluating whether the program has resulted in obtaining sufficient data to satisfy the project objectives (completeness).

2.1.1 Compliance

In accordance with the QAPP, compliance with the sampling process design, sampling methods, sample handling and custody requirements, field QA/QC sample collection schedule, field QA/QC procedures, field equipment testing, inspection, and maintenance procedures were assessed by the project manager. No significant deviations from the SAP were noted for these activities during 1999.

The data management coordinator was responsible for assessing compliance with laboratory chain of custody requirements, analytical methods requirements, laboratory QA/QC procedures, testing, inspection, and maintenance of laboratory instrumentation, and laboratory instrument calibration and frequency. The first phase of this assessment included a Tier 1 review of the data upon receipt of a Data Summary Package from NEA. Evaluating data quality on an as-received basis helps identify deficiencies in the data generation process as soon as possible, allowing for implementation of corrective action. Following the Tier 1 evaluation, a

computerized verification system was utilized to evaluate the data. Approximately 10% of the data were verified manually for these criteria to confirm the results of the computer verification. Additionally, any data that were identified by the computer verification as not being in compliance were subjected to manual verification. No significant deviations from the SAP were noted for these activities during 1999.

Upon receipt from NEA, electronic data is added to the QA/QC databases using a Visual Basic Program. Data verification and validation is performed monthly using a customized program written in interactive data language (IDL) software. Data validation results are then incorporated into the database.

2.1.2 Correctness

As specified in the QAPP, the project manager was responsible for assessing whether field activities, including sample collection, handling, and transport were conducted correctly. No significant deviations from the SAP were noted for these activities during 1999. The data management coordinator had overall responsibility for assessing laboratory activities for correctness. Deviations in the analytical procedures were identified for a portion of the analyses, resulting in qualifying these data during validation (Section 3.1), as appropriate. The data affected by these deviations have been assigned qualifiers, as described in Section 3.1.

2.1.3 Consistency

The project manager was responsible for evaluating whether field activities were conducted consistently at all sampling locations. The data management coordinator was responsible for identifying inconsistencies in the laboratory data generation process. No significant inconsistencies were identified in either the field activities or the laboratory data generation process.

2.1.4 Completeness

Completeness pertains to evaluating whether the program has resulted in obtaining all the data necessary to perform the evaluations required to satisfy the project objectives. The PCRDMP is a routine monitoring program that has been conducted since 1991 with the resultant data evaluated in annual summary reports. This data evaluation found that the scope of the PCRDMP is appropriate for achieving the project objectives.

SECTION 3 - DATA VALIDATION

3.1 Data Validation

Data validation is the process of identifying the usability of the data for conducting the assessments required to satisfy the project objectives. In 1999, data validation was performed on a total of 439 environmental samples collected from the Hudson River, including 50 blind duplicate samples. In addition, 51 equipment blanks were evaluated. Data that were recognized as not meeting applicable QA/QC criteria were qualified according to the type of deviation identified. Each data point that did not fully meet QA/QC criteria was assigned a data qualifier. These qualifiers also accompany the data in the GE Hudson River database. The qualifiers used for this program are described below:

U Indicates that the sample was analyzed, but the compound of interest (PCBs) was not detected above the method detection limit (MDL; 11 ng/L) of the procedure. The sample result is still considered useable for evaluation purposes.

P Indicates that PCBs were detected in the sample at a concentration below the practical quantitation limit (PQL; 44 ng/L). The sample result is still considered useable for evaluation purposes.

J Indicates that the result is considered approximate. This qualifier denotes that the identity of the compound is accurate; however, there is limited confidence in the accuracy of the PCB concentration. The sample result is still considered useable for evaluation purposes.

UJ Indicates that the MDL and sample result is considered approximate. The sample result is still considered useable for evaluation purposes.

R Indicates that the sample result or detection limit has been rejected due to serious deficiencies during the analytical process and/or inability to meet quality control criteria. The sample result is therefore considered unusable for quantitative evaluations.

The data validation process resulted in the assignment of data qualifiers to a total of 343 samples. Of these, 304 did not exhibit deviations during the data generation process, with 164 of these samples being below the MDL (assigned the "U" qualifier), and 140 samples below the PQL (assigned the "P" qualifier). A total of 6 samples were assigned the "J" qualifier, 7 were assigned the "PJ" qualifier, and 25 samples were assigned the "UJ qualifier. One sample was assigned the "R" qualifier, and therefore the results of this sample have not been included in the interpretive efforts presented in the main report. The results of the data validation, including the logic for the assignment of each qualifier are presented in Tables A-1 through A-5, as follows:

Table A-1	Summary of Data Qualifiers Assigned to Environmental Samples
Table A-2	Summary of Data Qualifiers Assigned to Equipment Blank Samples
Table A-3	Summary of Environmental Data Assigned "U" Qualifier
Table A-4	Summary of Environmental Data Assigned "P" Qualifier
Table A-5	Summary of Other Data Qualifiers Assigned to Environmental Samples

3.2 Data Useability

The results of the data validation indicate that over 99% of the data are useable for meeting the project objective, which is to monitor the effectiveness of the remedial action performed on the remnant deposits through assessment of PCB flux from the remnant deposits to the Hudson River on a quantitative basis. USEPA guidance recommends performing a data quality assessment to identify how well the validated data can support their intended use. However, a formal data quality assessment is not appropriate for the PCRDMP, as the PCRDMP is an on-going routine monitoring program. The data resulting from this program have been evaluated

and documented in annual summary reports since 1991. The results of these evaluations have demonstrated that data obtained for the PCRDMP are appropriate to support evaluations required to satisfy the project objective.

SECTION 4 - REFERENCES

Consent Decree. 1990. United States v. General Electric Company., No. 90-CV-575, April 6, 1990.

HydroQual. 1997. Development of Corrections for Analytical Biases in the 1991-1997 GE Hudson River PCB Database. Prepared for General Electric Company, CEP, Albany, NY, June 1997.

O'Brien & Gere Engineers, Inc. 1997. Correction of Analytical Biases in the 1991 – 1997 GE Hudson River PCB Database. Syracuse, NY: O'Brien & Gere Engineers, Inc. September 1997.

Post-Construction Remnant Deposit Monitoring Program Sampling and Analysis Plan. QEA, February, 2000.

Standard Operating Procedure, Northeast Analytical, Inc., NE013_04.SOP, May 01, 1999.

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TABLES

QEA
Quantitative Environmental Analysis, LLC

Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC00004R	BOATLAUNCH	01/05/99	28	P, J	Less than PQL, Exceeded extraction holding time. Sample reanalyzed due to lab contamination coeluting with peak 2.
AC00102R	BOATLAUNCH	01/13/99	11	P, J	Less than PQL, Exceeded extraction holding time. Sample reanalyzed due to lab contamination coeluting with peak 2.
AC00130	BOATLAUNCH	01/20/99	15	P	Less than PQL
AC00123	B.F.Br	01/20/99	<11	U	Less than MDL
AC00124	Rt.197 Br.	01/20/99	13	P	Less than PQL
AC00125	TID-WEST	01/20/99	18	P	Less than PQL
AC00126	TID-WEST	01/20/99	18	P	Less than PQL
AC00201	Rt.197 Br.	01/27/99	<11	U	Less than MDL
AC00199	TID-WEST	01/27/99	22	P	Less than PQL
AC00200	Rt.29 Br.	01/27/99	23	P	Less than PQL
AC00197	B.F.Br	01/27/99	<11	UJ	Less than MDL, Matrix spike recovery
AC00198	Rt.197 Br.	01/27/99	12	P	Less than PQL
AC00342	B.F.Br	02/03/99	<11	U	Less than MDL
AC00343	Rt.197 Br.	02/03/99	<11	U	Less than MDL
AC00344	TID-WEST	02/03/99	17	P	Less than PQL
AC00345	Rt.29 Br.	02/03/99	19	P	Less than PQL
AC00346	TID-WEST	02/03/99	16	P	Less than PQL
AC00472	B.F.Br	02/10/99	<11	U	Less than MDL
AC00473	Rt.197 Br.	02/10/99	<11	U	Less than MDL
AC00474	TID-WEST	02/10/99	21	P	Less than PQL
AC00475	Rt.29 Br.	02/10/99	20	P	Less than PQL
AC00476	Rt.197 Br.	02/10/99	<11	U	Less than MDL
AC00540	B.F.Br	02/17/99	<11	U	Less than MDL
AC00541	Rt.197 Br.	02/17/99	<11	U	Less than MDL
AC00543	TID-WEST	02/17/99	17	P	Less than PQL
AC00544	TID-PRW2	02/17/99	18	P	Less than PQL
AC00545	Rt.29 Br.	02/17/99	19	P	Less than PQL
AC00547	B.F.Br	02/17/99	<11	U	Less than MDL
AC00606	B.F.Br	02/24/99	<11	U	Less than MDL
AC00608	Rt.197 Br.	02/24/99	<11	U	Less than MDL
AC00609	TID-WEST	02/24/99	<11	U	Less than MDL
AC00611	TID-PRW2	02/24/99	13	P	Less than PQL
AC00612	Rt.29 Br.	02/24/99	30	P	Less than PQL
AC00613	Rt.197 Br.	02/24/99	<11	U	Less than MDL
AC00699	B.F.Br	03/03/99	<11	U	Less than MDL
AC00700	Rt.197 Br.	03/03/99	<11	U	Less than MDL
AC00702	TID-WEST	03/03/99	26	P	Less than PQL
AC00703	TID-PRW2	03/03/99	12	P	Less than PQL
AC00704	Rt.29 Br.	03/03/99	39	P	Less than PQL
AC00706	TID-WEST	03/03/99	23	P	Less than PQL
AC00710	PLUNGEPOOL	03/03/99	15	P	Less than PQL
AC00790	Rt.197 Br.	03/10/99	<11	U	Less than MDL

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Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC00791	TID-WEST	03/10/99	21	P	Less than PQL
AC00792	Rt.29 Br.	03/10/99	28	P	Less than PQL
AC00788	B.F.Br	03/10/99	<11	U	Less than MDL
AC00793	Rt.29 Br.	03/10/99	23	P	Less than PQL
AC00846	PLUNGEPOOL	03/17/99	15	P	Less than PQL
AC00847	B.F.Br	03/18/99	<11	U	Less than MDL
AC00848	Rt.197 Br.	03/18/99	<11	U	Less than MDL
AC00850	TID-WEST	03/18/99	24	P	Less than PQL
AC00852	TID-PRW2	03/18/99	<11	U	Less than MDL
AC00853	Rt.29 Br.	03/18/99	18	P	Less than PQL
AC00854	B.F.Br	03/18/99	<11	U	Less than MDL
AC01006	TID-WEST	03/25/99	30	P	Less than PQL
AC01007	TID-PRW2	03/25/99	16	P	Less than PQL
AC01009	Rt.29 Br.	03/25/99	28	P	Less than PQL
AC01011	Rt.197 Br.	03/25/99	<11	U	Less than MDL
AC01003	PLUNGEPOOL	03/25/99	14	P	Less than PQL
AC01004	B.F.Br	03/25/99	<11	U	Less than MDL, sample reanalyzed due to unknown peaks coeluting in PCB region of chromatogram
AC01005	Rt.197 Br.	03/25/99	<11	U	Less than MDL
AC01113	B.F.Br	03/31/99	<11	U	Less than MDL
AC01115	Rt.197 Br.	03/31/99	<11	U	Less than MDL
AC01116	TID-WEST	03/31/99	23	P	Less than PQL
AC01117	Rt.29 Br.	03/31/99	24	P	Less than PQL
AC01119	TID-WEST	03/31/99	22	P	Less than PQL
AC01112	PLUNGEPOOL	03/31/99	16	P	Less than PQL
AC01182	Rt.197 Br.	04/04/99	20	P	Less than PQL
AC01183	B.F.Br	04/04/99	<11	U	Less than MDL
AC01193	Rt.197 Br.	04/05/99	26	P	Less than PQL
AC01188	Rt.197 Br.	04/05/99	40	P	Less than PQL
AC01189	Rt.197 Br.	04/05/99	238	J	Matrix spike recovery
AC01191	B.F.Br	04/05/99	<11	U	Less than MDL
AC01192	Rt.197 Br.	04/05/99	38	P	Less than PQL
AC01194	Rt.197 Br.	04/06/99	21	P	Less than PQL
AC01195	B.F.Br	04/06/99	<11	U	Less than MDL
AC01239	B.F.Br	04/07/99	<11	U	Less than MDL
AC01241	Rt.197 Br.	04/07/99	14	P	Less than PQL
AC01243	TID-PRW2	04/07/99	18	P	Less than PQL
AC01245	Rt.29 Br.	04/07/99	60	P, J	Less than PQL, Exceeded extraction holding time, Duplicate RPD >35%, sample reanalyzed due to poor comparison to blind duplicate
AC01246	Rt.29 Br. Dup.	04/07/99	285	R	Duplicate RPD >35%
AC01305	B.F.Br	04/14/99	<11	U	Less than MDL
AC01306	Rt.197 Br.	04/14/99	<11	U	Less than MDL
AC01308	TID-WEST	04/14/99	31	P	Less than PQL
AC01310	TID-PRW2	04/14/99	17	P	Less than PQL

Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC01311	Rt.29 Br.	04/14/99	27	P	Less than PQL
AC01312	B.F.Br	04/14/99	<11	U	Less than MDL
AC01314	BOATLAUNCH	04/14/99	15	P	Less than PQL
AC01518	PLUNGEPOOL	04/21/99	14	P	Less than PQL
AC01507	B.F.Br	04/21/99	11	P	Less than PQL
AC01508	Rt.197 Br.	04/21/99	17	P	Less than PQL
AC01512	Rt.29 Br.	04/21/99	38	P	Less than PQL
AC01514	Rt.197 Br.	04/21/99	20	P	Less than PQL
AC01724	B.F.Br	04/28/99	14	P	Less than PQL
AC01729	TID-PRW2	04/28/99	33	P	Less than PQL
AC01726	Rt.197 Br.	04/28/99	32	P, J	Less than PQL, Surrogate recovery
AC01836	B.F.Br	05/05/99	<11	U	Less than MDL
AC01838	Rt.197 Br.	05/05/99	15	P	Less than PQL
AC01843	B.F.Br	05/05/99	<11	U	Less than MDL
AC01847	PLUNGEPOOL	05/05/99	19	P	Less than PQL
AC02226	B.F.Br	05/12/99	11	P	Less than PQL
AC02227	Rt.197 Br.	05/12/99	14	P	Less than PQL
AC02233	B.F.Br	05/12/99	<11	U	Less than MDL
AC02235	BOATLAUNCH	05/12/99	32	P	Less than PQL
AC02237	PLUNGEPOOL	05/12/99	12	P	Less than PQL
AC02534	B.F.Br	05/19/99	16	P	Less than PQL
AC02535	Rt.197 Br.	05/19/99	18	P	Less than PQL
AC02540	Rt.197 Br.	05/19/99	18	P	Less than PQL
AC02544	PLUNGEPOOL	05/19/99	30	P	Less than PQL
AC02969	B.F.Br	05/26/99	<11	U	Less than MDL
AC02971	Rt.197 Br.	05/26/99	15	P	Less than PQL
AC02980	BOATLAUNCH	05/26/99	23	P	Less than PQL
AC02982	PLUNGEPOOL	05/26/99	<11	U	Less than MDL
AC03175	Rt.197 Br.	06/02/99	16	P	Less than PQL
AC03180	B.F.Br	06/02/99	<11	U	Less than MDL
AC03182	BOATLAUNCH	06/02/99	36	P	Less than PQL
AC03184	PLUNGEPOOL	06/02/99	16	P	Less than PQL
AC03173	B.F.Br	06/02/99	<11	U	Less than MDL
AC03348	B.F.Br	06/09/99	<11	U	Less than MDL
AC03349	Rt.197 Br.	06/09/99	19	P	Less than PQL
AC03354	Rt.29 Br.	06/09/99	189	J	Surrogate recovery
AC03356	Rt.197 Br.	06/09/99	20	P	Less than PQL
AC03360	PLUNGEPOOL	06/09/99	16	P	Less than PQL
AC03494	B.F.Br	06/16/99	13	P	Less than PQL
AC03496	Rt.197 Br.	06/16/99	26	P	Less than PQL
AC03502RE	TID-WEST	06/16/99	246	J	Exceeded extraction holding time, sample reanalyzed due spillage during cleanup
AC03506	PLUNGEPOOL	06/16/99	25	P	Less than PQL

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Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC03508	US-1	06/16/99	<11	U	Less than MDL
AC03507	US-2	06/16/99	<11	U	Less than MDL
AC03589	B.F.Br	06/23/99	<11	U	Less than MDL
AC03591	Rt.197 Br.	06/23/99	19	P	Less than PQL
AC03595	Rt.29 Br.	06/23/99	118	J	Surrogate recovery, sample reanalyzed due to loss of sample extract
AC03600	PLUNGEPOOL	06/23/99	22	P, J	Less than PQL, Surrogate recovery, sample reanalyzed due to double spiking of surrogate
AC03771	B.F.Br	06/30/99	<11	U	Less than MDL
AC03772	Rt.197 Br.	06/30/99	15	P	Less than PQL
AC03778	Rt.197 Br.	06/30/99	19	P	Less than PQL
AC03780	BOATLAUNCH	06/30/99	27	P	Less than PQL
AC03823	B.F.Br	07/07/99	<11	U	Less than MDL
AC03824	Rt.197 Br.	07/07/99	15	P	Less than PQL
AC03821	PLUNGEPOOL	07/07/99	20	P	Less than PQL
AC04070	B.F.Br	07/14/99	<11	U	Less than MDL
AC04072	Rt.197 Br.	07/14/99	<11	U	Less than MDL
AC04077	B.F.Br	07/14/99	<11	UJ	Less than MDL, Internal standard area performance
AC04079	BOATLAUNCH	07/14/99	19	P	Less than PQL
AC04081	PLUNGEPOOL	07/14/99	12	P	Less than PQL
AC04332	B.F.Br	07/21/99	<11	U	Less than MDL
AC04333	Rt.197 Br.	07/21/99	<11	U	Less than MDL
AC04338	Rt.197 Br.	07/21/99	<11	U	Less than MDL
AC04342	PLUNGEPOOL	07/21/99	15	P	Less than PQL
AC04607	PLUNGEPOOL	07/28/99	33	P	Less than PQL
AC04596	B.F.Br	07/28/99	<11	U	Less than MDL
AC04597	Rt.197 Br.	07/28/99	13	P	Less than PQL
AC04699	B.F.Br	08/04/99	<11	U	Less than MDL
AC04701	Rt.197 Br.	08/04/99	<11	U	Less than MDL
AC04709	BOATLAUNCH	08/04/99	24	P	Less than PQL
AC04707	PLUNGEPOOL	08/04/99	<11	U	Less than MDL
AC04910	B.F.Br	08/11/99	<11	U	Less than MDL
AC04911	Rt.197 Br.	08/11/99	<11	U	Less than MDL
AC04921	PLUNGEPOOL	08/11/99	<11	U	Less than MDL
AC05346	B.F.Br	08/18/99	<11	U	Less than MDL
AC05347	Rt.197 Br.	08/18/99	<11	U	Less than MDL
AC05354	BOATLAUNCH	08/18/99	33	P	Less than PQL
AC05356	PLUNGEPOOL	08/18/99	<11	U	Less than MDL
AC05549	B.F.Br	08/25/99	<11	U	Less than MDL
AC05551	Rt.197 Br.	08/25/99	<11	U	Less than MDL
AC05554	TID-PRW2	08/25/99	44	P	Less than PQL
AC05558	BOATLAUNCH	08/25/99	15	P	Less than PQL
AC05560	PLUNGEPOOL	08/25/99	<11	U	Less than MDL
AC05841	B.F.Br	09/01/99	<11	U	Less than MDL

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Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC05842	Rt.197 Br.	09/01/99	<11	U	Less than MDL
AC05845	TID-PRW2	09/01/99	26	P	Less than PQL
AC05848	Rt.197 Br.	09/01/99	<11	U	Less than MDL
AC05850	BOATLAUNCH	09/01/99	22	P	Less than PQL
AC05852	PLUNGEPOOL	09/01/99	<11	U	Less than MDL
AC06011	B.F.Br	09/08/99	<11	U	Less than MDL
AC06012	Rt.197 Br.	09/08/99	<11	U	Less than MDL
AC06015	TID-PRW2	09/08/99	28	P	Less than PQL
AC06019	BOATLAUNCH	09/08/99	19	P	Less than PQL
AC06021	PLUNGEPOOL	09/08/99	<11	U	Less than MDL
AC06301	B.F.Br	09/15/99	<11	U	Less than MDL
AC06303	Rt.197 Br.	09/15/99	<11	U	Less than MDL
AC06310	BOATLAUNCH	09/15/99	<11	U	Less than MDL
AC06312	PLUNGEPOOL	09/15/99	<11	U	Less than MDL
AC06697	B.F.Br	09/22/99	<11	U	Less than MDL
AC06698	Rt.197 Br.	09/22/99	<11	U	Less than MDL
AC06701	TID-PRW2	09/22/99	29	P	Less than PQL
AC06702	Rt.29 Br.	09/22/99	26	P	Less than PQL
AC06703	Rt.197 Br.	09/22/99	<11	U	Less than MDL
AC06707	PLUNGEPOOL	09/22/99	<11	U	Less than MDL
AC06840	B.F.Br	09/29/99	<11	U	Less than MDL
AC06842	Rt.197 Br.	09/29/99	<11	U	Less than MDL
AC06845	TID-PRW2	09/29/99	32	P	Less than PQL
AC06846	Rt.29 Br.	09/29/99	41	P	Less than PQL
AC06847	B.F.Br	09/29/99	<11	U	Less than MDL
AC06849	BOATLAUNCH	09/29/99	30	P	Less than PQL
AC06851	PLUNGEPOOL	09/29/99	<11	U	Less than MDL
AC06996	B.F.Br	10/06/99	<11	U	Less than MDL
AC06997	Rt.197 Br.	10/06/99	<11	U	Less than MDL
AC07000	TID-PRW2	10/06/99	29	P	Less than PQL
AC07002	Rt.29 Br.	10/06/99	35	P	Less than PQL
AC07003	Rt.197 Br.	10/06/99	<11	U	Less than MDL
AC07005	BOATLAUNCH	10/06/99	12	P	Less than PQL
AC07007	PLUNGEPOOL	10/06/99	<11	U	Less than MDL
AC07212	B.F.Br	10/13/99	<11	U	Less than MDL
AC07213	Rt.197 Br.	10/13/99	<11	U	Less than MDL
AC07217	TID-PRW2	10/13/99	23	P	Less than PQL
AC07218	Rt.29 Br.	10/13/99	38	P	Less than PQL
AC07219	B.F.Br	10/13/99	<11	U	Less than MDL
AC07221	BOATLAUNCH	10/13/99	15	P	Less than PQL
AC07223	PLUNGEPOOL	10/13/99	<11	U	Less than MDL
AC07461	B.F.Br	10/20/99	<11	U	Less than MDL

Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC07462	Rt.197 Br.	10/20/99	<11	U	Less than MDL
AC07465	TID-PRW2	10/20/99	27	P	Less than PQL
AC07467	Rt.29 Br.	10/20/99	36	P	Less than PQL
AC07468	Rt.197 Br.	10/20/99	<11	UJ	Less than MDL, Internal standard area performance
AC07470	BOATLAUNCH	10/20/99	13	P	Less than PQL
AC07472	PLUNGEPOOL	10/20/99	<11	UJ	Less than MDL, Internal standard area performance
AC07694	TID-PRW2	10/27/99	32	P	Less than PQL
AC07695	Rt.29 Br.	10/27/99	36	P	Less than PQL
AC07696	TID-PRW2	10/27/99	33	P	Less than PQL
AC07700	PLUNGEPOOL	10/27/99	<11	U	Less than MDL
AC07690	B.F.Br	10/27/99	12	P	Less than PQL
AC07691	Rt.197 Br.	10/27/99	<11	U	Less than MDL
AC07840	B.F.Br	11/03/99	<11	U	Less than MDL
AC07841	Rt.197 Br.	11/03/99	<11	U	Less than MDL
AC07844	TID-PRW2	11/03/99	42	P	Less than PQL
AC07846	Rt.29 Br.	11/03/99	40	P	Less than PQL
AC07847	B.F.Br	11/03/99	<11	U	Less than MDL
AC07849	BOATLAUNCH	11/03/99	22	P	Less than PQL
AC07851	PLUNGEPOOL	11/03/99	30	P	Less than PQL
AC07998	B.F.Br	11/10/99	<11	U	Less than MDL
AC07999	Rt.197 Br.	11/10/99	<11	U	Less than MDL
AC08003	TID-PRW2	11/10/99	20	P	Less than PQL
AC08004	Rt.29 Br.	11/10/99	44	P	Less than PQL
AC08007	BOATLAUNCH	11/10/99	16	P	Less than PQL
AC08009	PLUNGEPOOL	11/10/99	<11	U	Less than MDL
AC08140	B.F.Br	11/17/99	13	P	Less than PQL
AC08141	Rt.197 Br.	11/17/99	<11	U	Less than MDL
AC08142	HRM 194.2E	11/17/99	<11	U	Less than MDL
AC08143	HRM 194.2W	11/17/99	<11	U	Less than MDL
AC08145	TID-PRW2	11/17/99	23	P	Less than PQL
AC08148	Rt.29 Br.	11/17/99	39	P, J	Less than PQL, Internal standard area performance
AC08149	B.F.Br	11/17/99	<11	U	Less than MDL
AC08150	HRRIL1	11/17/99	<11	U	Less than MDL
AC08151	HRRIL4	11/17/99	<11	U	Less than MDL
AC08153	BOATLAUNCH	11/17/99	23	P	Less than PQL
AC08155	PLUNGEPOOL	11/17/99	<11	U	Less than MDL
AC08271	B.F.Br	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08273	Rt.197 Br.	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08274	HRRIL1	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08275	HRRIL2	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08276	HRRIL4	11/23/99	<11	U	Less than MDL
AC08279	TID-PRW2	11/23/99	24	P	Less than PQL

322496

Table A-1. Summary of Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC08281	HRRIL1	11/23/99	<11	U	Less than MDL
AC08282	HRM 194.2E	11/23/99	<11	U	Less than MDL
AC08283	HRM 194.2W	11/23/99	<11	U	Less than MDL
AC08285	BOATLAUNCH	11/23/99	42	P	Less than PQL
AC08287	PLUNGEPOOL	11/23/99	<11	U	Less than MDL
AC08408	B.F.Br	12/01/99	<11	U	Less than MDL
AC08410	HRM 194.2E	12/01/99	16	P	Less than PQL
AC08411	HRM 194.2W	12/01/99	<11	U	Less than MDL
AC08412	HRRIL1	12/01/99	12	P	Less than PQL
AC08414	HRRIL2	12/01/99	17	P	Less than PQL
AC08415	HRRIL4	12/01/99	15	P	Less than PQL
AC08417	TID-PRW2	12/01/99	19	P	Less than PQL
AC08418	Rt.29 Br.	12/01/99	33	P, J	Less than PQL, Internal standard area performance
AC08419	HRRIL2	12/01/99	17	P	Less than PQL
AC08421	BOATLAUNCH	12/01/99	20	P	Less than PQL
AC08691	B.F.Br	12/08/99	<11	U	Less than MDL
AC08693	HRM 194.2E	12/08/99	<11	U	Less than MDL
AC08694	Rt.197 Br.	12/08/99	19	P	Less than PQL
AC08695	HRM 194.2W	12/08/99	<11	U	Less than MDL
AC08696	HRRIL1	12/08/99	<11	U	Less than MDL
AC08697	HRRIL2	12/08/99	<11	U	Less than MDL
AC08700	TID-PRW2	12/08/99	17	P	Less than PQL
AC08701	Rt.29 Br.	12/08/99	44	J	Internal standard area performance
AC08702	HRRIL4	12/08/99	<11	U	Less than MDL
AC08703	HRRIL4	12/08/99	<11	U	Less than MDL
AC08704	BOATLAUNCH	12/08/99	17	P	Less than PQL
AC08904	B.F.Br	12/15/99	<11	U	Less than MDL
AC08905	Rt.197 Br.	12/15/99	<11	U	Less than MDL
AC08908	TID-PRW2	12/15/99	19	P	Less than PQL
AC08909	Rt.29 Br.	12/15/99	34	P	Less than PQL
AC08912	BOATLAUNCH	12/15/99	64	J	Internal standard area performance
AC09109	B.F.Br	12/22/99	<11	U	Less than MDL
AC09110	Rt.197 Br.	12/22/99	12	P	Less than PQL
AC09113	TID-PRW2	12/22/99	17	P	Less than PQL
AC09115	TID-PRW2	12/22/99	16	P	Less than PQL
AC09214	B.F.Br	12/29/99	<11	U	Less than MDL
AC09216	Rt.197 Br.	12/29/99	<11	U	Less than MDL
AC09217	TID-WEST	12/29/99	25	P	Less than PQL
AC09218	TID-PRW2	12/29/99	<11	U	Less than MDL
AC09220	TID-PRW2	12/29/99	<11	U	Less than MDL

(1) - MDL = method detection limit, PQL = practical quantitation limit.

