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February 27, 1998

VIA OVERNIGHT DELIVERY

Mr. Douglas Tomchuk
Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway - 20th Floor
New York, NY 10007-1866

RE: HUDSON RIVER TIP RESEARCH STUDIES - DATA DOCUMENTATION REPORT

Dear Mr. Tomchuk:

During 1996 and 1997, GE sponsored a number of field investigations related to the PCB dynamics within the Thompson Island Pool (TIP) section of the upper Hudson River. The work plans for these studies were submitted to you for your review prior to implementation and the resultant data have been provided in the routine weekly reports. The data have been provided to you in electronic format as part of the Hudson River database updates prepared by O'Brien & Gere Engineers. We have also reviewed this data with you and others on a number of occasions and provided copies of the briefing materials.

To provide further documentation of this TIP research effort, please find enclosed the report prepared by O'Brien & Gere Engineers entitled: *1996 - 1997 Thompson Island Pool Studies (February 1998)*. This report documents the procedures used to collect and analyze the samples, the data quality review results, and provides copies of all the raw data in the form of laboratory reports.

A separate data interpretation report is being prepared by Quantitative Environmental Analysis (former employees of HydroQual, Inc.) and will be distributed within the next few weeks.

Please place a copy of this report in the Hudson River project site administrative record.

Yours truly,

John Haggard/WAM

John G. Haggard

JGH/djb
Enclosure:

cc: *(w/enclosure)*
Victor Bierman, Jr., Ph.D. - Limno-Tech, Inc.
Anders Carlson - NYSDOH *(2 copies)*
Al D'Bernardo - TAMS Consultants
Jay Field - NOAA
Douglas Fisher - U.S. EPA *(letter only)*
Anton Geidt, Esq. - NOAA *(letter only)*
Steven Hammond - NYSDEC *(2 copies)*
William MacCabe - U.S. EPA
Ronald Sloan - NYSDEC

DATA SUMMARY REPORT

Hudson River Project
1996-1997 Thompson Island Pool Studies

General Electric Company
Corporate Environmental Programs
Albany, New York

February 1998

O'BRIEN & GERE
ENGINEERS, INC.

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Data Summary Report

Hudson River Project
1996-1997 Thompson Island Pool Studies

General Electric Company
Corporate Environmental Programs
Albany, New York

J. Kevin Farmer, P.E.
Vice President

February 1998

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1. Introduction

On behalf of the General Electric Company (General Electric), O'Brien & Gere Engineers, Inc. (O'Brien & Gere) in association with HydroQual, Inc. (HydroQual) conducted water column studies in the Thompson Island Pool of the upper Hudson River (Figure 1-1). These studies were performed to advance the understanding of the origin, fate, and transport of PCBs in the Thompson Island Pool portion of the upper Hudson River. In addition, the studies were performed to establish whether the data routinely collected at the Thompson Island Dam is representative of the water column PCB concentrations in river water discharged from the pool. Sampling at the dam has been included in weekly or biweekly sampling for the Post-Construction Remnant Deposit Monitoring Program (PCRDMP) since 1992 (O'Brien & Gere 1996a).

The remainder of this report presents the project background, program objectives, sampling and analysis methods, and hydrologic and analytical data generated during the *1996-1997 Thompson Island Pool Studies* (HydroQual and O'Brien & Gere 1996, O'Brien & Gere and HydroQual 1997). In addition, PCB mass transport estimates in the vicinity of Thompson Island Dam are presented based on the PCB and hydrologic data. Detailed interpretation of the data will be provided in subsequent reports.

1.1. Project Background

The *1996-1997 Thompson Island Pool Studies* were performed to test hypotheses regarding the origin of elevated PCB loadings observed in the Thompson Island Pool since approximately 1992 ("the Thompson Island Pool anomaly;" HydroQual 1995).

1.1.1. Thompson Island Pool anomaly

General Electric conducted extensive investigations from 1995 through 1997 to evaluate potential causes for the anomalous PCB loading in the Thompson Island Pool. PCB loading attributable to diffusive flux from sediment based on principles of equilibrium partitioning is insufficient to account for the water column PCB concentrations measured at Thompson Island Dam (HydroQual 1995).

Several hypotheses have been developed to account for the anomalous PCB loading (General Electric 1996):

Underestimating PCB loading at Fort Edward (HRM 194.2[1]*)* - The mass and concentration of PCBs entering the Thompson Island Pool are greater than the mass and concentration measured at the Fort Edward monitoring station due to pulsed loadings from the Bakers Falls area or due to PCB transport in the bed-load sediment. The PCRDMP water sampling would not likely detect either of these potential PCB sources to Thompson Island Pool.

Overestimating PCB loading at Thompson Island Dam (HRM 188.5) - PCB concentrations measured in samples collected from the routine monitoring station at the Thompson Island Dam are greater than the average PCB concentrations in water as it passes over the dam.

Contributions from ground water flux through sediment - Ground water inflow to the Thompson Island Pool is transporting PCBs from sediment to the water column at levels which exceed estimated contributions from diffusion controlled processes.

Increased PCB concentrations in surface sediment - PCB concentrations in surface sediment are greater than historic surface sediment data indicate as a result of recent release(s) of PCBs from the Hudson Falls Plant site area.

Other PCB sources - PCBs are entering the Thompson Island Pool between Rogers Island and the Thompson Island Dam from areas such as dredge spoil sites.

Low flow resuspension - Resuspension of surface sediment contributes PCBs into the Thompson Island Pool water column.

To the extent that these factors are not accounted for, the amount of PCBs contributed from sediment to the water column in the Thompson Island Pool via diffusional processes will be overestimated by the PCRDMP. The Thompson Island Pool Studies provide data to support evaluation of PCB loadings observed in the pool.

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[1]Hudson River mile (HRM) sample location designations indicate the approximate river mile upstream of the confluence of the Hudson River at the Battery in New York City, HRM 0.0. The north-south orientation of the river provides a convenient location reference.

1.2. Program objectives

The objectives of the *1996-1997 Thompson Island Pool Studies* were to provide data to assess the various hypotheses that have been developed to explain the anomalous PCB loading in the Thompson Island Pool. The results of these studies will be used to facilitate redesign of the PCRDMP, if appropriate.

1.3. Approach

The *1996-1997 Thompson Island Pool Studies* were implemented according to the sampling and analysis plans developed for the PCRDMP (O'Brien & Gere 1992a,b,c, 1995b, 1996a) and this project (HydroQual and O'Brien & Gere 1996; O'Brien & Gere and HydroQual 1997). These plans were submitted to the New York State Department of Environmental Conservation (NYSDEC), The New York State Department of Health (NYSDOH), and the U.S. Environmental Protection Agency (USEPA) for review and comment. Comments were not received.

Water column sampling based on time of travel of subject parcels of water were performed at several stations in the upper Hudson River. Samples were analyzed for PCBs and total suspended solids (TSS). Samples collected in the vicinity of Thompson Island Dam in September 1997 were analyzed for additional parameters (Section 2.5). This report summarizes the data from the studies performed in 1996 and 1997.

1.3.1. Evaluation of spatial patterns of water column PCB loading in Thompson Island Pool

Four time of travel sampling surveys were conducted over the 6-mile reach of Thompson Island Pool (Figures 1-2 and 1-3). The objective of these surveys was to characterize the spatial pattern of PCB loadings and the composition of PCBs in Thompson Island Pool. For each survey, sampling was conducted along eighteen to twenty sampling stations along the length of the pool, with two to three sampling stations positioned across the river, perpendicular to the flow at each transect (Figures 1-2 and 1-3).

The transect stations represented the east shore region, west shore region, and the center channel. Specific transect locations were identified to evaluate shore deposits of PCBs, tributaries, the Fort Edward POTW outfall, and PCB "hot spot" locations. For the 1997 surveys, time of travel samples were also collected at the Thompson Island Dam sampling station (HRM 188.5W) for comparison with the transect data, as discussed in Section 1.3.2 below. Details of the sampling locations and procedures used for the Thompson Island Pool time of travel surveys are presented in Section 2.2. Hydrologic data were also collected for a portion of the river in the vicinity of the Snook Kill to assist evaluation of observed water column PCB concentrations.

1.3.2. Evaluation of representativeness of the Thompson Island Dam sampling station

Time of travel sampling was conducted in the vicinity of Thompson Island Dam to compare with data collected at the HRM 188.5W sampling station at the dam. This evaluation included transect sampling upstream and downstream of the dam, near shore sampling upstream of the dam, and sampling from other dam abutments, and sampling downstream of the dam (Table 1-1, Figure 1-4). Details of sampling locations and procedures are presented in Section 2.3.

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2. Methods

The *1996-1997 Thompson Island Pool Studies* consisted of numerous sampling programs to investigate the origin of PCB loadings in the Thompson Island Pool. In general, the studies were designed to sample the subject parcels of water at several sampling stations as the water traveled downstream. An overview of time of travel sampling techniques used for the field sampling activities is provided (Section 2.1).

The Thompson Island Pool Studies consisted of two sampling programs:

- One program consisted of sampling to investigate spatial patterns of water column PCB loading in Thompson Island Pool using time of travel surveys designed to collect data along the length of the pool (Section 2.2).

- The other program consisted of water column sampling in the vicinity of Thompson Island Dam to evaluate the representativeness of the routine monitoring location and to estimate PCB loading from Thompson Island Pool (Section 2.3).

The section that follows provides the descriptions of each program consisting of time of travel estimates for subject parcels of water, and the sample locations and collection procedures employed. The descriptions also include summaries of hydrologic field data collected to support evaluation of PCB mass transport estimates. Photographs showing various aspects of the sampling are presented in Appendix A.

Additional data that were collected downstream of Thompson Island Pool during the Thompson Island Dam evaluation field activities conducted on August 13, 1997 are also presented (Section 2.4). Analytical methods employed for each of the programs are presented (Section 2.5). Sample handling, field equipment cleaning, quality assurance/quality control, and health and safety procedures are also presented (Sections 2.6, 2.7, 2.8 and 2.9, respectively).

2.1. Time of travel sampling techniques

For each sampling event, the timing of sampling was based on estimates of time of travel for the subject parcel of water traveling from upstream sampling stations to downstream sampling stations and instantaneous flow readings obtained prior to and during the sampling events from the USGS gaging station at Fort Edward (Appendix B).

The time of travel estimates were developed based on field experience obtained during the transect sampling conducted during the *1995 River Monitoring Test* (O'Brien & Gere 1996b), float surveys conducted for the PCRDMP in the remnant deposits reach of the river (O'Brien & Gere 1994, 1993), 1996 field activities (HydroQual and O'Brien & Gere 1996) and time of travel studies by others (Tofflemire 1984; USGS 1969). For the 1997 Thompson Island Pool time of travel surveys, dye was added to the river in the vicinity of Bakers Falls to provide a tracer for the subject parcel of water to be sampled through the Thompson Island Pool.

The flow rate of the Hudson River was monitored during each sampling event by obtaining instantaneous water levels from the USGS gaging station in Fort Edward. After completion of field activities, provisional USGS flow data for 15-minute intervals was obtained from the world-wide web site via the Internet (USGS 1997). The Internet flow data were used to construct hydrographs of the Fort Edward flows for the subject sampling periods (Appendix B). For each sampling period, flow variability was likely attributable to the operation of the Hudson Falls hydroelectric facility, as well as intermittent operation of several other hydroelectric facilities and other water users upstream of the project area (O'Brien & Gere 1996a).

Details of the time of travel estimates used for each sampling event and flow monitoring during the events are presented in their respective sections.

2.2. Evaluation of spatial patterns of water column PCB loading in Thompson Island Pool

The objectives of this sampling event were to identify spatial patterns of water column PCB loading and composition in the Thompson Island Pool (Section 1.2). Four Thompson Island Pool time of travel surveys were conducted through the pool to accomplish these objectives. To assist in the evaluation of the water sampling data, precipitation data for September and October were obtained from the National Weather Service for several sampling stations in the Hudson River, Snook Kill, and Moses Kill watersheds (Appendix C).

2.2.1. Estimated time of travel for subject parcels of water

Flow monitoring conducted during sampling to estimate the time of travel of the subject parcels of water for each event are summarized below. For the 1997 events, dye tracer was injected in the vicinity of Bakers Falls and tracked through the pool using a field fluorometer to detect the dye (Appendix D). Sampling for the 1997 events was based on the location of the dye plume, with confirmation of dye progress using instantaneous flow data and time of travel estimates.

Event 1 - September 24, 1996. Flows at Fort Edward averaged approximately 4600 cfs, and ranged from approximately 3700 cfs to 5800 cfs during the 8-hour sampling event (Appendix B).

Event 2 - September 25, 1996. Flows at Fort Edward averaged approximately 5100 cfs, and ranged from approximately 4100 cfs to 6400 cfs during the 8-hour sampling event (Appendix B).

Event 3 - June 4, 1997. Dye was injected based on an estimated flow of 4500 cfs. A dye feed concentration of 5% was used for a target concentration of 1.5 μg/l. The dye was injected for a one hour period from 0700 to 0800 at a rate of 240 ml/min. Flows at Fort Edward averaged approximately 4500 cfs, and ranged from approximately 3000 cfs to 5500 cfs during the 9-hour sampling event (Appendix B).

Event 4 - June 17, 1997. Dye was injected based on an estimated flow of 1600 cfs. A dye feed concentration of 20% was used for a target concentration of 1.5 μg/l. The dye was injected for a half-hour period from 0708 to 0739 at a rate of 164 ml/min. Flows at Fort Edward averaged approximately 3700 cfs, and ranged from approximately 1200 cfs to 6100 cfs during the 12-hour sampling event (Appendix B).

2.2.2. Sample locations

Eighteen transects were sampled through the length of Thompson Island Pool for the 1996 sampling events (Figure 1-2). For the 1997 sampling events, 20 transects were sampled concentrating on the lower portion of the pool (Figure 1-3). Each transect consisted of two to three sampling stations established perpendicular to river flow direction to represent water column concentrations in the west section, center channel and east section of the river. The center station was located at the approximate center of the navigation channel; the east and west sampling stations were positioned midway between the center station and the respective shores. Sample locations were selected to consider possible source areas, including dredged sediment deposits, tributaries, the Fort Edward POTW outfall, and PCB "hot spot" locations. The sampling locations were positioned relative to navigational buoys in the river channel.

2.2.3. Sample collection procedures

For each of the four surveys, three boats were used to simultaneously sample the west, center, and east sampling stations (Appendix A: Figures 1-2 and 1-3). Sampling began upstream of the PCRDMP monitoring station HRM 194.2 in Fort Edward and continued downstream to the transect located upstream of the Thompson Island Dam (TIP-18; Figures 1-2 and 1-3, Section 2.2.2). For each survey, the boat engine was used to assist positioning. Boats were not anchored throughout the surveys to avoid potential interferences from sediment disruptions. Water depths were recorded at each sampling location during each sampling round using on-board depth finders.

At each sampling station, samples were collected as depth-integrated composites of surface, mid, and deep sample depths, except at stations 1 and 2 where water depth was not sufficient to collect three sample depths. At these stations, two depths were collected to represent surface and deep aliquots. Sample aliquots were collected upstream of the boat from the bow or side of the boat using 1.2-liter Kemmerer samplers dedicated to each section of the river (west, center and east stations). Composites were formed by discharging aliquots from the Kemmerer sampler directly into appropriate sampling containers (Table 2-1). Sample containers were pre-marked in approximately one-third increments to guide in preparation of the depth-integrated composites.

The 1996 time of travel surveys were conducted according to the sampling schedule developed based on time of travel estimates for a parcel of water (Figure 1-2, Appendix B). The 1997 surveys were conducted according to the progression of the dye plume assisted with instantaneous flow data obtained during sampling (Appendices E and C, respectively).

The sample collection periods and flow data are summarized below:

Thompson Island Pool Time of Travel Surveys
- Sample collection times and flows during sampling events

					Flow (cfs)	
Event	**Sample dates**	**Begin**	**End**	**Elapsed time**	**Mean**	**Range**
FS-1	6/24/96	730	1816	8-hours	4600	3700-5800
FS-2	6/25/96	700	1712	8-hours	5100	4100-6400
FS-3	6/4/97	853	1815	9-hours, 22 min.	4500	3000-5500
FS-4	6/17/97	910	2050	11-hours, 40 min.	3700	1200-6100

Source: O'Brien & Gere Engineers, Inc.

2.2.4. Hudson River hydrologic data collected in Thompson Island Pool near Snook Kill

To facilitate interpretation of the results of the time of travel surveys, hydrologic surveys were conducted on the Hudson River in an area of the Thompson Island Pool where flow patterns may have influenced PCB concentrations measured. The field activities included surveying and mapping approximately 3,000 feet of shoreline, and collecting bathymetric and flow velocity data along 5 transects across the Hudson River in the vicinity of Snook Kill. The shoreline mapping extended from the northern end of a group of islands on the east shore opposite the Snook Kill, south to the confluence of Black House Creek on the east shore (Figure 2-1). The mapping included the shorelines of four islands in this section of the river. Details of the data collection associated with development of the bathymetric profiles in this region of the river are presented in Appendix E.

2.3. Evaluation of the Thompson Island Dam sampling station

Sampling was conducted at several sampling stations in the vicinity of Thompson Island Dam to evaluate the accuracy of data collected by PCRDMP sampling methods for representing overall water column PCB mass transport from the pool (Figures 1-1 and 1-4). The west dam abutment of the west channel at Thompson Island Dam (HRM 188.5W) is sampled weekly along with samples collected for the PCRDMP. In addition to PCB and TSS analyses, samples collected on August 13 and 14, 1997 were analyzed for other water quality parameters (Section 2.5).

2.3.1. Sample locations

Several sample locations in the vicinity of the Thompson Island Dam were included in the evaluation of data collected at the PCRDMP sampling station at HRM 188.5W (Figures 1-4 and 2-2; Table 1-1). The HRM 188.5W sampling station located at the west shore of the west channel was sampled for each event. Various stations were sampled to address uncertainties associated with the HRM 188.5W sampling station (Figure 2-2):

Upstream of the dam was sampled in the vicinity of transect TIP-18, at the same approximate location sampled for the 1995 River Monitoring Test (O'Brien & Gere 1996b) and TIP-18 sampled for the Thompson Island Pool Time of Travel Surveys (Figures 1-2 and 1-3, Section 2.2.2). The transect was located at a point where the river widens and splits into two channels before passing over the dam, approximately 700 north of the dam (Figure 1-4).

For the 1996 field activities, buoys were anchored at six stations across the river channel at the TIP-18 transect. The stations were spaced along the transect to maximize the spatial resolution of sampling in the main flow channel. Markers placed along the shoreline were used to locate the transect again for 1997 field activities. Four sampling events consisted of transect sampling at 3 to 6 stations separated approximately equidistant across the river perpendicular to flow (Figure 1-4). All six stations were sampled on September 18, 1996 and three stations representing west, center and east portions of the river were sampled on October 29, 1996 and on June 4 and 17, 1997, during the Thompson Island Pool surveys.

Additional field events consisted of sampling from the approximate center of the TIP-18 transect (identified as station TIP-18C) during subsequent sampling events (Figure 2-2). For three sampling events conducted in October 1997, a sample was collected near the edge of the aquatic weed bed at the western end of transect TIP-18 (identified as station TIP-18SW; Figure 1-4). The water depth at the near shore station was approximately a foot deep during sampling.

Additional locations near the dam were also sampled. The configuration of the dam and associated sampling locations are illustrated in Figure 1-4. Thompson Island Dam consists of two spans. One span extends from the eastern shore, across the eastern channel of the river, to Thompson Island; and the other span extends from Thompson Island Dam, across the western channel of the river, to the western shore. The routine sampling station (HRM

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188.5) is located on the western abutment of the west channel dam. Samples were also collected from the eastern abutment of the west channel dam (HRM 188.5IW), and from the eastern abutment of the east channel dam (HRM 188.5E).

Comparison of data collected at the routine HRM 188.5 sampling location with conditions in the center of the channel would have required obtaining samples near the center of the channel, just upstream of the dam. Due to safety concerns related to accessing the center of the river so close to the upstream side of the dam, samples were obtained from the east and west channels along transects located approximately 200 ft downstream of the dam (Figure 1-4). These sampling locations are referred to as "profile stations".

For three sampling events conducted in September 1997, transect sampling was conducted in both channels at three transect stations in each channel separated approximately equidistant across the river perpendicular to flow (Figure 2-2). The approximate locations of the east channel profile stations (TID-PRE1, TID-PRE2, TID-PRE3) and the west channel profile stations (TID-PRW1, TID-PRW2, TID-PRW3) are illustrated in Figure 1-4. Additional field events consisted of sampling from the approximate center of the river in the west and east channels, at stations TID-PRW2 and TID-PRE2, respectively; or from the west channel only at station TID-PRW2 (Figure 2-2).

2.3.2. Sample collection procedures

Sample collection procedures were specific to the sampling location and varied depending on accessibility and water depth (Table 1-1). Surface grabs were collected in water depths of less than three feet or where access was limited, and depth-integrated composite samples were collected in deeper water. The depth-integrated composite sample data are considered more reliable than the surface grab sample data estimating overall water column PCB transport.

The surface grab samples were collected from the dam abutment sampling stations - HRM 188.5W, HRM 188.5IW and HRM 188.5E - and the near shore sampling station upstream of the dam at TIP-18SW. At the dam abutments, stainless steel buckets were used to collect the samples and then distribute them to the appropriate sample containers. The TIP-18SW samples were collected from a boat by submerging sample bottles directly below the water surface.

At the remaining stations, depth-integrated composite samples were collected from boats. Where water depths were sufficient, the composites consisted of surface, mid, and deep sample depth aliquots. However, at TIP-18 stations

1 and 2, and TID-PRW1, TID-PRE1, TID-PRE2, and TID-PRE3 sample locations, water depth was not sufficient to collect three sample depths. At these stations, two depths were collected to represent surface and deep aliquots. Sample aliquots were collected upstream of the boat from the bow or side of the boat using 1.2-liter Kemmerer samplers dedicated to each location. Composites were formed by discharging aliquots from the Kemmerer sampler directly into appropriate sampling containers (Table 2-1). Sample containers were pre-marked in approximately one-third increments to guide in preparation of the depth-integrated composites.

For most of the field events, samples were collected as temporally discrete samples. However, for three of the field events, samples were collected as temporal composites (Figure 2-2):

September 18, 1996 field event
At each sampling station, samples were composed of aliquots collected hourly over a seven-hour sampling period.

October 29, 1996 field event
Temporal aliquots were collected at ½-hour intervals over a 2-hour period.

August 13, 1997 field events
At each sampling station, five temporal aliquots were collected hourly over a four-hour sampling period.

The intent of the temporal composite sampling is to sample a larger parcel of water and improve the representativeness of the sample for quantifying PCB loadings.

Analyses of samples collected for each event consisted of PCBs and TSS, and samples collected on September 9 and 10, 1997 were also analyzed for other water quality parameters (Section 2.5).

2.3.3. Hudson River hydrologic data collected upstream of Thompson Island Dam

Hydrologic data were collected to support estimates of PCB mass transport in the vicinity of the Thompson Island Dam (Appendix E). For this evaluation, bathymetric and flow velocity data were collected in sub-sections of transect TIP-18 corresponding to the six water column sampling stations across the river. The percent of total flow was estimated for each sub-section which was matched with the water column PCB data corresponding to the subject sub-section to estimate PCB mass transport past the transect (Appendix F).

To estimate the percent of total flow in the east and west channels at Thompson Island Dam, river widths were estimated from USGS topographic maps. The east and west channels were estimated as 430 ft and 270 ft, respectively. It was assumed that water depth was constant across the face of the dam. As such, flow and water column PCB data were sufficient to estimate PCB mass transport from these stations (Section 3.2). However, the reliability of PCB data collected from the dam abutments for estimating PCB mass are questionable (Table 1-1).

Transect sampling is a more reliable technique for estimating overall PCB mass transport than simply calculating PCB mass transport based on data collected at the dam abutment and total flow. Comparison of PCB mass transport estimates for the same parcel of water at sampling stations in the vicinity of the dam provides an additional evaluation of the reliability of the data collected at the dam.

2.4. Additional sampling downstream of the Thompson Island Pool

The sampling conducted for the Thompson Island Pool evaluation on August 13, 1997 included sampling downstream at Fort Miller on August 13, 1997 and at Schuylerville on August 14, 1997 (Figures 1-4 and 2-2). For this sampling event, sampling at these stations was timed to sample the parcel of water that was sampled in the vicinity of Thompson Island Dam. The Schuylerville sampling station was also sampled on October 1, 10, and 16, 1997 along with the weekly PCRDMP sampling and Thompson Island Dam evaluation sampling on those days.

2.4.1. Sample locations

The Fort Miller sampling station was located at the approximate center of the river in the vicinity of the caution buoys upstream of the Lock 6 dam. The Schuylerville sampling station was located in the center of the river navigation channel at the north face of the Route 29 bridge in Schuylerville.

2.4.2. Sample collection procedures

For the August 13 and 14, 1997 sampling event, samples were collected at both stations as temporal composites of five depth-integrated aliquots collected hourly over a four-hour sampling period. The Fort Miller sample was collected from the upstream side of a boat and the Schuylerville sample was collected from the north side of the Route 29 bridge (Figure 1-4). Samples collected at the Schuylerville station for the three October, 1997 sampling events were collected as temporally discrete depth-integrated composites. For each sampling event, sample aliquots were collected using 1.2-liter Kemmerer samplers dedicated to each location. Composites were formed by discharging aliquots from the Kemmerer sampler directly into appropriate sampling containers (Table 2-1). Sample containers were pre-marked to guide in preparation of the depth-integrated and temporal composites, as appropriate.

2.5. Analytical testing

Samples collected from each location were analyzed for PCBs by Method NEA608CAP and TSS by Method 160.2 (Table 2-1). In addition, the August 13 and 14, 1997 field event included analysis for total organic carbon (TOC), particulate organic carbon (POC), total solids (TS), and chlorophyll-a (Table 2-1). Analytical results are presented in Section 3.

Recent research identified analytical biases in the quantification of PCB congener data generated by Method NEA608CAP (HydroQual 1997). These analytical biases resulted from error in the original calibration of the PCB standard used in the NEA608CAP (calibration error), and from coeluting mixed peak deconvolution assumptions used for Hudson River samples (coelution error). Calibration error and coelution error correction factors were developed to adjust the PCB data for the analytical biases inherent in Method NEA608CAP (HydroQual 1997). These correction factors have been applied to PCB analytical data collected from the Hudson River prior to September 1, 1997 (O'Brien & Gere 1997). Since September 1, 1997, NEA has corrected the calibration standard used in Method NEA608CAP, and coelution error correction factors are subsequently applied to the laboratory PCB data results obtained from Hudson River samples (O'Brien & Gere 1997). A comparison of laboratory reported PCB results and PCB results corrected for analytical and coelution biases is presented in Appendix G.

2.6. Sample handling

Samples were handled according to procedures presented in the quality assurance project plan (QAPP; O'Brien & Gere 1992b). Samples were assigned a unique sample designation identifying sample location, date and time of sample collection. Upon collection, samples were discharged to appropriate bottles and preserved according to requirements of the sampling and analysis plans (Table 2-1; HydroQual and O'Brien & Gere 1996, O'Brien & Gere and HydroQual 1997).

Samples were chilled with ice to approximately 4 °C. Following completion of field activities, samples were transported to, or picked up by, Northeast Analytical, Inc. (NEA) for analysis. Standard chain of custody procedures were followed, as detailed in the QAPP (O'Brien & Gere 1992b). Copies of field logs and chains-of-custody are provided in Appendices I and J, respectively.

2.7. Field equipment cleaning

For each of the sampling tasks, field equipment was cleaned prior to initiation of field sampling activities, according to procedures presented in the field sampling plan addendum presented in the 1995 PCRDMP report (O'Brien & Gere 1996a). Specific sampling equipment used at each station was tracked in field logs (Appendix H). Sampling equipment was cleaned at the Syracuse office of O'Brien & Gere before beginning field activities (O'Brien & Gere 1996a). Field procedures for cleaning equipment consisted of three sequential rinse steps:

1. acetone rinse
2. hexane rinse
3. rinse with distilled water, using at least approximately five times the volume of solvent used.

Prior to sampling, the sampling equipment was rinsed with river water at the subject sampling station. Additional details specific to each of the sampling programs are identified below.

Thompson Island Pool time of travel surveys.
Equipment cleaning for the Thompson Island Pool time travel surveys also included a pre-rinse with distilled water before the three step field cleaning

procedures described above were implemented. Kemmerer sampling devices were dedicated to each boat (west, center, and east). Equipment was cleaned in the field between each sampling station.

Thompson Island Dam evaluation sampling events.
Dedicated sampling devices were used at each sampling station to the extent practicable. Field activities were performed using three Kemmerer samplers. When field activities required using the same sampling devices at multiple stations, equipment was cleaned between stations. For temporal composites sampling equipment was not cleaned between rounds, nor was sampling equipment cleaned between stations located along the same transect.

2.8. Quality assurance/quality control

Field quality assurance/quality control (QA/QC) activities were conducted according to procedures presented in the QA/QC activities developed for the PCRDMP (O'Brien & Gere 1992b) and the addendum to the QAPP presented in the *1995 River Monitoring Test* Work Plan (O'Brien & Gere 1995) and sampling plans developed for the *1996-1997 Thompson Island Pool Studies* (O'Brien & Gere and HydroQual 1997, HydroQual and O'Brien & Gere 1996). QA/QC field samples for PCB analyses consisted of a matrix spike, duplicate, and equipment rinse blank (Table 2-2). QA/QC field samples for TSS, TOC, POC, TS, and chlorophyll-a consisted of duplicate analyses. The QA/QC field samples collected and analyzed for PCBs and criteria used for evaluating the QA/QC data are summarized for each of the sampling events (Table 2-2). PCRDMP sampling conducted concurrently with the *1996-1997 Thompson Island Pool Studies* also included PCB matrix spike, blind duplicate and equipment blanks, and TSS blind duplicates, as required by that program (Table 2-2).

A Tier 1 review of QA/QC data was conducted consisting of review of holding times, matrix spike recoveries, duplicate relative percent differences (RPD), and equipment blank results. The results of this review indicated that the data quality was acceptable for the intended uses (Table 2-2). A summary of the results of the QA/QC review are presented in Section 3.4.

2.9. Health and safety

Field activities were conducted in accordance with health and safety procedures described in the Health and Safety Plan developed for the PCRDMP (O'Brien & Gere 1992c) and the addendum to the health and safety plan provided in the *1995 River Monitoring Test Work Plan* (O'Brien & Gere 1995) and sampling plans developed for the *1996-1997 Thompson Island Pool Studies* (O'Brien & Gere and HydroQual 1997, HydroQual and O'Brien & Gere 1996).

3. Results

Results of field activities conducted for the *1996-1997 Thompson Island Pool Studies* in separate subsections below. Results of sampling to identify potential source(s) in Thompson Island Pool are presented in Section 3.1 and results of the evaluation of the Thompson Island Dam sampling station are presented in Section 3.2. Results of sampling at additional stations downstream of Thompson Island Dam are presented in Section 3.3. A summary of the results of QA/QC sampling is presented in Section 3.4

Laboratory reports of PCB data are presented in Appendix I. Laboratory reports of TSS data and additional parameters are presented in Appendix J. Data presented in this report have been corrected for coelution biases (Section 2.5). A comparison of laboratory PCB data and corrected PCB data presented in this report is presented in Appendix G.

3.1. Evaluation of spatial patterns of water column PCB loading in Thompson Island Pool

Thompson Island Pool time of travel sampling data are presented as follows:

1996 time of travel surveys total PCB and TSS data

- 1996 Thompson Island Pool time of travel survey total PCB and TSS results are presented in Table 3-1. Sample water depths measured at the sampling stations during field activities are also presented in the table.
- Data for Event 1 conducted on September 24, 1996 are provided in Figure 3-1.
- Data for Event 2 conducted on September 25, 1996 are provided in Figure 3-2.

1997 time of travel surveys total PCB and TSS data

- 1997 Thompson Island Pool time of travel survey total PCB, TSS and dye results are presented in Table 3-2. Water depths measured at sampling stations during the field activities are also presented in the table.
- Data for Event 3 conducted on June 4, 1997 are provided in Figure 3-3.
- Data for Event 4 conducted on June 17, 1997 are provided in Figure 3-4.

1996 and 1997 total PCB and TSS data comparisons

- Comparisons of 1996 and 1997 PCB and TSS data for each sampling station are provided in Figures 3-5 and 3-6, respectively.

PCB composition data

- PCB homolog distributions for 1996 and 1997 time of travel survey data and PCRDMP data collected during the surveys are presented in Table 3-3.
- Comparisons of PCB homolog distributions of 1996 and 1997 Thompson Island time of travel survey data are presented in Figures 3-7 and 3-8, respectively.
- PCB congener distributions for selected Thompson Island Pool time of travel sampling stations are presented in Appendix K.

Additional data

- For reference, PCRDMP total PCB results for samples collected during Thompson Island Pool studies are presented in Table 3-3.
- Time of travel estimates used to schedule sampling times at each station are provided in Appendix B.
- USGS flow data are presented in Appendix B.
- Precipitation data for the Snook Kill and Moses Kill watersheds and portions of the Hudson River watershed upstream of these tributaries are presented in Appendix C.

3.2. Evaluation of the accuracy of the Thompson Island Dam sampling station

Evaluation of the accuracy of the Thompson Island Dam weekly sampling station (HRM 188.5W) consisted of time of travel sampling of single parcels of water traveling downstream. Sampling was conducted at stations upstream and downstream of the dam (Figures 1-1 and 1-4). Data collected in the vicinity of Thompson Island Dam are presented as follows:

Total PCB and TSS results

- PCB and TSS results of transect sampling upstream of the dam (Transect TIP-18) are presented in Table 3-4.
- PCB and TSS results of temporal composite sampling in the vicinity of the dam on August 13-14, 1997 are presented in Table 3-5.
- PCB and TSS results of transect sampling downstream of the dam (Transect TID) are presented in Table 3-6.
- A comparison of PCB and TSS results are presented in Table 3-7.

Data comparisons

- A comparison of PCB concentrations at the transect station upstream of the dam and data collected at the dam is presented in Figure 3-9.
- A comparison of the Thompson Island Dam profile transect sampling station data and data collected at the dam is presented in Figure 3-10.
- A comparison of additional PCB and TSS data collected at stations in the vicinity of the dam is presented in Figure 3-11.
- A scatter plot comparison of PCB and TSS concentrations at stations in the vicinity of the dam (June - October, 1997) is presented in Figure 3-12.
- A scatter plot comparison of PCB concentrations at stations in the vicinity of the dam over time is presented in Figure 3-13.

PCB composition data

- PCB homolog data are presented in Table 3-3.
- A comparison of mean PCB homolog distributions of transect stations upstream of the dam and data collected at the dam are presented in Figures 3-14 and 3-15.
- A comparison of mean PCB homolog distributions of the center sampling station upstream of the dam and data collected at the dam are presented in Figure 3-16.
- A comparison of mean PCB homolog distributions of stations in the vicinity of Thompson Island Dam data are presented in Figure 3-17.
- PCB congener distributions are presented in Appendix K.

PCB mass transport estimates

- A comparison of PCB mass transport estimates at the transect sampling station upstream of the dam and data collected at the dam is presented in Figure 3-18.
- A comparison of PCB mass transport estimates at stations in the vicinity of the is dam summarizing data collected in August and September 1997 is presented in Figure 3-19.
- A comparison of PCB mass transport estimates at stations in the vicinity of the dam summarizing data collected in October 1997 is presented in Figure 3-20.

Additional data

- Water quality data collected on August 13, 1997 are presented in Table 3-5.
- For reference, PCRDMP total PCB results for samples collected during Thompson Island Pool studies are presented in Table 3-3.
- USGS flow data are presented in Appendix B.
- Precipitation data for the Snook Kill and Moses Kill watersheds and portions of the Hudson River watershed upstream of these tributaries are presented in Appendix C.

3.3. Additional data collected downstream of Thompson Island Dam

Data collected at Fort Miller and Schuylerville on August 13 and 14, 1997 are presented in Tables 3-5 and 3-8. Samples were collected at these stations from the same parcel of water sampled in the vicinity of Thompson Island Dam on August 13, 1997. Time of travel estimates are presented in Appendix B. Flow data recorded at the USGS Fort Edward gaging station during sampling are provided in Appendix B. Additional data were collected at Schuylerville on October 1, 10, and 16, 1997 (Table 3-8).

3.4. Quality assurance/quality control

A tier 1 QA/QC review of data was conducted. From this review it was concluded that the data quality was acceptable for intended purposes. A summary of the review for PCB analyses is provided below:

- PCB samples were analyzed within the prescribed analytical holding times. Extraction times were not included in the data packages, therefore extraction holding times were not reviewed.
- PCB matrix spike recoveries were within the prescribed recovery limits of 70% to 130% (Tables 2-3 and 3-9).
- PCB and TSS duplicates were within the prescribed limit of 35% (Tables 2-3 and 3-9)
- Equipment blanks were less than the detection limit except one equipment blank as discussed below (Table 2-2).

3.4.1. September 1996 laboratory contamination of Aroclor 1260

On September 24, 1996, contamination of the laboratory distilled water source with Aroclor 1260 PCBs was reported related to other work in the laboratory at the time. This occurrence was indicated as the source of contamination of equipment blank FS2-2W-EQBL collected before the second Thompson Island Pool time of travel survey conducted on September 25, 1996.

Aroclor 1260 was not identified in other samples except sample FS2-13W which contained PCBs at 66 ng/l resembling altered Aroclors 1260 and 1242. The source of the Aroclor 1260 in that field sample is likely attributed to the laboratory contamination. A duplicate sample collected at this location had a

PCB concentration of 28 ng/l with a composition that resembled altered Aroclor 1242. The laboratory reported that the concentration of altered Aroclor 1242 in the original sample was similar to the duplicate.

3.4.2. October 1997 laboratory contamination of Aroclor 1260
Laboratory contamination with Aroclor 1260 was detected in wipe samples collected from laboratory equipment during October. Detection of Aroclor 1260 in the October 1, 1997 sample from station TIP-18SW was likely due to laboratory contamination. The laboratory reportedly discarded associated laboratory ware and cleaned laboratory surfaces. Detection of PCBs in the October 16, 1997 PCRDMP equipment blank may also be associated with the laboratory contamination. Additional samples may have been affected by this problem. Samples with heptachlorobiphenyls were uncharacteristic of data typically collected in Thompson Island Pool. Weight percent concentrations of heptachlorobiphenyl greater than 3 percent are likely due to the presence of Arcolor 1260 contamination. Detection of weight percent concentrations of heptachlorobiphenyl less than 3 percent may be due to environmental Arcolor 1254 in the pool or Aroclor 1260 contamination. Due to the uncertainty associated with the laboratory contamination, samples containing detectable heptachlorobiphenyls were qualified as estimates (Table 3-3).

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Table 1-1. Thompson Island Dam evaluation: sample locations, collection procedures, and data interpretation notes.

Site Identification	Location Description	Approx. River Mile	River Bed Geometry	Sample Collection	Data Interpretation Notes
TIP - 18C	Middle of river approx. 1000 ft upstream of Thompson Island Dam.	HRM 188.6	Main river flow toward east portion of river. Water depth at sampling station typically 8-10 feet deep during low flow.	Depth-integrated composite sample collected with a Kemmerer sampler from a boat.	Sampling at this location is generally considered representative of overall water column PCB concentrations. Transect sampling at six stations across the river verified that water column PCB concentrations were similar across the river.
TIP-18SW	Approx. 1000 ft upstream of Thompson Island Dam collected at edge of weed bed.	HRM 188.6	Water depth approximately 1 ft.	Surface grab sample collected by submerging sample bottles from a boat.	Samples have been collected at this station to investigate near-shore PCB concentrations. Surface grab sample data collected from near shore are not intended for estimating overall water column PCB loading. Such samples have been demonstrated to be unreliable for that purpose.
HRM 188.5, HRM 188.5W	West channel from west dam abutment, approx. 5ft upstream of Thompson Island Dam; routine PCRDMP sampling station.	HRM 188.5	Shallow water depth, 3-4 feet deep, at this near shore sampling station.	Surface grab sample collected from the dam abutment with a stainless steel bucket.	Evaluation of surface grab sample data for estimating PCB transport from Thompson Island Pool is an objective of the 1996-1997 Thompson Island Pool Studies.
HRM 188.5IW	West channel, from west dam abutment of Thompson Island, approx 5 ft upstream of Thompson Island Dam.	HRM 188.5	Shallow water depth, 3-4 feet deep, at this near shore sampling station	Surface grab sample collected from the dam abutment with a stainless steel bucket.	Evaluation of surface grab sample data for estimating PCB transport from Thompson Island Pool is an objective of the 1996-1997 Thompson Island Pool Studies.
HRM 188.5E	East channel, east dam abutment, approx. 5 ft upstream of Thompson Island Dam.	HRM 188.5	Shallow water depth, 3-4 feet deep, at this near shore sampling station	Surface grab sample collected from the dam abutment with a stainless steel bucket.	Evaluation of surface grab sample data for estimating PCB transport from Thompson Island Pool is an objective of the 1996-1997 Thompson Island Pool Studies.

310631

Table 1-1. Thompson Island Dam evaluation: sample locations, collection procedures, and data interpretation notes.

Site Identification	Location Description	Approx. River Mile	River Bed Geometry	Sample Collection	Data Interpretation Notes
TID-PRW	West channel water column profile station approx. 200 ft downstream of Thompson Island dam.	HRM 188.48	Typical total water depth 11-12 ft deep at center of river. Represents approx. 40 % of total flow from both channels.	Depth-integrated composite sample collected with a Kemmerer sampler in west channel from a boat. Sampling generally consists of a single sample collected from the center of the river, however two additional samples were collected approx. equidistant to the east and west shores during September sampling events.	Sampling at this location is generally considered representative of overall water column PCB concentrations. Transect sampling at three stations across the west channel of the river verified that water column PCB concentrations were similar across the river. Station TID-PRW2 located at the approx. center of the river was added to the weekly sampling program in October 1997.
TID-PRE	East channel water column profile station approx. 200 ft downstream of Thompson Island dam.	HRM 188.48	Water depth approx. 5 ft at center of river. Represents approx. 60 % of total flow from both channels.	Depth-integrated composite sample collected with a Kemmerer sampler in east channel from a boat. Sampling generally consists of a single sample collected from the center of the river, however two additional samples were collected approx. equidistant to the east and west shores during September sampling events.	Sampling at this location is generally considered representative of overall water column PCB concentrations. Transect sampling at three stations across the west channel of the river verified that water column PCB concentrations were similar across the river. Access to east channel is more difficult than from the west channel.
FM	Center of river upstream of the Lock 6 dam at Fort Miller, in vicinity of caution buoys upstream of the dam.	HRM 186.3	Water depth varied from 4-8 ft across river at low flow.	Depth-integrated composite sample collected with a Kemmerer sampler from a boat.	It is assumed that depth integrated samples collected at this station are representative of the overall water column.

310632

Table 1-1. Thompson Island Dam evaluation: sample locations, collection procedures, and data interpretation notes.

Site Identification	Location Description	Approx. River Mile	River Bed Geometry	Sample Collection	Data Interpretation Notes
SCH	Middle section of river navigation channel at Route 29 bridge, Schuylerville.	HRM 181.4	Typical total water depth approx. 15-16 ft.	Depth-integrated composite sample collected from the bridge using a Kemmerer sampler.	It is assumed that depth integrated samples collected at this station are representative of the overall water column.

Note: HRM = Hudson River Mile. Mile 0.0 is located at the Battery in New York City

Source: O'Brien & Gere Engineers, Inc.

310633

Table 2-1. Analytical methods, sample containers, preservation methods, holding times and field QC

Parameter	Method	Sample bottle	Preservation	Holding Times	Field QA/QC
All 1996 - 1997 Thompson Island Pool sampling events					
PCBs	NEA608CAP	1-L glass	chilled to approx. 4°C	7 days to extraction, 40 days to analysis	Matrix spike, Duplicate, Equipment blank
Total suspended solids (TSS)	USEPA 160.2	1-L plastic	chilled to approx. 4°C	7 days	Duplicate
September 13-14 Thompson Island dam evaluation samplling event					
Total solids (TS)	USEPA 160.3	250-ml plastic	chilled to approx. 4°C	7 days	Duplicate
Total organic carbon (TOC)	USEPA 415.2	250-ml plastic	1-ml 1/1 H_2SO_4	28 days	Duplicate
Particulate organic carbon (POC)	USEPA 415.1	1-L plastic	chilled to approx. 4°C	14 days	Duplicate
Chlorophyll-a	Standard Method 10200H3	1-L glass covered w/ Al foil	chilled to approx. 4°C, maintain in dark	ASAP	Duplicate

Notes:

[1] Samples collected for this monitoring program were analyzed along with routine PCRDMP samples; QA/QC samples collected for PCRDMP analyses on same dates were included in the evaluation of analytical performance.

Source: O'Brien & Gere Engineers, Inc.

Table 2-2. Field sampling PCB quality assurance/quality control parameters.

QA/QC Sample Type	Purpose	Evaluation Procedure	Criteria	1996 -1997 Results No. of samples	Mean
Matrix spike	Evaluate accuracy of PCB quantification in the field media.	Duplicate samples are spiked with a known quantity of analyte by the laboratory. The percent recovery is calculated.	Spike recoveries are expected to be in the 70 to 130 recovery range.	27	91%
Duplicate	Evaluate the precision of analyses.	A relative percent difference (RPD) is calculated as: RPD = (C1 - C2) / ([C1+C2]) / 2) where C1 is the original sample and C2 is the duplicate sample.	The RPD is expected to be less than 35%. RPD is not calculated (NC) for samples and duplicates with total PCBs <11 ng/l.	32	13%
Equipment blank	Evaluate the effectiveness of equipment cleaning procedures.	Detection of PCBs in the equipment blank requires evaluation of source and correction of contamination problem.	Detection of PCBs in the equipment blank results in qualification of the associated field samples. Field sample concentrations <5 times the concentration of the equipment blank are qualified with a "U." Field sample concentrations >5 times the detection limit are qualified with a "J."	36	<11 ng/L

Source: O'Brien & Gere Engineers, Inc.

310635

Table 3-1. 1996 Thompson Island Pool Time of Travel Surveys - Total PCB and TSS data

September 24, 1996

		West Section			Center Channel			East Section		
Station	Time	PCBs (ng/l)	TSS (mg/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	Water depth (ft)
1	0730	<11	<1.2	1.5	-	-	-	<11	1.5	2.7
2	0736	<11	<1.2	3	-	-	-	12	1.6	2.5
3	0749	<11	<1.3	7	-	-	-	<11	1.5	6
4	0803	<11	1.2	6	-	-	-	<11	1.5	10
5	0820	<11	1.3	16	16	<1.0	14	14	2.7	13
6	0835	12	1.6	14	15	2.4	16	14	1.6	9
7	0850	12	1.4	4	13	1.4	14	14	1.9	11
8	0937	52	1.7	7	113*	1.5	13	27	1.9	8
9	1021	34 (42)	1.4 (1.5)	10	23	1.5	14	25	1.9	13
10	1056	17	1.1	9	21	1.8	15	27	2.5	5
11	1131	18	2.6	15	21	2.0	14	21	2.0	11
12	1227	21	3.7	9	23	4.0	16	74 (70)	2.9 (2.7)	12
13	1318	20	4.4	8	25	3.5	14	39	3.7	13
14	1418	27	3.8	10	26	3.5	15	56	3.4	8
15	1541	31	3.7	15	50 (54)	3.3 (2.9)	20	113	3.5	8
16	1629	40	4.4	18	67	3.1	18	90	4.5	17
17	1717	52	3.0	10	58	3.8	12	60	4.5	15
18	1816	52	3.3	6	59	3.2	7	53	1.5	10

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242, except as noted by an asterisk (*), indicating the laboratory reported an Aroclor 1248 PCB composition.

West Section = samples collected at approximate mid-point between center of channel and west shore of river.

Center Channel = samples collected at approximate mid-point between buoy markers identifying channel width.

East Section = samples collected at approximate mid-point between center of channel and east shore of river.

Data presented in parentheses ( ) are the results of duplicate analyses.

On September 24, 1996, daily average flow at the USGS Fort Edward gaging station was approximately 4,700 cfs; estimated mean flow for the parcel sampled was approximately 4,600 cfs and flows ranged from 3,700 to 5,800 cfs with a standard deviation of 350 cfs during sampling.

Source: O'Brien & Gere Engineers, Inc.

310636

Table 3-1. 1996 Thompson Island Pool Time of Travel Surveys - Total PCB and TSS data

September 25, 1996

		West Section			Center Channel			East Section		
Station	Time	PCBs (ng/l)	TSS (mg/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	Water depth (ft)
1	0700	<11	1.0	2.4	-	-	-	<11	<1.0	2.7
2	0706	<11	1.4	4	-	-	-	<11	1.2	2.5
3	0717	<11	1.5	7	-	-	-	15	<1.0	8
4	0727	<11	1.5	6	-	-	-	<11	1.6	10
5	0738	30	<1.0	16	<11	1.5	16	11	1.7	17
6	0751	<11	1.2	13	<11	1.6	16	18	1.9	10
7	0804	13	1.1	4	<11	1.3	14	<11	1.9	11
8	0846	11	1.2	7	<11	1.0	13	15	1.9	10
9	0925	28	1.2	10	<11	1.0	14	27	1.7	8
10	0956	31	<1.0	9	28	1.4	15	16	1.3	4
11	1027	39	1.2	15	22 (23)	1.4 (1.6)	14	27	<1.0	9
12	1123	21	1.5	9	26	2.9	16	110	5.2	14
13	1214	{74} (35)	2.3 (2.3)	8	19	2.3	15	17	1.2	13
14	1314	36	2.9	10	40	2.0	19	61	<1.0	15
15	1437	27	1.9	15	38	2.1	24	72	1.1	15
16	1525	39	2.2	18	50	1.0	17	62 (72)	1.2 (1.1)	13
17	1613	48	1.8	10	61	2.2	14	77	1.5	15
18	1712	53	2.0	6	50	2.2	5	67	1.7	10

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242, except data presented in braces { }; that sample exhibited elevated PCB concentration and unusual PCB composition consisting of highly altered Aroclor 1260 type pattern along with the typical altered Aroclor 1242 pattern at a concentration similar to the duplicate of this sample. Laboratory contamination appears to be the likely source of the altered Aroclor 1260 detected. Equipment blank FS2-W-EQBL1 had Aroclor 1260 at 54 ng/l due to laboratory contamination error attributed to distilled water supply. Corrective actions eliminated the problem.

West Section = samples collected at approximate mid-point between center of channel and west shore of river.

Center Channel = samples collected at approximate mid-point between buoy markers identifying channel width.

East Section = samples collected at approximate mid-point between center of channel and east shore of river.

Data presented in parentheses ( ) are the results of duplicate analyses.

On September 25, 1996, daily average flow at the USGS Fort Edward gaging station was approximately 5,100 cfs; estimated mean flow for the parcel sampled was approximately 5,100 cfs and flows ranged from 4,100 to 6,400 cfs with a standard deviation of 650 cfs during sampling.

Source: O'Brien & Gere Engineers, Inc.

310637

Table 3-2. 1997 Thompson Island Pool Time of Travel Surveys - Total PCB, TSS, and dye data

June 4, 1997

		West Section				Center Channel				East Section			
Station	Time	PCBs (ng/l)	TSS (mg/l)	dye (ug/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	dye (ug/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	dye (ug/l)	Water depth (ft)
2	0853	<11	1.8	1.5	4	-	-	-	-	11	2.1	1.9	4
3	0906	<11	1.5	1.5	9	-	-	-	-	{30}	2.5	1.9	8
5	0936	<11	1.8	1.4	15	17	2.1	1.2	18	11	1.9	0.7	16
7	1038	22	1.4	0.4	4	17	2.1	0.8	14	<11	2.6	0.8	10
9	1105	{64} (<11)	1.6 (2.0)	0.1 (0.1)	7	14	2.0	0.5	16	<11	1.8	0.2	13
10	1140	84	1.6	0.1	11	47	2.1	0.2	16	16	2.3	0.2	6
11	1153	79	1.4	0.1	11	22	1.4	0.5	15	17	2.4	0.4	11
11A	1204	59	2.4	0.1	10	24	1.7	0.5	16	14	2.3	0.5	15
11B	1240	<11	1.8	0.2	9	22	2.1	0.6	16	198	2.3	0.2	12
12	1255	<11	2.7	0.2	8	22	1.9	0.5	16	267	2.8	0.1	7
12A	1333	96	2.7	0.2	11	30	2.2	0.6	14	109 (92)	1.6 (1.5)	0.4 (0.4)	9
13	1406	92	3.1	0.2	10	60	2.1	0.5	14	52	1.7	0.7	14
13A	1430	101	3.3	0.2	27	31	1.7	0.7	16	114	1.6	0.4	19
14	1448	44	2.1	0.5	15	45	1.8	0.6	18	100	1.6	0.4	10
14A	1517	51	2.3	0.4	14	42	1.7	0.5	14	85	1.5	0.3	7
15	1534	49	2.7	0.3	17	43	1.8	0.5	20	111	1.7	0.2	23
15A	1615	50	2.4	0.3	21	69	1.7	0.4	20	110	1.6	0.2	16
16	1625	57	2.3	0.2	5	67	1.5	0.4	20	93	1.8	0.3	20
17	1707	84	2.0	0.3	7	69	2.2	0.4	13	78	2.2	0.3	14
18	1755	81	1.4	0.3	6	84 (81)	1.9 (1.5)	0.3 (0.4)	7	76	2.2	0.3	11
HRM 188.5	1815	113	2.0	0.2	surface	-	-	-	-	-	-	-	-

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242 except data presented in braces { } which may include a component of Aroclor 1260 as indicated by elevated heptachlorobiphenyls . The presence of Aroclor 1260 is atttributed to laboratory contamination.

West Section = samples collected at approximate mid-point between center boat and west shore of river

Center Channel = samples collected at approximate mid-point between buoy markers identifying channel width or peak dye concentration

East Section = samples collected at approximate mid-point between center boat and east shore of river

Data presented in parentheses ( ) are the results of duplicate analyses.

On June 4, 1997, daily average flow at the USGS Fort Edward gaging station was approximately 4,500 cfs; estimated mean flow for the parcel of water sampled was approximately 4,500 cfs and flows ranged from 3,000 to 5,500 cfs with a standard deviation of 500 cfs during sampling.

Source: O'Brien & Gere Engineers, Inc.

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Table 3-2. 1997 Thompson Island Pool Time of Travel Surveys - Total PCB, TSS, and dye data

June 17, 1997

		West Section				Center Channel				East Section			
Station	Time	PCBs (ng/l)	TSS (mg/l)	dye (ug/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	dye (ug/l)	Water depth (ft)	PCBs (ng/l)	TSS (mg/l)	dye (ug/l)	Water depth (ft)
2	0910	29	3.9	1.3	3	-	-	-	-	34	3.8	1.0	4
3	0950	{29}	2.7	1.3	4	-	-	-	-	49	3.8	0.5	9
5	1045	34	2.4	0.6	14	33	3.3	1.2	14	72	3.3	0.0	16
7	1202	{91}	2.0	0.0	4	37	2.8	0.9	13	36	4.5	0.9	13
9	1345	{197} (145)	1.9 (1.9)	0.0 (0.0)	10	52	3.2	0.3	15	88	2.2	0.7	11
10	1415	95	1.8	0.3	10	68	2.8	0.4	14	77	2.0	0.5	5
11	1425	105	2.2	0.3	12	50	2.9	0.6	10	74	1.7	0.3	5
11A	1438	81	2.3	0.3	13	25	2.5	0.4	14	50	2.2	0.3	14
11B	1502	110	3.1	0.2	10	67	3.0	0.5	13	137	1.8	0.1	14
12	1520	116	3.0	0.3	8	65	2.7	0.4	16	126	1.9	0.2	14
12A	1600	100	3.9	0.2	12	68	1.5	0.3	13	224 (214)	1.9 (2.2)	0.2 (0.1)	11
13	1611	96	4.2	0.2	13	89	1.9	0.3	12	45*	1.8	0.3	11
13A	1625	{156}	3.8	0.1	20	75	1.4	0.3	16	154	2.2	0.0	9
14	1643	{126}	2.9	0.2	15	{106}	2.0	0.2	14	133	2.2	0.1	6
14A	1713	134	4.2	0.1	14	86	2.0	0.3	15	144	2.4	0.0	6
15	1803	{134}	3.8	0.2	14	{113}	2.2	0.3	19	191	2.0	0.0	12
15A	1830	{133}	4.6	0.1	21	112	9.9	0.3	18	168	2.4	0.1	15
16	1848	120	4.7	0.2	14	121	2.1	0.2	18	179	2.4	0.1	18
17	1923	{141}	3.8	0.2	7	102	2.0	0.2	13	194	3.0	0.1	15
18	2020	{136}	3.0	0.2	5	95 (116)	1.7	0.2 (0.2)	10	153	2.9	0.1	10
HRM 188.5	2050	272	4.2	0.1	surface	-	-	-	-	-	-	-	-

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242 except data presented in braces { } which may include a component of Aroclor 1260 as indicated by elevated heptachlorobiphenyls . The presence of Aroclor 1260 is atttributed to laboratory contamination. *Low surrogate recovery for sample (35%) indicates extraction problem.; actual PCB concentration of the sample is expected to be higher than that reported by laboratory.

West Section = samples collected at approximate mid-point between center boat and west shore of river.

Center Channel = samples collected at approximate mid-point between buoy markers identifying channel width or peak dye concentration.

East Section = samples collected at approximate mid-point between center boat and east shore of river.

Data presented in parentheses ( ) are the results of duplicate analyses.

On June 17, 1997, daily average flow at the USGS Fort Edward gaging station was approximately 2,800 cfs; estimated mean flow for the parcel of water sampled was approximately 3,700 cfs and flows ranged from 1,200 cfs to 6,100 cfs with a standard deviation of 1,000 cfs during sampling.

Source: O'Brien & Gere Engineers, Inc.

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Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%) mono	di	tri	tetra	penta	hexa	hepta
09/18/96	HRM 197.0	P	<11	---	---	---	---	---	---	---
	HRM 194.2	P	<11	---	---	---	---	---	---	---
	HRM 194.2	P, BD	<11	---	---	---	---	---	---	---
	HRM 188.5W	---	65	10.6	40.3	30.5	14.2	3.9	0.6	0.0
	TIP-18 1	---	75	9.6	27.5	25.8	20.9	12.1	4.1	0.0
	TIP-18 2	---	48	12.0	38.2	25.2	18.7	5.0	1.0	0.0
	TIP-18 3	---	54	8.8	35.6	29.8	17.8	6.5	1.5	0.0
	TIP-18 4	---	53	9.2	40.5	27.4	17.4	4.8	0.8	0.0
	TIP-18 4	BD	65	6.5	26.6	31.1	21.3	11.5	3.1	0.0
	TIP-18 5	---	58	10.2	36.8	27.7	18.7	5.9	0.8	0.0
	TIP-18 6	---	71	10.3	39.8	27.6	16.3	5.2	0.9	0.0
	HRM 188.5W	---	142	8.3	23.7	32.8	24.5	8.8	2.0	0.0
	HRM 188.5E	---	102	10.7	34.8	29.9	16.9	6.3	1.3	0.0
	HRM 188.5E	BD	99	12.0	36.4	29.5	15.1	5.7	1.3	0.0
09/24/96	HRM 197.0	P	<11	---	---	---	---	---	---	---
	FS1-1W	P	<11	---	---	---	---	---	---	---
	FS1-1E	P	<11	---	---	---	---	---	---	---
	FS1-2W	P	<11	---	---	---	---	---	---	---
	FS1-2E	P	12	0.0	30.5	26.7	29.9	10.4	2.6	0.0
	FS1-3W	P	<11	---	---	---	---	---	---	---
	FS1-3E	P	<11	---	---	---	---	---	---	---
	FS1-4W	P	<11	---	---	---	---	---	---	---
	FS1-4E	P	<11	---	---	---	---	---	---	---
	FS1-5W	P	<11	---	---	---	---	---	---	---
	FS1-5C	P	16	0.0	19.0	37.3	28.0	12.8	2.9	0.0
	FS1-5E	P	14	0.0	21.5	37.5	25.9	11.3	3.8	0.0
	FS1-6W	P	12	0.0	23.6	39.2	23.2	11.7	2.5	0.0
	FS1-6C	P	15	0.0	21.4	41.3	24.0	11.0	2.4	0.0
	FS1-6E	P	14	0.0	20.9	33.1	33.3	10.5	2.2	0.0
	FS1-7W	P	12	0.0	21.2	42.7	22.1	12.0	2.1	0.0
	FS1-7C	P	13	0.0	24.7	38.1	23.6	10.6	3.0	0.0
	FS1-7E	P	14	0.0	20.5	36.0	30.4	10.6	2.6	0.0
	FS1-8W	---	52	29.9	39.1	19.5	7.9	3.0	0.6	0.0
	FS1-8C	---	113	0.0	3.1	8.6	52.3	29.8	6.2	0.0
	FS1-8E	P	27	8.7	34.7	29.4	18.0	7.6	1.7	0.0
	FS1-9W	P	34	16.8	38.8	28.2	10.7	4.0	1.6	0.0
	FS1-9W	P,BD	42	13.3	35.5	19.1	14.6	11.8	5.6	0.0
	FS1-9C	P	23	0.0	36.2	32.9	21.4	7.9	1.5	0.0
	FS1-9E	P	25	8.9	33.6	28.2	20.2	7.3	1.7	0.0
	FS1-10W	P	17	10.6	28.6	32.8	18.0	8.1	2.0	0.0
	FS1-10C	P	21	0.0	35.8	35.8	19.0	7.6	1.8	0.0
	FS1-10E	P	27	14.6	33.5	28.0	16.2	6.1	1.7	0.0
	FS1-11W	P	18	0.0	46.0	27.9	20.5	4.1	1.4	0.0
	FS1-11C	P	21	0.0	35.4	33.4	19.5	9.5	2.2	0.0
	FS1-11E	P	21	6.7	30.5	30.1	21.8	8.4	2.5	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%) mono	di	tri	tetra	penta	hexa	hepta
09/24/96	FS1-12W	P	21	14.6	30.9	26.8	19.1	6.7	1.9	0.0
	FS1-12C	P	23	0.0	35.8	34.2	19.9	7.6	2.5	0.0
	FS1-12E	---	74	19.0	37.6	23.3	12.8	5.9	1.5	0.0
	FS1-12E	BD	70	19.5	36.9	25.4	12.5	4.8	1.0	0.0
	FS1-13W	P	20	0.0	29.4	35.1	24.8	8.3	2.4	0.0
	FS1-13C	P	25	0.0	40.9	31.2	16.2	9.2	2.5	0.0
	FS1-13E	P	39	12.9	32.1	24.5	14.8	11.7	4.1	0.0
	FS1-14W	P	27	0.0	42.3	34.0	15.5	6.7	1.6	0.0
	FS1-14C	P	26	0.0	43.4	28.1	17.3	9.4	1.9	0.0
	FS1-14E	---	56	15.3	41.0	25.7	12.5	4.6	0.9	0.0
	FS1-15W	P	31	11.4	38.9	27.1	15.4	5.6	1.5	0.0
	FS1-15C	---	50	21.4	35.7	23.9	11.8	5.8	1.4	0.0
	FS1-15C	BD	54	12.3	35.1	26.5	16.6	7.9	1.6	0.0
	FS1-15E	---	113	15.3	35.6	24.7	14.3	7.9	2.2	0.0
	FS1-16W	P	40	14.1	39.4	26.1	14.3	5.1	1.1	0.0
	FS1-16C	---	67	12.0	45.4	26.4	11.2	4.4	0.5	0.0
	FS1-16E	---	90	15.9	38.6	26.2	13.1	5.2	0.9	0.0
	FS1-17W	---	52	13.5	39.0	25.2	14.5	6.5	1.3	0.0
	FS1-17C	---	58	12.9	43.4	26.2	12.4	4.4	0.7	0.0
	FS1-17E	---	60	11.7	37.3	29.8	14.1	5.9	1.2	0.0
	FS1-18W	---	52	15.3	40.3	25.7	13.5	4.5	0.9	0.0
	FS1-18C	---	59	16.2	44.0	23.8	11.2	4.1	0.6	0.0
	FS1-18E	---	53	16.9	39.0	25.0	12.9	5.0	1.2	0.0
09/25/96	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P,DM	34	0.0	11.8	49.4	30.5	7.1	1.3	0.0
	HRM 194.2	P	<11	---	---	---	---	---	---	---
	HRM 194.2	P,BD	<11	---	---	---	---	---	---	---
	HRM 188.5W	---	53	11.7	48.5	22.4	13.0	3.7	0.6	0.0
	EQBL1-FS2W	J1260	56	0.0	3.5	2.3	5.0	24.4	40.2	24.6
	FS2-1W	P	<11	---	---	---	---	---	---	---
	FS2-1E	P	<11	---	---	---	---	---	---	---
	FS2-2W	P	<11	---	---	---	---	---	---	---
	FS2-2E	P	<11	---	---	---	---	---	---	---
	FS2-3W	P	<11	---	---	---	---	---	---	---
	FS2-3E	P	15	0.0	52.0	20.6	20.4	5.5	1.5	0.0
	FS2-4W	P	<11	---	---	---	---	---	---	---
	FS2-4E	P	<11	---	---	---	---	---	---	---
	FS2-5W	P	30	0.0	12.9	21.4	25.7	20.7	19.3	0.0
	FS2-5C	P	<11	---	---	---	---	---	---	---
	FS2-5E	P	<11	---	---	---	---	---	---	---
	FS2-6W	P	<11	---	---	---	---	---	---	---
	FS2-6C	P	<11	---	---	---	---	---	---	---
	FS2-6E	P	18	0.0	41.5	31.3	19.2	6.5	1.5	0.0
	FS2-7W	P	13	0.0	37.8	32.2	22.1	5.7	2.2	0.0
	FS2-7C	P	<11	---	---	---	---	---	---	---
	FS2-7E	P	<11	---	---	---	---	---	---	---