322497

Table A-2. Summary of Data Qualifiers Assigned to Equipment Blank Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC00128	HRM 197.0 EQBL	01/20/99	<11	UJ	Less than MDL, Surrogate recovery
AC00203	HRM 194.2 EQBL	01/27/99	<11	U	Less than MDL
AC00348	HRM 188.5 EQBL	02/03/99	<11	U	Less than MDL
AC00478	HRM 194.2 EQBL	02/10/99	<11	U	Less than MDL
AC00546	RT. 29 BR. EQBL	02/17/99	<11	U	Less than MDL
AC00607	B.F. BR. EQBL	02/24/99	<11	U	Less than MDL
AC00701	RT. 197 BR. EQBL	03/03/99	<11	UJ	Less than MDL, Surrogate recovery
AC00794	B.F. BR. EQBL	03/10/99	<11	U	Less than MDL
AC00851	TID-WEST EQBL	03/18/99	<11	U	Less than MDL
AC01008	TID-PRW2 EQBL	03/25/99	<11	U	Less than MDL, sample reanalyzed due to unknown peaks coeluting in PCB region of chromatogram
AC01118	RT. 29 BR. EQBL	03/31/99	<11	UJ	Less than MDL, Surrogate recovery
AC01187	RT. 197 BR. EQBL	04/04/99	<11	UJ	Less than MDL, Surrogate recovery
AC01240	B.F. BR. EQBL	04/07/99	<11	UJ	Less than MDL, Surrogate recovery
AC01307	RT. 197 BR. EQBL	04/14/99	<11	U	Less than MDL
AC01513	RT. 29 BR. EQBL	04/21/99	<11	UJ	Less than MDL, Surrogate recovery
AC01725	B.F. BR. EQBL	04/28/99	<11	UJ	Less than MDL, Surrogate recovery
AC01837	RT. 197 BR. EQBL	05/05/99	<11	U	Less than MDL
AC02230	TID-PRW2 EQBL	05/12/99	<11	U	Less than MDL
AC02538	RT. 29 BR. EQBL	05/19/99	<11	UJ	Less than MDL, Surrogate recovery
AC02968	B.F. BR. EQBL	05/26/99	<11	U	Less than MDL
AC03174	RT. 197 BR. EQBL	06/02/99	<11	UJ	Less than MDL, Surrogate recovery
AC03352	TID-PRW2 EQBL	06/09/99	<11	UJ	Less than MDL, Surrogate recovery
AC03500	RT. 29 BR. EQBL	06/16/99	<11	UJ	Less than MDL, Surrogate recovery
AC03588	B.F. BR. EQBL	06/23/99	<11	UJ	Less than MDL, Surrogate recovery
AC03773	TID-WEST EQBL	06/30/99	<11	U	Less than MDL
AC03826	TID-PRW2 EQBL	07/07/99	<11	UJ	Less than MDL, Surrogate recovery
AC04075	RT. 29 BR. EQBL	07/14/99	<11	UJ	Less than MDL, Surrogate recovery
AC04331	B.F. BR. EQBL	07/21/99	<11	UJ	Less than MDL, Surrogate recovery
AC04601	RT. 29 BR. EQBL	07/28/99	<11	U	Less than MDL
AC04700	RT. 197 BR. EQBL	08/04/99	<11	U	Less than MDL
AC04913	TID-PRW2 EQBL	08/11/99	<11	UJ	Less than MDL, Surrogate recovery
AC05348	TID-WEST EQBL	08/18/99	<11	UJ	Less than MDL, Surrogate recovery
AC05553	TID-PRW2 EQBL	08/25/99	<11	U	Less than MDL
AC05846	RT. 29 BR. EQBL	09/01/99	<11	UJ	Less than MDL, Surrogate recovery
AC06013	TID-PRW2 EQBL	09/08/99	<11	U	Less than MDL
AC06306	RT. 29 BR. EQBL	09/15/99	<11	U	Less than MDL
AC06696	B.F. BR. EQBL	09/22/99	<11	U	Less than MDL
AC06841	RT. 197 BR. EQBL	09/29/99	<11	U	Less than MDL
AC07001	RT. 29 BR. EQBL	10/06/99	<11	U	Less than MDL
AC07214	RT. 197 BR. EQBL	10/13/99	<11	U	Less than MDL
AC07464	RT. 29 BR. EQBL	10/20/99	<11	U	Less than MDL
AC07693	TID-PRW2 EQBL	10/27/99	<11	U	Less than MDL

322498

Table A-2. Summary of Data Qualifiers Assigned to Equipment Blank Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC07845	RT. 197 BR. EQBL	11/03/99	<11	UJ	Less than MDL, Surrogate recovery
AC08001	TID-PRW2 EQBL	11/10/99	<11	U	Less than MDL
AC08146	RT. 197 BR. EQBL	11/17/99	<11	UJ	Less than MDL, Internal standard area performance
AC08272R	RT. 197 BR. EQBL	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08409	RT. 197 BR. EQBL	12/01/99	<11	UJ	Less than MDL, Surrogate recovery
AC08692	RT. 197 BR. EQBL	12/08/99	<11	U	Less than MDL
AC08903	B.F. BR. EQBL	12/15/99	<11	U	Less than MDL
AC09112	TID-PRW2 EQBL	12/22/99	<11	U	Less than MDL
AC09219	RT. 29 BR. EQBL	12/29/99	<11	U	Less than MDL

(1) - MDL = method detection limit, PQL = practical quantitation limit.

322499

Table A-3. Summary of Environmental Data Assigned "U" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC00123	B.F.Br	01/20/99	<11	U	Less than MDL
AC00201	Rt.197 Br.	01/27/99	<11	U	Less than MDL
AC00342	B.F.Br	02/03/99	<11	U	Less than MDL
AC00343	Rt.197 Br.	02/03/99	<11	U	Less than MDL
AC00472	B.F.Br	02/10/99	<11	U	Less than MDL
AC00473	Rt.197 Br.	02/10/99	<11	U	Less than MDL
AC00476	Rt.197 Br.	02/10/99	<11	U	Less than MDL
AC00540	B.F.Br	02/17/99	<11	U	Less than MDL
AC00541	Rt.197 Br.	02/17/99	<11	U	Less than MDL
AC00547	B.F.Br	02/17/99	<11	U	Less than MDL
AC00606	B.F.Br	02/24/99	<11	U	Less than MDL
AC00608	Rt.197 Br.	02/24/99	<11	U	Less than MDL
AC00609	TID-WEST	02/24/99	<11	U	Less than MDL
AC00613	Rt.197 Br.	02/24/99	<11	U	Less than MDL
AC00699	B.F.Br	03/03/99	<11	U	Less than MDL
AC00700	Rt.197 Br.	03/03/99	<11	U	Less than MDL
AC00790	Rt.197 Br.	03/10/99	<11	U	Less than MDL
AC00788	B.F.Br	03/10/99	<11	U	Less than MDL
AC00847	B.F.Br	03/18/99	<11	U	Less than MDL
AC00848	Rt.197 Br.	03/18/99	<11	U	Less than MDL
AC00852	TID-PRW2	03/18/99	<11	U	Less than MDL
AC00854	B.F.Br	03/18/99	<11	U	Less than MDL
AC01011	Rt.197 Br.	03/25/99	<11	U	Less than MDL
AC01004	B.F.Br	03/25/99	<11	U	Less than MDL, sample reanalyzed due to unknown peaks coeluting in PCB region of chromatogram
AC01005	Rt.197 Br.	03/25/99	<11	U	Less than MDL
AC01113	B.F.Br	03/31/99	<11	U	Less than MDL
AC01115	Rt.197 Br.	03/31/99	<11	U	Less than MDL
AC01183	B.F.Br	04/04/99	<11	U	Less than MDL
AC01191	B.F.Br	04/05/99	<11	U	Less than MDL
AC01195	B.F.Br	04/06/99	<11	U	Less than MDL
AC01239	B.F.Br	04/07/99	<11	U	Less than MDL
AC01305	B.F.Br	04/14/99	<11	U	Less than MDL
AC01306	Rt.197 Br.	04/14/99	<11	U	Less than MDL
AC01312	B.F.Br	04/14/99	<11	U	Less than MDL
AC01836	B.F.Br	05/05/99	<11	U	Less than MDL
AC01843	B.F.Br	05/05/99	<11	U	Less than MDL

322500

Table A-3. Summary of Environmental Data Assigned "U" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC02233	B.F.Br	05/12/99	<11	U	Less than MDL
AC02969	B.F.Br	05/26/99	<11	U	Less than MDL
AC02982	PLUNGEPOOL	05/26/99	<11	U	Less than MDL
AC03180	B.F.Br	06/02/99	<11	U	Less than MDL
AC03173	B.F.Br	06/02/99	<11	U	Less than MDL
AC03348	B.F.Br	06/09/99	<11	U	Less than MDL
AC03508	US-1	06/16/99	<11	U	Less than MDL
AC03507	US-2	06/16/99	<11	U	Less than MDL
AC03589	B.F.Br	06/23/99	<11	U	Less than MDL
AC03771	B.F.Br	06/30/99	<11	U	Less than MDL
AC03823	B.F.Br	07/07/99	<11	U	Less than MDL
AC04070	B.F.Br	07/14/99	<11	U	Less than MDL
AC04072	Rt.197 Br.	07/14/99	<11	U	Less than MDL
AC04332	B.F.Br	07/21/99	<11	U	Less than MDL
AC04333	Rt.197 Br.	07/21/99	<11	U	Less than MDL
AC04338	Rt.197 Br.	07/21/99	<11	U	Less than MDL
AC04596	B.F.Br	07/28/99	<11	U	Less than MDL
AC04699	B.F.Br	08/04/99	<11	U	Less than MDL
AC04701	Rt.197 Br.	08/04/99	<11	U	Less than MDL
AC04707	PLUNGEPOOL	08/04/99	<11	U	Less than MDL
AC04910	B.F.Br	08/11/99	<11	U	Less than MDL
AC04911	Rt.197 Br.	08/11/99	<11	U	Less than MDL
AC04921	PLUNGEPOOL	08/11/99	<11	U	Less than MDL
AC05346	B.F.Br	08/18/99	<11	U	Less than MDL
AC05347	Rt.197 Br.	08/18/99	<11	U	Less than MDL
AC05356	PLUNGEPOOL	08/18/99	<11	U	Less than MDL
AC05549	B.F.Br	08/25/99	<11	U	Less than MDL
AC05551	Rt.197 Br.	08/25/99	<11	U	Less than MDL
AC05560	PLUNGEPOOL	08/25/99	<11	U	Less than MDL
AC05841	B.F.Br	09/01/99	<11	U	Less than MDL
AC05842	Rt.197 Br.	09/01/99	<11	U	Less than MDL
AC05848	Rt.197 Br.	09/01/99	<11	U	Less than MDL
AC05852	PLUNGEPOOL	09/01/99	<11	U	Less than MDL
AC06011	B.F.Br	09/08/99	<11	U	Less than MDL
AC06012	Rt.197 Br.	09/08/99	<11	U	Less than MDL
AC06021	PLUNGEPOOL	09/08/99	<11	U	Less than MDL

322501

Table A-3. Summary of Environmental Data Assigned "U" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC06301	B.F.Br	09/15/99	<11	U	Less than MDL
AC06303	Rt.197 Br.	09/15/99	<11	U	Less than MDL
AC06310	BOATLAUNCH	09/15/99	<11	U	Less than MDL
AC06312	PLUNGEPOOL	09/15/99	<11	U	Less than MDL
AC06697	B.F.Br	09/22/99	<11	U	Less than MDL
AC06698	Rt.197 Br.	09/22/99	<11	U	Less than MDL
AC06703	Rt.197 Br.	09/22/99	<11	U	Less than MDL
AC06707	PLUNGEPOOL	09/22/99	<11	U	Less than MDL
AC06840	B.F.Br	09/29/99	<11	U	Less than MDL
AC06842	Rt.197 Br.	09/29/99	<11	U	Less than MDL
AC06847	B.F.Br	09/29/99	<11	U	Less than MDL
AC06851	PLUNGEPOOL	09/29/99	<11	U	Less than MDL
AC06996	B.F.Br	10/06/99	<11	U	Less than MDL
AC06997	Rt.197 Br.	10/06/99	<11	U	Less than MDL
AC07003	Rt.197 Br.	10/06/99	<11	U	Less than MDL
AC07007	PLUNGEPOOL	10/06/99	<11	U	Less than MDL
AC07212	B.F.Br	10/13/99	<11	U	Less than MDL
AC07213	Rt.197 Br.	10/13/99	<11	U	Less than MDL
AC07219	B.F.Br	10/13/99	<11	U	Less than MDL
AC07223	PLUNGEPOOL	10/13/99	<11	U	Less than MDL
AC07461	B.F.Br	10/20/99	<11	U	Less than MDL
AC07462	Rt.197 Br.	10/20/99	<11	U	Less than MDL
AC07700	PLUNGEPOOL	10/27/99	<11	U	Less than MDL
AC07691	Rt.197 Br.	10/27/99	<11	U	Less than MDL
AC07840	B.F.Br	11/03/99	<11	U	Less than MDL
AC07841	Rt.197 Br.	11/03/99	<11	U	Less than MDL
AC07847	B.F.Br	11/03/99	<11	U	Less than MDL
AC07998	B.F.Br	11/10/99	<11	U	Less than MDL
AC07999	Rt.197 Br.	11/10/99	<11	U	Less than MDL
AC08009	PLUNGEPOOL	11/10/99	<11	U	Less than MDL
AC08141	Rt.197 Br.	11/17/99	<11	U	Less than MDL
AC08142	HRM 194.2E	11/17/99	<11	U	Less than MDL
AC08143	HRM 194.2W	11/17/99	<11	U	Less than MDL
AC08149	B.F.Br	11/17/99	<11	U	Less than MDL
AC08150	HRRIL1	11/17/99	<11	U	Less than MDL
AC08151	HRRIL4	11/17/99	<11	U	Less than MDL

322502

Table A-3. Summary of Environmental Data Assigned "U" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC08155	PLUNGEPOOL	11/17/99	<11	U	Less than MDL
AC08271	B.F.Br	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08273	Rt.197 Br.	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08274	HRRIL1	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08275	HRRIL2	11/23/99	<11	U	Less than MDL, sample reanalyzed due to autosampler contamination with silicone residue from septa
AC08276	HRRIL4	11/23/99	<11	U	Less than MDL
AC08281	HRRIL1	11/23/99	<11	U	Less than MDL
AC08282	HRM 194.2E	11/23/99	<11	U	Less than MDL
AC08283	HRM 194.2W	11/23/99	<11	U	Less than MDL
AC08287	PLUNGEPOOL	11/23/99	<11	U	Less than MDL
AC08408	B.F.Br	12/01/99	<11	U	Less than MDL
AC08411	HRM 194.2W	12/01/99	<11	U	Less than MDL
AC08691	B.F.Br	12/08/99	<11	U	Less than MDL
AC08693	HRM 194.2E	12/08/99	<11	U	Less than MDL
AC08695	HRM 194.2W	12/08/99	<11	U	Less than MDL
AC08696	HRRIL1	12/08/99	<11	U	Less than MDL
AC08697	HRRIL2	12/08/99	<11	U	Less than MDL
AC08702	HRRIL4	12/08/99	<11	U	Less than MDL
AC08703	HRRIL4	12/08/99	<11	U	Less than MDL
AC08904	B.F.Br	12/15/99	<11	U	Less than MDL
AC08905	Rt.197 Br.	12/15/99	<11	U	Less than MDL
AC09109	B.F.Br	12/22/99	<11	U	Less than MDL
AC09214	B.F.Br	12/29/99	<11	U	Less than MDL
AC09216	Rt.197 Br.	12/29/99	<11	U	Less than MDL
AC09218	TID-PRW2	12/29/99	<11	U	Less than MDL
AC09220	TID-PRW2	12/29/99	<11	U	Less than MDL

(1) - MDL = method detection limit, PQL = practical quantitation limit.

322503

Table A-4. Summary of Environmental Data Assigned "P" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC00130	BOATLAUNCH	01/20/99	15	P	Less than PQL
AC00124	Rt.197 Br.	01/20/99	13	P	Less than PQL
AC00125	TID-WEST	01/20/99	18	P	Less than PQL
AC00126	TID-WEST	01/20/99	18	P	Less than PQL
AC00199	TID-WEST	01/27/99	22	P	Less than PQL
AC00200	Rt.29 Br.	01/27/99	23	P	Less than PQL
AC00198	Rt.197 Br.	01/27/99	12	P	Less than PQL
AC00344	TID-WEST	02/03/99	17	P	Less than PQL
AC00345	Rt.29 Br.	02/03/99	19	P	Less than PQL
AC00346	TID-WEST	02/03/99	16	P	Less than PQL
AC00474	TID-WEST	02/10/99	21	P	Less than PQL
AC00475	Rt.29 Br.	02/10/99	20	P	Less than PQL
AC00543	TID-WEST	02/17/99	17	P	Less than PQL
AC00544	TID-PRW2	02/17/99	18	P	Less than PQL
AC00545	Rt.29 Br.	02/17/99	19	P	Less than PQL
AC00611	TID-PRW2	02/24/99	13	P	Less than PQL
AC00612	Rt.29 Br.	02/24/99	30	P	Less than PQL
AC00702	TID-WEST	03/03/99	26	P	Less than PQL
AC00703	TID-PRW2	03/03/99	12	P	Less than PQL
AC00704	Rt.29 Br.	03/03/99	39	P	Less than PQL
AC00706	TID-WEST	03/03/99	23	P	Less than PQL
AC00710	PLUNGEPOOL	03/03/99	15	P	Less than PQL
AC00791	TID-WEST	03/10/99	21	P	Less than PQL
AC00792	Rt.29 Br.	03/10/99	28	P	Less than PQL
AC00793	Rt.29 Br.	03/10/99	23	P	Less than PQL
AC00846	PLUNGEPOOL	03/17/99	15	P	Less than PQL
AC00850	TID-WEST	03/18/99	24	P	Less than PQL
AC00853	Rt.29 Br.	03/18/99	18	P	Less than PQL
AC01006	TID-WEST	03/25/99	30	P	Less than PQL
AC01007	TID-PRW2	03/25/99	16	P	Less than PQL
AC01009	Rt.29 Br.	03/25/99	28	P	Less than PQL
AC01003	PLUNGEPOOL	03/25/99	14	P	Less than PQL
AC01116	TID-WEST	03/31/99	23	P	Less than PQL
AC01117	Rt.29 Br.	03/31/99	24	P	Less than PQL
AC01119	TID-WEST	03/31/99	22	P	Less than PQL
AC01112	PLUNGEPOOL	03/31/99	16	P	Less than PQL

322504

Table A-4. Summary of Environmental Data Assigned "P" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC01182	Rt.197 Br.	04/04/99	20	P	Less than PQL
AC01193	Rt.197 Br.	04/05/99	26	P	Less than PQL
AC01188	Rt.197 Br.	04/05/99	40	P	Less than PQL
AC01192	Rt.197 Br.	04/05/99	38	P	Less than PQL
AC01194	Rt.197 Br.	04/06/99	21	P	Less than PQL
AC01241	Rt.197 Br.	04/07/99	14	P	Less than PQL
AC01243	TID-PRW2	04/07/99	18	P	Less than PQL
AC01308	TID-WEST	04/14/99	31	P	Less than PQL
AC01310	TID-PRW2	04/14/99	17	P	Less than PQL
AC01311	Rt.29 Br.	04/14/99	27	P	Less than PQL
AC01314	BOATLAUNCH	04/14/99	15	P	Less than PQL
AC01518	PLUNGEPOOL	04/21/99	14	P	Less than PQL
AC01507	B.F.Br	04/21/99	11	P	Less than PQL
AC01508	Rt.197 Br.	04/21/99	17	P	Less than PQL
AC01512	Rt.29 Br.	04/21/99	38	P	Less than PQL
AC01514	Rt.197 Br.	04/21/99	20	P	Less than PQL
AC01724	B.F.Br	04/28/99	14	P	Less than PQL
AC01729	TID-PRW2	04/28/99	33	P	Less than PQL
AC01838	Rt.197 Br.	05/05/99	15	P	Less than PQL
AC01847	PLUNGEPOOL	05/05/99	19	P	Less than PQL
AC02226	B.F.Br	05/12/99	11	P	Less than PQL
AC02227	Rt.197 Br.	05/12/99	14	P	Less than PQL
AC02235	BOATLAUNCH	05/12/99	32	P	Less than PQL
AC02237	PLUNGEPOOL	05/12/99	12	P	Less than PQL
AC02534	B.F.Br	05/19/99	16	P	Less than PQL
AC02535	Rt.197 Br.	05/19/99	18	P	Less than PQL
AC02540	Rt.197 Br.	05/19/99	18	P	Less than PQL
AC02544	PLUNGEPOOL	05/19/99	30	P	Less than PQL
AC02971	Rt.197 Br.	05/26/99	15	P	Less than PQL
AC02980	BOATLAUNCH	05/26/99	23	P	Less than PQL
AC03175	Rt.197 Br.	06/02/99	16	P	Less than PQL
AC03182	BOATLAUNCH	06/02/99	36	P	Less than PQL
AC03184	PLUNGEPOOL	06/02/99	16	P	Less than PQL
AC03349	Rt.197 Br.	06/09/99	19	P	Less than PQL
AC03356	Rt.197 Br.	06/09/99	20	P	Less than PQL
AC03360	PLUNGEPOOL	06/09/99	16	P	Less than PQL

Table A-4. Summary of Environmental Data Assigned "P" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC03494	B.F.Br	06/16/99	13	P	Less than PQL
AC03496	Rt.197 Br.	06/16/99	26	P	Less than PQL
AC03506	PLUNGEPOOL	06/16/99	25	P	Less than PQL
AC03591	Rt.197 Br.	06/23/99	19	P	Less than PQL
AC03772	Rt.197 Br.	06/30/99	15	P	Less than PQL
AC03778	Rt.197 Br.	06/30/99	19	P	Less than PQL
AC03780	BOATLAUNCH	06/30/99	27	P	Less than PQL
AC03824	Rt.197 Br.	07/07/99	15	P	Less than PQL
AC03821	PLUNGEPOOL	07/07/99	20	P	Less than PQL
AC04079	BOATLAUNCH	07/14/99	19	P	Less than PQL
AC04081	PLUNGEPOOL	07/14/99	12	P	Less than PQL
AC04342	PLUNGEPOOL	07/21/99	15	P	Less than PQL
AC04607	PLUNGEPOOL	07/28/99	33	P	Less than PQL
AC04597	Rt.197 Br.	07/28/99	13	P	Less than PQL
AC04709	BOATLAUNCH	08/04/99	24	P	Less than PQL
AC05354	BOATLAUNCH	08/18/99	33	P	Less than PQL
AC05554	TID-PRW2	08/25/99	44	P	Less than PQL
AC05558	BOATLAUNCH	08/25/99	15	P	Less than PQL
AC05845	TID-PRW2	09/01/99	26	P	Less than PQL
AC05850	BOATLAUNCH	09/01/99	22	P	Less than PQL
AC06015	TID-PRW2	09/08/99	28	P	Less than PQL
AC06019	BOATLAUNCH	09/08/99	19	P	Less than PQL
AC06701	TID-PRW2	09/22/99	29	P	Less than PQL
AC06702	Rt.29 Br.	09/22/99	26	P	Less than PQL
AC06845	TID-PRW2	09/29/99	32	P	Less than PQL
AC06846	Rt.29 Br.	09/29/99	41	P	Less than PQL
AC06849	BOATLAUNCH	09/29/99	30	P	Less than PQL
AC07000	TID-PRW2	10/06/99	29	P	Less than PQL
AC07002	Rt.29 Br.	10/06/99	35	P	Less than PQL
AC07005	BOATLAUNCH	10/06/99	12	P	Less than PQL
AC07217	TID-PRW2	10/13/99	23	P	Less than PQL
AC07218	Rt.29 Br.	10/13/99	38	P	Less than PQL
AC07221	BOATLAUNCH	10/13/99	15	P	Less than PQL
AC07465	TID-PRW2	10/20/99	27	P	Less than PQL
AC07467	Rt.29 Br.	10/20/99	36	P	Less than PQL
AC07470	BOATLAUNCH	10/20/99	13	P	Less than PQL

322506

Table A-4. Summary of Environmental Data Assigned "P" Qualifier

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC07694	TID-PRW2	10/27/99	32	P	Less than PQL
AC07695	Rt.29 Br.	10/27/99	36	P	Less than PQL
AC07696	TID-PRW2	10/27/99	33	P	Less than PQL
AC07690	B.F.Br	10/27/99	12	P	Less than PQL
AC07844	TID-PRW2	11/03/99	42	P	Less than PQL
AC07846	Rt.29 Br.	11/03/99	40	P	Less than PQL
AC07849	BOATLAUNCH	11/03/99	22	P	Less than PQL
AC07851	PLUNGEPOOL	11/03/99	30	P	Less than PQL
AC08003	TID-PRW2	11/10/99	20	P	Less than PQL
AC08004	Rt.29 Br.	11/10/99	44	P	Less than PQL
AC08007	BOATLAUNCH	11/10/99	16	P	Less than PQL
AC08140	B.F.Br	11/17/99	13	P	Less than PQL
AC08145	TID-PRW2	11/17/99	23	P	Less than PQL
AC08153	BOATLAUNCH	11/17/99	23	P	Less than PQL
AC08279	TID-PRW2	11/23/99	24	P	Less than PQL
AC08285	BOATLAUNCH	11/23/99	42	P	Less than PQL
AC08410	HRM 194.2E	12/01/99	16	P	Less than PQL
AC08412	HRRIL1	12/01/99	12	P	Less than PQL
AC08414	HRRIL2	12/01/99	17	P	Less than PQL
AC08415	HRRIL4	12/01/99	15	P	Less than PQL
AC08417	TID-PRW2	12/01/99	19	P	Less than PQL
AC08419	HRRIL2	12/01/99	17	P	Less than PQL
AC08421	BOATLAUNCH	12/01/99	20	P	Less than PQL
AC08694	Rt.197 Br.	12/08/99	19	P	Less than PQL
AC08700	TID-PRW2	12/08/99	17	P	Less than PQL
AC08704	BOATLAUNCH	12/08/99	17	P	Less than PQL
AC08908	TID-PRW2	12/15/99	19	P	Less than PQL
AC08909	Rt.29 Br.	12/15/99	34	P	Less than PQL
AC09110	Rt.197 Br.	12/22/99	12	P	Less than PQL
AC09113	TID-PRW2	12/22/99	17	P	Less than PQL
AC09115	TID-PRW2	12/22/99	16	P	Less than PQL
AC09217	TID-WEST	12/29/99	25	P	Less than PQL

(1) - MDL = method detection limit, PQL = practical quantitation limit.

322507

Table A-5. Summary of Other Data Qualifiers Assigned to Environmental Samples

NEA ID	Sample ID	Date Collected	PCB Concentration (ng/L)	Data Qualifiers	Notes (1)
AC00004R	BOATLAUNCH	01/05/99	28	P, J	Less than PQL, exceeded extraction holding time. Sample reanalyzed due to lab contamination coeluting with peak 2.
AC00102R	BOATLAUNCH	01/13/99	11	P, J	Less than PQL, exceeded extraction holding time. Sample reanalyzed due to lab contamination coeluting with peak 2.
AC00197	B.F.Br	01/27/99	<11	UJ	Less than MDL, matrix spike recovery
AC01189	Rt.197 Br.	04/05/99	238	J	Matrix spike recovery
AC01245	Rt.29 Br.	04/07/99	60	P, J	Less than PQL, exceeded extraction holding time, Duplicate RPD >35%, sample reanalyzed due to poor comparison to blind duplicate
AC01246	Rt.29 Br. Dup.	04/07/99	285	R	Duplicate RPD >35%
AC01726	Rt.197 Br.	04/28/99	32	P, J	Less than PQL, Surrogate recovery
AC03354	Rt.29 Br.	06/09/99	189	J	Surrogate recovery
AC03502RE	TID-WEST	06/16/99	246	J	Exceeded extraction holding time, sample reanalyzed due to spillage during cleanup
AC03595	Rt.29 Br.	06/23/99	118	J	Surrogate recovery, sample reanalyzed due to loss of sample extract
AC03600	PLUNGEPOOL	06/23/99	22	P, J	Less than PQL, Surrogate recovery, sample reanalyzed due to double spiking of surrogate
AC04077	B.F.Br	07/14/99	<11	UJ	Less than MDL, Internal standard area performance
AC07468	Rt.197 Br.	10/20/99	<11	UJ	Less than MDL, Internal standard area performance
AC07472	PLUNGEPOOL	10/20/99	<11	UJ	Less than MDL, Internal standard area performance
AC08148	Rt.29 Br.	11/17/99	39	P, J	Less than PQL, Internal standard area performance
AC08418	Rt.29 Br.	12/01/99	33	P, J	Less than PQL, Internal standard area performance
AC08701	Rt.29 Br.	12/08/99	44	J	Internal standard area performance
AC08912	BOATLAUNCH	12/15/99	64	J	Internal standard area performance

(1) - MDL = method detection limit, PQL = practical quantitation limit.