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%) mono	di	tri	tetra	penta	hexa	hepta
09/25/96	FS2-8W	P	<11	---	---	---	---	---	---	---
	FS2-8C	P	<11	---	---	---	---	---	---	---
	FS2-8E	P	15	0.0	33.7	36.3	20.6	7.0	2.5	0.0
	FS2-9W	P	28	0.0	59.1	25.4	10.2	3.9	1.5	0.0
	FS2-9C	P	<11	---	---	---	---	---	---	---
	FS2-9E	P	27	0.0	54.1	24.3	15.0	4.7	1.9	0.0
	FS2-10W	P	31	10.2	40.1	27.4	13.8	7.1	1.4	0.0
	FS2-10C	P	21	0.0	39.1	31.8	17.7	8.9	2.5	0.0
	FS2-10E	P	28	8.8	39.3	24.3	20.2	6.2	1.3	0.0
	FS2-11W	P	39	15.7	41.2	25.5	11.1	5.1	1.4	0.0
	FS2-11C	P	22	5.7	32.8	30.7	21.1	7.9	1.7	0.0
	FS2-11C	P,BD	23	10.8	28.3	33.7	19.5	6.2	1.6	0.0
	FS2-11E	P	27	6.5	37.7	29.5	17.6	7.3	1.5	0.0
	FS2-12W	P	21	9.3	35.0	29.7	17.0	6.8	2.3	0.0
	FS2-12C	P	26	11.5	40.1	26.2	13.4	7.0	1.8	0.0
	FS2-12E	---	110	10.6	46.0	23.1	12.2	6.5	1.5	0.0
	FS2-13W	J1260	74	7.6	17.0	15.8	14.9	15.9	18.4	10.4
	FS2-13W	P,BD	35	16.9	32.9	28.4	14.0	6.2	1.7	0.0
	FS2-13C	P	19	0.0	55.3	27.8	11.4	4.0	1.5	0.0
	FS2-13E	P	17	0.0	53.2	27.7	8.6	7.5	2.9	0.0
	FS2-14W	P	36	16.4	38.9	25.7	11.5	6.4	1.1	0.0
	FS2-14C	P	40	16.7	44.1	21.4	12.6	4.0	1.3	0.0
	FS2-14E	---	61	16.8	51.1	21.3	7.4	2.6	0.8	0.0
	FS2-15W	P	27	11.9	42.9	24.0	14.0	5.8	1.4	0.0
	FS2-15C	P	38	17.7	37.8	26.3	12.7	4.6	0.9	0.0
	FS2-15E	---	72	0.0	53.9	27.4	12.2	5.1	1.5	0.0
	FS2-16W	P	39	17.3	37.1	23.8	15.7	4.9	1.3	0.0
	FS2-16C	---	50	19.5	42.6	20.8	12.0	4.2	1.0	0.0
	FS2-16E	---	62	0.0	57.6	23.5	11.4	5.9	1.7	0.0
	FS2-16E	BD	72	14.8	49.9	22.6	8.9	3.4	0.5	0.0
	FS2-17W	---	48	17.6	41.3	22.0	12.9	5.1	1.0	0.0
	FS2-17C	---	61	18.9	41.5	22.5	12.6	3.7	0.8	0.0
	FS2-17E	---	77	18.8	46.8	21.8	9.5	2.8	0.5	0.0
	FS2-18W	---	53	19.9	37.7	23.6	13.2	4.6	1.0	0.0
	FS2-18C	---	50	16.6	40.6	23.3	13.4	4.7	1.4	0.0
	FS2-18E	---	67	25.4	43.5	18.3	9.6	2.7	0.5	0.0
10/29/96	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P,DM	19	0.0	15.4	36.8	28.4	15.7	3.8	0.0
	HRM 194.2	P	<11	---	---	---	---	---	---	---
	TIP-18 1	---	62	27.6	37.9	16.1	10.5	7.0	1.0	0.0
	TIP-18 3	---	50	25.2	37.7	19.4	12.2	4.1	1.2	0.0
	TIP-18 5	---	76	27.1	43.8	13.7	10.0	4.6	0.8	0.0
	HRM 188.5W-1	---	123	21.3	38.2	22.4	12.4	5.1	0.6	0.0
	HRM 188.5W-1	BD	125	20.1	40.8	21.3	12.2	5.0	0.7	0.0
	HRM 188.5W-2	---	129	25.5	41.1	16.8	11.7	4.3	0.6	0.0
	HRM 188.5W-3	---	118	23.7	37.2	19.1	14.6	4.9	0.5	0.0
	HRM 188.5W-4	---	102	25.2	40.4	19.3	11.0	3.7	0.5	0.0
	HRM 188.5E	---	111	26.6	41.3	18.0	9.4	4.0	0.6	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	mono	di	tri	tetra	penta	hexa	hepta
				Homologs (wt%)						
06/03/97	HRM 197.0	P	<11	-	-	-	-	-	-	-
	Plunge Pool	P, DM	<11	-	-	-	-	-	-	-
	HR 50 from east	P, DM	<11	-	-	-	-	-	-	-
	HR 20 from east	P, DM	<11	-	-	-	-	-	-	-
	HRM 194.2	P	<11	-	-	-	-	-	-	-
	HRM 188.5W	---	138	25.6	41.3	20.2	8.9	3.5	0.6	0.0
	HRM 188.5W	BD	148	24.3	41.1	19.2	9.2	4.8	1.5	0.0
06/04/97	FS3-2W	P	<11	---	---	---	---	---	---	---
	FS3-2E	P	<11	---	---	---	---	---	---	---
	FS3-3W	P	<11	---	---	---	---	---	---	---
	FS3-3E	P,J1260	30	0.0	0.0	6.5	17.5	25.3	33.7	17.1
	FS3-5W	P	<11	---	---	---	---	---	---	---
	FS3-5C	P	17	0.0	16.8	36.6	32.1	11.7	2.8	0.0
	FS3-5E	P	<11	---	---	---	---	---	---	---
06/04/97	FS3-7W	P	22	0.0	34.1	25.6	22.2	13.9	4.3	0.0
	FS3-7C	P	17	0.0	28.6	25.2	28.3	14.4	3.5	0.0
	FS3-7E	P	<11	---	---	---	---	---	---	---
	FS3-9W		64	26.5	43.4	13.4	8.6	6.6	1.6	0.0
	FS3-9W	P,BD	<11	---	---	---	---	---	---	---
	FS3-9C	P	14	0.0	19.7	24.7	31.8	20.5	3.3	0.0
	FS3-9E	P	<11	---	---	---	---	---	---	---
	FS3-10W	---	84	30.2	40.3	15.4	9.4	3.7	1.0	0.0
	FS3-10C	---	47	27.5	40.4	16.8	10.4	4.0	0.9	0.0
	FS3-10E	P	16	0.0	0.0	19.0	44.4	25.8	10.8	0.0
	FS3-11W	---	79	27.0	42.2	16.3	10.0	3.8	0.7	0.0
	FS3-11C	P	22	0.0	42.1	23.7	18.2	12.0	4.0	0.0
	FS3-11E	P	17	0.0	27.1	30.5	24.8	15.2	2.5	0.0
	FS3-11A-W	---	59	32.9	35.3	16.5	9.1	4.8	1.5	0.0
	FS3-11A-C	P	24	17.2	38.6	23.7	12.8	5.7	2.0	0.0
	FS3-11A-E	P	14	0.0	31.5	30.5	25.2	10.1	2.7	0.0
	FS3-11B-W	P	<11	---	---	---	---	---	---	---
	FS3-11B-C	P	22	0.0	43.2	26.5	20.2	8.0	2.0	0.0
	FS3-11B-E	---	198	41.5	35.4	12.2	7.6	2.7	0.6	0.0
	FS3-12W	P	<11	---	---	---	---	---	---	---
	FS3-12C	P	22	0.0	48.3	22.6	21.0	6.5	1.6	0.0
	FS3-12E	---	267	37.4	39.5	13.6	6.9	2.4	0.3	0.0
	FS3-12A-W	---	96	37.1	43.2	12.3	4.9	1.9	0.7	0.0
	FS3-12A-C	P	30	21.2	41.9	17.6	12.4	5.7	1.3	0.0
	FS3-12A-E	---	109	32.5	39.6	16.5	8.5	2.6	0.4	0.0
	FS3-12A-E	BD	92	28.6	42.7	15.8	9.1	3.0	0.8	0.0
	FS3-13W	---	92	33.8	40.1	12.8	8.0	4.1	1.3	0.0
	FS3-13C	---	60	21.7	46.7	22.9	6.5	1.4	0.8	0.0
	FS3-13E	---	52	15.6	49.4	16.2	12.3	5.3	1.2	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%) mono	di	tri	tetra	penta	hexa	hepta
06/04/97	FS3-13A-W	---	101	32.2	41.4	14.5	8.0	3.1	0.8	0.0
	FS3-13A-C	P	31	11.9	44.6	21.0	15.3	5.4	1.8	0.0
	FS3-13A-E	---	114	22.9	36.4	18.1	12.4	7.8	2.4	0.0
	FS3-14W	---	44	0.0	53.8	25.6	13.7	6.0	0.9	0.0
	FS3-14C	---	45	19.8	36.8	18.0	13.1	9.0	3.3	0.0
	FS3-14E	---	100	40.3	32.6	14.8	8.3	3.6	0.5	0.0
	FS3-14A-W	---	51	19.6	45.9	19.5	9.1	4.9	1.1	0.0
	FS3-14A-C	P	42	16.1	43.2	21.9	13.3	4.6	1.0	0.0
	FS3-14A-E	---	85	20.9	42.8	19.3	11.9	4.6	0.6	0.0
	FS3-15W	---	49	20.7	43.8	17.3	12.4	4.6	1.2	0.0
	FS3-15C	P	43	24.3	40.6	16.5	11.9	5.7	1.0	0.0
	FS3-15E	---	111	27.7	44.9	17.0	7.2	2.8	0.4	0.0
	FS3-15A-W	---	50	19.2	44.2	19.4	11.9	4.1	1.3	0.0
	FS3-15A-C	---	69	25.8	42.9	17.1	9.7	4.0	0.5	0.0
	FS3-15A-E	---	110	25.1	42.8	18.2	9.8	3.5	0.6	0.0
	FS3-16W	---	57	19.1	45.3	19.4	11.3	4.1	0.8	0.0
	FS3-16C	---	67	28.0	43.1	16.9	8.3	3.0	0.8	0.0
	FS3-16E	---	93	25.8	44.4	16.7	9.6	3.0	0.6	0.0
	FS3-17W	---	84	19.8	45.7	20.6	9.7	3.3	1.0	0.0
	FS3-17C	---	69	26.2	37.9	18.3	10.1	5.7	1.8	0.0
	FS3-17E	---	78	19.3	45.9	19.2	10.9	3.9	0.9	0.0
06/04/97	FS3-18W	---	81	27.0	45.3	11.4	10.3	4.5	1.5	0.0
	FS3-18C	---	84	28.0	42.2	17.1	9.0	3.1	0.7	0.0
	FS3-18C	BD	81	24.8	46.5	15.6	9.1	3.5	0.6	0.0
	FS3-18E	---	76	22.4	43.0	19.7	10.8	3.2	0.9	0.0
	HRM 188.5W	---	113	24.7	40.9	20.0	10.0	3.7	0.8	0.0
06/16/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P, DM	15	0.0	30.2	25.6	23.0	16.7	4.5	0.0
	HR 20 from east	P, DM	<11	---	---	---	---	---	---	---
	HR 50 from east	P, DM	<11	---	---	---	---	---	---	---
	HRM 194.2	P	15	0.0	28.0	18.4	28.6	16.7	8.2	0.0
	HRM 194.2	P, BD	15	0.0	28.2	21.2	28.1	15.3	7.2	0.0
	HRM 188.5W	---	413	23.1	40.8	22.4	10.1	2.9	0.6	0.0
06/17/97	FS4-2W	P	29	0.0	27.5	32.4	26.4	10.6	3.1	0.0
	FS4-2E	P	34	0.0	23.7	31.3	30.2	12.3	2.5	0.0
	FS4-3W	P,J1260	29	0.0	20.4	31.3	24.0	12.2	8.3	3.8
	FS4-3E	---	49	0.0	17.5	42.0	34.9	5.5	0.0	0.0
	FS4-5W	P	34	0.0	24.2	36.1	27.5	9.7	2.5	0.0
	FS4-5C	P	33	0.0	25.5	38.0	28.6	7.9	0.0	0.0
	FS4-5E	---	72	13.4	32.7	25.8	22.3	4.9	1.0	0.0
	FS4-7W	J1260	91	8.3	17.0	25.0	20.8	12.5	12.3	4.2
	FS4-7C	P	37	0.0	32.8	31.4	26.2	8.2	1.5	0.0
	FS4-7E	P	36	0.0	25.4	32.2	29.8	10.7	1.8	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%)						
				mono	di	tri	tetra	penta	hexa	hepta
06/17/97	FS4-9W	J1260	197	24.2	28.3	15.8	11.2	8.0	8.8	3.8
	FS4-9W	BD	145	24.8	37.2	19.5	14.3	3.6	0.6	0.0
	FS4-9C	---	52	16.8	27.0	27.2	21.3	6.6	1.1	0.0
	FS4-9E	---	88	21.6	38.8	19.4	14.1	4.9	1.2	0.0
	FS4-10W	---	95	20.1	35.9	23.2	15.2	4.9	0.7	0.0
	FS4-10C	---	68	12.6	34.9	27.6	17.5	6.2	1.3	0.0
	FS4-10E	---	77	15.1	30.7	25.7	21.2	6.4	1.0	0.0
	FS4-11W	---	105	21.4	38.5	21.6	13.5	4.4	0.5	0.0
	FS4-11C	---	50	0.0	29.3	34.5	25.3	9.0	1.9	0.0
	FS4-11E	---	74	12.7	36.3	26.4	18.5	4.9	1.2	0.0
	FS4-11A-W	---	81	15.5	39.3	24.5	15.3	4.7	0.8	0.0
	FS4-11A-C	P	25	0.0	2.7	36.5	43.1	15.2	2.6	0.0
	FS4-11A-E	---	50	0.0	34.1	31.5	24.3	8.2	1.9	0.0
	FS4-11B-W	---	110	21.2	36.4	24.4	12.8	4.3	1.0	0.0
	FS4-11B-C	---	67	11.5	38.7	24.6	17.8	6.5	1.1	0.0
	FS4-11B-E	---	137	24.7	42.0	18.2	11.2	3.2	0.7	0.0
	FS4-12W	---	116	24.8	39.0	20.1	12.2	3.4	0.6	0.0
	FS4-12C	---	65	11.6	34.8	29.0	18.2	5.3	1.1	0.0
	FS4-12E	---	126	21.1	44.2	18.5	12.3	3.4	0.6	0.0
	FS4-12A-W	---	100	19.9	37.3	23.3	13.2	5.3	1.1	0.0
	FS4-12A-C	---	68	12.0	34.2	27.0	19.2	6.5	1.2	0.0
	FS4-12A-E	---	224	28.7	41.7	17.0	9.1	3.1	0.5	0.0
	FS4-12A-E	BD	214	25.2	42.2	18.8	10.2	3.1	0.6	0.0
	FS4-13W	---	96	21.0	38.0	21.0	15.0	4.1	0.8	0.0
	FS4-13C	---	89	17.4	37.1	25.1	14.9	4.7	0.9	0.0
	FS4-13E	---	45	20.7	40.2	19.5	13.4	5.7	0.6	0.0
	FS4-13A-W	J1260	156	24.1	37.7	19.2	11.1	3.7	2.4	1.8
	FS4-13A-C	---	75	14.1	35.5	23.6	19.1	6.1	1.7	0.0
	FS4-13A-E	---	154	20.7	43.9	20.2	10.4	4.2	0.6	0.0
	FS4-14W	J1260	126	21.8	36.4	21.0	13.7	4.3	2.4	0.6
	FS4-14C	J1260	106	13.4	37.5	24.4	15.0	6.1	3.4	0.3
	FS4-14E	---	133	20.4	42.9	20.3	11.7	3.9	0.8	0.0
	FS4-14A-W	---	134	22.5	37.3	21.6	13.3	4.3	1.1	0.0
	FS4-14A-C	---	86	12.8	37.9	25.5	16.5	6.2	1.2	0.0
	FS4-14A-E	---	144	22.7	38.5	21.0	11.9	4.8	1.2	0.0
06/17/97	FS4-15W	J1260	134	17.2	37.9	22.6	13.2	4.6	3.7	0.8
	FS4-15C	J1260	113	11.1	31.1	20.2	15.1	9.7	9.8	3.1
	FS4-15E	---	191	25.0	40.6	20.1	10.3	3.5	0.5	0.0
	FS4-15A-W	J1260	133	21.1	34.7	21.5	12.7	5.1	3.6	1.4
	FS4-15A-C	---	112	18.1	38.6	23.8	14.9	4.1	0.5	0.0
	FS4-15A-E	---	168	19.2	42.4	21.9	12.0	3.8	0.7	0.0
	FS4-16W	---	120	16.4	42.8	22.1	13.8	4.0	0.9	0.0
	FS4-16C	---	121	19.9	36.7	24.7	14.2	3.9	0.6	0.0
	FS4-16E	---	179	19.5	41.9	21.9	12.0	4.0	0.8	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%) mono	di	tri	tetra	penta	hexa	hepta
06/17/97	FS4-17W	J1260	141	22.3	37.8	22.1	11.8	3.8	1.9	0.2
	FS4-17C	---	102	21.8	37.8	21.6	13.7	4.5	0.7	0.0
	FS4-17E	---	194	24.4	41.4	20.0	10.6	3.2	0.4	0.0
	FS4-18W	J1260	136	16.6	38.5	23.1	13.3	5.2	2.4	0.9
	FS4-18C	---	95	11.9	39.9	25.3	16.4	5.7	0.9	0.0
	FS4-18C	BD	116	15.8	39.6	24.3	14.6	5.0	0.7	0.0
	FS4-18E	---	153	18.2	42.5	23.6	11.4	3.7	0.6	0.0
	HRM 188.5W	---	272	23.9	38.5	22.1	11.2	3.5	0.7	0.0
06/30/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	DM	76	0.0	10.1	28.3	45.5	13.2	2.9	0.0
	HR20-East	P, DM	30	0.0	22.1	25.6	28.8	17.8	5.7	0.0
	HR50-East	P, DM	21	0.0	32.2	24.7	25.2	13.8	4.1	0.0
	HRM 194.2	P	18	0.0	32.0	23.4	25.3	13.6	5.7	0.0
	TIP-18C	---	175	20.2	43.2	21.0	10.9	4.1	0.7	0.0
	HRM 188.5W	---	271	20.9	41.6	22.5	10.7	3.4	0.9	0.0
	HRM 188.5W	BD	267	20.0	41.4	23.1	11.2	3.6	0.8	0.0
07/14/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P, DM	17	0.0	35.9	28.6	22.1	10.5	3.0	0.0
	HR20-East	P, DM	22	0.0	24.5	24.2	34.8	13.9	2.6	0.0
	HR50-East	P, DM	<11	---	---	---	---	---	---	---
	HRM 194.2	P	14	0.0	40.6	12.8	25.1	14.5	7.1	0.0
	TIP-18C	---	92	6.6	40.2	29.7	17.1	5.6	0.9	0.0
	HRM 188.5W	---	190	10.4	44.6	27.8	12.5	4.1	0.6	0.0
	HRM 188.5W	BD	189	11.1	43.9	27.6	12.9	3.9	0.6	0.0
07/28/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P, DM	15	0.0	29.3	32.3	22.5	12.8	3.3	0.0
	HR20-East	P, DM, J1260	36	0.0	11.3	18.5	23.9	17.8	21.0	7.6
	HR50-East	DM, P	<11	---	---	---	---	---	---	---
	HRM 194.2	P	19	0.0	31.3	23.2	25.8	16.0	3.7	0.0
	TIP-18C	---	67	4.2	42.9	27.8	18.1	5.7	1.3	0.0
	HRM 188.5	---	115	8.7	42.3	29.4	13.8	5.0	0.8	0.0
	HRM 188.5	BD	116	7.4	42.4	30.2	14.7	4.5	0.7	0.0
08/13/97	TIP-18C	---	50	0.0	42.7	28.4	19.5	8.0	1.5	0.0
	HRM 188.5W	---	90	10.4	37.6	28.7	15.7	7.0	0.5	0.0
	HRM 188.5E	---	81	9.7	41.5	25.2	15.2	6.5	1.9	0.0
	TID-PRW2	---	58	11.7	37.9	23.7	17.7	7.6	1.5	0.0
	TID-PRW2	BD	57	4.9	41.3	28.9	17.0	6.2	1.7	0.0
	TID-PRE2	---	58	11.8	38.2	24.1	17.0	7.2	1.7	0.0
	Fort Miller	---	76	7.4	39.7	29.1	16.4	6.5	1.0	0.0
08/14/97	Schuylerville	---	66	8.0	42.6	27.0	16.3	5.5	0.7	0.0
08/14/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P, DM	15	0.0	26.8	31.5	23.0	14.5	4.2	0.0
	HR20-East	P, DM	<11	---	---	---	---	---	---	---
	HR50-East	P, DM	12	0.0	41.7	24.0	18.5	11.4	4.4	0.0
	HRM 194.2	P	15	0.0	30.2	28.7	23.6	13.4	4.1	0.0
	HRM 188.5W	---	93	8.3	42.7	28.0	15.0	5.4	0.7	0.0
	HRM 188.5W	BD	93	9.0	40.5	29.1	14.8	5.6	0.9	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%) mono	di	tri	tetra	penta	hexa	hepta
09/09/97	1-TIP-18C	---	64	12.8	40.4	22.3	15.1	7.9	1.5	0.0
	1-HRM 188.5W	---	107	19.5	38.0	23.5	11.8	6.5	0.8	0.0
	1-HRM 188.5E	---	98	19.6	41.0	21.2	12.4	5.1	0.8	0.0
	1-TID-PRW1	West	69	13.6	40.0	24.7	12.7	7.8	1.3	0.0
	1-TID-PRW2	Center	60	10.0	43.7	24.3	13.5	7.2	1.5	0.0
	1-TID-PRW3	East	64	15.1	37.5	23.6	14.7	7.5	1.6	0.0
	1-TID-PRE1	East	70	15.0	40.9	23.2	13.1	6.6	1.2	0.0
	1-TID-PRE2	Center	66	10.9	40.8	23.7	14.5	8.6	1.5	0.0
	1-TID-PRE3	West	63	13.4	38.7	22.4	15.8	7.9	1.8	0.0
	2-TIP-18C	---	70	18.2	37.5	21.3	13.3	8.2	1.5	0.0
	2-TIP-18C	BD	64	16.3	39.2	22.2	13.8	7.2	1.4	0.0
	2-HRM 188.5W	---	90	16.1	40.4	23.5	12.2	6.8	1.1	0.0
	2-HRM 188.5E	---	84	11.8	41.7	24.4	13.2	7.7	1.3	0.0
	2-TID-PRW1	West	55	6.6	41.9	26.7	16.4	6.8	1.6	0.0
	2-TID-PRW2	Center	70	9.8	38.6	25.2	15.1	9.5	1.9	0.0
	2-TID-PRW3	East	64	14.9	38.3	23.2	14.1	7.9	1.7	0.0
	2-TID-PRE1	East	69	10.3	38.9	24.6	14.7	9.6	1.9	0.0
	2-TID-PRE2	Center	70	17.4	40.2	20.7	11.6	8.5	1.6	0.0
	2-TID-PRE3	West	62	8.5	44.9	24.6	12.8	7.4	1.7	0.0
09/10/97	Plunge Pool	P, DM	21	0.0	24.9	20.9	28.0	21.5	4.8	0.0
	HR20-East	P, DM	13	0.0	37.1	24.8	19.6	15.0	3.6	0.0
	HR50-East	P, DM	14	0.0	37.9	20.5	18.9	17.7	5.0	0.0
	3-TIP-18C	---	52	7.3	42.5	25.2	14.5	8.5	2.0	0.0
	3-HRM 188.5W	---	94	9.9	35.0	24.3	15.8	11.7	3.3	0.0
	3-HRM 188.5E	---	86	12.6	42.0	22.9	13.6	7.4	1.5	0.0
	3-TID-PRW1	West	67	8.1	38.2	29.0	13.7	9.4	1.7	0.0
	3-TID-PRW2	Center	56	8.5	44.1	24.3	14.6	6.8	1.8	0.0
	3-TID-PRW3	East	55	7.6	39.5	26.2	15.3	9.3	2.1	0.0
	3-TID-PRW3	BD	56	9.7	38.8	25.3	15.6	8.9	1.7	0.0
	3-TID-PRE1	East	59	9.0	38.6	24.1	15.6	11.0	1.8	0.0
	3-TID-PRE2	Center	62	11.1	36.6	26.7	15.3	8.9	1.5	0.0
	3-TID-PRE3	West	60	13.5	39.0	23.8	14.5	7.6	1.7	0.0
10/01/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P, DM	11	0.0	20.5	22.2	27.4	23.2	6.7	0.0
	HR20-East	P	16	0.0	13.4	18.7	26.7	30.9	10.4	0.0
	HR50-East	P	<11	---	---	---	---	---	---	---
	HRM 194.2	P	<11	---	---	---	---	---	---	---
	HRM 194.2	P,BD	<11	---	---	---	---	---	---	---
10/01/97	TIP 18SW	J1260	250	12.1	25.9	14.6	10.4	12.0	17.2	7.8
	TIP 18SW	Archive	152	11.2	41.1	25.6	12.4	6.3	3.0	0.4
	TIP 18C	---	65	18.9	44.2	18.7	10.1	6.6	1.5	0.0
	HRM 188.5W	---	101	20.9	44.7	19.5	9.2	4.7	0.9	0.0
	HRM 188.5 IW	---	60	19.4	44.8	18.2	10.3	5.8	1.5	0.0
	HRM 188.5 IW	BD	55	21.4	44.5	18.0	9.6	5.1	1.5	0.0
	TID PRW2	---	53	15.5	47.8	18.4	10.6	6.2	1.4	0.0
	Schuylerville	---	68	10.4	44.4	24.5	13.0	6.4	1.2	0.0

Table 3-3. PCB homolog distributions

Date Collected	Location (1)	Comments	Total PCBs (ng/l)	Homologs (wt%)						
				mono	di	tri	tetra	penta	hexa	hepta
10/09/97	TIP-18 C	---	74	21.1	42.6	17.0	10.8	5.8	2.8	0.0
	TIP-18 SW	---	128	29.4	42.6	16.5	7.1	3.5	1.0	0.0
	TIP-18 SW	BD	153	32.0	39.8	16.0	8.0	3.4	0.9	0.0
	HRM 188.5W	---	89	26.9	44.3	15.9	7.7	3.8	1.4	0.0
	HRM 188.5 IW	---	74	19.4	39.3	15.1	11.4	10.7	4.1	0.0
	TID-PRW2	---	67	23.7	44.3	18.0	8.8	4.0	1.2	0.0
10/10/97	HRM 197.0	-	<11	-	-	-	-	-	-	-
	Plunge Pool	DM	71	0.0	5.6	15.4	21.7	32.3	22.6	2.3
	HR20 East	DM, P	32	0.0	2.0	27.3	40.5	26.4	3.7	0.0
	HR50 East	DM	<11	-	-	-	-	-	-	-
	HRM 194.2	-	<11	-	-	-	-	-	-	-
	HRM 194.2	BD	<11	-	-	-	-	-	-	-
	Schuylerville	-	86	18.5	42.9	20.6	11.0	5.5	1.6	0.0
10/16/97	HRM 197.0	P	<11	---	---	---	---	---	---	---
	Plunge Pool	P, DM	19	0.0	6.5	28.5	30.1	28.1	6.9	0.0
	HR20-East	P, DM	19	0.0	31.1	29.5	20.0	15.0	4.4	0.0
	HR50-East	P, DM	17	0.0	36.3	31.7	16.9	11.0	4.1	0.0
	HRM 194.2	P	12	0.0	10.3	27.5	25.0	27.7	9.5	0.0
	HRM 194.2	P,BD	<11	---	---	---	---	---	---	---
	TIP-18SW	---	143	22.3	44.6	18.0	8.8	4.3	2.0	0.0
	TIP-18C	---	83	25.3	39.1	18.2	9.4	6.3	1.9	0.0
	HRM 188.5W	---	93	23.7	47.3	17.6	7.5	3.0	0.9	0.0
	HRM 188.5-IW	---	81	22.1	44.0	18.0	8.5	5.7	1.7	0.0
	TID-PRW2	---	86	22.8	42.9	18.2	9.2	5.5	1.5	0.0
	TID-PRW2	BD	89	22.6	44.1	17.4	9.1	5.2	1.6	0.0
	Schuylerville	---	108	20.0	46.6	18.7	8.4	4.8	1.4	0.0

Notes:

(1) HRM = Approximate Hudson River mile; HRM 0.0 is located at the Battery in New York City.

(2) Samples analyzed for PCBs by capillary column using NEA Method 608CAP. PCB data corrected for analytical bias, as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc., 09/97). Data has not been validated.

(3) Homolog groups octa-, nona- and deca-chlorinated biphenyls were not detected above 0.02%.

Key:

BD = Blind duplicate - a field PCB duplicate sample submitted to the laboratory without identification of sampling location.

P = Practical quantitation limit (PQL) note that identifies PCB concentrations between <11 and 44 ng/l.

DM = Samples collected by Dames & Moore peresonnel.

J1260 = Data estimated due to potential laboratory contamination with Aroclor 1260 as indicated by the detection of heptachlorobiphenyls. Laboratory reported contamination problems occurred during that time period.

Source: O'Brien & Gere Engineers, Inc.

Table 3-4. Transect TIP-18 Sampling Total PCBs and TSS Results- September 18 and October 29, 1996, and September 9-10, 1997

A. TIP transect data with averages of temporal sampling and PCRDMP data - September and October 1996

Sampling Station	Thompson Island Pool 09/18/96 type	Time	Flow	PCBs	TSS	Thompson Island Pool 10/29/96 type	Time	Flow	PCBs	TSS
			HRM 188.5W					HRM 188.5W*		
Temporal Average	composite	11:00-18:00	4,700	142	5.6	average	11:30-13:00	2,900	124	2.8
	grab	08:15	3,000	65	2.6					
			TIP Transect					TIP Transect		
1 (west shore)	composite	10:30-17:35	4,700	75	1.4	composite	11:16-12:45	2,900	62	1.9
2	composite	10:41-17:38	4,700	48	1.8		-	-	-	-
3	composite	10:51-17:40	4,700	54	2.8	composite	11:20-12:48	2,900	50	2.3
4	composite	10:58-17:43	4,700	53 (65)	3.1 (2.6)		-	-	-	-
5	composite	11:04-17:46	4,700	58	2.8	composite	11:25-12:50	2,900	76	2.2
6 (east shore)	composite	11:07-17:48	4,700	71	2.7		-	-	-	-
			HRM 188.5E					HRM 188.5E		
Temporal Average	composite	11:00-18:00	4,700	102 (99)	2.6 (2.6)	composite	11:30-13:00	2,900	111	2.2

B. HRM 188.5W data - October 1996

HRM 188.5 - Sampled 10/29/96 Station	Type	Time	Flow	PCBs	TSS
HRM 188.5W-1	grab	11:30	-	123 (125)	2.9 (2.8)
HRM 188.5W-2	grab	12:00	-	125	3.0
HRM 188.5W-3	grab	12:30	-	129	2.8
HRM 188.5W-4	grab	13:00	-	118	2.4
Temporal Average	-	11:30-13:00	2,900	124	2.8
PCRDMP	*(see HRM 188.5W-1, above)*				

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242, in ng/l. TSS was analyzed by Method 160.2 and results are reported in mg/l.

For PCB concentrations less than the detection limit, a value of one-half the detection limit (5.5 ng/l) was used to calculate the average.

Results of duplicate analyses are in parentheses ( ).

Transect TIP was established at the approximate location used in the 1995 River Monitoring Test and Thompson Island Pool Time of Travel Surveys (TIP-18). Transect TIP was located approximately 700 feet upstream of the Thompson Island dam (HRM 188.5).

September 18, 1996 transect sampling event consisted of hourly sampling conducted over 8-hour sampling period. TIP transect PCB and TSS data are results of composite sampling consisting of surface and deep aliquots; HRM 188.5E and HRM 188.5W PCB and TSS data are results of composite sampling consisting of surface aliquots collected at east and west dam abutments, respectively.

October 29, 1996 transect sampling consisted of sampling conducted at half-hour intervals over a two-hour sampling period: TIP transect PCB and TSS data are results of composite sampling consisting of surface and deep aliquots; HRM 188.5E PCB and TSS data are results of composite sampling consisting of surface aliquots; HRM 188.5W PCB and TSS data are results of temporarily discrete surface samples.

PCRDMP PCB and TSS data are results of routine monitoring conducted on the same day as the transect studies:

In Table 3-6B, the asterisk (*)indicates that PCB and TSS concentrations presented for the location noted are averages of temporally discrete samples, which are presented in Tables 3-6A above.

Flow data is presented based on estimated time of travel from the USGS gaging station at Fort Edward; flow data for temporal composite samples is presented as the average of the instantaneous flows corresponding to the sampling period; flow data for temporally discrete samples is presented as the instantaneous flows corresponding to the time of sample collection. Flow is approximated.

Source: O'Brien & Gere Engineers, Inc.

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Table 3-5. Thompson Island Dam evaluation, August 13-14, 1997 data - water quality parameters

Sample Station	Avg. Flow (cfs)	Sample Date	USGS Time of Travel	Sample Collection Time	PCBs (ng/l)	TSS (mg/l)	TS (mg/l)	TOC (mg/l)	POC (mg/l)	Chlorophyll-a (mg/l) corrected	Chlorophyll-a (mg/l) uncorrected
TIP-18C	1600	08/13	----	1030-1330	50	2.1	76	6.1	0.26	0.3	0.5
HRM 188.5W	1900	08/13	1100	1100-1400	90	1.9	76	6.1	0.18	0.3	0.5
HRM 188.5E	1900	08/13	1100	1108-1400	81	1.9	70	5.7	0.21	1.1	1.7
TID-PRW2	1900	08/13	1110	1105-1405	58 (57)	1.6 (1.6)	62 (75)	7.5 (6.4)	0.21 (0.19)	0.3 (0.3)	0.4
TID-PRE2	1900	08/13	1110	1118-1405	58	2.1	96	5.2	0.18	0.4	0.5
FM	2800	08/13	1650	1725-2025	76	1.9	69	5.7	0.22	0.3	0.4
SCH	2400	08/14	0720	0615-0915	66	2.1	88	8.0	0.11	0.3	0.5

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242.

TSS = total suspended solids; TS = total solids; TOC = total organic carbon; POC = particulate organic carbon

Sampling stations: TIP-18C is located in the center of the river approximately 700 ft upstream of the Thompson Island dam; HRM 188.5W is located at the west dam abutment sampled weekly for the Post-Construction Remnant Deposit Monitoring Program; HRM 188.5E is the east dam abutment; TID-PRW2 and TID-PRE-2 are located at the center of the channel approximately 200 ft downstream of the dam in the west and east channels, respectively; FM is located upstream of the Lock 6 dam in Fort Miller at the approximate center of the main river flow; SCH is located the the Route 29 bridge in Schuylerville.

Results of duplicate analyses presented in parentheses ( ).

USGS time of travel = Time estimated for leading edge of subject parcel of water sampled at station TIP-18C to travel to stations down-river.

Avg. Flow = Based on provisional data collected at 15-minute intervals at the USGS Fort Edward gaging station.

Source: O'Brien & Gere Engineers, Inc.

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Table 3-6. Transect TID Sampling, Total PCBs and TSS Results, September 1997

Sampling Station	Event 1- 9/9/97 [3200 cfs] Time	PCBs (ng/l)	TSS (mg/l)	Event 2 - 9/9/97 [4000 cfs] Time	PCBs (ng/l)	TSS (mg/l)	Event 3 - 9/10/97 [3100 cfs] Time	PCBs (ng/l)	TSS (mg/l)
TIP-18C	12:45 - 15:45	64	2.0	16:00 - 18:00	70 (64)	2.1 (2.0)	08:10 - 11:10	52	2.1
HRM 188.5W	13:20 - 16:20	107	1.8	16:20 - 18:20	90	2.0	08:50 - 11:50	94	1.7
TID-PRW (Avg.)	13:30 - 16:40	64	2.1	16:30 - 18:40	63	2.1	08:55 - 12:05	60	2.1
West (1)	13:30 - 16:30	69	1.8	16:30 - 18:30	55	1.9	08:55 - 11:55	67	2.1
Center (2)	13:35 - 16:35	60	2.2	16:35 - 18:35	70	2.1	09:00 - 12:00	56	2.3
East (3)	13:40 - 16:40	64	2.2	16:40 - 18:40	64	2.2	09:10 - 12:05	55 (56)	2.2 (1.8)
HRM 188.5E	13:20 - 16:20	98	2.0	16:20 - 18:20	84	2.2	08:50 - 11:50	86	2.0
TID-PRE (Avg.)	13:28 - 16:35	66	2.3	16:40 - 18:48	67	2.1	08:56 - 12:03	60	2.0
West (3)	13:40 - 16:35	63	2.3	16:50 - 18:48	62	2.2	09:04 - 12:03	60	2.2
Center (2)	13:33 - 16:30	66	2.4	16:45 - 18:44	70	2.2	09:00 - 11:59	62	1.9
East (1)	13:28 - 16:27	70	2.2	16:40 - 18:40	69	2.0	08:56 - 11:55	59	1.9

Notes:
- Sampling at downstream stations based on estimated time of travel of a parcel of water.
- Samples collected for Events 1 and 3 collected as 4-hour time composite samples, and samples collected for Event 2 were collected as 3-hour time composites. Samples for each event consisted of aliquots collected hourly over the sampling period.
- — = no data
- Approx. flow reported for the USGS gaging station at Fort Edward during sampling period presented in brackets [ ]. (Assumes approximately 1/2 hour time lag from Fort Edward to Thompson Island dam)
- Results of duplicate analyses presented in parentheses ( ).
- Coelution correction factors have been applied to laboratory PCB analytical results.

Source: O'Brien & Gere Engineers, Inc.

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Table 3-7. Thompson Island Dam evaluation data, 1996 - 1997

Sample Date	Flow (cfs)	Water Temp (deg. C)	TIP-18SW PCBs (ng/l)	TIP-18SW TSS (mg/l)	TIP-18C PCBs (ng/l)	TIP-18C TSS (mg/l)	HRM 188.5W PCBs (ng/l)	HRM 188.5W TSS (mg/l)	HRM 188.5IW PCBs (ng/l)	HRM 188.5IW TSS (mg/l)	HRM 188.5E PCBs (ng/l)	HRM 188.5E TSS (mg/l)	TID-PRW2 PCBs (ng/l)	TID-PRW2 TSS (mg/l)	TID-PRE2 PCBs (ng/l)	TID-PRE2 TSS (mg/l)
09/18/96	3,200	19	----	----	53	3.0	142	5.6	----	----	100	2.6	----	----	----	----
10/29/96	3,000	11	----	----	50	2.3	119	2.8	----	----	111	2.2	----	----	----	----
06/04/97	4,700	17	----	----	82	1.7	113	2.0	----	----	----	----	----	----	----	----
06/17/97	3,000	23	----	----	105	1.8	272	4.2	----	----	----	----	----	----	----	----
06/30/97	2,700	26	----	----	175	2.2	269	2.7	----	----	----	----	----	----	----	----
07/14/97	3,200	25	----	----	92	1.3	190	1.2	----	----	----	----	----	----	----	----
07/28/97	2,700	25	----	----	67	1.3	116	1.4	----	----	----	----	----	----	----	----
08/13/97	2,400	24	----	----	50	2.1	90	1.9	----	----	81	1.9	57	1.6	58	2.1
09/09/97	2,900	21	----	----	64	2.0	107	1.8	----	----	98	2.0	60	2.2	66	2.4
09/09/97	2,900	21	----	----	67	2.1	90	2.0	----	----	84	2.2	70	2.1	70	2.2
09/10/97	2,900	21	----	----	52	2.1	94	1.7	----	----	86	2.0	56	2.3	62	1.9
10/01/97	3,100	15	{250} [153]	3.0	65	1.9	101	1.7	57	1.7	----	----	53	1.8	----	----
10/09/97	3,200	18	140	2.0	74	2.5	89	1.9	74	2.5	----	----	67	2.5	----	----
10/16/97	2,700	14	143	4.3	83	3.1	93	2.9	81	2.8	----	----	88	2.7	----	----
Means																
9/18/96 - 10/16/97	3,000	20	----	----	77	2.1	135	2.4	----	----	----	----	----	----	----	----
8/13 - 9/10	2,800	22	----	----	58	2.1	95	1.9	----	----	87	2.0	61	2.1	64	2.2
10/1 - 10/16	3,000	16	145	3.1	74	2.5	94	2.2	71	2.3	----	----	69	2.3	----	----
Mean Ratio: site/HRM 188.5W																
9/18/96 - 10/16/97	----	----	----	----	0.6	0.9	1.0	1.0	----	----	----	----	----	----	----	----
8/13 - 9/10	----	----	----	----	0.6	1.1	1.0	1.0	----	----	0.9	1.1	0.6	1.1	0.7	1.2
10/1 - 10/16	----	----	1.5	1.4	0.8	1.2	1.0	1.0	0.7	1.1	----	----	0.7	1.1	----	----

Notes:

Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report "Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242 except data presented in braces { } which may include a component of Aroclor 1260 as indicated by elevated heptachlorobiphenyls . The presence of Aroclor 1260 is atttributed to laboratory contamination. Results of archive sample analysis outside extraction holding times presented in brackets [ ].

Results of duplicate analyses presented in parentheses ( ).

Sampling stations: TIP-18C is located in the center of the river approximately 700 ft upstream of the Thompson Island dam; HRM 188.5W is located at the west dam abutment sampled weekly for the Post-Construction Remnant Deposit Monitoring Program; HRM 188.5IW is the east dam abutment of the west channel and HRM 188.5E is the east dam abutment of the east channel; TID-PRW2 and TID-PRE2 are located at the center of the river approximately 200 ft downstream of the dam in the west and east channels, respectively.

Source: O'Brien & Gere Engineers, Inc.

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Table 3-8. Additional sampling downstream of Thompson Island Pool

			Fort Miller		Schuylerville	
Sample Date	Flow (cfs)	Water Temp. (deg. C)	PCBs (ng/l)	TSS (mg/l)	PCBs (ng/l)	TSS (mg/l)
08/13/97	2,800	24	76	1.9	---	---
08/14/97	2,300	24	---	---	66	2.1
10/01/97	3,100	15	---	---	68	<1.0
10/10/97	3,200	19	---	---	86	2.2
10/16/97	2,700	14	---	---	108	3.0

Notes:
Samples analyzed for PCBs by method NEA608CAP. PCB data corrected for analytical bias as described in the report Correction of Analytical Biases in the 1991-1997 GE Hudson River Database" (O'Brien & Gere Engineers, Inc. 9/97). Results reported as Aroclor 1242 or altered Aroclor 1242.

Source: O'Brien & Gere Engineers, Inc.

Table 3-9. PCB QA/QC data

		Duplicate				Matrix Spike		
Date	Location	Orig.	Dup.	RPD	Comments	Location	% Rec.	Comments
Thompson Island Pool Time of Travel Surveys								
09/24/96	FS1-12E	74	70	6		FS1-17E	85	
	FS1-15C	50	54	8		FS1-7C	101	
	FS1-9W	34	42	21		FS1-2W	93	
09/25/96	FS2-16E	62	72	15		FS2-5E	85	
	FS2-11C	22	23	4		FS2-9C	91	
	FS2-13W	74	35	72	(1)	FS2-15W	107	
	HRM 194.2	<11	<11	0		HRM 188.5	97	
06/04/97	FS1-12A-E	109	92	17		FS1-5E	108	
	FS1-18C	84	81	4		FS1-13AC	84	
	FS1-9W	64	<11	141	(1)	FS1-15W	102	
06/03/97	HRM 188.5	101	109	7		HRM 194.2	40	(3)
06/17/97	FS2-12A-E	224	214	5		FS2-5E	104	
	FS2-18C	95	116	20		FS2-13AC	100	
	FS2-9W	197	145	30		FS2-15W	59	(2)
06/17/97	HRM 194.2	13	13	0		HRM 197.0	101	
Thompson Island dam sampling station evaluation								
09/18/96	TIP-4	53	65	20		HRM 197.0	99	
	HRM 194.2	<11	<11	0		HRM 194.2W-5	93	
10/29/96	HRM 188.5	123	125	2		HRM 197.0	94	
06/30/97	HRM 188.5	271	267	1		HRM 194.2	98	
07/14/97	HRM 188.5	190	189	1		HRM 194.2	103	
07/28/97	HRM 188.5	115	116	1		HRM 197.0	102	
08/13/97	TID PRW	58	57	2				
08/14/97	HRM 188.5	93	93	0		HRM 194.2	100	
09/09/97	2-TIP-18C	70	64	9		1-TID-PRE2	105	
09/10/97	3-TID-PRW3	60	56	7				
09/11/97	HRM 188.5	73	74	1		HRM 194.2	1.5	
10/01/97	HRM 188.5IW	60	55	9		—		
	HRM 194.2	<11	<11	0		HRM 197.0	99	
10/09/97	TIP-18SW	158	186	16		—		
	HRM 194.2	<11	<11	0		HRM 194.2	99	
10/16/97	TID-PRW2	86	89	3		—		
	HRM 194.2	12	<11	9		HRM 197.0	101	

Notes:

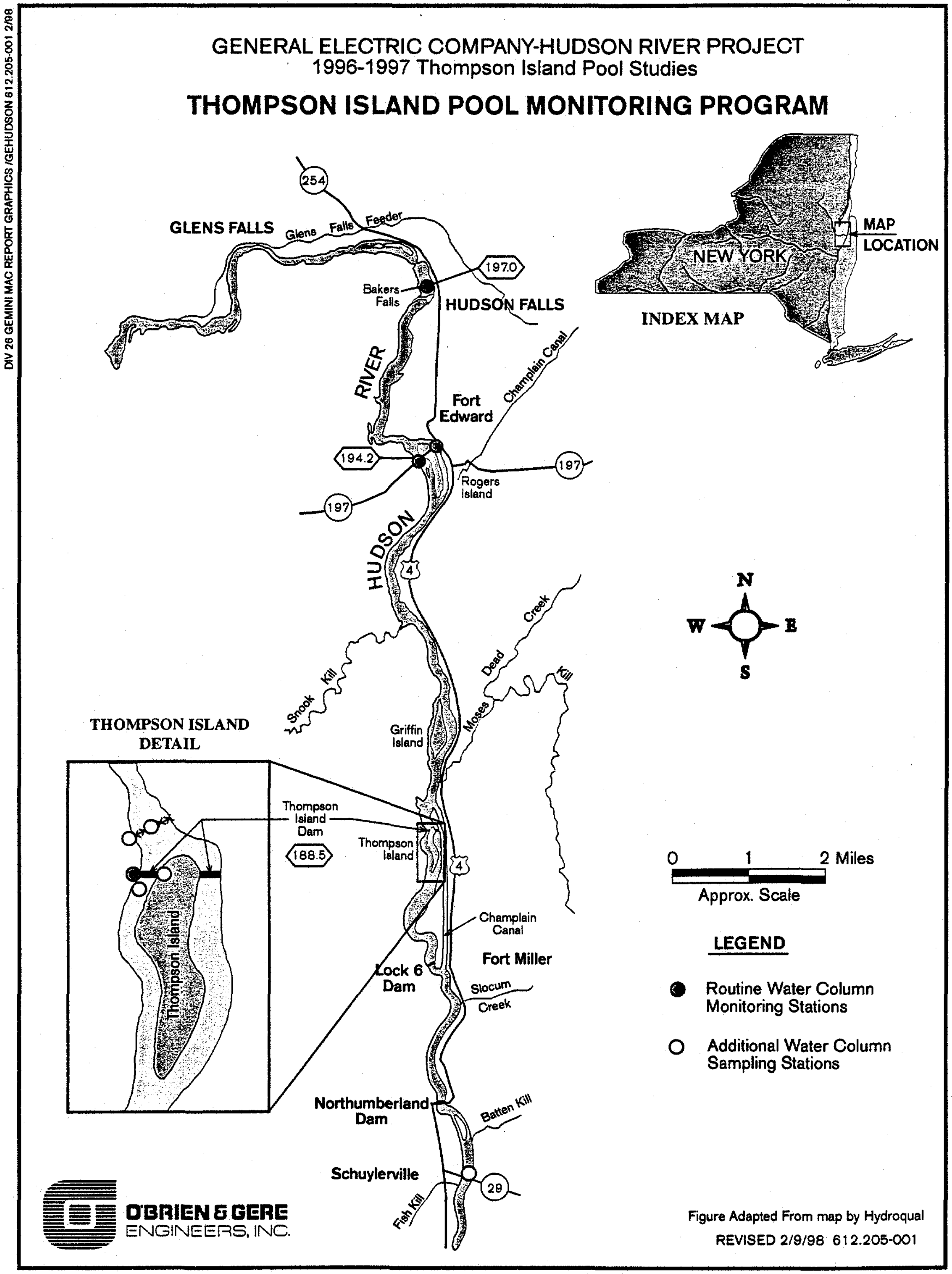
Duplicate data: orig. = original sample; dup. = duplicate sample; RPD = relative percent difference, calculated as the sum of the original and duplicate values divided by the average of the two samples with the quotient of that expression multiplied by 100. Data corrected for analytical bias. For data less than the detection limit a value of 11 ng/l was assumed. Matrix spike data: % rec. = percent recovery, calculated as the original sample concentration subtracted from the spiked sample concentration divided by the spike concentration added, multiplied by 100. Data reported by laboratory, not corrected for anlaytical bias.

(1) Aroclor 1260 detected in original sample; (2) a portion of the sample extract was lost

(3) Low matrix spike recovery reported by laboratory

Source: O'Brien & Gere Engineers, Inc.

Figure 1-1



DIV 26 GEMINI MAC REPORT GRAPHICS /GEHUDSON 612.205-001 2/98
GENERAL ELECTRIC COMPANY-HUDSON RIVER PROJECT
1996-1997 Thompson Island Pool Studies
THOMPSON ISLAND POOL MONITORING PROGRAM
254
GLENS FALLS
Glens Falls Feeder
197.0
Bakers Falls
HUDSON FALLS
MAP LOCATION
NEW YORK
INDEX MAP
RIVER
Champlain Canal
Fort Edward
194.2
197
Rogers Island
197
HUDSON
4
N
W
E
S
Creek
Dead
Kill
Snook Kill
Moses
THOMPSON ISLAND DETAIL
Griffin Island
Thompson Island Dam
188.5
Thompson Island
4
Thompson Island
0
1
2 Miles
Approx. Scale
Champlain Canal
Fort Miller
LEGEND
Lock 6 Dam
Slocum Creek
Routine Water Column Monitoring Stations
Additional Water Column Sampling Stations
Northumberland Dam
Batten Kill
Schuylerville
29
Fish Kill
O'BRIEN & GERE ENGINEERS, INC.
Figure Adapted From map by Hydroqual
REVISED 2/9/98 612.205-001

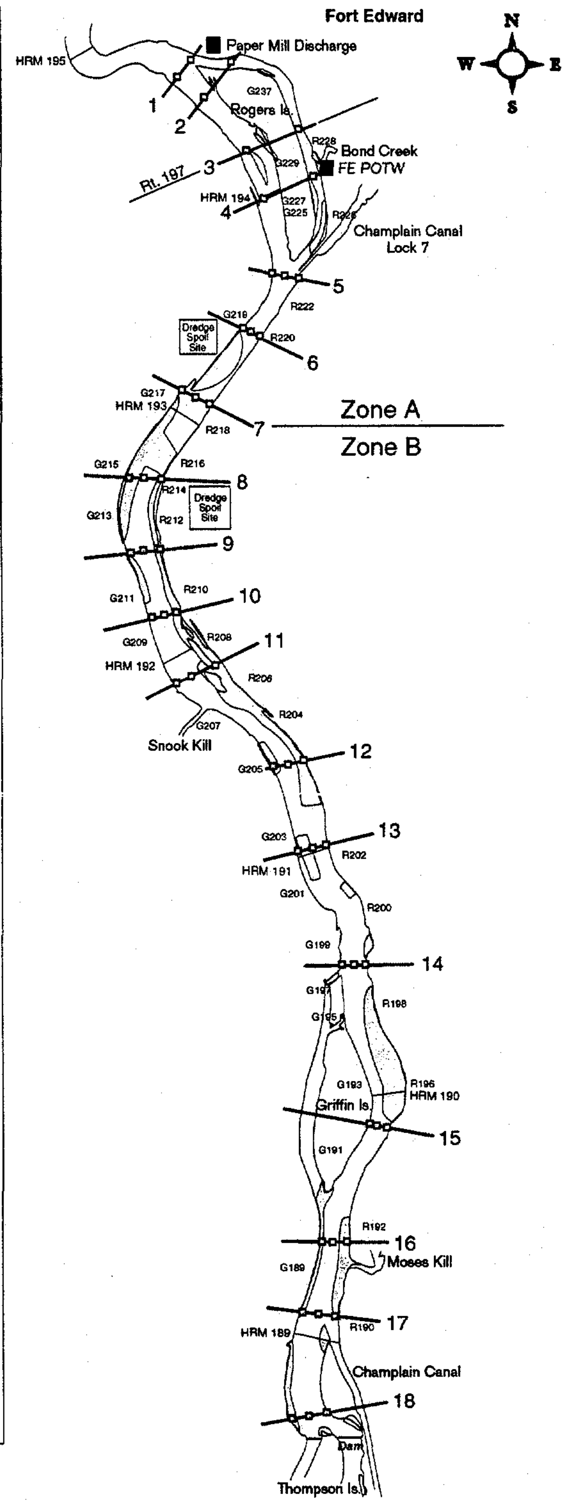
Figure 1-2

GENERAL ELECTRIC COMPANY-HUDSON RIVER PROJECT
1996-1997 Thompson Island Pool Studies

1996 TIP SURVEY SAMPLE COLLECTION TIMES

Sample Collection Times (Military Hours)

Sample Transect	FS1 September 24, 1996	FS2 September 25, 1996
1	07:30	07:00
2	07:36	07:06
3	07:49	07:17
4	08:03	07:27
5	08:20	07:38
6	08:35	07:51
7	08:50	08:04
8	09:37	08:46
9	10:21	09:25
10	10:56	09:56
11	11:31	10:27
12	12:27	11:23
13	13:18	12:14
14	14:18	13:14
15	15:41	14:37
16	16:29	15:25
17	17:17	16:13
18	18:16	17:12



0 1.0 2.0 Miles

Approximate Scale

Notes:

1. HRM = Hudson River Mile. Mile 0.0 is located at the battery in New York City.
5. Map adapted from HydroQual, Inc.

Legend

- 18 Transect site line
- HRM 189 Mile marker
- Sample location
- G237 Green NOAA bouy
- R228 Red NOAA bouy
- Hotspot

O'BRIEN & GERE ENGINEERS, INC.

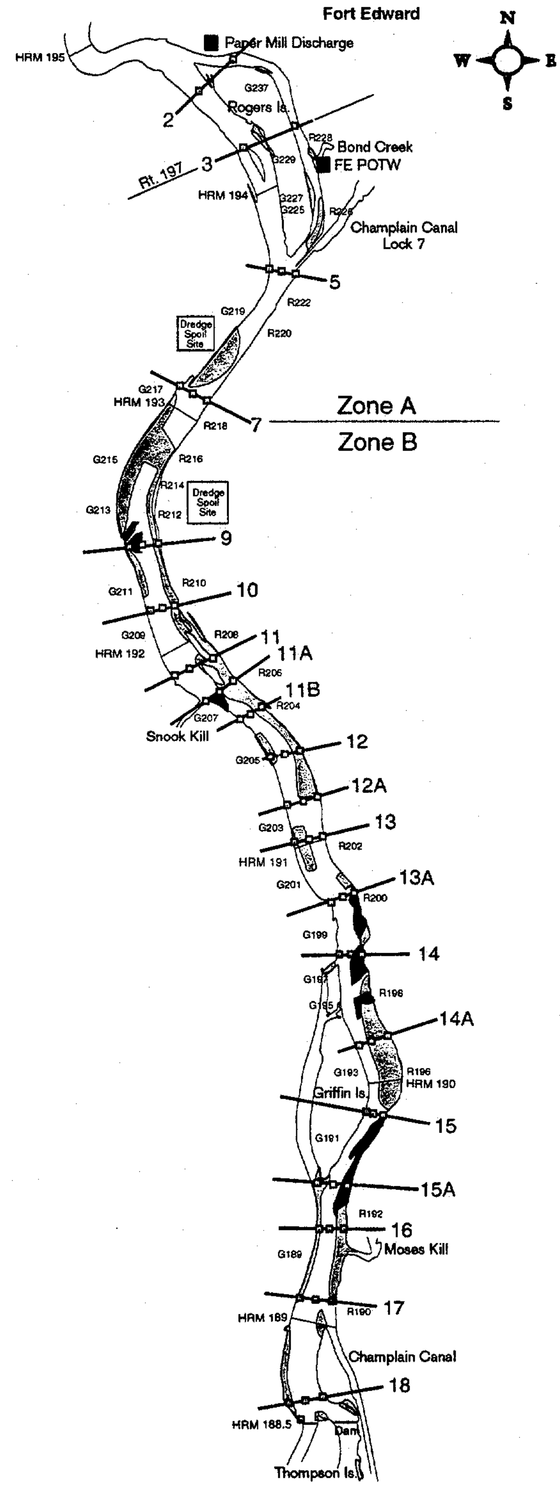
Revised 12/17/96 (52) 0612.205-006
DIV 28/Gemini MacReport Graphics/GE Hudson '96 Sample Col Times

Figure 1-3

1997 TIP TIME OF TRAVEL SURVEY SAMPLE LOCATIONS AND COLLECTION TIMES

Sample Collection Times (Military Hours)

Sample Transect	FS3 June 4, 1997	FS4 June 17, 1997
2	08:53	09:10
3	09:06	09:50
5	09:36	10:45
7	10:38	12:02
9	11:05	13:45
10	11:40	14:15
11	11:53	14:25
11A	12:04	14:38
11B	12:40	15:02
12	12:55	15:20
12A	13:33	16:00
13	14:06	16:11
13A	14:30	16:25
14	14:48	16:43
14A	15:17	17:13
15	15:34	18:03
15A	16:15	18:30
16	16:25	18:48
17	17:07	19:23
18	17:55	20:20
HRM 188.5	18:15	20:50



NOTES:

1. HRM = Hudson River Mile. Mile 0.0 is located at the battery in New York City.
2. Sample locations without alphabetical references were also sampled during the 1996 water column monitoring study. Sample locations with alphabetical references were included in the 1997 monitoring to provide additional data in the lower portion of Thompson Island Pool.

0 1.0 2.0 Miles

Approximate Scale

Legend

- 18 Transect site line
- HRM 189 Mile marker
- Sample location
- G237 Green NOAA bouy
- R228 Red NOAA bouy
- Hotspot
- Bedrock

O'BRIEN & GERE ENGINEERS, INC.

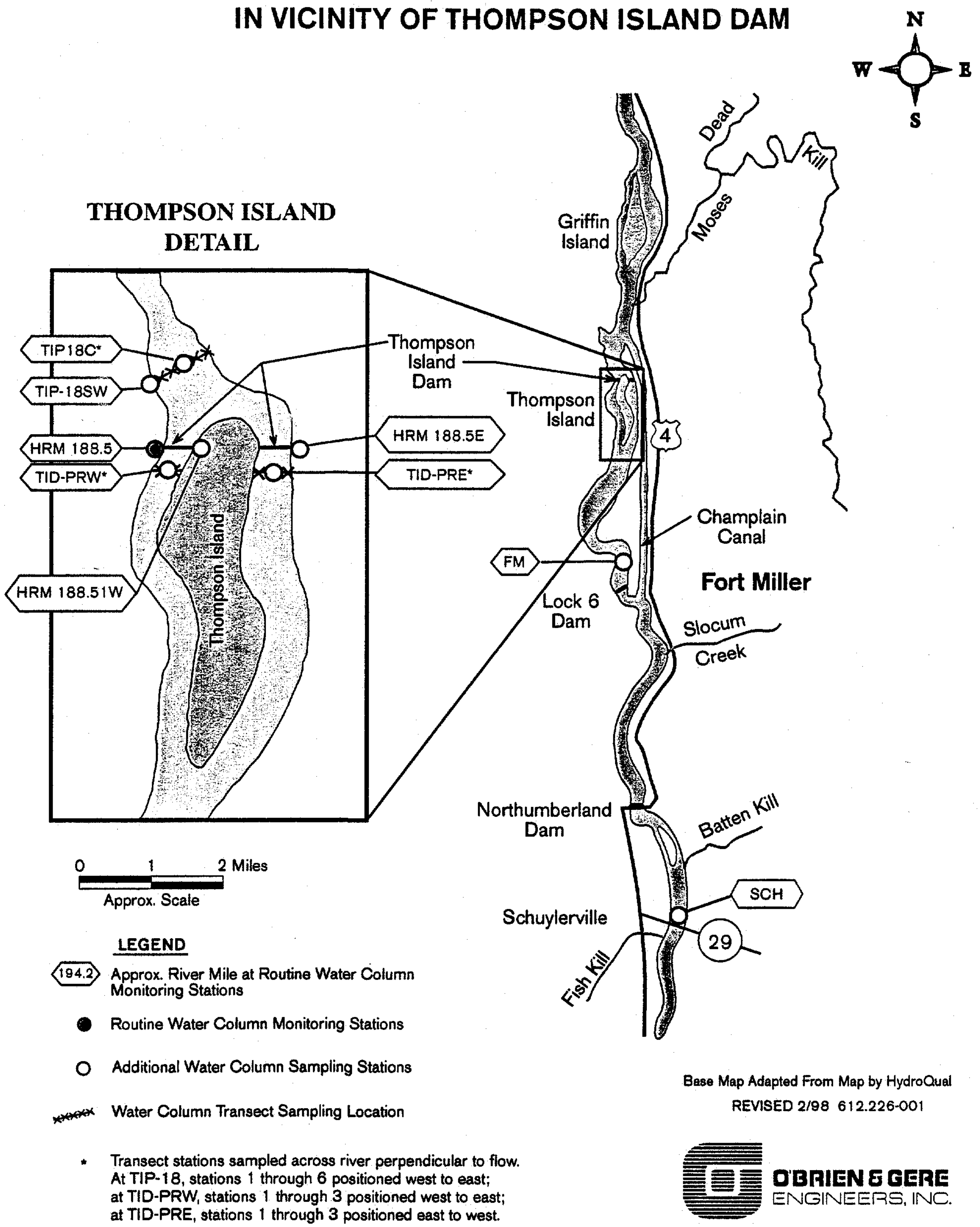
Map adapted from HydroQual, Inc.

Revised 2/9/98 ald (52) 0612.226-006

DIV 26/Gemini Mac/Report Graphics/GE Hudson Sample Col rev

Figure 1-4

GENERAL ELECTRIC COMPANY-HUDSON RIVER PROJECT
1996-1997 THOMPSON ISLAND POOL STUDIES
SAMPLING STATIONS
IN VICINITY OF THOMPSON ISLAND DAM



Base Map Adapted From Map by HydroQual
REVISED 2/98 612.226-001

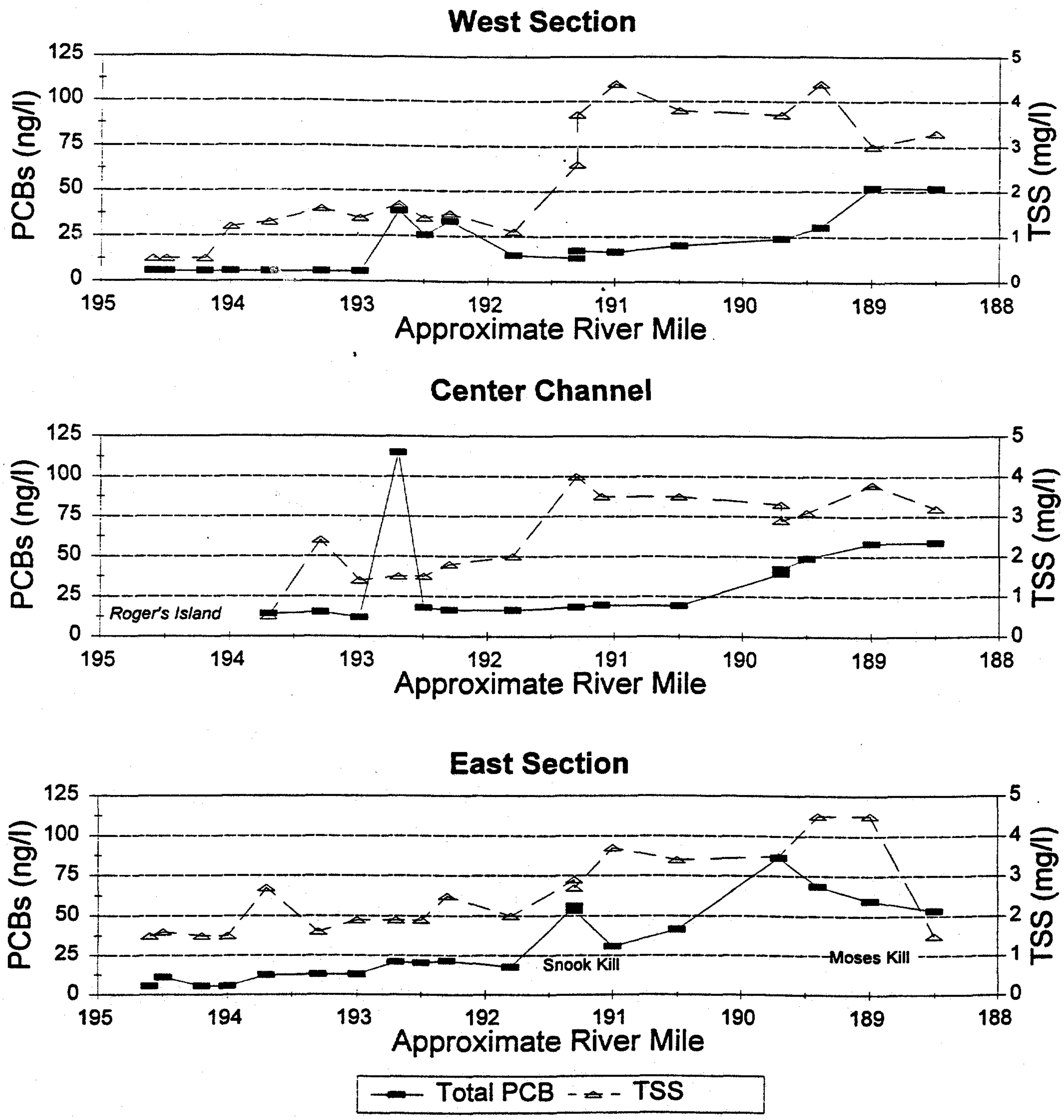
O'BRIEN & GERE ENGINEERS, INC.

THE MAP IS AVAILABLE FOR REVIEW AT THE FOLLOWING LOCATION:

HUDSON RIVER PCBS ADMINISTRATIVE RECORD

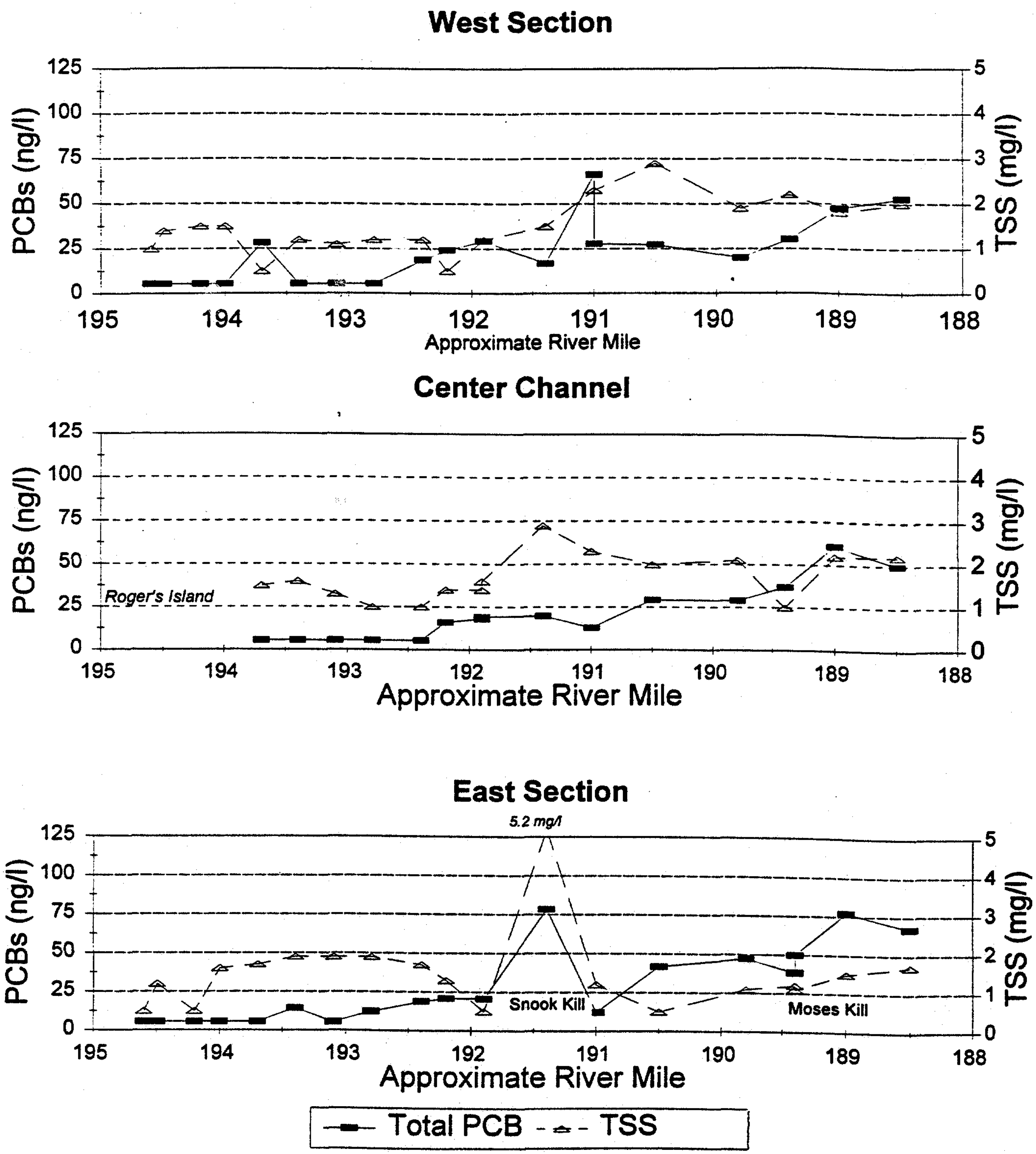
U. S. EPA, REGION 2 SUPERFUND RECORDS CENTER,
290 BROADWAY, 18TH FLOOR, NEW YORK, NY 10007

Figure 3-1
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Survey Event 1, September 24, 1996



PCB data presented in this figure have been adjusted for analytical bias

Figure 3-2
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Survey, Event 2, September 25, 1996



PCB data presented in this figure have been adjusted for analytical bias.

Figure 3-3
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Survey Event 3 - June 4, 1997

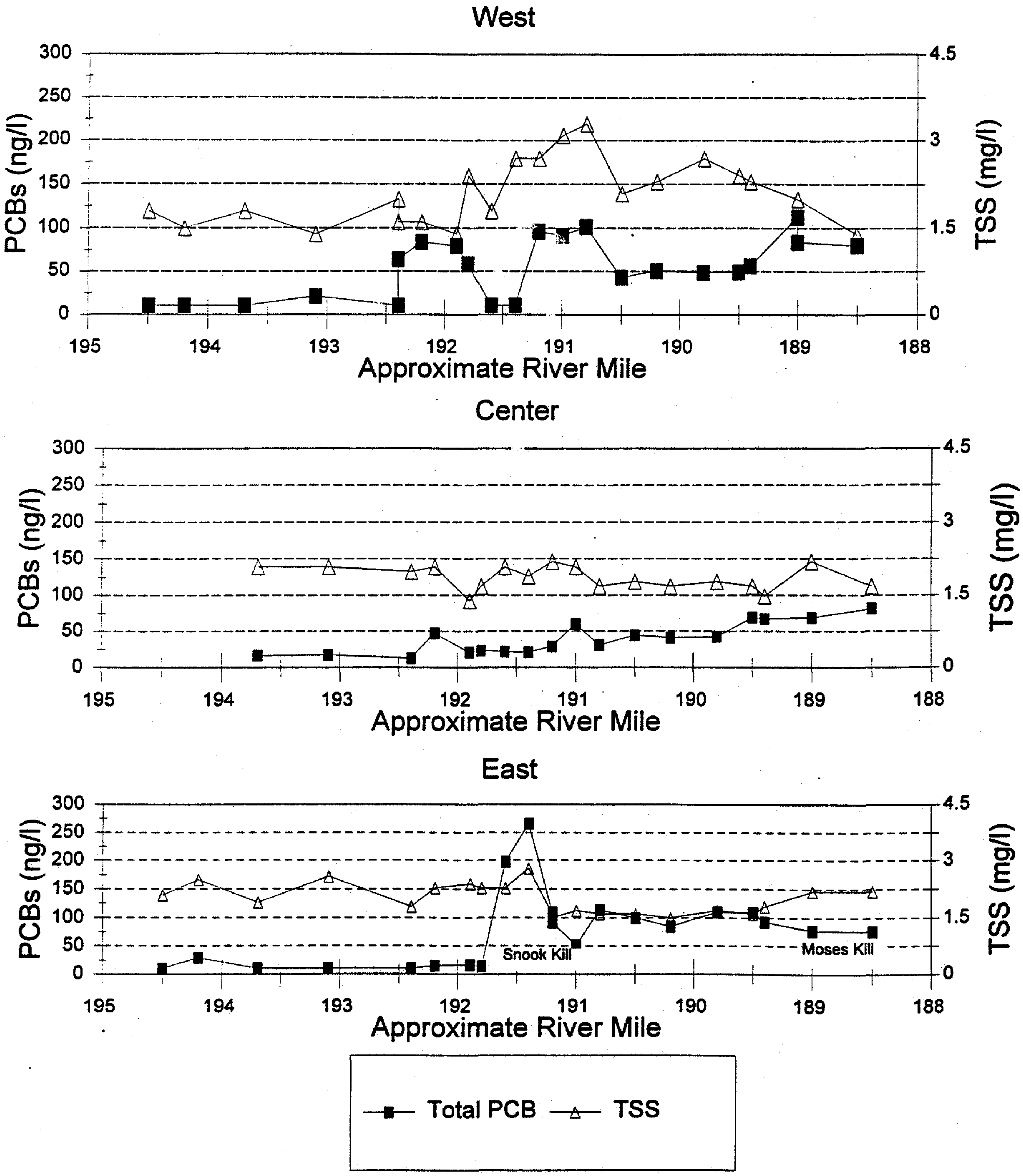


Figure 2-2
GE Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Sampling Events

Sample Location	Sample ID	1996 Sep. 18	1996 Oct. 29	1997 Jun. 4, 17, 30	1997 Jul. 14, 28	1997 Aug. 13-14	1997 Sep. 9, 10	1997 Oct. 1, 9, 16
Dam abutments - west channel								
west shore sampling, PCRDMP	HRM 188.5W	●	○○○○	○○○	○○	●	○○○	○○○
island west shore	HRM 188.5IW							○○○
Dam abutment - east channel								
east shore	HRM 188.5E	●	●			●	○○○	
Thompson Island Pool near the dam (approx. 700 ft upstream of the dam)								
transect sampling stations	TIP-18	▲	▲	△△□	□□	■	□□□	□□□
near west shore sampling station	TIP-18SW							○○○
Thompson Island dam profile stations (approx. 200 ft downstream of the dam)								
west channel - PCRDMP	TID-PRW					■	△△△	□□□
east channel	TID-PRE					■	△△△	
Additional stations downstream of Thompson Island dam								
Fort Miller	FM					■		
Schuylerville - PCRDMP	SCH					■		□□□

Notes:
PCRDMP = sampling stations included in weekly post-construction remnant deposit monitoring program. The HRM 188.5W station has been included throughout the PCRDMP.
The FM and SCH sampling stations were added to the weekly sampling program in October 1997.

Symbols:
Individual samples (surface grabs)
- temporally discrete ○
- temporal composite ●

Individual samples (depth composites collected from center of river)
- temporally discrete □
- temporally composite ■

Transect samples (depth composites)
- temporally discrete △
- temporal composite ▲

E27BA.fh5/clm/122297rev2/98

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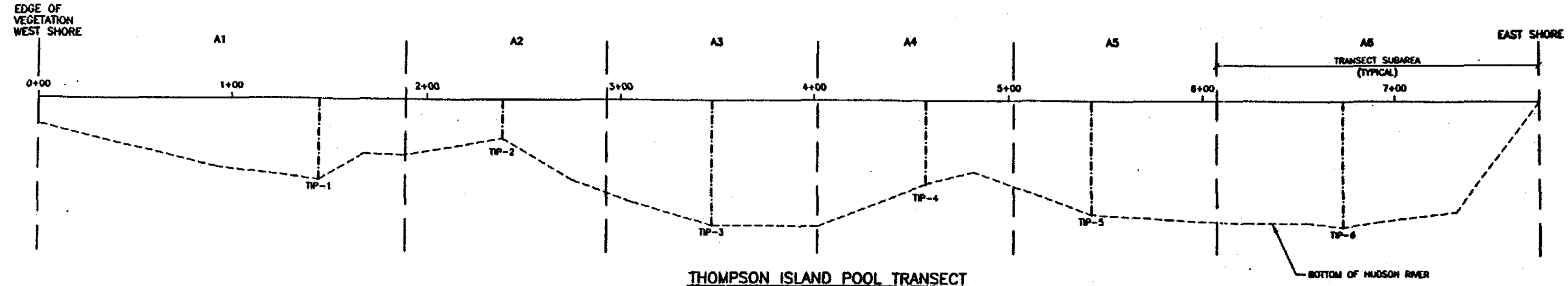
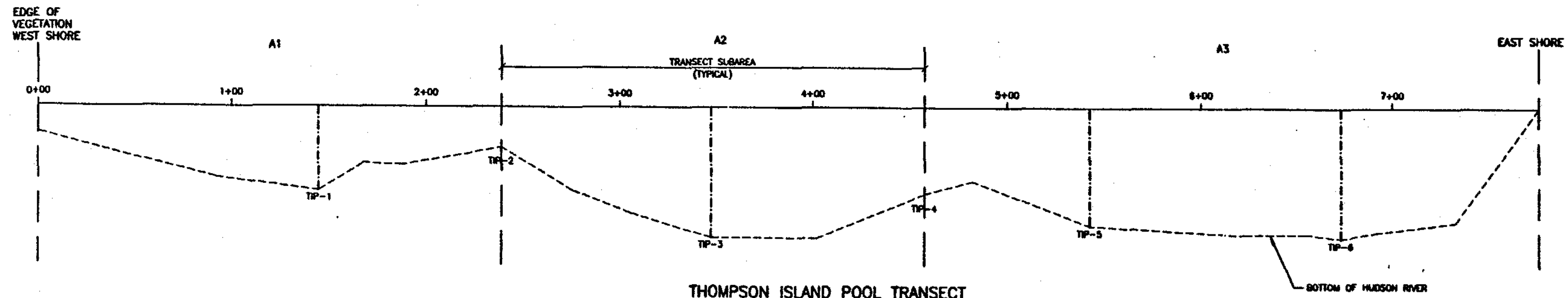


THOMPSON ISLAND POOL TRANSECT
9/18/96



THOMPSON ISLAND POOL TRANSECT
10/29/96

LEGEND

TIP-3 THOMPSON ISLAND POOL TRANSECT SAMPLING LOCATION
—·—·— SAMPLE COLLECTION POINT

PRELIMINARY NOT FOR CONSTRUCTION
DATE: 12/3/97

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

IN CHARGE OF ________
DESIGNED BY ______ CHECKED BY ______
DRAWN BY ________

(HORIZ.) 1"=30' 30 0 30 60
(VERT.) 1"=5' 5 0 5 10

NO.	DATE	REVISION	INIT.

O'BRIEN & GERE ENGINEERS, INC.