FINAL

Hudson River Monitoring Program

1999 Summary Report
Appendix B
Field Logs

Prepared for:

General Electric Company
Albany, New York

Job Number:
GENhrm 131

January 2001

QEA, LLC
January 2001

GENERAL ELECTRIC COMPANY
1999 HUDSON RIVER WATER SAMPLING PROGRAM
including POST-CONSTRUCTION REMNANT DEPOSIT MONITORING

FIELD LOG FOR January 28 1999 (Sampling Date)
Date 1/27/99

Station	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
HRM 197.0 (County Rt. 27 Bridge)	1110	Type: Composite Kemmerer: 96B	1°C	0-7	MS		Bakers Falls: no flow over dam
HRM 194.2 (Rt. 197 Bridges Comp. - East and Main Channel)	1225	Type: Composite Kemmerer: 96A	2°C	0-6.5E 0-6 W	Dup		
HRM 188.6 (Thompson Island Dam)	1250	Type: Grab	4°C	Surface	—		
Equipment blank: HRM 194.2 - SG-BL	1150	Type: Grab Kemmerer: 96A					
TID-PRW2	—	Type: Composite Kemmerer: —	—	—	—		
SCH	1320	Type: Composite Kemmerer: 98	3C	0-12'	—		
Ft. Edward Staff Gage (518) 747-9900	1145						Level: 22.30 - 6700 cfs
Additional Notes:							

Sampled by: WAyling

Weather Data
Description: 30sF Overcast
Temperature: 30sF
Wind: Calm
Precipitation: none

322510

GENERAL ELECTRIC COMPANY
1999 HUDSON RIVER WATER SAMPLING PROGRAM
including POST-CONSTRUCTION REMNANT DEPOSIT MONITORING

FIELD LOG FOR February 3, 1999 (Sampling Date)

Station	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
HRM 197.0 (County Rt. 27 Bridge)	11:15	Type: Composite Kemmerer: 96B	4°C	0-7'	—	✓	Bakers Falls: no flow over dam. WAH
HRM 194.2 (Rt. 197 Bridges Comp. - East and Main Channel)	1240	Type: Composite Kemmerer: 96A	*	0-6.5' E 0-6.0' W	MS	✓	WAH
HRM 188.5 (Thompson Island Dam)	1310	Type: Grab	*	Surface	DUP	✓	WAH
Equipment blank: Hrm 188.5	0805	Type: Grab Kemmerer: —					WAH
TID-PRW2	—	Type: Composite Kemmerer:	—	—	—	—	no sample
SCH	1335	Type: Composite Kemmerer: 98	*	0-12'	—	✓	MPH
Ft. Edward Staff Gage (518) 747-9900	1210						Level: 12.10 ft 6200 cfs
Additional Notes: * no reading thermometer problems							

Sampled by: W. Ayling / M. Hennessey

Weather Data
Description: Sunny
Temperature: 40s F - 50s F
Wind: Calm
Precipitation: None

322511

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	2/10/99	10 : 20	Vertically Stratified Composite	7	1.5	Flow over dam, East section, 20' wide.
B.F.Br MS	2/10/99	10 : 20	Vertically Stratified Composite	7	1.5	
BOATLAUNCH	2/10/99	10 : 00	Vertically Stratified Composite		0	
Rt.197 Br.	2/10/99	11 : 45	Vertically Stratified Composite	6.5	1.5	
Rt.197 Br. EQBL	2/10/99	7 : 25	Rinse			
TID-WEST	2/10/99	13 : 15	Surface Grab	3	1.5	
Rt.29 Br.	2/10/99	13 : 45	Vertically Stratified Composite	15	1.5	
Blind Duplicate	2/10/99	:				Blind dup taken at Rt. 197.0 Br.

Additional Notes:

Weather Data

Temperature Partly Sunny 44°F
Wind 44°F Light N
Precipitation None

Fort Edward Staff Gage

Time 11:17
Gage Height (ft) 22.54
Estimated Flow (cfs) 7,700

Sampled by: Hennessey
Date: 2/10/99

322512

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br Ac00540	2/17/99	10 : 40	Vertically Stratified Composite	7	1	slight trickle of Water flowing over dam.
Rt.197 Br. Ac00541	2/17/99	11 : 30	Vertically Stratified Composite	7	1	Stage = 22.37, flow = 6963 cfs
Rt.197 Br. Ac00542 MS	2/17/99	11 : 30	Vertically Stratified Composite	3		
TID-WEST Ac00543	2/17/99	12 : 50	Surface Grab	3	1	
TID-PRW2 Ac00544	2/17/99	12 : 35	Vertically Stratified Composite	11	1	
Rt.29 Br. Ac00545	2/17/99	13 : 50	Vertically Stratified Composite	15	1	
Rt.29 Br. Ac00546 EQBL	2/17/99	13 : 45	Rinse			
Blind Duplicate Ac00547	2/17/99	:				Blind Duplicate Taken at B.F.Br

Additional Notes: Slight trickle of water over the dam.

Weather Data

Temperature 30°F

Wind —

Precipitation —

Fort Edward Staff Gage

Time 11:25

Gage Height (ft) 22.37

Estimated Flow (cfs) 6963 cfs

Sampled by: Matt C. Huntley

Date: 02/17/99

322513

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	2/24/99	10 : 35	Vertically Stratified Composite	7	1	slight trickle of water over the dam.
B.F.Br EQBL	2/24/99	13 : 50	Rinse		1	distance from br. Railing to river invert = 38Ft.
Rt.197 Br.	2/24/99	11 : 20	Vertically Stratified Composite	8.5	1	Blind dup. Flow = 6449 cfs
TID-WEST	2/24/99	12 : 55	Surface Grab	3	1	
TID-WEST MS	2/24/99	12 : 55	Surface Grab	3	1	
TID-PRW2	2/24/99	12 : 35	Vertically Stratified Composite	11	1	
Rt.29 Br.	2/24/99	13 : 45	Vertically Stratified Composite	9	1	
Blind Duplicate	2/24/99	:				Sample taken at Rt. 197 Br.

Additional Notes:

Weather Data

Temperature ≈20°F
Wind Calm
Precipitation None

Fort Edward Staff Gage

Time 11:11
Gage Height (ft) 22.24
Estimated Flow (cfs) 6449

Sampled by: Martin P. Hennessey
Date: 02/24/99

322514

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.29 Br.	3/10/99	13 : 00	Vertically Stratified Composite	17	1	
Blind Duplicate	3/10/99	:				Blind Dupe Taken at Rt. 29 Br.
B.F.Br EQBL	3/10/99	10 : 05	Rinse Blank			
B.F.Br	3/10/99	10 : 15	Vertically Stratified Composite	8	1	
B.F.Br MS	3/10/99	10 : 15	Vertically Stratified Composite	8	1	
Rt.197 Br.	3/10/99	11 : 20	Vertically Stratified Composite	7	1	Gage at 22.94, flow = 5322(cfs)
TID-WEST	3/10/99	12 : 15	Surface Grab	3	1	

Additional Notes:

Weather Data

Temperature 17°F
Wind Slight N
Precipitation None

Fort Edward Staff Gage

Time 10:54
Gage Height (ft) 22.94
Estimated Flow (cfs) 5322

Sampled by: Martin Hennessey
Date: 03/10/99

322515

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	3/3/99	10 : 45	Vertically Stratified Composite	7	1	No flow over dam.
Rt.197 Br.	3/3/99	11 : 30	Vertically Stratified Composite	8	1	
Rt.197 Br. EQBL	3/3/99	11 : 10	Rinse			Ft. Edward gage: 21.97. Flow approx.:5435
TID-WEST	3/3/99	12 : 00	Surface Grab	3	1	Blind dup taken here.
TID-PRW2	3/3/99	13 : 35	Vertically Stratified Composite	11	1	
Rt.29 Br.	3/3/99	14 : 10	Vertically Stratified Composite	17	2	
Rt.29 Br. MS	3/3/99	14 : 10	Vertically Stratified Composite	17	2	
Blind Duplicate	3/3/99	:				Sample taken at TID-WEST
BOATLAUNCH	3/3/99	8 : 59	Surface Grab	5	1	
PLUNGEPOOL	3/3/99	9 : 35	Surface Grab	35	0	
HR-1	3/3/99	10 : 00	Surface Grab		0	

Additional Notes:

Weather Data

Temperature 20-30°F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 1110
Gage Height (ft) 21.97
Estimated Flow (cfs) 5,435

Sampled by: Martin P. Hennessey
Date: 03/03/99

322516

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
HR-2	3/3/99	10 : 25	Surface Grab		0	
HR-5	3/3/99	9 : 42	Surface Grab		0	
HR-6	3/3/99	10 : 14	Surface Grab		0	
HR-7	3/3/99	10 : 50	Surface Grab		0	

Additional Notes:

Weather Data

Temperature 20-30 °F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:10
Gage Height (ft) 21.97
Estimated Flow (cfs) 5,435

Sampled by: Martin P. Hennessey
Date: 03/03/99

322517

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
TID-PRW2	3/18/99	11 : 15	Vertically Stratified Composite	11	2	
Rt.29 Br.	3/18/99	13 : 30	Vertically Stratified Composite	15	3	
Blind Duplicate	3/18/99	:				blind dupe taken at B.F.Bridge.
B.F.Br	3/18/99	11 : 50	Vertically Stratified Composite	8	3	Kemmerer seals changed from silicon to teflon!
Rt.197 Br.	3/18/99	12 : 30	Vertically Stratified Composite	7	3	22.05 gage
Rt.197 Br. MS	3/18/99	12 : 30	Vertically Stratified Composite	7	3	
TID-WEST	3/18/99	10 : 10	Surface Grab	3	2	Samples appear cloudy./turbid
TID-WEST EQBL	3/18/99	10 : 10	Rinse Blank			

Additional Notes: Slight flow over dam, eastern section.

Weather Data

Temperature ≈ 30 °F
Wind Strong/West
Precipitation Late day

Fort Edward Staff Gage

Time 12:30
Gage Height (ft) 22.05
Estimated Flow (cfs) 5731

Sampled by: Martin P. Hennessey
Date: 3/18/99

322518

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.29 Br.	3/25/99	12 : 10	Vertically Stratified Composite	15	3	
Rt.29 Br. MS	3/25/99	12 : 10	Vertically Stratified Composite		3	
Blind Duplicate	3/25/99	:				Taken at Rt. 197 Br.
B.F.Br	3/25/99	10 : 20	Vertically Stratified Composite	7	2	Slight flow over the eastern section of Dam.
Rt.197 Br.	3/25/99	11 : 10	Vertically Stratified Composite	7	2	Blind Dupe Taken Here.
TID-WEST	3/25/99	8 : 30	Surface Grab	3		Wind making it difficult to not bump wall.
TID-PRW2	3/25/99	8 : 15	Vertically Stratified Composite	11		
TID-PRW2 EQBL	3/25/99	7 : 50	Rinse Blank			

Additional Notes:

Weather Data

Temperature 40°F
Wind 0-5 MPH North
Precipitation None

Fort Edward Staff Gage

Time
Gage Height (ft) 22.27
Estimated Flow (cfs) 6566

Sampled by: Martin P. Hennessey
Date: 3/25/98

322519

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.29 Br.	3/31/99	12 : 30	Vertically Stratified Composite	17	6	
Rt.29 Br. EQBL	3/31/99	11 : 05	Rinse Blank			
Blind Duplicate	3/31/99	:				Blind dup taken at TID-WEST.
B.F.Br	3/31/99	10 : 10	Vertically Stratified Composite	8	5	Slight flow over eastern portion of dam.
Rt.197 Br. MS	3/31/99	10 : 45	Vertically Stratified Composite	6	5	
Rt.197 Br.	3/31/99	10 : 45	Vertically Stratified Composite	6	5	
TID-WEST	3/31/99	11 : 20	Surface Grab	3	5	

Additional Notes:

Weather Data

Temperature 70°f
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:05
Gage Height (ft) 22.55
Estimated Flow (cfs) 7707

Sampled by: Martin P. Hennessey
Date: 03/31/99

322520

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.197 Br.	4/4/99	14 : 30	Vertically Stratified Composite	7	4	flow= 14063 (14060)
B.F.Br	4/4/99	17 : 00	Vertically Stratified Composite	8	4	Flow= 15066. No TSS sample, lost due to wind. (15070)
Rt.197 Br.	4/4/99	17 : 20	Vertically Stratified Composite	7	4	Flow= 15066 (15070)
Rt.197 Br.	4/5/99	16 : 30	Vertically Stratified Composite	7	6	Flow= 17473
Blind Duplicate	4/5/99	16 : 30	Vertically Stratified Composite	7	6	Flow= 17473, Dup Taken at Rt. 197 Br. (17470)
Rt.197 Br.	4/6/99	9 : 10	Vertically Stratified Composite	7	3	Flow= 15621 (15620)
B.F.Br	4/6/99	8 : 30	Vertically Stratified Composite	7	3	Flow= 15621 (15620)
Rt.197 Br.	4/4/99	18 : 05	Vertically Stratified Composite	7	4	Flow= 17089 (17090)
Rt.197 Br.	4/4/99	19 : 00	Vertically Stratified Composite	4	7	Flow= 16042 (16040)
Rt.197 Br. EQBL	4/4/99	22 : 00	Rinse Blank			
Rt.197 Br.	4/5/99	1 : 00	Vertically Stratified Composite	7	3	Flow= 15761 (15760)