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
THOMPSON ISLAND POOL STUDIES

Figure 2-3

General Electric
HUDSON RIVER, NEW YORK
BATHYMETRIC PROFILES OF TRANSECT STUDY SAMPLING LOCATIONS

FILE NO. 612.226-004
DATE DEC. 1997

Figure 3-4
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Survey Event 4 - June 17, 1997

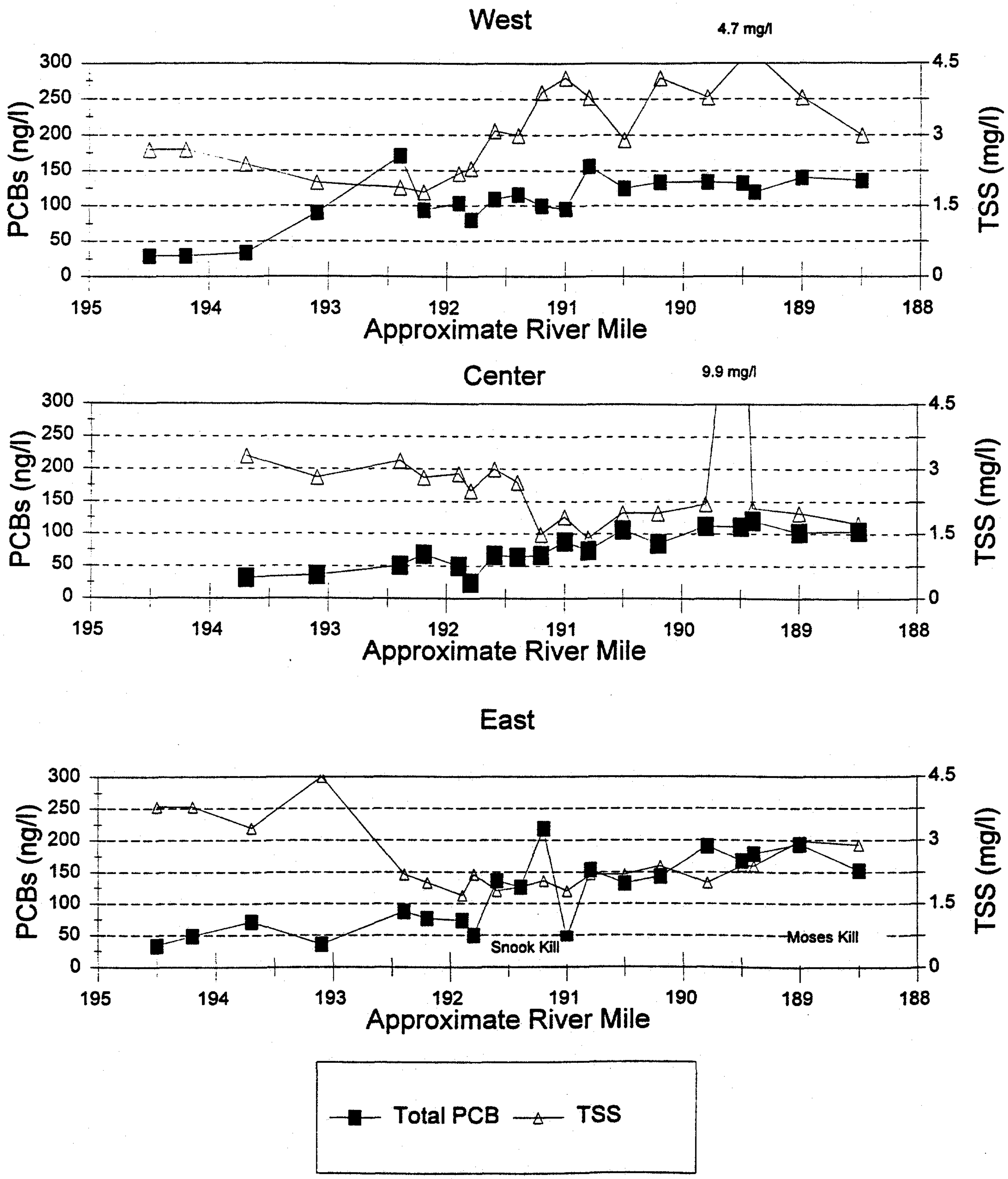


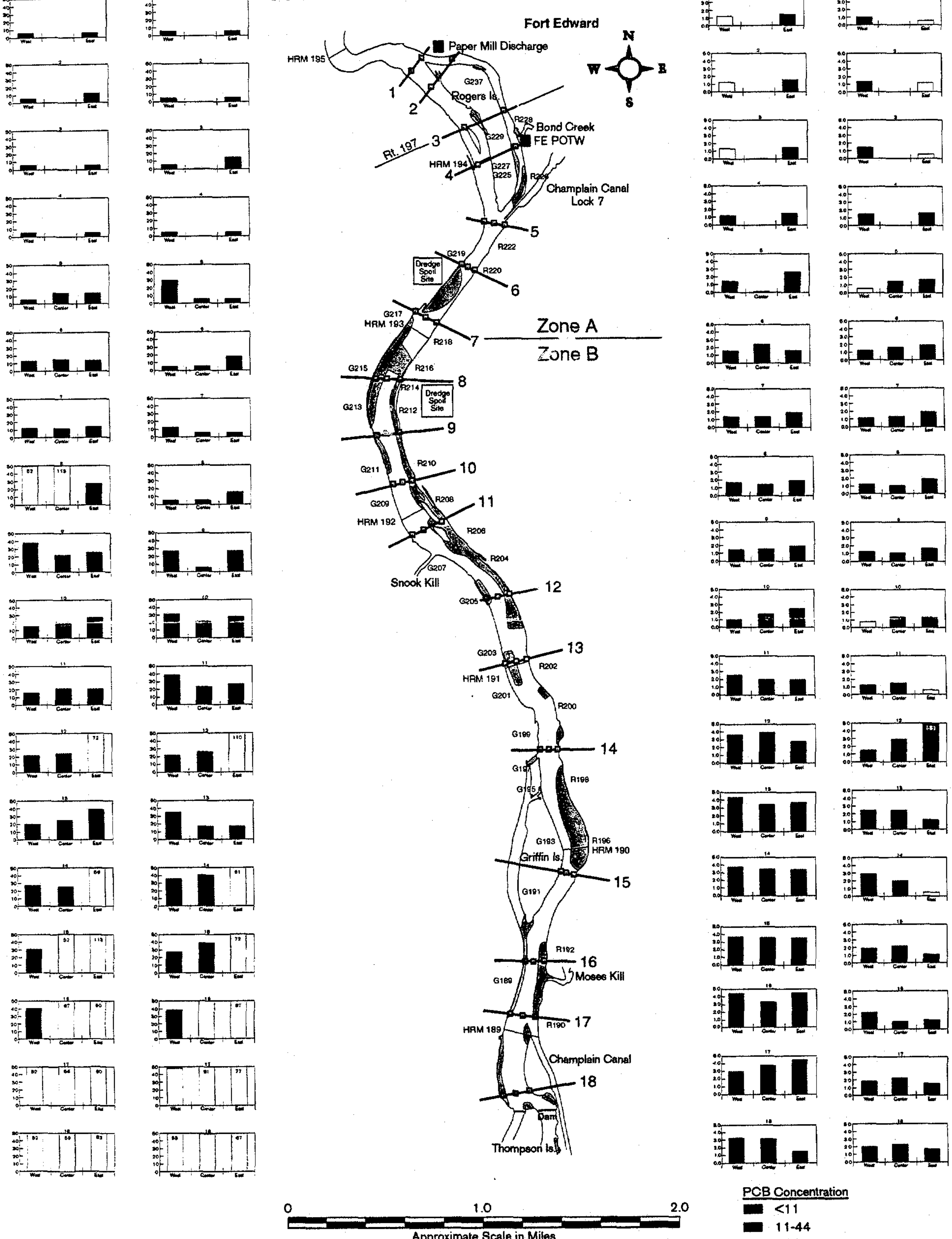
Figure 3-5

GENERAL ELECTRIC COMPANY / HUDSON RIVER PROJECT
1996-1997 THOMPSON ISLAND POOL STUDIES

1996 TIP SURVEYS PCB AND TSS DATA

PCBs (ng/l) — FS1 September 24, 1996; FS2 September 25, 1996

TSS (mg/l) — FS1 September 24, 1996; FS2 September 25, 1996



Drawing Notes:

1. HRM = Hudson River Mile. Mile 0.0 is located at the battery in New York City.
2. PCB composition resembled Aroclor 1242 with varying degrees of alteration (unshaded background) except sample FSI-8C which resembled Aroclor 1248 or highly evaporated Aroclor 1242 (shaded background) and sample FS2-5W which resembled altered Aroclors 1242 and 1260. The Aroclor 1260 was attributed to laboratory contamination (see note #3 below).
3. Duplicate analyses are presented as averages, except sample FS2-13W which had a PCB composition that resembled altered Aroclors 1260 and 1242 (74ng/l), whereas the dupicate of that sample resembled altered Aroclor 1242 (35ng/l). The Aroclor 1260 composition in the original sample was attributed to laboratory contamination. The duplicate data for sample FS2-13W is presented in this figure.
4. Map adapted from HydroQual, Inc.

Legend

18 Transect site line
HRM 189 Mile marker
Sample location
G237 Green NOAA buoy
R228 Red NOAA buoy
Hotspot

PCB Concentration

- <11
- 11-44
- >44
- Unshaded background (note 2)
- Shaded background (note 2)

TSS Concentration

- Shaded: detected concentration
- Unshaded: less than detect

Revised 12/11/97 ... (52) 0612.205-003

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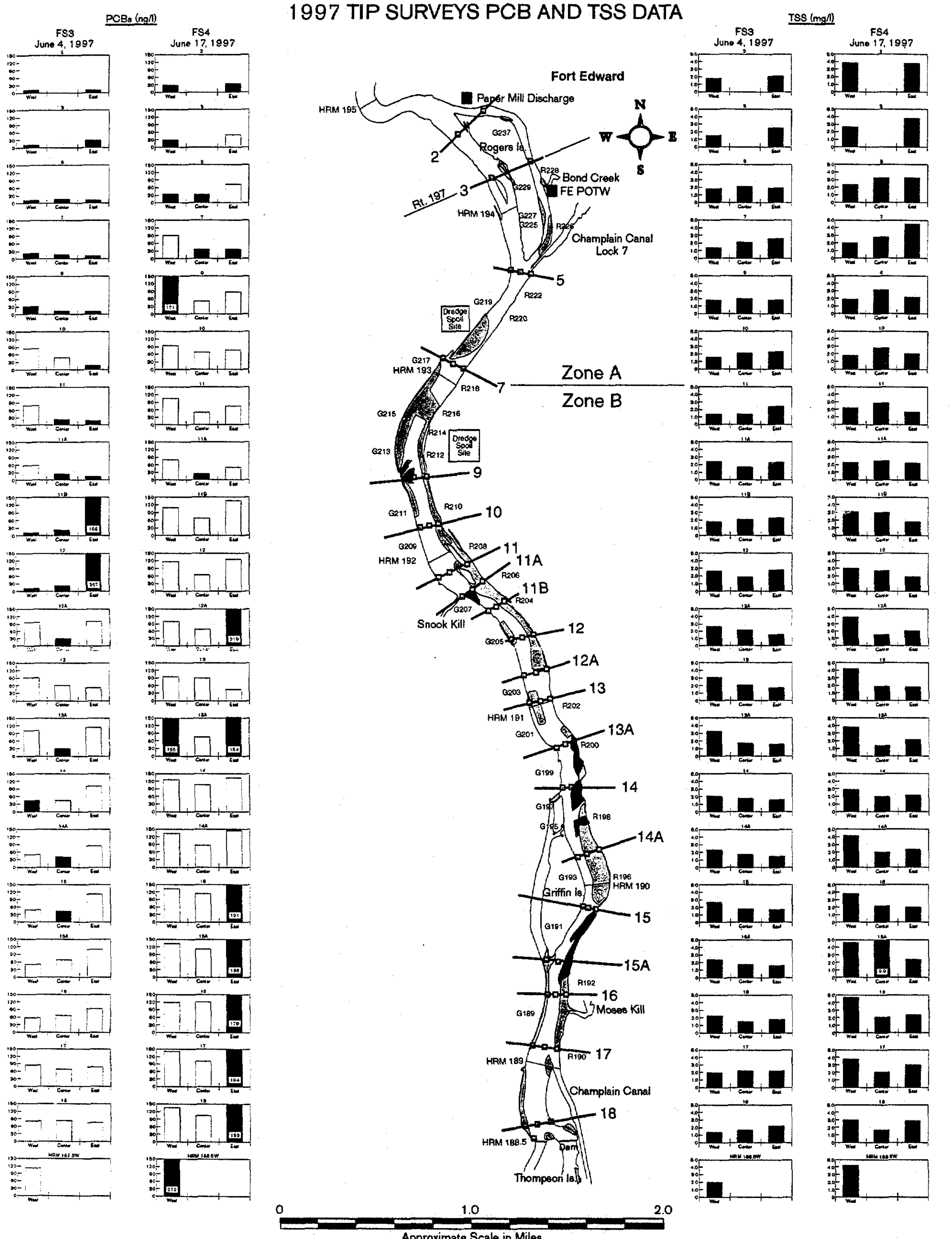
Figure 3-6

GENERAL ELECTRIC COMPANY / HUDSON RIVER PROJECT
1996-1997 THOMPSON ISLAND POOL STUDIES

1997 TIP SURVEYS PCB AND TSS DATA



Drawing Notes:

1. HRM = Hudson River Mile. Mile 0.0 is located at the battery in New York City.
2. PCB composition resembled Aroclor 1242 with varying degrees of alteration (unshaded) except (shaded) samples FS3-3E, FS4-3W, FS4-7W, FS4-9W and FS4-15C which appear contaminated with Aroclor 1260 and additional samples that may have been affected as indicated by the presence of hepta chlorobiphenyls. Alternatively, the additional samples may contain an environmental Aroclor 1254 component.
3. Duplicate analyses are presented as averages, except sample FS3-9W for which the duplicate results are present, PCBs were not detected in the original sample.
5. Map adapted from HydroQual, Inc.

Legend

- 18 Transect site line
- HRM 189 Mile marker
- Sample location
- G237 Green NOAA bouy
- R228 Red NOAA bouy
- Hotspot
- Bedrock

PCB Concentration

- <11
- 11-44
- 45-150
- >150
- Shaded background (note 2)
- Unshaded background (note 2)

Gemini Mac/Resort Graphics/GE/Hudson PCB/TSS 12.97/GE PCB/TSS data map 12/97

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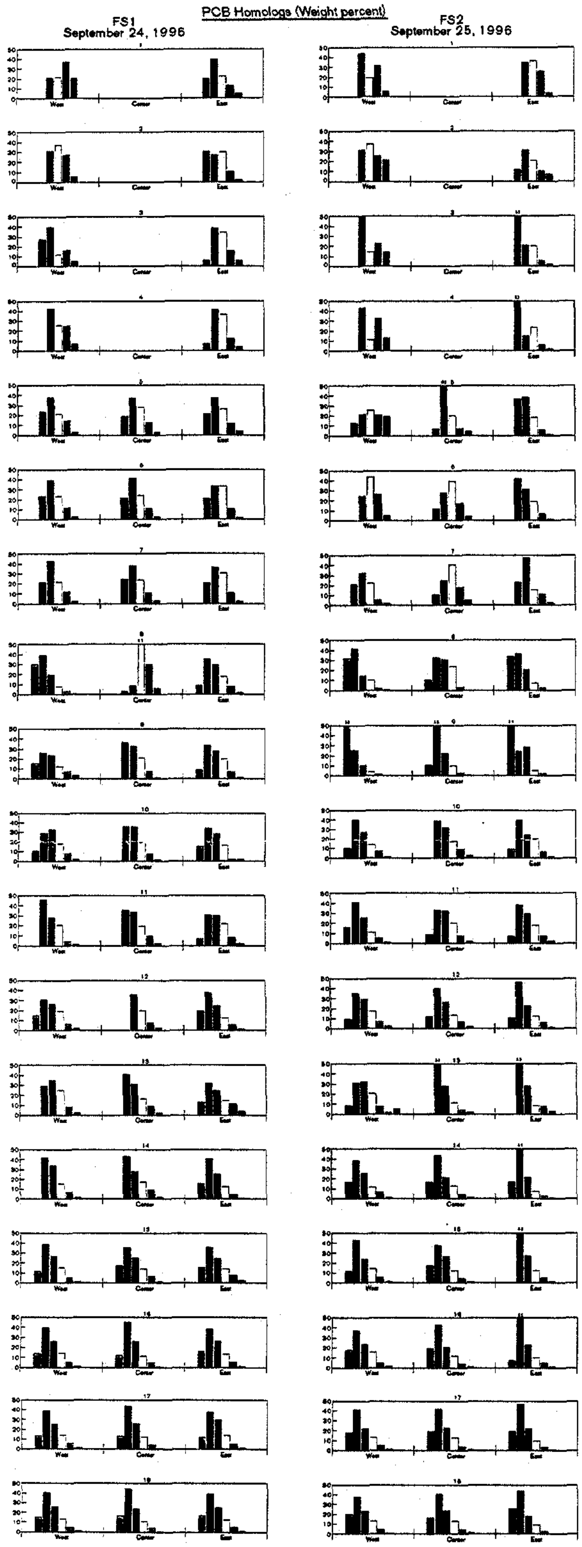
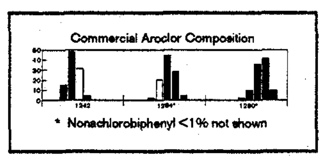
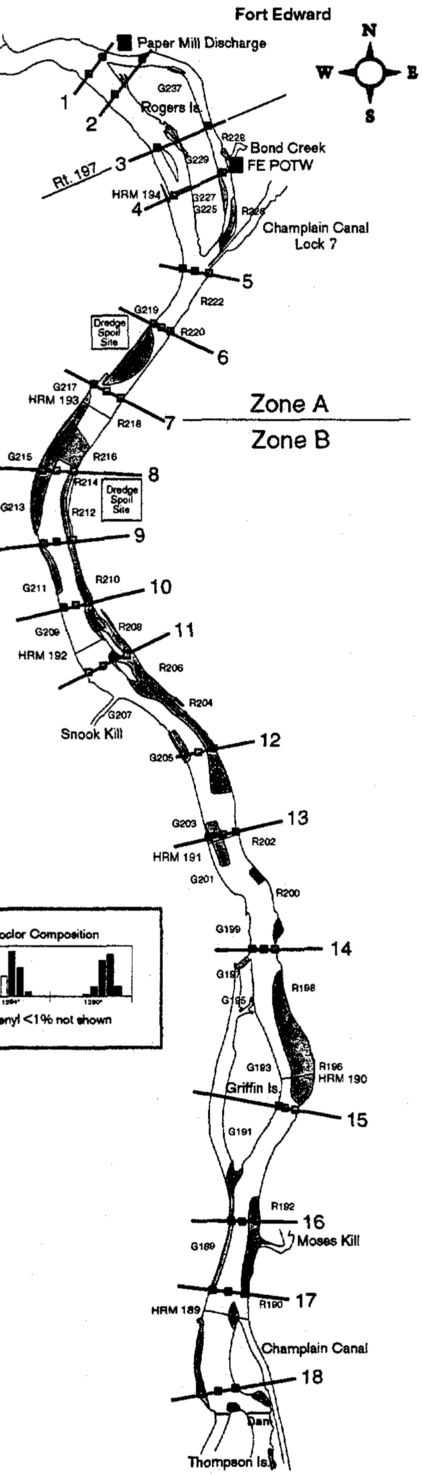
GENERAL ELECTRIC COMPANY-
HUDSON RIVER PROJECT
1996-1997 THOMPSON ISLAND POOL STUDIES

Figure 3-7

1996 TIP SURVEYS PCB HOMOLOG DISTRIBUTIONS







0 1.0 2.0
Approximate Scale in Miles

Legend

- 18 Transect site line
- HRM 189 Mile marker
- ■ Sample location
- G237 Green NOAA bouy
- R228 Red NOAA bouy
- Hotspot

PCB Homolog Concentration

- mono
- di
- tri
- tetra
- penta
- hexa
- hepta
- octa

Drawing Notes:

1. HRM = Hudson River Mile. Mile 0.0 is located at the battery in New York City.
2. PCB composition resembled Aroclor 1242 with varying degrees of alteration except samples FS1-8C which resembled Aroclor 1248 or highly evaporated Aroclor 1242; FS2-5W which resembled Aroclor 1242 and altered Aroclor 1260; and sample FS2-13W (see note #3 below).
3. Duplicate analyses are presented as averages, except sample FS2-13W for which (see note #4).
4. PCB compositions of samples FS2-5W and FS2-13W resembled altered Aroclors 1260 and 1242. The Aroclor 1260 composition in the samples was attributed to laboratory contamination.
5. For PCB homolog distributions presented, *indicates total PCB concentrations greater than the practical quantitation limit (PQL; 44ng/l). These data are considered more reliable indicators of actual PCB composition as analytical distortion of PCB composition has been observed at concentrations between the PQL and the method detection limit (11ng/l) resulting in decreased accuracy of PCB composition patterns. However, results of duplicate analyses generally indicate acceptable levels of precision for PCB homolog distributions at total PCB concentrations less than the PQL indicating that comparisons of data in the same concentration ranges may be acceptable for interpretation of pattern shifts. Interpretation of data at PCB concentrations less than the PQL (presented without *) should recognize these limitations.
6. Map adapted from Hydroqual, Inc.

(52) 0612.205-005

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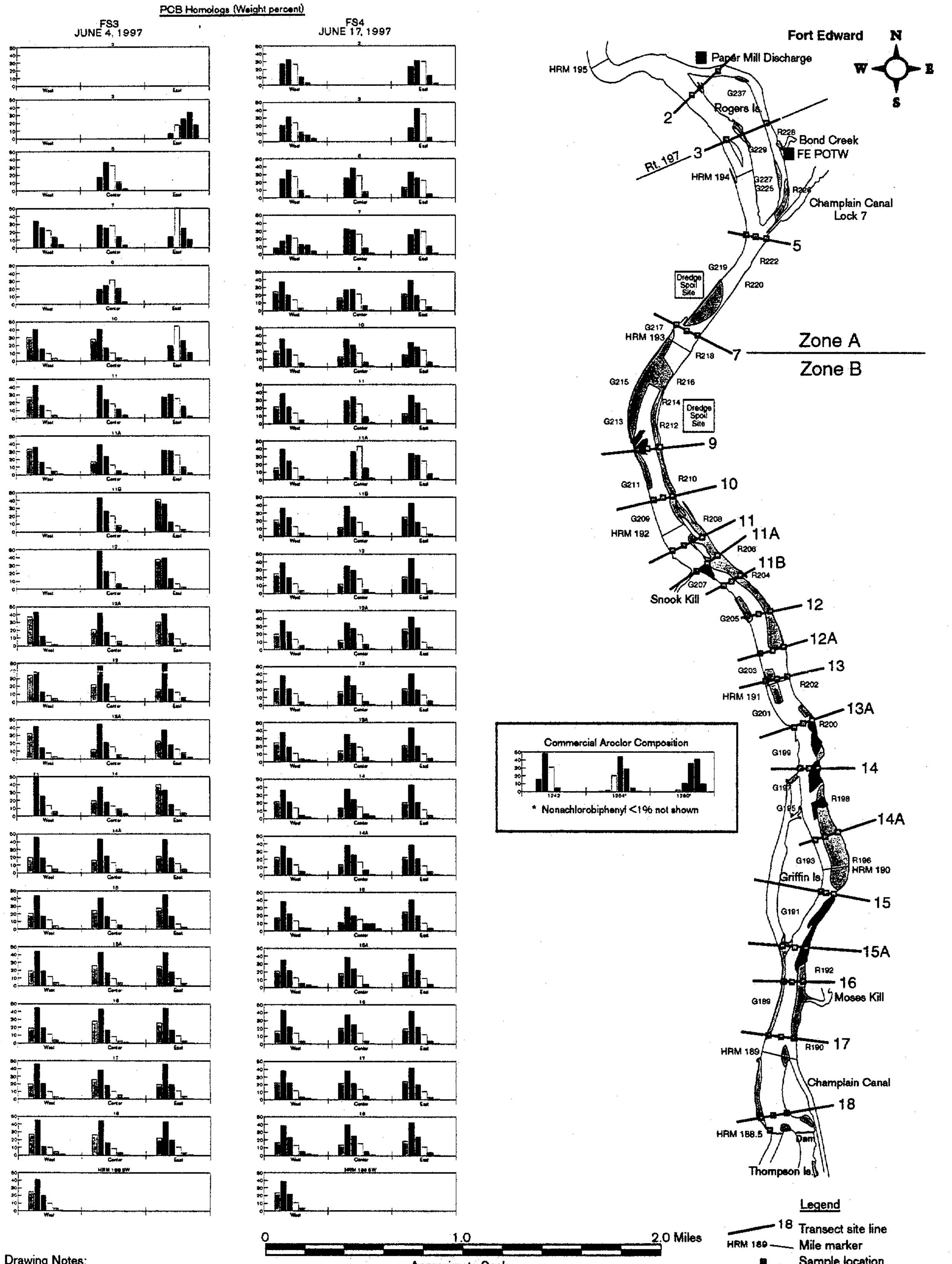
Figure 3-8

GENERAL ELECTRIC COMPANY / HUDSON RIVER PROJECT
1996-1997 THOMPSON ISLAND POOL STUDY

1997 TIP SURVEYS PCB HOMOLOG DISTRIBUTIONS



Drawing Notes:

1 HRM = Hudson River Mile. Mile 0.0 is located at the battery in New York City.

2. PCB composition resembled Aroclor 1242 with varying degrees of alteration (unshaded background) except (shaded background) samples FS3-3E, FS4-3W, FS4-7W, FS4-9W and FS4-15C which appear contaminated with Aroclor 1260 and additional samples that may have been affected as indicated by the presence of hepta chlorobiphenyls. Alternatively, the additional samples may contain an environmental Aroclor 1254 component.

3. Duplicate analyses are presented as averages, except samples FS3-9W, FS4-9W for which the duplicate results are presented.

4. For PCB homolog distributions presented, total PCB concentrations greater than the practical quantitation limit (PQL; 44ng/l) are considered more reliable indicators of actual PCB composition as analytical distortion of PCB composition has been observed at concentrations between the PQL and the method detection limit (11ng/l) resulting in decreased accuracy of PCB composition patterns. However, results of duplicate analyses generally indicate acceptable levels of precision for PCB homolog distributions at total PCB concentrations less than the PQL indicating that comparisons of data in the same concentration ranges may be acceptable for interpretation of pattern shifts. Interpretation of data at PCB concentrations less than the PQL should recognize these limitations. Refer to Figure 3-7 for total PCB concentrations.

5. Map adapted from HydroQual, Inc.

Legend

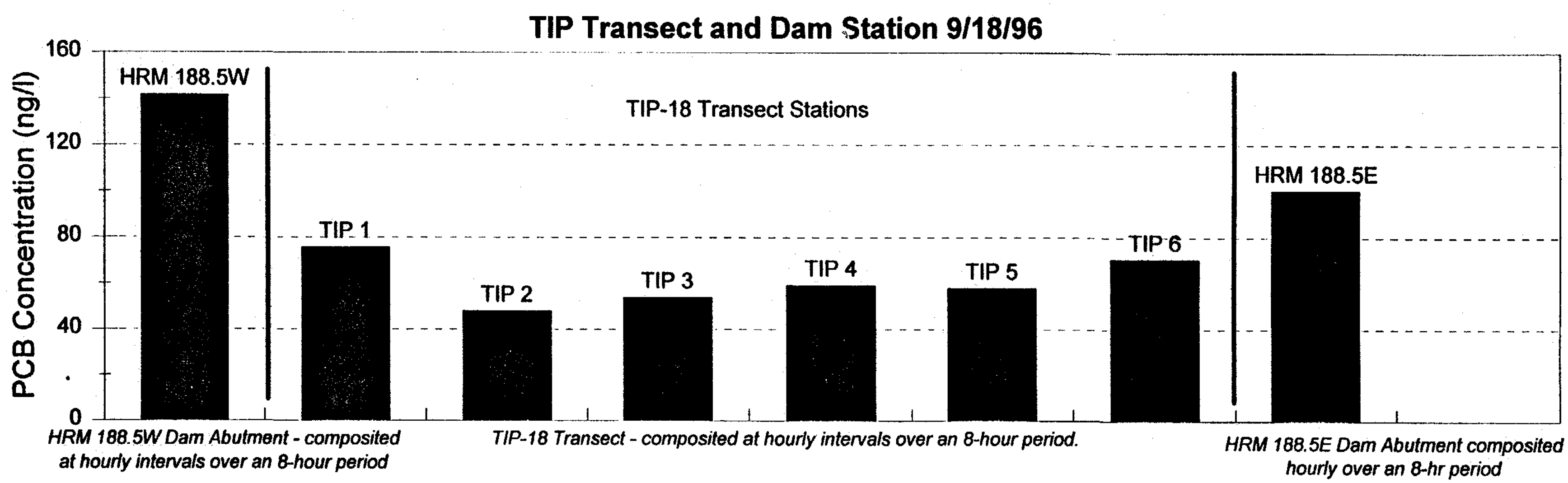
18 Transect site line
HRM 189 Mile marker
Sample location
G237 Green NOAA bouy
R228 Red NOAA bouy
Hotspot
Bedrock

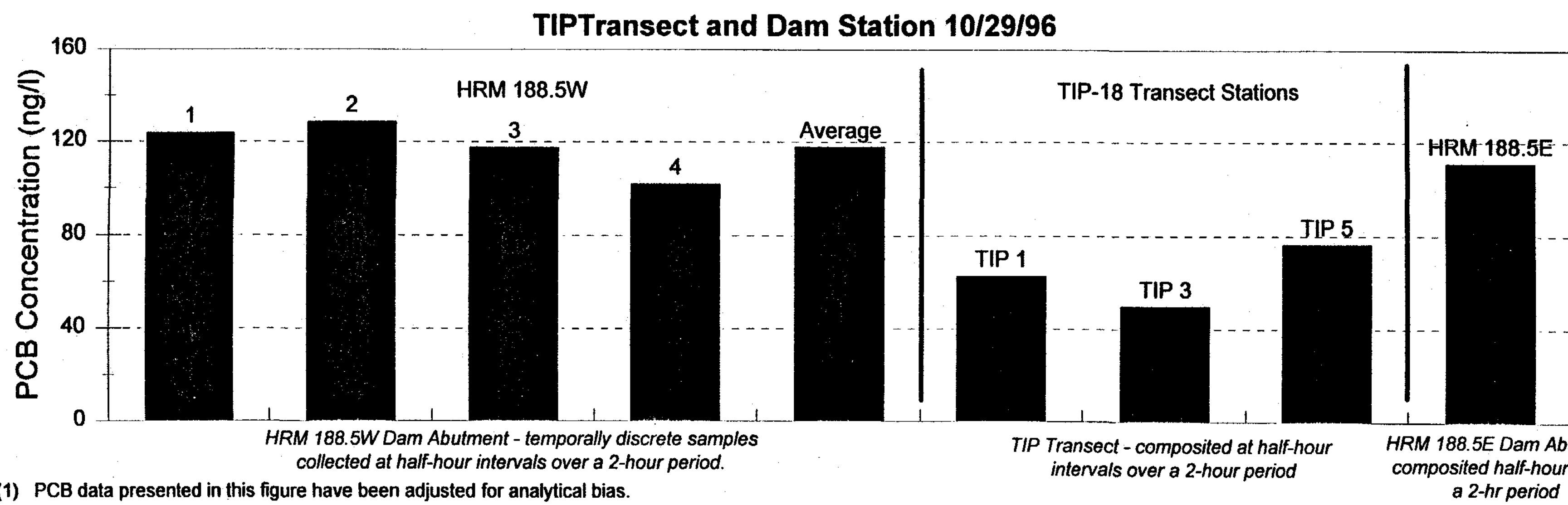
PCB Homolog Concentration

mono, di, tri, tetra, penta, hexa, hepta, octa

DIV 26/Gemini Mac/Report Graphics/GE Hudson-fyling/1997 Homologs

Figure 3-9
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of Transect TIP-18 and Thompson Island Dam (HRM 188.5W) PCB Data





Note: (1) PCB data presented in this figure have been adjusted for analytical bias.

Final: 02/27/98
(i:520612226\5_\tip_tid\tbl_fig/96TRANS.WB2(TIDmass))

O'Brien & Gere Engineers, Inc.

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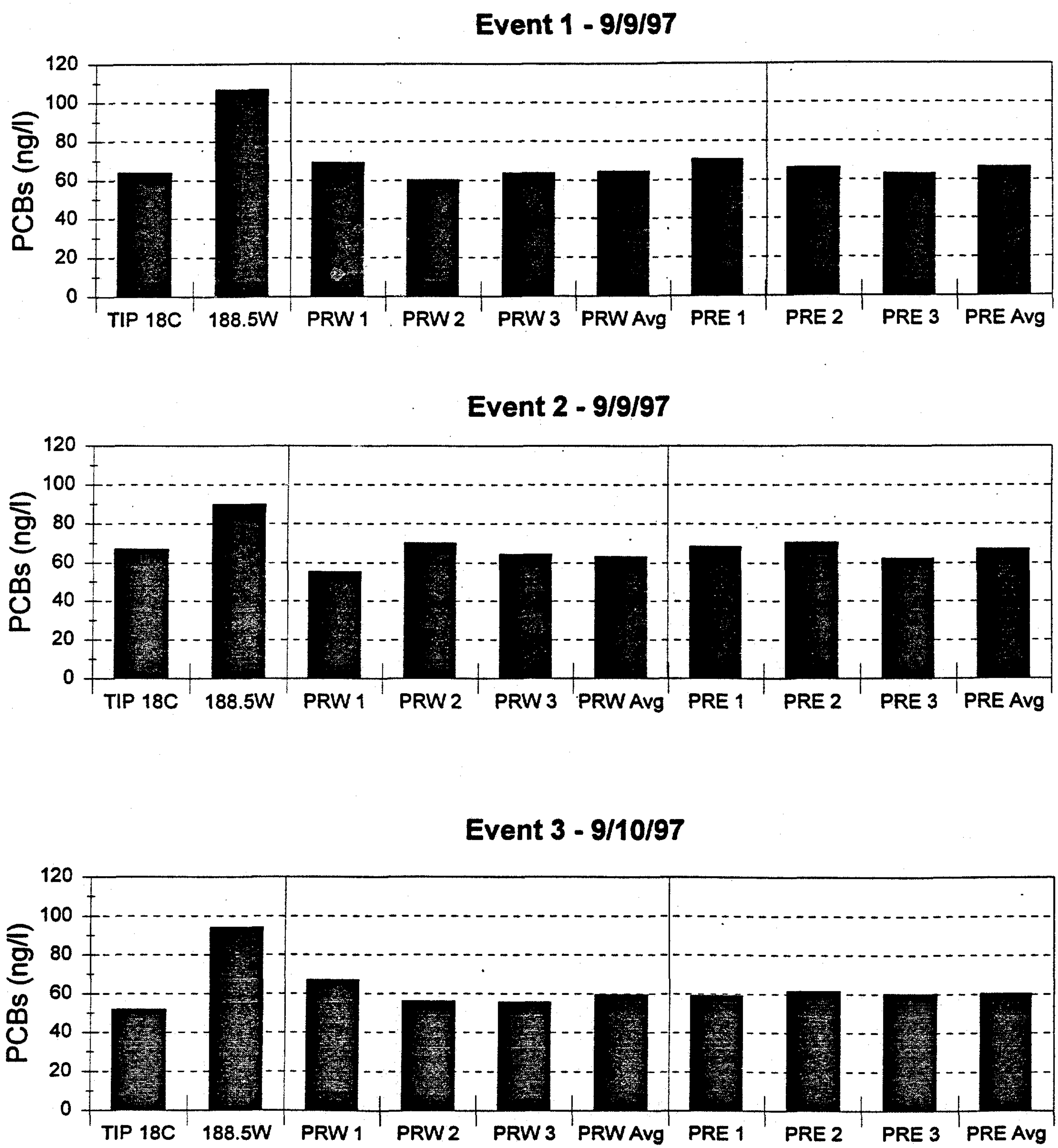
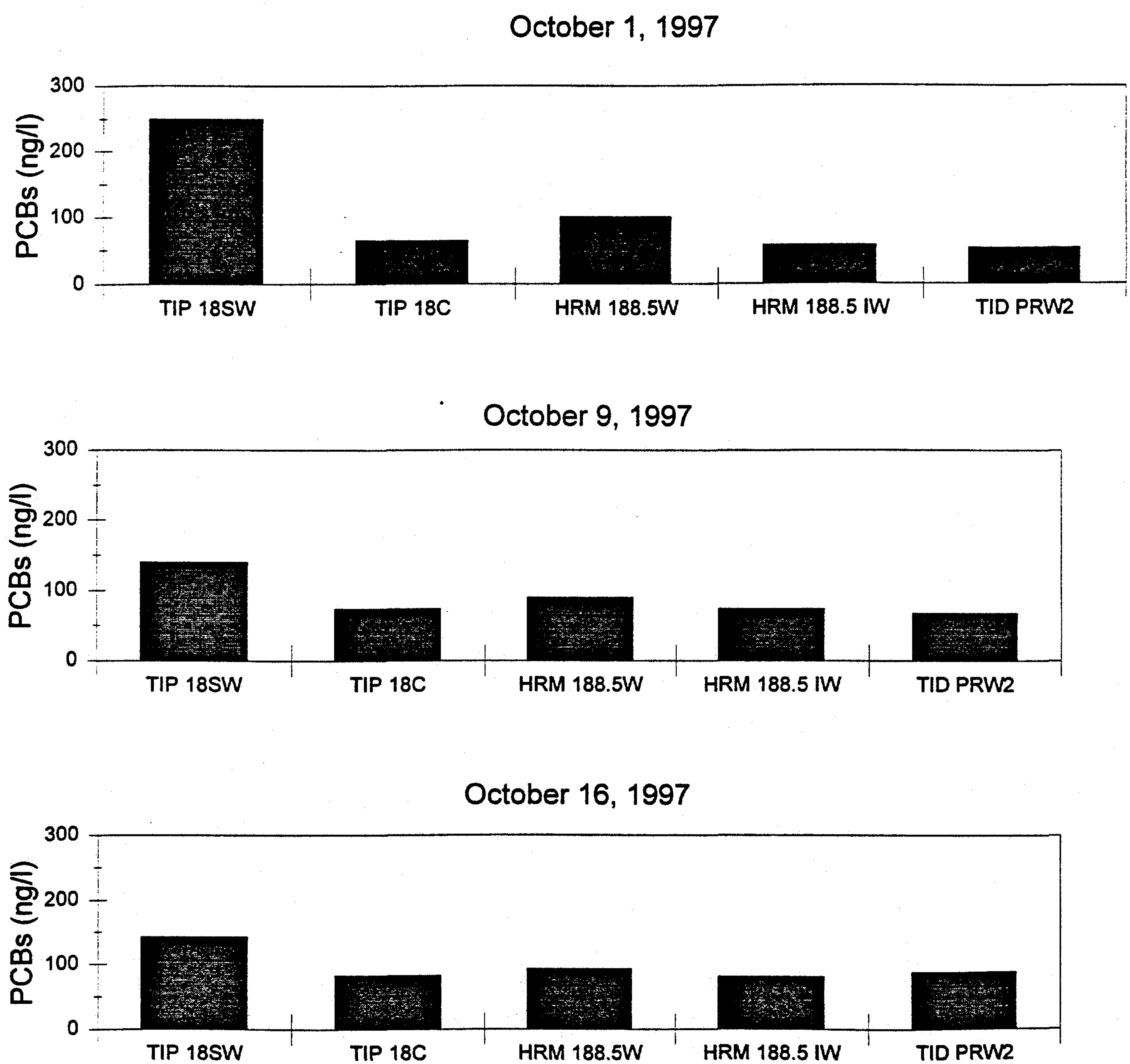
Figure 3-10
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of TID Profile Stations PCB Data



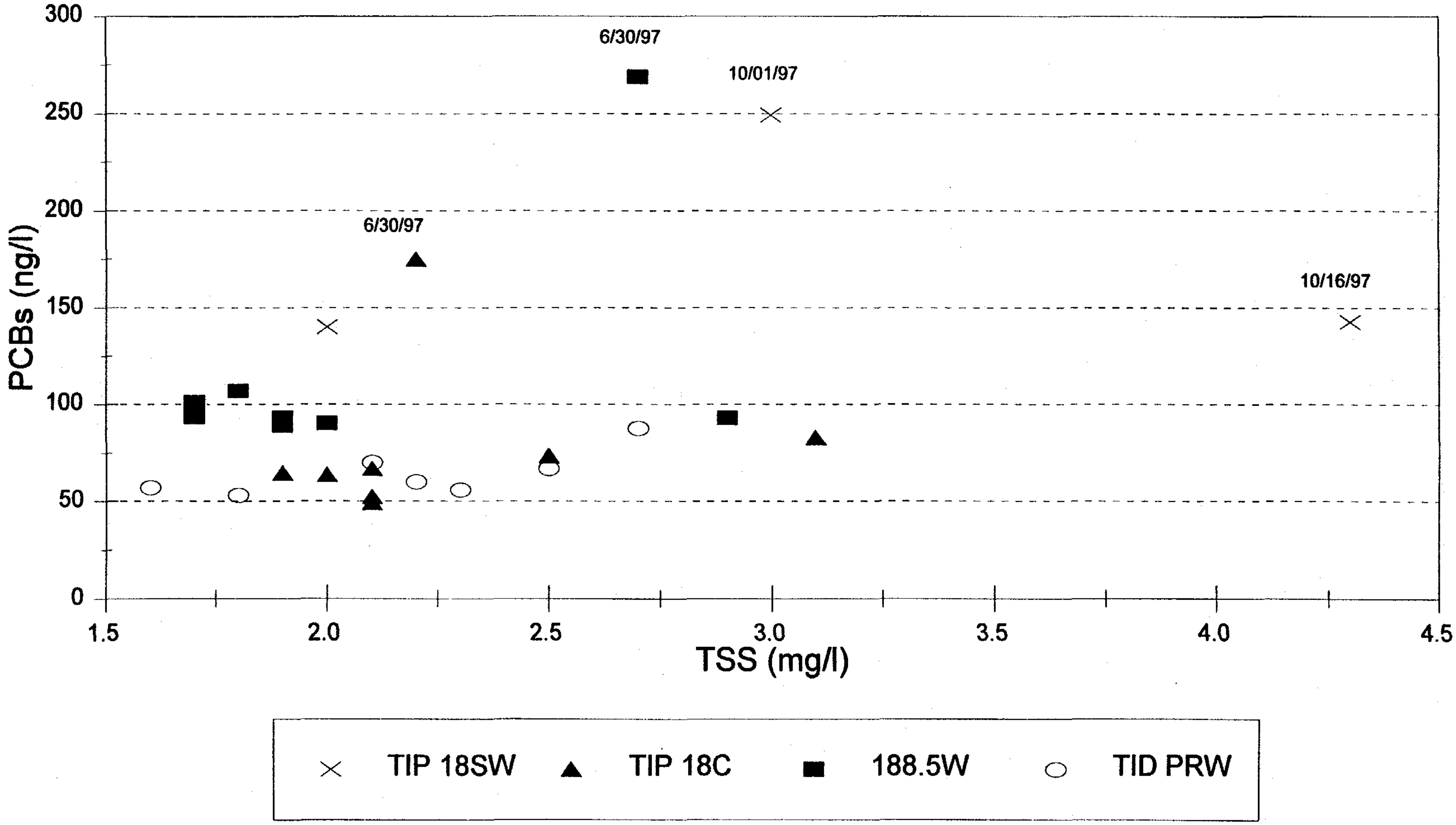
Note: PCB data presented in this figure have been adjusted for analytical bias.

Figure 3-11
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of PCB Concentrations in the Vicinity of Thompson Island Dam



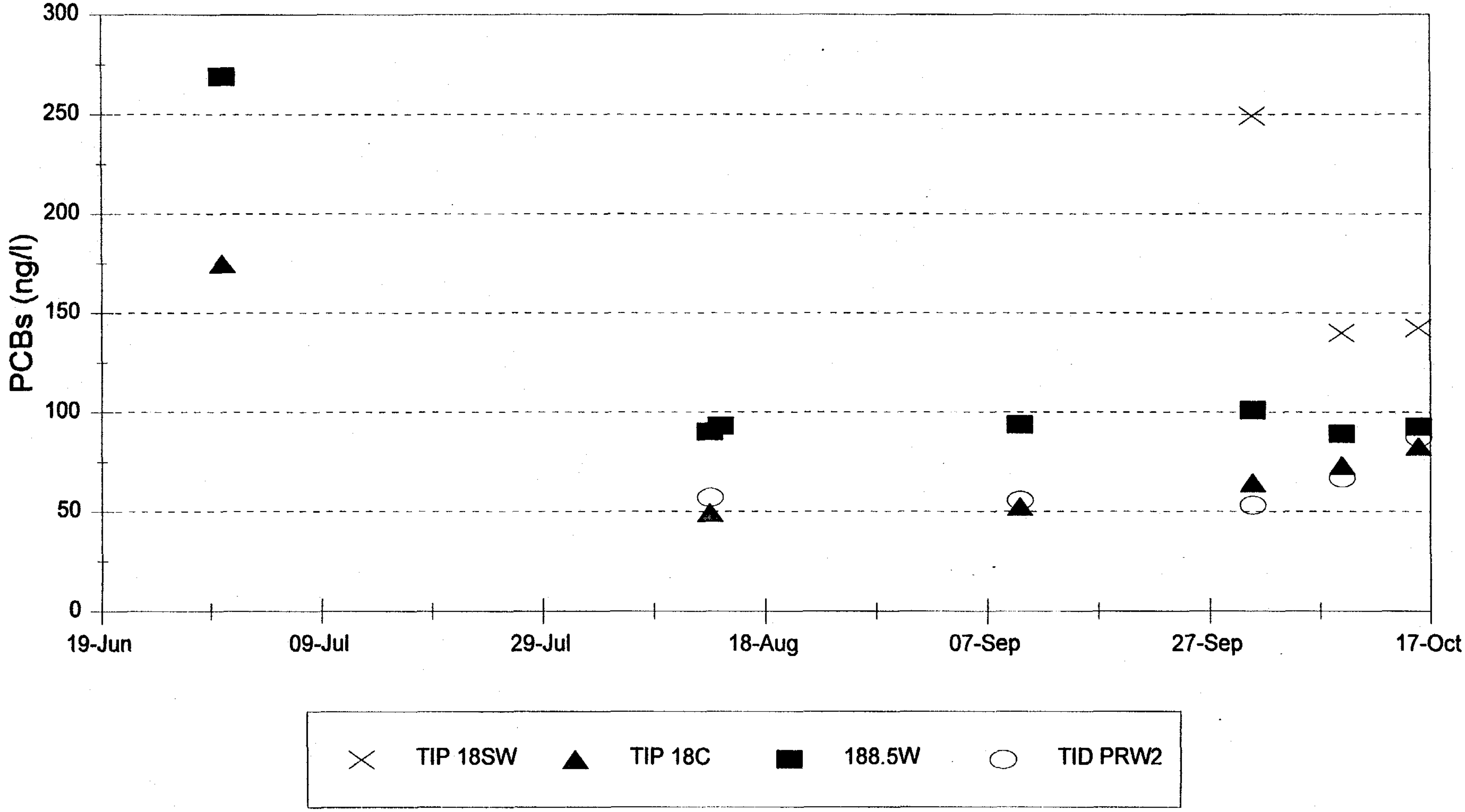
Note: PCB data presented in this figure have been adjusted for analytical bias.

Figure 3-12
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
PCB vs TSS in the Vicinity of Thompson Island Dam
June-Oct 1997



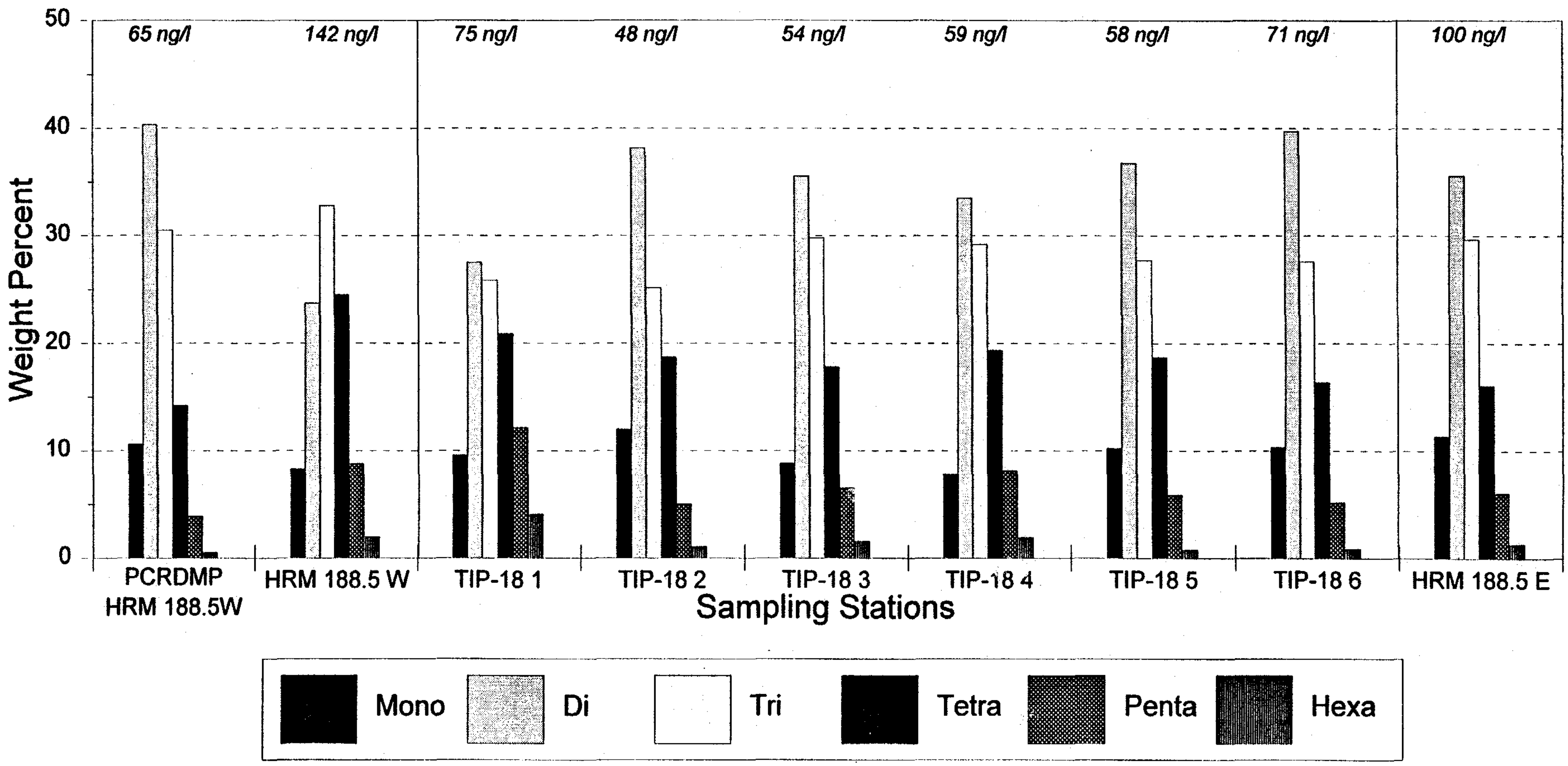
Note: PCB data presented in this figure have been adjusted for analytical biases.

Figure 3-13
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of PCB concentrations in the vicinity of Thompson Island Dam over Time



Note: PCB data presented in this figure have been adjusted for analytical biases.

Figure 3-14
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of Transect TIP-18 and HRM 188.5 PCB Homolog Distributions - 09/18/96



Notes: Results for each station are composites collected over an eight-hour period except sample collected during routine PCRDMP conducted on 9/18/96. Hepta through deca homolog groups are less than 1% by weight and are not presented. Total PCB concentrations are shown for each sampling station at the top of the graph above each homolog group. PCB homolog distributions for TIP4 and HRM 188.5E sampling stations are averages of sample and duplicate analyses. PCB data presented in this figure have been adjusted for analytical bias.

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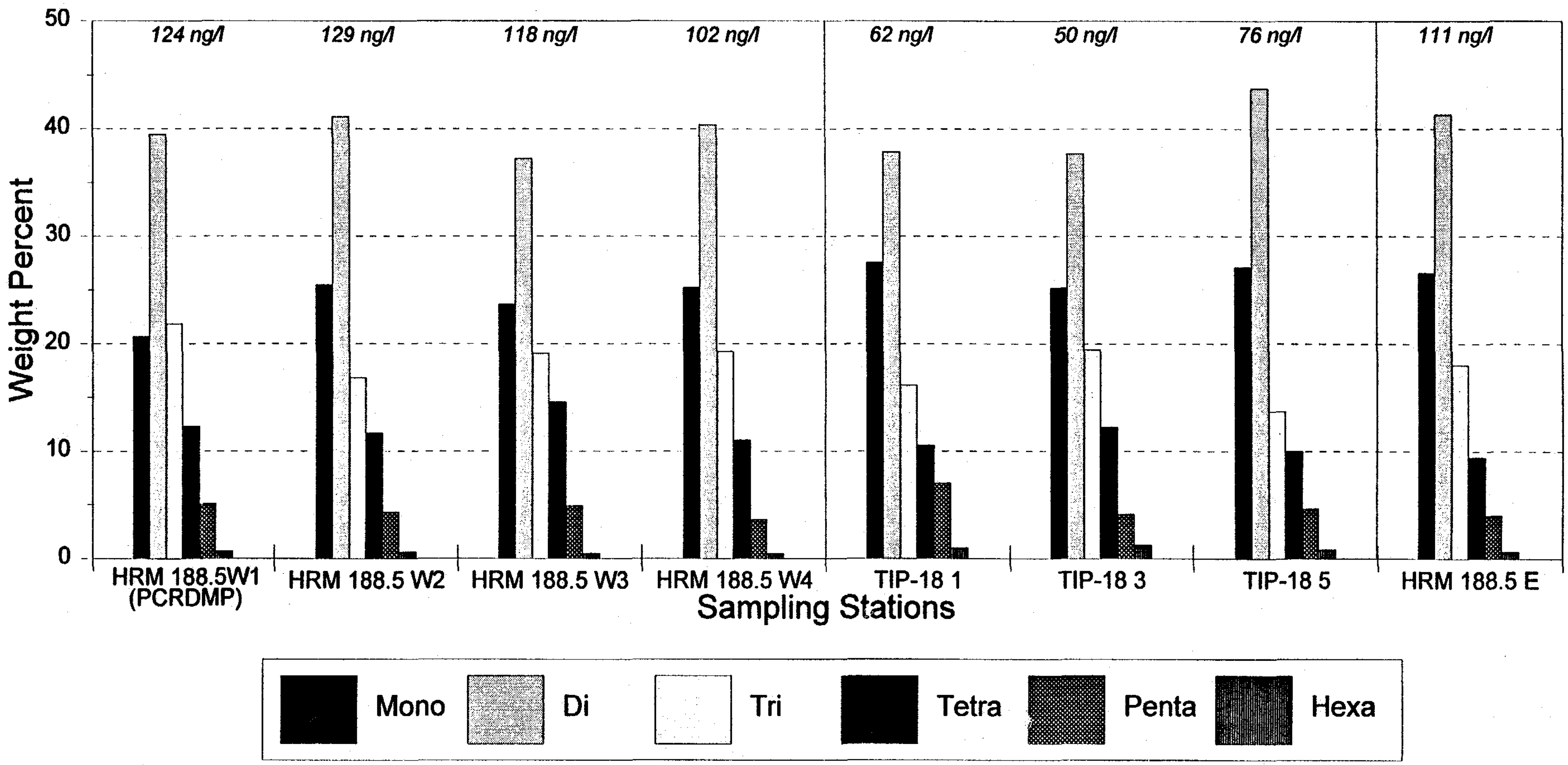
Figure 3-15
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of Transect TIP-18 and HRM 188.5 PCB Homolog Distribution - 10/29/96



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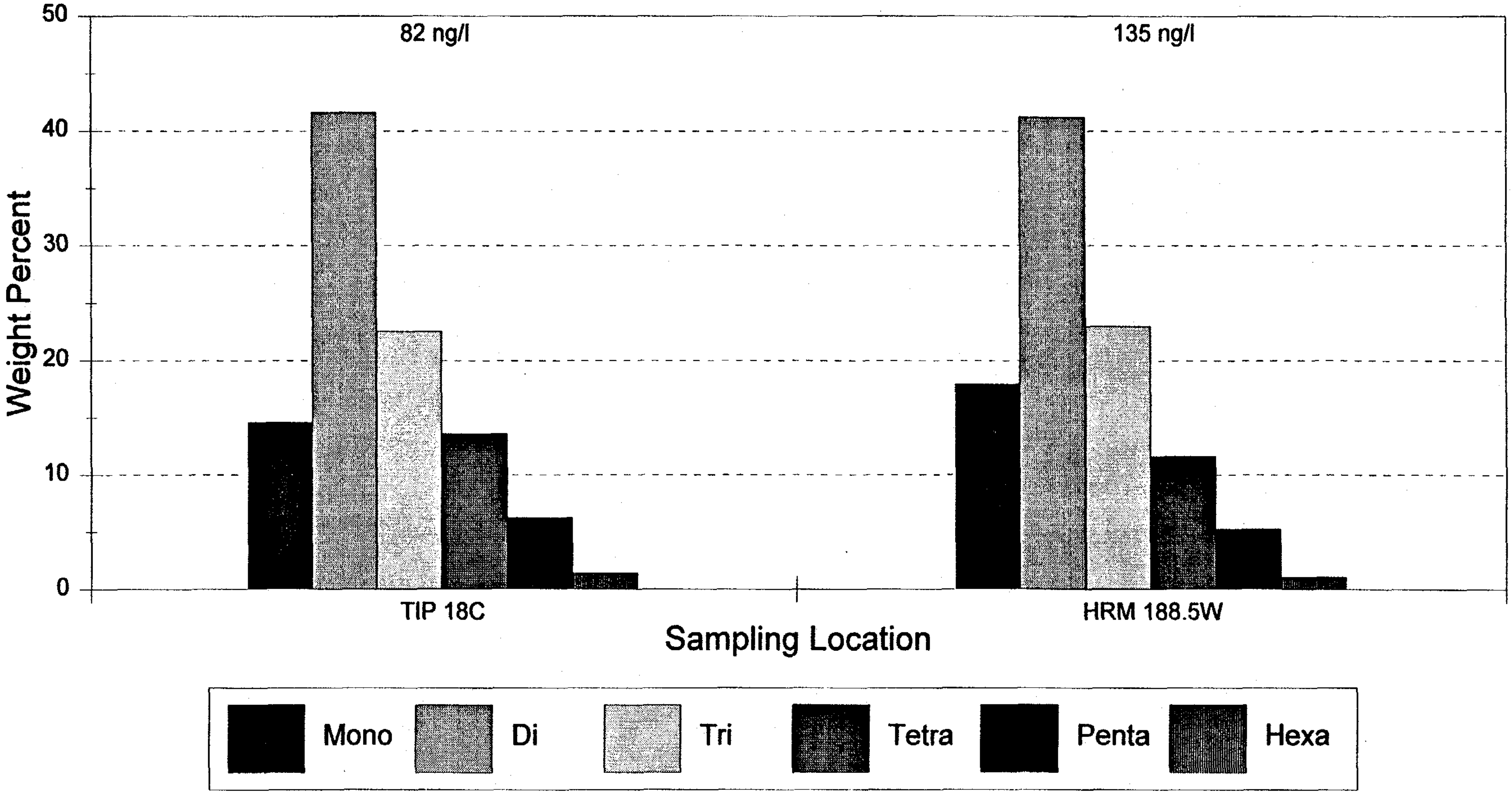
Notes: Results for the three TIP transect station and HRM 188.5E dam abutment are composites collected over a two-hour period. Samples collected from HRM 188.5W dam abutment are temporally discrete samples. Hepta through deca homolog groups are less than 1% by weight and are not presented. Total PCB concentrations are shown for each sampling station at the top of the graph above each homolog group. PCB data presented in this figure have been adjusted for analytical bias.

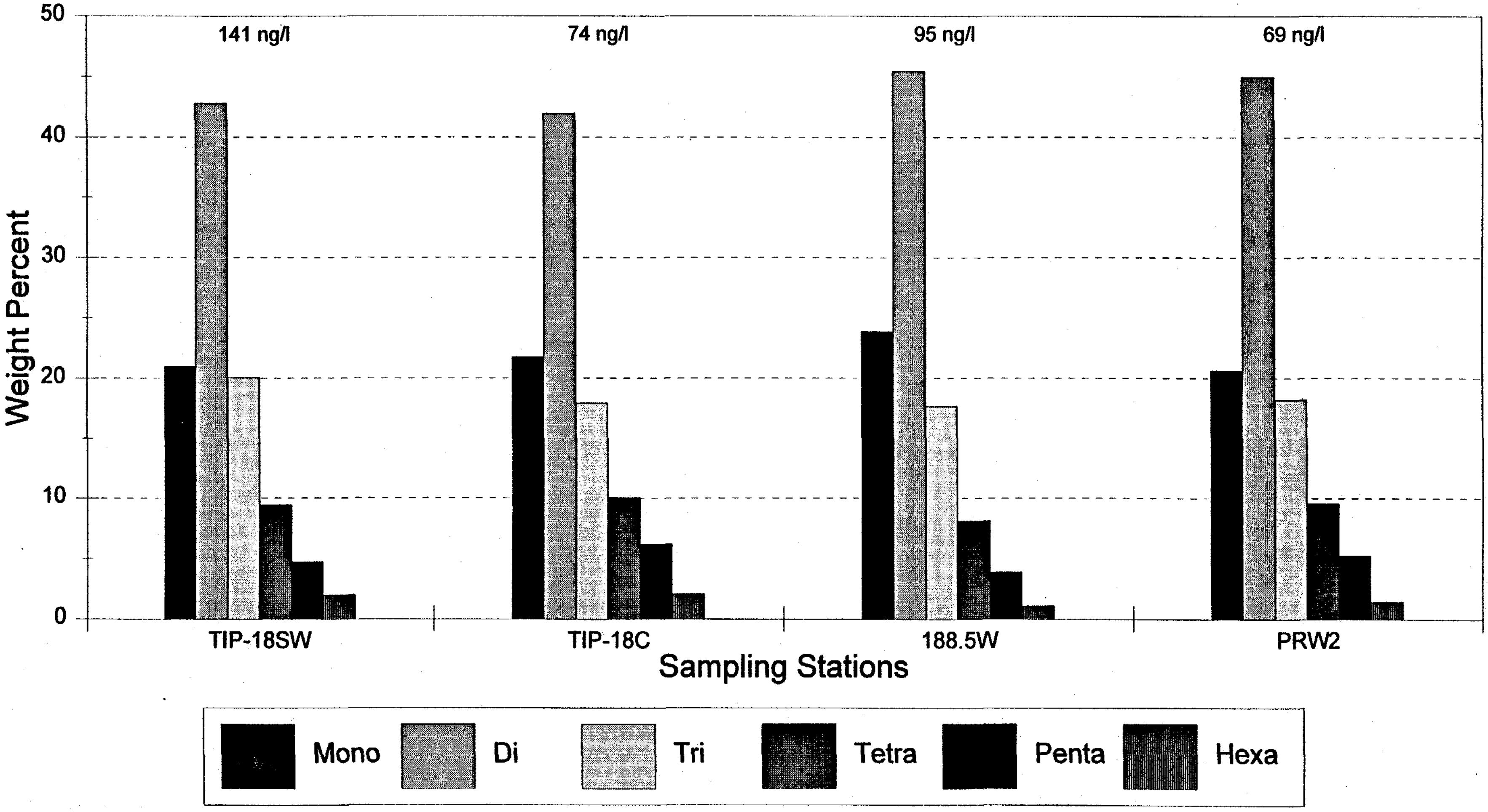
Figure 3-16
General Electric Company Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of Mean PCB homolog Distributions at TIP 18C and HRM 188.5W



310678

Notes: Results for both sampling stations are averages of twelve sampling events in June through October 1997. Average of total PCB concentrations are shown for each sampling station at the top of the graph above each homolog group. PCB data have been adjusted for analytical bias.

Figure 3-17
General Electric Company Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of Mean PCB Homolog Distributions in Vicinity of Thompson Island Dam



Notes: Results for all four stations are averages of three sampling events (10/1/97, 10/9/97, and 10/16/97). Average total PCB concentrations are shown above each homolog group. Data from 10/01/97 for station TIP-18SW are results of archive sample analysis; the homolog distribution pattern of the original sample suggested Aroclor 1260 contamination of the sample. This contamination pattern was not detected in the archive sample. PCB data have been adjusted for analytical bias.

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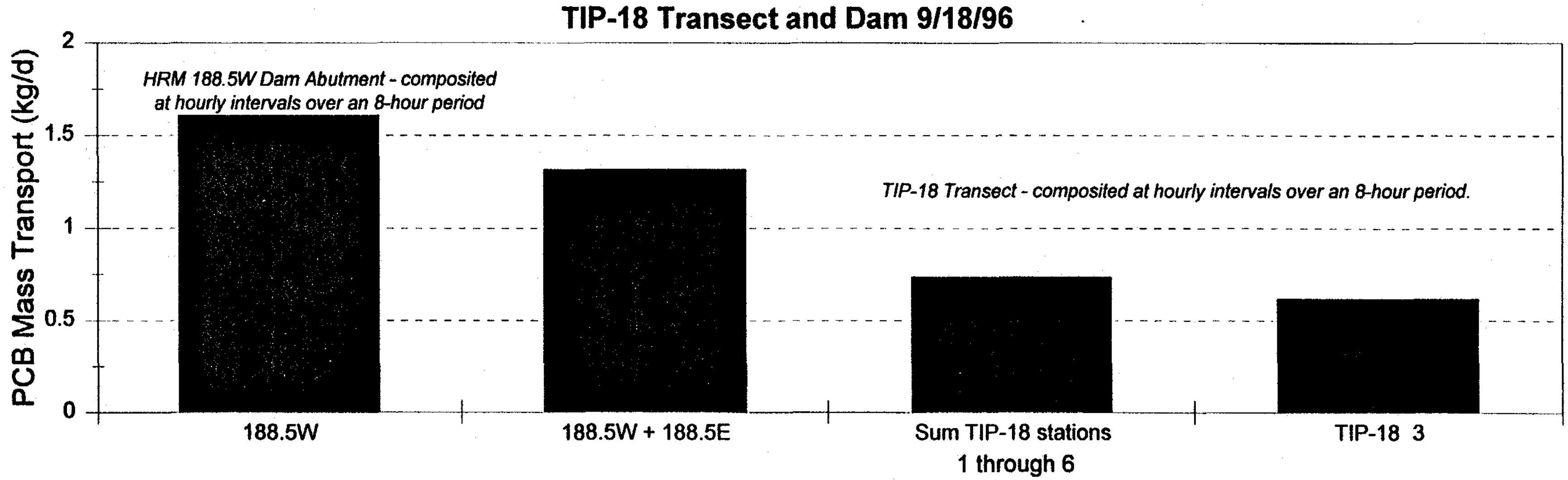
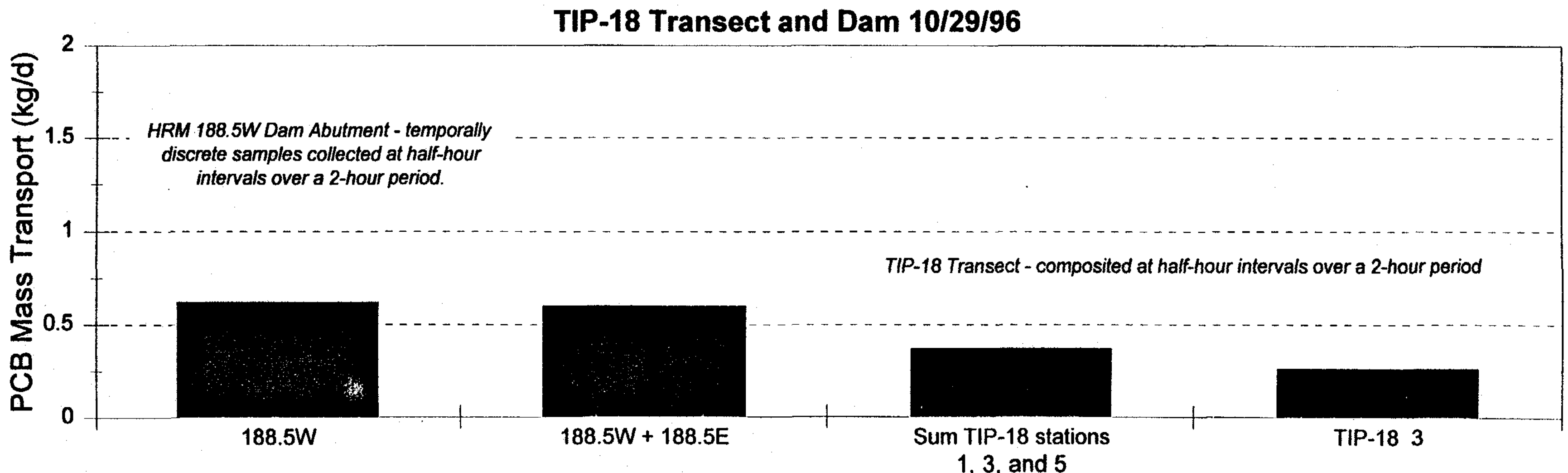
Figure 3-18
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Comparison of PCB Mass Transport at Transect TIP-18 and Thompson Island Dam





Note: PCB data presented in this figure have been adjusted for analytical bias.

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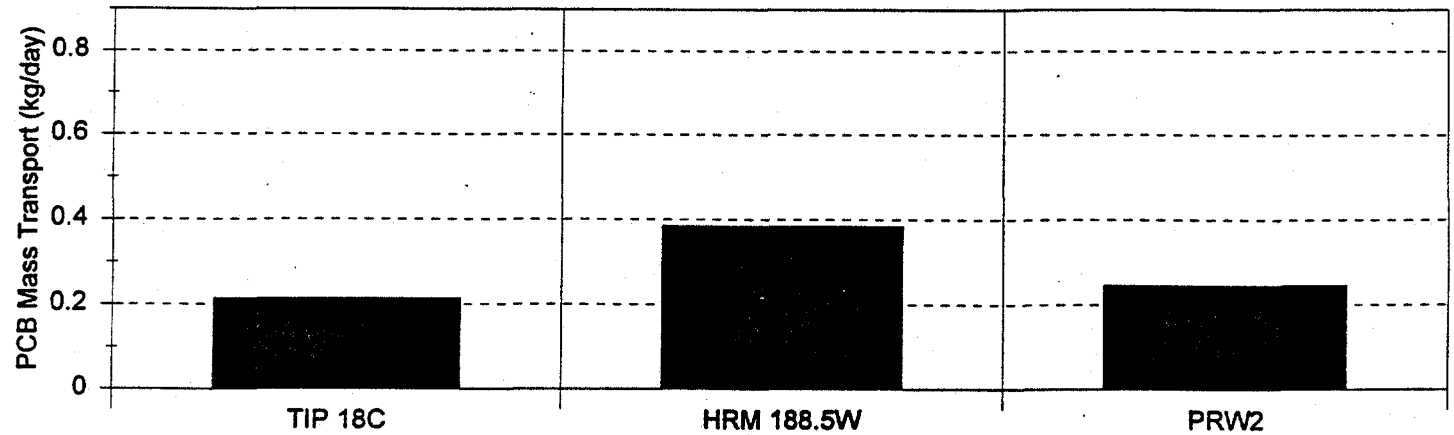
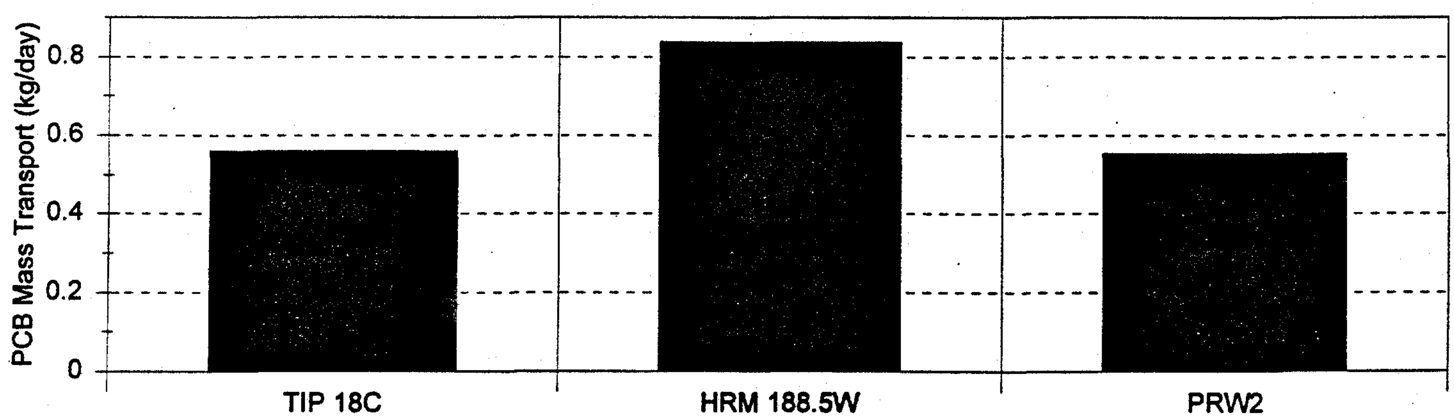
Figure 3-19
General Electric Company Hudson River Project
1996-1997 Thompson Island Pool Studies
PCB Mass Transport August-September 1997

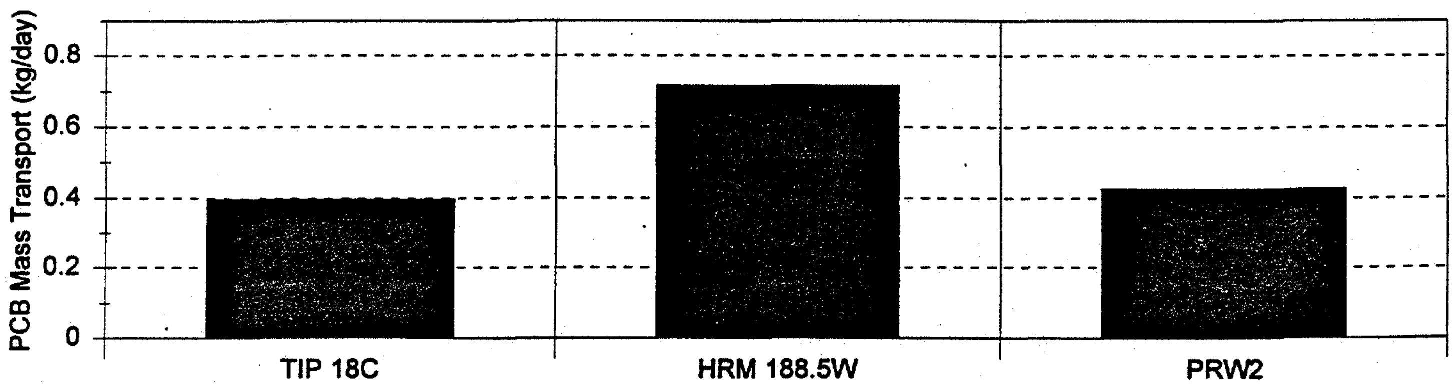
August 13, 1997



September 9, 1997

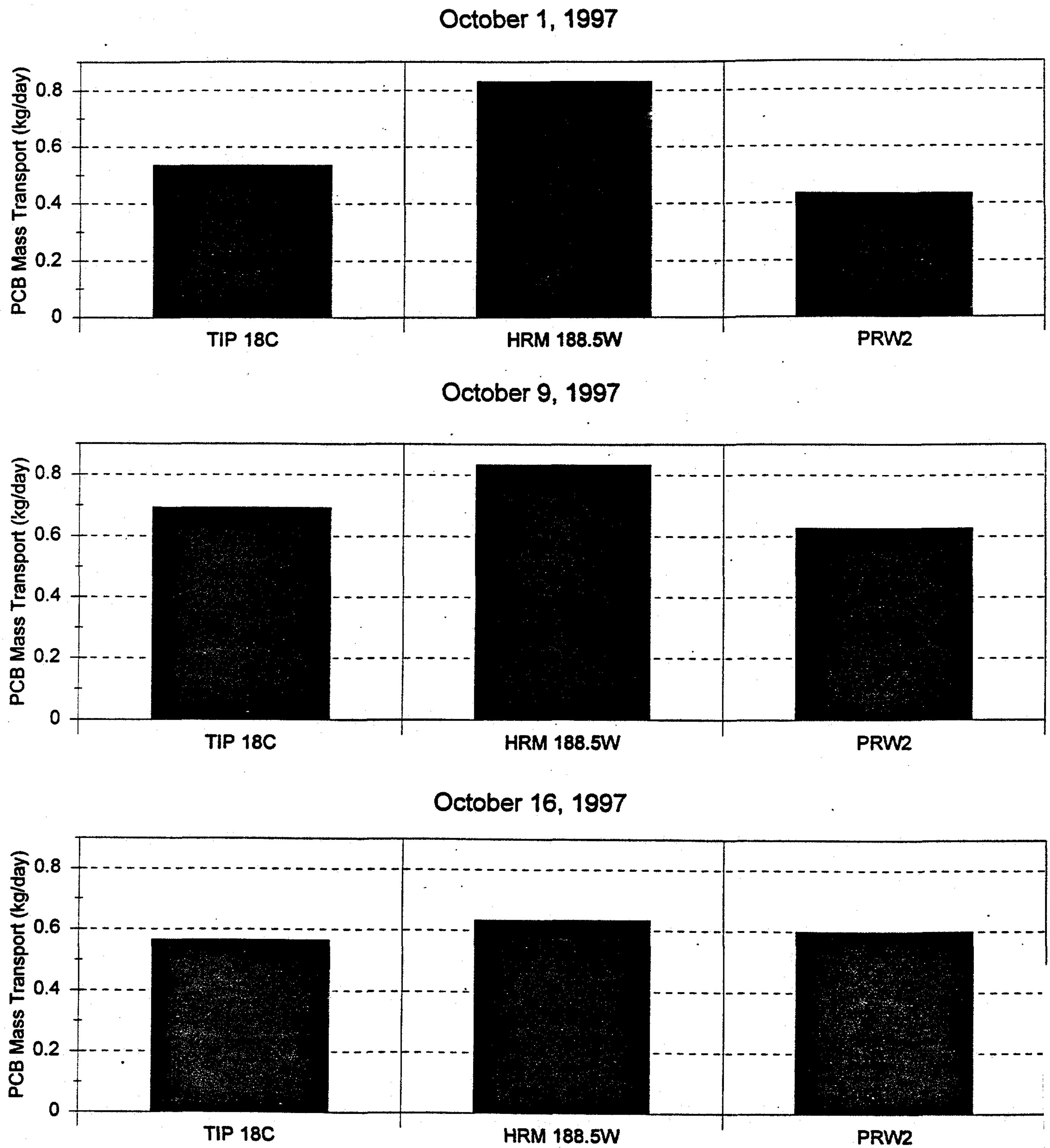


September 10, 1997



Based on estimated mean flow for the sampling period calculated from USGS provisional flow data reported at 15-min intervals. PCB mass transport calculated as the product of estimated flow and mean PCB concentrations for each station. Mass transport for the two west channel stations calculated assuming flow for entire channel. PCB data have been adjusted for analytical bias.

Figure 3-20
General Electric Company Hudson River Project
1996-1997 Thompson Island Pool Studies
PCB Mass Transport October 1997



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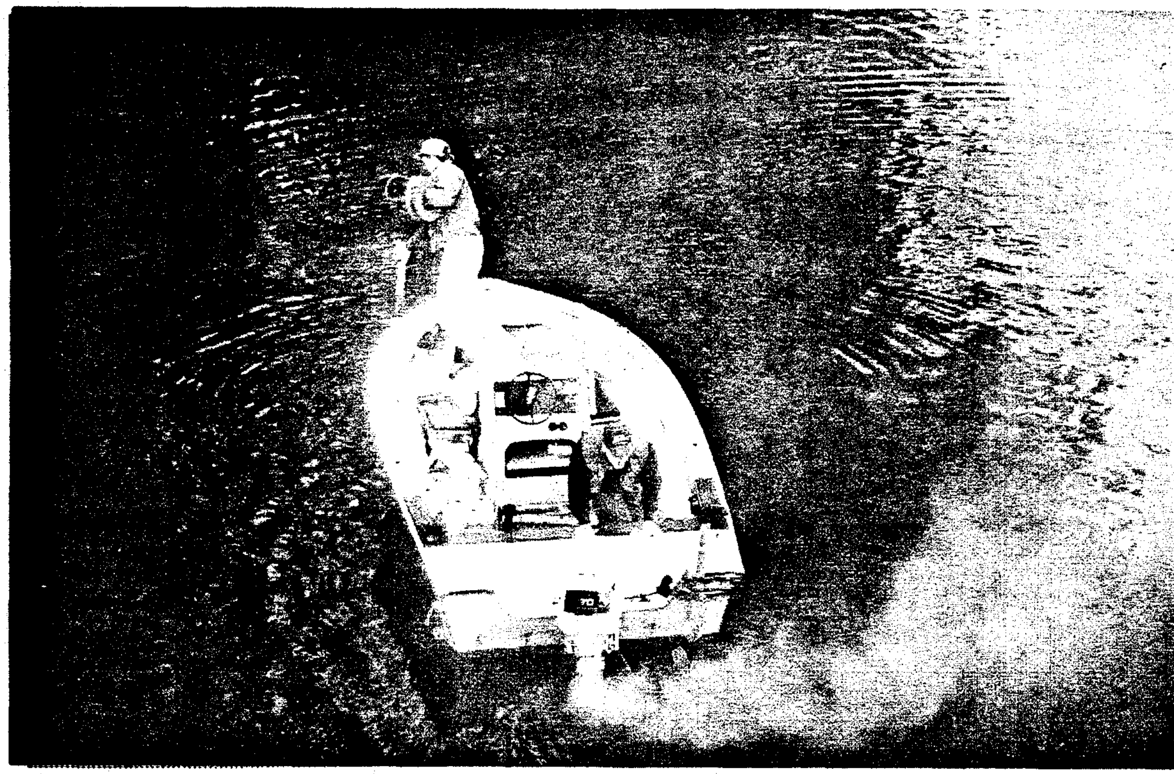
Based on estimated mean flow for the sampling period calculated from USGS provisional flow data reported at 15-min intervals. PCB mass transport calculated as the product of estimated flow and mean PCB concentrations for each station. Mass transport for the two west channel stations calculated assuming flow for entire channel. PCB data have been adjusted for analytical bias.

APPENDICES

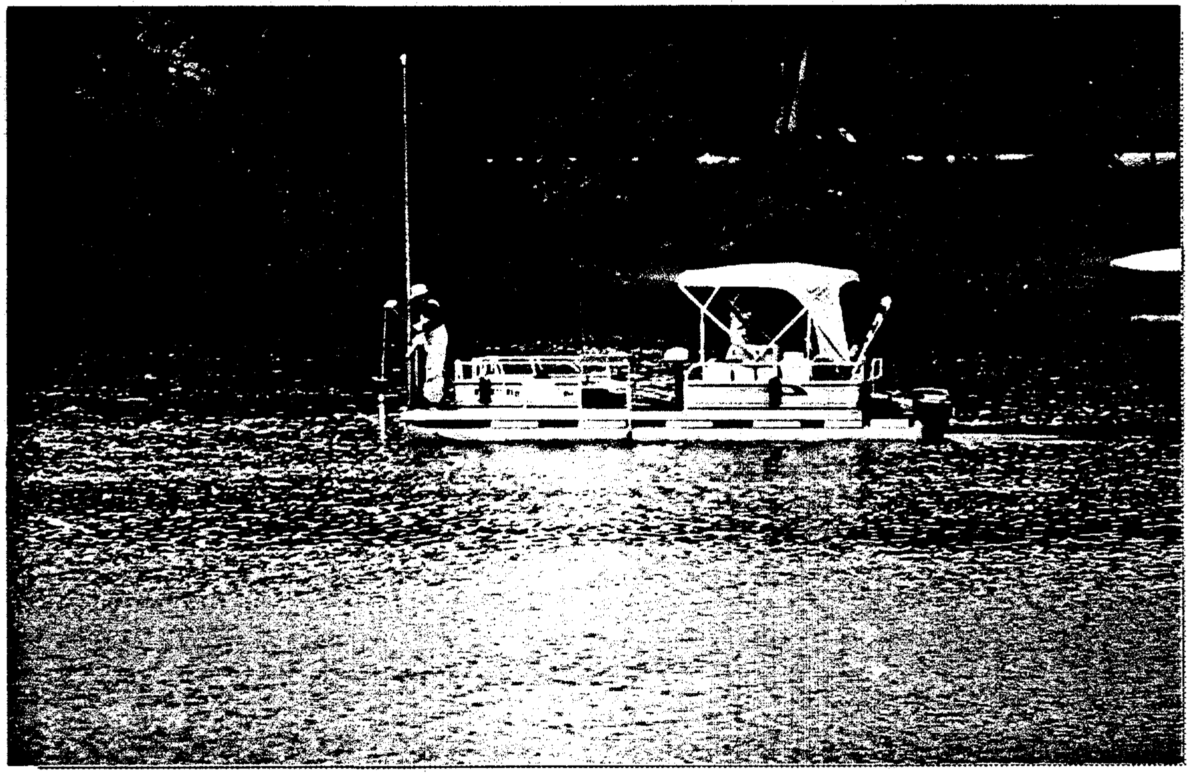
310683

Photographs of sampling activities

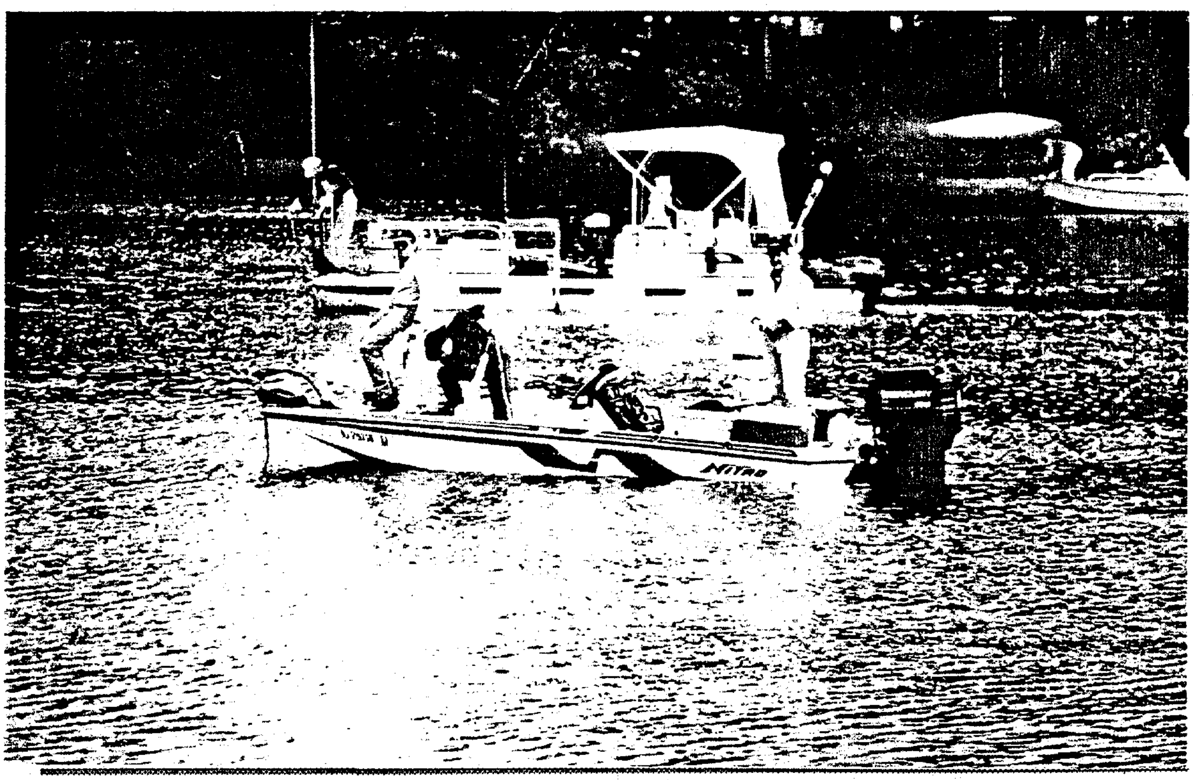


1 TIP time of travel survey 09/24-25/96: Sample collection in the east channel of Roger's Island (FS-3E), upstream of the Route 197 bridge (HRM 194.2). Photograph taken from the Route 197 bridge.

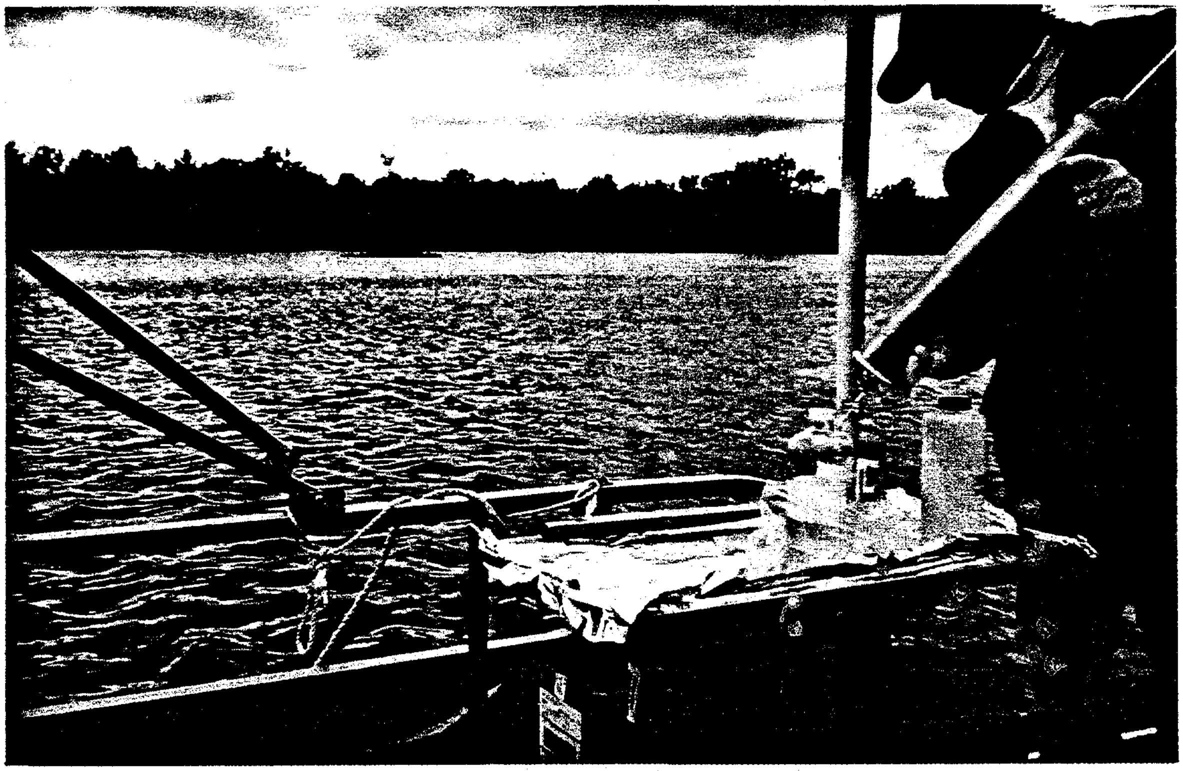
2 TIP time of travel survey sampling 09/24-25/96: Three sampling boats in position to sample at the west, center and east transect stations at FS-9. Photograph taken from the west shore, facing upstream.



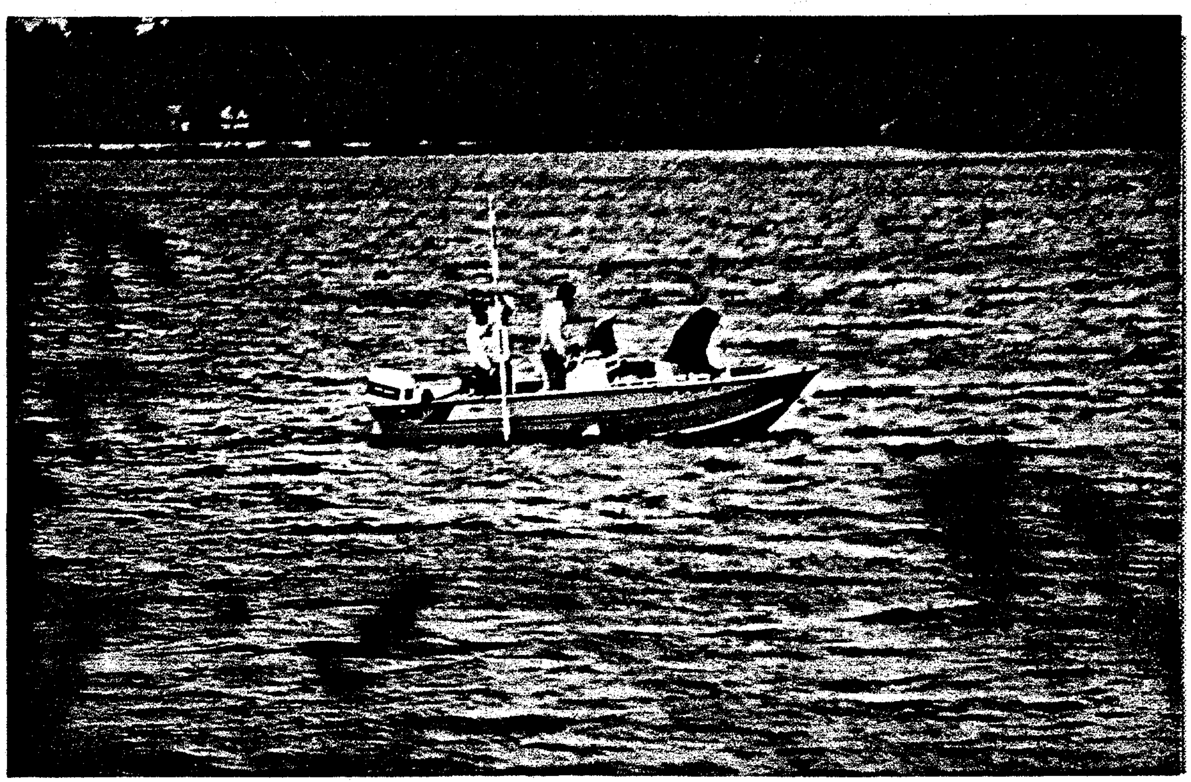
3 TIP time of travel survey sampling 09/24-25/96: Sample collection from the pontoon boat in Thompson Island Pool (FS-16C), as viewed from the west shore. The sample is collected off the bow of the boat facing upstream.



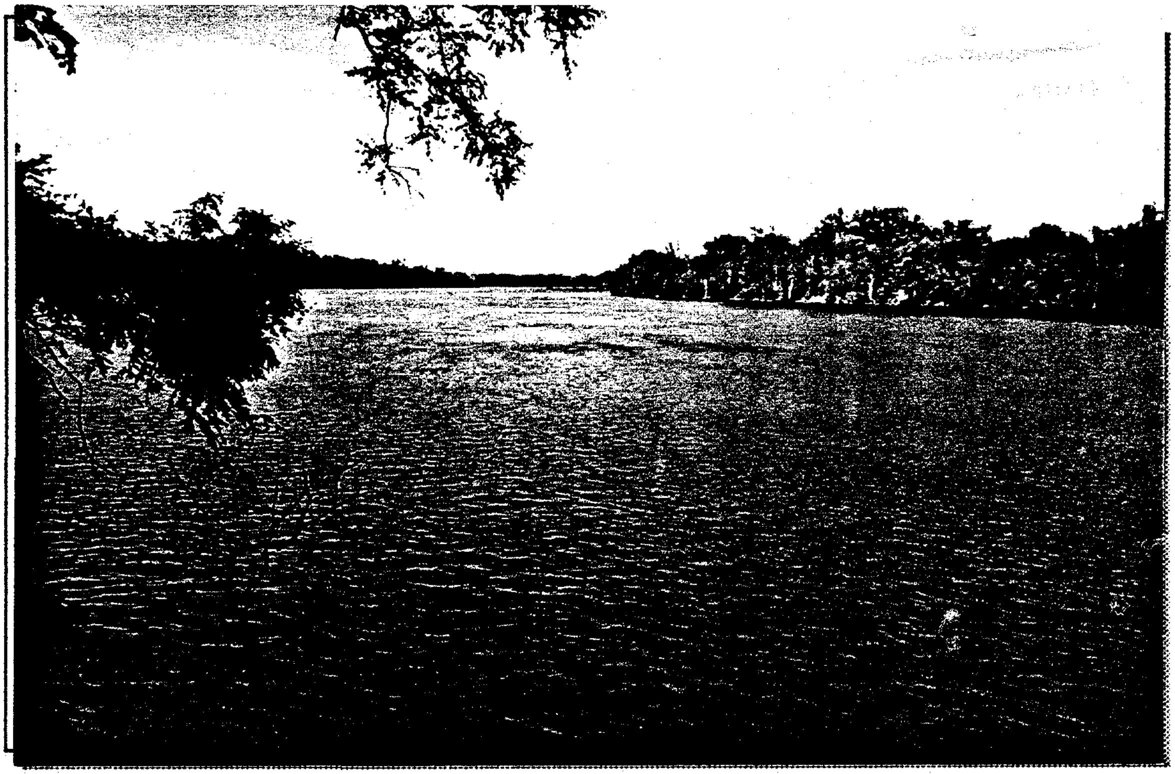
4 TIP time of travel survey 09/24-25/96: Three sampling boats in position for sampling at transect FS-16 in Thompson Island Pool. Photograph taken from the west shore. The bows of the boats are facing upstream.



5 Thompson Island Pool water column monitoring 09/97. Water samples were collected at three depths and composited in the sample bottles.

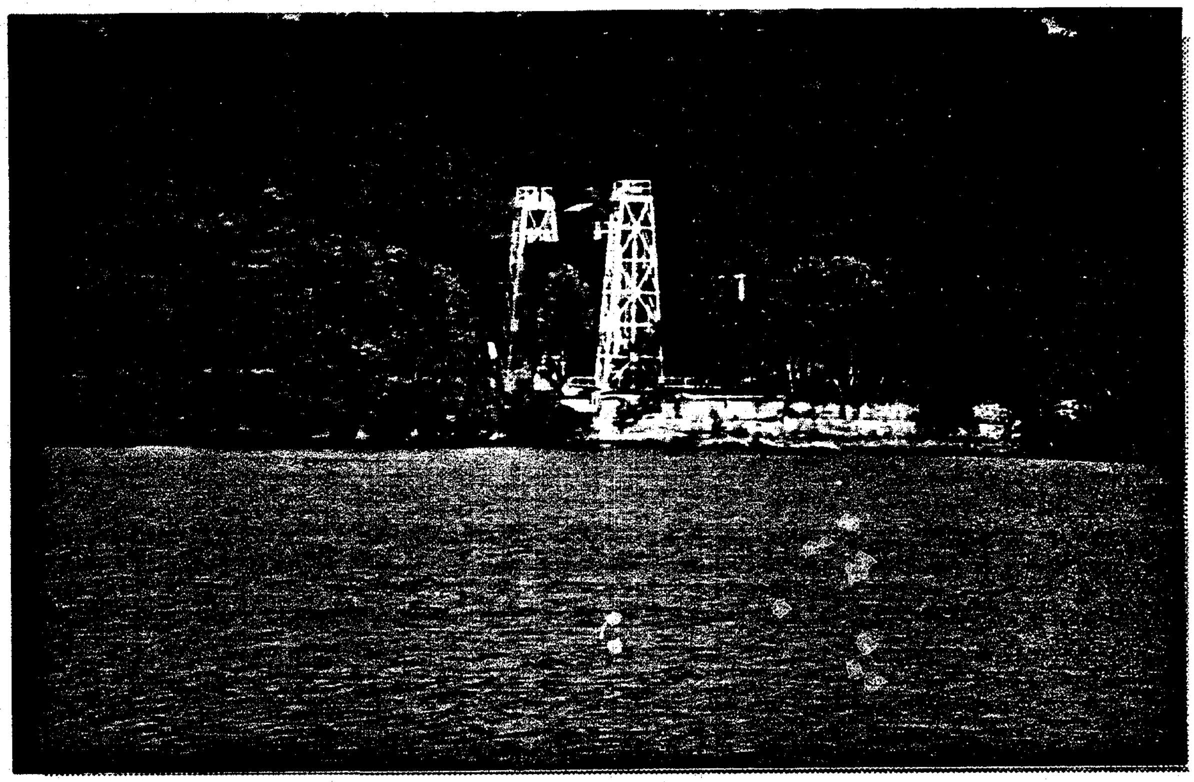


6 Thompson Island Pool (TIP) transect sampling 9/18/96: Water depth was measured at each transect station during sampling. Photograph taken from the west shore.



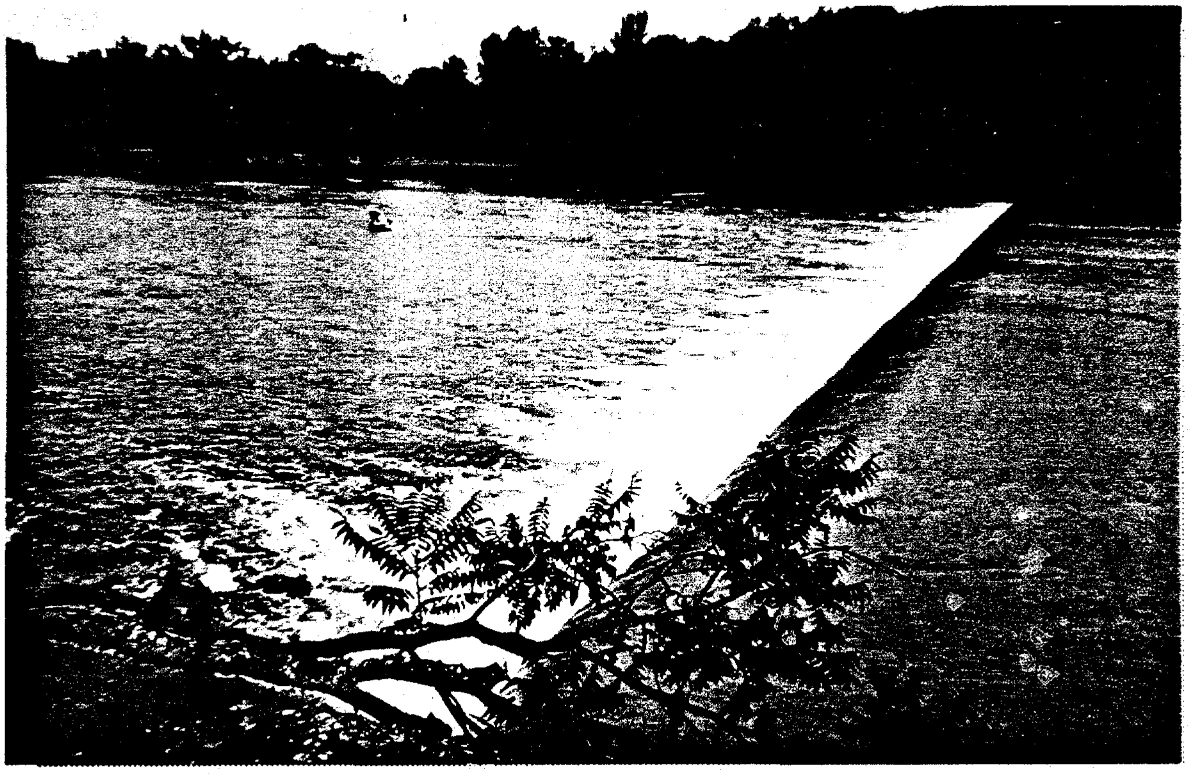
7 View from the west dam abutment of Thompson Island Dam (TID) looking upstream. Routine PCRDMP samples are collected from this station (HRM 188.5W).

8 Transect sampling event 9/18/96, station HRM 188.5W: West shore dam abutment is visible to the right of center in this photograph. Two white buoys marking the TIP transect are also visible.



9 Transect sampling event 9/18/96, station HRM 188.5E: East shore dam abutment of Thompson Island Dam as photographed from the west shore.

10 Thompson Island Pool station TIP-18SW located along the west shore at transect 18. White buoy in center of photograph indicates site location.



11 Down river of Thompson Island dam - east channel: Samples were collected along a transect approximately 200 ft down river from the dam.

APPENDIX B

Time of travel estimates and USGS flow data

Table B-1
General Electric Company - Hudson River Project
Water Column Monitoring Study

USGS Real-Time Data, Hudson River at Fort Edward
USGS Station Number: 01327750
TIP Transect Sampling September 18, 1996

Time (international hours)	Stage (ft above datum)	Estimated Flow (cfs)
00:00	21.48	3,740
00:15	21.40	3,500
00:30	21.35	3,350
00:45	21.35	3,350
01:00	21.49	3,780
01:15	21.65	4,290
01:30	21.63	4,230
01:45	21.60	4,130
02:00	21.47	3,710
02:15	21.43	3,590
02:30	21.57	4,030
02:45	21.74	4,600
03:00	21.83	4,920
03:15	21.83	4,920
03:30	21.78	4,740
03:45	21.79	4,780
04:00	21.81	4,850
04:15	21.83	4,920
04:30	21.80	4,810
04:45	21.79	4,780
05:00	21.72	4,530
05:15	21.70	4,460
05:30	21.86	5,030
05:45	22.17	6,180
06:00	22.34	6,840
06:15	22.38	7,000
06:30	22.38	7,000
06:45	22.41	7,130
07:00	22.46	7,330
07:15	22.53	7,620
07:30	22.52	7,580
07:45	22.41	7,130
08:00	22.29	6,650
08:15	22.25	6,490
08:30	22.26	6,530
08:45	22.30	6,680
09:00	21.98	5,470
09:15	21.61	4,160
09:30	21.73	4,570
09:45	22.48	7,410
10:00	22.99	9,680
10:15	22.67	8,220
10:30	22.19	6,260
10:45	21.76	4,670
11:00	21.47	3,710
11:15	21.41	3,530
11:30	21.68	4,400
11:45	21.89	5,140
12:00	21.89	5,140
12:15	21.75	4,640
12:30	21.66	4,330
12:45	21.59	4,100

Table B-1
General Electric Company - Hudson River Project
Water Column Monitoring Study

USGS Real-Time Data, Hudson River at Fort Edward
USGS Station Number: 01327750
TIP Transect Sampling September 18, 1996

Time (international hours)	Stage (ft above datum)	Estimated Flow (cfs)
13:00	21.72	4,530
13:15	21.85	4,990
13:30	21.90	5,170
13:45	21.87	5,060
14:00	21.78	4,740
14:15	21.73	4,570
14:30	21.70	4,460
14:45	21.76	4,670
15:00	21.76	4,670
15:15	21.79	4,780
15:30	21.72	4,530
15:45	21.68	4,400
16:00	21.67	4,360
16:15	21.71	4,500
16:30	21.78	4,740
16:45	21.78	4,740
17:00	21.73	4,570
17:15	21.66	4,330
17:30	21.60	4,130
17:45	21.65	4,290
18:00	21.76	4,670
18:15	21.84	4,960
18:30	21.81	4,850
18:45	21.74	4,600
19:00	21.68	4,400
19:15	21.68	4,400
19:30	21.77	4,710
19:45	21.84	4,960
20:00	21.80	4,810
20:15	21.74	4,600
20:30	21.67	4,360
20:45	21.64	4,260
21:00	21.65	4,290
21:15	21.74	4,600
21:30	21.77	4,710
21:45	21.72	4,530
22:00	21.70	4,460
22:15	21.68	4,400
22:30	21.71	4,500
22:45	21.78	4,740
23:00	21.85	4,990
23:15	21.81	4,850
23:30	21.78	4,740
23:45	21.70	4,460

Notes:
Stage data were downloaded from internet connection on September 30, 1996. More information about the quality of real-time data is available on the Internet at the following URL:
http://wwwdnyalb.er.usgs.gov/swr/NY/
Flow values were derived from the Expanded Rating Table provided by USGS. USGS data in this table have not received Director's approval and as such are provisional and subject to revision. The data are released on the condition that neither the USGS nor the United States Government may be held liable for any damages resulting from its use.

Table B-2
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies

Time of Travel Estimates from the USGS Fort Edward Gaging Station to Time of Travel Study Sampling Station

Transect No.	Approx. River Mile	Zone	Estimated Time of Travel (hours) 2500 cfs	3000 cfs	3500 cfs	4000 cfs	4500 cfs	5000 cfs
1	194.60	A	0.00	0.00	0.00	0.00	0.00	0.00
2	194.46	A	0.18	0.15	0.13	0.11	0.10	0.09
3	194.20	A	0.51	0.43	0.37	0.32	0.29	0.26
4	193.96	A	0.82	0.69	0.59	0.51	0.46	0.41
5	193.70	A	1.16	0.96	0.83	0.72	0.64	0.58
6	193.40	A	1.54	1.29	1.10	0.96	0.86	0.77
7	193.10	A	1.93	1.61	1.38	1.21	1.07	0.96
8	192.75	B	3.18	2.65	2.27	1.99	1.77	1.59
9	192.42	B	4.36	3.63	3.12	2.73	2.42	2.18
10	192.16	B	5.29	4.41	3.78	3.31	2.94	2.65
11	191.90	B	6.22	5.18	4.44	3.89	3.46	3.11
12	191.43	B	7.90	6.58	5.64	4.94	4.39	3.95
13	191.00	B	9.44	7.87	6.74	5.90	5.24	4.72
14	190.50	B	11.23	9.36	8.02	7.02	6.24	5.61
15	189.80	B	13.73	11.44	9.81	8.58	7.63	6.87
16	189.40	B	15.16	12.63	10.83	9.48	8.42	7.58
17	189.00	B	16.59	13.83	11.85	10.37	9.22	8.30
18	188.50	B	18.36	15.32	13.13	11.49	10.21	9.19

Notes:

Approximate river miles were estimated from a map.

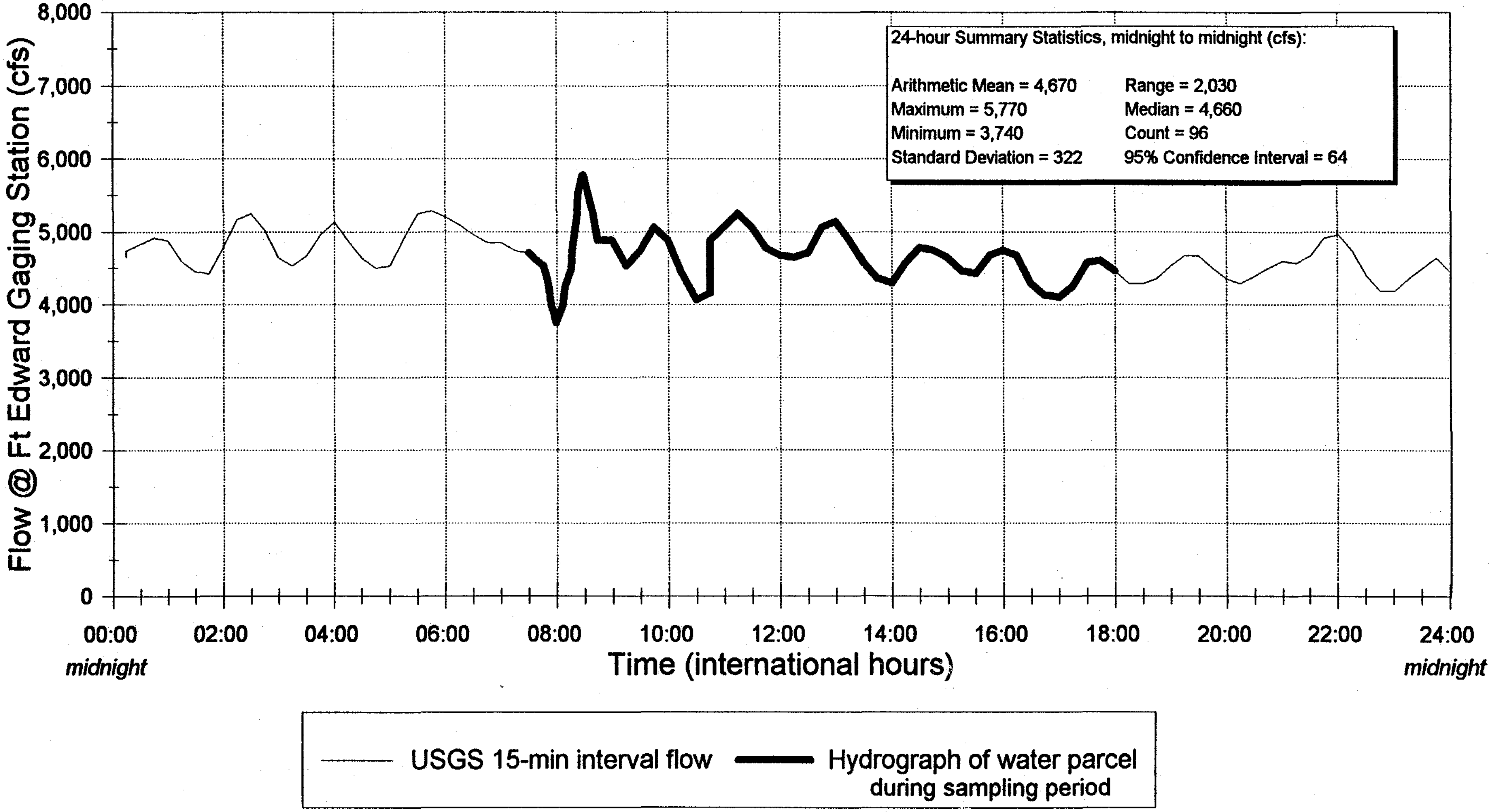
Final equations used: Zone A - v = 0.000139Q

Zone B - v = 0.00005Q

Prepared by HydroQual, Inc. (JAB 09/20/96).

Thompson Island Pool
Time of travel surveys

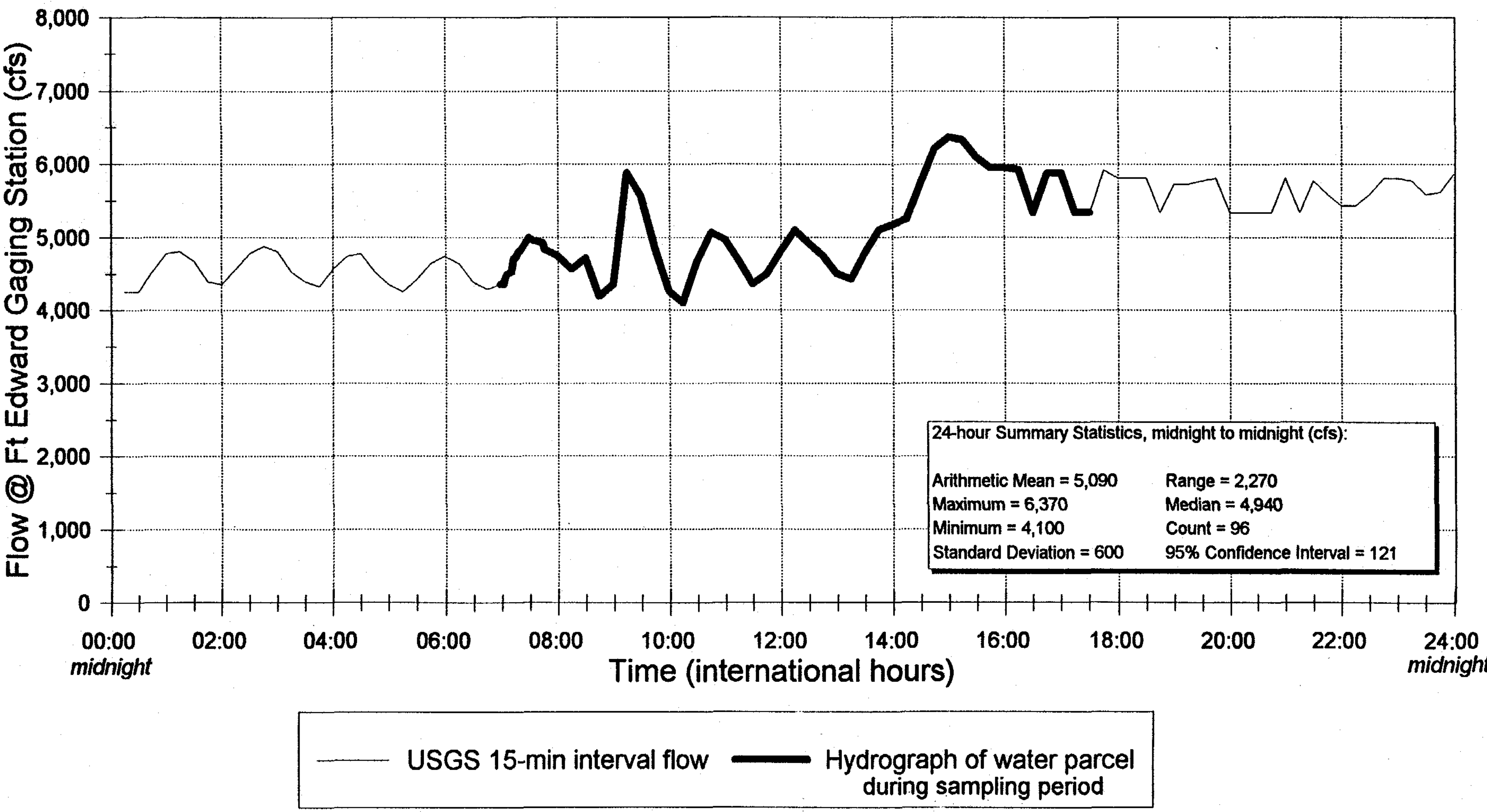
Figure B-1
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Time of Travel Survey (FS-1) Hydrograph - September 24, 1996



Note: USGS 15-minute interval data were obtained in September 1996 from the USGS WEB site. Data are provisional and subject to change. Approximate parcel of water sampled passed the gaging station at the start of the sampling period (approximately 7:30 a.m.).

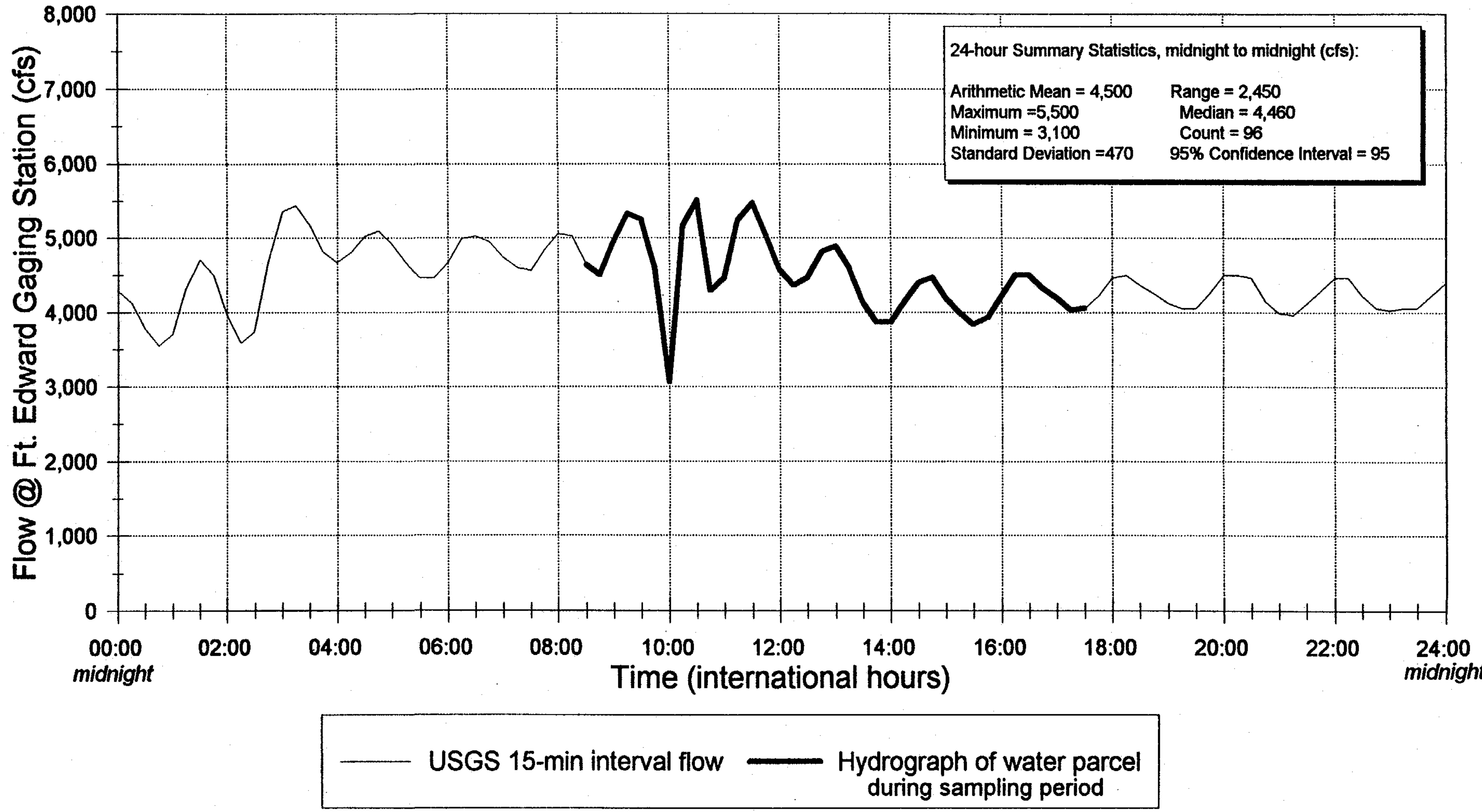
310696

Figure B-2
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Time of Travel Survey (FS-2) Hydrograph - September 25, 1996



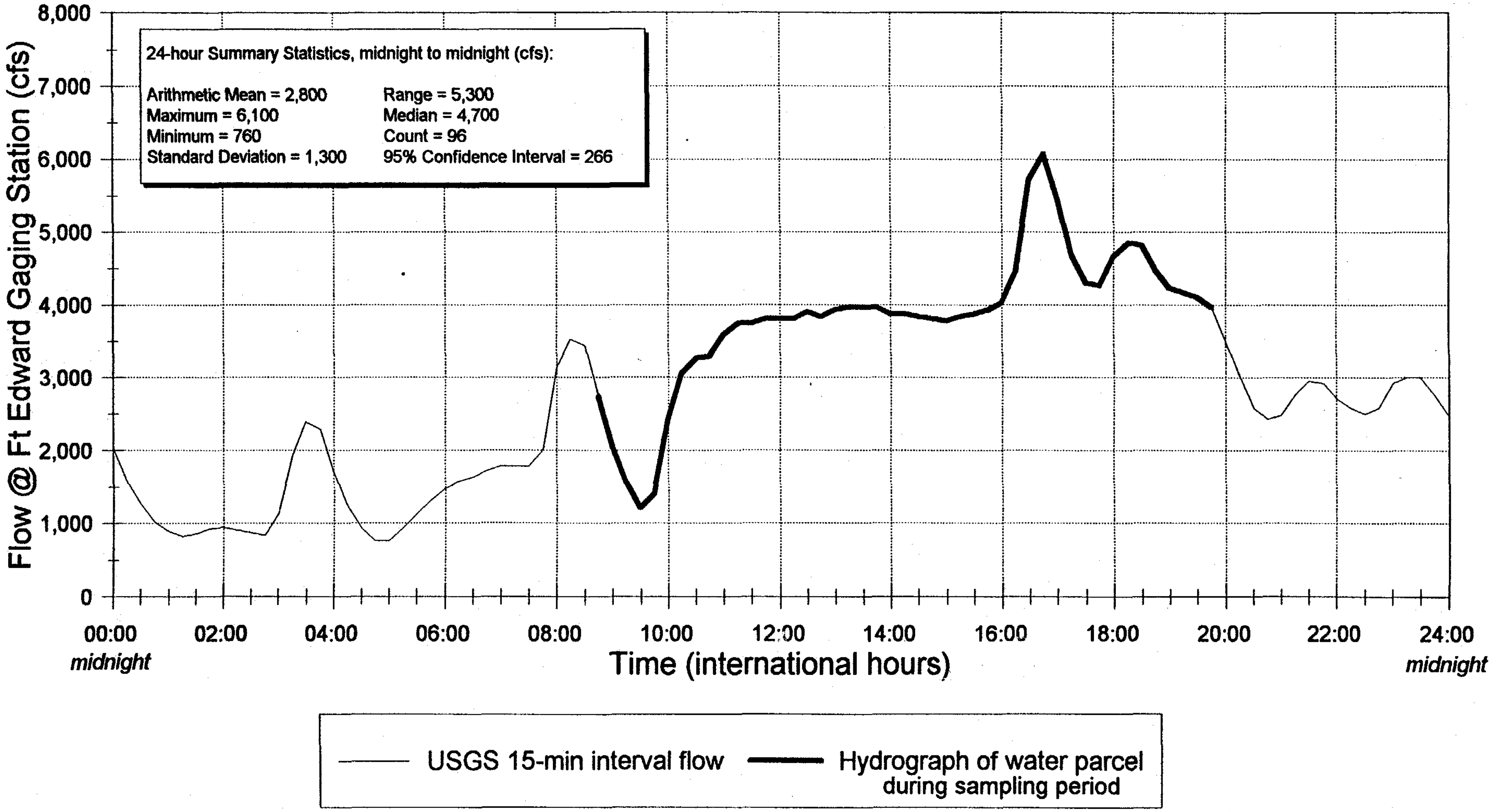
Note: USGS 15-minute interval data were obtained in September 1996 from the USGS WEB site. Data are provisional and subject to change. Approximate parcel of water sampled passed the gaging station at the start of the sampling period (approximately 7:00 a.m.).

Figure B-3
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Time of Travel Survey (FS-3) Hydrograph - June 4, 1997



Note: USGS 15-minute interval data were obtained in June 1997 from the USGS WEB site. Data are provisional and subject to change. Approximate parcel of water sampled passed the gaging station at the start of the sampling period (approximately 8:30 a.m.).

Figure B-4
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
TIP Time of Travel Survey (FS-4) Hydrograph - June 17, 1997

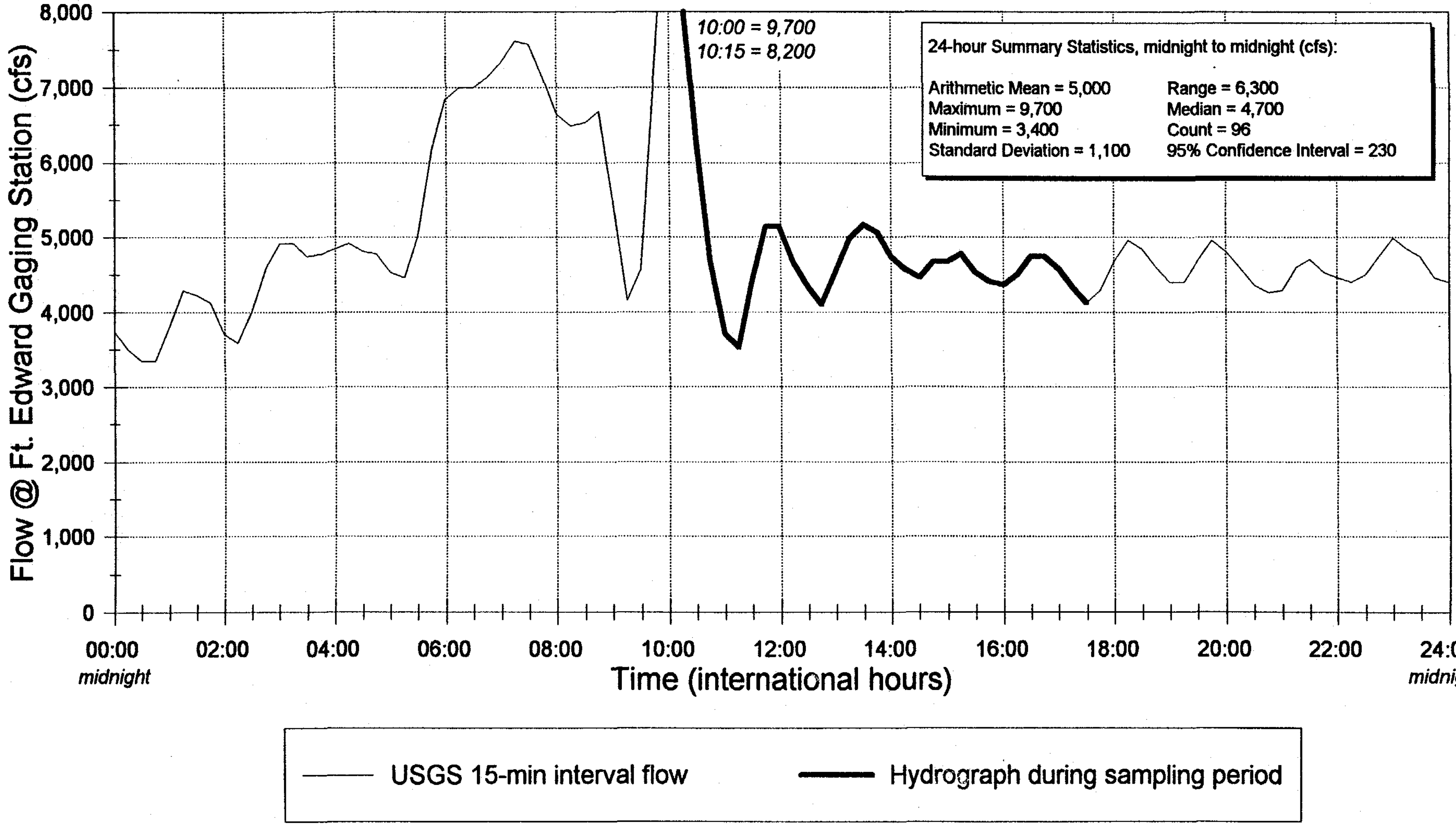


Note: USGS 15-minute interval data were obtained in June 1997 from the USGS WEB site. Data are provisional and subject to change. Approximate parcel of water sampled passed the gaging station at the start of the sampling period (approximately 8:30 a.m.).

310699

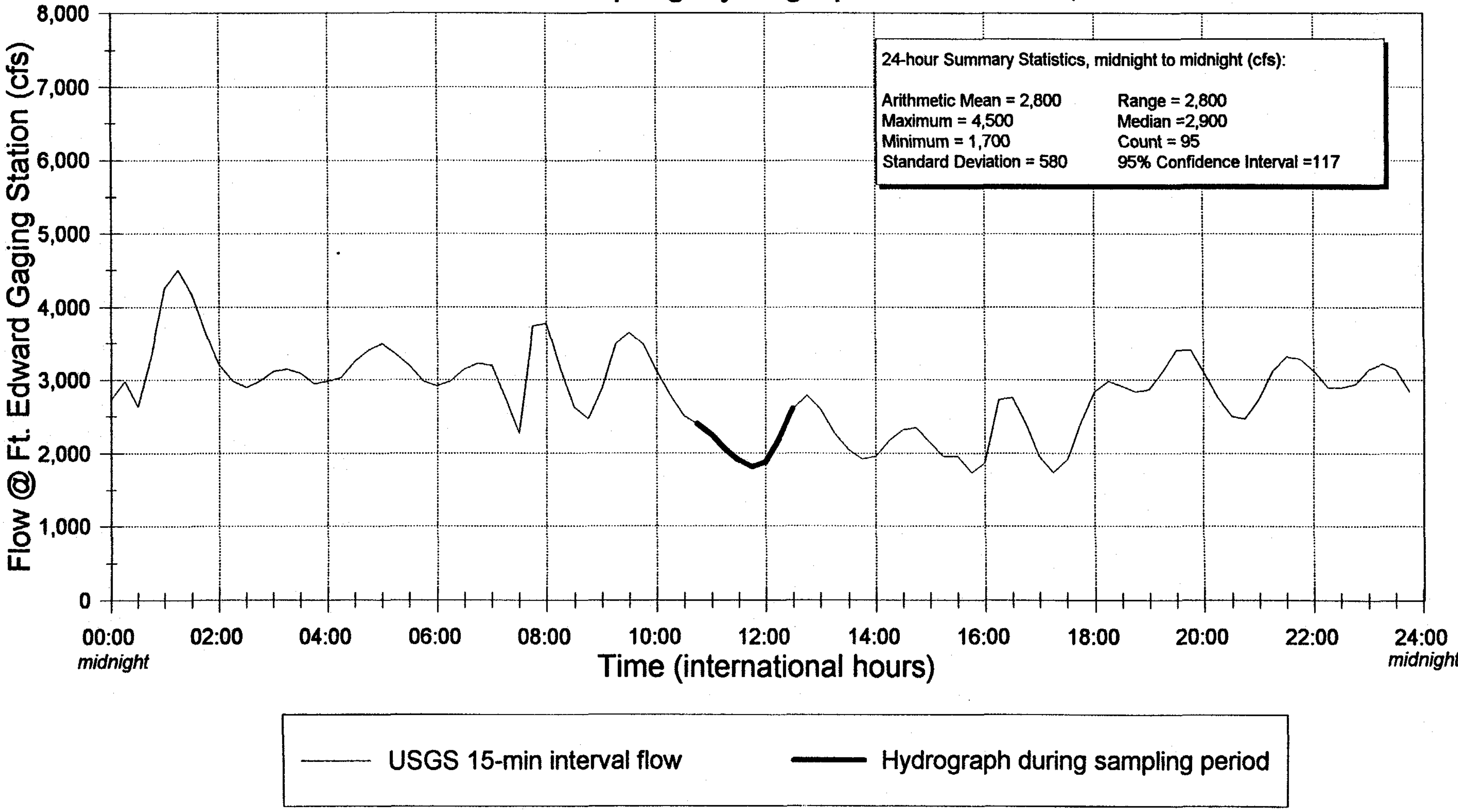
Thompson Island Dam Evaluation

Figure B-5
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Transect TIP-18 Sampling Hydrograph - September 18, 1996



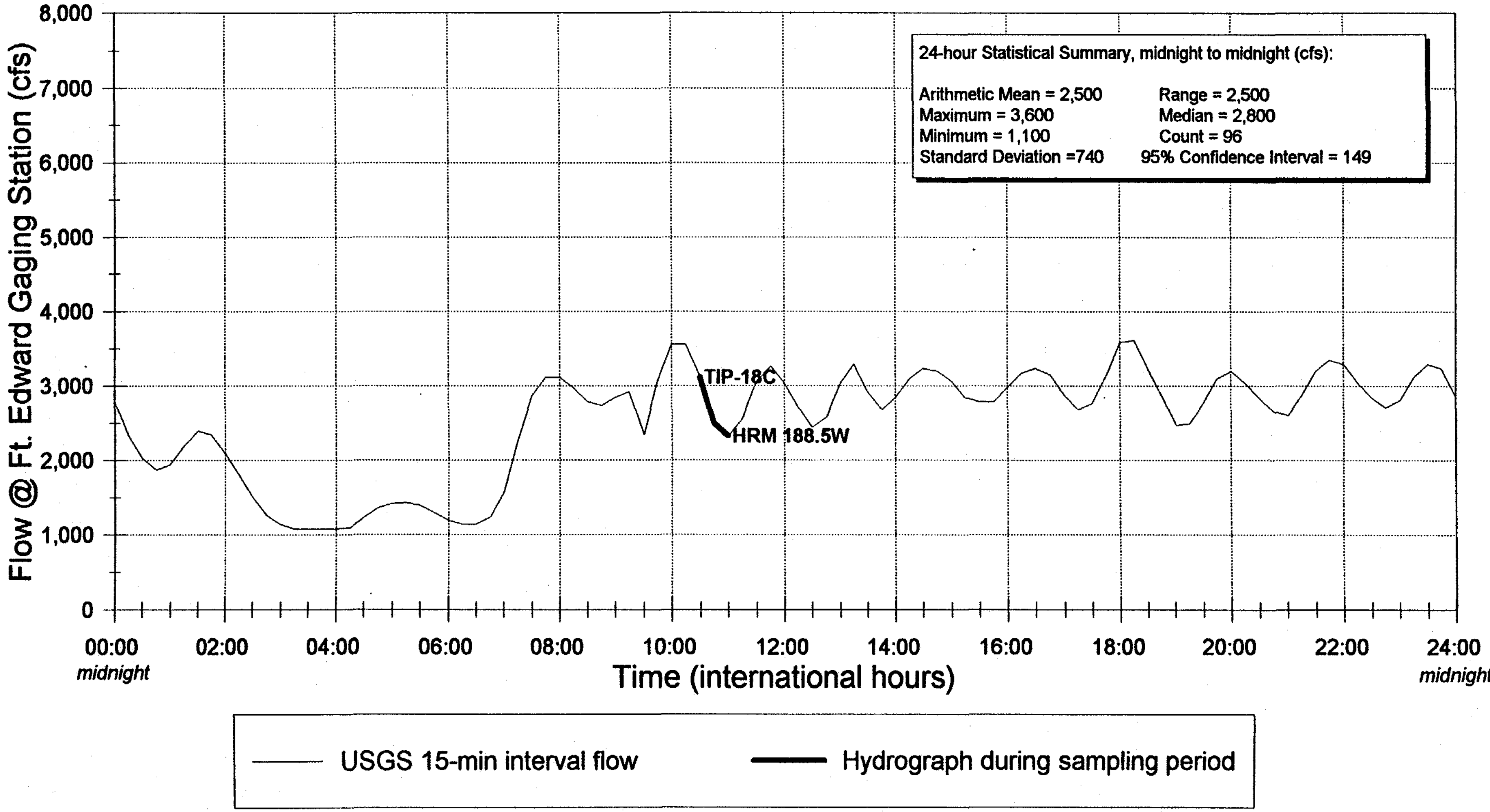
Note: USGS 15-minute interval data were obtained in September 1996 from the USGS WEB site. Data are provisional and subject to change. Sampling period began at approximately 10:30 a.m.

Figure B-6
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Transect TIP-18 Sampling Hydrograph - October 29, 1996



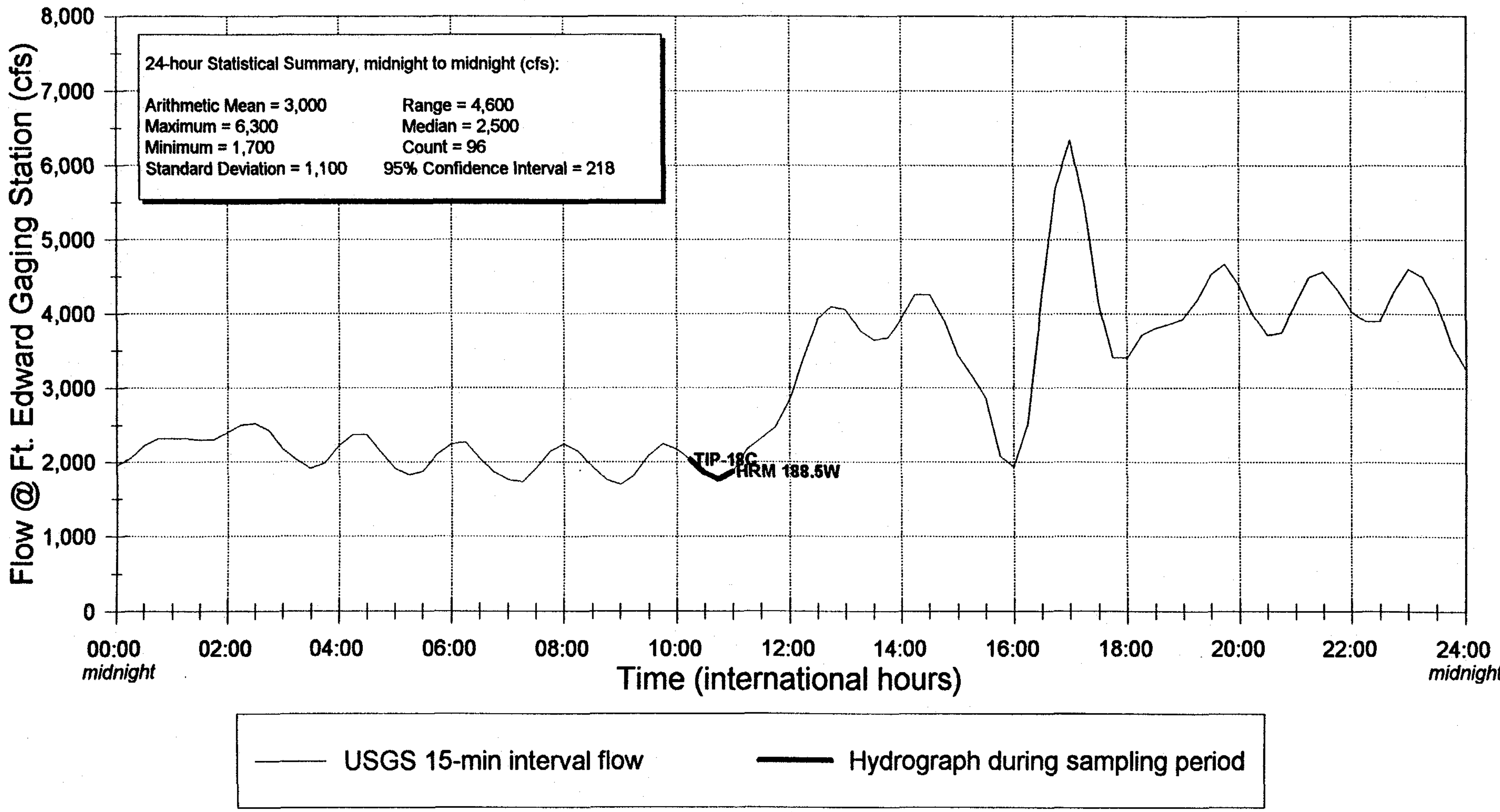
Note: USGS 15-minute interval data were obtained in October 1996 from the USGS WEB site. Data are provisional and subject to change.

Figure B-7
General Electric - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrograph - June 30, 1997



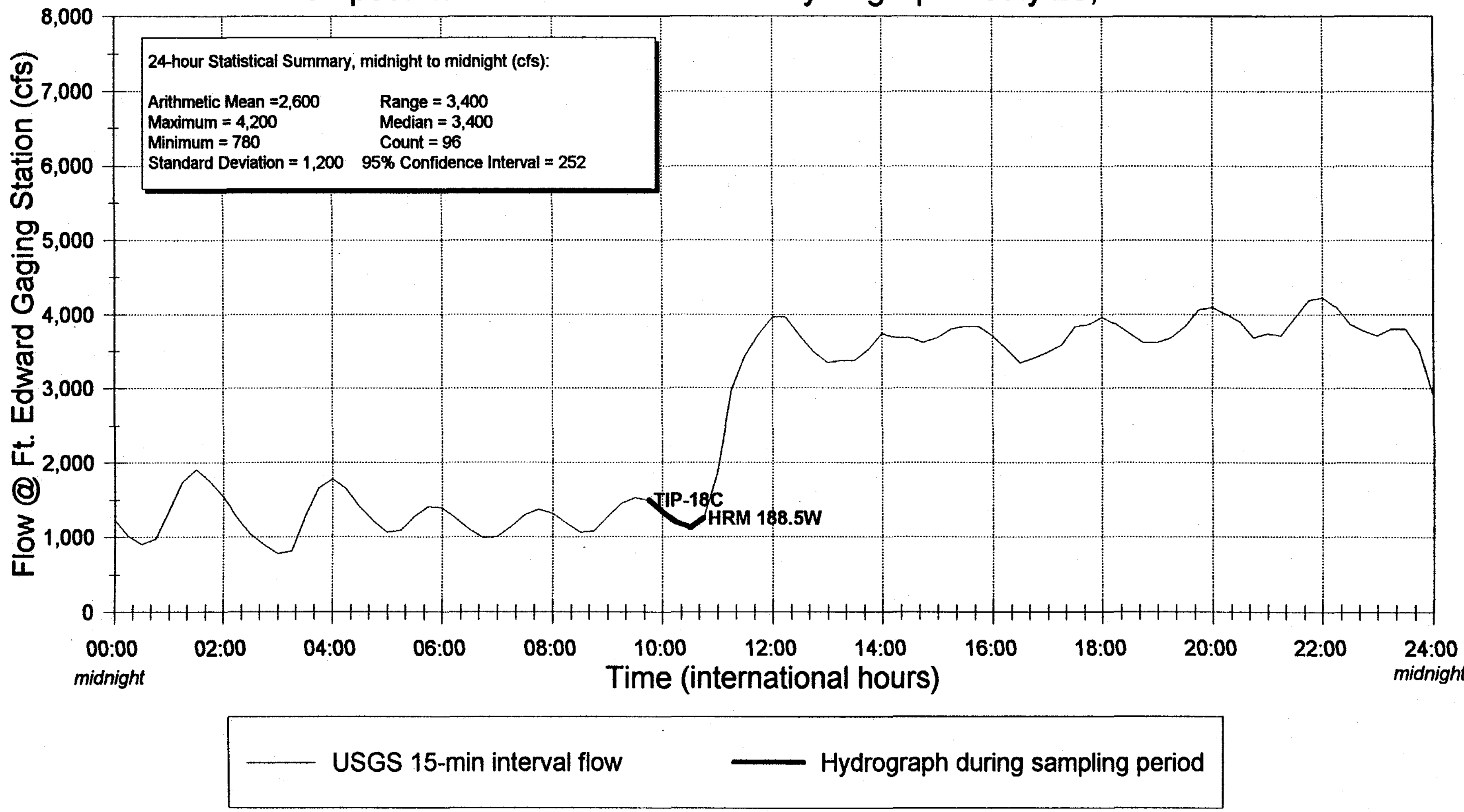
Note: USGS 15-minute interval data were obtained in June 1997 from the USGS WEB site. Data are provisional and subject to change. Sample location TIP-18C was sampled at the start of the sampling period; HRM 188.5 west dam abutment was sampled at the end of the sampling period.

Figure B-8
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrograph - July 14, 1997

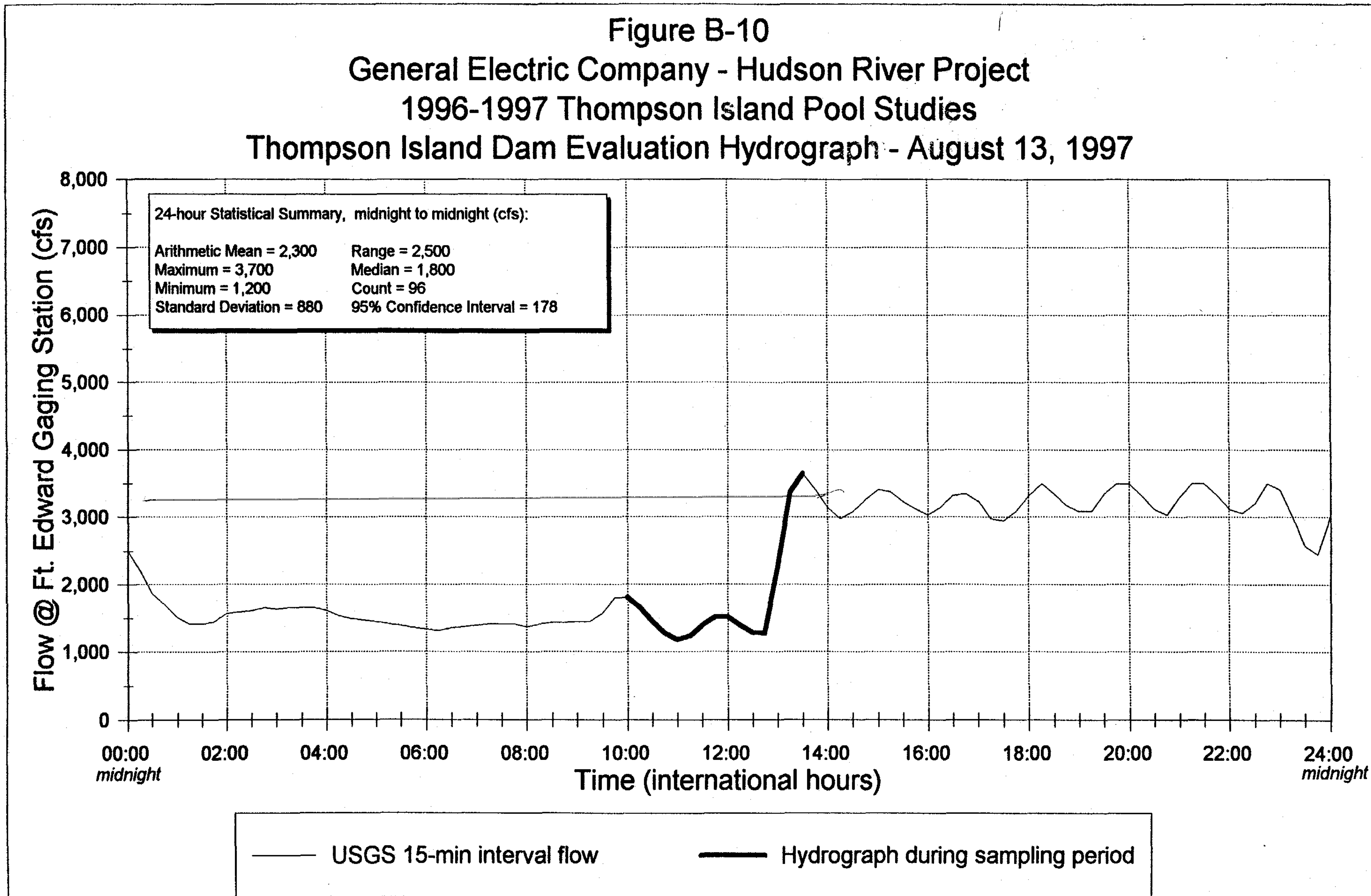


Note: USGS 15-minute interval data were obtained in July 1997 from the USGS WEB site. Data are provisional and subject to change. Sample location TIP-18C was sampled at the start of the sampling period; HRM 188.5 west dam abutment was sampled at the end of the sampling period.