Additional Notes:

Weather Data

Temperature 50-60 °F
Wind 15-20 MPH North
Precipitation None

Fort Edward Staff Gage

Time _____
Gage Height (ft) _____
Estimated Flow (cfs) _____

Sampled by: Martin P. Hennessey
Date: 4/6/99

322521

QEA, a/k/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.197 Br.	4/5/99	7 : 10	Vertically Stratified Composite	7	2	Flow= 17960
Rt.197 Br. MS	4/5/99	7 : 10	Vertically Stratified Composite	7	2	Flow= 17960
B.F.Br	4/5/99	8 : 15	Vertically Stratified Composite	7	2	Flow= 18009 (18,010)

Additional Notes:

Weather Data

Temperature _____

Wind _____

Precipitation _____

Fort Edward Staff Gage

Time _____

Gage Height (ft) _____

Estimated Flow (cfs) _____

Sampled by: _____

Date: _____

322522

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.29 Br.	4/7/99	12 : 30	Vertically Stratified Composite	17	6	Suspended sand particles in samples.
Blind Duplicate	4/7/99	:				Samples Taken at Rt. 29 Br.
BOATLAUNCH	4/5/99	16 : 20	Surface Grab	3	3.3	
B.F.Br	4/7/99	10 : 20	Vertically Stratified Composite	8	5	Significant flow over dam.
B.F.Br EQBL	4/7/99	10 : 15	Rinse Blank			
Rt.197 Br.	4/7/99	12 : 00	Vertically Stratified Composite	6	5	Suspended sand particles in samples.
TID-WEST	4/7/99	11 : 20	Surface Grab	3	5	Suspended sand particles in samples.
TID-PRW2	4/7/99	11 : 00	Vertically Stratified Composite	11	5	Suspended sand particles in samples.
Rt.197 Br. MS	4/7/99	12 : 00	Vertically Stratified Composite	17	6	Suspended sand particles in sample

Additional Notes:

Weather Data

Temperature _____

Wind 0-5 mph North

Precipitation NONE

Fort Edward Staff Gage

Time 12:00

Gage Height (ft) 24.00

Estimated Flow (cfs) 14700

Sampled by: Martin P. Hennessey

Date: 4/7/99

3225523

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	4/14/99	10 : 00	Vertically Stratified Composite	8	6	flow over entire portion of dam, slight.
Rt.197 Br.	4/14/99	11 : 00	Vertically Stratified Composite	6	6	flow= 9300
Rt.197 Br. EQBL	4/14/99	10 : 55	Rinse Blank			
TID-WEST	4/14/99	11 : 45	Surface Grab	3	7	
TID-WEST MS	4/14/99	11 : 45	Surface Grab	3	7	
TID-PRW2	4/14/99	11 : 30	Vertically Stratified Composite	11	7	
Rt.29 Br.	4/14/99	12 : 20	Vertically Stratified Composite	17	7	
Blind Duplicate	4/14/99	:				Blind dup taken at B.F.Br

Additional Notes:

Weather Data

Temperature 40-50°f
Wind 5-10mph North
Precipitation None

Fort Edward Staff Gage

Time 11:05
Gage Height (ft) 22.91
Estimated Flow (cfs) 9,305

Sampled by: Martin P. Hennessey
Date: 4/14/99

322524

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	4/21/99	10 : 30	Vertically Stratified Composite	7	8	Slight flow over Eastern portion of Dam.
Rt.197 Br.	4/21/99	11 : 05	Vertically Stratified Composite	6	9	
TID-WEST	4/21/99	11 : 40	Surface Grab		9	
TID-PRW2	4/21/99	12 : 15	Vertically Stratified Composite	11	9	
TID-PRW2 MS	4/21/99	12 : 15	Vertically Stratified Composite	11	9	
Rt.29 Br.	4/21/99	12 : 50	Vertically Stratified Composite	15	9	
Rt.29 Br. EQBL	4/21/99	11 : 35	Rinse Blank			
Blind Duplicate	4/21/99	:				taken at 197 Br.

Additional Notes:

Weather Data

Temperature ≈ 50°F
Wind Slight North
Precipitation None

Fort Edward Staff Gage

Time 11:16
Gage Height (ft) 22.99
Estimated Flow (cfs) 7455

Sampled by: Martin P Hennessey
Date: 4/21/99

322525

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	4/28/99	10 : 10	Vertically Stratified Composite	7	10	No flow over Dam. No aqu. Veg. Seen on shoreline.
B.F.Br EQBL	4/28/99	10 : 10	Rinse Blank			
Rt.197 Br.	4/28/99	10 : 45	Vertically Stratified Composite	6	11	no veg., NIMO trucks on East channel Bridge.
Rt.197 Br. MS	4/28/99	10 : 45	Vertically Stratified Composite	6	11	
TID-WEST	4/28/99	11 : 20	Surface Grab	3	10	
TID-PRW2	4/28/99	11 : 45	Vertically Stratified Composite		10	Very low flow, no aqu. Vegatation.
Rt.29 Br.	4/28/99	12 : 30	Vertically Stratified Composite	17	11	
Blind Duplicate	4/28/99	:				blind dupe taken at TID-WEST!

Additional Notes:

Weather Data

Temperature ≈ 60-70°F
Wind Slight North
Precipitation None

Fort Edward Staff Gage

Time 10:50
Gage Height (ft) 21.61
Estimated Flow (cfs) 4,161

Sampled by: Martin & Hennessey
Date: 04/28/99

322526

QEA a/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	5/5/99	10 : 40	Vertically Stratified Composite	8	15	No Flow over dam. Rain.
Rt.197 Br. EQBL	5/5/99	11 : 10	Rinse Blank			
Rt.197 Br.	5/5/99	11 : 30	Vertically Stratified Composite	7	15	
TID-WEST	5/5/99	11 : 45	Surface Grab	3	15	
TID-WEST MS	5/5/99	11 : 45	Surface Grab	3	15	
TID-PRW2	5/5/99	12 : 15	Vertically Stratified Composite	11	15	
Rt.29 Br.	5/5/99	12 : 45	Vertically Stratified Composite	15	15	
Blind Duplicate	5/5/99	:				Blind dup taken at B.F.Br

Additional Notes:

Weather Data

Temperature ≈ 80°F
Wind Slight North
Precipitation Scattered Showers

Fort Edward Staff Gage

Time 10:50
Gage Height (ft) 21.76
Estimated Flow (cfs) 4670

Sampled by: Martin Hennessey
Date: 05/05/99

322527

QEA da/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	5/12/99	10 : 20	Vertically Stratified Composite	7	16	no flow over dam
Rt.197 Br.	5/12/99	11 : 25	Vertically Stratified Composite	6.5	16	fort edward flow 3100 cfs - 11:40
TID-WEST	5/12/99	12 : 00	Surface Grab	3	16	turbid water observed within 10ft of west shore
TID-PRW2	5/29/99	12 : 20	Vertically Stratified Composite	11	16	
TID-PRW2 EQBL	5/12/99	12 : 05	Rinse Blank			
Rt.29 Br.	5/12/99	13 : 30	Vertically Stratified Composite	17	17	turbid water along west shore
Rt.29 Br. MS	5/12/99	13 : 30	Vertically Stratified Composite	17	17	
Blind Duplicate	5/12/99	:				Sample taken at B.F. Br.

Additional Notes:

Weather Data

Temperature: 70's
Wind: None
Precipitation: None

Fort Edward Staff Gage

Time: 11:41
Gage Height (ft): 21.28
Estimated Flow (cfs): 3,100

Sampled by: Martin P Hennessey
Date: 05/12/99

322528

QEA, a/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	5/19/99	9 : 50	Vertically Stratified Composite		18	no flow over dam.
B.F.Br MS	5/19/99	9 : 50	Vertically Stratified Composite		18	no flow over dam.
Rt.197 Br.	5/19/99	10 : 25	Vertically Stratified Composite		18	Blind dup taken here
TID-WEST	5/19/99	11 : 00	Surface Grab		18	
TID-PRW2	5/19/99	11 : 30	Vertically Stratified Composite		18	
Rt.29 Br. EQBL	5/19/99	12 : 30	Rinse Blank			
Rt.29 Br.	5/19/99	12 : 35	Vertically Stratified Composite		18	
Blind Duplicate	5/19/99	:				taken at Rt. 197 Br.

Additional Notes:

Weather Data

Temperature 70°
Wind Calm
Precipitation Rain

Fort Edward Staff Gage

Time 10:50
Gage Height (ft) 21.28
Estimated Flow (cfs) 3150

Sampled by: Hennessey
Date: 5/19/99

322529

QEA
Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

Sample Location		Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	EQBL	5/26/99	10 : 30	Rinse Blank			
B.F.Br		5/26/99	10 : 40	Vertically Stratified Composite	6	15	
Rt.197 Br.	MS	5/26/99	11 : 05	Vertically Stratified Composite	6	15	
Rt.197 Br.		5/26/99	11 : 05	Vertically Stratified Composite	6	15	
TID-WEST		5/26/99	12 : 35	Surface Grab	3	15	Blind Dup taken here.
TID-PRW2		5/26/99	12 : 05	Vertically Stratified Composite	11	15	
Rt.29 Br.		5/26/99	12 : 50	Vertically Stratified Composite	15	15	
Blind Duplicate		5/26/99	:			15	Sample taken at TID-WEST.

Additional Notes:

Weather Data

Temperature: 70's
Wind: Slight West
Precipitation: Scattered Showers

Fort Edward Staff Gage

Time: 11:40
Gage Height (ft): 21.65
Estimated Flow (cfs): 4,294

Sampled by: Martin P. Hennessey
Date: 05/26/99

322530

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	6/2/99	10 : 15	Vertically Stratified Composite	7	22	no flow over the Dam.
Rt.197 Br. EQBL	6/2/99	10 : 50	Rinse Blank			
Rt.197 Br.	6/2/99	11 : 15	Vertically Stratified Composite	6	23	
TID-WEST MS	6/2/99	12 : 15	Surface Grab	3	23	
TID-WEST	6/2/99	12 : 15	Surface Grab	3	23	
TID-PRW2	6/2/99	11 : 50	Vertically Stratified Composite	9	23	
Rt.29 Br.	6/2/99	13 : 00	Vertically Stratified Composite	15	23	
Blind Duplicate	6/2/99	:				Taken at B.F Br.

Additional Notes:

Weather Data

Temperature 87°F
Wind None
Precipitation Scattered Showers

Fort Edward Staff Gage

Time 11:20
Gage Height (ft) 20.95
Estimated Flow (cfs) 2,273

Sampled by: Martin P Hennessey
Date: 06/02/99

322531

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	6/9/99	10 : 00	Vertically Stratified Composite	7	24	flow over all portions of the dam.
Rt.197 Br.	6/9/99	11 : 45	Vertically Stratified Composite	6	24	Blind dup taken here.
TID-WEST	6/9/99	11 : 15	Surface Grab		24	floating mats of algea at all stations.
Blind Duplicate	6/9/99	:				sample taken at Rt. 197 Br.
TID-PRW2	6/9/99	12 : 15	Vertically Stratified Composite	11		
TID-PRW2 EQBL	6/9/99	11 : 20	Rinse Blank			
Rt.29 Br. MS	6/9/99	12 : 50	Vertically Stratified Composite	17	24	
Rt.29 Br.	6/9/99	12 : 50	Vertically Stratified Composite	17	24	
TID-WESTB	6/9/99	11 : 20	Surface Grab		24	

Additional Notes:

Weather Data

Temperature 80°F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 10:50
Gage Height (ft) 21.22
Estimated Flow (cfs) 2977

Sampled by: Martin P. Hennessey
Date: 06/09/99

322532

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	6/16/99	10 : 10	Vertically Stratified Composite	7	22	slight flow over the dam(eastern portion)
B.F.Br MS	6/16/99	10 : 10	Vertically Stratified Composite	7	22	Dead fish under bridge, floating vegatation.
Rt.197 Br.	6/16/99	11 : 00	Vertically Stratified Composite	6	22	
Blind Duplicate	6/16/99	:				
TID-WEST	6/16/99	12 : 00	Surface Grab	~~24~~ MOH 5	24	Blind Dup Taken here.
TID-WEST_1	6/16/99	12 : 15	Surface Grab		24	
TID-PRW2	6/16/99	:	Vertically Stratified Composite	11		
Rt.29 Br. EQBL	6/16/99	11 : 20	Rinse Blank			
Rt.29 Br.	6/16/99	11 : 30	Vertically Stratified Composite	17		floating veg.

Additional Notes:

Weather Data

Temperature 80's
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:40
Gage Height (ft) 21.11
Estimated Flow (cfs) 2,680

Sampled by: Martin P Hennessey
Date: 6/16/99

322533

QEA da/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br EQBL	6/23/99	9 : 50	Rinse Blank	7		
B.F.Br	6/23/99	10 : 00	Vertically Stratified Composite	7	24	
Rt.197 Br. MS	6/23/99	10 : 30	Vertically Stratified Composite	6	24	
Blind Duplicate	6/23/99	:	Vertically Stratified Composite			Taken at Rt.29 Br.
Rt.29 Br.	6/23/99	11 : 45	Vertically Stratified Composite	17		
Rt.197 Br.	6/23/99	10 : 30	Vertically Stratified Composite	6	24	
TID-WEST	6/23/99	11 : 00	Surface Grab	3	24	
TID-WEST_1	6/23/99	11 : 05	Surface Grab		23	
TID-PRW2	6/23/99	12 : 15	Vertically Stratified Composite	11	24	

Additional Notes:

Weather Data

Temperature 80's

Wind None

Precipitation None

Fort Edward Staff Gage

Time ~~21.0~~ mph 10:45

Gage Height (ft) 21.06

Estimated Flow (cfs) 2,550

Sampled by: Martin P. Hennessey

Date: 6/23/99

322534

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	6/30/99	10 : 15	Vertically Stratified Composite	6	23	
Rt.197 Br.	6/30/99	11 : 00	Vertically Stratified Composite	6	23	Blind Dupe Taken Here!
TID-WEST EQBL	6/30/99	12 : 40	Rinse Blank		22	
TID-WEST	6/30/99	12 : 45	Surface Grab	3	22	
TID-PRW2	6/30/99	12 : 30	Vertically Stratified Composite	11	22	
Rt.29 Br. MS	6/30/99	11 : 45	Vertically Stratified Composite	15	22	
Rt.29 Br.	6/30/99	11 : 45	Vertically Stratified Composite	15	22	
Blind Duplicate	6/30/99	:				Rt.197 Br.