Figure B-9
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrograph - July 28, 1997



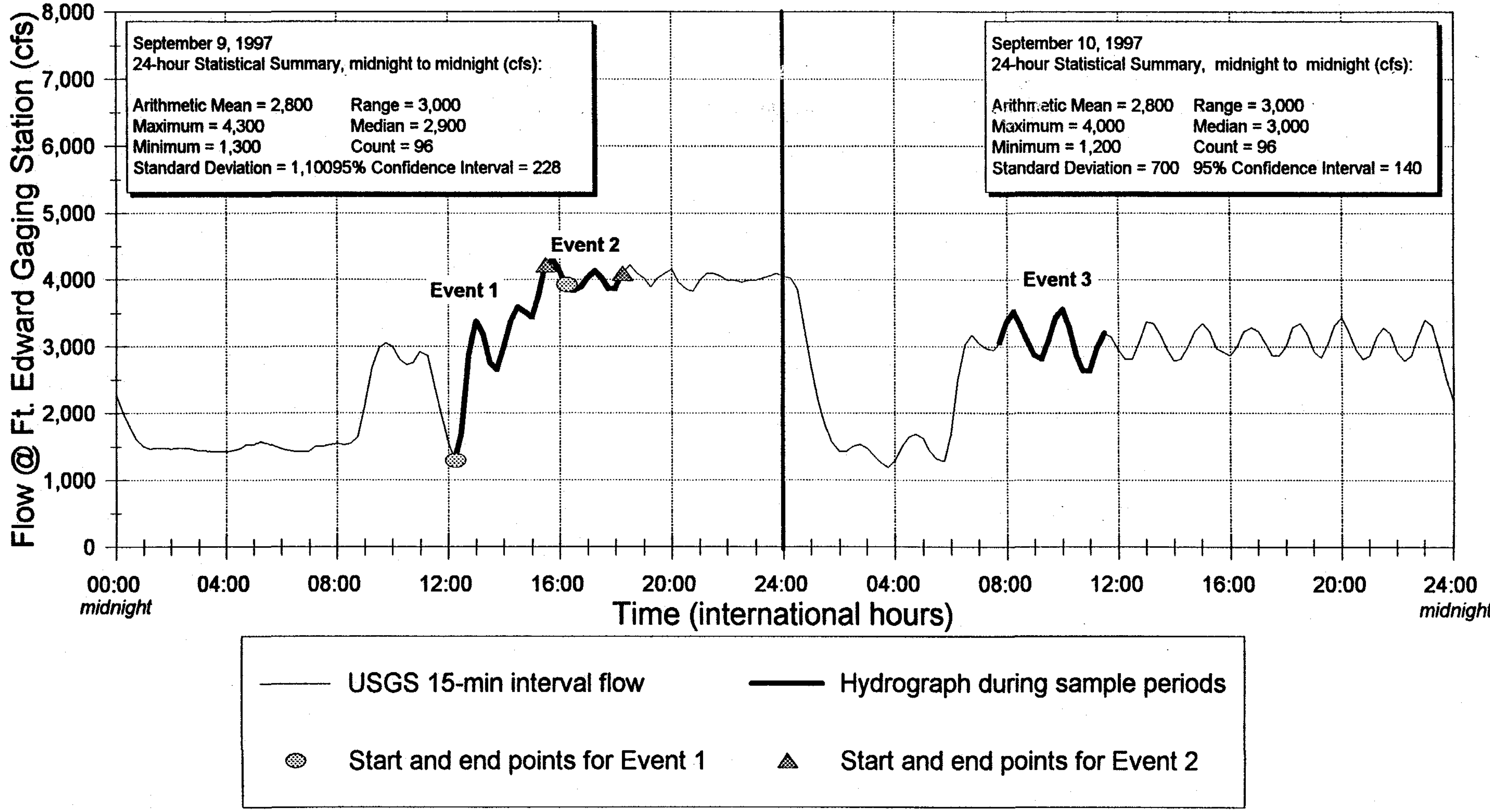
Note: USGS 15-minute interval data were obtained in July 1997 from the USGS WEB site. Data are provisional and subject to change. Sample location TIP-18C was sampled at the start of the sampling period; HRM 188.5 west dam abutment was sampled at the end of the sampling period.



Note: USGS 15-minute interval data were obtained in August 1997 from the USGS WEB site. Data are provisional and subject to change.

310706

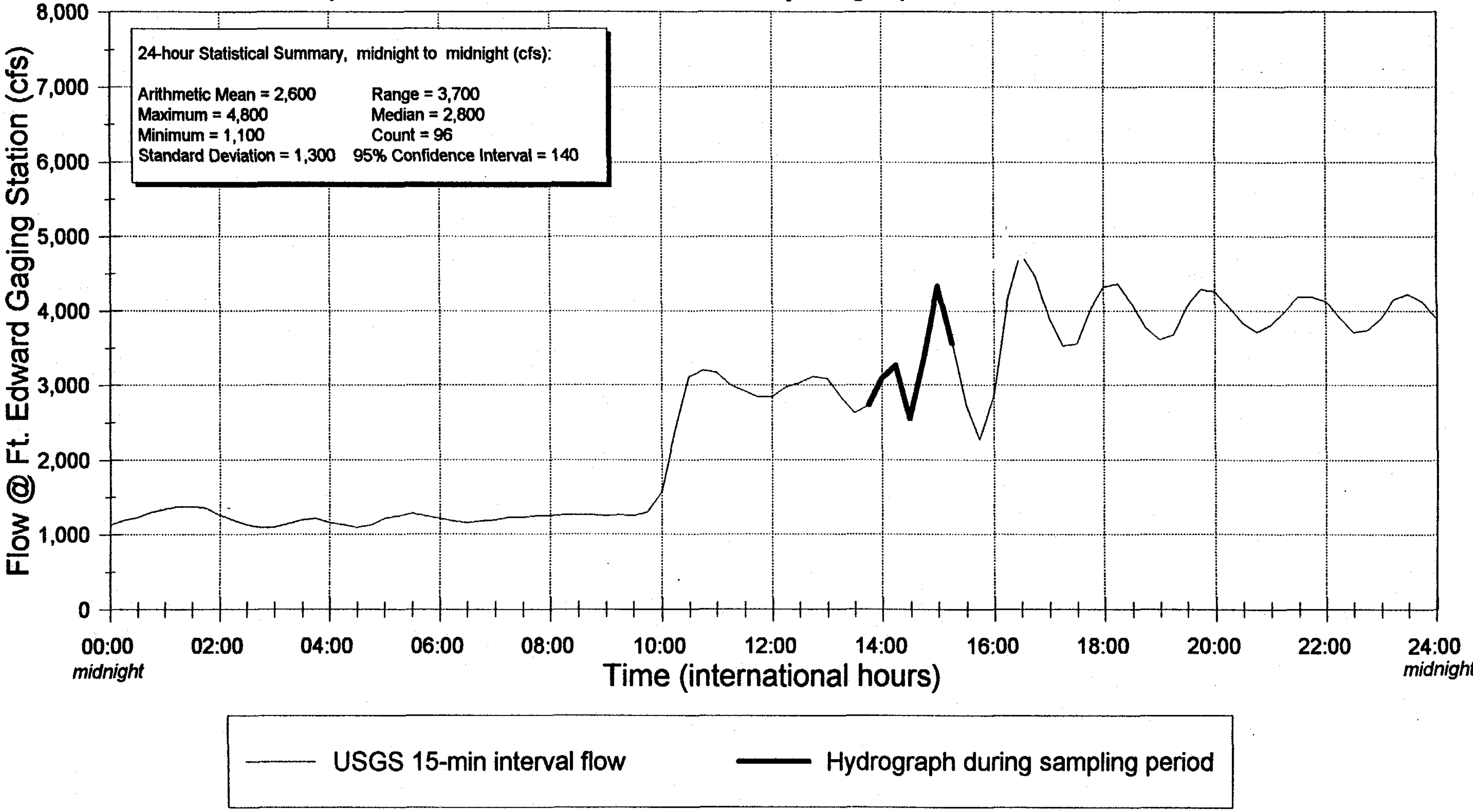
Figure B-11
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrographs - September 9-10, 1997



Note: USGS 15-minute interval data were obtained in September 1997 from the USGS WEB site. Data are provisional and subject to change. Sampling Events 1 and 2 overlap in time; start and end points for Events 1 and 2 are shown.

310707

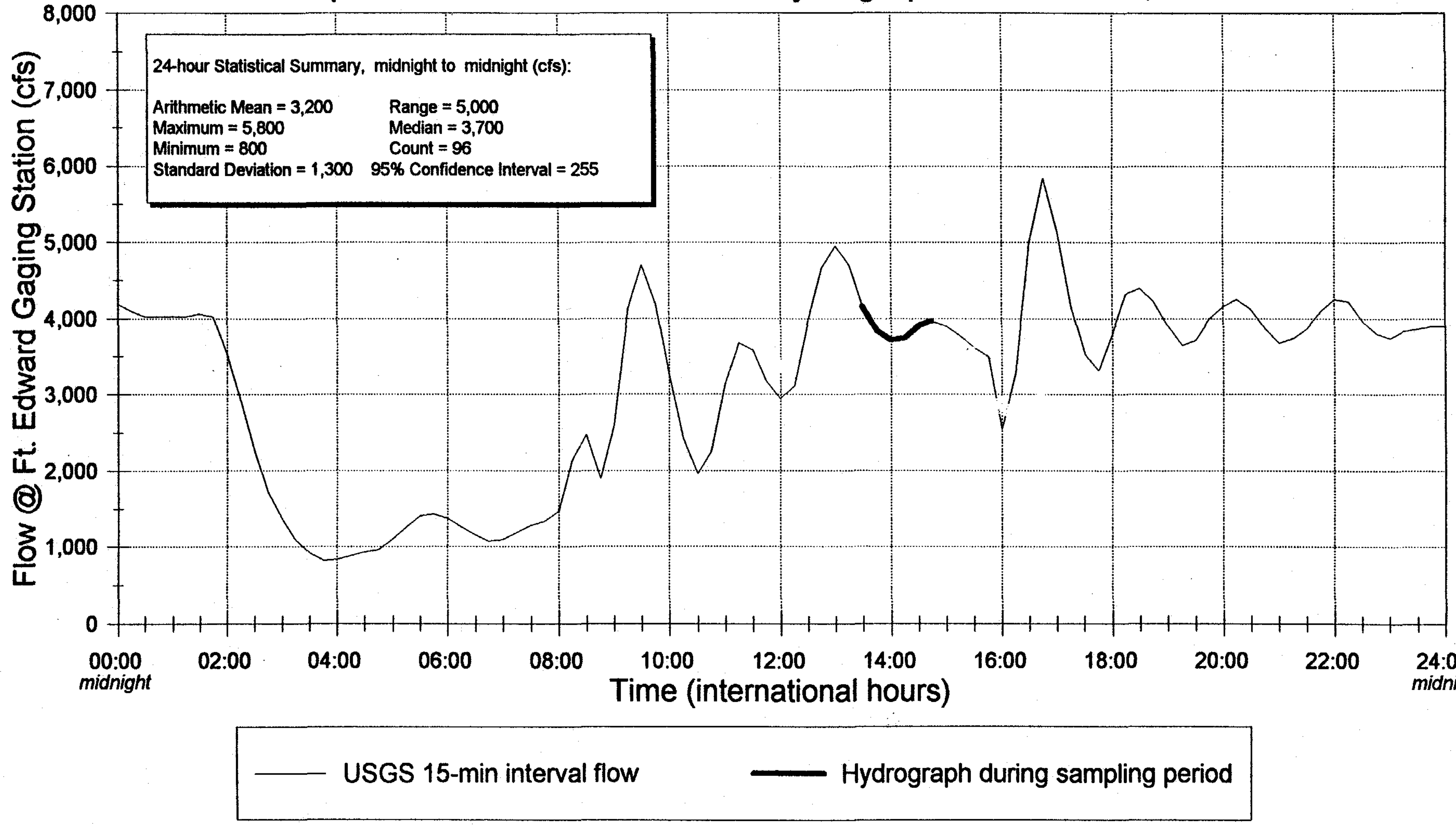
Figure B-12
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrograph - October 1, 1997



Note: USGS 15-minute interval data were obtained in October 1997 from the USGS WEB site. Data are provisional and subject to change.

310708

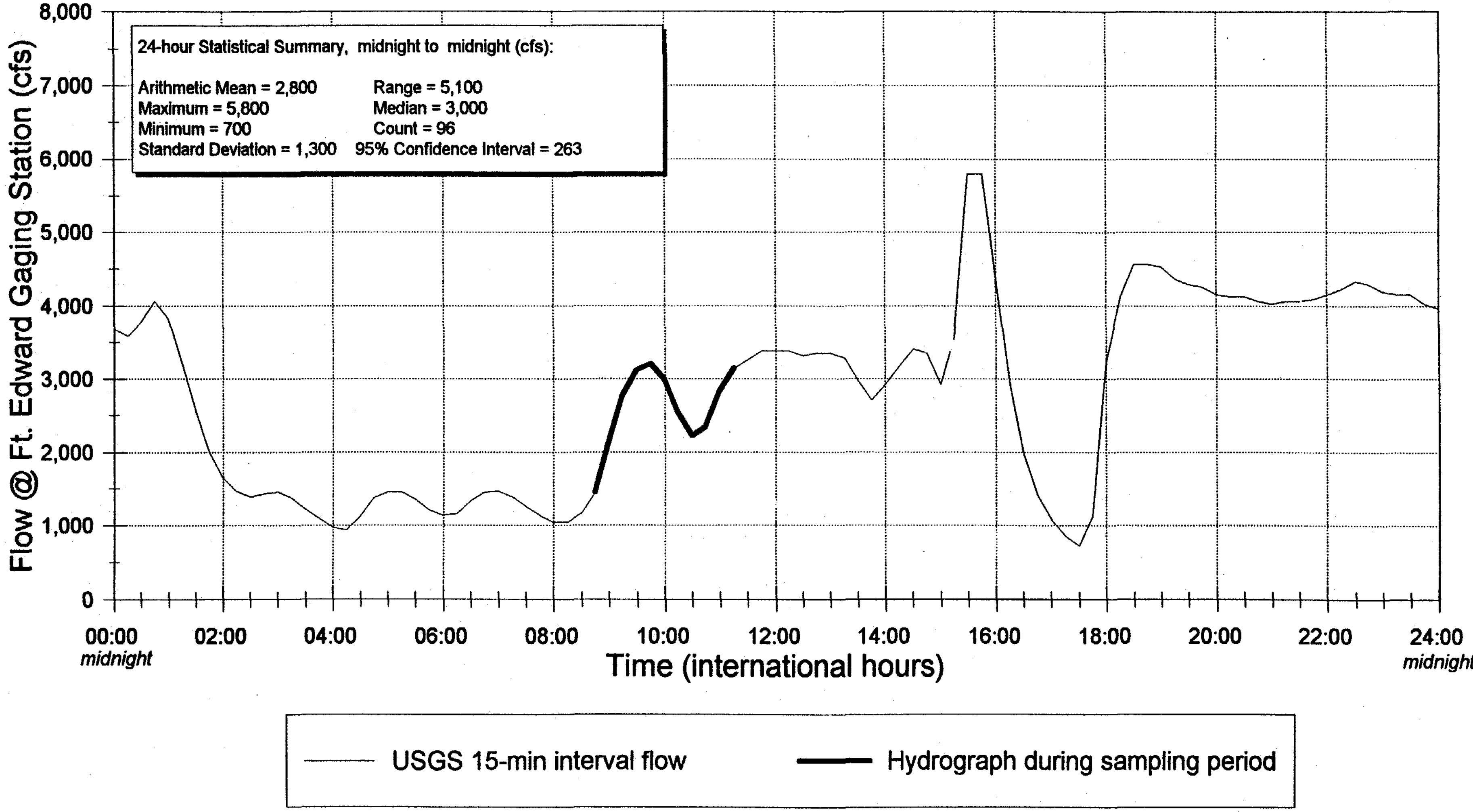
Figure B-13
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrographs - October 9, 1997



Note: USGS 15-minute interval data were obtained in October 1997 from the USGS WEB site. Data are provisional and subject to change.

310709

Figure B-14
General Electric Company - Hudson River Project
1996-1997 Thompson Island Pool Studies
Thompson Island Dam Evaluation Hydrograph - October 16, 1997

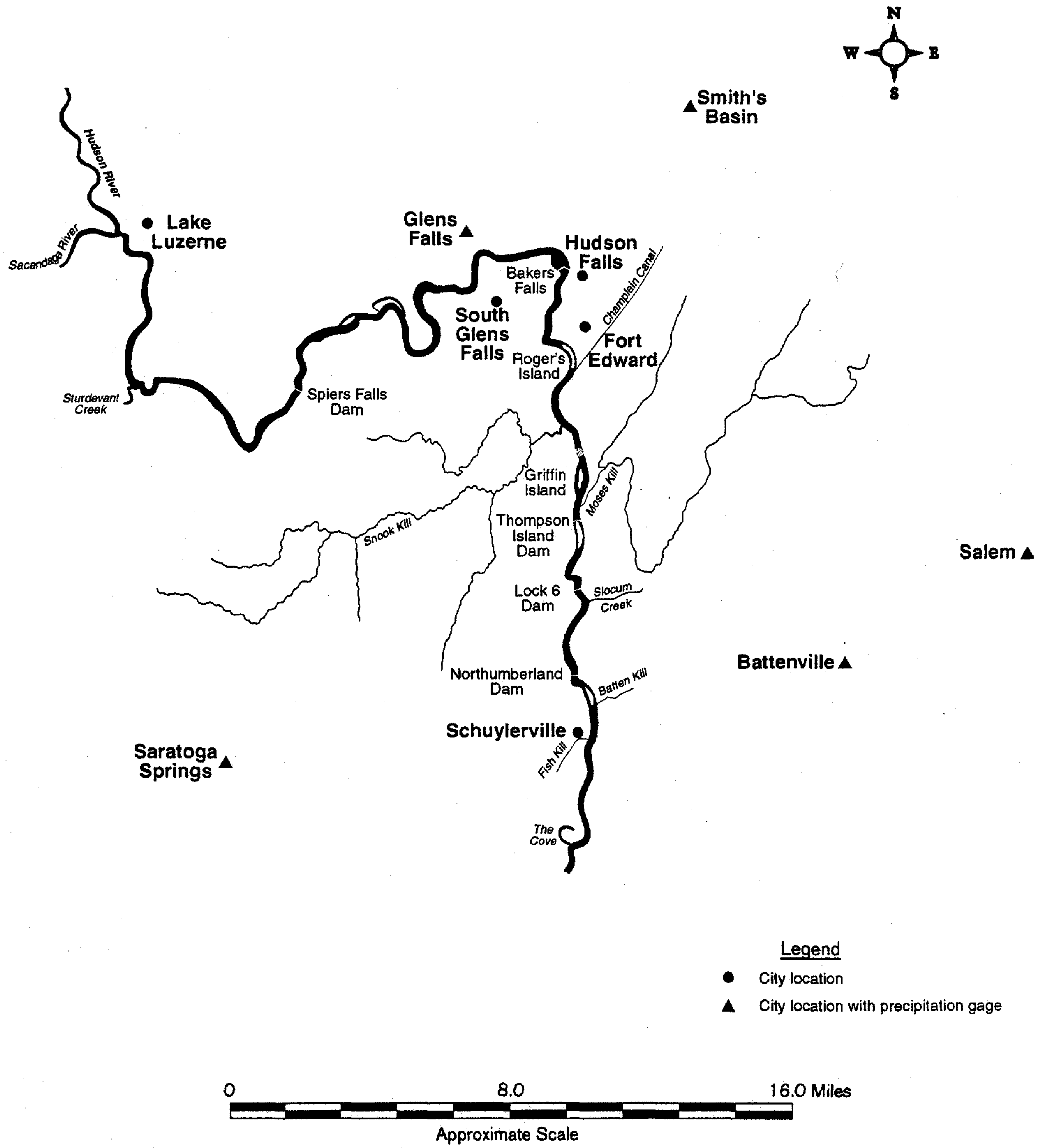


Note: USGS 15-minute interval data were obtained in October 1997 from the USGS WEB site. Data are provisional and subject to change.

Precipitation data

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
HUDSON RIVER, NEW YORK
1996-1997 THOMPSON ISLAND POOL STUDIES

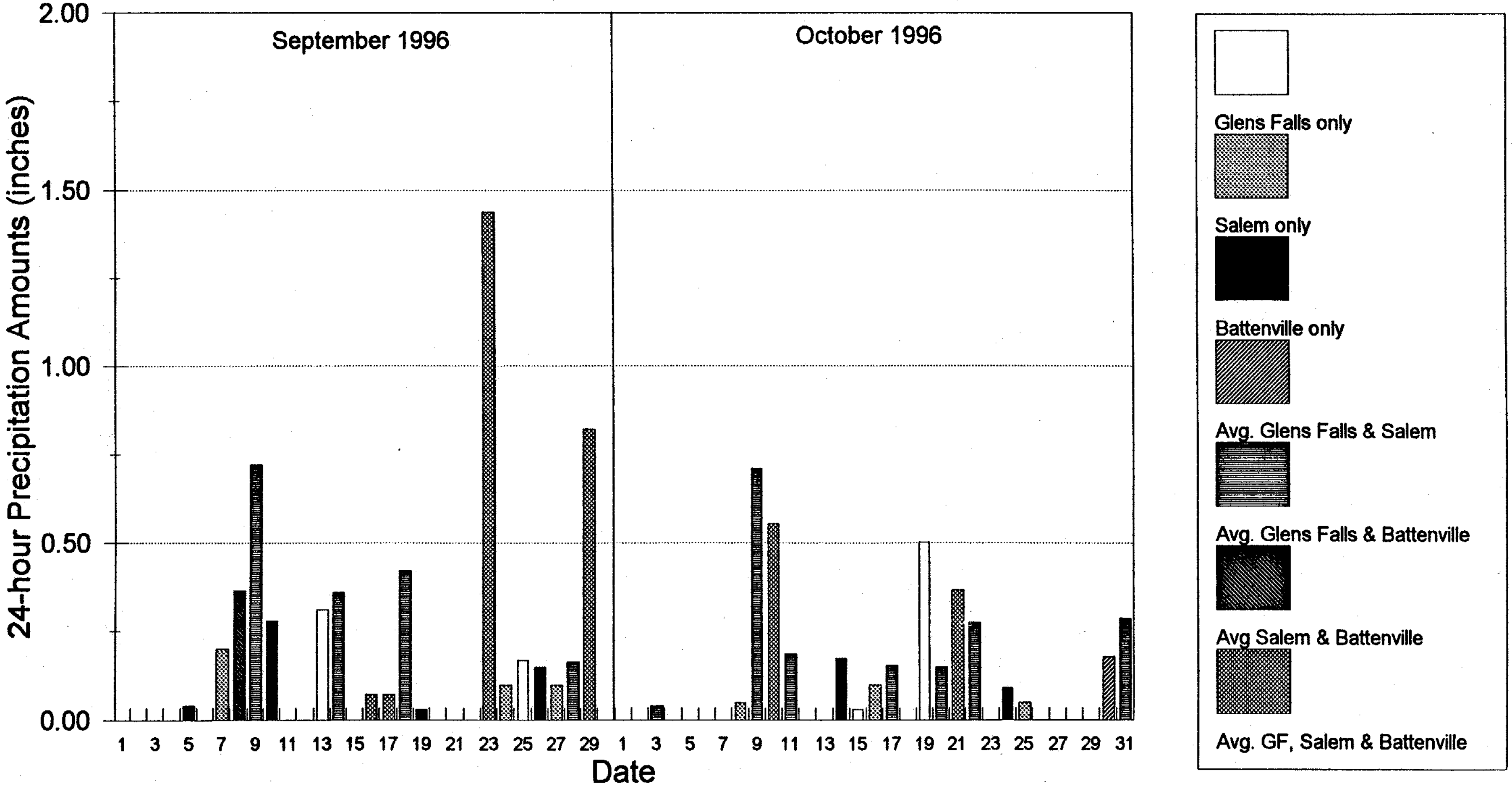
PRECIPITATION STATION LOCATIONS



Revised 2/98 sld (52) 0612.205-004
DIV 26/Gemini Mac/Report Graphics/GE Hudson 612.205-004

310712

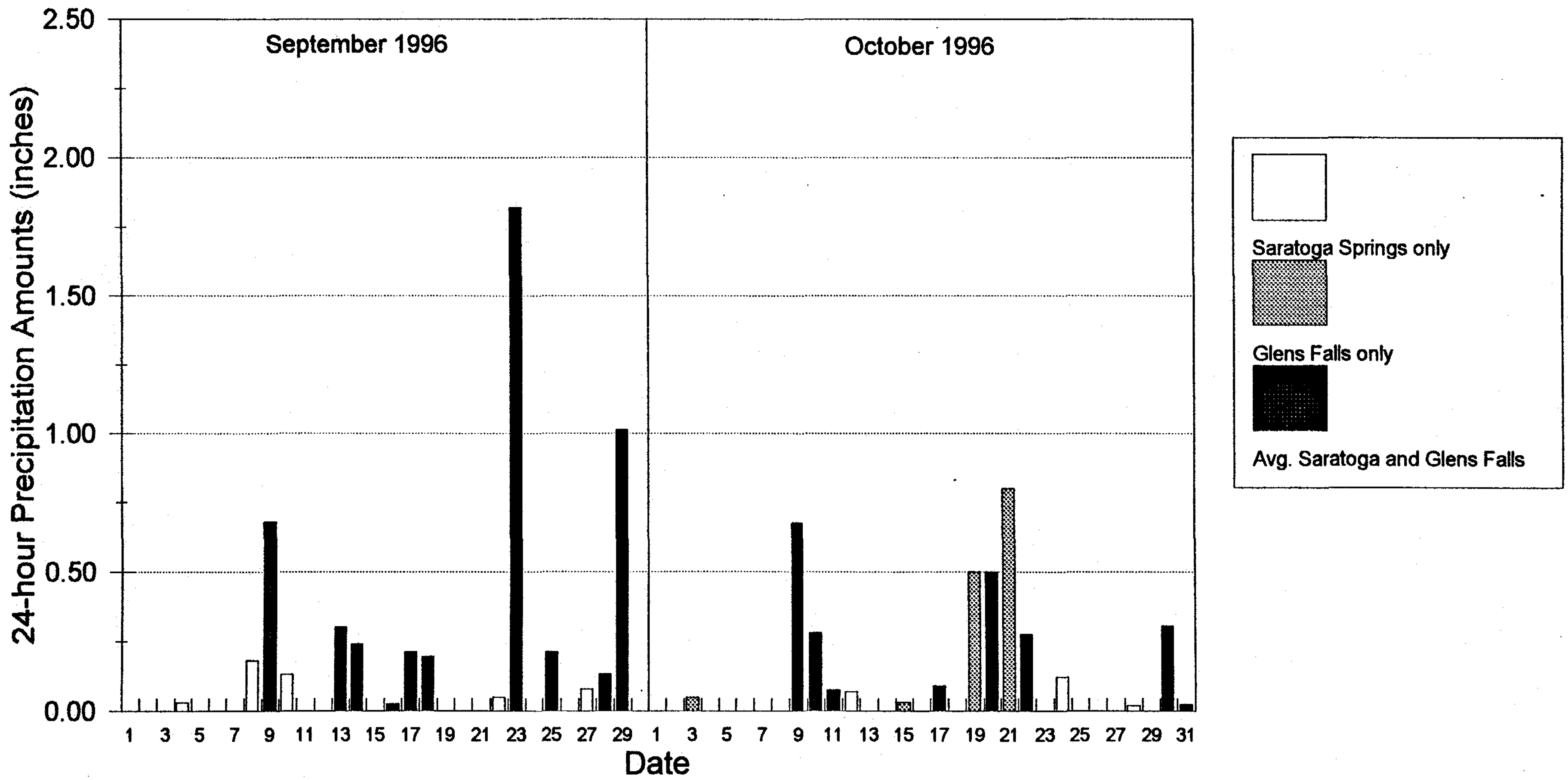
Figure C-2
General Electric Company - Hudson River Project
1996 - 1997 Thompson Pool Studies
Precipitation Recorded for Moses Kill Watershed Stations



Note: Precipitation amounts are averaged for events measured at multiple stations. The average of precipitation data reported by all three stations is considered most representative of the precipitation falling on the watershed.

310713

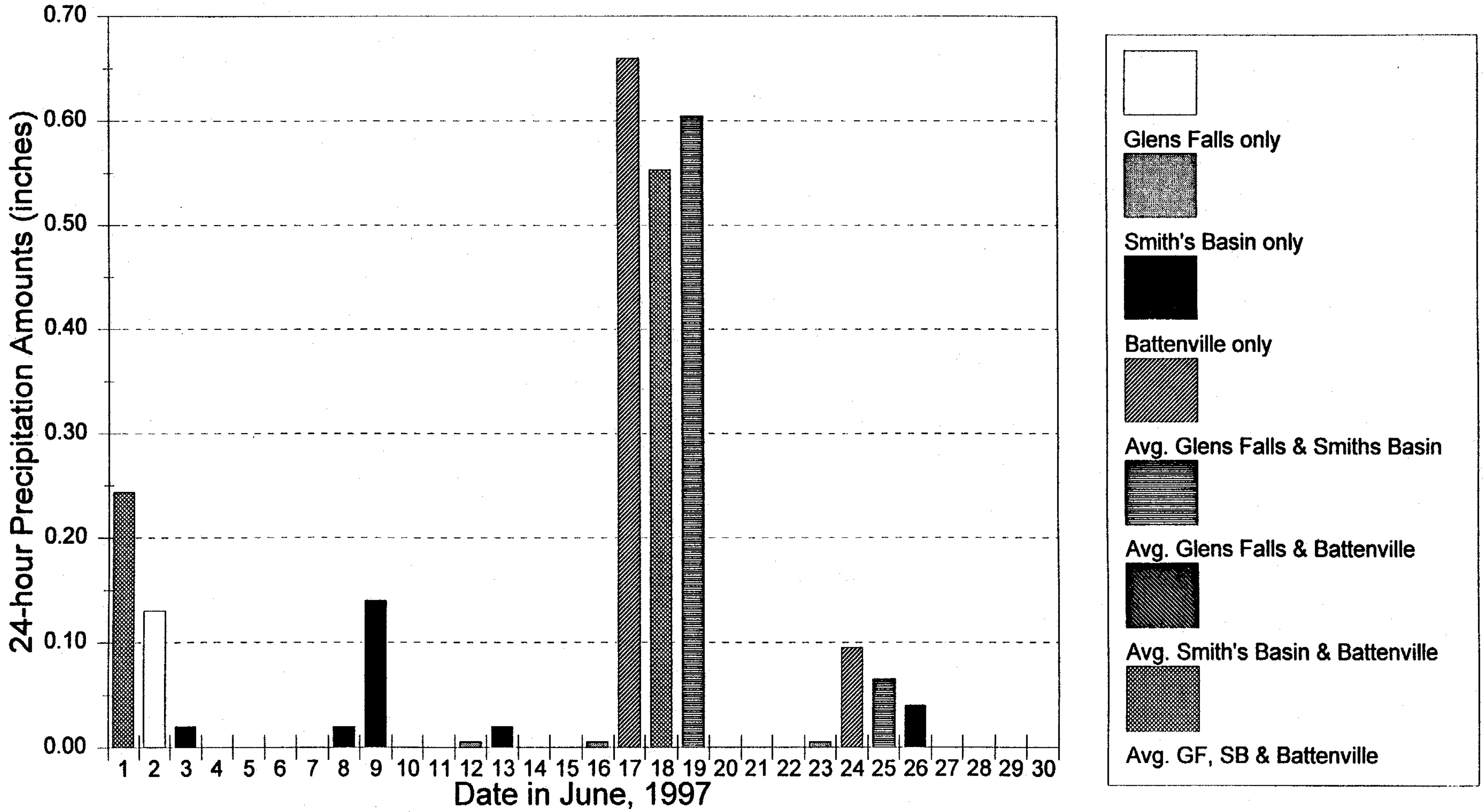
Figure C-3
General Electric Company - Hudson River Project
1996 - 1997 Thompson Island Pool Studies
Precipitation Recorded for Snook Kill Watershed Stations



Note: Precipitation amounts are averaged for events measured at multiple stations. The average of precipitation data reported by both stations is considered most representative of the precipitation falling on the watershed.

310714

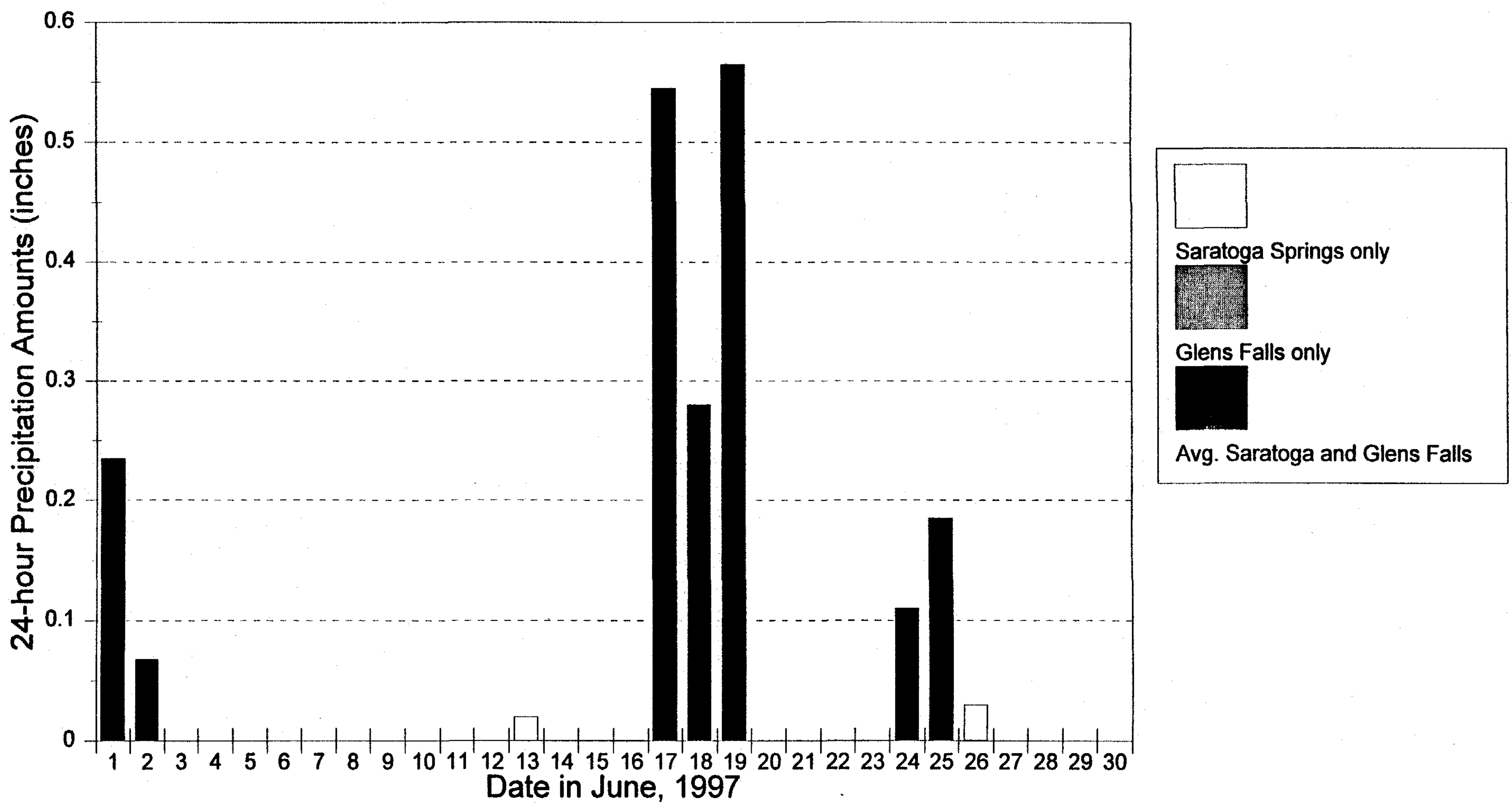
Figure C-4
General Electric Company - Hudson River Project
1996 - 1997 Thompson Island Pool Studies
Precipitation Recorded for Moses Kill Watershed Stations



Note: Precipitation amounts are averaged for events measured at multiple stations. The average of precipitation data reported by all three stations is considered most representative of the precipitation falling on the watershed.

310715

Figure C-5
General Electric Company - Hudson River Project
1996 - 1997 Thompson Island Pool Studies
Precipitation Recorded for Snook Kill Watershed Stations



Note: Precipitation amounts are averaged for events measured at multiple stations. The average of precipitation data reported by both stations is considered most representative of the precipitation falling on the watershed.

310716

APPENDIX D

Dye tracer monitoring procedures

Appendix D. Dye tracer monitoring procedures

Dye was injected to track parcels of water sampled during the 1997 Thompson Island Pool Time of Travel Surveys. Prior to initiation of dye studies, the New York State Department of Environmental Conservation (NYSDEC) was notified (Attachment D-1).

Dye analysis consisted of field analyses and laboratory confirmation analyses. Field analyses were used to track dye transport progress and, thereby, to time sample collection. Laboratory analyses were performed to obtain dye concentration data under more rigorous QA/QC conditions to allow comparison of dye data between sample collection stations.

Field dye

A Model 10 field fluorometer was operated in the field for real-time measurements of dye concentrations in the river according to the operations manual (Turner Designs).

Calibration.
Before field use, a one-point calibration was performed using a 1.0μg/l standard prepared by diluting 20% Rhodamine WT dye stock solution with Hudson River water. Following calibration, the standard was used as a check sample to confirm the accuracy of the field instrument. The standard was prepared in a plastic 5-gallon bucket. The standard was injected by syringe into the instrument. The instrument and tubing were purged thoroughly following injection of the standard. Calibration was again confirmed following field use.

Operation.
The field fluorometer was set up for continuous operation. An in-line pump was used to draw water through a hose to the inlet port of the instrument. A discharge hose was fastened to the instrument outlet port. The discharge hose was directed away from the inlet hose. The instrument and the in-line pump were both powered by a 12-volt battery. Sample readings, in μg/l, and the time were recorded in the field notes. The instrument was monitored during operation for interference caused by air bubbles in the continuous feed line. When air bubbles were observed, no readings were taken and adjustments were made to reduce the air bubbles in the feed line.

Quality assurance/quality control.
Due to the continuous mode of operation, duplicate analyses were not possible. Readings observed over time, however, were stable and did not exhibit significant variability. Calibration was confirmed following field use by re-analyzing the check sample.

Data results.
Field dye monitoring during Thompson Island Pool time of travel surveys was conducted from the sampling boat. Data were collected at various locations throughout Thompson Island Pool, and recorded in field logs (Appendix H).

Laboratory dye analysis

Dye samples were analyzed in the pilot study laboratory of O'Brien & Gere Engineers using a Model 111 fluorometer operated according to the operations manual (GK Turner Associates 1966). The analyzer was fitted with an ultraviolet light source, and primary and secondary filters. The primary filter was a No. 110-832 (wavelength 546 mυ) recommended for tracer work with Rhodamine dye. The secondary filter was a No. 110-833 (wavelength 590 mυ), compatible with the primary filter.

Calibration.
Calibration of the fluorometer began by zeroing the instrument to a cuvette blank, which blocked light from the detector. Standards were prepared by diluting 20% Rhodamine WT dye stock solution with distilled water to achieve concentrations of 0.125 μg/l, 0.25 μg/l, 0.5 μg/l, and 1.0μg/l. Next, the four standards were analyzed as internal standards to confirm calibration.

Operation.
Prior to sample analysis, the instrument was zeroed to the cuvette blank and the instrument was calibrated (see above). Distilled water was used as the reagent blank, and the instrument was zeroed to this sample to minimize background interference for the remaining samples. The instrument response and dye concentration of the standard were used to calculate the sample concentration according to the following formula:

$$C_U = \frac{C_S}{R_S} \times R_U$$

here:

C_U	=	dye concentration of the unknown field sample
C_S	=	dye concentration of the standard
R_S	=	instrument response to the dye standard
R_U	=	instrument response to unknown dye concentration of the field sample.

Quality assurance/quality control.
Quality was maintained through the analysis of blind duplicate samples collected for each section of the river. The blind duplicates were collected at a ratio of one duplicate to twenty samples. To check for instrument drift over time, the standard and the reagent blank were reanalyzed after every twenty samples.

Data results.
Raw data results from laboratory dye analyses are presented in Table 3-2 of the main report along with PCB and TSS analytical results.

Attachment D-1

O'BRIEN & GERE
ENGINEERS, INC.

May 28, 1997

William Wasilauski
New York State
Department of Environmental Conservation
Hudson Street Extension
Warrensburg, New York 12885

Re: Hudson River Project
Enhanced River Monitoring Project

File: 0612.226

Dear Mr. Wasilauski:

As we discussed, O'Brien & Gere Engineers, Inc. and HydroQual, Inc. are preparing to implement the *Thompson Island Pool Time of Travel Survey* (*TIP Survey*) water sampling study of the Hudson River on behalf of General Electric Company. The study is tentatively planned for Wednesday, June 4, 1997. Details of the study were described in the sampling plan previously submitted to the New York State Department of Environmental Conservation.

The *TIP Survey* includes injection of Rhodamine WT dye into the river as a tracer to identify a subject mass of water to be sampled as it travels downstream. For this study, dye will be injected at the Adirondack Hydro Development Corporation hydroelectric facility at Bakers Falls in Hudson Falls, New York. It is anticipated that the dye will be injected over a 2-hour period to provide a target dye concentration of approximately 1 μg/l downstream.

Implementation of the *TIP Survey* is conditional based on results of rush analyses of weekly samples collected for the *Post-Construction Remnant Deposit Monitoring Program* (PCRDMP) on May 27. It is planned that detections of PCB concentrations of 60 ng/l or greater in the surface water samples collected at the Thompson Island Dam (sample HRM 188.5) will prompt the study to proceed. If the PCRDMP sampling results indicate that conditions are not suitable for the *TIP Survey*, it will be rescheduled.

Based on our conversation, we understand that it is acceptable to NYSDEC to conduct the dye injection. When we finalize the decision to proceed with the study, we will make the required 24-hour notification to Region 5. As you recommended, we will also notify the Spill Unit in Saratoga (518-583-6324) and the local fire department in Hudson Falls (518-747-5112). Please call me (315-437-6100) or Jim Rhea at HydroQual (315-484-6220) if you have any questions.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

William Ayling

William Ayling
Project Scientist

WAA:djb (i:52\0612226\2_\tipsurv\nysdec.wpd)

cc: John Connolly - AHDC
Walter Demick, P.E. - NYSDEC
J. Kevin Farmer, P.E. - O'Brien & Gere
John G. Haggard - General Electric
Mark D. LaRue - O'Brien & Gere
Wiley Lavigne - NYSDEC Region 5
Robert Montione - NYSDOH
James Rhea, PhD - HydroQual
William Ports, P.E. - NYSDEC
Douglas J. Tomchuk - USEPA

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O'BRIEN & GERE
ENGINEERS, INC.

VIA TELEFAX

June 3, 1997

William Wasilauski
New York State
Department of Environmental Conservation
Hudson Street Extension
Warrensburg, New York 12885

Re: Hudson River Project
Enhanced River Monitoring Project

File: 0612.226

Dear Mr. Wasilauski:

In accordance with my letter to you dated May 28, 1997, O'Brien & Gere Engineers, Inc. is providing via this letter a 24-hour notice of dye injection into the Hudson River. Dye will be injected into the river from the Adirondack Hydro Development Corporation hydroelectric facility discharge at Bakers Falls in Hudson Falls, New York. Dye injection will begin at approximately 5:30 am and continue for approximately 1 hour on Wednesday, June 4, 1997.

Pursuant to your request, O'Brien & Gere contacted the NYSDEC spill unit in Saratoga and the Hudson Falls fire department on Friday May 30, 1997 and informed them of our schedule.

If you have any questions or concerns, please contact me at (315) 437-6100 or (518) 796-1300.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

William Ayling

William Ayling
Project Scientist

WAA:djb (i:52\0612226\2_\tipsurv\dec24hr.wpd)

cc: John Connolly - AHDC
J. Kevin Farmer, P.E. - O'Brien & Gere
John G. Haggard - General Electric
Wiley Lavigne - NYSDEC Region 5
William Ports, P.E. - NYSDEC

O'BRIEN & GERE
ENGINEERS, INC.

June 10, 1997

William Wasilauski
New York State
Department of Environmental Conservation
Hudson Street Extension
Warrensburg, New York 12885

Re: Hudson River Project
Enhanced River Monitoring Project

File: 0612.226

Dear Mr. Wasilauski:

As we discussed, O'Brien & Gere Engineers, Inc. and HydroQual, Inc. are preparing to implement a second *Thompson Island Pool Time of Travel Survey* (*TIP Survey*) water sampling study of the Hudson River on behalf of General Electric Company. The study is tentatively planned for Tuesday, June 17, 1997. Details of the study were described in the sampling plan previously submitted to the New York State Department of Environmental Conservation.

The second *TIP Survey* is similar to the *TIP Survey* performed on June 4, 1997 and includes injection of Rhodamine WT dye into the river as a tracer to identify a subject mass of water to be sampled as it travels downstream. For this study, dye will be injected at the Adirondack Hydro Development Corporation hydroelectric facility at Bakers Falls in Hudson Falls, New York. It is anticipated that the dye will be injected over a 1-hour period to provide a target dye concentration of approximately 1 μg/l downstream.

Based on our conversation, we understand that it is acceptable to NYSDEC to conduct the dye injection. Implementation of the dye study is contingent on acceptable weather conditions. When we finalize the decision to proceed with the study, we will make the required 24-hour notification to Region 5. As you recommended previously, we will also notify the Spill Unit in Saratoga (518-583-6324) and the local fire department in Hudson Falls (518-747-5112) before beginning the dye injection. Please call me (315-437-6100) or Jim Rhea at HydroQual (315-484-6220) if you have any questions.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

William Ayling

William Ayling
Project Scientist

WAA:djb (i:52\0612226\2_\tipsurv\nysdec1.wpd)

cc:
John Connolly - AHDC
Walter Demick, P.E. - NYSDEC
J. Kevin Farmer, P.E. - O'Brien & Gere
John G. Haggard - General Electric
Mark D. LaRue - O'Brien & Gere
Wiley Lavigne - NYSDEC Region 5
Robert Montione - NYSDOH
James Rhea, PhD - HydroQual
William Ports, P.E. - NYSDEC
Douglas J. Tomchuk - USEPA

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O'Brien & Gere Engineers, Inc., an O'Brien & Gere company
5000 Brittonfield Parkway / PO Box 4873 / Syracuse, NY 13221 / (315) 437-6100 FAX (315) 463-7554
. . . *and offices in major U.S. cities.*

O'BRIEN & GERE
ENGINEERS, INC.

VIA TELEFAX

June 13, 1997

William Wasilauski
New York State
Department of Environmental Conservation
Hudson Street Extension
Warrensburg, New York 12885

Re: Hudson River Project
Enhanced River Monitoring Project

File: 0612.226

Dear Mr. Wasilauski:

In accordance with my letter to you dated June 10, 1997, O'Brien & Gere Engineers, Inc. is providing via this letter a 24-hour notice of dye injection into the Hudson River. Dye will be injected into the river from the Adirondack Hydro Development Corporation hydroelectric facility discharge at Bakers Falls in Hudson Falls, New York. Dye injection will begin Tuesday morning, June 17, 1997, and continue for approximately 1 hour.

Pursuant to your request, O'Brien & Gere contacted the NYSDEC spill unit in Saratoga and the Hudson Falls fire department today (Friday, June 13, 1997) and informed them of our schedule.

If you have any questions or concerns, please contact me at (315) 437-6100 or (518) 796-1300.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

William Ayling

William Ayling
Project Scientist

WAA:djb (i:52\0612226\2_\tipsurv\jun24hrA.wpd)

cc: John Connolly - AHDC
J. Kevin Farmer, P.E. - O'Brien & Gere
John G. Haggard - General Electric
Wiley Lavigne - NYSDEC Region 5
William Ports, P.E. - NYSDEC

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Appendix E

Hydrologic survey data

Appendix E - Hydrologic survey data

Hydrologic survey data were collected for two sections of Thompson Island Pool to supplement data interpretation efforts. One section was located in the vicinity of Snook Kill and the other was at transect TIP-18 approximately 700 feet upstream of the Thompson Island Dam. Both surveys consisted of bathymetric and flow velocity data collection to develop hydrologic profiles. Separate discussion of the activities associated with each task are provided below.

Hudson River in the vicinity of Snook Kill

The scope of the activities performed in this reach of the river was based on the results of reconnaissance activities performed in the vicinity of Snook Kill within the Thompson Island Pool by HydroQual and O'Brien & Gere personnel on August 21, 1997. The field activities included mapping approximately 3,000 ft of the Hudson River shoreline, and collecting bathymetric and flow velocity data at five transects (Figure 1). The field activities were conducted by O'Brien & Gere personnel using a 24-ft pontoon boat. Surveying support was provided by Richard Rybinski Land Surveying.

The shoreline mapping began at a point upstream of the group of islands east of Snook Kill, and extended south to a point just downstream of where Black House Creek enters the river on the east shore. Mapping included the shorelines of the four islands in this section of the river, designated as islands 1 through 4 in Figure 1. Observations and mapping by O'Brien & Gere contrasted with the United States Geological Survey (USGS) Fort Miller quadrangle map, which indicates three islands in this reach of the river. As the shoreline mapping was conducted, the locations of the five transects (designated as 1, 2, 3, 4, and 5) were identified and staked out oriented perpendicular to river flow (Figure 1). The locations of transects 1, 2, 4, and 5 were consistent with time of travel survey transects 10,11, 11A, and 11B (Figure 1-3 of main report); respectively.

After completing the shoreline mapping, water depth and flow velocity measurements were obtained at selected points along each of the five transects. Hydrologic data were collected along transect 5 on August 27, 1997, and along transects 1 through 4 on August 28, 1997. The locations of the data collection points were spaced closely in areas where the bottom was irregular; where the elevation of the river bed was relatively even, the data collection points were spaced further apart. To assist in selecting data collection points, the shape of the bottom was observed using a Humminbird® bottom profiling depth finder. At a selected data collection point, the boat was held in position using spuds (where depths permitted) or anchors. The boat was positioned as close to the transect line as practical given the current and wind conditions encountered.

Flow velocity, water depth, and survey data were measured concurrently at each data collection point (Figure 1). Flow velocity was measured at approximately 25% and 75% of the total water depth at each point with a Marsh-McBirney model 201 water velocity meter. At each transect, instantaneous stage heights at the Fort Edward USGS gaging station were obtained before starting and at completion of hydrologic data collection. The water depth was measured at each data collection point by probing with a calibrated rod. The depths were confirmed with the depth finder. Survey control points were established on shore, and the angle and distance to a prism mounted on the boat were obtained at each point where depth and velocity was measured. Hydrologic profiles and flow estimates were developed based on dividing the transect cross-sectional area into subsections (Figure 2). Flow for each subsection was calculated as the product of measured velocities and the cross-sectional area (Table 1).

Flows through the channels between the islands and the percentage of the total flow that passes through the channels were estimated (Table 2). A back current was observed at transect 5 along the east shore. This observation was confirmed with the velocity meter. At the time of the survey, the upstream extent of the back current appeared to terminate in the vicinity of transect 4. The downstream extent (or point of origin) of the back current was not known; it may originate near the next downstream bend in the river. The characteristics of the back current likely change under different flow conditions in the river. The total estimated flow for Transect 5 was calculated by subtracting the portion of flow that was observed to be flowing upstream from the flow measured across the remainder of the transect (Table 1).

The overall quality of the flow data appears to be good. The differences in flow rates obtained from the Fort Edward USGS gaging station and field measurements at the transects are likely due to the local effects of tributary flow on total river flow, changes in river flow during the collection of velocity data, the use of a mean water elevation of 118.7 during the study, and the potential errors inherent to measuring open channel flow (Grant 1989). Several inches of rain fell as a result of a heavy rain storm that passed through the area during the late afternoon and evening of August 27. On the morning of August 28, the Hudson River at Fort Edward and throughout the Thompson Island Pool was turbid (water column visibility was reduced to less than one foot deep), apparently due to storm water runoff. The flow at the Fort Edward gaging station did not increase appreciably as a result of the storm; therefore, the heavy rain may have been localized. During and after the storm Thompson Island Pool tributaries, including Bond Creek and Snook Kill, flowed significantly. The river remained turbid throughout the day.

Hydrologic data was collected along transect 5 on August 27, 1997, prior to the storm event. There was minimal flow in the tributaries prior to the storm. Flow at this transect was calculated to be within approximately 2% of the mean flow at the Ft. Edward gaging station during the data collection period (Table 1). The effects of tributary flow on flow in the Thompson Island Pool after the storm event are likely indicated by the increase in flow observed on August 28, 1997 between Ft. Edward and transects 1, 2, and 3, as indicated in Table 1. This increase was approximately 500-600 cfs, and was likely due to flow from Bond Creek and other small unnamed tributaries which enter the river downstream of the gaging station and upstream of transect 1. There also appears to have been an increase in flow between transects 3 and 4, if the flow measured at each transect is compared with the mean flow at the gaging station during the respective data collection periods (approximate increase between the gaging station and transect 3 was 650 cfs; 1,000 cfs for transect 4). This apparent increase is likely due to flow from Snook Kill, which enters the river just upstream of transect 4.

Bathymetric data were also obtained along a series of east/west oriented transects located between the group of islands and the east shore of the river (Figure 1). These data, including river bed spot elevations, were obtained to fill in a data gap, as bathymetric data were not collected in this area during the 1991 hydrologic survey (O'Brien & Gere 1992). The elevation of the Hudson River varied approximately 0.4 ft during the survey, with flow at the Fort Edward gaging station varying from approximately 3,300 to 4,700 cfs. A mean river elevation of 118.7 was used to represent river conditions at the time of the survey (Table 1).

Hudson River at Transect 18

Hydrologic profiles for Transect 18 were constructed to provide data to support PCB mass transport estimates (Appendix F). The Transect 18 location has been extensively sampled during the 1995 River Monitoring Test (September 1995), TIP Transect study (June 18 and October 29,1996), Thompson Island Pool Time of Travel Surveys (June 24 and 25,1996; June 4 and 17, 1997), and subsequent sampling at the approximate center of the river (ten rounds between June and October 1997; Figure 2-2 of main report). The hydrologic profiles were constructed from bathymetric data, water depths, and flow velocity measurements collected across the transect.

The bathymetric data were collected at subsections along the transect during preliminary field reconnaissance performed before the sampling events were conducted (Figure 3). Bathymetric data was obtained at each proposed sampling station, at approximate mid-points between the sampling stations, and at each shoreline (Figure 2-2). During the bathymetric survey, the water depth was measured at each data collection point by probing with a calibrated rod. The depths were confirmed with the depth finder. River bed elevations were surveyed at approximately fifteen stations across the river channel. The approximate locations of each station were obtained using the survey stadia technique.

Hydrologic profiles and flow estimates were developed subsequently during sampling activities along the transect subsections (Figure 3). Flow velocity was measured at approximately 25% and 75% of the total water depth at each point with a Marsh-McBirney model 201 water velocity meter. Flow for each subsection was calculated as the product of measured velocities and the cross-sectional area (Table 1). The hydrologic profiles obtained during profile development field work were adjusted to represent conditions experienced during the transect sampling events based on water depth and velocity data obtained at the time of sampling.

Water velocities were recorded as time and weather permitted during the September 18 and October 29, 1996 sampling events. During water velocity measurement the boat was anchored when possible. A strong wind made positioning the boat and water velocity measurement difficult. Due to the strong wind and related positioning difficulties, it was not possible to measure depths at sampling station TIP-1 with precision for each round conducted on September 18, 1996. Percentage of total flow for each sub-area for each sampling event was calculated using this information (Table 3).

The overall quality of the flow data appears to be good. The differences in flow rates obtained from the Fort Edward USGS gaging station and field measurements at Transect 18 were small.

References

Table 1. Hydrologic data summary.

					Shallow			Deep							
Date	Time	Transect	Point I.D.	Water Depth (ft)	25% Depth Velocity (ft/sec)	Flow area (ft2)	Flow (cfs)	75% Depth Velocity (ft/sec)	Flow area (ft2)	Flow (cfs)	Transect Total Flow (cfs)	Instantaneous Stage @ Ft. Edward	Instantaneous Flow @ Ft. Edward (cfs)	Mean Flow @ Ft. Edward for transect (cfs)	Diff. Between Mean Flow @ Ft. Edward and Transect (cfs)
08/28/97	13:21	1	A	3.4	0.1	153	15.3	0.1	162	16.2	-	21.54	3934	-	-
08/28/97	13:28	1	B	8.5	0.4	329	115.2	0.4	303	121.2	-	-	-	-	-
08/28/97	13:40	1	C	13.0	1.1	634	697.4	1.1	649	713.9	-	-	-	-	-
08/28/97	13:44	1	D	15.5	1.1	953	1048.3	1.2	931	1117.2	-	-	-	-	-
08/28/97	13:50	1	E	13.0	0.3	601	180.3	0.5	632	316.0	-	-	-	-	-
08/28/97	14:08	1	F	12.0	0.2	420	84.0	0.3	364	109.2	-	-	-	-	-
08/28/97	14:12	1	G	5.5	0.0	190	0.0	0.0	182	0.0	4534 (1)	21.58	4063	3999	536
08/28/97	14:34	2	A	1.5	0.3	10	2.9	0.3	13	3.8	-	21.54	3934	-	-
08/28/97	14:39	2	B	3.7	0.4	35	12.3	0.4	29	10.2	-	-	-	-	-
08/28/97	14:45	2	C	3.8	0.2	59	11.8	0.2	32	6.4	-	-	-	-	-
08/28/97	14:50	2	D	3.3	0.2	107	21.4	0.2	78	15.6	-	-	-	-	-
08/28/97	14:53	2	E	3.9	0.3	146	43.8	0.2	161	32.2	-	-	-	-	-
08/28/97	15:00	2	F	5.8	0.2	264	52.8	0.2	276	55.2	-	-	-	-	-
08/28/97	15:04	2	G	8.3	0.7	467	326.9	0.9	509	458.1	-	-	-	-	-
08/28/97	15:08	2	H	13.0	1.3	748	972.4	1.2	713	820.0	-	-	-	-	-
08/28/97	15:13	2	I	16.0	0.9	780	702.0	0.8	695	556.0	-	-	-	-	-
08/28/97	15:21	2	J	11.9	0.2	387	77.4	0.4	411	143.9	-	-	-	-	-
08/28/97	15:25	2	K	7.5	0.2	131	26.2	0.2	116	23.2	4374 (1)	21.44	3620	3777	597
08/28/97	15:41	3	A	3.6	0.1	73	7.3	0.1	56	5.6	-	-	-	-	-
08/28/97	15:45	3	B	5.7	0.3	112	33.6	0.2	122	24.4	-	-	-	-	-
08/28/97	15:49	3	C	9.5	0.2	204	40.8	0.2	114	22.8	-	-	-	-	-
08/28/97	15:54	3	D	1.5	0.1	51	5.1	0.1	60	6.0	-	21.71	4498	-	-
08/28/97	16:00	3	E	4.8	0.1	182	18.2	0.1	187	18.7	-	-	-	-	-
08/28/97	16:05	3	F	7.8	0.4	343	137.2	0.3	339	101.7	-	-	-	-	-
08/28/97	16:09	3	G	10.4	0.9	451	405.9	0.8	481	384.8	-	-	-	-	-
08/28/97	16:14	3	H	16.0	1.4	564	789.6	1.2	509	585.4	-	-	-	-	-
08/28/97	16:19	3	I	16.5	1.4	574	803.6	1.3	503	628.8	-	-	-	-	-
08/28/97	16:23	3	J	10.0	1.1	428	470.8	1.0	428	428.0	-	-	-	-	-
08/28/97	16:28	3	K	4.0	0.3	139	41.7	0.2	172	25.8	-	21.77	4706	-	-
08/28/97	16:55	3	AA	4.1	0.0	56	0.0	0.0	34	0.0	-	21.67	4362	-	-
08/28/97	16:59	3	BB	5.0	0.2	48	9.6	0.2	42	8.4	-	-	-	-	-
08/28/97	17:03	3	CC	3.6	0.2	40	8.0	0.2	40	8.0	-	-	-	-	-
08/28/97	17:06	3	DD	2.2	0.1	86	8.6	0.1	43	4.3	5033 (1)	21.54	3933	4375	658

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Table 1. Hydrologic data summary.

Date	Time	Transect	Point I.D.	Water Depth (ft)	Shallow: 25% Depth Velocity (ft/sec)	Shallow: Flow area (ft2)	Shallow: Flow (cfs)	Deep: 75% Depth Velocity (ft/sec)	Deep: Flow area (ft2)	Deep: Flow (cfs)	Transect Total Flow (cfs)	Instantaneous Stage @ Ft. Edward	Instantaneous Flow @ Ft. Edward (cfs)	Mean Flow @ Ft. Edward for transect (cfs)	Diff. Between Mean Flow @ Ft. Edward and Transect (cfs)
08/28/97	11:35	4	A	1.8	0.0	26	0.0	0.0	26	0.0	-	21.35	3350	-	-
08/28/97	11:47	4	B	5.5	0.2	105	21.0	0.2	90	16.2	-	-	-	-	-
08/28/97	11:51	4	C	6.2	0.3	134	33.5	0.3	118	35.4	-	-	-	-	-
08/28/97	11:54	4	D	4.3	0.2	86	17.2	0.2	96	14.4	-	-	-	-	-
08/28/97	11:58	4	E	3.6	0.1	87	8.7	0.1	50	5.0	-	-	-	-	-
08/28/97	12:05	4	F	7.7	0.6	270	148.5	0.7	235	152.8	-	-	-	-	-
08/28/97	12:10	4	G	14.0	1.0	578	549.1	1.1	539	566.0	-	-	-	-	-
08/28/97	12:15	4	H	15.5	1.4	674	943.6	1.2	642	770.4	-	-	-	-	-
08/28/97	12:20	4	I	14.0	1.6	382	611.2	1.3	176	228.8	-	-	-	-	-
08/28/97	12:27	4	J	10.5	1.6	182	282.1	1.4	176	246.4	-	-	-	-	-
08/28/97	12:31	4	K	6.6	1.4	167	233.8	1.3	121	157.3	5041 (2)	21.77	4706	4028	1013
08/27/97	15:48	5	A	4.2	-0.1	163	-16.3	-0.2	108	-16.2	-	21.39	3469	-	-
08/27/97	16:03	5	B	5.3	-0.1	104	-10.4	-0.1	107	-10.7	-	-	-	-	-
08/27/97	16:07	5	C	11.0	0.1	153	15.3	0.2	173	34.6	-	-	-	-	-
08/27/97	16:12	5	D	17.5	0.2	392	58.8	0.3	374	112.2	-	-	-	-	-
08/27/97	16:20	5	E	19.5	0.5	439	219.5	0.6	436	270.3	-	-	-	-	-
08/27/97	16:25	5	F	21.5	0.8	645	516.0	0.8	645	483.8	-	-	-	-	-
08/27/97	16:31	5	G	22.5	1.0	872	872.0	0.7	783	548.1	-	-	-	-	-
08/27/97	16:38	5	H	14.0	0.6	385	231.0	0.5	423	211.5	-	-	-	-	-
08/27/97	16:45	5	I	4.5	0.2	107	21.4	0.1	103	10.3	3551 (3)	21.50	3806	3638	-86

Notes:

(1) - includes flow from Bond Creek and other tributaries located between Ft. Edward gaging station and transect. Tributary flow was significant on August 28, 1997 due to heavy rain on previous evening.

(2) - includes flow from upstream tributaries and Snook Kill.

(3) - transect data obtained prior to storm event, minimal flow observed in tributaries.

Source: O'Brien & Gere Engineers, Inc.

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Table 2. Flow analysis at transects.

Transect	Channel	Points	Estimated Flow (cfs)	Percent of Total Flow
1	Main Channel	A-G	4534	100.0
	Transect total	A-G	4534	100.0
2	Between East Shore and Island 1	-	- (1)	-
	Between Island 1 and Island 2	A-C	47.4	1.1
	Main Channel	D-K	4327	98.9
	Transect total	A-K	4374	100.0
3	Between East Shore and Island 2	AA-DD	46.9	0.9
	Between Island 2 and Island 4	A-C	135	2.7
	Main Channel	D-K	4851	96.4
	Transect total	AA-K	5033	100.0
4	Between East Shore and Island 4	A-E	151	3.0
	Main Channel	F-K	4890	97.0
	Transect total	A-K	5041	100.0
5	Main Channel	C-I	3605	101.5
	Back Current	A-B	-53.6	-1.5
	Transect total	A-I	3551	100.0

Notes:

(1) Measureable flow was not observed on the east side of Island 1 or Island 3.

Source: O'Brien & Gere Engineers, Inc.

Table 3. 1996 hydrologic survey data collected at transect TIP-18 on September 18, 1996

Transect	Transect Sub-Area	River Width (ft)	Approx. Time	Water Depth	X-Sectional Area (ft2)	Velocity (ft/sec)	Instantaneous Flow (cfs)	% of Total Flow	USGS Flow (cfs)
Thompson	TIP-1	190	15:30	6.7	904	0.2	217	5.9	-
Island Pool	TIP-2	104	15:30	-	493	0.3	123	3.4	-
	TIP-3	109	15:30	-	1,077	0.4	442	12.1	-
	TIP-4	101	15:30	-	777	0.6	490	13.4	-
	TIP-5	105	15:30	-	971	0.7	680	18.6	-
	TIP-6	168	15:30	-	1,177	1.5	1,707	46.7	-
	Total	**777**	**-**	**-**	**5,399**	**-**	**3,658**	**100.0**	**4,700**
Thompson	TIP-1	242	15:30	6.7	1,056	0.2	253	7.1	-
Island Pool	TIP-3	211	15:30	-	1,773	0.4	762	21.4	-
	TIP-5	324	15:30	-	2,569	1.0	2,544	71.5	-
	Total	**777**	**-**	**-**	**5,399**	**-**	**3,560**	**100.0**	**4,700**

Sampling stations — TIP-1 through TIP-6 were located at approximate equal distances across the river from the west to east shore. The TIP transect was located at the same approximate location as TIP-18 used in the Thompson Island Pool Time of Travel Surveys.

Water depth — Measured at Station 1 of transect and compared to initial bathymetric data collected during preliminary field work as a benchmark.

Cross-sectional area — Calculations based on bathymetric data. The water depth was measured at Station 1 of the transect at the time the velocity measurements were obtained. These data were used to recalculate bathymetric cross-sectional areas. Changes in water elevation at Station 1 of the transect was assumed to be consistent across the width of the river. In addition, it was assumed that changes in water elevation did not impact the width of the cross sections. Therefore, the cross-sectional area was calculated for the transect using the results of bathymetric survey data as a baseline. A change in water elevation resulted in a corresponding change in cross-sectional area, calculated as the product of the elevational change and the baseline width of the transect (or transect sub-area). This area change was added (or subtracted) to the baseline area identified during the bathymetric survey.

Velocity — Velocities were measured in the field at each sampling location using a Marsh McBirney Model 201 velocity meter. These velocities were assumed to be representative of the area associated with each sampling location. Wind during field activities likely interfered with velocity measurements.

Instantaneous flow — Calculated as the product of the velocity and cross-sectional area.

USGS Flow — Estimated from 15-minute interval flow readings obtained from the USGS Fort Edward gaging station. Flow reported for Transect TIP-18 assumes approximately 15-minute time lag in flow change observed at Fort Edward.

Source: O'Brien & Gere Engineers, Inc.

310734

Grant, Douglas M. 1989. ISCO Open Channel Flow Measurement Handbook. Third Edition. Lincoln, NE; ISCO Environmental Division.

O'Brien & Gere Engineers, Inc. 1992. 1991 Hydrographic Survey of the Upper Hudson River. Syracuse, NY: O'Brien & Gere Engineers, Inc. June 1992.

THE MAP IS AVAILABLE FOR REVIEW AT THE FOLLOWING LOCATION:

HUDSON RIVER PCBS ADMINISTRATIVE RECORD

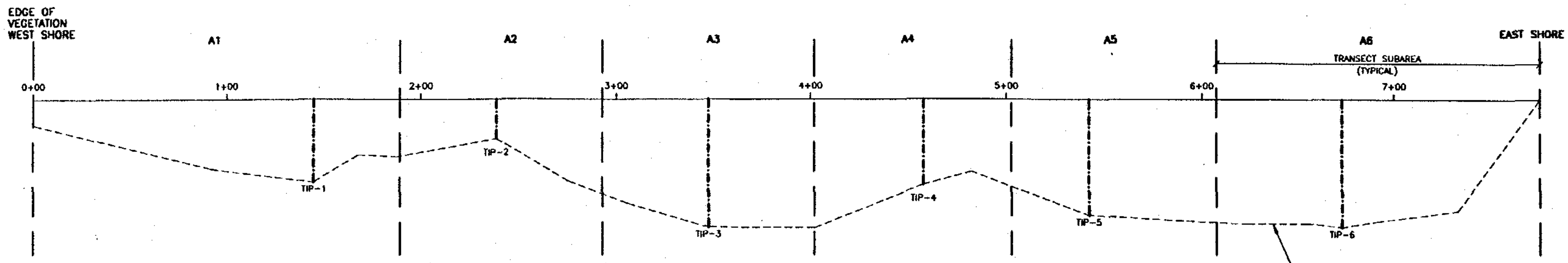
U. S. EPA, REGION 2 SUPERFUND RECORDS CENTER, 290 BROADWAY, 18TH FLOOR, NEW YORK, NY 10007

THE MAP IS AVAILABLE FOR REVIEW AT THE FOLLOWING LOCATION:

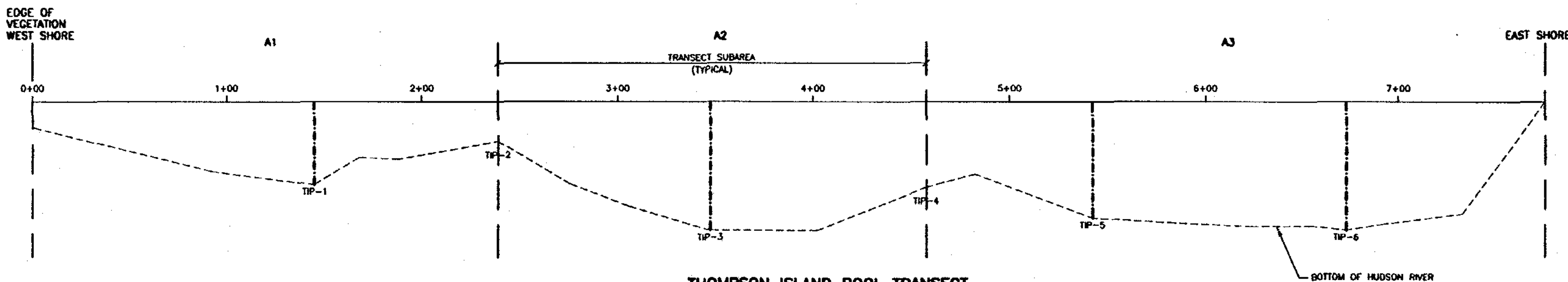
HUDSON RIVER PCBS ADMINISTRATIVE RECORD

U. S. EPA, REGION 2 SUPERFUND RECORDS CENTER,
290 BROADWAY, 18TH FLOOR, NEW YORK, NY 10007

FIGURE 3



THOMPSON ISLAND POOL TRANSECT
9/18/96



THOMPSON ISLAND POOL TRANSECT
10/29/96

LEGEND

FED-4 FT. EDWARD TRANSECT SAMPLING LOCATION
TIP-3 THOMPSON ISLAND POOL TRANSECT SAMPLING LOCATION
—·—·— SAMPLE COLLECTION POINT

PRELIMINARY NOT FOR CONSTRUCTION
DATE: 2/10/98

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

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O'BRIEN & GERE ENGINEERS, INC.

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
THOMPSON ISLAND POOL STUDIES

GENERAL
HUDSON RIVER, NEW YORK
BATHYMETRIC PROFILES OF TRANSECT STUDY SAMPLING LOCATIONS

FILE NO. 612.226-004
DATE DEC. 1997

PLOT DATE: 2/10/98

310737

PCB mass transport calculations

Appendix F. PCB mass transport calculations

An objective of the Thompson Island Pool Studies is to evaluate the reliability of estimated PCB mass transport from the Thompson Island Pool. This appendix provides details of the PCB mass transport calculations that are presented in the report in Figures 3-18 through 3-20. An outline of the appendix is provided below.

- Overview of mass transport
- Overview of sampling stations
- Thompson Island dam sampling stations
  - Flow data
  - PCB concentrations
- Thompson Island Pool Transect TIP-18 sampling stations
  - Flow data
  - PCB concentrations

The PCB mass transport calculation methods presented in this appendix are adapted from those used for the *1995 River Monitoring Test* (O'Brien & Gere 1996).

Overview of mass transport

Total PCB mass transport at a given location along the river is estimated as:

$$M_T = Q_T * C_T \qquad \text{(Eq. 1)}$$

where:

M_T = total mass transport
Q_T = total river flow
C_T = total PCB concentration

Estimation of PCB mass transport required conversion of units before the calculations were performed to obtain the PCB mass transport results in kilograms/day. Total river flow(Q_T) in Thompson Island Pool was estimated from flows recorded at the USGS gaging station at Fort Edward. A 15-minute lag time was assumed for flow changes observed at Fort Edward arriving at

Thompson Island dam based on model predictions (HydroQual 1997). Otherwise, flows were assumed comparable.

Sampling at TIP-18 included transect sampling at multiple sampling stations across the river to allow detailed evaluation PCB mass transport (September 18 and October 29, 1996). Flows were estimated for subareas corresponding to water column PCB data available for each subarea. Mass transport (mass/unit time) utilizing multiple data points at a transect is calculated as the sum of the product of subarea flows and PCB concentrations:

$$M_n = Q_n * C_n \qquad \text{(Eq. 2)}$$

where:

n = subarea sampling stations
M_n = mass transport in a subarea of a transect
Q_n = flow in subarea n
C_n = PCB concentration in subarea n

Overview of sampling stations

The weekly sampling station at the west dam abutment (HRM 188.5W) was originally selected as a sampling station for the convenience of access. Surface grab samples have been collected from the shore at this station weekly or biweekly since 1992 (Section 1, Figure 1-1, main report). However, there is uncertainty in the reliability of surface grab samples collected from shore for estimating water column PCB mass transport (Section 1, main report). Depth-integrated samples collected from the center of the river perpendicular to flow are preferable, but sampling at the dam is not practical for safety reasons.

Intensive sampling in the vicinity of the dam was conducted for the *1996-1997 Thompson Island Pool Studies* to evaluate the reliability of data collected at the weekly monitoring station at the dam (Figure 1-4, main report). For this study, stations upstream and downstream of the dam and at the other dam abutments were sampled (Table 2-2, main report). For each event, sampling was performed as a time of travel study intended to sample a single parcel of water as it passed Thompson Island Dam (Section 2.1). This approach maintains the comparability of data from each station. Depth-integrated and time composite sampling are additional techniques employed in the *1996-1997 Thompson Island Pool Studies* to improve the representativeness of the data over techniques utilized for weekly monitoring.

PCB mass estimates presented in this report compare data collected at the weekly sampling station at the dam (HRM 188.5W) with data collected at transect TIP-18 approximately 700 ft upstream of the dam and profile stations (TID-PRW and TID-PRE) located approximately 200 ft downstream of the dam. The PCB mass estimates assume that flow was constant between sampling stations.

Thompson Island Dam stations (including profile sampling stations downstream of the dam)

For sampling events consisting of collecting single samples at the weekly sampling station (HRM 188.5W), PCB mass transport was estimated simply using equation 1 (Eq. 1) above. For sampling events that included additional stations, evaluation of data followed the procedures below.

Flow estimates
For sampling events conducted in the east and west channels at the dam, the proportion of flow was estimated from USGS map of the area. It was assumed that water depth across the dam was constant and therefore width was sufficient to estimate flow proportion. West and east channel flows were estimated as 40% and 60% of the total flow from the pool using this approach. This relationship was used for stations at the dam abutment and at the profile sampling stations downstream of the dam (Figure 1-4, main report).

PCB concentration data
For the September 9 and 10, 1997 transect sampling events at the profile sampling stations downstream of the dam (TID-PRW and TID-PRE), the PCB concentrations of the stations sampled across the river were averaged for each channel. Differences in PCB concentrations across the river were less than 10%. Subsequent sampling at the Thompson Island Dam profile sampling station was conducted at the approximate center of the west channel.

Thompson Island Pool Transect TIP-18

PCB mass transport for Transect TIP-18 was estimated at several levels of detail. PCB mass transport estimates for September 18 and October 29, 1996 are detailed estimates based on hydrologic data measured during field activities (Appendix E) and water column PCB concentrations (Table 3-3, main report).

For the sampling events that followed, single samples collected at the approximate center of the channel were used to estimate water column PCB concentrations. Mass transport for the time of travel surveys utilized averages of PCB concentrations for the three stations sampled across the river. The approach used for evaluating the September 18 and October 29, 1996 data is presented below. For other sampling dates, estimates were calculated as described in Equation 1.

Flow estimates
To identify Q_n for each subarea was accomplished in three steps:

1. Percentage of flow estimated from instantaneous field measurements
The percentage of flow in each subarea was calculated from field data consisting of estimates of subsectional areas, water depths and velocities (Appendix E, Table 3). As discussed in subsection 2.1, estimates of instantaneous flow rates for each subarea of each transect, Qi_n, were derived as the product of the subsectional area and instantaneous flow velocities obtained during bathymetric and hydrologic surveys conducted in the field:

$$Qi_n = Vi_n A_n \quad \text{(Eq. 3)}$$

where:

Qi_n = calculated subarea instantaneous flow (ft^3/sec)
Vi_n = instantaneous subarea flow velocity (ft/sec) measured in the field (Appendix E, Table 3)
A_n = transect subarea (ft^2) calculated from bathymetry obtained from field measurements (Appendix E)

Instantaneous velocity measurement (Vi_n).
Instantaneous flow velocities were measured for one round of sampling during each sampling event using a velocity meter. Instantaneous flow velocities were obtained at several locations along each transect (Table 4, Appendix D).

Subarea measurement
Baseline subareas (A_n) were established during preliminary field work (Appendix E). Baseline water depths were obtained during preliminary field work at the same locations that instantaneous flow velocities were measured along each transect (Appendix E, Table 3). These data provide baseline cross-sectional areas (A_n) of the river channel at each sampling transect (Appendix E, Figure 3).

For subsequent transect sampling, cross-sectional areas were adjusted for flow conditions encountered during each event using water depth data collected adjacent to sample station 1 as a reference point (Appendix E, Table 3). It was assumed that water depth changes were consistent across the river. Therefore, the cross-sectional area of each subarea was increased or decreased, as appropriate, based on the change in water depth from the baseline. It was also assumed that the width of the TIP-18 transect remained constant and was not impacted significantly by the changes in water elevation experienced during the sampling periods. Consequently, the cross-sectional areas were adjusted vertically, but not horizontally.

Instantaneous flow (Qi)
As stated previously, for each subarea, field measurements of instantaneous flow were calculated as the product of the cross-sectional area and associated instantaneous flow velocity (Eq. 3). The field measurement of instantaneous total flow measured at the transect (Qi_t) is the sum of the subarea instantaneous flows(Qi_n):

$$Qi_T = \text{sum of } Qi_n \qquad \text{(Eq. 4)}$$

The instantaneous flows derived from field measurements were verified by comparison to instantaneous flow readings obtained from the Fort Edward gaging station. Mean percentage of total flow through each subarea was used to develop the mean flows used for the mass transport calculations to minimize the typical variability experienced when measuring open channel flow.

2. USGS flow data collected during transect sampling event
The mean total flow rate for each event was estimated from provisional data collected at 15-minute intervals at the Fort Edward USGS gaging station (Appendix B). For comparison with flow data collected during field activities. The mean, minimum, and maximum flows are summarized in Table F-2 below.

		USGS Fort Edward flow data			
Date	Sampling times	Mean (cfs)	Min. (cfs)	Max. (cfs)	Time interval
09/18/96	10:30-17:45	4700	3500	8200	10:15-17:30
10/29/96	11:30-13:00	2200	1800	2800	11:15-12:45

Source: O'Brien & Gere Engineers, Inc.

The time interval presented in the table accounts for the time of travel of the subject volume of water from the gaging station. A 15-minute lag time was assumed for flow changes observed at Fort Edward to arrive at Thompson Island dam (HydroQual 1997).

3. Calculation of mean flows for each subarea

Mean percentage of flow for each subarea (section no. 1, above) was multiplied by mean total flows (section no. 2, above) to obtain mean flow values for each subarea (Appendix E, Table 3). Flow in the Hudson River varied during each sampling event up to 130% (Table F-1).

PCB concentration data

For the September 18, 1996 sampling event, depth-integrated composite samples were collected from a sampling stations located within each subarea. For each sampling round, aliquots were collected in approximately equal volumes. Therefore, the samples were not flow proportioned and variations in flow observed during each event are not accounted for in total PCB concentrations.

References

HydroQual, Inc. 1997. Personal communication of William Ayling of O'Brien & Gere Engineers, Inc. and Kirk Ziegler of HydroQual, Inc. August 8, 1997.

O'Brien & Gere Engineers, Inc. 1996. Hudson River Project, River Monitoring Test Data Summary Report. Syracuse, New York: O'Brien & Gere Engineers, Inc. January 1996.

Comparison of PCB Laboratory reported and bias corrected data

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)	Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/18/96	PCRDMP	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2 BD.	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 188.5W	49	13.5	26.5	36.8	18.3	4.1	0.7	0.0
		revised	65	10.6	40.3	30.5	14.2	3.9	0.6	0.0
	TRANSECT	TIP-18 1	62	11.1	17.6	29.4	25.6	12.0	4.2	0.0
		revised	75	9.6	27.5	25.8	20.9	12.1	4.1	0.0
		TIP-18 2	36	15.3	20.6	32.5	24.7	5.6	1.3	0.0
		revised	48	12.0	38.2	25.2	18.7	5.0	1.0	0.0
		TIP-18 3	43	10.4	24.9	34.1	22.5	6.5	1.6	0.0
		revised	54	8.8	35.6	29.8	17.8	6.5	1.5	0.0
		TIP-18 4	40	11.6	26.3	33.0	23.3	4.9	0.9	0.0
		revised	53	9.2	40.5	27.4	17.4	4.8	0.8	0.0
		TIP-18 4 BD	54	7.5	17.1	34.6	25.9	11.5	3.5	0.0
		revised	65	6.5	26.6	31.1	21.3	11.5	3.1	0.0
		TIP-18 5	45	12.6	23.6	32.8	24.4	5.8	0.8	0.0
		revised	58	10.2	36.8	27.7	18.7	5.9	0.8	0.0
		TIP-18 6	53	13.1	25.9	33.1	21.5	5.4	1.0	0.0
		revised	71	10.3	39.8	27.6	16.3	5.2	0.9	0.0
		HRM 188.5W	119	9.4	15.3	35.6	29.2	8.4	2.1	0.0
		revised	142	8.3	23.7	32.8	24.5	8.8	2.0	0.0
		HRM 188.5E	79	13.3	22.0	34.9	22.0	6.5	1.3	0.0
		revised	102	10.7	34.8	29.9	16.9	6.3	1.3	0.0
		HRM 188.5E BD	76	14.9	23.8	34.9	19.1	5.9	1.5	0.0
		revised	99	12.0	36.4	29.5	15.1	5.7	1.3	0.0
09/24/96	TIP SURVEY	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-1E	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-1W	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-2E	11	0.0	27.2	28.3	32.5	9.4	2.6	0.0
		revised	12	0.0	30.5	26.7	29.9	10.4	2.6	0.0
		FS1-2W	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-3E	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-3W	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-4E	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-4W	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		FS1-5E	12	0.0	17.5	38.8	29.4	10.5	3.8	0.0
		revised	14	0.0	21.5	37.5	25.9	11.3	3.8	0.0
		FS1-5C	14	0.0	14.6	38.3	32.7	11.7	2.8	0.0
		revised	16	0.0	19.0	37.3	28.0	12.8	2.9	0.0
		FS1-5W	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/24/96	TIP SURVEY	FS1-6E		13	0.0	16.0	35.1	37.3	9.4	2.2	0.0
	(continued)		*revised*	14	0.0	20.9	33.1	33.3	10.5	2.2	0.0
		FS1-6C		15	0.0	27.3	37.4	24.8	8.4	2.1	0.0
			revised	15	0.0	21.4	41.3	24.0	11.0	2.4	0.0
		FS1-6W		<11	-	-	-	-	-	-	-
			revised	12	0.0	23.6	39.2	23.2	11.7	2.5	0.0
		FS1-7E		13	0.0	16.8	37.1	33.9	9.7	2.5	0.0
			revised	14	0.0	20.5	36.0	30.4	10.6	2.6	0.0
		FS1-7C		12	0.0	20.5	39.1	27.5	9.9	3.1	0.0
			revised	13	0.0	24.7	38.1	23.6	10.6	3.0	0.0
		FS1-7W		<11	-	-	-	-	-	-	-
			revised	12	0.0	21.2	42.7	22.1	12.0	2.1	0.0
		FS1-8E		21	10.7	22.6	34.1	22.8	7.9	1.9	0.0
			revised	27	8.7	34.7	29.4	18.0	7.6	1.7	0.0
		FS1-8C		115	0.0	2.6	8.3	58.4	24.4	6.3	0.0
			revised	113	0.0	3.1	8.6	52.3	29.8	6.2	0.0
		FS1-8W		39	38.5	23.1	23.9	10.7	3.1	0.7	0.0
			revised	52	29.9	39.1	19.5	7.9	3.0	0.6	0.0
		FS1-9E		20	10.4	24.3	31.9	24.3	7.2	1.9	0.0
			revised	25	8.9	33.6	28.2	20.2	7.3	1.7	0.0
		FS1-9C		18	0.0	24.8	37.7	27.5	8.2	1.8	0.0
			revised	23	0.0	36.2	32.9	21.4	7.9	1.5	0.0
		FS1-9W		26	20.9	26.7	32.4	14.0	4.2	1.8	0.0
			revised	34	16.8	38.8	28.2	10.7	4.0	1.6	0.0
		FS1-9W BD		33	15.9	25.7	21.6	18.4	12.3	6.1	0.0
			revised	42	13.3	35.5	19.1	14.6	11.8	5.6	0.0
		FS1-10E		21	17.8	21.6	31.8	20.5	6.4	1.9	0.0
			revised	27	14.6	33.5	28.0	16.2	6.1	1.7	0.0
		FS1-10C		17	0.0	24.1	41.7	24.3	7.7	2.1	0.0
			revised	21	0.0	35.8	35.8	19.0	7.6	1.8	0.0
		FS1-10W		15	11.8	20.8	35.7	22.0	7.6	2.1	0.0
			revised	17	10.6	28.6	32.8	18.0	8.1	2.0	0.0
		FS1-11E		18	7.6	23.3	32.9	25.6	8.1	2.6	0.0
			revised	21	6.7	30.5	30.1	21.8	8.4	2.5	0.0
		FS1-11C		17	0.0	24.4	39.3	24.6	9.3	2.4	0.0
			revised	21	0.0	35.4	33.4	19.5	9.5	2.2	0.0
		FS1-11W		13	0.0	31.9	33.7	28.0	4.8	1.7	0.0
			revised	18	0.0	46.0	27.9	20.5	4.1	1.4	0.0
		FS1-12E		56	23.8	24.0	27.9	16.5	6.2	1.7	0.0
			revised	74	19.0	37.6	23.3	12.8	5.9	1.5	0.0
		FS1-12E BD		53	24.6	23.1	29.9	16.2	5.0	1.1	0.0
			revised	70	19.5	36.9	25.4	12.5	4.8	1.0	0.0
		FS1-12C		18	0.0	25.7	38.8	24.7	7.9	2.9	0.0
			revised	23	0.0	35.8	34.2	19.9	7.6	2.5	0.0
		FS1-12W		17	16.9	21.3	30.1	23.2	6.5	2.0	0.0
			revised	21	14.6	30.9	26.8	19.1	6.7	1.9	0.0
		FS1-13E		31	15.5	22.1	28.4	18.3	11.7	3.9	0.0
			revised	39	12.9	32.1	24.5	14.8	11.7	4.1	0.0
		FS1-13C		20	0.0	32.0	35.1	20.8	9.4	2.8	0.0
			revised	25	0.0	40.9	31.2	16.2	9.2	2.5	0.0
		FS1-13W		17	0.0	22.0	38.1	29.2	8.2	2.5	0.0
			revised	20	0.0	29.4	35.1	24.8	8.3	2.4	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/24/96	TIP SURVEY	FS1-14E		42	19.7	26.8	31.1	16.5	4.9	1.1	0.0
	(continued)		*revised*	56	15.3	41.0	25.7	12.5	4.6	0.9	0.0
		FS1-14C		19	0.0	28.7	35.8	23.4	9.9	2.3	0.0
			revised	26	0.0	43.4	28.1	17.3	9.4	1.9	0.0
		FS1-14W		20	0.0	28.6	41.6	20.8	7.1	1.9	0.0
			revised	27	0.0	42.3	34.0	15.5	6.7	1.6	0.0
		FS1-15E		87	19.2	21.8	29.7	18.4	8.4	2.5	0.0
			revised	113	15.3	35.6	24.7	14.3	7.9	2.2	0.0
		FS1-15C		39	26.0	24.4	27.4	14.8	6.0	1.5	0.0
			revised	50	21.4	35.7	23.9	11.8	5.8	1.4	0.0
		FS1-15C BD		42	14.9	23.4	30.9	20.9	8.2	1.8	0.0
			revised	54	12.3	35.1	26.5	16.6	7.9	1.6	0.0
		FS1-15W		24	14.1	26.5	31.8	19.9	6.0	1.7	0.0
			revised	31	11.4	38.9	27.1	15.4	5.6	1.5	0.0
		FS1-16E		69	20.1	24.8	32.1	16.7	5.3	1.0	0.0
			revised	90	15.9	38.6	26.2	13.1	5.2	0.9	0.0
		FS1-16C		49	15.8	30.3	33.2	15.3	4.8	0.7	0.0
			revised	67	12.0	45.4	26.4	11.2	4.4	0.5	0.0
		FS1-16W		30	17.9	25.4	31.2	18.9	5.4	1.2	0.0
			revised	40	14.1	39.4	26.1	14.3	5.1	1.1	0.0
		FS1-17E		45	14.9	23.0	36.1	18.4	6.1	1.4	0.0
			revised	60	11.7	37.3	29.8	14.1	5.9	1.2	0.0
		FS1-17C		43	16.7	29.0	32.3	16.4	4.8	0.8	0.0
			revised	58	12.9	43.4	26.2	12.4	4.4	0.7	0.0
		FS1-17W		40	17.0	25.9	29.7	18.9	7.1	1.5	0.0
			revised	52	13.5	39.0	25.2	14.5	6.5	1.3	0.0
		FS1-18E		41	21.2	25.4	30.1	16.8	5.2	1.3	0.0
			revised	53	16.9	39.0	25.0	12.9	5.0	1.2	0.0
		FS1-18C		42	21.6	27.8	29.6	15.7	4.5	0.8	0.0
			revised	59	16.2	44.0	23.8	11.2	4.1	0.6	0.0
		FS1-18W		39	19.4	26.1	30.7	18.0	4.8	1.0	0.0
			revised	52	15.3	40.3	25.7	13.5	4.5	0.9	0.0
09/25/96	PCRDMP	HRM 197.0		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		Plunge Pool		34	0.0	15.9	45.2	32.1	5.7	1.2	0.0
			revised	34	0.0	11.8	49.4	30.5	7.1	1.3	0.0
		HRM 194.2		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		HRM 194.2 BD		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		HRM 188.5W		37	16.1	31.5	28.6	18.9	4.3	0.8	0.0
			revised	53	11.7	48.5	22.4	13.0	3.7	0.6	0.0
09/25/96	TIP SURVEY	FS2-1E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-1W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-2E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-2W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-3E		<11	-	-	-	-	-	-	-
			revised	15	0.0	52.0	20.6	20.4	5.5	1.5	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/25/96	TIP SURVEY	FS2-3W		<11	-	-	-	-	-	-	-
	(continued)		*revised*	<11	-	-	-	-	-	-	-
		FS2-4E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-4W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-5E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-5C		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-5W		28	0.0	10.2	21.8	28.1	18.6	21.3	0.0
			revised	30	0.0	12.9	21.4	25.7	20.7	19.3	0.0
		FS2-6E		14	0.0	29.7	35.5	26.4	6.8	1.7	0.0
			revised	18	0.0	41.5	31.3	19.2	6.5	1.5	0.0
		FS2-6C		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-6W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-7E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-7C		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-7W		<11	-	-	-	-	-	-	-
			revised	13	0.0	37.8	32.2	22.1	5.7	2.2	0.0
		FS2-8E		12	0.0	27.5	37.4	25.1	7.3	2.7	0.0
			revised	15	0.0	33.7	36.3	20.6	7.0	2.5	0.0
		FS2-8C		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-8W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-9E		19	0.0	38.9	31.9	20.9	5.9	2.4	0.0
			revised	27	0.0	54.1	24.3	15.0	4.7	1.9	0.0
		FS2-9C		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS2-9W		19	0.0	46.7	32.0	14.6	4.9	1.8	0.0
			revised	28	0.0	59.1	25.4	10.2	3.9	1.5	0.0
		FS2-10E		21	11.3	23.7	29.5	27.3	6.8	1.5	0.0
			revised	28	8.8	39.3	24.3	20.2	6.2	1.3	0.0
		FS2-10C		16	0.0	27.5	37.3	22.7	9.5	2.9	0.0
			revised	21	0.0	39.1	31.8	17.7	8.9	2.5	0.0
		FS2-10W		24	12.6	28.4	32.0	17.9	7.6	1.5	0.0
			revised	31	10.2	40.1	27.4	13.8	7.1	1.4	0.0
		FS2-11E		21	8.0	25.0	34.7	23.0	7.5	1.8	0.0
			revised	27	6.5	37.7	29.5	17.6	7.3	1.5	0.0
		FS2-11C		18	6.7	23.5	34.0	26.4	7.6	1.9	0.0
			revised	22	5.7	32.8	30.7	21.1	7.9	1.7	0.0
		FS2-11C BD		19	12.4	20.6	36.0	23.3	6.1	1.6	0.0
			revised	23	10.8	28.3	33.7	19.5	6.2	1.6	0.0
		FS2-11W		29	19.8	27.7	31.1	14.2	5.5	1.6	0.0
			revised	39	15.7	41.2	25.5	11.1	5.1	1.4	0.0
		FS2-12E		78	14.2	29.4	30.3	16.8	7.4	1.9	0.0
			revised	110	10.6	46.0	23.1	12.2	6.5	1.5	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/25/96	TIP SURVEY	FS2-12C		20	14.5	27.0	30.7	18.1	7.5	2.2	0.0
	(continued)		*revised*	26	11.5	40.1	26.2	13.4	7.0	1.8	0.0
		FS2-12W		17	11.2	24.3	34.3	21.0	6.8	2.5	0.0
			revised	21	9.3	35.0	29.7	17.0	6.8	2.3	0.0
		FS2-13E		12	0.0	37.7	36.1	13.6	9.1	3.5	0.0
			revised	17	0.0	53.2	27.7	8.6	7.5	2.9	0.0
		FS2-13C		13	0.0	39.9	37.2	16.2	4.9	1.9	0.0
			revised	19	0.0	55.3	27.8	11.4	4.0	1.5	0.0
		FS2-13W		66	8.2	10.1	16.3	17.2	15.1	21.2	12.0
			revised	74	7.6	17.0	15.8	14.9	15.9	18.4	10.4
		FS2-13W BD		28	20.3	21.4	32.6	17.7	6.2	1.9	0.0
			revised	35	16.9	32.9	28.4	14.0	6.2	1.7	0.0
		FS2-14E		42	23.6	32.8	28.2	11.0	3.4	0.9	0.0
			revised	61	16.8	51.1	21.3	7.4	2.6	0.8	0.0
		FS2-14C		29	21.9	28.0	26.7	17.4	4.5	1.6	0.0
			revised	40	16.7	44.1	21.4	12.6	4.0	1.3	0.0
		FS2-14W		27	20.8	25.3	31.3	14.9	6.4	1.3	0.0
			revised	36	16.4	38.9	25.7	11.5	6.4	1.1	0.0
		FS2-15E		47	0.0	35.2	37.5	19.1	6.4	1.8	0.0
			revised	72	0.0	53.9	27.4	12.2	5.1	1.5	0.0
		FS2-15C		29	22.3	24.1	30.9	16.6	5.0	1.0	0.0
			revised	38	17.7	37.8	26.3	12.7	4.6	0.9	0.0
		FS2-15W		20	15.6	27.4	30.0	19.1	6.1	1.7	0.0
			revised	27	11.9	42.9	24.0	14.0	5.8	1.4	0.0
		FS2-16E		39	0.0	39.0	33.0	17.9	7.9	2.1	0.0
			revised	62	0.0	57.6	23.5	11.4	5.9	1.7	0.0
		FS2-16E BD		50	20.5	33.3	29.2	12.5	3.9	0.6	0.0
			revised	72	14.8	49.9	22.6	8.9	3.4	0.5	0.0
		FS2-16C		37	25.1	27.7	25.4	16.3	4.5	1.1	0.0
			revised	50	19.5	42.6	20.8	12.0	4.2	1.0	0.0
		FS2-16W		30	21.5	23.7	28.3	20.1	4.9	1.5	0.0
			revised	39	17.3	37.1	23.8	15.7	4.9	1.3	0.0
		FS2-17E		53	26.0	28.6	28.2	13.2	3.4	0.6	0.0
			revised	77	18.8	46.8	21.8	9.5	2.8	0.5	0.0
		FS2-17C		46	24.1	26.8	27.4	17.0	3.8	0.9	0.0
			revised	61	18.9	41.5	22.5	12.6	3.7	0.8	0.0
		FS2-17W		35	23.1	25.6	27.1	17.6	5.4	1.2	0.0
			revised	48	17.6	41.3	22.0	12.9	5.1	1.0	0.0
		FS2-18E		48	33.9	26.4	23.1	13.1	3.0	0.6	0.0
			revised	67	25.4	43.5	18.3	9.6	2.7	0.5	0.0
		FS2-18C		37	21.5	25.3	28.5	18.1	5.1	1.4	0.0
			revised	50	16.6	40.6	23.3	13.4	4.7	1.4	0.0
		FS2-18W		41	24.9	23.3	28.4	17.2	5.1	1.1	0.0
			revised	53	19.9	37.7	23.6	13.2	4.6	1.0	0.0
		EQBL1-FS2W		54	0.0	3.4	2.6	5.7	21.8	39.6	26.8
			revised	56	0.0	3.5	2.3	5.0	24.4	40.2	24.6
10/29/96	PCRDMP	HRM 197.0		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		Plunge Pool		18	0.0	15.8	35.8	31.3	14.6	2.5	0.0
			revised	19	0.0	15.4	36.8	28.4	15.7	3.8	0.0
		HRM 194.2		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
10/29/96	TRANSECT	TIP-18 1		48	34.7	23.0	19.1	13.9	8.2	1.1	0.0
			revised	62	27.6	37.9	16.1	10.5	7.0	1.0	0.0
		TIP-18 3		38	31.4	24.3	22.7	16.1	4.3	1.3	0.0
			revised	50	25.2	37.7	19.4	12.2	4.1	1.2	0.0
		TIP-18 5		59	33.8	31.2	16.0	13.0	5.1	0.9	0.0
			revised	76	27.1	43.8	13.7	10.0	4.6	0.8	0.0
		HRM 188.5E		83	34.3	26.3	21.8	12.3	4.6	0.8	0.0
			revised	111	26.6	41.3	18.0	9.4	4.0	0.6	0.0
		HRM 188.5W1		93	26.9	23.4	27.0	16.4	5.6	0.8	0.0
			revised	123	21.3	38.2	22.4	12.4	5.1	0.6	0.0
		HRM 188.5W1 BD		94	25.5	26.3	25.6	16.3	5.5	0.8	0.0
			revised	125	20.1	40.8	21.3	12.2	5.0	0.7	0.0
		HRM 188.5W2		96	32.9	25.3	20.4	15.8	4.9	0.8	0.0
			revised	129	25.5	41.1	16.8	11.7	4.3	0.6	0.0
		HRM 188.5W3		90	29.6	22.9	22.8	18.9	5.3	0.6	0.0
			revised	118	23.7	37.2	19.1	14.6	4.9	0.5	0.0
		HRM 188.5W4		76	32.2	25.1	23.4	14.7	3.9	0.5	0.0
			revised	102	25.2	40.4	19.3	11.0	3.7	0.5	0.0
06/04/97	TIP SURVEY	FS3-2E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-2W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-3E		30	0.0	0.0	7.0	18.6	22.0	35.0	17.5
			revised	30	0.0	0.0	6.5	17.5	25.3	33.7	17.1
		FS3-3W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-5E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-5C		16	0.0	12.1	37.1	36.9	10.8	3.1	0.0
			revised	17	0.0	16.8	36.6	32.1	11.7	2.8	0.0
		FS3-5W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-7E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-7C		15	0.0	20.0	28.0	34.1	14.3	3.5	0.0
			revised	17	0.0	28.6	25.2	28.3	14.4	3.5	0.0
		FS3-7W		18	0.0	24.8	28.1	29.0	13.8	4.4	0.0
			revised	22	0.0	34.1	25.6	22.2	13.9	4.3	0.0
		FS3-9E		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-9C		12	0.0	13.5	26.5	36.3	20.6	3.1	0.0
			revised	14	0.0	19.7	24.7	31.8	20.5	3.3	0.0
		FS3-9W		48	33.9	27.7	16.4	12.3	7.7	2.1	0.0
			revised	64	26.5	43.4	13.4	8.6	6.6	1.6	0.0
		FS3-9W BD		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-10E		15	0.0	0.0	21.0	47.3	22.3	9.4	0.0
			revised	16	0.0	0.0	19.0	44.4	25.8	10.8	0.0
		FS3-10C		35	35.6	24.8	19.9	14.0	4.8	1.1	0.0
			revised	47	27.5	40.4	16.8	10.4	4.0	0.9	0.0
		FS3-10W		63	38.8	24.5	18.2	13.1	4.2	1.2	0.0
			revised	84	30.2	40.3	15.4	9.4	3.7	1.0	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
					Homolog Distribution (weight percent) (5)						
06/04/97	TIP SURVEY	FS3-11E		14	0.0	19.4	32.1	30.6	15.3	2.5	0.0
	(continued)		*revised*	17	0.0	27.1	30.5	24.8	15.2	2.5	0.0
		FS3-11C		16	0.0	28.0	28.9	24.7	13.9	4.6	0.0
			revised	22	0.0	42.1	23.7	18.2	12.0	4.0	0.0
		FS3-11W		59	34.9	26.6	19.4	14.0	4.3	0.8	0.0
			revised	79	27.0	42.2	16.3	10.0	3.8	0.7	0.0
		FS3-11A-E		12	0.0	22.5	33.5	31.1	10.1	2.9	0.0
			revised	14	0.0	31.5	30.5	25.2	10.1	2.7	0.0
		FS3-11A-C		18	21.4	23.8	28.6	17.1	6.6	2.5	0.0
			revised	24	17.2	38.6	23.7	12.8	5.7	2.0	0.0
		FS3-11A-W		47	39.6	22.8	19.1	11.8	5.1	1.7	0.0
			revised	59	32.9	35.3	16.5	9.1	4.8	1.5	0.0
		FS3-11B-E		152	52.1	19.9	14.5	9.9	2.9	0.7	0.0
			revised	198	41.5	35.4	12.2	7.6	2.7	0.6	0.0
		FS3-11B-C		17	0.0	29.5	31.7	27.6	8.8	2.4	0.0
			revised	22	0.0	43.2	26.5	20.2	8.0	2.0	0.0
		FS3-11B-W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-12E		198	48.2	23.0	16.5	9.3	2.7	0.4	0.0
			revised	267	37.4	39.5	13.6	6.9	2.4	0.3	0.0
		FS3-12C		16	0.0	32.9	28.3	29.4	7.4	2.0	0.0
			revised	22	0.0	48.3	22.6	21.0	6.5	1.6	0.0
		FS3-12W		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		FS3-12A-E		81	42.2	23.0	19.9	11.5	2.9	0.5	0.0
			revised	109	32.5	39.6	16.5	8.5	2.6	0.4	0.0
		FS3-12A-E BD		67	38.1	24.9	19.8	12.8	3.5	1.0	0.0
			revised	92	28.6	42.7	15.8	9.1	3.0	0.8	0.0
		FS3-12A-C		23	25.9	30.7	20.4	15.8	5.7	1.4	0.0
			revised	30	21.2	41.9	17.6	12.4	5.7	1.3	0.0
		FS3-12A-W		69	50.0	24.6	15.8	6.8	2.1	0.8	0.0
			revised	96	37.1	43.2	12.3	4.9	1.9	0.7	0.0
		FS3-13E		40	19.3	36.4	19.7	17.5	5.7	1.4	0.0
			revised	52	15.6	49.4	16.2	12.3	5.3	1.2	0.0
		FS3-13C		50	25.1	40.7	24.2	7.8	1.4	0.8	0.0
			revised	60	21.7	46.7	22.9	6.5	1.4	0.8	0.0
		FS3-13W		68	44.0	23.4	15.5	11.1	4.7	1.4	0.0
			revised	92	33.8	40.1	12.8	8.0	4.1	1.3	0.0
		FS3-13A-E		88	28.3	23.6	20.4	16.6	8.6	2.6	0.0
			revised	114	22.9	36.4	18.1	12.4	7.8	2.4	0.0
		FS3-13A-C		23	15.6	28.0	26.7	21.3	6.2	2.1	0.0
			revised	31	11.9	44.6	21.0	15.3	5.4	1.8	0.0
		FS3-13A-W		75	41.8	24.9	17.9	11.0	3.5	1.0	0.0
			revised	101	32.2	41.4	14.5	8.0	3.1	0.8	0.0
		FS3-14E		79	48.8	19.3	16.8	10.7	3.8	0.6	0.0
			revised	100	40.3	32.6	14.8	8.3	3.6	0.5	0.0
		FS3-14C		34	24.7	23.0	21.8	17.3	10.0	3.3	0.0
			revised	45	19.8	36.8	18.0	13.1	9.0	3.3	0.0
		FS3-14W		29	0.0	34.3	35.8	21.0	7.7	1.2	0.0
			revised	44	0.0	53.8	25.6	13.7	6.0	0.9	0.0
		FS3-14A-E		61	27.8	25.9	24.1	16.2	5.2	0.8	0.0
			revised	85	20.9	42.8	19.3	11.9	4.6	0.6	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
					Homolog Distribution (weight percent) (5)						
06/04/97	TIP SURVEY	FS3-14A-C		31	20.8	27.5	27.6	18.0	4.9	1.3	0.0
	(continued)		*revised*	42	16.1	43.2	21.9	13.3	4.6	1.0	0.0
		FS3-14A-W		37	26.1	29.4	24.6	12.9	5.8	1.2	0.0
			revised	51	19.6	45.9	19.5	9.1	4.9	1.1	0.0
		FS3-15E		78	37.8	26.3	22.0	10.4	3.1	0.5	0.0
			revised	111	27.7	44.9	17.0	7.2	2.8	0.4	0.0
		FS3-15C		32	31.4	24.6	20.4	16.2	6.2	1.1	0.0
			revised	43	24.3	40.6	16.5	11.9	5.7	1.0	0.0
		FS3-15W		36	27.1	29.2	19.8	17.4	5.0	1.5	0.0
			revised	49	20.7	43.8	17.3	12.4	4.6	1.2	0.0
		FS3-15A-E		79	33.5	25.1	23.1	13.6	4.1	0.7	0.0
			revised	110	25.1	42.8	18.2	9.8	3.5	0.6	0.0
		FS3-15A-C		51	33.9	26.8	21.3	13.0	4.4	0.6	0.0
			revised	69	25.8	42.9	17.1	9.7	4.0	0.5	0.0
		FS3-15A-W		36	25.3	27.4	25.2	16.0	4.5	1.5	0.0
			revised	50	19.2	44.2	19.4	11.9	4.1	1.3	0.0
		FS3-16E		67	34.5	26.5	21.4	13.5	3.5	0.6	0.0
			revised	93	25.8	44.4	16.7	9.6	3.0	0.6	0.0
		FS3-16C		49	37.0	26.8	20.6	11.2	3.4	0.9	0.0
			revised	67	28.0	43.1	16.9	8.3	3.0	0.8	0.0
		FS3-16W		40	25.9	27.6	24.7	15.9	4.8	1.0	0.0
			revised	57	19.1	45.3	19.4	11.3	4.1	0.8	0.0
		FS3-17E		55	26.2	27.6	25.0	15.3	4.7	1.2	0.0
			revised	78	19.3	45.9	19.2	10.9	3.9	0.9	0.0
		FS3-17C		52	33.3	22.4	22.1	13.7	6.4	2.1	0.0
			revised	69	26.2	37.9	18.3	10.1	5.7	1.8	0.0
		FS3-17W		60	26.8	29.0	25.9	13.4	3.9	1.1	0.0
			revised	84	19.8	45.7	20.6	9.7	3.3	1.0	0.0
		FS3-18E		54	30.1	24.8	25.4	15.0	3.7	1.0	0.0
			revised	76	22.4	43.0	19.7	10.8	3.2	0.9	0.0
		FS3-18C		61	37.0	24.6	21.5	12.3	3.6	0.9	0.0
			revised	84	28.0	42.2	17.1	9.0	3.1	0.7	0.0
		FS3-18C BD		57	33.3	29.4	20.1	12.4	4.1	0.7	0.0
			revised	81	24.8	46.5	15.6	9.1	3.5	0.6	0.0
		FS3-18W		59	35.3	27.5	15.5	14.3	5.3	2.1	0.0
			revised	81	27.0	45.3	11.4	10.3	4.5	1.5	0.0
		HRM 188.5W		82	32.5	24.5	24.5	13.5	4.1	0.9	0.0
			revised	113	24.7	40.9	20.0	10.0	3.7	0.8	0.0
06/16/97	PCRDMP	HRM 197.0		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		Plunge Pool		12	0.0	18.8	29.3	29.1	17.8	5.0	0.0
			revised	15	0.0	30.2	25.6	23.0	16.7	4.5	0.0
		HR20 from East		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		HR50 from East		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		HRM 194.2		13	0.0	18.6	20.9	35.1	16.9	8.5	0.0
			revised	15	0.0	28.0	18.4	28.6	16.7	8.2	0.0
		HRM 194.2 BD		13	0.0	18.8	24.1	34.1	15.2	7.8	0.0
			revised	15	0.0	28.2	21.2	28.1	15.3	7.2	0.0
		HRM 188.5W		302	30.3	24.6	27.6	13.4	3.2	0.8	0.0
			revised	413	23.1	40.8	22.4	10.1	2.9	0.6	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
06/17/97	TIP SURVEY	FS4-2E		30	0.0	18.3	32.9	34.6	11.7	2.5	0.0
			revised	34	0.0	23.7	31.3	30.2	12.3	2.5	0.0
		FS4-2W		25	0.0	17.9	35.1	33.0	10.7	3.3	0.0
			revised	29	0.0	27.5	32.4	26.4	10.6	3.1	0.0
		FS4-3E		45	0.0	15.0	41.5	38.8	4.7	0.0	0.0
			revised	49	0.0	17.5	42.0	34.9	5.5	0.0	0.0
		FS4-3W		26	0.0	14.8	31.4	28.5	11.4	9.5	4.5
			revised	29	0.0	20.4	31.3	24.0	12.2	8.3	3.8
		FS4-5E		57	16.1	20.9	28.9	28.0	5.1	1.1	0.0
			revised	72	13.4	32.7	25.8	22.3	4.9	1.0	0.0
		FS4-5C		28	0.0	19.1	39.2	34.3	7.3	0.0	0.0
			revised	33	0.0	25.5	38.0	28.6	7.9	0.0	0.0
		FS4-5W		30	0.0	18.2	38.0	32.2	9.3	2.3	0.0
			revised	34	0.0	24.2	36.1	27.5	9.7	2.5	0.0
		FS4-7E		32	0.0	17.4	34.7	35.5	10.7	1.8	0.0
			revised	36	0.0	25.4	32.2	29.8	10.7	1.8	0.0
		FS4-7C		30	0.0	21.4	35.1	33.2	8.6	1.6	0.0
			revised	37	0.0	32.8	31.4	26.2	8.2	1.5	0.0
		FS4-7W		84	8.6	13.0	24.6	23.4	11.5	14.0	4.8
			revised	91	8.3	17.0	25.0	20.8	12.5	12.3	4.2
		FS4-9E		68	26.9	24.7	23.0	18.6	5.4	1.5	0.0
			revised	88	21.6	38.8	19.4	14.1	4.9	1.2	0.0
		FS4-9C		44	19.2	18.9	28.5	25.9	6.5	1.0	0.0
			revised	52	16.8	27.0	27.2	21.3	6.6	1.1	0.0
		FS4-9W		160	28.6	15.3	17.4	14.3	8.5	11.2	4.8
			revised	197	24.2	28.3	15.8	11.2	8.0	8.8	3.8
		FS4-9W BD		110	31.3	21.5	23.0	19.6	4.0	0.7	0.0
			revised	145	24.8	37.2	19.5	14.3	3.6	0.6	0.0
		FS4-10E		63	17.6	19.3	28.7	26.5	6.8	1.0	0.0
			revised	77	15.1	30.7	25.7	21.2	6.4	1.0	0.0
		FS4-10C		53	15.5	22.9	30.8	23.0	6.6	1.3	0.0
			revised	68	12.6	34.9	27.6	17.5	6.2	1.3	0.0
		FS4-10W		74	24.8	22.6	27.0	19.7	5.1	0.8	0.0
			revised	95	20.1	35.9	23.2	15.2	4.9	0.7	0.0
		FS4-11E		58	15.6	23.5	30.3	24.1	5.3	1.3	0.0
			revised	74	12.7	36.3	26.4	18.5	4.9	1.2	0.0
		FS4-11C		41	0.0	19.4	37.4	31.8	9.3	2.1	0.0
			revised	50	0.0	29.3	34.5	25.3	9.0	1.9	0.0
		FS4-11W		80	27.0	23.7	25.9	17.9	4.8	0.6	0.0
			revised	105	21.4	38.5	21.6	13.5	4.4	0.5	0.0
		FS4-11A-E		40	0.0	23.0	35.7	30.7	8.5	2.1	0.0
			revised	50	0.0	34.1	31.5	24.3	8.2	1.9	0.0
		FS4-11A-C		24	0.0	4.8	34.4	45.5	13.2	2.1	0.0
			revised	25	0.0	2.7	36.5	43.1	15.2	2.6	0.0
		FS4-11A-W		62	19.5	25.3	29.0	20.2	5.2	0.8	0.0
			revised	81	15.5	39.3	24.5	15.3	4.7	0.8	0.0
		FS4-11B-E		100	32.4	25.5	22.4	15.4	3.6	0.8	0.0
			revised	137	24.7	42.0	18.2	11.2	3.2	0.7	0.0
		FS4-11B-C		52	14.3	24.7	29.6	23.0	7.2	1.2	0.0
			revised	67	11.5	38.7	24.6	17.8	6.5	1.1	0.0
		FS4-11B-W		83	26.7	22.6	27.9	16.9	4.7	1.2	0.0
			revised	110	21.2	36.4	24.4	12.8	4.3	1.0	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
06/17/97	TIP SURVEY	FS4-12E		92	27.9	26.8	23.5	17.3	3.9	0.7	0.0
	(continued)		*revised*	126	21.1	44.2	18.5	12.3	3.4	0.6	0.0
		FS4-12C		50	14.5	20.8	33.1	24.2	6.0	1.3	0.0
			revised	65	11.6	34.8	29.0	18.2	5.3	1.1	0.0
		FS4-12W		87	31.9	23.6	23.5	16.6	3.8	0.7	0.0
			revised	116	24.8	39.0	20.1	12.2	3.4	0.6	0.0
		FS4-12A-E		164	37.7	24.6	21.0	12.8	3.5	0.5	0.0
			revised	224	28.7	41.7	17.0	9.1	3.1	0.5	0.0
		FS4-12A-E BD		156	33.0	25.5	23.4	14.0	3.4	0.8	0.0
			revised	214	25.2	42.2	18.8	10.2	3.1	0.6	0.0
		FS4-12A-C		53	14.6	21.5	30.9	24.8	6.9	1.3	0.0
			revised	68	12.0	34.2	27.0	19.2	6.5	1.2	0.0
		FS4-12A-W		77	24.8	23.1	27.5	17.6	5.8	1.2	0.0
			revised	100	19.9	37.3	23.3	13.2	5.3	1.1	0.0
		FS4-13E		33	27.2	23.7	23.7	18.4	6.3	0.7	0.0
			revised	45	20.7	40.2	19.5	13.4	5.7	0.6	0.0
		FS4-13C		68	21.5	23.4	29.6	19.4	5.1	1.0	0.0
			revised	89	17.4	37.1	25.1	14.9	4.7	0.9	0.0
		FS4-13W		73	26.5	22.9	25.0	20.1	4.7	0.9	0.0
			revised	96	21.0	38.0	21.0	15.0	4.1	0.8	0.0
		FS4-13A-E		109	27.9	26.3	25.5	14.6	4.9	0.8	0.0
			revised	154	20.7	43.9	20.2	10.4	4.2	0.6	0.0
		FS4-13A-C		59	17.2	22.2	27.3	24.9	6.6	1.9	0.0
			revised	75	14.1	35.5	23.6	19.1	6.1	1.7	0.0
		FS4-13A-W		120	30.0	23.3	22.3	14.4	4.1	3.4	2.6
			revised	156	24.1	37.7	19.2	11.1	3.7	2.4	1.8
		FS4-14E		95	27.1	25.5	25.5	16.4	4.5	0.9	0.0
			revised	133	20.4	42.9	20.3	11.7	3.9	0.8	0.0
		FS4-14C		82	16.7	22.9	28.7	19.9	6.6	4.8	0.4
			revised	106	13.4	37.5	24.4	15.0	6.1	3.4	0.3
		FS4-14W		97	27.1	21.5	24.7	18.0	4.7	3.2	0.8
			revised	126	21.8	36.4	21.0	13.7	4.3	2.4	0.6
		FS4-14A-E		107	29.2	22.4	25.5	16.3	5.3	1.3	0.0
			revised	144	22.7	38.5	21.0	11.9	4.8	1.2	0.0
		FS4-14A-C		65	16.3	23.1	30.4	22.1	6.8	1.4	0.0
			revised	86	12.8	37.9	25.5	16.5	6.2	1.2	0.0
		FS4-14A-W		102	28.3	22.8	25.2	17.7	4.7	1.3	0.0
			revised	134	22.5	37.3	21.6	13.3	4.3	1.1	0.0
		FS4-15E		141	32.4	24.6	24.6	14.0	3.8	0.6	0.0
			revised	191	25.0	40.6	20.1	10.3	3.5	0.5	0.0
		FS4-15C		91	13.2	18.1	22.6	19.1	10.4	12.5	4.1
			revised	113	11.1	31.1	20.2	15.1	9.7	9.8	3.1
		FS4-15W		102	21.7	23.2	26.5	17.4	5.1	5.0	1.2
			revised	134	17.2	37.9	22.6	13.2	4.6	3.7	0.8
		FS4-15A-E		122	25.4	25.4	27.5	16.6	4.3	0.8	0.0
			revised	168	19.2	42.4	21.9	12.0	3.8	0.7	0.0
		FS4-15A-C		85	23.0	24.1	28.4	19.5	4.4	0.6	0.0
			revised	112	18.1	38.6	23.8	14.9	4.1	0.5	0.0
		FS4-15A-W		104	25.7	21.3	24.6	16.2	5.5	4.8	1.9
			revised	133	21.1	34.7	21.5	12.7	5.1	3.6	1.4
		FS4-16E		131	25.5	25.4	27.5	16.4	4.4	1.0	0.0
			revised	179	19.5	41.9	21.9	12.0	4.0	0.8	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)		Total PCBs (4) (ng/l)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
					Homolog Distribution (weight percent) (5)						
06/17/97	TIP SURVEY	FS4-16C		92	25.1	22.2	28.9	18.8	4.3	0.7	0.0
	(continued)		*revised*	121	19.9	36.7	24.7	14.2	3.9	0.6	0.0
		FS4-16W		88	21.5	26.2	27.6	19.0	4.6	1.1	0.0
			revised	120	16.4	42.8	22.1	13.8	4.0	0.9	0.0
		FS4-17E		142	32.0	24.6	25.0	14.4	3.5	0.6	0.0
			revised	194	24.4	41.4	20.0	10.6	3.2	0.4	0.0
		FS4-17C		78	27.4	22.8	26.1	18.0	4.9	0.8	0.0
			revised	102	21.8	37.8	21.6	13.7	4.5	0.7	0.0
		FS4-17W		107	28.1	22.7	26.3	15.5	4.2	2.8	0.3
			revised	141	22.3	37.8	22.1	11.8	3.8	1.9	0.2
		FS4-18E		111	24.1	26.0	29.6	15.5	4.1	0.7	0.0
			revised	153	18.2	42.5	23.6	11.4	3.7	0.6	0.0
		FS4-18C		70	15.5	23.2	31.4	22.4	6.4	1.1	0.0
			revised	95	11.9	39.9	25.3	16.4	5.7	0.9	0.0
		FS4-18C BD		86	20.4	24.0	29.5	19.8	5.6	0.8	0.0
			revised	116	15.8	39.6	24.3	14.6	5.0	0.7	0.0
		FS4-18W		102	21.2	22.7	27.7	18.0	6.0	3.3	1.2
			revised	136	16.6	38.5	23.1	13.3	5.2	2.4	0.9
		HRM 188.5W		204	30.6	23.2	26.7	14.8	3.9	0.9	0.0
			revised	272	23.9	38.5	22.1	11.2	3.5	0.7	0.0
06/30/97	PCRDMP	HRM 197.0		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		Plunge Pool		74	0.0	7.2	27.5	51.0	11.3	3.0	0.0
			revised	76	0.0	10.1	28.3	45.5	13.2	2.9	0.0
		HR20 from East		27	0.0	18.4	27.3	32.5	16.2	5.6	0.0
			revised	30	0.0	22.1	25.6	28.8	17.8	5.7	0.0
		HR50 from East		18	0.0	24.6	28.4	30.1	13.0	4.0	0.0
			revised	21	0.0	32.2	24.7	25.2	13.8	4.1	0.0
		HRM 194.2		15	0.0	22.8	26.1	31.1	14.2	5.9	0.0
			revised	18	0.0	32.0	23.4	25.3	13.6	5.7	0.0
		TIP-18C		125	27.0	26.2	26.4	15.0	4.6	0.8	0.0
			revised	175	20.2	43.2	21.0	10.9	4.1	0.7	0.0
		HRM 188.5W		197	27.5	25.4	27.7	14.4	3.9	1.1	0.0
			revised	271	20.9	41.6	22.5	10.7	3.4	0.9	0.0
		HRM 188.5W BD		194	26.3	25.1	28.5	15.1	4.1	0.9	0.0
			revised	267	20.0	41.4	23.1	11.2	3.6	0.8	0.0
07/14/97	PCRDMP	HRM 197.0		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		Plunge Pool		13	0.0	28.7	28.9	27.6	11.7	3.2	0.0
			revised	17	0.0	35.9	28.6	22.1	10.5	3.0	0.0
		HR20 from East		19	0.0	14.9	26.6	42.7	13.2	2.7	0.0
			revised	22	0.0	24.5	24.2	34.8	13.9	2.6	0.0
		HR50 from East		<11	-	-	-	-	-	-	-
			revised	<11	-	-	-	-	-	-	-
		HRM 194.2		<11	-	-	-	-	-	-	-
			revised	14	0.0	40.6	12.8	25.1	14.5	7.1	0.0
		TIP-18C		66	8.8	22.9	36.6	24.2	6.4	1.1	0.0
			revised	92	6.6	40.2	29.7	17.1	5.6	0.9	0.0
		HRM 188.5W		132	14.3	26.9	35.6	17.5	4.8	0.9	0.0
			revised	190	10.4	44.6	27.8	12.5	4.1	0.6	0.0
		HRM 188.5W BD		134	15.0	26.9	35.0	17.7	4.5	0.9	0.0
			revised	189	11.1	43.9	27.6	12.9	3.9	0.6	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)	Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
07/28/97	PCRDMP	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		Plunge Pool	13	0.0	23.8	34.0	26.6	12.2	3.3	0.0
		revised	15	0.0	29.3	32.3	22.5	12.8	3.3	0.0
		HR20 from East	34	0.0	7.0	18.7	25.7	16.8	23.3	8.6
		revised	36	0.0	11.3	18.5	23.9	17.8	21.0	7.6
		HR50 from East	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2	15	0.0	18.8	26.5	33.8	17.0	4.0	0.0
		revised	19	0.0	31.3	23.2	25.8	16.0	3.7	0.0
		TIP-18C	48	5.6	26.3	35.1	24.9	6.6	1.5	0.0
		revised	67	4.2	42.9	27.8	18.1	5.7	1.3	0.0
		HRM 188.5W	82	11.7	25.7	37.1	18.9	5.6	1.0	0.0
		revised	115	8.7	42.3	29.4	13.8	5.0	0.8	0.0
		HRM 188.5W BD	82	10.0	25.6	38.2	20.1	5.1	0.9	0.0
		revised	116	7.4	42.4	30.2	14.7	4.5	0.7	0.0
08/13/97	TID MONITOR	TIP-18C	37	0.0	27.9	34.5	26.6	9.2	1.8	0.0
		revised	50	0.0	42.7	28.4	19.5	8.0	1.5	0.0
		TID-EAST	59	12.8	26.0	31.1	20.6	7.3	2.1	0.0
		revised	81	9.7	41.5	25.2	15.2	6.5	1.9	0.0
		HRM 188.5W	68	13.3	23.7	34.3	20.2	7.9	0.6	0.0
		revised	90	10.4	37.6	28.7	15.7	7.0	0.5	0.0
		TID-PRE	44	14.8	24.3	28.8	22.5	7.7	1.9	0.0
		revised	58	11.8	38.2	24.1	17.0	7.2	1.7	0.0
		TID-PRW	44	14.8	23.0	28.4	23.3	8.8	1.8	0.0
		revised	58	11.7	37.9	23.7	17.7	7.6	1.5	0.0
		TID-PRW BD	42	6.4	26.7	35.2	22.8	7.0	2.0	0.0
		revised	57	4.9	41.3	28.9	17.0	6.2	1.7	0.0
		Fort Miller	57	9.5	26.2	34.5	21.3	7.1	1.4	0.0
		revised	76	7.4	39.7	29.1	16.4	6.5	1.0	0.0
		Schuylerville	48	10.6	26.8	33.4	22.0	6.3	0.9	0.0
08/14/97		*revised*	66	8.0	42.6	27.0	16.3	5.5	0.7	0.0
08/14/97	PCRDMP	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		Plunge Pool	12	0.0	20.7	33.8	27.0	14.5	4.1	0.0
		revised	15	0.0	26.8	31.5	23.0	14.5	4.2	0.0
		HR20 from East	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HR50 from East	<11	-	-	-	-	-	-	-
		revised	12	0.0	41.7	24.0	18.5	11.4	4.4	0.0
		HRM 194.2	12	0.0	21.6	31.1	29.8	13.3	4.2	0.0
		revised	15	0.0	30.2	28.7	23.6	13.4	4.1	0.0
		HRM 188.5W	67	11.1	26.7	34.8	20.4	6.2	0.9	0.0
		revised	93	8.3	42.7	28.0	15.0	5.4	0.7	0.0
		HRM 188.5W BD	68	11.9	25.3	35.5	19.8	6.3	1.2	0.0
		revised	93	9.0	40.5	29.1	14.8	5.6	0.9	0.0
09/09/97	TID MONITOR	TIP-18C	78	10.5	51.5	17.9	12.4	6.5	1.3	0.0
		revised	64	12.8	40.4	22.3	15.1	7.9	1.5	0.0
		HRM 188.5E	119	16.1	52.1	16.9	10.1	4.2	0.7	0.0
		revised	98	19.6	41.0	21.2	12.4	5.1	0.8	0.0
		HRM 188.5W	129	16.1	49.0	19.0	9.8	5.4	0.7	0.0
		revised	107	19.5	38.0	23.5	11.8	6.5	0.8	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)	Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/09/97	TID MONITOR	TID-PRE 1	86	12.3	52.1	18.4	10.8	5.4	1.0	0.0
	(continued)	*revised*	70	15.0	40.9	23.2	13.1	6.6	1.2	0.0
		TID-PRE 2	81	8.9	52.1	18.9	11.8	7.0	1.3	0.0
		revised	66	10.9	40.8	23.7	14.5	8.6	1.5	0.0
		TID-PRE 3	76	11.1	49.7	18.1	13.1	6.6	1.5	0.0
		revised	63	13.4	38.7	22.4	15.8	7.9	1.8	0.0
		TID-PRW 1	84	11.1	51.2	19.8	10.4	6.4	1.1	0.0
		revised	69	13.6	40.0	24.7	12.7	7.8	1.3	0.0
		TID-PRW 2	74	8.1	54.9	19.1	10.9	5.8	1.2	0.0
		revised	60	10.0	43.7	24.3	13.5	7.2	1.5	0.0
		TID-PRW 3	76	12.6	48.4	19.0	12.3	6.3	1.4	0.0
		revised	64	15.1	37.5	23.6	14.7	7.5	1.6	0.0
09/09/97	TID MONITOR	TIP-18C	84	15.2	48.5	17.3	11.0	6.8	1.3	0.0
		revised	70	18.2	37.5	21.3	13.3	8.2	1.5	0.0
		TIP-18C BD	78	13.5	50.3	17.8	11.4	5.9	1.1	0.0
		revised	64	16.3	39.2	22.2	13.8	7.2	1.4	0.0
		HRM 188.5E	102	9.6	52.9	19.4	10.8	6.3	1.1	0.0
		revised	84	11.8	41.7	24.4	13.2	7.7	1.3	0.0
		HRM 188.5W	110	13.2	51.7	18.7	10.0	5.5	0.9	0.0
		revised	90	16.1	40.4	23.5	12.2	6.8	1.1	0.0
		TID-PRE 1	83	8.5	50.1	19.7	12.1	7.9	1.6	0.0
		revised	69	10.3	38.9	24.6	14.7	9.6	1.9	0.0
		TID-PRE 2	86	14.3	51.4	16.6	9.5	7.0	1.3	0.0
		revised	70	17.4	40.2	20.7	11.6	8.5	1.6	0.0
		TID-PRE 3	77	6.9	56.1	19.3	10.4	6.0	1.4	0.0
		revised	62	8.5	44.9	24.6	12.8	7.4	1.7	0.0
		TID-PRW 1	68	5.4	53.1	21.2	13.4	5.6	1.3	0.0
		revised	55	6.6	41.9	26.7	16.4	6.8	1.6	0.0
		TID-PRW 2	85	8.1	49.6	20.3	12.5	7.9	1.6	0.0
		revised	70	9.8	38.6	25.2	15.1	9.5	1.9	0.0
		TID-PRW 3	77	12.4	49.3	18.7	11.8	6.5	1.4	0.0
		revised	64	14.9	38.3	23.2	14.1	7.9	1.7	0.0
09/10/97	TID MONITOR	Plunge Pool	24	0.0	33.9	17.9	24.9	19.1	4.3	0.0
		revised	21	0.0	24.9	20.9	28.0	21.5	4.8	0.0
		HR20 from East	16	0.0	49.2	19.5	16.1	12.3	2.9	0.0
		revised	13	0.0	37.1	24.8	19.6	15.0	3.6	0.0
		HR50 from East	17	0.0	49.1	16.3	15.7	14.7	4.2	0.0
		revised	14	0.0	37.9	20.5	18.9	17.7	5.0	0.0
		TIP-18C	64	6.0	53.7	19.9	11.8	7.0	1.6	0.0
		revised	52	7.3	42.5	25.2	14.5	8.5	2.0	0.0
		HRM 188.5E	105	10.2	53.2	18.2	11.1	6.1	1.2	0.0
		revised	86	12.6	42.0	22.9	13.6	7.4	1.5	0.0
		HRM 188.5W	111	8.3	45.9	19.9	13.3	9.9	2.8	0.0
		revised	94	9.9	35.0	24.3	15.8	11.7	3.3	0.0
		TID-PRE 1	72	7.4	49.7	19.4	12.9	9.1	1.5	0.0
		revised	59	9.0	38.6	24.1	15.6	11.0	1.8	0.0
		TID-PRE 2	74	9.3	47.5	21.7	12.8	7.4	1.2	0.0
		revised	62	11.1	36.6	26.7	15.3	8.9	1.5	0.0
		TID-PRE 3	73	11.1	50.2	19.2	11.9	6.2	1.4	0.0
		revised	60	13.5	39.0	23.8	14.5	7.6	1.7	0.0

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)	Total PCBs (4) (ng/l)	Homolog Distribution (weight percent) (5) Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
09/10/97	TID MONITOR	TID-PRW 1	80	6.8	49.3	23.4	11.4	7.8	1.4	0.0
	(continued)	*revised*	67	8.1	38.2	29.0	13.7	9.4	1.7	0.0
		TID-PRW 2	70	6.8	55.4	19.2	11.7	5.5	1.4	0.0
		revised	56	8.5	44.1	24.3	14.6	6.8	1.8	0.0
		TID-PRW 3	67	6.3	50.7	21.0	12.6	7.6	1.7	0.0
		revised	55	7.6	39.5	26.2	15.3	9.3	2.1	0.0
		TID-PRW 3 BD	68	8.0	50.1	20.3	12.9	7.3	1.4	0.0
		revised	56	9.7	38.8	25.3	15.6	8.9	1.7	0.0
10/01/97	TID MONITOR	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		Plunge Pool	13	0.0	29.8	19.2	24.4	20.6	6.0	0.0
		revised	11	0.0	20.5	22.2	27.4	23.2	6.7	0.0
		HR20 from East	17	0.0	20.0	16.7	24.8	28.8	9.7	0.0
		revised	16	0.0	13.4	18.7	26.7	30.9	10.4	0.0
		HR50 from East	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2 BD	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		TIP-18C	80	15.3	55.4	14.7	8.1	5.4	1.2	0.0
		revised	65	18.9	44.2	18.7	10.1	6.6	1.5	0.0
		TIP-18SW	285	10.6	35.4	12.5	9.1	10.5	15.1	6.8
		revised	250	12.1	25.9	14.6	10.4	12.0	17.2	7.8
		TIP-18SW Arch	186	9.2	52.2	20.5	10.2	5.2	2.4	0.3
		revised	152	11.2	41.1	25.6	12.4	6.3	3.0	0.4
		HRM 188.5W	126	16.8	55.9	15.3	7.4	3.8	0.8	0.0
		revised	101	20.9	44.7	19.5	9.2	4.7	0.9	0.0
		HRM 188.5IW	74	15.6	56.0	14.2	8.3	4.7	1.2	0.0
		revised	60	19.4	44.8	18.2	10.3	5.8	1.5	0.0
		HRM 188.5IW BD	69	17.1	55.9	14.2	7.6	4.0	1.2	0.0
		revised	55	21.4	44.5	18.0	9.6	5.1	1.5	0.0
		TID-PRW 2	68	12.3	59.1	14.2	8.4	4.9	1.1	0.0
		revised	53	15.5	47.8	18.4	10.6	6.2	1.4	0.0
		Schuylerville	85	8.3	55.9	19.2	10.5	5.1	1.0	0.0
		revised	68	10.4	44.4	24.5	13.0	6.4	1.2	0.0
10/09/97	TID MONITOR	TIP-18C	91	17.1	53.8	13.4	8.8	4.7	2.3	0.0
		revised	74	21.1	42.6	17.0	10.8	5.8	2.8	0.0
		TIP-18SW	158	23.8	53.9	13.0	5.7	2.8	0.8	0.0
		revised	128	29.4	42.6	16.5	7.1	3.5	1.0	0.0
		TIP-18SW BD	186	26.3	50.8	12.8	6.5	2.8	0.7	0.0
		revised	153	32.0	39.8	16.0	8.0	3.4	0.9	0.0
		HRM 188.5IW	89	16.1	50.1	12.1	9.5	8.9	3.4	0.0
		revised	74	19.4	39.3	15.1	11.4	10.7	4.1	0.0
		HRM 188.5W	111	21.6	55.6	12.5	6.1	3.1	1.1	0.0
		revised	89	26.9	44.3	15.9	7.7	3.8	1.4	0.0
		TID-PRW 2	84	19.0	55.7	14.0	7.0	3.2	1.0	0.0
		revised	67	23.7	44.3	18.0	8.8	4.0	1.2	0.0
10/10/97	TID MONITOR	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-

Table G-1. Hudson River water column PCB monitoring results: comparison of laboratory data and results corrected for analytical bias (1)

Date Collected	Sampling Program (2)	Location (3)	Total PCBs (4) (ng/l)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta
				Homolog Distribution (weight percent) (5)						
10/10/97	TID MONITOR	Plunge Pool	73	0.0	8.6	14.5	21.2	31.5	22.0	2.3
	(continued)	*revised*	71	0.0	5.6	15.5	21.7	32.3	22.6	2.3
		HR20 from East	32	0.0	3.3	26.4	40.3	26.3	3.7	0.0
		revised	32	0.0	2.0	27.3	40.5	26.4	3.7	0.0
		HR50 from East	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		HRM 194.2 BD	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		Schuylerville	106	15.0	54.2	16.2	8.9	4.4	1.3	0.0
		revised	86	18.5	42.9	20.6	11.0	5.5	1.6	0.0
10/16/97	TID MONITOR	HRM 197.0	<11	-	-	-	-	-	-	-
		revised	<11	-	-	-	-	-	-	-
		Plunge Pool	20	0.0	12.5	26.2	28.4	26.5	6.5	0.0
		revised	19	0.0	6.5	28.5	30.1	28.1	6.9	0.0
		HR20 from East	23	0.0	43.9	23.6	16.5	12.3	3.7	0.0
		revised	19	0.0	31.1	29.5	20.0	15.0	4.4	0.0
		HR50 from East	21	0.0	49.8	24.7	13.5	8.8	3.3	0.0
		revised	17	0.0	36.3	31.7	16.9	11.0	4.1	0.0
		HRM 194.2	14	0.0	19.7	24.2	22.6	25.0	8.5	0.0
		revised	12	0.0	10.3	27.5	25.0	27.7	9.5	0.0
		HRM 194.2 BD	12	0.0	24.5	28.7	22.2	18.5	6.0	0.0
		revised	<11	-	-	-	-	-	-	-
		TIP-18C	101	20.8	50.3	14.5	7.7	5.2	1.5	0.0
		revised	83	25.3	39.1	18.2	9.4	6.3	1.9	0.0
		TIP-18SW	178	17.9	56.0	14.1	7.1	3.4	1.6	0.0
		revised	143	22.3	44.6	18.0	8.8	4.3	2.0	0.0
		HRM 188.5W	118	18.7	58.7	13.5	5.9	2.4	0.7	0.0
		revised	93	23.7	47.3	17.6	7.5	3.0	0.9	0.0
		HRM 188.5IW	101	17.6	55.6	14.1	6.8	4.6	1.4	0.0
		revised	81	22.1	44.0	18.0	8.5	5.7	1.7	0.0
		TID-PRW 2	107	18.3	54.4	14.3	7.4	4.4	1.2	0.0
		revised	86	22.8	42.9	18.2	9.2	5.5	1.5	0.0
		TID-PRW 2 BD	111	18.1	55.5	13.6	7.3	4.2	1.3	0.0
		revised	89	22.6	44.1	17.4	9.1	5.2	1.6	0.0
		Schuylerville	136	15.9	57.9	14.5	6.7	3.9	1.1	0.0
		revised	108	20.0	46.6	18.7	8.4	4.8	1.4	0.0

Notes:

(1) Samples analyzed by capillary column using NEA Method 608CAP. "Revised" indicates NEA Method 608CAP data has been corrected 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). Data has not been validated.

(2) Sampling programs: PCRDMP = Post-Construction Remnant Deposit Monitoring Program; TRANSECT = Thompson Island Pool Transect Sampling; TIP SURVEY = Thompson Island Pool Time of Travel Survey; TID MONITOR = Thompson Island Dam evaluation.

(3) HRM = Approximate Hudson River mile; HRM 0.0 is located at the Battery in New York City. Samples from location HRM 194.2 are a composite of west and east channels; Plunge Pool, HR20 from East and HR50 from East samples were collected at the base of Bakers Falls (approximate HRM 196.9); sample locations for TIP surveys and TID monitoring are detailed in the body of this report.

(4) Homolog groups octa-, nona- and deca-chlorinated biphenyls were not detected greater than 0.02%. Homolog distributions for samples with total PCB concentrations less than the method detection limit (<11 ng/l) are not presented.

Key:

BD = Blind Duplicate - a field PCB duplicate sample submitted to the laboratory without identification of sampling location.

Source: O'Brien & Gere Engineers, Inc.