Additional Notes:

Weather Data

Temperature 90°S
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:10
Gage Height (ft) 21.23
Estimated Flow (cfs) ~~3,010~~ 3,010 mgd

Sampled by: Martin P. Hennessey
Date: 6/30/99

322535

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br MS	7/7/99	02 : 50	Vertically Stratified Composite	7	26	Slight Flow
B.F.Br	7/7/99	10 : 50	Vertically Stratified Composite	7	26	
Rt.197 Br.	7/7/99	11 : 50	Vertically Stratified Composite	6	26	
TID-WEST	7/7/99	12 : 15	Surface Grab	3	27	
TID-PRW2 EQBL	7/7/99	12 : 25	Rinse Blank			
TID-PRW2	7/7/99	12 : 50	Vertically Stratified Composite	10	27	
Rt.29 Br.	7/7/99	13 : 15	Vertically Stratified Composite	17	27	
Blind Duplicate	7/7/99	:				Sample Taken at TID-WEST

Additional Notes:

Weather Data

Temperature 80's
Wind None
Precipitation None

Fort Edward Staff Gage

Time 10:40
Gage Height (ft) 20.96
Estimated Flow (cfs) 5,400

Sampled by: Matt S. Hummel
Date: 7/8/99

322536

QEA Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	7/14/99	10 : 15	Vertically Stratified Composite	7	24	Blind Dup taken here. ~~slight flow(east)~~ (mph)
Rt.197 Br. MS	7/14/99	11 : 15	Vertically Stratified Composite	6	24	
Rt.197 Br.	7/14/99	11 : 15	Vertically Stratified Composite	6	25	
TID-WEST	7/14/99	11 : 45	Surface Grab	3	25	
TID-PRW2	7/14/99	12 : 05	Vertically Stratified Composite	11	25	
Rt.29 Br. EQBL	7/14/99	12 : 20	Rinse Blank			
Rt.29 Br.	7/14/99	12 : 30	Vertically Stratified Composite	17	25	
Blind Duplicate	7/14/99	:				sample taken at B.F.Br.

Additional Notes:

Weather Data

Temperature 80°
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:21
Gage Height (ft) 20.78
Estimated Flow (cfs) 1,872

Sampled by: Matt S. Hummy
Date: 7/15/99

322537

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br EQBL	7/21/99	9 : 45	Rinse Blank			
B.F.Br	7/21/99	9 : 50	Vertically Stratified Composite	6	25	no flow over dam. Gas observed near shore
Rt.197 Br.	7/21/99	11 : 00	Vertically Stratified Composite	5	25	Blind Dup taken here.
TID-WEST	7/21/99	11 : 30	Surface Grab	3	26	
TID-WEST MS	7/21/99	11 : 30	Surface Grab	3	26	
TID-PRW2	7/21/99	11 : 45	Vertically Stratified Composite	10	26	
Rt.29 Br.	7/21/99	12 : 40	Vertically Stratified Composite	17	26	
Blind Duplicate	7/21/99	:				

Additional Notes:

Weather Data

Temperature 80°F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:00
Gage Height (ft) 20.69
Estimated Flow (cfs) 1,680

Sampled by: Martin P. Hennessey
Date: 7/28/99

322538

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	7/28/99	10 : 30	Vertically Stratified Composite	6	26	no flow over the dam.
Rt.197 Br.	7/28/99	11 : 15	Vertically Stratified Composite	6	26	
TID-WEST MS	7/28/99	11 : 50	Surface Grab	3	26	
TID-PRW2	7/28/99	11 : 40	Vertically Stratified Composite	10	26	
TID-WEST	7/28/99	11 : 50	Surface Grab	3	26	
Rt.29 Br. EQBL	7/28/99	12 : 40	Rinse Blank			
Rt.29 Br.	7/28/99	12 : 45	Vertically Stratified Composite	15	26	
Blind Duplicate	7/28/99	:				sample taken at TID-WEST.

Additional Notes:

Weather Data

Temperature 80 °F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:15
Gage Height (ft) 20.94
Estimated Flow (cfs) 2250

Sampled by: Martin P. Hennessey
Date: 7/28/99

322539

QEA, a/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br MS	8/4/99	10 : 00	Vertically Stratified Composite	6	24	No flow over dam.
B.F.Br	8/4/99	10 : 00	Vertically Stratified Composite	6	24	
Rt.197 Br. EQBL	8/4/99	10 : 45	Rinse Blank			
Rt.197 Br.	8/4/99	10 : 50	Vertically Stratified Composite	6	24	
TID-WEST	8/4/99	11 : 25	Surface Grab	3	26	20.42
TID-PRW2	8/4/99	11 : 40	Vertically Stratified Composite	9	26	
Rt.29 Br.	8/4/99	12 : 20	Vertically Stratified Composite	15	26	
Blind Duplicate	8/4/99	:				sample taken at Rt. 29 Br.

Additional Notes:

Weather Data

Temperature: Cool 70's
Wind: Slight North
Precipitation: None

Fort Edward Staff Gage

Time: 11:00
Gage Height (ft): 20.35
Estimated Flow (cfs): 1,050

Sampled by: MIKE WERTH
Date: 8/4/99

322540

Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	8/11/99	10 : 15	Vertically Stratified Composite	6	23	No flow over dam, flash boards up!
Rt.197 Br.	8/11/99	10 : 50	Vertically Stratified Composite	6	23	
TID-WEST	8/11/99	11 : 20	Surface Grab	3	23	
TID-PRW2 EQBL	8/11/99	11 : 30	Rinse Blank			
TID-PRW2	8/11/99	11 : 45	Vertically Stratified Composite	9	23	grass in kemmerer,compostie round not included.
Rt.29 Br.	8/11/99	12 : 20	Vertically Stratified Composite	15		
Rt.29 Br. MS	8/11/99	12 : 20	Vertically Stratified Composite	15		
Blind Duplicate	8/11/99	:				sample taken at TID-PRW2.

Additional Notes:

Weather Data

Temperature 75°
Wind None
Precipitation Slight

Fort Edward Staff Gage

Time 12:30
Gage Height (ft) 20.80
Estimated Flow (cfs) 1,920

Sampled by: MIKE WERTH
Date: 8/11/99

322541

QEA, a/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br MS	08/18/1999	9:55	Vertically Stratified Composite	6	25°C	
B.F.Br	08/18/1999	9:55	Vertically Stratified Composite	6	25°C	No flow over dam
Rt.197 Br.	08/18/1999	10:45	Vertically Stratified Composite	6	25°C	
TID-WEST EQBL	08/18/1999	11:15	Rinse Blank			
TID-WEST	08/18/1999	11:20	Surface Grab	3	25°C	
TID-PRW2	08/18/1999	11:50	Vertically Stratified Composite	9	24°C	
Rt.29 Br.	08/18/1999	12:45	Vertically Stratified Composite	15	24°C	
Blind Duplicate		:				Sample Taken At TID-PRW2

Additional Notes:

Weather Data

Temperature: 75° F
Wind: Calm
Precipitation: None

Fort Edward Staff Gage

Time: 11:00
Gage Height (ft): 20.83
Estimated Flow (cfs): 1986

Sampled by: M. Wilcox
Date: 8/18/99

322542

QEA a+a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	8/25/99	9 : 50	Vertically Stratified Composite	6	24	lots of floating grass
Rt.197 Br. MS	8/25/99	10 : 40	Vertically Stratified Composite	6	24	
Rt.197 Br.	8/25/99	10 : 40	Vertically Stratified Composite	6	24	
TID-WEST	8/25/99	11 : 05	Surface Grab	3	24	
TID-PRW2 EQBL	8/25/99	11 : 15	Rinse Blank			
TID-PRW2	8/25/99	11 : 30	Vertically Stratified Composite	9	24	
Rt.29 Br.	8/25/99	12 : 00	Vertically Stratified Composite	15	24	Sample taken at Rt.29 Br.
Blind Duplicate	8/25/99	:				

Additional Notes:

Weather Data

Temperature 70°
Wind None
Precipitation None

Fort Edward Staff Gage

Time 10:40
Gage Height (ft) 20.74
Estimated Flow (cfs) 1780

Sampled by: M. Hennessey
Date: 8/25/99

322543

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	9/1/99	11:00	Vertically Stratified Composite	6	23°C	NO FLOW OVER DAM
Rt.197 Br.	9/1/99	12:15	Vertically Stratified Composite	6	24	
TID-WEST MS	9/1/99	13:20	Surface Grab	3	24	
TID-WEST	9/1/99	13:20	Surface Grab	3	24	
TID-PRW2	9/1/99	12:55	Vertically Stratified Composite	9	24	
Rt.29 Br. EQBL	9/1/99	14:00	Rinse Blank		25	
Rt.29 Br.	9/1/99	14:10	Vertically Stratified Composite	15	25	[redacted]
Blind Duplicate	9/1/99	:				sample taken at ~~BF Bridge~~ 197 Bridge

Additional Notes:

Weather Data

Temperature 80°F
Wind CALM
Precipitation NONE

Fort Edward Staff Gage

Time 12:30
Gage Height (ft) 20.71
Estimated Flow (cfs) 1720

Sampled by: Mike Wath
Date: 9/1/99

322544

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br. MS	9/8/99	10 : 30	Vertically Stratified Composite	6	24	
B.F.Br	9/8/99	10 : 30	Vertically Stratified Composite	6	24	
Rt.197 Br.	9/8/99	12 : 30	Vertically Stratified Composite	6	24	
TID-WEST	9/8/99	11 : 10	Surface Grab	3	24	
TID-PRW2 EQBL	9/8/99	11 : 30	Rinse Blank		24	
TID-PRW2	9/8/99	11 : 45	Vertically Stratified Composite	11	24	
Rt.29 Br.	9/8/99	12 : 00	Vertically Stratified Composite	15	24	
Blind Duplicate	9/8/99	:				sample taken at TID-WEST

Additional Notes:

Weather Data

Temperature 70°
Wind None
Precipitation None

Fort Edward Staff Gage

Time 12:30
Gage Height (ft)
Estimated Flow (cfs) 2,000

Sampled by: M. Heaney
Date: 9/8/99

322545

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	9/15/99	10 : 15	Vertically Stratified Composite	6	24	
Rt.197 Br. MS	9/15/99	12 : 15	Vertically Stratified Composite	6	24	
Rt.197 Br.	9/15/99	12 : 15	Vertically Stratified Composite	6	24	
TID-WEST	9/15/99	11 : 00	Surface Grab	3	24	
TID-PRW2	9/15/99	10 : 50	Vertically Stratified Composite	11	24	
Rt.29 Br. EQBL	9/15/99	11 : 15	Rinse Blank			
Rt.29 Br.	9/15/99	11 : 45	Vertically Stratified Composite	15	24	
Blind Duplicate	9/15/99	:				Sample taken at TID-WEST.

Additional Notes:

Weather Data

Temperature 70°
Wind None
Precipitation None

Fort Edward Staff Gage

Time 12:30
Gage Height (ft) 20.78
Estimated Flow (cfs) 1870

Sampled by: M. Hennessey
Date: 9/8/99

322546

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br EQBL	9/22/99	8 : 00	Rinse Blank			
B.F.Br	9/22/99	13 : 00	Vertically Stratified Composite	6	23	No Flow Over the dam
Rt.197 Br.	9/22/99	12 : 45	Vertically Stratified Composite	6	23	Blind Dup taken here
TID-WEST	9/22/99	10 : 45	Surface Grab	3	23	
TID-PRW2 MS	9/22/99	11 : 00	Vertically Stratified Composite	11	23	
TID-PRW2	9/22/99	11 : 00	Vertically Stratified Composite	11	23	
Rt.29 Br.	9/22/99	11 : 45	Vertically Stratified Composite	15	23	
Blind Duplicate		:				Sample taken at Rt.197 Br.
BOATLAUNCH	9/22/99	8 : 04	Surface Grab	5	15	

Additional Notes:

Weather Data

Temperature 50°F
Wind South
Precipitation Heavy Rain

Fort Edward Staff Gage

Time 12:45
Gage Height (ft) 4.7
Estimated Flow (cfs) 1720

Sampled by: M. Hennessey
Date: 9/22/99

322547

QEA
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	9/29/99	10 : 20	Vertically Stratified Composite	6	19	No Flow over the Dam.
Rt.197 Br. EQBL	9/29/99	7 : 30	Rinse Blank			
Rt.197 Br.	9/29/99	10 : 55	Vertically Stratified Composite	6	19	
TID-WEST MS	9/29/99	11 : 20	Surface Grab	3	18	
TID-WEST	9/29/99	11 : 20	Surface Grab	3	18	
TID-PRW2	9/29/99	11 : 30	Vertically Stratified Composite	11	18	
Rt.29 Br.	9/29/99	12 : 20	Vertically Stratified Composite	15	18	
Blind Duplicate	9/29/99	:				Sample Taken at B.F.Bridge
BOATLAUNCH	9/29/99	9 : 42	Surface Grab	5	19	

Additional Notes:

Weather Data

Temperature 70°F
Wind Slight, South
Precipitation None

Fort Edward Staff Gage

Time _____
Gage Height (ft) _____
Estimated Flow (cfs) 1850

Sampled by: M. Hennessey
Date: 9/29/99

322548

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	10/6/99	11 : 15	Vertically Stratified Composite	4	14	
Rt.197 Br.	10/6/99	11 : 55	Vertically Stratified Composite	6	14	
TID-WEST	10/6/99	10 : 50	Surface Grab	3	14	
TID-PRW2 MS	10/6/99	10 : 45	Vertically Stratified Composite		14	
TID-PRW2	10/6/99	10 : 45	Vertically Stratified Composite	11	14	
Rt.29 Br. EQBL	10/6/99	12 : 40	Rinse Blank			
Rt.29 Br.	10/6/99	12 : 45	Vertically Stratified Composite	15	14	
Blind Duplicate	10/6/99	:				Sample Taken at Rt.197 Bridge.
BOATLAUNCH	10/6/99	9 : 15	Surface Grab	5	15	

Additional Notes:

Weather Data

Temperature ≈ 40°F
Wind Slight South
Precipitation Light

Fort Edward Staff Gage

Time 11:45
Gage Height (ft) 21.53
Estimated Flow (cfs) 3,900

Sampled by: M. Hennessey
Date: 10/6/99

322549

QEA, PLLC
Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

	Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
	B.F.Br Ac07212	10/13/99	10 : 05	Vertically Stratified Composite	5	13	no flow over dam
	Rt.197 Br. Ac07213	10/13/99	10 : 50	Vertically Stratified Composite	4	14	FE stage = 20.98; FE flow = 2350cfs
	Rt.197 Br. Ac07214 EQBL	10/13/99	10 : 30	Rinse Blank			
	TID-WEST Ac07215 MS	10/13/99	11 : 30	Surface Grab	3		
	TID-WEST Ac07216	10/13/99	11 : 30	Surface Grab	3	13	
6	TID-PRW2 Ac07217	10/13/99	11 : 50	Vertically Stratified Composite	6	13	
7	Rt.29 Br. Ac07218	10/13/99	12 : 30	Vertically Stratified Composite	12	13	
8	Blind Duplicate Ac07219	10/13/99	:				Sample Taken at B.F.Bridge!