Field logs

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey, Event 1

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
HRM 197.0	9/24/96	5:00	✓	✓	6'		
FS1-1E	↓	~~9:55~~ 7:30				Time of Travel @ 4,000 cfs	Sample collected by R. Rybinski & W. Dunn
FS1-2E		7:36					" "
FS1-3E		7:55	✓	✓	6'		Channel depth south of Bridge ~15'
FS1-4E		8:10	✓	✓	10'		
FS1-5E		8:23	✓	✓	13'		
FS1-6E		8:40	✓	✓	6-11'		
FS1-7E		8:50	✓	✓	11'		
FS1-8E		9:37	✓	✓	8'		
FS1-9E	↓	10:21	✓	✓	13'		Level 21.69 @ 10:10 - 4,400
FS1-E-EQBL1	9/23/96	10:35					

310762

Water temperature: 16°C
Weather data:
Air temperature 10-12°C @ 9:40
Wind: Calm
Precipitation: none

Notes:
Foggy then clearing ~ 9:30

Sampled by:
Team Leader: W. Ayling
Crew #1: M. Murphy
Crew #2: K. Thurston

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey, Event 1

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS1-10E	9/24/96	10:00	✓	✓	5'		
FS1-11E	↓	11:31	✓	✓	11'		level 21.87 @ 11:16 5064
FS1-12E		12:27	✓	✓	12'	Time of travel @ 4500 cfs	
FS1-12E-DUP		12:27	✓	✓	12'		COC: FS1-E-DUP
FS1-13E		13:18	✓	✓	13'		
FS1-14E		14:20	✓	✓	8'		level 21.65 @ 1355
FS1-15E		15:41	✓	✓	8'		
FS1-16E		16:29	✓	✓	17'		boat passes during sampling
FS1-17E		17:13	✓	✓	15'		
FS1-17E-MS		17:17	✓	✓	15'		
FS1-18E	↓	18:16	✓	✓	10'		Sample at Transect Bouy 6
FS1-E-EQBL2	9/24/96	20:10					

Water temperature: 17°C @ 12:10
Weather data:
Air temperature ____
Wind: ____
Precipitation: ____

Notes:

Sampled by:
Team Leader: W. Ayling
Crew #1: K. Thurston
Crew #2: ____

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

310763

FILE: 612.205

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type PCB aliquot	Sample Type TSS aliquot	Approximate Water Depth		Comments
FS1-5C	9/24	0821	✓	✓	14.2	sample @ 2,7 + 12'	dense fog - waiting for E boat
FS1-6C	9/24	0835	✓	✓	16.0	3.8 + 13'	~
FS1-7C	9/24	0850	✓	✓	14.3	2,7 + 12'	fog burning off
FS1-7C-MS	↓	↓	✓		↓	↓	matrix spike
FS1-8C	9/24	0937	✓	✓	13.05	2.6 + 11'	~
FS1-9C	9/24	1021	✓	✓	14.0	2,7 + 12'	clear skies - fog gone
1W	9/24	0728	✓	✓	2.5	@ approx 1 ft	1W/1E/2E bottle immersion grabs
1E	9/24	0730	✓	✓	2.7	↓	~
2E	9/24	0736	✓	✓	2.5	↓	sample 50' below outfall to insure mixing
FS1-C-EQBL1	9/23	2300	✓	✓	N/A	~	@ motel

Water temperature: ______

Weather data:

Air temperature mid 40's @ 0730

Wind: Calm

Precipitation: None

Notes: @ 0730 - dense fog
@ 1020 - clear sky - warming nicely

Sampled by:

Team Leader: ~

Crew #1: W.M. Dunne

Crew #2: D. Rybinski

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

310764

FILE: 612.205

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS1-10C	9/24	1058	✓	✓	15.0	2, 7 + 12'	
FS1-11C	9/24	1131	✓	✓	14.0	2, 7 + 12'	
FS1-12C	9/24	1227	✓	✓	16.0	2, 8 + 14'	Moving times up to the 4500 CFS schedule
FS1-13C	9/24	1318	✓	✓	14.0	2, 7 + 12'	
FS1-14C	9/24	1418	✓	✓	15.0	2, 7 + 13'	
FS1-15C	9/24	1541	✓	✓	20.0	2, 10 + 17'	light rain
FS1-15C -DUP	↓	↓	✓	✓	↓	↓	COC:FS1-C-DUP
FS1-16C	9/24	1629	✓	✓	18.0	2, 9 + 16'	rain has stopped temporarily
FS1-17C	9/24	1717	✓	✓	12.0	2, 6 + 10'	
FS1-18C	9/24	1816	✓	✓	7.0	2, 4 + 6'	end of day 1
FS1-C-EQBL2	9/24	20:15					MHM/KAT

310765

Water temperature: 18°C
Weather data:
Air temperature high 50's
Wind: Calm
Precipitation: NONE

Notes: @ 1230 cloud cover near 100%
1430 heavy overcast - no precip
1630 heavy overcast - raining lightly off and on
1830 light rain

Sampled by:
Team Leader: ~
Crew #1: Wm Dunne
Crew #2: D. Rubinski
O'Brien & Gere Engineers
(WAA:djb/52:612.198)

FILE: 612.205

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

TIP Float Survey, Event 1

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS1-1W	9/24/96	7:30 a	✓	✓	~1.5'		Grab sample
FS1-2W-MS	"	7:36	✓	✓	3'		Verticle composite 2 samples
FS1-2W	"	7:36	✓	✓	3'		"
FS1-3W	"	7:49	✓	✓	7'		UNDER USGS station, Verticle Composite 2 samples
FS1-4W	"	8:03	✓	✓	6'		Verticle Composite 2 samples
FS1-5W	"	8:20	✓	✓	16'		Verticle Composite 3 samples
FS1-6W	"	8:35	✓	✓	14'		"
FS1-7W	"	8:50	✓	✓	4'		Verticle Composite 2 samples
FS1-8W	"	9:37 a	✓	✓	17'		" "
~~FS1-8W-DUP~~							~~COC: FS1-W-DUP~~
FS1-9W	"	10:21 a	✓	✓	10'		Verticle Composite 3 samples
FS1-9W DUP	"	10:21 a	✓	✓	"		COC: FS1-W-DUP
FS1-W-EQBL1	9/23/96	11:00 pm	✓	—	—		Eq Blank Collected @ HOTEL

310766

Water temperature: ______
Weather data:
Air temperature 60°F
Wind: Light
Precipitation: -Ø-

Notes:

Sampled by:
Team Leader: J Rhea HQI
Crew #1: R. Laufenberg "
Crew #2: ______

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

TIP Float Survey, Event 1

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS1-10W	9/24/96	10:56a	✓	✓	9'		Verticle Composite 3 Samples
FS1-11W	"	11:31a	✓	✓	15'		"
FS1-12W	"	12:27p	✓	✓	9'		"
FS1-13W	"	1:18p	✓	✓	8'		"
FS1-14W	"	2:18p	✓	✓	10'		"
FS1-15W	"	3:41p	✓	✓	15'		"
FS1-16W	"	4:29p	✓	✓	18'		"
FS1-17W	"	5:17p	✓	✓	10'		"
FS1-18W	"	6:16pm	✓	✓	6'		"
FS1-W-EQBL2	9/24/96	20:25					MHM/KAT

310767

Water temperature: 18

Weather data:

Air temperature: 60°F

Wind: Slight

Precipitation: ∅

Notes:

Sampled by:

Team Leader: S. Rhea, HQI

Crew #1: R. Laufenberg, HQI

Crew #2:

O'Brien & Gere Engineers

(WAA:djb/52:612.198)

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HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS2-1E	9/25/96	~~7:17~~	✓	✓	8'		
FS2-2E							
FS2-3E		7:17	✓	✓	8'		
FS2-4E		7:27	✓	✓	10'		
FS2-5E		7:38	✓	✓	17'		
FS2-6E		7:51	✓	✓	10'		
FS2-7E		8:04	✓	✓	11'		
FS2-8E		8:46	✓	✓	10'		21.67 @ 850 4400
FS2-9E		9:25	✓	✓	8'		
FS2-5EMS		7:38	✓	✓	17'		
FS2-E-EQBL1	4:45						

Flow 21.77 @ 7:05 4700

310768

Water temperature: ____

Weather data:

Air temperature ____

Wind: ____

Precipitation: ____

Notes: Overcast w, clearing by ~830

Sampled by:
Team Leader: N Ayling
Crew #1: K. Thurston
Crew #2: M. Murphy

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

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HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS2-10E	9/24/96	9:56	✓	✓	4'		
FS2-11E	↓	10:27	✓	✓	9'		
FS2-12E		11:23	✓	✓	14'		21.67 @ 11:30
FS2-13E		12:14	✓	✓	13'		
FS2-14E		13:14	✓	✓	15'		
FS2-15E		14:37	✓	✓	Variable 9-20		Sampled to depth of ~ 15'
FS2-16E		15:25	✓	✓	13'		22.18 @ 14:45 ~6,200
FS2-16E-DUP		15:25	✓	✓	13'		COC:FS2-E-DUP
FS2-17E		16:13	✓	✓	15'		
~~FS2-17E-MS~~	—	—	—	—	—	—	—
FS2-18E		17:12			10'		
FS2-E-EQBL2		18:30					

310769

Water temperature: ______________

Weather data:

Air temperature ______________

Wind: ______________

Precipitation: ______________

Notes:

Sampled by:

Team Leader: W. Ayling

Crew #1: M. Murphy

Crew #2: K. Thurston

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS2-1W	9/25/96						
FS2-2W	↓	7:00 AM	surface dip 3' Kemmerer		4'		
FS2-3W		7:05 AM	2', 5' Kemmerer		7'		
FS2-4W		7:27 AM	2', 4' Kemmerer		6'		
FS2-5W		7:38 AM	3', 8', 12' Kemmerer		16'		
FS2-6W		7:51 AM	3', 7', 11' Kemmerer		13'		
~~FS2-6W-DUP~~		~~8:04 AM~~	~~surface dip, 3' Kemmerer~~		~~4'~~	No Bottle	
FS2-7W		8:04 AM	surface dip, 3' Kemmerer		4'		COC:FS2-W-DUP
FS2-8W		8:46 AM	2', 5' Kemmerer		7'		
FS2-9W		9:25 AM	2', 5', 8' Kemmerer		10'		
FS2-W-EQBL1							

Water temperature: ______________
Weather data:
Air temperature ______________
Wind: ______________
Precipitation: ______________

Notes:

Sampled by:
Team Leader: Rob
Crew #1: John Connolly
Crew #2: John Haggard

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

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GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS2-10W	9/25/96	9:56	2', 4', 7' Kemmerer ✓	✓	9'		
FS2-11W		10:27	3', 7', 12' Kemmerer ✓	✓	15'		
FS2-12W		11:23	2', 4', 7' Kemmerer ✓	✓	9'		
FS2-13W		12:16	2', 4', 6' Kemmerer ✓	✓	8'		
FS2-14W		13:14	3', 5', 8' Kemmerer ✓	✓	10'		
FS2-15W		14:35	3', 7', 12' Kemmerer ✓	✓	15'		
FS2-15W-MS		14:35	✓		15'		
FS2-16W		15:25	5', 9', 16' Kemmerer ✓	✓	18'		
FS2-17W		16:13	2', 5', 8' Kemmerer ✓	✓	10'		
FS2-18W		17:11	2', 4' Kemmerer ✓	✓	6'		pulled up weeds, sample discarded
FS2-Dup	↓	12:16	2', 4', 6' Kemmerer		8'		Station FS2-13W
FS2-W-EQBL2	9/25/96	18:20					

310771

Water temperature: ______________
Weather data:
Air temperature ______________
Wind: ______________
Precipitation: ______________

Notes:

Sampled by:
Team Leader: Rob Laufenberg
Crew #1: John Haggard
Crew #2: John Connolly

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
FS2-5C	9/25	0738	✓	✓	16	2/8/14	
FS2-6C	9/25	0751	✓	✓	16	2/8/14	
FS2-7C	9/25	0804	✓	✓	14	2/7/12	
FS2-8C	9/25	0846	✓	✓	13	2/6/11	
FS2-9C	9/25	0925	✓	✓	14	2/7/12	
FS2-9C-MS	↓	↓	✓		↓	↓	
FS2-1W	9/25	0658	✓	✓	2.4'	1' from surface	
FS2-1E	9/25	0701	✓	✓	2.7'	↓	
FS2-2E	9/25	0706	✓	✓	2.5'	↓	
FS2-C-EQBL1	9/24	2030	✓	✓	~	~	equipment blank

310772

① Calibrated Fathometer measured 17.3 (meter-17)

Water temperature: 17.0°c@0730
Weather data:
Air temperature: 11°c @ 0730
Wind: Calm
Precipitation: NONE
partly cloudy @ 0730

Notes: ②

Sampled by:
Team Leader: ~
Crew #1: W. Dunne
Crew #2: D. Rubinski
O'Brien & Gere Engineers
(WAA:djb/52:612.198)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Aliquot depths	Comments
FS2-10C	9/25	0956	✓	✓	15	2/7/13	Using 4500 CFS times
FS2-11C	9/25	1027	✓	✓	14	2/7/12	
FS2-11C-DUP	↓	↓	✓	✓	↓	↓	COC:FS2-C-DUP
FS2-12C	9/25	1123	✓	✓	16	2/8/14	
FS2-13C	9/25	1214	✓	✓	15	2/7/13	
FS2-14C	9/25	1314	✓	✓	19	2/9/17	
FS2-15C	9/25	1437	✓	✓	24	2/12/21	
FS2-16C	9/25	1525	✓	✓	17	2/8/15	
FS2-17C	9/25	1613	✓	✓	14	2/7/12	
FS2-18C	9/25	1712	✓	✓	5	2/4	
FS2-C-EQBL2	9/25	18:25					

310773

Water temperature: 17.0°C
Weather data:
Air temperature 14.5°C (58°F)
Wind: light
Precipitation: NONE
cloud cover 90% @ 1030

Notes:

Sampled by:
Team Leader:
Crew #1: W Duane
Crew #2: D Rubinski

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

(612.226)

June 4, 1997 WCM
TIP time-of-travel survey

FILE: 612.226

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type: PCB	TSS	Dye	~~Approximate~~ * Water Depth		Comments
FS1-2-W	6/4/97	0853	✓	✓	✓	4.0	samples @ 1 and 3'	* Fathometer very accurate
FS1-3-W	6/4/97	0906	✓	✓	✓	8.5	@ 2, 4 + 6'	(calibrated vs survey rods)
FS1-5-W	6/4/97	0936	✓	✓	✓	14.5	@ 2, 7 + 12'	
FS1-7-W	6/4/97	1038	✓	✓	✓	4.0	@ 1 + 3'	
FS1-9-W	6/4/97	1105	✓	✓	✓	7.0	@ 1, 3 + 5'	
FS1-9-W-DUP	6/4/97	↓	✓	✓	✓	↓	↓	COC:FS1-W-DUP
FS1-10-W	6/4/97	1140	✓	✓	✓	10.5	@ 2, 5, 8'	
FS1-11-W	6/4/97	1153	✓	✓	✓	11.0	@ 2, 5, 8'	
FS1-11A-W	6/4/97	1204	✓	✓	✓	9.5	@ 2 5 + 7.5'	
FS1-11B-W	6/4/97	1240	✓	✓	✓	9.0	@ 2, 4.5 + 7'	
FS1-12-W	6/4/97	1255	✓	✓	✓	8.0	@ 2, 4 + 6'	
FS1-W-EQBL1	6/5/97	1040						WAA

310775

Notes:

① River very clear today - we have seen bottom is as much as 7' of water

② Snook Kill is very turbid compared to River (sample location is right at the edge of the turbid water)

Water temperature: 16.0°C

Weather data:

Air temperature: approx 65° F

Wind: very light

Precipitation: NONE

@ 0900 hrs

Sampled by:

Team Leader: —

Crew #1: Rob Laufenberg

Crew #2: Willy Dunne

O'Brien & Gere Engineers

(WAA/52:612.226)

General Electric Company
Hudson River Project
1997 Water Column Monitoring Study

File: 612.226

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type: PCB	TSS	Dye	Approximate Water Depth	Samples	Comments
FS1-12A-W	6/4/97	1333	✓	✓	✓	10.5	@2, 5 + 8'	
FS1-13-W	↓	1406	✓	✓	✓	10.0	@2, 5 + 8'	
FS1-13A-W		1430	✓	✓	✓	27.0 !	@2, 12 + 24'	
FS1-14-W		1448	✓	✓	✓	14.5	@2, 7 + 12'	* see notes
FS1-14A-W		1517	✓	✓	✓	14.0	@2, 7 + 12'	
FS1-15-W		1534	✓	✓	✓	17.0	@2, 8 + 16'	
FS1-15-W-MS		↓	✓	✓	✓	↓		1 extra glass bottle for PCB
FS1-15A-W		1615	✓	✓	✓	21.0	@2, 10 + 18'	
FS1-16-W		1625	✓	✓	✓	5.0	@1 + 3.5'	
FS1-17-W		1707	✓	✓	✓	7.0	@1, 3 + 5'	
FS1-18-W	↓	1755	✓	✓	✓	6.0	@1, 3 + 4.5'	will try to define dye plume on upriver run
FS1-W-EQBL2	6/4/97	1950	✓			—	—	

310776

Water temperature: ______

Weather data:

Air temperature mid 70s °F

Wind: very light

Precipitation: NONE

} @1300 hrs

bright sunshine all day
occasional fair weather clouds

Notes: ① changed from having the center boat in the channel to having the center boat wherever the peak dye concentration is found and the E/W boats equidistant to shoreline

Sampled by:

Team Leader: —

Crew #1: Rob Laufenberg

Crew #2: Willy Dunne

O'Brien & Gere Engineers
(WAA/52:612.226)

FILE: 612.226

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth		Comments
FS1-5-C	6/4/97	9:40	C	C	C	18'		FLUOROMETER READING - 1.10 (LESS ON EAST SIDE)
FS1-7-C	6/4/97	10:35	C	C	C	14'		1.27 (CONTINUOUS)
FS1-9-C	6/4/97	11:10	C	C	C	16'		0.4 (TWO DISCRETE SAMPLES)
FS1-10-C	6/4/97	11:40	C	C	C	16'		
FS1-11-C	6/4/97	11:55	C	C	C	15'		
FS1-11A-C	6/4/97	12:10	C	C	C	16'		0.45 (CONT)
FS1-11B-C	6/4/97	12:40	C	C	C	16'		
FS1-12-C	6/4/97	12:55	C	C	C	16'		
FS1-C-EQBL1	6/3/97	2240						WAA

310777

Water temperature: 16°C
Weather data:
Air temperature 60°F
Wind: 0-3
Precipitation: NONE

Notes:

Sampled by:
Team Leader: MARK LARUE
Crew #1: ERIC HAUSMANN
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

FILE: 612.226

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth		Comments
FS1-12A-C	6/4/97	13:35	comp	comp.	comp.	14'		
FS1-13-C	"	14:05				14'		
FS1-13A-C		14:30				16'		
FS1-13A-C-MS								
FS1-14-C		14:50				18'		BEGAN CENTER CHANNEL (AT 14) LOCATION BASED
FS1-14A-C		15:15				14'	VERIFIED ON LEADING EDGE OF PLUME	ON HIGHEST DYE CONC. - NOT CENTER OF NAVIGATIONAL CHANNEL
FS1-15-C		15:35				20'	"	
FS1-15A-C		16:15				20'	"	
FS1-16-C		16:30				20'	"	
FS1-17-C		17:10				13'	"	
FS1-18-C		17:55				7'	"	
FS1-18-C-DUP		17:55				7'	"	COC:FS1-C-DUP
FS1-C-EQBL2		20:05	GRAB	—	—	—	—	

310778

Water temperature: ______
Weather data:
Air temperature 75°F ±
Wind: CALM
Precipitation: NONE

Notes:

Sampled by:
Team Leader: ______
Crew #1: MARK LARUE
Crew #2: MARGARET MURPHY
O'Brien & Gere Engineers
(WAA/52:612.226)

FILE: 612.226

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type			Approximate Water Depth		Comments
			PCB	TSS	Dye			
FS1-2-E	6/4/97	9:00	✓	✓	✓	3-4'		
FS1-3-E		910	✓	✓	✓	8'		
FS1-5-E		9:40	✓	✓	✓	16'		Approx 30' from east shore (FES)
FS1-5-E-MS		9:40	✓	—	—	16'		
FS1-7-E		10:40	✓	✓	✓	10'		
FS1-9-E		11:05	✓	✓	✓	13'		
FS1-10-E		11:40	✓	✓	✓	6'		
FS1-11-E		12:00	✓	✓	✓	11'		
FS1-11A-E		12:05	✓	✓	✓	15'		
FS1-11B-E		12:42	✓	✓	✓	12'		
FS1-12-E		12:58	✓	✓	✓	7'		
FS1-E-EQBL1	6/3/97	2240						

310779

Water temperature: ______

Weather data:

Air temperature 60°F

Wind: Calm

Precipitation: None. Sunny

Notes:

Sampled by:

Team Leader: W. Ayling

Crew #1: T. Tong-ngork

Crew #2: ______

O'Brien & Gere Engineers
(WAA/52:612.226)

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

FILE: 612.226

TIP Float Survey: Event 1

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth		Comments
FS1-12A-E	6/4/97	13:35	✓	✓	✓	9'		~50' downstream of boat house @ West shore
FS1-12A-E-DUP	↓	13:35	✓	✓	✓	9'		COC:FS1-E-DUP
FS1-13-E		14:05	✓	✓	✓	14'		dye readings differ across channel highest in middle of river not nav. channel
FS1-13A-E		14:35	✓	✓	✓	19'		
FS1-14-E *		14:50	✓	✓	✓	10'		
FS1-14A-E		15:16	✓	✓	✓	7'		Center boat w C = NAV channel Transect oppos. McDonalds &c.
FS1-15-E		15:35	✓	✓	✓	23'		C of nav channel
FS1-15A-E		1616	✓	✓	✓	16'		
FS1-16-E		1630	✓	✓	✓	20'	hit bottom w, samples	opposite blue house @ east shore
FS1-17-E		17:10	✓	✓	✓	14'		Sample in line w, Red buoy from E shore @ center of Canal
FS1-18-E	↓	1755	✓	✓	✓	11'		
HRM 188.5	6/4/97	1815	✓	✓	✓	Surface		Collected by Eric Hausoman
FS1-E-EQBL2	6/4/97	1930						

* Samples collected before transect 14 based on navigation channel with center = center nav. channel. However dye conc peak noted to track better w, middle of river. Stations 14 & up based on C = peak conc across river.

Water temperature: ______
Weather data:
Air temperature: 70°s F
Wind: light breeze
Precipitation: Sunny - No precip

Notes:

Sampled by:
Team Leader: W Ahling
Crew #1: T. Tong-Ngork
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

310780

(612.226)

June 17, 1997 WCM
TIP time-of-travel survey

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

FILE: 612.226

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth	Sample depths	Comments
FS2-2-W	6/17/97	0708	✓	✓	✓	3 ft	mid depth	secchi - visible on bottom
FS2-3-W	6/17/97	0950	✓	✓	✓	4 ft	mid depth	secchi " " "
FS2-5-W	6/17/97	1045	✓	✓	✓	14 ft	2-7-12	secchi - 5.5'
FS2-7-W	6/17/97	1201	✓	✓	✓	4 ft	mid depth	secchi - visible on bottom
FS2-9-W	6/17/97	1350	✓	✓	✓	10 ft	2-5-8	secchi - 6.8'
FS2-9-W-DUP	6/17/97	1350	✓	✓	✓	10 ft	2-5-8	COC:FS2-W-DUP 43 14 256 073 35 824
FS2-10-W	6/17/97	1415	✓	✓	✓	10 ft	2-5-8	secchi - 6.6' 43 13 982 073 35 697
FS2-11-W	6/17/97	1425	✓	✓	✓	12 ft	2-6-10	secchi - 6.6' 043 13 893 073 35 623
FS2-11A-W	6/17/97	1435	✓	✓	✓	13 ft	2-6-11	secchi - 5.9' 43 13 910 073 35 525
FS2-11B-W	6/17/97	1502	✓	✓	✓	10 ft	2-5-8	secchi - 5.7' 43 13 700 073 35 261
FS2-12-W	6/17/97	1517	✓	✓	✓	8 ft	2-4-6	secchi 5.5' 43 13 657 073 35 219
FS2-W-EQBL1 WAA	6/16/97	18:30						Kemmerer; 95

310782

Water temperature: 21.0°c approx

Notes: started GPS after rain stopped
walkie-talkie inoperative
kemmerer marks @ 357 etc
secchi readings on west boat only

Weather data:
Air temperature: 60s am / 70s pm
Wind: light
Precipitation: heavy rain until 1100 then dry but

Sampled by:
Team Leader:
Crew #1: Rob Laulenbach
Crew #2: Wally Dunne

O'Brien & Gere Engineers
(WAA/52:612.226)

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HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

FILE: 612.226

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth	sample depths	Comments
FS2-12A-W	6/17/97	1556	✓	✓	✓	12'	2-6-10	secchi 5.2' 043 13 498 073 35 147
FS2-13-W	6/17/97	1610	✓	✓	✓	13'	2-6-11	secchi 5.0' 043 13 330 073 35 124
FS2-13A-W	6/17/97	1624	✓	✓	✓	20'	2-10-18	secchi 4.4' 43 13 116 073 34 934
FS2-14-W	6/17/97	1640	✓	✓	✓	15'	2-7-13	secchi 5.5' 43 12 948 073 34 411
FS2-14A-W	6/17/97	1710	✓	✓	✓	14'	2-7-12	secchi 5.1' 43 12 589 073 34 832
FS2-15-W	6/17/97	1803	✓	✓	✓	14'	2-7-12	secchi 5.0' 43 12 412 073 34 660
FS2-15-W-MS	6/17/97	1803	✓			14'	"	" "
FS2-15A-W	6/17/97	1832	✓	✓	✓	21'	2-10-18	secchi 5.0' 43 12 218 073 35 027
FS2-16-W	6/17/97	1847	✓	✓	✓	14'	2-7-12	secchi 5.1' 43 12 127 073 35 090
FS2-17-W	6/17/97	1925	✓	✓	✓	7'	2-3.5-5	secchi 5.2' 43 11 794 073 35 146
FS2-18-W	6/17/97	2022	✓	✓	✓	5'	mid depth	secchi 5.5' 43 11 456 073 35 214
FS2-W-EQBL2	6/17/97	2210	✓			N/A	N/A	Kemmerer as primary sampling device

310783

Water temperature: approx 26.0°C
Weather data:
Air temperature: cool - low 70s
Wind: light - increasing from south
Precipitation: none since 1200
mostly cloudy

Notes:

Sampled by:
Team Leader: Kevin Russell
Crew #1: Willy Dunn
Crew #2: Rob Laubach
O'Brien & Gere Engineers
(WAA/52:612.226)

FILE: 612.226

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth		Comments
FS2-5-C		10:48	✓	✓	✓	14		Dye 1.0
FS2-7-C		12:10				13	location at pwr wires	0.65 - 0.72
FS2-9-C		13:48				15	back of peak	0.28 - 0.4
FS2-10-C		14:17				14	back of peak	0.4 west of middle
FS2-11-C		14:30				10	@ peak	0.5 east of middle of red buoy
FS2-11A-C		14:40				14	back of pk	0.4 - 0.47 @ mouth of Snook Kill
FS2-11B-C		15:05				13		0.4
FS2-12-C		15:21				16		0.42
FS2-C-EQBL1	6/16/97	1850						Kemmerer 96A
WAA								

Water temperature: ____________

Weather data:

Air temperature ____________

Wind: ____________

Precipitation: ____________

Notes:

Sampled by:

Team Leader: W Ayling

Crew #1: M Murphy

Crew #2: ____________

O'Brien & Gere Engineers

(WAA/52:612.226)

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GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

FILE: 612.226

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type PCB	TSS	Dye	Approximate Water Depth		Dye Conc. Comments
FS2-12A-C	6/17/97	1600				13	behind peak	0.21
FS2-13-C	6/17/97	1612				12	behind peak	0.25 20' west of red buoy
FS2-13A-C	6/17/97	1627				16	peak	0.24-0.32
FS2-13A-C-MS		1627	✓	—	—	—		flow 2205 5,700
FS2-14-C		1645				14		0.24
FS2-14A-C		1714				15	ahead of peak & @	0.21 - 0.26
FS2-15-C		1804				19	@ & behind peak	0.23-0.26 4,300@ 1740
FS2-15A-C		1832				18		0.24-0.23 4,500@ 1840
FS2-16-C		1850				18		0.2 - 0.3
FS2-17-C		1925				13		0.22 - 0.23
FS2-18-C		2023				10		0.20 3,500@ 1951
FS2-18-C-DUP	↓	2023				10		COC:FS2-C-DUP
FS2-C-EQBL2	6/17/97							
FS2-HRM188.SW	6/17/97	2050	✓	✓	✓	SURFACE	Collected by Margaret Murphy	Added to West bear COC by lab
FS2-HRM188.SW	6/17/97	2100	—	—	✓	SURFACE	↓	↓

310785

Water temperature: ______
Weather data:
Air temperature ______
Wind: ______
Precipitation: ______

Notes:

Sampled by:
Team Leader: W Ayling
Crew #1: M. Murphy
Crew #2: ______

O'Brien & Gere Engineers
(WAA/52:612.226)

FILE: 612.226

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB	Sample Type: TSS	Sample Type: Dye	Approximate Water Depth		Comments
FS2-2-E	6/17/97	9:10	✓	✓	✓	4'		STEADY RAIN, FLOW ≈ 1500 CFS
FS2-3-E		9:50				9'		" "
FS2-5-E		10:45				16'		" "
FS2-5-E-MS		10:45				16'		
FS2-7-E		12:02		✓	✓	13'		LIGHT SPRINKLE
FS2-9-E		13:45				11'		RAIN STOPPED, OVERCAST
FS2-10-E		14:15				5'		
FS2-11-E		14:25				5'		
FS2-11A-E		14:38				14'		DISASSEMBLED KEMMERER, WAS NOT TRIPPING
FS2-11B-E		15:02				14'		
FS2-12-E		15:20				14'		
FS2-E-EQBL1	6/16/97	1840	✓					Kemmerer 96B

Water temperature: ________
Weather data:
Air temperature 70° ±
Wind: CALM
Precipitation: DRIZZLE

Notes:

Sampled by:
Team Leader:
Crew #1: MDL/TT
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

310786

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

FILE: 612.226

TIP Float Survey: Event 2

Station I.D.	Date	Time	Sample Type: PCB	Sample Type: TSS	Sample Type: Dye	Approximate Water Depth		Comments
FS2-12A-E	6/17/97	16:00	✓	✓	✓	11'		
FS2-12A-E-DUP		16:00	✓	✓		11'	DUP. FOR DYE NOT COLLECTED	COC:FS2-E-DUP (NO CONTAINER FOR DYE DUP.)
FS2-13-E		16:11	✓	✓	✓	11'		
FS2-13A-E		16:25				9'		
FS2-14-E		16:43				6'		
FS2-14A-E		17:13				6'		
FS2-15-E		18:03				12'		
FS2-15A-E		18:30				15'		
FS2-16-E		18:48				18'		
FS2-17-E		19:23				15'		
FS2-18-E		20:20				10'		DUP. COLLECTED IN ALT. CONTAINER
FS2-E-EQBL2	6/17/97	20:57	✓	—	—	—		

Water temperature: ______
Weather data:
Air temperature 65° F ±
Wind: S - 5-10 mph
Precipitation: NONE, OVERCAST

Notes:

Sampled by:
Team Leader: ______
Crew #1: TT / MDL
Crew #2: ______

O'Brien & Gere Engineers
(WAA/52:612.226)

310787

GENERAL ELE[CT]RIC COMPANY
HUDSON RIVER PROJECT - RIVER MONITORING TEST
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

Transect TIP Field Log: Round 1

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft²/sec)	Comments
(near west shore) TIP1-1	9/18/96	10:31	✓✓	✓✓	Surface 7.05	? 12	Unreasonable H_2O vel.
TIP1-1MS	↓		[illegible]	[illegible]			
TIP2-1		10:41	✓✓	✓✓	8.02	? 11	
TIP3-1		10:51	✓✓	✓✓	10.90		
TIP4-1		10:58	✓✓	✓✓	5.8		
TIP4-1 dup		10:58	✓✓	✓✓	〃		COC: HRdup3
TIP5-1		11:04	✓✓	✓✓	9.6		
(near east shore) TIP6-1	↓	11:07	✓✓	✓✓	10.80		
Ft Ed gage	10:17						22.69 8,700
TIP EQBL							

Water temperature: ______
Weather data:
Air temperature ______
Wind: ______
Precipitation: ______

Notes:

Sampled by:
Team Leader: W Ayling
Crew #1: R. Rybinski
Crew #2: K. Fish

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

310788

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

Transect TIP Field Log: Round 2

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft²/sec)	Comments
(near west shore) TIP1-2	9/18/96	10:31	✓✓	✓✓	7.20		
TIP1-2MS	↓		✓✓	✓✓	~~[illegible]~~		
TIP2-2		10:36	✓✓	✓✓	3:30		
TIP3-2		10:40	✓✓	✓✓	10.4		
TIP4-2		10:43	✓✓	✓✓	6.8		
TIP4-2 dup		10:43	✓✓	✓✓	6.8		COC: HRdup3
TIP5-2		11:46	✓✓	✓✓	9.4		
(near east shore) TIP6S-2		11:52	✓	✓	10.6		
Ft Edward							
Gage St.							

Water temperature: ______________
Weather data:
Air temperature ______________
Wind: ______________
Precipitation: ______________

Notes:

Sampled by:
Team Leader: W Ayling
Crew #1: R Rybinski
Crew #2: K. Fish

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

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FILE: 612.205

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

Transect TIP Field Log: Round 3

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft^2/sec)	Comments
(near west shore) TIP1-3	9/16/96	12:28	✓✓	✓✓	70		
TIP1-3MS		12:28	✓	✓			
TIP2-3		12:32	✓✓	✓✓	3.40		
TIP3-3		12:36	✓✓	✓✓	10.50		
TIP4-3		12:38	✓✓	✓✓	5.50		
TIP4-3 dup		12:38	✓✓	✓✓	5.50		COC: HRdup3
TIP5-3		12.43	✓✓	✓✓	9.30		
(near east shore) TIP6-3		12:46	✓✓	✓✓	10.70		

310790

Water temperature: ______________
Weather data:
Air temperature ______________
Wind: ______________
Precipitation: ______________

Notes:

Sampled by:
Team Leader: W Ayling
Crew #1: R. Rybinski
Crew #2: K. [illegible]

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

FILE: 612.205

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

Transect TIP Field Log: Round 4

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft^2/sec)	Comments
(near west shore) TIP1-4	9/18/96	1:29	✓✓	✓✓	6.5	0.3	At 1:58
TIP1-4MS	↓	1:29	✓✓	✓✓	3.4		
TIP2-4		1:34	✓✓	✓✓	3.6		
TIP3-4		1:36	✓✓	✓✓	10.7	0.65	At 1:55
TIP4-4		1:39	✓✓	✓✓	6.6		difficult Approach
TIP4-4 dup		1:39	✓✓	✓✓			COC: HRdup3
TIP5-4		1:42	✓✓	✓✓	9.5		
(near east shore) TIP6-4	↓	1:44	✓✓	✓✓	1:20 10.62 | 1:45 10.8	during velocity measurement	
		1:19				1.36 ft/s	

310791

Water temperature: ______
Weather data:
Air temperature ______
Wind: ______
Precipitation: ______

Notes:

Sampled by:
Team Leader: WA
Crew #1: ER
Crew #2: KF

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

FILE: 612.205

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

Transect TIP Field Log: Round 5

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft^2/sec)	Comments
(near west shore) TIP1-5	9/18/96	2:32	✓✓	✓✓	6.8		
TIP1-5MS	↓	2:33	✓	✓			
TIP2-5		2:36	✓✓	✓✓	3.2		
TIP3-5		2:39	✓✓	✓✓	10.2		deep samples at 3:04 96A lost equipment
TIP4-5		3:09	✓✓	✓✓	6.4		
TIP4-5 dup		3:09	✓✓	✓✓	6.4		COC: HRdup3
TIP5-5		3:12	✓✓	✓✓	10.2		
(near east shore) TIP6-5	↓	3.15	✓✓	✓✓	10.7		Surface only -

310792

Water temperature: ______
Weather data:
Air temperature ______
Wind: ______
Precipitation: ______

Notes:

Sampled by:
Team Leader: WA
Crew #1: RR
Crew #2: KF

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

GENERAL ELEC[illegible]IC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

Transect TIP Field Log: Round 6

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft²/sec)	Comments
(near west shore) TIP1-6	9/18/96	3:27	✓✓	✓✓	6.7 6.6	0.24	Depth + V taken at 4:18 10 ft upstream
TIP1-6MS	↓	3:29	✓✓	✓✓	~~31~~		MORE REPRESENT most representative Depth 3.6 20 Ft upstream
TIP2-6		3:~~29~~	✓✓	✓✓	~~10.6~~ 3.0	1st 0.60, 2nd 0.53 0.25	H_2O V taken at 4:04, 4:07 4:10
TIP3-6		3:32	✓✓	✓✓	10.6 10.9 while meas. V	0.41	H_2O V taken at 4:00
TIP4-6		3:36	✓✓	✓✓	5.9	0.63	H_2O V taken at 3:57
TIP4-6 dup		3:36	✓✓	✓✓	5.9		COC: HRdup3
TIP5-6		3:40	✓✓	✓✓	9.3	0.70	H_2O V taken at 3:52
(near east shore) TIP6-6	↓	3:42	✓✓	✓✓	10.5	1.45	H_2O V taken at 3:49

310793

Water temperature: ____________
Weather data:
Air temperature ____________
Wind: ____________
Precipitation: ____________

Notes:

Sampled by:
Team Leader: WA
Crew #1: RL
Crew #2: KF

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

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1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

Transect TIP Field Log: Round 7

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft^2/sec)	Comments
(near west shore) TIP1-7	9/18/96	4:27	✓✓	✓✓	6.7		
TIP1-7MS		4:29	✓✓	✓✓	6.7		
TIP2-7		4:32	✓✓	✓✓	3.4		
TIP3-7		4:34	✓✓	✓✓	10.4		
TIP4-7		4:37	✓✓	✓✓	5.4		
TIP4-7		4:37	✓✓	✓✓	5.4		
TIP5-7dup		4:40	✓✓	✓✓	9.1		COC: HRdup3
(near east shore) TIP6-7		4:45	✓✓	✓✓	10.6		

Water temperature: ________
Weather data:
Air temperature ________
Wind: ________
Precipitation: ________

Notes:

Sampled by:
Team Leader: WA
Crew #1: RR
Crew #2: KF

O'Brien & Gere Engineers
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310794

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HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

Transect TIP Field Log: Round 8

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft³/sec)	Comments
(near west shore) TIP1-8	9/18/96	5:35	✓✓	✓✓	6.5		
TIP1-8MS	↓	5:35	✓✓	✓✓			
TIP2-8		5:38	✓✓	✓✓	3.2		
TIP3-8		5:40	✓✓	✓✓	10.6		
TIP4-8		5:43	✓✓	✓✓	6.5		
TIP4-8 dup			✓✓	✓✓			
TIP5-8		5:46	✓✓	✓✓	10.2		COC: HRdup3
(near east shore) TIP6-8	↓	5:48	✓✓	✓✓	10.5		

310795

Water temperature: __________

Weather data:

Air temperature __________

Wind: __________

Precipitation: __________

Notes:

Sampled by:

Team Leader: WA

Crew #1: KR

Crew #2: KF

O'Brien & Gere Engineers
(WAA:djb/52:612.198)

General Electric Company
Hudson River Project
1996 Water Column Monitoring Study

File: 612.205

HRM 188.5W Field Log

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft^2/sec)	Comments
HRM 188.5W-1	09/18/96	11^{00}	✓	✓	surface grab	n/a	light wind
HRM 188.5W-2		12^{00}	✓	✓			wind's kicked up
HRM 188.5W-3		13^{00}	✓	✓			Very windy
HRM 188.5W-4		14^{00}	✓	✓			" "
HRM 188.5W-5		15^{00}	✓	✓			" "
HRM 188.5W-6		16^{00}	✓	✓			" "
HRM 188.5W-7		17^{00}	✓	✓			less wind
HRM 188.5W-8		18^{00}	✓	✓			" "

310796

Water temperature: ____________
Weather data:
Air temperature ~65°F
Wind: light to brisk to VERY
Precipitation: none - overcast to mostly cloudy

Notes: Each water sample was the same in appearance - slight yellow tinge, no observed organic particles, clear.

Sampled by:
Team Leader: Kerry Thurston
Crew #1: ____________
Crew #2: ____________

O'Brien & Gere Engineers
(WAA:djb/52:612.205)

GENERAL ELEC...IC COMPANY
HUDSON RIVER PROJECT
1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

HRM 188.5E Field Log

Station I.D.	Date	Time	Sample Type PCB aliquot	Sample Type TSS aliquot	Approximate Water Depth	Water Velocity (ft²/sec)	Comments
HRM 188.5E-1	09/18/96	11:00	✓✓	✓✓			Include duplicate sample each round. COC: HRdup4
HRM 188.5E-2	09/18/96	11:58	✓✓	✓✓			
HRM 188.5E-3	09/18/96	13:01	✓✓	✓✓			
HRM 188.5E-4	09/18/96	14:01	✓✓	✓✓			
HRM 188.5E-5	09/18/96	15:00	✓✓	✓✓			
HRM 188.5E-6	09/18/96	16:00	✓✓	✓✓			
HRM 188.5E-7	09/18/96	17:01	✓✓	✓✓			
HRM 188.5E-8	09/18/96	18:01	✓✓	✓✓			
HRM 188.5E EQBL							

310797

Water temperature: ____________
Weather data:
Air temperature ____________
Wind: ____________
Precipitation: ____________

Notes:

Sampled by:
Team Leader: James Mathews
Crew #1: ____________
Crew #2: ____________

O'Brien & Gere Engineers
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FILE: 612.205

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1996 WATER COLUMN MONITORING STUDY

Transect TIP Field Log

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth	Water Velocity (ft^2/sec)	Comments
(near west shore) TIP1-1	10/29/96	11:16	✓	✓	5'	NA	
TIP3-1	10/29/96	11:20	✓	✓	10'		
(near east shore) TIP6-1	10/29/96	11:25	✓	✓	9'		SAMPLE COLLECTED AT TIP-5, TIP-6 BUOY MISSING
(near west shore) TIP1-2	10/29/96	11:47	✓	✓	5'		
TIP3-2	10/29/96	11:50	✓	✓	9'		
(near east shore) TIP6-2	10/29/96	11:54	✓	✓	9'		(TAKEN AT TIP-5)
(near west shore) TIP1-3	10/29/96	12:15	✓	✓	5'		
TIP3-3	10/29/96	12:19	✓	✓	10'		
(near east shore) TIP6-3	10/29/96	12:22	✓	✓	9'		(TAKEN AT TIP-5)
(near west shore) TIP1-4	10/29/96	12:45	✓	✓	5'		
TIP3-4	10/29/96	12:48	✓	✓	10'		
(near east shore) TIP6-4	10/29/96	12:50	✓	✓	9'		(TAKEN AT TIP-5)

310798

Water temperature: ____________

Weather data:

Air temperature ±50° F

Wind: NORTH 10-15 MPH

Precipitation: CLEAR

Notes:

Sampled by:

Team Leader: MDL/RMR

Crew #1: ____________

Crew #2: ____________

O'Brien & Gere Engineers
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1996 WATER COLUMN MONITORING STUDY

FILE: 612.205

Transect TIP Field Log

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
HRM 188.5W-1	10/29/96	11:30	✓	✓			PCRDMP sample ; see fieldlog
HRM 188.5W-2	10/29/96	12:00	✓	✓			
HRM 188.5W-3	10/29/96	12:30	✓	✓			
HRM 188.5W-4	10/29/96	13:00	✓	✓			

310799

Water temperature: 11°C
Weather data:
Air temperature 10°C @ 12:20
Wind: Strong N
Precipitation: None

Notes:
Sunny 58°F @ 13:30 (Bank Temp @ Fred)

Sampled by:
Team Leader: W Ayling
Crew #1: —
Crew #2: —

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(WAA:djb/52:612.198)

FILE: 612.205

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1996 WATER COLUMN MONITORING STUDY

Transect TIP Field Log

Station I.D.	Date	Time	Sample Type: PCB aliquot	Sample Type: TSS aliquot	Approximate Water Depth		Comments
HRM 188.5E-1	10/29/96	11:30a	Comp.	Comp.	2.0 ft.		
HRM 188.5E-2	10/29/96	12:00p	"	"	2.0 ft.		
HRM 188.5E-3	10/29/96	12:30p	"	"	2.0 ft.		
HRM 188.5E-4	10/29/96	13:00	"	"	2.0 ft.		

Bill cell phone # (518)-796-1300

Water temperature: ______
Weather data:
Air temperature ______
Wind: ______
Precipitation: ______

Notes:

Sampled by: CJB
Team Leader: WAA
Crew #1: MDL, D.R.
Crew #2: CJB
O'Brien & Gere Engineers
(WAA:djb/52:612.198)

310800

Thompson Island Dam Evaluation
September 1997

FILE: 612.226

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HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

Station I.D.	Date	Time	Sample Type PCB	TSS	Approximate Water Depth		Comments
1-TIP-18C-1	9/9/97	1245	✓	✓	8 total 0-6'		
1-TIP-18C-2	↓	1345	✓	✓	↓ ↓		
1-TIP-18C-3		1445	✓	✓			
1-TIP-18C-4		15 45	✓	✓			
1-HRM188.5E-1	9/9/97	1320					
1-HRM188.5E-2							
1-HRM188.5E-3							
1-HRM188.5E-4							
2-TIP-18C-1	9/9/97	16:00	✓	✓	8 0-6		
2-TIP-18C-2	↓	17:00	✓	✓	9 0-6		Fixed gage 21.60 4/100
2-TIP-18C-3		18:00	✓	✓	8 0-6		
~~2-TIP-18C-4~~		—					
2-HRM188.5E-1							
2-HRM188.5E-2							
2-HRM188.5E-3							
2-HRM188.5E-4							

1-TIO PRW-2 ABL 1130

310802

Water temperature: ______

Weather data:

Air temperature: 70°F

Wind: Calm

Precipitation: None

Notes:

Sampled by:

Team Leader: W. Ayling

Crew #1: S. Lambert

Crew #2: ______

O'Brien & Gere Engineers
(WAA/52:612.226)

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HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

First Set | Second Set

Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth		Comments	Time
1-TID-PRW1-1	9-9-97	1:30	✓	✓	2.2		Two depth composite	4:30
1-TID-PRW1-2		2:30						5:30
1-TID-PRW1-3		3:30						6:30
1-TID-PRW1-4		4:30						—
1-TID-PRW2-1		1:35			11.4			4:35
1-TID-PRW2-2		2:35						5:35
1-TID-PRW2-3		3:35						6:35
1-TID-PRW2-4		4:35						—
~~1-TID-PRW2-1 (DUP)~~								
~~1-TID-PRW2-2 (DUP)~~ WAA								
~~1-TID-PRW2-3 (DUP)~~								
~~1-TID-PRW2-4 (DUP)~~								
1-TID-PRW3-1		1:40			2.8		Two depth composite	
1-TID-PRW3-2		2:40						4:40
1-TID-PRW3-3		3:40						5:40
1-TID-PRW3-4		4:40						6:40

310803

Water temperature: ____________
Weather data:
Air temperature ____________
Wind: ____________
Precipitation: none

Notes:

Sampled by:
Team Leader: ____________
Crew #1: ____________
Crew #2: ____________

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(WAA/52:612.226)

FILE: 612.226

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HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

W x3 x2 x1 E

Station I.D.	Date	Time	Sample Type PCB	TSS	Approximate Water Depth		Comments	
1-TID-PRE1-1	9/9	1328	✓	✓	3'		station E Sample surface & bottom	Station East
1-TID-PRE1-2	9/9	1428	✓	✓	3'			
1-TID-PRE1-3	9/9	1527	✓	✓	3'			
1-TID-PRE1-4	9/9	1627	✓	✓	3.5'			
1-TID-PRE2-1	9/9	1333	✓	✓	3.5'		sample surface & bottom	
1-TID-PRE2-2	9/9	1433	✓	✓	3.5'			Station Center
1-TID-PRE2-3	9/9	1532	✓	✓	3.5'			
1-TID-PRE2-4	9/9	1630	✓	✓	4.5'			
1-TID-PRE2-1MS	9/9	1333	✓	✓	3.5'		sample surface & bottom	
1-TID-PRE2-2MS	9/9	1433	✓	✓	3.5'			sk
1-TID-PRE2-3MS	9/9	1532	✓	✓	3.5'			
1-TID-PRE2-4MS	9/9	1630	✓	✓	4.5'			
1-TID-PRE3-1	9/9	1340	✓	✓	6'		lots of macrophyte growth	
1-TID-PRE3-2	9/9	1440	✓	✓	6'		sample at surface and middle	Station West
1-TID-PRE3-3	9/9	1538	✓	✓	6'			
1-TID-PRE3-4	9/9	1635	✓	✓	6.5'			

310804

Water temperature: 20.5°C
Weather data:
Air temperature 70°F
Wind: Light
Precipitation: None

Notes:

Sampled by:
Team Leader: M H Murphy
Crew #1: K Buelow
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

FILE: 612.226

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1997 WATER COLUMN MONITORING STUDY

Second Set

Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth		Comments	Time
1-HRM 188.5W-1	9-9-97	1:20	✓	✓	2.6		Not depth composite	4:20
1-HRM 188.5W-2	↓	2:20						5:20
1HRM 188.5W-3	↓	3:20			2.8			6:20
1-HRM 188.5W-4	↓	4:20						

310805

Water temperature: ______________
Weather data:
Air temperature ______________
Wind: ______________
Precipitation: ______________

Notes:

Sampled by:
Team Leader: ______________
Crew #1: ______________
Crew #2: ______________

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Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth		Comments
2-TID-PRE1-1	9/9	1640	✓	✓	3.5'		2 depths collected
2-TID-PRE1-2	↓	1746	✓	✓	↓		↓
2-TID-PRE1-3	↓	1840	✓	✓	↓		↓
2-TID-PRE1-4							
2-TID-PRE2-1	9/9	1645	✓	✓	4.5'		2 depth collected
2-TID-PRE2-2	↓	1745	✓	✓	↓		↓
2-TID-PRE2-3	↓	1844	✓	✓	↓		↓
2-TID-PRE2-4							
2-TID-PRE3-1	9/9	1650	✓	✓	6.5'		2 depths collected
2-TID-PRE3-2	↓	1750	✓	✓	↓		↓
2-TID-PRE3-3	↓	1848	✓	✓	↓		↓
2-TID-PRE3-4							

310806

Water temperature: 20.5°C
Weather data:
Air temperature 70°F
Wind: Light
Precipitation: None

Notes:

Sampled by:
Team Leader: MH Murphy
Crew #1: K Buelow
Crew #2:

O'Brien & Gere Engineers
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Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth		Comments
3-TID-PRE1-1	9/10	0856	✓	✓	4'		2 depths sampled
3-TID-PRE1-2	9/10	0958	✓	✓	4'		
3-TID-PRE1-3	9/10	1055	✓	✓	4'		
3-TID-PRE1-4	9/10	1155	✓	✓	4'		
3-TID-PRE2-1	9/10	0900	✓	✓	4'		2 depths sampled
3-TID-PRE2-2	9/10	~~09~~ 1005	✓	✓	4.3'		
3-TID-PRE2-3	9/10	1058	✓	✓	4.3'		
3-TID-PRE2-4	9/10	1159	✓	✓	4.5'		
3-TID-PRE3-1	9/10	0904	✓	✓	~~5~~ 5.5'		2 depths sampled
3-TID-PRE3-2	9/10	1010	✓	✓	5.5'		
3-TID-PRE3-3	9/10	1102	✓	✓	5.5'		
3-TID-PRE3-4	9/10	1203	✓	✓	5.5'		
3-TID-PRE-EQ Bl	9/10	0700					

310807

Water temperature: 20.5°C
Weather data:
Air temperature 60°F
Wind: Light
Precipitation: None

Notes: Joan, Tom, Peter of Behan Comms
photo during PRE 2 and at 188.5E - 2

Sampled by:
Team Leader: MH Murphy
Crew #1: K Buelow
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

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HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

Station I.D.	Date	Time	Sample Type: PCB	Sample Type: TSS	Approximate Water Depth		Comments
2-TIP-18C-1 (DUP)	9/9/97	16:00	✓	✓	8' total 0-6'		COC: WCM Blind dup
2-TIP-18C -2	↓	1700	✓	✓			
2-TIP-18C -3	↓	1800	✓	✓			

310808

Water temperature: ________

Weather data:

Air temperature ________

Wind: ________

Precipitation: ________

Notes:

Sampled by:

Team Leader: W Ayling

Crew #1: ________

Crew #2: ________

O'Brien & Gere Engineers
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FILE: 612.226

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Station I.D.	Date	Time	Sample Type PCB	TSS	Approximate Water Depth		Comments
3-TIP-18C-1	9/10/97	0810	✓	✓	9 0.7		
3-TIP-18C-2	↓	0910	✓	✓	10 0.8		
3-TIP-18C-3		1010	✓	✓	9 0.7		gage 21.33 3300 cfs
3-TIP-18C-4		1110	✓	✓	9 0.7		
3-HRM188.5E-1	~~9/9/97~~	~~1320~~	✓	✓			
3-HRM188.5E-2							
3-HRM188.5E-3							
3-HRM188.5E-4							

21°C Water temp @ 1050

310809

Water temperature: 21
Weather data: Foggy until ~ 8AM, sun & clouds
Air temperature: 70sF
Wind:
Precipitation:

Notes:

Sampled by:
Team Leader: N Ayling
Crew #1: S. Lambert
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

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Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth		Comments
3-TID-PRW1-1	9-10-97	8:55	✓	✓	3.5		
3-TID-PRW1-2		9:55					
3-TID-PRW1-3		10:55					
3-TID-PRW1-4		11:55					
3-TID-PRW2-1		9:00	✓	✓	11.5		
3-TID-PRW2-2		10:00					
3-TID-PRW2-3		11:00					
3-TID-PRW2-4		12:00					
3-TID-PRW3-1		9:10	✓	✓	2.7		BLIND DUPLICATE HERE
3-TID-PRW3-2		10:05					
3-TID-PRW3-3		11:05					
3-TID-PRW3-4		12:05					
3-HRM 188.5W-1	9-10-97	8:50	✓	✓	2.7		
3-HRM 188.5W-2		9:50					
3-HRM 188.5W-3		10:50					
3-HRM 188.5W-4		11:50					

310810

Water temperature: ______
Weather data:
Air temperature 50°F
Wind: 5-10
Precipitation: none

Notes:

Sampled by:
Team Leader: BOB HALERITTER
Crew #1: ERIC HAUSAMANN
Crew #2: ______

O'Brien & Gere Engineers
(WAA/52:612.226)

Thompson Island Dam Evaluation
October 1997

FILE: 612.226

GENERAL ELECTRIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth	Depth Sampled	Comments
TIP-18sW	10/16/97	0918	✓	✓	0.7'	SURFACE	gage 47.15 2800cfs
~~TIP-18sW-Dup~~		—	—	—	—	—	~~COC: WCM Blind Dup~~
TIP-18C		0937	✓	✓	8-9'	0-6'	Kemmerer 96A
HRM 188.5-IW		1025	✓	✓	—	SURFACE	~~New bucket~~ WAA
TID-PRW2		1150	✓	✓	11.4	0-9'	Kemmerer 96B
SCH		17:00	✓	✓	15-16'	0-12'	Kemmerer 96B
TID-PRW2' DUP (WAA 10/16/97) ~~HRM 188.5-DUP~~		1150 WAA	✓	✓	11.4	0-9'	COC: BLIND DUP
HRM 188.5-EQBL	↓	0600	✓	–	–	–	COC: ~~WCM Blind dup~~

Water temperature: ~~Same~~
Weather data: Sun & Clouds, Fog lifting @ 9AM becoming Sunny no clouds
Air temperature: 50s
Wind: Calm, becoming N
Precipitation: none

Notes:

Sampled by:
Team Leader: W Ayling
Crew #1: J Forsey
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

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FILE: 612.226

GENERAL EL RIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth	Depth Sampled	Comments
TIP-18sW	10/9/97	1403	✓	✓	1.3'	Surface	
TIP-18sW- Dup	↓	1403	✓	✓	1.3'	"	COC: WCM Blind Dup
TIP-18C	↓	1413	✓	✓	8'	0-6'	Kemmerer 96B
HRM 188.5-IW	↓	1447	✓	✓	—	Surface	
TID-PRW2	↓	1510	✓	✓	10.8'	0-8'	Kemmerer 96A
SCH	10/10/97	1610	✓	✓	15'	0-12'	
TIP-18C-EQBL	10/9/97	1310					Kemmerer 96B
							21.41 →3500

310813

Water temperature: ____
Weather data: Sun & Thin Clouds
Air temperature 70s
Wind: S
Precipitation: None

Notes:

Sampled by:
Team Leader: W. Ayling
Crew #1: M. LaRue
Crew #2: ____

O'Brien & Gere Engineers
(WAA/52:612.226)

FILE: 612.226

GENERAL EL[illegible]RIC COMPANY
HUDSON RIVER PROJECT
1997 WATER COLUMN MONITORING STUDY

Station I.D.	Date	Time	Sample Type PCB	Sample Type TSS	Approximate Water Depth	Depth Sample	Comments
TIP 18sW	10/1/97	1423	✓	✓	1.2	Surface	Collected as grab by submerging bottle into water MHM
TIP-18C	↓	1435	✓	✓	8-9' Total	Sampled 0-6	Kem 96A MHM
HRM 188.5-IW		1530	✓	✓	~~2.8' @ [illegible]~~	Surface ~~[illegible]~~	WAA
TID-PRWC		1545	✓	✓	~12' Total	0-9'	Kem 95 MHM
SCH	↓	1810	✓	✓	17'	0-15.5'	Sampled at green light on bridge Kem. 96B WAA
HRM 188.5-IW-Dup	↓	1530	✓	✓	—	Surface	COC: Wem Blind Dup WAA 10/22/97
Ft Ed gage		1432					21.06 2600

Estimated Time of Travel to HRM 188.5 40-55 min

Water temperature: 14-15°C
Weather data:
Air temperature: 40s-50sF
Wind: NW
Precipitation: Occasional spits

Notes: Marked location TIP18sW with buoy

Sampled by:
Team Leader: W Ayling
Crew #1: M Murphy
Crew #2:

O'Brien & Gere Engineers
(WAA/52:612.226)

310814

APPENDIX I

PCB analytical data packages
(Bound Separately)

TSS and additional parameters data packages

Time of Travel Survey #1

September 24, 1996

TSS Analytical Data

310817

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
NOVEMBER 26, 1996

RECEIVED
NOV 02 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/24/96
DATE RECEIVED: 09/24/96 TIME: 20:35
DATE ANALYZED: SEE BELOW
SAMPLED BY: L. DUNN, R. RYBINSKI, W. AYLING, K. THURSTON, J. RHEA, R. LAUFENBERG
LOCATION: GENERAL ELECTRIC HUDSON RIVER JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605211	FS1-10W	1.1	1.0	09/25/96
9605212	FS1-11W	2.6	1.0	09/27/96
9605213	FS1-12W	3.7	1.0	09/27/96
9605214	FS1-13W	4.4	1.0	09/27/96
9605215	FS1-14W	3.8	1.3	09/27/96
9605216	FS1-15W	3.7	1.0	09/27/96
9605217	FS1-16W	4.4	1.0	09/27/96
9605218	FS1-17W	3.0	1.0	09/27/96
9605219	FS1-18W	3.3	1.0	09/27/96
9605221	FS1-10E	2.5	1.0	09/27/96
9605222	FS1-11E	2.0	1.0	09/27/96
9605223	FS1-12E	2.9	1.0	09/27/96
9605224	FS1-13E	3.7	1.0	09/27/96
9605225	FS1-14E	3.4	1.0	09/27/96
9605226	FS1-15E	3.5	1.0	09/27/96
9605227	FS1-16E	4.5	1.0	09/27/96
9605228	FS1-17E	4.5	1.0	09/27/96
9605229	FS1-18E	1.5	1.0	09/27/96
9605230	FS1-E-DUP	2.7	1.0	09/27/96

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ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
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NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605233	FS1-10C	1.8	1.1	09/27/96
9605234	FS1-11C	2.0	1.2	09/27/96
9605235	FS1-12C	4.0	1.4	09/27/96
9605236	FS1-13C	3.5	1.3	09/27/96
9605237	FS1-14C	3.5	1.1	09/27/96
9605238	FS1-15C	3.3	1.1	09/27/96
9605239	FS1-16C	3.1	1.1	09/27/96
9605240	FS1-17C	3.8	1.2	09/27/96
9605241	FS1-18C	3.2	1.2	09/30/96
9605242	FS1-C-DUP	2.9	1.2	09/30/96

Authorized Signature: T. Chris Hynes

theast Analytical, Inc.
ert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: N/A

DATE RECEIVED: N/A TIME: N/A

DATE ANALYZED: SEE BELOW

SAMPLED BY: N/A

LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960925BW	< 1.0	1.0	09/25/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960925LCSA	104	102	98	85-115
960925LCSB	104	102	98	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960925LCS	102	102	0	20

uthorized Signature: T. Chris Hymes

heast Analytical, Inc.
ert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: N/A
DATE RECEIVED: N/A TIME: N/A
DATE ANALYZED: SEE BELOW
SAMPLED BY: N/A
LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960927BW	< 1.0	1.0	09/27/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960927LCSA	104	109	105	85-115
960927LCSB	104	103	99	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960927LCS	109	103	5.7	20

Authorized Signature: R. Chris Hipes

.heast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES
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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: N/A
DATE RECEIVED: N/A TIME: N/A
DATE ANALYZED: SEE BELOW
SAMPLED BY: N/A
LOCATION: GENERAL ELECTRIC HUDSON RIVER JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960930BW	< 1.0	1.0	09/30/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960930LCSA	104	101	97	85-115
960930LCSB	104	99	95	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960930LCS	101	99	2	20

Authorized Signature: G. Chris Haynes

..theast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES
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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
NOVEMBER 26, 1996

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NOV 0 3 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/24/96
DATE RECEIVED: 09/24/96 **TIME**: 13:40
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING, J. RHEA, R. LAUFENBERG, M. MURPHY
LOCATION: GENERAL ELECTRIC, HUDSON RIVER, JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605181	FS1-1W	< 1.2	1.2	09/25/96
9605182	FS1-2W	< 1.2	1.2	09/25/96
9605183	FS1-3W	< 1.3	1.3	09/25/96
9605184	FS1-4W	1.2	1.0	09/25/96
9605185	FS1-5W	1.3	1.0	09/25/96
9605186	FS1-6W	1.6	1.1	09/25/96
9605187	FS1-7W	1.4	1.0	09/25/96
9605188	FS1-8W	1.7	1.0	09/25/96
9605189	FS1-9W	1.4	1.0	09/25/96
9605190	FS1-W-DUP	1.5	1.0	09/25/96
9605193	FS1-5C	< 1.0	1.0	09/25/96
9605194	FS1-6C	2.4	1.2	09/25/96
9605195	FS1-7C	1.4	1.2	09/25/96
9605196	FS1-8C	1.5	1.0	09/25/96
9605197	FS1-9C	1.5	1.0	09/25/96
9605198	FS1-1E	1.5	1.2	09/25/96
9605199	FS1-2E	1.6	1.1	09/25/96

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NEA #	CLIENT ID	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605202	HRM 197.0	1.7	1.0	09/25/96
9605203	FS1-3E	1.5	1.0	09/25/96
9605204	FS1-4E	1.5	1.0	09/25/96
9605205	FS1-5E	2.7	1.0	09/25/96
9605206	FS1-6E	1.6	1.0	09/25/96
9605207	FS1-7E	1.9	1.0	09/25/96
9605208	FS1-8E	1.9	1.0	09/25/96
9605209	FS1-9E	1.9	1.0	09/25/96

Authorized Signature: A. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: N/A

DATE RECEIVED: N/A TIME: N/A

DATE ANALYZED: SEE BELOW

SAMPLED BY: N/A

LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960925BW	< 1.0	1.0	09/25/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960925LCSA	104	102	98	85-115
960925LCSB	104	102	98	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960925LCS	102	102	0	20

uthorized Signature: T. Chris Hynes

heast Analytical, Inc.
ert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 09/25/96 TIME: 8:47

DATE RECEIVED: 09/25/96 TIME: 11:42

DATE ANALYZED: SEE BELOW

SAMPLED BY: J. HAWLEY

LOCATION: GENERAL ELECTRIC HUDSON RIVER

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605244	PLUNGE POOL, BAKER FALLS	2.0	1.1	09/30/96

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/25/96
DATE RECEIVED: 09/25/96 TIME: 13:15
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING, K. THURSTON
LOCATION: GENERAL ELECTRIC HUDSON RIVER JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605255	FS2-3E	< 1.0	1.0	09/30/96
9605256	FS2-4E	1.6	1.0	09/30/96
9605257	FS2-5E	1.7	1.0	09/30/96
9605258	FS2-6E	1.9	1.0	09/30/96
9605259	FS2-7E	1.9	1.0	09/30/96
9605260	FS2-8E	1.9	1.0	09/30/96
9605261	FS2-9E	1.7	1.0	09/30/96

Authorized Signature: A. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/25/96
DATE RECEIVED: 09/25/96 TIME: 13:15
DATE ANALYZED: SEE BELOW
SAMPLED BY: J. CONNOLLY
LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605246	FS2-2W	1.4	1.0	09/30/96
9605247	FS2-3W	1.5	1.0	09/30/96
9605248	FS2-4W	1.5	1.0	09/30/96
9605249	FS2-5W	< 1.0	1.0	09/30/96
9605250	FS2-6W	1.2	1.0	09/30/96
9605251	FS2-7W	1.1	1.0	09/30/96
9605252	FS2-8W	1.2	1.0	09/30/96
9605253	FS2-9W	1.2	1.0	09/30/96

Authorized Signature: T. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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EW\JD\100396

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

Time of Travel Survey #2
September 25, 1996

TSS Analytical Data

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 09/25/96

DATE RECEIVED: 09/25/96 TIME: 13:15

DATE ANALYZED: SEE BELOW

SAMPLED BY: W. DUNNE, R. RYBINSKI

LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605270	FS2-5C	1.5	1.0	09/30/96
9605271	FS2-6C	1.6	1.0	09/30/96
9605272	FS2-7C	1.3	1.0	09/30/96
9605273	FS2-8C	1.0	1.0	09/30/96
9605274	FS2-9C	1.0	1.0	09/30/96
9605275	FS2-1W	1.0	1.0	09/30/96
9605276	FS2-1E	< 1.0	1.0	09/30/96
9605277	FS2-2E	1.2	1.0	09/30/96

Authorized Signature: T. Chris Klemes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: N/A TIME: N/A
SAMPLED BY: N/A
CUSTOMER PO#: N/A

DATE SAMPLED: N/A
DATE ANALYZED: SEE BELOW
LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452
LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960930BW	< 1.0	1.0	09/30/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960930LCSA	104	101	97	85-115
960930LCSB	104	99	95	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960930LCS	101	99	2.0	20

Authorized Signature: T. Chris Hynes

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Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/25/96
DATE RECEIVED: 09/26/96 TIME: 11:28
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING, M. MURPHY
LOCATION: GENERAL ELECTRIC HUDSON RIVER JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605314	FS2-10E	1.3	1.0	10/01/96
9605315	FS2-11E	< 1.0	1.0	10/01/96
9605316	FS2-12E	5.2	1.0	10/01/96
9605317	FS2-13E	1.2	1.0	10/01/96
9605318	FS2-14E	< 1.0	1.0	10/01/96
9605319	FS2-15E	1.1	1.0	10/01/96
9605320	FS2-16E	1.2	1.0	10/01/96
9605321	FS2-17E	1.5	1.0	10/01/96
9605322	FS2-18E	1.7	1.0	10/01/96
9605323	FS2-E-DUP	1.1	1.0	10/01/96

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/25/96

DATE RECEIVED: 09/26/96 **TIME:** 11:32
DATE ANALYZED: SEE BELOW

SAMPLED BY: W. DUNNE, R. RYBINSKI
LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452

CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605303	FS2-10C ✓	1.4	1.0	10/01/96
9605304	FS2-11C	1.4	1.0	10/01/96
9605305	FS2-12C	2.9	1.0	10/01/96
9605306	FS2-13C	2.3	1.0	10/01/96
9605307	FS2-14C	2.0	1.0	10/01/96
9605308	FS2-15C	2.1	1.0	10/01/96
9605309	FS2-16C	1.0	1.0	10/01/96
9605310	FS2-17C	2.2	1.0	10/01/96
9605311	FS2-18C	2.2	1.0	10/01/96
9605312	FS2-C-DUP	1.6	1.0	10/01/96

Authorized Signature: R. Chris Wagner

ortheast Analytical, Inc.
obert E. Wagner, Laboratory Director

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OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/25/96
DATE RECEIVED: 09/26/96 TIME: 11:37
DATE ANALYZED: SEE BELOW
SAMPLED BY: J. CONNOLLY, J. HAWLEY, R. RYBINKSI
LOCATION: GENERAL ELECTRIC, HUDSON RIVER, JOB# 612.205.452
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605291	FS2-10W	< 1.0	1.0	09/30/96
9605292	FS2-11W	1.2	1.0	09/30/96
9605293	FS2-12W	1.5	1.0	09/30/96
9605294	FS2-13W	2.3	1.0	09/30/96
9605295	FS2-14W	2.9	1.0	09/30/96
9605296	FS2-15W	1.9	1.0	10/01/96
9605297	FS2-16W	2.2	1.0	10/01/96
9605298	FS2-17W	1.8	1.0	10/01/96
9605299	FS2-18W	2.0	1.0	10/01/96
9605300	FS2-DUP-13W	2.3	1.0	10/01/96

Authorized Signature: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: N/A

DATE RECEIVED: N/A TIME: N/A

DATE ANALYZED: SEE BELOW

SAMPLED BY: N/A

LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
961001BW	< 1.0	1.0	10/01/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
961001LCSA	104	103	99	85-115
961001LCSB	104	96	92	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
961001LCS	103	96	7.0	20

Authorized Signature: T. Chris Hayes

:heast Analytical, Inc.
..ert E. Wagner, Laboratory Director

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER | DATE SAMPLED: N/A

DATE RECEIVED: N/A TIME: N/A | DATE ANALYZED: SEE BELOW

SAMPLED BY: N/A | LOCATION: GENERAL ELECTRIC HUDSON RIVER JOB# 612.205.452

CUSTOMER PO#: N/A | LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960930BW	< 1.0	1.0	09/30/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960930LCSA	104	101	97	85-115
960930LCSB	104	99	95	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960930LCS	101	99	2.0	20

.uthorized Signature: T. Chris Wymes

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"obert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
OCTOBER 3, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/25/96
DATE RECEIVED: 09/25/96 TIME: 13:15
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING
LOCATION: GENERAL ELECTRIC
HUDSON RIVER - PCRDMP
JOB# 612.204
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605264	HRM 197.0	1.2	1.0	09/30/96
9605265	HRM 194.2	1.4	1.0	09/30/96
9605266	HRM 188.5	1.0	1.0	09/30/96
9605267	BLIND DUPLICATE	< 1.0	1.0	09/30/96

Authorized Signature: R. Chris Hepner

Iortheast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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Time of Travel Survey #3
June 4, 1997

TSS Analytical Data

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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 06/04/97
DATE RECEIVED: 06/04/97 TIME: 15:25
DATE ANALYZED: SEE BELOW
SAMPLED BY: T. TONG-NGERK
LOCATION: HUDSON RIVER
CUSTOMER JOB#: 612.226.518
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703586	FS1-2-E	2.1	1.0	06/09/97
9703587	FS1-3-E	2.5	1.0	06/09/97
9703588	FS1-5-E	1.9	1.1	06/09/97
9703589	FS1-7-E	2.6	1.0	06/09/97
9703590	FS1-9-E	1.8	1.0	06/09/97
9703591	FS1-10-E	2.3	1.0	06/11/97
9703592	FS1-11-E	2.4	1.0	06/11/97
9703593	FS1-11A-E	2.3	1.0	06/11/97
9703594	FS1-11B-E	2.3	1.0	06/11/97
9703595	FS1-12-E	2.8	1.0	06/11/97
9703597	FS1-5-C	2.1	1.0	06/11/97
9703598	FS1-7-C	2.1	1.0	06/11/97
9703599	FS1-9-C	2.0	1.0	06/11/97
9703600	FS1-10-C	2.1	1.0	06/11/97
9703601	FS1-11-C	1.4	1.0	06/11/97
9703602	FS1-11A-C	1.7	1.0	06/11/97
9703603	FS1-11B-C	2.1	1.0	06/11/97
9703604	FS1-12-C	1.9	1.0	06/11/97

..norized Signature: Robert Wagner

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Robert E. Wagner, Laboratory Director
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CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: 06/04/97 TIME: 15:25
SAMPLED BY: T. TONG-NGERK
CUSTOMER JOB#: 612.226.518

DATE SAMPLED: 06/04/97
DATE ANALYZED: SEE BELOW
LOCATION: HUDSON RIVER
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703606	FS1-2-W	1.8	1.0	06/11/97
9703607	FS1-3-W	1.5	1.0	06/11/97
9703608	FS1-5-W	1.8	1.1	06/11/97
9703609	FS1-7-W	1.4	1.1	06/11/97
9703610	FS1-9-W	1.6	1.1	06/11/97
9703611	FS1-10-W	1.6	1.0	06/11/97
9703612	FS1-11-W	1.4	1.0	06/11/97
9703613	FS1-11A-W	2.4	1.1	06/11/97
9703614	FS1-11B-W	1.8	1.1	06/11/97
9703615	FS1-12-W	2.7	1.1	06/11/97
9703616	FS1-W-DUP	2.0	1.0	06/11/97

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES
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CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.

5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 06/04/97

DATE RECEIVED: 06/04/97 TIME: 15:25

DATE ANALYZED: SEE BELOW

SAMPLED BY: T. TONG-NGERK

LOCATION: HUDSON RIVER

CUSTOMER JOB#: 612.226.518

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970610BW	< 1.0	1.0	06/11/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970610LCS	47.4	50	105	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9703709	5.3	5.3	0	20

Authorized Signature: R. Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.

5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	06/04/97
DATE RECEIVED:	06/04/97 TIME: 15:25	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	T. TONG-NGERK	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	#11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970606BW	< 1.0	1.0	06/09/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970606LCS	47.4	47	99	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9703512	10	9.6	4.1	20

Authorized Signature: R. E. Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 06/04/97
DATE RECEIVED: 06/05/97 TIME: 09:56
DATE ANALYZED: SEE BELOW
SAMPLED BY: M. LARUE
LOCATION: HUDSON RIVER
CUSTOMER JOB#: 612.226.518
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703635	FS1-12A-C	2.2	1.0	06/11/97
9703636	FS1-13-C	2.1	1.0	06/11/97
9703637	FS1-13A-C	1.7	1.0	06/11/97
9703638	FS1-14-C	1.8	1.0	06/11/97
9703639	FS1-14A-C	1.7	1.0	06/11/97
9703640	FS1-15-C	1.8	1.0	06/11/97
9703641	FS1-15A-C	1.7	1.0	06/12/97
9703642	FS1-16-C	1.5	1.0	06/12/97
9703643	FS1-17-C	2.2	1.0	06/12/97
9703644	FS1-18-C	1.9	1.0	06/12/97
9703645	FS1-C-DUP	1.5	1.0	06/12/97
9703648	FS1-12A-W	2.7	1.0	06/12/97
9703649	FS1-13-W	3.1	1.1	06/12/97
9703650	FS1-13A-W	3.3	1.1	06/12/97

uthorized Signature: G. Chris Nepre

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER — DATE SAMPLED: 06/04/97

DATE RECEIVED: 06/05/97 TIME: 09:56 — DATE ANALYZED: SEE BELOW

SAMPLED BY: M. LARUE — LOCATION: HUDSON RIVER

CUSTOMER JOB#: 612.226.518 — LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703651	FS1-14-W	2.1	1.1	06/12/97
9703652	FS1-14A-W	2.3	1.0	06/12/97
9703653	FS1-15-W	2.7	1.0	06/12/97
9703654	FS1-15A-W	2.4	1.1	06/12/97
9703655	FS1-16-W	2.3	1.0	06/12/97
9703656	FS1-17-W	2.0	1.1	06/12/97
9703657	FS1-18-W	1.4	1.1	06/12/97
9703660	FS1-12A-E	1.6	1.0	06/12/97
9703661	FS1-13-E	1.7	1.0	06/12/97
9703662	FS1-13A-E	1.6	1.0	06/12/97
9703663	FS1-14-E	1.6	1.0	06/12/97
9703664	FS1-14A-E	1.5	1.0	06/12/97
9703665	FS1-15-E	1.7	1.0	06/12/97
9703666	FS1-15A-E	1.6	1.0	06/12/97
9703667	FS1-16-E	1.8	1.0	06/12/97
9703668	FS1-17-E	2.2	1.0	06/12/97
9703669	FS1-18-E	2.2	1.0	06/12/97
9703670	FS1-E-DUP	1.5	1.0	06/12/97
9703671	HRM-188.5	2.0	1.0	06/12/97

Authorized Signature: [signature]
Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB
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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.

5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	06/04/97
DATE RECEIVED:	06/05/97 TIME: 09:56	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	M. LARUE	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	#11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970611BW	< 1.0	1.0	06/12/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970611LCS	47.4	40	85	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9703703	4.1	4.6	11	20

Authorized Signature: Robert Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 16, 1997

O'BRIEN & GERE ENGINEERS, INC.