Additional Notes:

Weather Data

Temperature ~65°F
Wind (NW) ~~Light~~ Gusty
Precipitation None

Fort Edward Staff Gage

Time 11:10
Gage Height (ft) 20.98
Estimated Flow (cfs) 2350

Sampled by: Mike Wenth
Date: 10/13/99

322550

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	10/20/99	10 : 50	Vertically Stratified Composite	7	11	No flow over the dam
Rt.197 Br.	10/20/99	:	Vertically Stratified Composite	6	11	
TID-WEST	10/20/99	:	Surface Grab	3	11	
TID-PRW2 EQBL	10/20/99	:	Rinse Blank			
TID-PRW2	10/20/99	:	Vertically Stratified Composite	11	11	
Rt.29 Br. MS	10/20/99	:	Vertically Stratified Composite	15		
Rt.29 Br.	10/20/99	:	Vertically Stratified Composite	15	11	
Blind Duplicate	10/20/99	:				Sample Taken at Rt. 197 Br.

Additional Notes:

Weather Data

Temperature ≈40°F
Wind None
Precipitation Rain

Fort Edward Staff Gage

Time 11:35
Gage Height (ft) 22.21
Estimated Flow (cfs) 6,333

Sampled by: M. Hennessey
Date: 10/20/99

322551

QEA a/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br MS	10/27/99	10:00	Vertically Stratified Composite	7	10	No flow over the dam
B.F.Br	10/27/99	10:00	Vertically Stratified Composite	7		
Rt.197 Br.	10/27/99	10:30	Vertically Stratified Composite	6		
TID-WEST	10/27/99	10:55	Surface Grab	3		
TID-PRW2 EQBL	10/27/99	11:10	Rinse Blank			
TID-PRW2	10/27/99	11:15	Vertically Stratified Composite	11		
Rt.29 Br.	10/27/99	12:00	Vertically Stratified Composite	15		
Blind Duplicate	10/27/99	:				Sample Taken at TID-PRW2
BOATLAUNCH	10/27/99	9:31	Surface Grab	5	10	

Additional Notes:

Weather Data

Temperature 40°F
Wind North
Precipitation None

Fort Edward Staff Gage

Time 10:30
Gage Height (ft) 22.37
Estimated Flow (cfs) 6960

Sampled by: M. Heaney
Date: 10/27/99

322552

QEA, a/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
B.F.Br	11/3/99	10 : 00	Vertically Stratified Composite	6	10	Blind Dup taken here. No flow over the dam.
Rt.197 Br.	11/3/99	10 : 45	Vertically Stratified Composite	6	10	
TID-WEST MS	11/3/99	11 : 45	Surface Grab		10	
TID-WEST	11/3/99	11 : 45	Surface Grab	3	10	
TID-PRW2	11/3/99	12 : 00	Vertically Stratified Composite	11	10	
Rt.197 Br. EQBL	11/3/99	10 : 30	Rinse Blank			
Rt.29 Br.	11/3/99	12 : 25	Vertically Stratified Composite	15	10	
Blind Duplicate	11/3/99	:				B.F.Br.

Additional Notes:

Weather Data

Temperature ~50°F
Wind South (5-10MPH)
Precipitation Light (morning)

Fort Edward Staff Gage

Time 11:10
Gage Height (ft) 21.89
Estimated Flow (cfs) 5,140

Sampled by: M. Hennessey
Date: 11/3/99

322553

QEA da/a Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
TID-PRW2	11/10/99	11 : 05	Vertically Stratified Composite	11	9	
Rt.29 Br.	11/10/99	11 : 50	Vertically Stratified Composite	15	9	
Blind Duplicate	11/10/99	:				Sample taken at Rt.29.Br.
B.F.Br	11/10/99	10 : 00	Vertically Stratified Composite	7	9	No Flow Over the dam.
Rt.197 Br.	11/10/99	10 : 35	Vertically Stratified Composite	6	9	
TID-WEST	11/10/99	11 : 25	Surface Grab	3	9	
TID-PRW2 EQBL	11/10/99	11 : 00	Rinse Blank		0	
TID-PRW2 MS	11/10/99	11 : 05	Vertically Stratified Composite	11	9	

Additional Notes:

Weather Data

Temperature 60°F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 10:50
Gage Height (ft) 21.76
Estimated Flow (cfs) 4671.101

Sampled by: M. Hennessey
Date: 11/10/99

322554

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
TID-WEST	11/17/99	13 : 00	Surface Grab	3	4	
TID-PRW2	11/17/99	13 : 30	Vertically Stratified Composite	11	4	
197 Br. EQBL	11/17/99	11 : 25	Rinse Blank			
Rt.29 Br. MS	11/17/99	14 : 15	Vertically Stratified Composite	15	5	
Rt.29 Br.	11/17/99	14 : 15	Vertically Stratified Composite	15	4	
Blind Duplicate	11/17/99	:				B.F.Bridge
HRRIL4	11/17/99	12 : 35	Surface Grab	3	5	
B.F.Br	11/17/99	10 : 50	Vertically Stratified Composite	7	4	
Rt.197 Br.	11/17/99	11 : 50	Vertically Stratified Composite	7	4	

Additional Notes:

Weather Data

Temperature ≈50°
Wind None
Precipitation None

Fort Edward Staff Gage

Time 11:00
Gage Height (ft) 21.81
Estimated Flow (cfs) 48,47

Sampled by: M. Hennessey
Date: 11-17-99

322555

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company
Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
HRM 194.2E	11/17/99	11 : 30	Vertically Stratified Composite	٦	4	
HRM 194.2W	11/17/99	12 : 10	Vertically Stratified Composite	٦	4	
HRRIL1	11/17/99	12 : 33	Surface Grab	3	5	Sample collected by BBL personell.

Additional Notes:

Weather Data

Temperature _____
Wind _____
Precipitation _____

Fort Edward Staff Gage

Time _____
Gage Height (ft) _____
Estimated Flow (cfs) _____

Sampled by: _____

Date: _____

322556

QEA a/a
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.197 Br. E	11/23/99	12 : 50	Vertically Stratified Composite	7	5	
Rt.197 Br. W	11/23/99	13 : 00	Vertically Stratified Composite	7	5	
HRRIL4 MS	11/23/99	13 : 45	Surface Grab		5	
TID-WEST	11/23/99	12 : 15	Surface Grab	3	5	
TID-PRW2	11/23/99	12 : 00	Vertically Stratified Composite	11	5	
Rt.29 Br.	11/23/99	14 : 30	Vertically Stratified Composite	15	5	
Blind Duplicate	11/23/99	:				Sample Taken at HRRIL1
B.F.Br	11/23/99	11 : 30	Vertically Stratified Composite	7	5	
Rt.197 Br. EQBL	11/23/99	11 : 45	Rinse Blank	7		

Additional Notes:

Weather Data

Temperature 45°
Wind Slight North
Precipitation None

Fort Edward Staff Gage

Time 12:45
Gage Height (ft) 21.83
Estimated Flow (cfs) 4,920
Daily: 5120 cfs

Sampled by: Hennessey
Date: 12/23/99

322557

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.197 Br.	11/23/99	12 : 50	Vertically Stratified Composite	7	5	
HRRIL1	11/23/99	13 : 25	Surface Grab		5	
HRRIL2	11/23/99	13 : 35	Surface Grab		2	
HRRIL4	11/23/99	13 : 45	Surface Grab		5	

Additional Notes:

Weather Data

Temperature _____

Wind _____

Precipitation _____

Fort Edward Staff Gage

Time _____

Gage Height (ft) _____

Estimated Flow (cfs) _____

Sampled by: _____

Date: _____

322558

OEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
HRRIL2	12/1/99	:	Surface Grab			
HRRIL4	12/1/99	:	Surface Grab			
TID-WEST	12/1/99	:	Surface Grab	3		
TID-PRW2	12/1/99	:	Vertically Stratified Composite	11		
Rt.29 Br.	12/1/99	:	Vertically Stratified Composite	15		
Blind Duplicate		:				Sample Taken at HRRIL2
B.F.Br	12/1/99	:	Vertically Stratified Composite	7		
Rt.197 Br. EQBL	12/1/99	:	Rinse Blank			
HRM 194.2E	12/1/99	:	Vertically Stratified Composite	7		

Additional Notes:

Weather Data

Temperature 20°F

Wind Slight West

Precipitation None

Fort Edward Staff Gage

Time 11:10

Gage Height (ft) 22.51

Estimated Flow (cfs) 7,539

Sampled by: Hennessey

Date: 12/1/99

322559

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
HRM 194.2W	12/1/99	:	Vertically Stratified Composite	7		
HRRIL1	12/1/99	:	Surface Grab			
HRRIL1 MS	12/1/99	:	Surface Grab			

Additional Notes:

Weather Data

Temperature _____

Wind _____

Precipitation _____

Fort Edward Staff Gage

Time _____

Gage Height (ft) _____

Estimated Flow (cfs) _____

Sampled by: _____

Date: _____

322560

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
HRRIL1	12/8/99	12 : 20	Surface Grab	7	4	
HRRIL2	12/8/99	12 : 40	Surface Grab	7	4	
HRRIL2 MS	12/8/99	12 : 40	Surface Grab	7		
TID-WEST	12/8/99	11 : 00	Surface Grab		4	
TID-PRW2	12/8/99	11 : 10	Vertically Stratified Composite	11	4	
Rt.29 Br.	12/8/99	13 : 45	Vertically Stratified Composite	15	4	
Blind Duplicate	12/8/99	:			4	Taken at HRRIL4
HRRIL4	12/8/99	12 : 30	Surface Grab		4	
B.F.Br	12/8/99	13 : 00	Vertically Stratified Composite	7	4	

Additional Notes:

Weather Data

Temperature 30°F
Wind Calm
Precipitation None

Fort Edward Staff Gage

Time 11:30
Gage Height (ft) 22.13
Estimated Flow (cfs) 6030

Sampled by: Hennessey
Date: 12/8/99

322561

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.197 Br. EQBL	12/8/99	11 : 15	Rinse Blank	7		
HRM 194.2E	12/8/99	11 : 50	Vertically Stratified Composite	7	4	
Rt.197 Br.	12/8/99	12 : 00	Vertically Stratified Composite	7	4	
HRM 194.2W	12/8/99	12 : 15	Vertically Stratified Composite	7	4	

Additional Notes:

Weather Data

Temperature _____

Wind _____

Precipitation _____

Fort Edward Staff Gage

Time _____

Gage Height (ft) _____

Estimated Flow (cfs) _____

Sampled by: _____

Date: _____

322562

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.29 Br.	12/15/99	12 : 00	Vertically Stratified Composite	15	3	
Blind Duplicate	12/15/99	:				Taken at TID-WEST
B.F.Br EQBL	12/15/99	9 : 55	Rinse Blank	7		
B.F.Br	12/15/99	10 : 00	Vertically Stratified Composite	7	3	
Rt.197 Br.	12/15/99	10 : 30	Vertically Stratified Composite	7	3	
TID-WEST MS	12/15/99	11 : 00	Surface Grab	3	3	
TID-WEST	12/15/99	11 : 00	Surface Grab	3	3	
TID-PRW2	12/15/99	11 : 30	Vertically Stratified Composite	11	3	

Additional Notes:

Weather Data

Temperature 35°
Wind Calm
Precipitation None

Fort Edward Staff Gage

Time 10:30
Gage Height (ft) 21.45
Estimated Flow (cfs) 3,650

Sampled by: M. Hennessey
Date: 12/15/99

322563

QEA Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
TID-PRW2	12/22/99	10 : 30	Vertically Stratified Composite	11	2	
Rt.29 Br.	12/22/99	12 : 00	Vertically Stratified Composite	15	2	
Blind Duplicate	12/22/99	:				Taken at TID-PRW2
B.F.Br MS	12/22/99	10 : 00	Vertically Stratified Composite	7	2	
B.F.Br	12/22/99	10 : 00	Vertically Stratified Composite	7	2	
Rt.197 Br.	12/22/99	10 : 30	Vertically Stratified Composite	7	2	
TID-WEST	12/22/99	11 : 00	Surface Grab	3	2	
TID-PRW2 EQBL	12/22/99	11 : 15	Rinse Blank		2	

Additional Notes:

Weather Data

Temperature ≈ 30°F
Wind None
Precipitation None

Fort Edward Staff Gage

Time 10:30
Gage Height (ft) 21.68
Estimated Flow (cfs) 4400

Sampled by: M. Hennessey
Date: 12/22/99

322564

QEA, LLC
Quantitative Environmental Analysis, LLC

General Electric Company

Hudson River Monitoring Program

Field Log

Sample Location	Date	Time	Sampling Method	Approximate Water Depth (ft)	Water Temp. (C)	Comments
Rt.29 Br. EQBL	12/29/99	11:45	Rinse Blank			
Rt.29 Br.	12/29/99	:	Vertically Stratified Composite	15	0.5	
Blind Duplicate	12/29/99	:				Taken at TID-PRW2
B.F.Br	12/29/99	10:30	Vertically Stratified Composite	7		
Rt.197 Br. MS	12/29/99	11:00	Vertically Stratified Composite	7		
Rt.197 Br.		11:00	Vertically Stratified Composite	7		
TID-WEST	12/29/99	12:15	Surface Grab	3		
TID-PRW2	12/29/99	12:25	~~Vertically Stratified Composite~~ Surface Grab	11		Sample was surface grab due to frozen Kemmerer

Additional Notes:

Weather Data

Temperature: 25°F
Wind: Slight North
Precipitation: None

Fort Edward Staff Gage

Time: 10:50
Gage Height (ft): 20.76
Estimated Flow (cfs): 1830

Sampled by: M. Werth
Date: 12/29/99

322565