5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 06/04/97
DATE RECEIVED: 06/05/97 TIME: 09:56
DATE ANALYZED: SEE BELOW
SAMPLED BY: M. LARUE
LOCATION: HUDSON RIVER
CUSTOMER JOB#: 612.226.518
LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970610BW	< 1.0	1.0	06/11/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970610LCS	47.4	50	105	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9703709	5.3	5.3	0	20

Authorized Signature: R. Weiz Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

Time of Travel Survey #4
June 17, 1997

TSS Analytical Data

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	06/17/97
DATE RECEIVED:	06/17/97 TIME: 17:38	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	W. DUNNE	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703918	FS2-2-W	3.9	1.3	06/23/97
9703919	FS2-3-W	2.7	1.2	06/23/97
9703920	FS2-5-W	2.4	1.2	06/23/97
9703921	FS2-7-W	2.0	1.2	06/23/97
9703922	FS2-9-W	1.9	1.4	06/23/97
9703923	FS2-10-W	1.8	1.4	06/23/97
9703924	FS2-11-W	2.2	1.4	06/23/97
9703925	FS2-11A-W	2.3	1.4	06/23/97
9703926	FS2-11B-W	3.1	1.5	06/23/97
9703927	FS2-12-W	3.0	1.6	06/23/97
9703928	FS2-W-DUP	1.9	1.5	06/23/97

Authorized Signature: R. Chris Hayes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

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CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: 06/17/97 TIME: 17:38
SAMPLED BY: M. MURPHY
CUSTOMER JOB#: 612.226.518

DATE SAMPLED: 06/17/97
DATE ANALYZED: SEE BELOW
LOCATION: HUDSON RIVER
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703940	FS2-5-C	3.3	1.6	06/23/97
9703941	FS2-7-C	2.8	1.3	06/23/97
9703942	FS2-9-C	3.2	1.6	06/23/97
9703943	FS2-10-C	2.8	1.3	06/23/97
9703944	FS2-11-C	2.9	1.4	06/23/97
9703945	FS2-11A-C	2.5	1.4	06/23/97
9703946	FS2-11B-C	3.0	1.3	06/23/97
9703947	FS2-12-C	2.7	1.1	06/23/97
9703949	FS2-2-E	3.8	1.3	06/23/97
9703950	FS2-3-E	3.8	1.3	06/23/97
9703951	FS2-5-E	3.3	1.3	06/23/97
9703952	FS2-7-E	4.5	1.4	06/23/97
9703953	FS2-9-E	2.2	1.2	06/24/97
9703954	FS2-10-E	2.0	1.2	06/24/97
9703955	FS2-11-E	1.7	1.2	06/24/97
9703956	FS2-11A-E	2.2	1.1	06/24/97
9703957	FS2-11B-E	1.8	1.2	06/24/97
9703958	FS2-12-E	1.9	1.2	06/24/97

Au..norized Signature: R. Chris Haynes
ortheast Analytical, Inc.
obert E. Wagner, Laboratory Director
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CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	6/17/97
DATE RECEIVED:	06/17/97 TIME: 17:38	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	W. DUNNE, M. MURPHY	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970623BW	< 1.0	1.0	06/24/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970623LCSA	47.4	41	86	85-115
970623LCSB	47.4	43	91	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
970623LCS	41	43	4.8	20

Authorized Signature:

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	6/17/97
DATE RECEIVED:	06/17/97 TIME: 17:38	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	W. DUNNE, M. MURPHY	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970620BW	< 1.0	1.0	06/23/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970620LCS	47.4	52	110	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9703932	6.5	5.9	9.7	20

Authorized Signature: G. Chris Ayers

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
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CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER — DATE SAMPLED: 06/17/97
DATE RECEIVED: 06/18/97 TIME: 10:25 — DATE TESTED: SEE BELOW
SAMPLED BY: M. LARUE — LOCATION: HUDSON RIVER
CUSTOMER JOB#: 612.226.518 — LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA ID	CLIENT SAMPLE ID	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703961	FS2-12A-E	1.9	1.3	06/24/97
9703962	FS2-13-E	1.8	1.2	06/24/97
9703963	FS2-13A-E	2.2	1.2	06/24/97
9703964	FS2-14-E	2.2	1.1	06/24/97
9703965	FS2-14A-E	2.4	1.3	06/24/97
9703966	FS2-15-E	2.0	1.1	06/24/97
9703967	FS2-15A-E	2.4	1.3	06/24/97
9703968	FS2-16-E	2.4	1.3	06/24/97
9703969	FS2-17-E	3.0	1.4	06/24/97
9703970	FS2-18-E	2.9	1.3	06/24/97
9703971	FS2-E-DUP	2.2	1.2	06/24/97

Authorized Signature: R. Ch... Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 06/17/97
DATE RECEIVED: 06/18/97 TIME: 10:30
DATE TESTED: SEE BELOW
SAMPLED BY: M. MURPHY
LOCATION: HUDSON RIVER
CUSTOMER JOB#: 612.226.518
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA ID	CLIENT SAMPLE ID	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703973	FS2-12A-C	1.5	1.4	06/24/97
9703974	FS2-13-C	1.9	1.2	06/24/97
9703975	FS2-13A-C	1.4	1.4	06/24/97
9703976	FS2-14-C	2.0	1.2	06/24/97
9703977	FS2-14A-C	2.0	1.2	06/24/97
9703978	FS2-15-C	2.2	1.4	06/24/97
9703979	FS2-15A-C	9.9	1.3	06/24/97
9703980	FS2-16-C	2.1	1.3	06/24/97
9703981	FS2-17-C	2.0	1.4	06/24/97
9703982	FS2-18-C	1.7	1.3	06/24/97
9703983	FS2-C-DUP	1.8	1.3	06/24/97

Authorized Signature: R. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 06/17/97
DATE RECEIVED: 06/18/97 TIME: 10:25
DATE TESTED: SEE BELOW
SAMPLED BY: W. DUNNE
LOCATION: HUDSON RIVER
CUSTOMER JOB#: 612.226.518
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA ID	CLIENT SAMPLE ID	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9703986	FS2-12A-W	3.9	1.6	06/25/97
9703987	FS2-13-W	4.2	1.5	06/25/97
9703988	FS2-13A-W	3.8	1.6	06/25/97
9703989	FS2-14-W	2.9	1.6	06/25/97
9703990	FS2-14A-W	4.2	1.6	06/25/97
9703991	FS2-15-W	3.8	1.5	06/25/97
9703992	FS2-15A-W	4.6	1.7	06/25/97
9703993	FS2-16-W	4.7	1.8	06/25/97
9703994	FS2-17-W	3.8	1.6	06/25/97
9703995	FS2-18-W	3.0	1.3	06/25/97
9703998	FS2-HRM 188.5W	4.2	1.5	06/25/97

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
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CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	6/17/97
DATE RECEIVED:	06/18/97 TIME: 10:25	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	DUNNE, MURPHY, LARUE	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970624BW	< 1.0	1.0	06/25/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970624LCS	47.4	47	99	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9704031	8.6	7.1	19	20

Authorized Signature: D. Chris Hepner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
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CERTIFICATE OF ANALYSIS
JUNE 26, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	6/17/97
DATE RECEIVED:	06/18/97 TIME: 10:25	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	DUNNE, MURPHY, LARUE	LOCATION:	HUDSON RIVER
CUSTOMER JOB#:	612.226.518	LAB ELAP #:	11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970623BW	< 1.0	1.0	06/24/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970623LCSA	47.4	41	86	85-115
970623LCSB	47.4	43	91	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
970623LCS	41	43	4.8	20

Authorized Signature: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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1996 Transect Sampling

September 17-18, 1996
October 29, 1996

TSS Analytical Data

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 25, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	09/17/96
DATE RECEIVED:	09/18/96 TIME: 8:45	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	W. AYLING	LOCATION:	GENERAL ELECTRIC JOB# 612.205.352
CUSTOMER PO#:	N/A	LAB ELAP #:	#11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605058	HRM 197.0-1	1.6	1.0	09/20/96
9605059	HRM 197.0-2	2.0	1.0	09/20/96
9605060	HRM 197.0-3	1.7	1.0	09/20/96
9605061	HRM 197.0-4	1.6	1.0	09/20/96
9605062	HRM 197.0-5	1.5	1.0	09/20/96
9605063	HRM 197.0-6	1.7	1.0	09/20/96
9605064	HRM 197.0-7	1.5	1.0	09/20/96
9605065	HRM 197.0-8	1.7	1.0	09/20/96
9605066	BLIND DUPLICATE:HR-2	1.9	1.0	09/20/96

uthorized Signature: [signature]

Northeast Analytical, Inc.
obert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 25, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: N/A
DATE RECEIVED: 09/18/96 TIME: 8:35
DATE ANALYZED: SEE BELOW
SAMPLED BY: C. BABLIN
LOCATION: GENERAL ELECTRIC JOB# 612.205.352
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605086	BLIND DUPLICATE:HR-1	1.3	1.0	09/20/96

Authorized Signature: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 25, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 09/17/96

DATE RECEIVED: 09/18/96 TIME: 8:35

DATE ANALYZED: SEE BELOW

SAMPLED BY: C. BABLIN

LOCATION: GENERAL ELECTRIC
JOB# 612.205.352

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605078	FED1	< 1.0	1.0	09/20/96
9605079	FED2	1.1	1.0	09/20/96
9605080	FED3	1.0	1.0	09/20/96
9605081	FED4	1.1	1.0	09/20/96
9605082	FED5	1.1	1.0	09/20/96
9605083	FED6	1.1	1.0	09/20/96

Authorized Signature: A. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 24, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER | DATE SAMPLED: 09/17/96

DATE RECEIVED: 09/18/96 TIME: 8:48 | DATE ANALYZED: SEE BELOW

SAMPLED BY: W. AYLING | LOCATION: GENERAL ELECTRIC JOB# 612.205.352

CUSTOMER PO#: N/A | LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605050	HRM 194.2E-1	2.3	1.0	09/20/96
9605051	HRM 194.2E-2	2.7	1.0	09/20/96
9605052	HRM 194.2E-3	2.5	1.0	09/20/96
9605053	HRM 194.2E-4	2.6	1.0	09/20/96
9605054	HRM 194.2E-5	2.1	1.0	09/20/96
9605055	HRM 194.2E-6	2.5	1.0	09/20/96
9605056	HRM 194.2E-7	1.8	1.0	09/20/96
9605057	HRM 194.2E-8	1.7	1.0	09/20/96

Authorized Signature: T. Chris Hymes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
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301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 24, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 09/17/96

DATE RECEIVED: 09/18/96 TIME: 8:48

DATE ANALYZED: SEE BELOW

SAMPLED BY: W. AYLING

LOCATION: GENERAL ELECTRIC JOB# 612.205.352

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960920BW	< 1.0	1.0	09/20/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960920LCSA	104	107	103	85-115
960920LCSB	104	107	103	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960920LCS	107	107	0	20

Authorized Signature: R. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 24, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: 09/18/96 TIME: 8:49
SAMPLED BY: J. HAWLEY
CUSTOMER PO#: N/A

DATE SAMPLED: 09/17/96
DATE ANALYZED: SEE BELOW
LOCATION: GE - HUDSON FALLS
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605048	PLUNGE POOL, BAKER FALLS	2.4	1.0	09/20/96

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES
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CERTIFICATE OF ANALYSIS
SEPTEMBER 25, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: 09/18/96 TIME: 8:47
SAMPLED BY: W. AYLING
CUSTOMER PO#: N/A

DATE SAMPLED: 09/17/96
DATE ANALYZED: SEE BELOW
LOCATION: GENERAL ELECTRIC
JOB# 612.205.352
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605068	HRM 194.2W-1	< 1.0	1.0	09/20/96
9605069	HRM 194.2W-2	< 1.0	1.0	09/20/96
9605070	HRM 194.2W-3	< 1.0	1.0	09/20/96
9605071	HRM 194.2W-4	1.2	1.0	09/20/96
9605072	HRM 194.2W-5	1.1	1.0	09/20/96
9605073	HRM 194.2W-6	1.1	1.0	09/20/96
9605074	HRM 194.2W-7	< 1.0	1.0	09/20/96
9605075	HRM 194.2W-8	1.5	1.0	09/20/96

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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SW\JD\092596

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 09/18/96
DATE RECEIVED: 09/18/96 TIME: 20:40
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING, K. THURSTON, J. MATHERS
LOCATION: GENERAL ELECTRIC, HUDSON RIVER, JOB# 612.205.352
CUSTOMER PO#: N/A
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605122	TIP1	1.4	1.0	09/20/96
9605123	TIP2	1.8	1.0	09/20/96
9605124	TIP3	2.8	1.0	09/20/96
9605125	TIP4	3.1	1.0	09/20/96
9605126	TIP5	2.8	1.0	09/20/96
9605127	TIP6	2.7	1.0	09/20/96
9605128	BLIND DUPLICATE: HR-3	2.6	1.1	09/20/96
9605131	HRM 197.0	3.1	1.3	09/20/96
9605132	HRM 194.2	3.3	1.4	09/20/96
9605133	HRM 188.5	2.6	1.1	09/20/96
9605134	BLIND DUPLICATE-PCRDMP	2.8	1.2	09/25/96
9605137	HRM 188.5W	5.6	1.2	09/25/96
9605138	HRM 188.5E	2.6	1.0	09/25/96
9605140	BLIND DUPLICATE: HR-4	2.6	1.0	09/25/96

ıorized Signature: R. Chris Hynes

ıortheast Analytical, Inc.
obert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 1, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: N/A

DATE RECEIVED: N/A TIME: N/A

DATE ANALYZED: SEE BELOW

SAMPLED BY: N/A

LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.452

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960925BW	< 1.0	1.0	09/25/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960925LCSA	104	102	98	85-115
960925LCSB	104	102	98	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960925LCS	102	102	0	20

Authorized Signature: T. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES
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CERTIFICATE OF ANALYSIS
SEPTEMBER 24, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 09/17/96

DATE RECEIVED: 09/18/96 TIME: 8:48

DATE ANALYZED: SEE BELOW

SAMPLED BY: W. AYLING

LOCATION: GENERAL ELECTRIC
JOB# 612.205.352

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
960920BW	< 1.0	1.0	09/20/96

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
960920LCSA	104	107	103	85-115
960920LCSB	104	107	103	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8061: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
960920LCS	107	107	0	20

Authorized Signature: T. Chris Hejnes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
NOVEMBER 04, 1996

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. Bill Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 10/29/96

DATE RECEIVED: 10/29/96 TIME: 18:26

DATE ANALYZED: SEE BELOW

SAMPLED BY: W. AYLING
C. BABLIN
D. RYBINSKY
M. LARUE

LOCATION: GENERAL ELECTRIC
HUDSON RIVER
JOB# 612.205.352

CUSTOMER PO#: N/A

LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9605873	HRM 188.5 W-2	3.0	1.0	10/30/96
9605874	HRM 188.5 W-3	2.8	1.0	10/30/96
9605875	HRM 188.5 W-4	2.4	1.0	10/30/96
9605876	HRM 188.5 E	2.2	1.0	10/30/96
9605877	TIP1	1.9	1.0	10/30/96
9605878	TIP3	2.3	1.0	10/30/96
9605879	TIP5	2.2	1.0	10/10/96

Authorized Signature: A. Chris Hepes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

1997 Thompson Island Dam Evaluation

June through October 1997

TSS Analytical Data
Total Organic Carbon Analytical Data
Particulate Organic Carbon Analytical Data
Chlorophyll a Analytical Data
Total Residue Analytical Data

NORTHEAST ANALYTICAL
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CERTIFICATE OF ANALYSIS
JULY 7, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: 06/30/97 TIME: 14:05
SAMPLED BY: W. AYLING
CUSTOMER JOB#: 612.225

DATE SAMPLED: 06/30/97
DATE ANALYZED: SEE BELOW
LOCATION: HUDSON RIVER - PCRDMP
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9704159	HRM 197.0	2.0	1.1	07/03/97
9704160	HRM 194.2	1.8	1.1	07/03/97
9704161	HRM 188.5	2.6	1.1	07/03/97
9704162	BLIND DUPLICATE	2.8	1.1	07/03/97
9704165	TIP-18C	2.2	1.0	07/03/97

Authorized Signature:

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
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CERTIFICATE OF ANALYSIS
JULY 7, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	06/30/97 TIME: 09:24
DATE RECEIVED:	06/30/97 TIME: 14:05	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	N/A	LOCATION:	N/A
CUSTOMER JOB#:	28171-631	LAB ELAP #:	#11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9704167	PLUNGE POOL, BAKER FALLS	2.9	1.2	07/03/97

Authorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JULY 7, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE RECEIVED: 06/30/97 TIME: 14:05
SAMPLED BY: W. AYLING
CUSTOMER JOB#: 612.225

DATE SAMPLED: 06/30/97
DATE ANALYZED: SEE BELOW
LOCATION: HUDSON RIVER - PCRDMP
LAB ELAP #: 11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970702BW	< 1.0	1.0	07/03/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970702LCS	47.4	42	89	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9704189	7.3	8.2	12	20

ıthorized Signature: R. Chris Wagner

Northeast Analytical, Inc.
›bert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
JULY 25, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 07/14/97
DATE RECEIVED: 07/14/97 TIME: 14:31
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING
LOCATION: HUDSON RIVER - PCRDMP
CUSTOMER JOB#: 612.225
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9704448	HRM 197.0	< 1.0	1.0	07/21/97
9704449	HRM 194.2	< 2.4	2.4	07/21/97
9704450	HRM 188.5	1.1	1.1	07/21/97
9704451	BLIND DUPLICATE	1.3	1.0	07/21/97
9704454	TIP-18C	1.3	1.0	07/21/97

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970718BLK	< 1.0	1.0	07/21/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970718LCS	47.4	41	86	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9704347	14	14	0	20

ıthorized Signature: G. Chris Wagner

N east Analytical, Inc.
R ert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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CERTIFICATE OF ANALYSIS
JULY 24, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 07/14/97 **TIME**: 08:21

DATE RECEIVED: 07/14/97 **TIME**: 14:31

DATE ANALYZED: SEE BELOW

SAMPLED BY: N/A

LOCATION: N/A

CUSTOMER JOB#: 28171-631

LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9704456	PLUNGE POOL, BAKER FALLS	< 1.0	1.0	07/21/97

Authorized Signature: Brian L Saunders

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
AUGUST 4, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 07/28/97
DATE RECEIVED: 07/28/97 TIME: 13:45
DATE ANALYZED: SEE BELOW
SAMPLED BY: W. AYLING
LOCATION: HUDSON RIVER - PCRDMP
CUSTOMER JOB#: 612.225
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9704824	HRM 197.0	1.2	1.1	08/04/97
9704825	HRM 194.2	2.4	1.1	08/04/97
9704826	HRM 188.5	1.4	1.0	08/04/97
9704827	BLIND DUPLICATE	1.3	1.0	08/04/97
9704830	TIP-18C	1.3	1.0	08/04/97

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970801BW	< 1.0	1.0	08/04/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970801LCS	47.4	41	86	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9704865	43	40	7.2	20

Authorized Signature: R. Ebert Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
AUGUST 4, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 07/28/97
DATE RECEIVED: 07/28/97 TIME: 13:49
DATE ANALYZED: SEE BELOW
SAMPLED BY: N/A
LOCATION: N/A
CUSTOMER JOB#: 28171-631
LAB ELAP #: #11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9704832	PLUNGE POOL, BAKER FALLS	< 1.1	1.1	08/04/97

Authorized Signature:

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
AUGUST 22, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 8/13/97, 8/14/97
DATE RECEIVED: 08/14/97 TIME: 14:10/14:12
DATE ANALYZED: SEE BELOW
SAMPLED BY: AYLING, LAUTENBERG
LOCATION: HUDSON RIVER - WCM
CUSTOMER JOB#: 612.226
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9705219	HRM 188.5E	1.9	1.0	08/19/97
9705220	HRM 188.5W	1.9	1.0	08/19/97
9705221	TIP-18C	2.1	1.2	08/19/97
9705222	TID-PRW	1.6	1.0	08/19/97
9705223	TID-PRE	2.1	1.1	08/19/97
9705224	WCM-BLIND DUP	1.6	1.0	08/19/97
9705225	FM	1.9	1.0	08/19/97
9705226	SCH	2.1	1.0	08/19/97

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
970815BW	< 1.0	1.0	08/19/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
970815LCS	47.4	46	97	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8064: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
9705180	190	190	0	20

uthorized Signature: R. Robert Wagner

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB
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NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 22, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 9/9/97

DATE RECEIVED: 09/10/97 TIME: 15:55
DATE ANALYZED: SEE BELOW

SAMPLED BY: AYLING, LAMBERT, HALBOOTER, HAUSSMANN, MURPHY, BUELOW
LOCATION: HUDSON RIVER - WCM

CUSTOMER JOB#: 612.226
LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9705747	1-HRM 188.5E	2.0	1.0	9/17/97
9705748	1-HRM 188.5W	1.8	1.0	9/17/97
9705749	1-TIP-18C	2.0	1.0	9/17/97
9705750	1-TID-PRW1	1.8	1.0	9/17/97
9705751	1-TID-PRW2	2.2	1.0	9/17/97
9705752	1-TID-PRW3	2.2	1.0	9/17/97
9705753	1-TID-PRE1	2.2	1.0	9/17/97
9705754	1-TID-PRE2	2.4	1.0	9/17/97
9705755	1-TID-PRE3	2.3	1.0	9/17/97
9705758	2-HRM 188.5E	2.2	1.0	9/17/97
9705759	2-HRM 188.5W	2.0	1.0	9/17/97
9705760	2-TIP-18C	2.1	1.0	9/17/97
9705761	2-TID-PRW1	1.9	1.0	9/17/97
9705762	2-TID-PRW2	2.1	1.0	9/17/97
9705763	2-TID-PRW3	2.2	1.0	9/17/97
9705764	2-TID-PRE1	2.0	1.0	9/17/97
9705765	2-TID-PRE2	2.2	1.0	9/17/97
9705766	2-TID-PRE3	2.2	1.0	9/17/97
9705767	WCM BLIND DUP-2	2.0	1.0	9/17/97

Authorized Signature: R. Chris Hugnes

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Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL

ENVIRONMENTAL LAB SERVICES

301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
SEPTEMBER 22, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER

DATE SAMPLED: 9/10/97

DATE RECEIVED: 09/10/97 TIME: 15:55

DATE ANALYZED: SEE BELOW

SAMPLED BY: AYLING, LAMBERT, HALBOOTER, HAUSSMANN, MURPHY, BUELOW

LOCATION: HUDSON RIVER - WCM

CUSTOMER JOB#: 612.226

LAB ELAP #: 11078

Non-Filterable Residue (TSS) by EPA 1979 Method 160.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9705768	3-HRM 188.5E	2.0	1.0	9/17/97
9705769	3-HRM 188.5W	1.7	1.0	9/17/97
9705770	3-TIP-18C	2.1	1.0	9/17/97
9705771	3-TID-PRW1	2.1	1.0	9/17/97
9705772	3-TID-PRW2	2.3	1.0	9/17/97
9705773	3-TID-PRW3	2.2	1.0	9/17/97
9705774	3-TID-PRE1	1.9	1.0	9/17/97
9705775	3-TID-PRE2	1.9	1.0	9/17/97
9705776	3-TID-PRE3	2.2	1.0	9/17/97
9705777	WCM BLIND DUP-3	1.8	1.0	9/17/97

Authorized Signature: R. Chris Haynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director
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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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CERTIFICATE OF ANALYSIS
10/17/97

O'BRIEN & GERE ENGINEERS
5000 BRITTONFIELD PARKWAY
PO BOX 4873
SYRACUSE, NY 13221
CONTACT: BILL AYLING

MATRIX :	WATER	**DATE SAMPLED:**	10/1/97
DATE RECEIVED:	10/1/97 **TIME:** 19:30	**PROJECT:**	612.226
SAMPLED BY:	W. AYLING	**LOCATION:**	GENERAL ELECTRIC COMPANY
		LAB ELAP #:	11078

NEA ID:	CUSTOMER ID :	METHOD:	RESULTS	PQL	UNITS	DATE TESTED
AA07030	TIP 18SW	TSS:EPA Meth. 160.2	3.0	1.0	mg/L	10/10/97
AA07031	TIP 18C	TSS:EPA Meth. 160.2	1.9	1.0	mg/L	10/10/97
AA07032	HRM 188.5 IW	TSS:EPA Meth. 160.2	1.7	1.0	mg/L	10/10/97
AA07033	TID-PRW2	TSS:EPA Meth. 160.2	1.8	1.0	mg/L	10/10/97
AA07034	SCH	TSS:EPA Meth. 160.2	ND	1.0	mg/L	10/10/97
AA07035	WCM-BLIND DUP	TSS:EPA Meth. 160.2	1.8	1.0	mg/L	10/10/97

Note: ND (Not Detected) Denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) Denotes lowest analyte concentration reportable for the sample

AUTHORIZED SIGNATURE: R. Chris Wagner

Northeast Analytical, Inc.
obert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
OCTOBER 17, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	10/1/97
DATE RECEIVED:	10/1/97 TIME: 19:30	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	W. AYLING	LOCATION:	GENERAL ELECTRIC
CUSTOMER JOB#:	612.226	LAB ELAP #:	11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
AA1007B	< 1.0	1.0	10/10/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
AA1007L	87.1	86	98.7	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8065: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
AA07053	9.3	9.7	4.2	20

Authorized Signature: R. Chris Hemes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
10/23/97

O'BRIEN & GERE ENGINEERS
5000 BRITTONFIELD PARKWAY
PO BOX 4873
SYRACUSE, NY 13221
CONTACT: BILL AYLING

MATRIX :	WATER	**PROJECT:**	612.226
DATE RECEIVED:	10/10/97 **TIME:** 17:15	**LOCATION:**	HUDSON RIVER-PCRDMP
SAMPLED BY:	W. AYLING	**LAB ELAP #:**	11078
CUSTOMER PO	N/A		

NEA ID:	CUSTOMER ID :	METHOD:	DATE SAMPLED	RESULTS	PQL	UNITS	DATE TESTED
AA07642	TIP-18SW	TSS:EPA Meth. 160.2	10/9/97	2.0	1.0	mg/L	10/21/97
AA07643	TIP-18C	TSS:EPA Meth. 160.2	10/9/97	2.5	1.0	mg/L	10/21/97
AA07644	HRM 188.51W	TSS:EPA Meth. 160.2	10/9/97	2.5	1.0	mg/L	10/21/97
AA07645	TID-PRW2	TSS:EPA Meth. 160.2	10/9/97	2.5	1.0	mg/L	10/21/97
AA07646	SCH	TSS:EPA Meth. 160.2	10/10/97	2.2	1.0	mg/L	10/21/97
AA07647	WCM-BLIND DUP	TSS:EPA Meth. 160.2	10/10/97	2.1	1.0	mg/L	10/21/97

Note: ND (Not Detected) Denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) Denotes lowest analyte concentration reportable for the sample

AUTHORIZED SIGNATURE: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
OCTOBER 23, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX:	WATER	DATE SAMPLED:	10/9/97, 10/10/97
DATE RECEIVED:	10/10/97 TIME: 17:15	DATE ANALYZED:	SEE BELOW
SAMPLED BY:	W. AYLING	LOCATION:	GE - HUDSON RIVER
CUSTOMER JOB#:	612.226	LAB ELAP #:	11078

Quality control data for nonfilterable residue

Method blank summary

NEA #	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
AA1016B	< 1.0	1.0	10/20/97

Reference sample summary

NEA #	REFERENCE VALUE (mg/L)	RESULTS (mg/L)	% RECOVERY	%RECOVERY LIMITS
AA1016LCS	87.1	82.7	94.9	85-115

REFERENCE SAMPLE: ERA small lab Wastewater Lot# 8065: total suspended solids sample.

Duplicate sample summary

NEA#	SAMPLE CONC. (mg/L)	DUPLICATE SAMPLE CONC. (mg/L)	% RPD	% RPD LIMITS
AA07622	17	18	10	20

Authorized Signature: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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CERTIFICATE OF ANALYSIS
10/31/97

O'BRIEN & GERE ENGINEERS
5000 BRITTONFIELD PARKWAY
PO BOX 4873
SYRACUSE, NY 13221
CONTACT: BILL AYLING

MATRIX :	WATER			**DATE SAMPLED:**	10/16/97
DATE RECEIVED:	10/16/97	**TIME:**	18:25	**PROJECT:**	612.226.418
SAMPLED BY:	W. AYLING			**LOCATION:**	GE HUDSON FALLS
				LAB ELAP #:	11078

NEA ID:	CUSTOMER ID :	METHOD:	RESULTS	PQL	UNITS	DATE TESTED
AA07867	TIP-18SW	TSS:EPA Meth. 160.2	4.3	1.0	mg/L	10/27/97
AA07868	TIP-18C	TSS:EPA Meth. 160.2	3.1	1.0	mg/L	10/27/97
AA07869	HRM 188.5-IN	TSS:EPA Meth. 160.2	2.8	1.0	mg/L	10/27/97
AA07870	TIP-PRW2	TSS:EPA Meth. 160.2	2.7	1.0	mg/L	10/27/97
AA07871	SCH	TSS:EPA Meth. 160.2	3.0	1.0	mg/L	10/27/97
AA07872	WCM-BLIND DUP	TSS:EPA Meth. 160.2	2.6	1.0	mg/L	10/27/97

Note: ND (Not Detected) Denotes analyte not detected at a concentration greater than the PQL
PQL (Practical Quantitation Limit) Denotes lowest analyte concentration reportable for the sample

AUTHORIZED SIGNATURE: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

NORTHEAST ANALYTICAL
ENVIRONMENTAL LAB SERVICES
301 Nott Street, Schenectady, NY 12305
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CERTIFICATE OF ANALYSIS
AUGUST 18, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 8/13/97, 8/14/97
DATE RECEIVED: 08/14/97 TIME: 14:10, 14:12
DATE ANALYZED: SEE BELOW
SAMPLED BY: AYLING, LAUTENBERG
LOCATION: HUDSON RIVER - WCM
CUSTOMER JOB#: 612.226
LAB ELAP #: 11078

Total Organic Carbon (TOC) by EPA 1979 Method 415.2

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9705219	HRM 188.5E	5.7	1.1	8/18/97
9705220	HRM 188.5W	6.1	1.1	8/18/97
9705221	TIP-18C	6.1	1.1	8/18/97
9705222	TID-PRW	7.5	1.1	8/18/97
9705223	TID-PRE	5.2	1.1	8/18/97
9705224	WCM BLIND DUP	6.4	1.1	8/18/97
9705225	FM	5.7	1.1	8/18/97
9705226	SCH	8.0	1.1	8/18/97

Authorized Signature: [signature]

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

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CERTIFICATE OF ANALYSIS
AUGUST 28, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 08/13/97, 08/14/97
DATE RECEIVED: 08/14/96 TIME: 14:10/14:12
DATE TESTED: SEE BELOW
SAMPLED BY: AYLING, LAUTENBERG
LOCATION: GE - HUDSON RIVER - WCM
CUSTOMER JOB#: 612.226
LAB ELAP #: #11078

Particulate Organic Carbon by EPA 1979 Method 415.2

NEA ID	CLIENT ID	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9705219	HRM 188.5E	0.21	0.11	08/26/97
9705220	HRM 188.5W	0.18	0.11	08/26/97
9705221	TIP-18C	0.26	0.11	08/27/97
9705222	TID-PRW	0.21	0.11	08/27/97
9705223	TID-PRE	0.18	0.11	08/27/97
9705224	WCM BLIND DUP	0.19	0.11	08/27/97
9705225	FM	0.22	0.11	08/27/97
9705226	SCH	0.11	0.11	08/27/97

Authorized Signature: G. Chris Hymes

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Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

Aquatec Biological Sciences

Ecology | Environmental Toxicology | Natural Resource · Assessments | Microbiology

Analytical Report

Bill Ayling	Date	: 8/27/97
O'Brien and Gere Engineers	BTR No.	: 01128
5000 Brittonfield Parkway	Project No.	: 97000
P.O. Box 4873	No. of Samples	: 8
Syracuse, NY 13221	Date Received	: 8/19/97

Reference: O'Brien and Gere

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Laboratory Number/ Method Number:	Sample Information/ Method Description:	Result
003035	HRM 188.5E : 8/13/97 @ 2:00:00 PM	
10200H3-C	Chlorophyll a, corrected, ug/L	1.1
10200H3-U	Chlorophyll a, uncorrected, ug/L	1.7
003036	HRM 188.5W : 8/13/97 @ 1:55:00 PM	
10200H3-C	Chlorophyll a, corrected, ug/L	0.3
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.5
003037	TIP-18C : 8/13/97 @ 1:30:00 PM	
10200H3-C	Chlorophyll a, corrected, ug/L	0.3
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.5
003038	TID-PRW : 8/13/97 @ 2:10:00 PM	
10200H3-C	Chlorophyll a, corrected, ug/L	0.3
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.4
003039	TID-PRE : 8/13/97 @ 2:05:00 PM	
10200H3-C	Chlorophyll a, corrected, ug/L	0.4
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.5

Comments/Notes

3.0ug/l standard=3.0 ug/l

75 Green Mountain Drive, South Burlington, Vt. 05403 Tel: 802.860.1638 Fax: 802.658.3189

Aquatec Biological Sciences

Ecology | Environmental Toxicology | Natural Resource Assessments | Microbiology

Analytical Report

Bill Ayling	Date : 8/27/97
O'Brien and Gere Engineers	BTR No. : 01128
5000 Brittonfield Parkway	Project No. : 97000
P.O. Box 4873	No. of Samples : 8
Syracuse, NY 13221	Date Received : 8/19/97

Reference: O'Brien and Gere

Standard analyses were performed in accordance with Methods for Analysis of Water and Wastes, EPA-600/4/79-020, Test Methods for Evaluating Solid Waste, SW-846, or Standard Methods for the Examination of Water and Wastewater. All results are in mg/l unless otherwise noted.

Laboratory Number/ Method Number:	Sample Information/ Method Description:	Result
003040	WCM Blind Dup : 8/13/97 @	
10200H3-C	Chlorophyll a, corrected, ug/L	0.3
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.4
003041	FM : 8/13/97 @ 9:15:00 AM	
10200H3-C	Chlorophyll a, corrected, ug/L	0.3
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.4
003042	SCH : 8/13/97 @ 9:30:00 AM	
10200H3-C	Chlorophyll a, corrected, ug/L	0.3
10200H3-U	Chlorophyll a, uncorrected, ug/L	0.5

Comments/Notes

3.0ug/l standard=3.0 ug/l

Submitted By: Brian D. Moffat ABS

75 Green Mountain Drive, South Burlington, Vt. 05403 Tel: 802.860.1638 Fax: 802.658.3189

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ENVIRONMENTAL LAB SERVICES
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(518) 346-4592 • FAX (518) 381-6055

CERTIFICATE OF ANALYSIS
AUGUST 22, 1997

O'BRIEN & GERE ENGINEERS, INC.
5000 Brittonfield Parkway
Suite 300, PO Box 4873
Syracuse, NY 13221
Contact: Mr. William Ayling

SAMPLE MATRIX: WATER
DATE SAMPLED: 8/13/97, 8/14/97
DATE RECEIVED: 08/14/97 TIME: 14:10/14:12
DATE ANALYZED: SEE BELOW
SAMPLED BY: AYLING, LAUTENBERG
LOCATION: HUDSON RIVER - WCM
CUSTOMER JOB#: 612.226
LAB ELAP #: 11078

Total Residue (TS) by EPA 1979 Method 160.3

NEA #	CLIENT ID.	RESULTS (mg/L)	DETECTION LIMIT (mg/L)	DATE ANALYZED
9705219	HRM 188.5E	70	11	08/21/97
9705220	HRM 188.5W	76	11	08/21/97
9705221	TIP-18C	76	11	08/21/97
9705222	TID-PRW	62	11	08/21/97
9705223	TID-PRE	96	10	08/21/97
9705224	WCM-BLIND DUP	75	10	08/21/97
9705225	FM	69	11	08/21/97
9705226	SCH	88	10	08/21/97

Authorized Signature: G. Chris Hynes

Northeast Analytical, Inc.
Robert E. Wagner, Laboratory Director

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NY STATE DEPARTMENT OF HEALTH CERTIFIED LAB

Job No. 612.226
Sheet 1 of ____

Office: Syracuse

Address:

Phone: (315) 437-6100

CHAIN OF CUSTODY

HRM 188.5W TIP-PRW HRM 188.5W TIP-18C

CLIENT: General Electric Company
LOCATION: Hudson River - WCM

COLLECTED BY: (Signature) TIP-PRE- [signature] [signature] [signature]

SAMPLE DESCRIPTION	Date	Time	Sample Matrix[1]	Sample Type[2]	No. of Containers	ANALYSIS REQUESTED
HRM 188.5E 9705219	8/13/97	1400	W	Comp.	2	PCBs, NEA 608CAP
HRM 188.5W 9705220		1355	W	Comp.	2	PCBs, NEA 608CAP
TIP-18C 9705221		1330	W	Comp.	2	PCBs, NEA 608CAP
TID-PRW 9705222		1410	W	Comp.	2	PCBs, NEA 608CAP
TID-PRE 9705223		1405	W	Comp.	2	PCBs, NEA 608CAP
HRM 188.5E ~~9705224~~ 1400		~~1330~~	W	Comp.	5	9705219 TSS,TS,TOC,POC, Chlorophyll a
HRM 188.5W ~~9705225~~		1355	W	Comp.	5	9705220 TSS,TS,TOC,POC, Chlorophyll a
TIP-18C ~~9705226~~		1330	W	Comp.	5	9705221 TSS,TS,TOC,POC, Chlorophyll a
TID-PRW ~~9705227~~		1410	W	Comp.	5	9705222 TSS,TS,TOC,POC, Chlorophyll a
TID-PRE ~~9705228~~		1405	W	Comp.	5	9705223 TSS,TS,TOC,POC, Chlorophyll a
WCM Blind Dup ~~9705229~~		—	W	Comp.	2	PCBs, NEA 608CAP 9705224
WCM-Blind Dup ~~9705230~~		—	W	Comp.	5	9705224 TSS,TS,TOC, POC, chlorophyll a

[1] Matrix = water, wastewater, air, sludge, sediment, etc.
[2] Type = grab, composite

Relinquished by: / of:	Date	Time	Received by: / of:	Date	Time
Relinquished by: of:			Received by: of:		
Relinquished by: of:			Received by: of:		
Use this space if shipped via courier (e.g., Fed Ex) Relinquished by: of:			Courier Name: *Attach delivery/courier receipt to Chain of Custody		
Relinquished by: [signature] of: O'Brien & Gere Engineers, Inc.	8/14/97	1412	Received by: [signature] of: Northeast Analytical, Inc.	8/14/97	14:12

djb/i:52/0612226/4/coc_up.frm

August 12, 1997

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Job No. 612.226
Sheet 1 of

Office: Syracuse
Address:
Phone: (315) 437-6100

CHAIN OF CUSTODY

CLIENT: General Electric Company	COLLECTED BY: (Signature) William Ayling
LOCATION: Hudson River - WCM	William Ayling

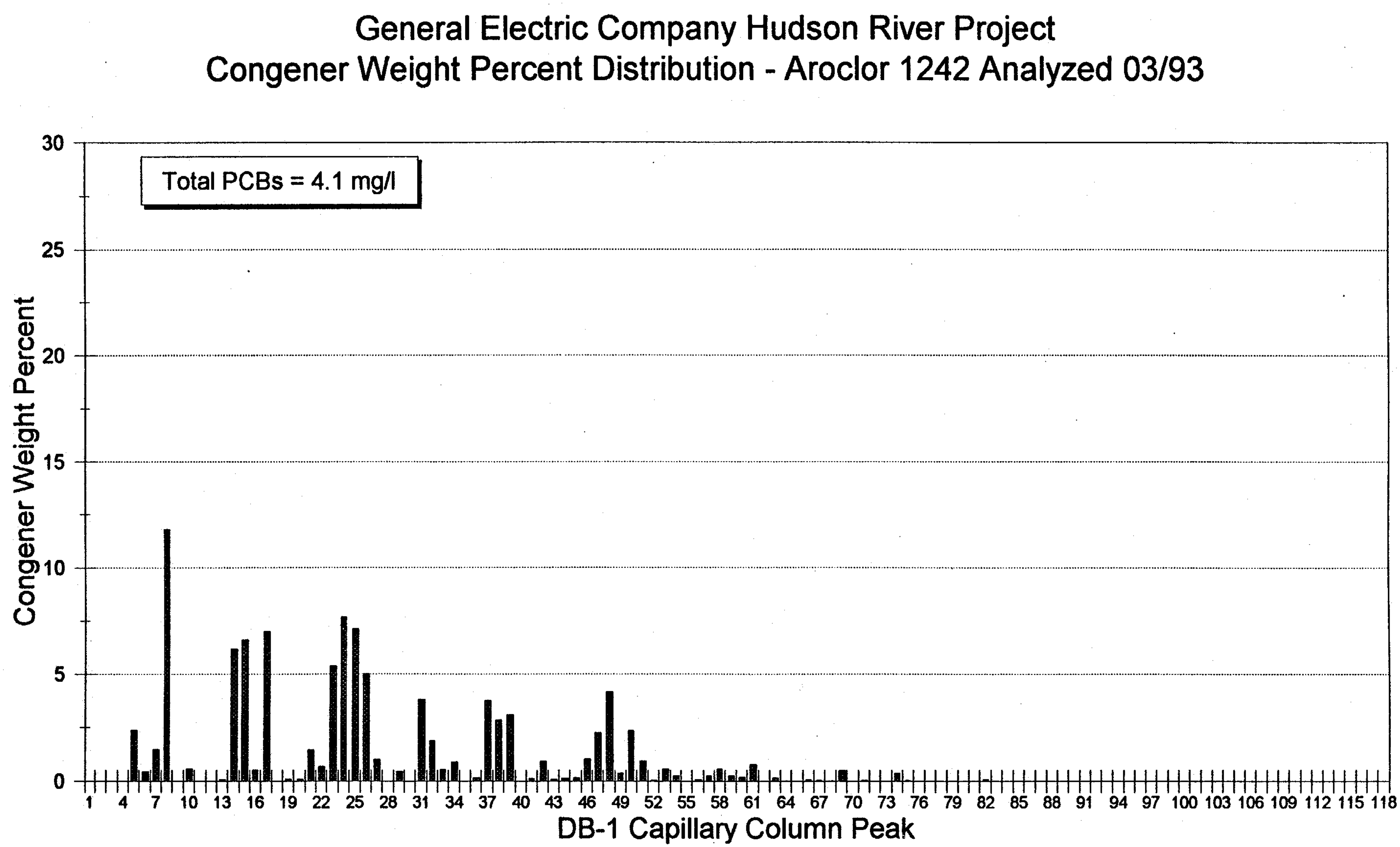
SAMPLE DESCRIPTION	Date	Time	Sample Matrix[1]	Sample Type[2]	No. of Containers	ANALYSIS REQUESTED
FM 9705225	8/13/97	2025	W	Comp.	2	PCBs, NEA 608CAP
SCH 9705226	8/14/97	0915	W	Comp.	2	PCBs, NEA 608CAP
FM 9705225	8/13/97	2025	W	Comp.	5	TSS,TS,TOC,POC, Chlorophyll a
SCH 9705226	8/14/97	0915	W	Comp.	5	TSS,TS,TOC,POC, Chlorophyll a
TIP-PRW 9705227	8/14/97	0930	W	GRAB	2	PCBs NEA 608CAP

[1] Matrix = water, wastewater, air, sludge, sediment, etc.
[2] Type = grab, composite

Relinquished by: / of:	Date	Time	Received by: / of:	Date	Time
Relinquished by: of:			Received by: of:		
Relinquished by: of:			Received by: of:		
Use this space if shipped via courier (e.g., Fed Ex) Relinquished by: of:			Courier Name: *Attach delivery/courier receipt to Chain of Custody		
Relinquished by: William Ayling of: O'Brien & Gere Engineers, Inc.	8/14/97	14:10	Received by: S. Olan of: Northeast Analytical, Inc.	8/14/97	14:10

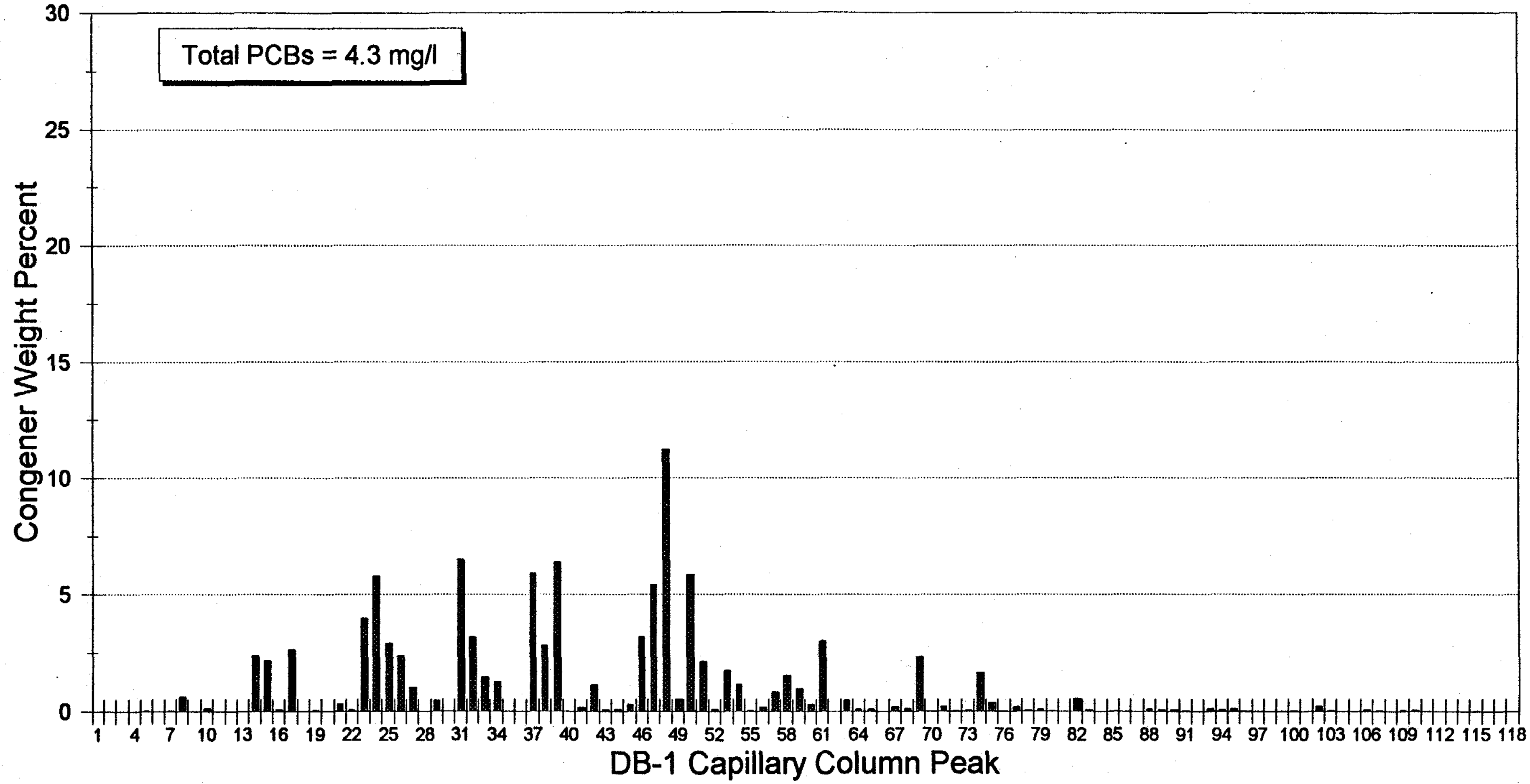
Thompson Island Pool PCB congener distributions

Aroclor Standards



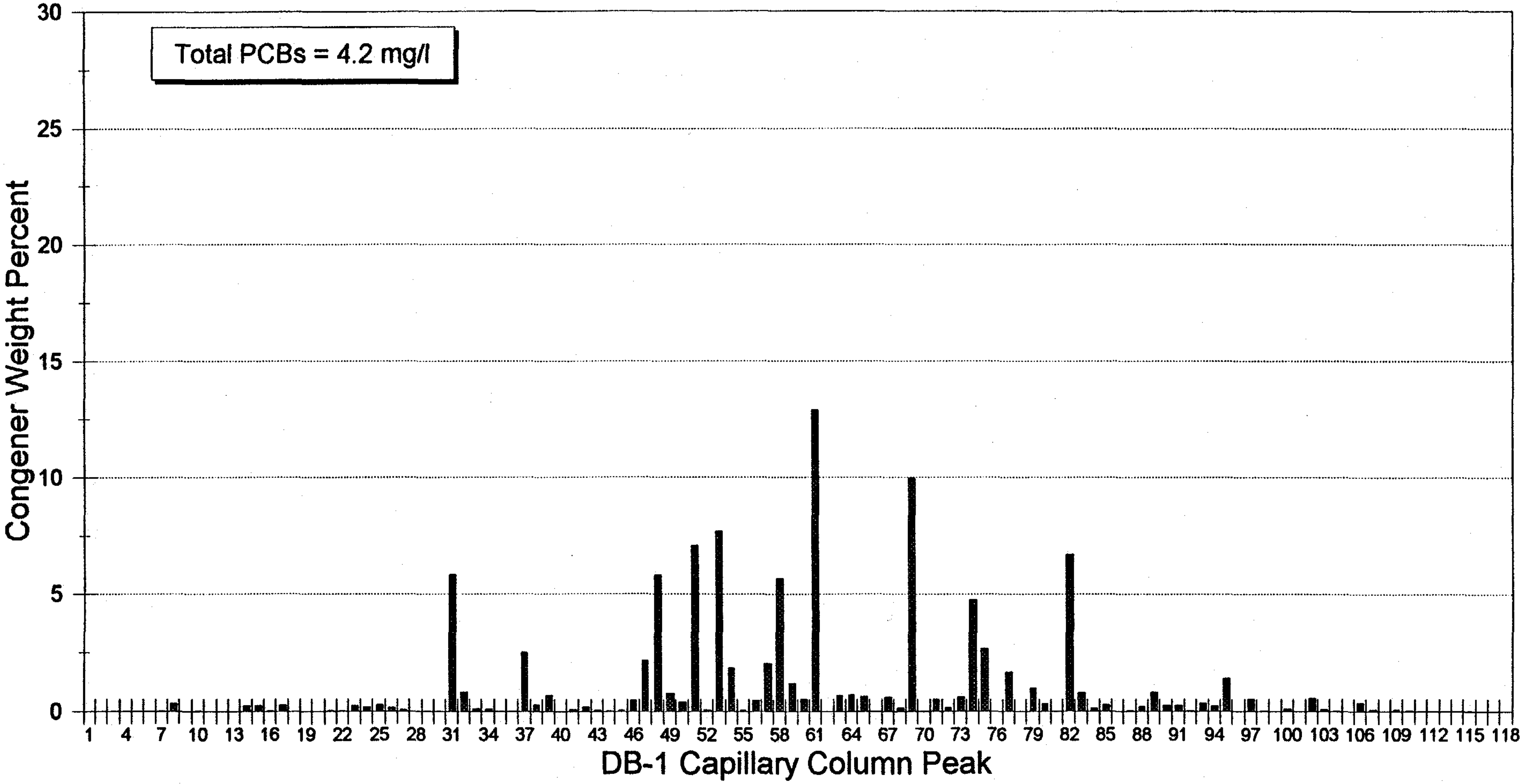
Note: Sample analyzed by Method NEA608CAP. Data has been adjusted only for calibration bias.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l. Original spike concentration = 3.96 mg/l.

General Electric Company Hudson River Project
Congener Weight Percent Distribution - Aroclor 1248 Analyzed 03/93



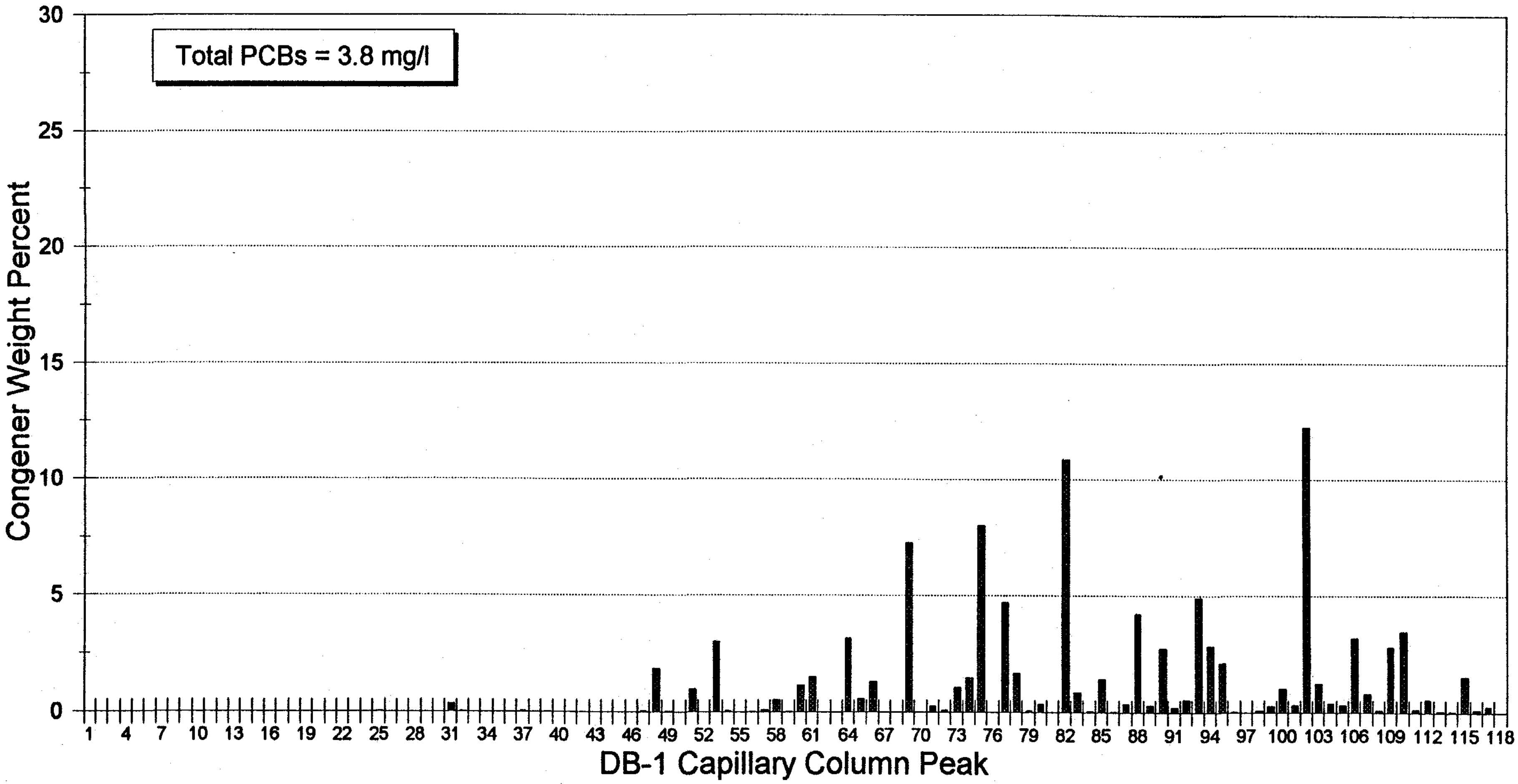
Note: Sample analyzed by Method NEA608CAP. Data has been adjusted only for calibration bias.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l. Original spike concentration = 4.35 mg/l.

General Electric Company Hudson River Project
Congener Weight Percent Distribution - Aroclor 1254 Analyzed 03/93



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted only for calibration bias.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l. Original spike concentration = 3.98 mg/l.

General Electric Company Hudson River Project
Congener Weight Percent Distribution - Aroclor 1260 Analyzed 03/93

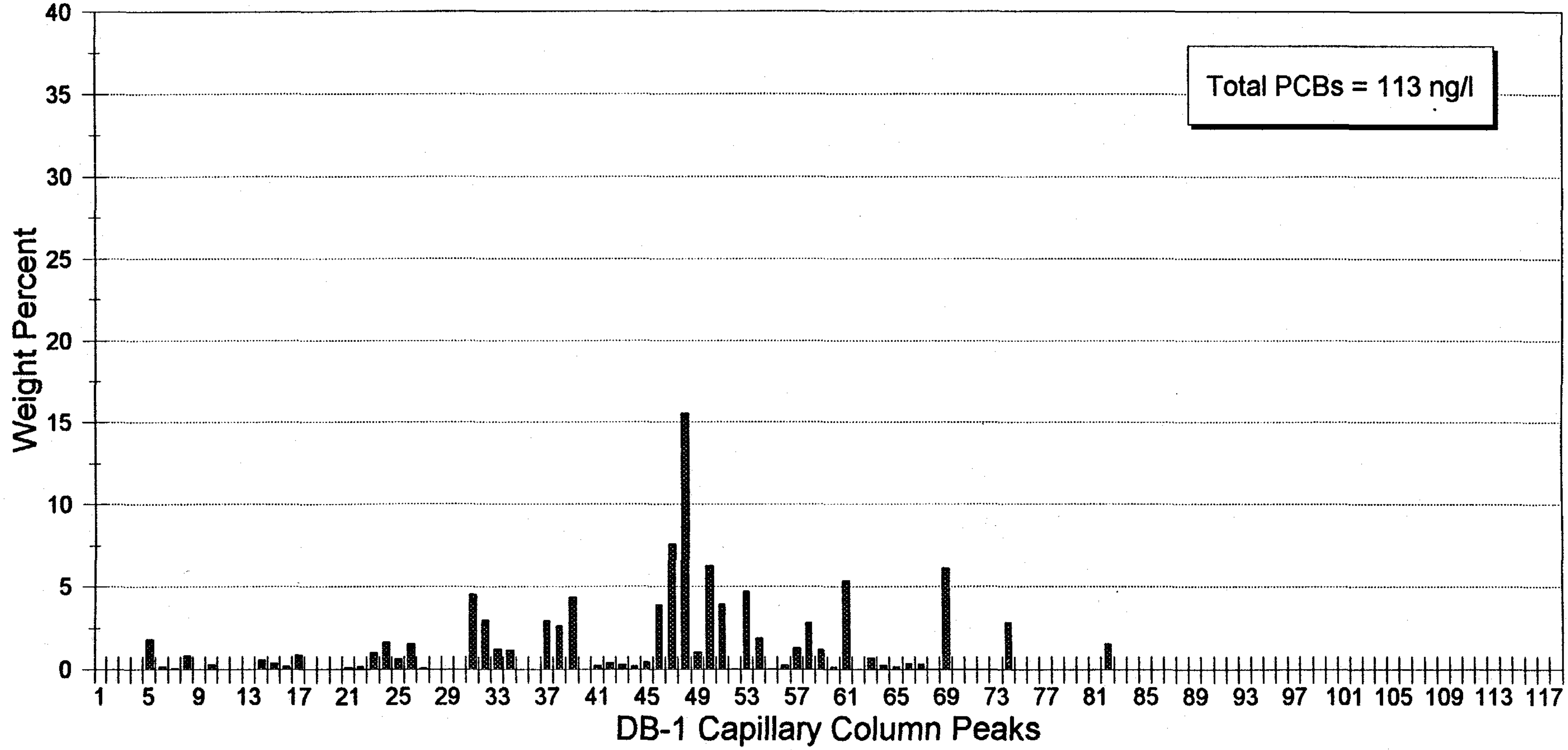


Note: Sample analyzed by Method NEA608CAP. Data has been adjusted only for calibration bias.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l. Original spike concentration = 3.97 mg/l.

Field Samples

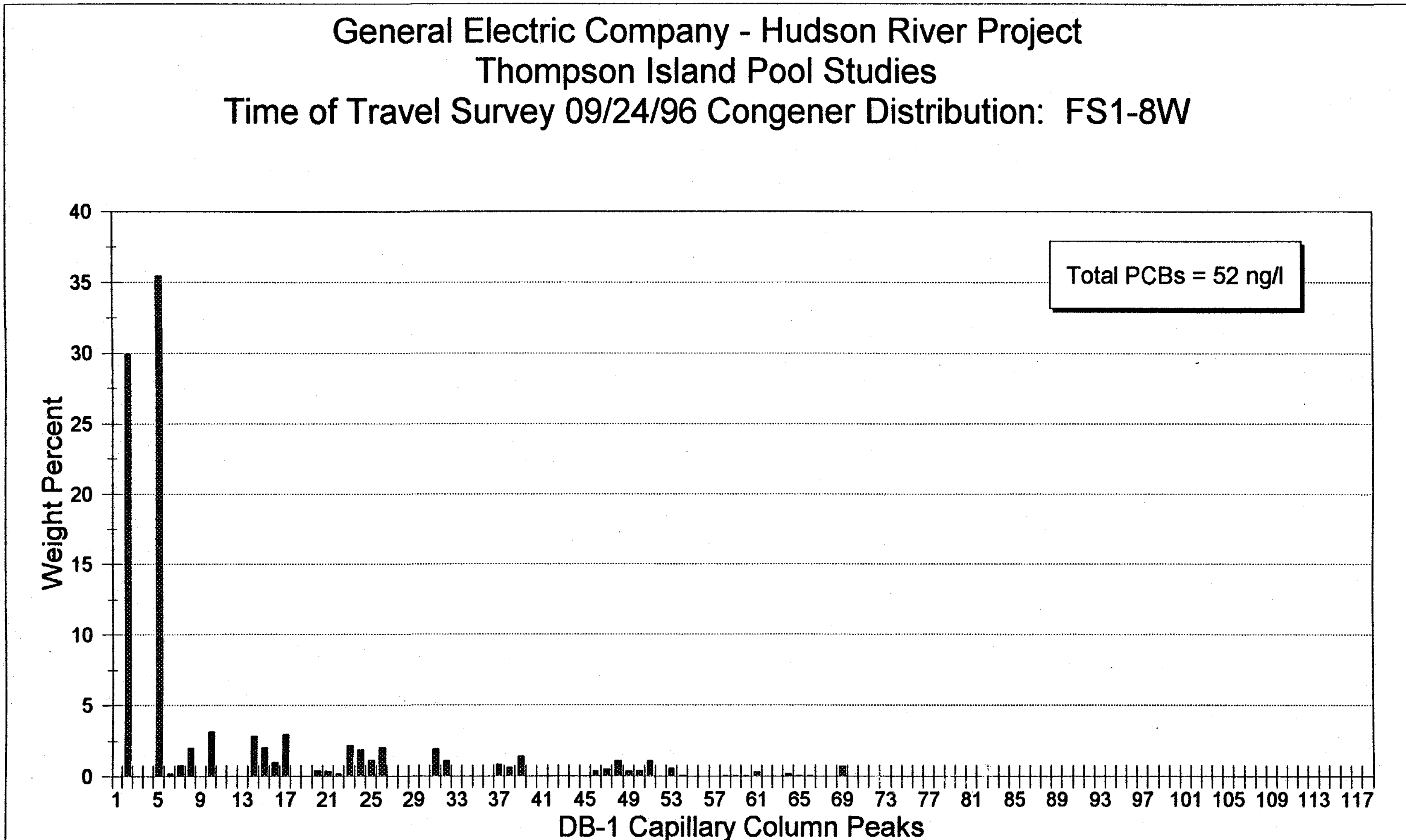
Thompson Island Pool
Time of Travel Survey
September 24, 1996

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-8C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

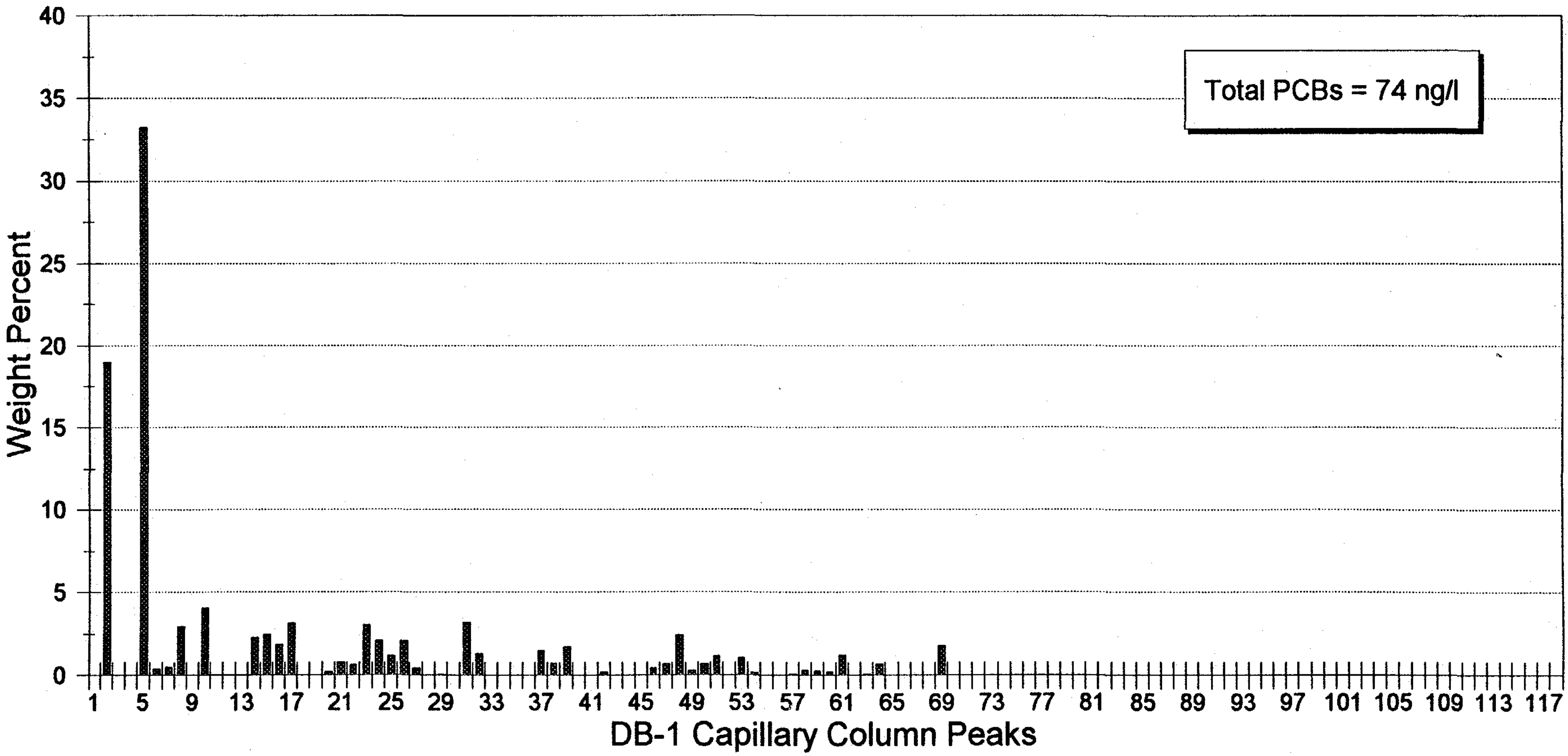
310900



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310901

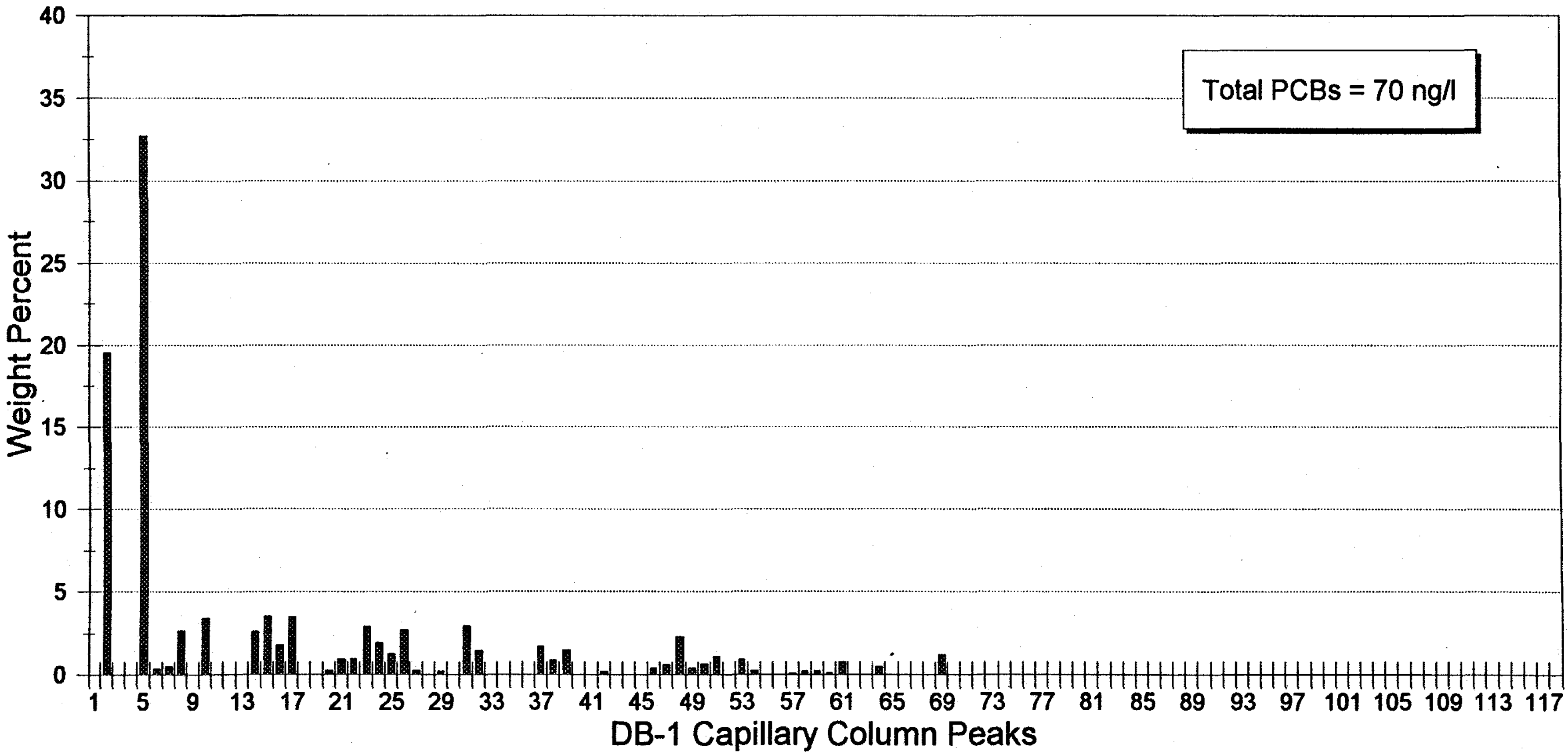
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-12E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310902

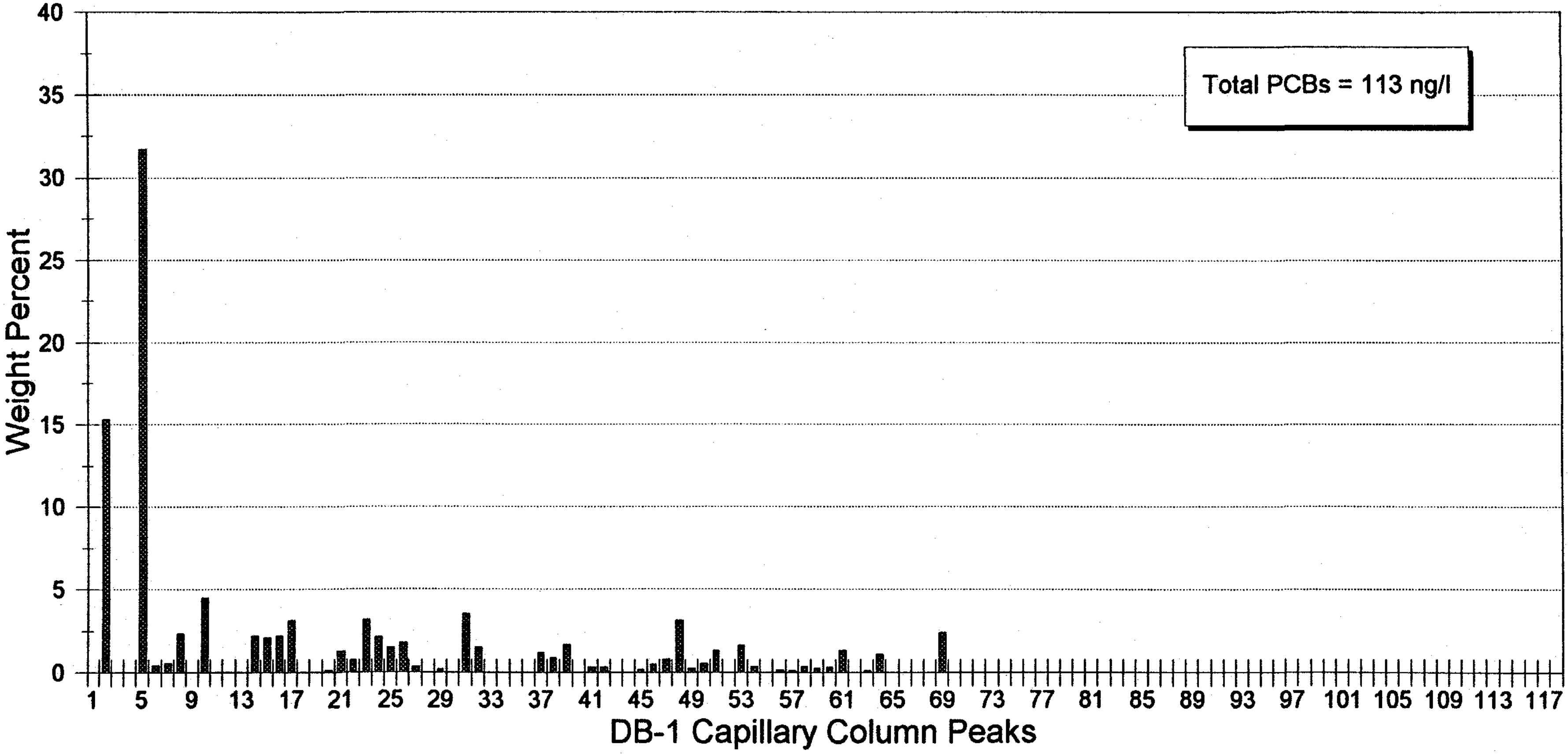
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-12E-Dup



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310903

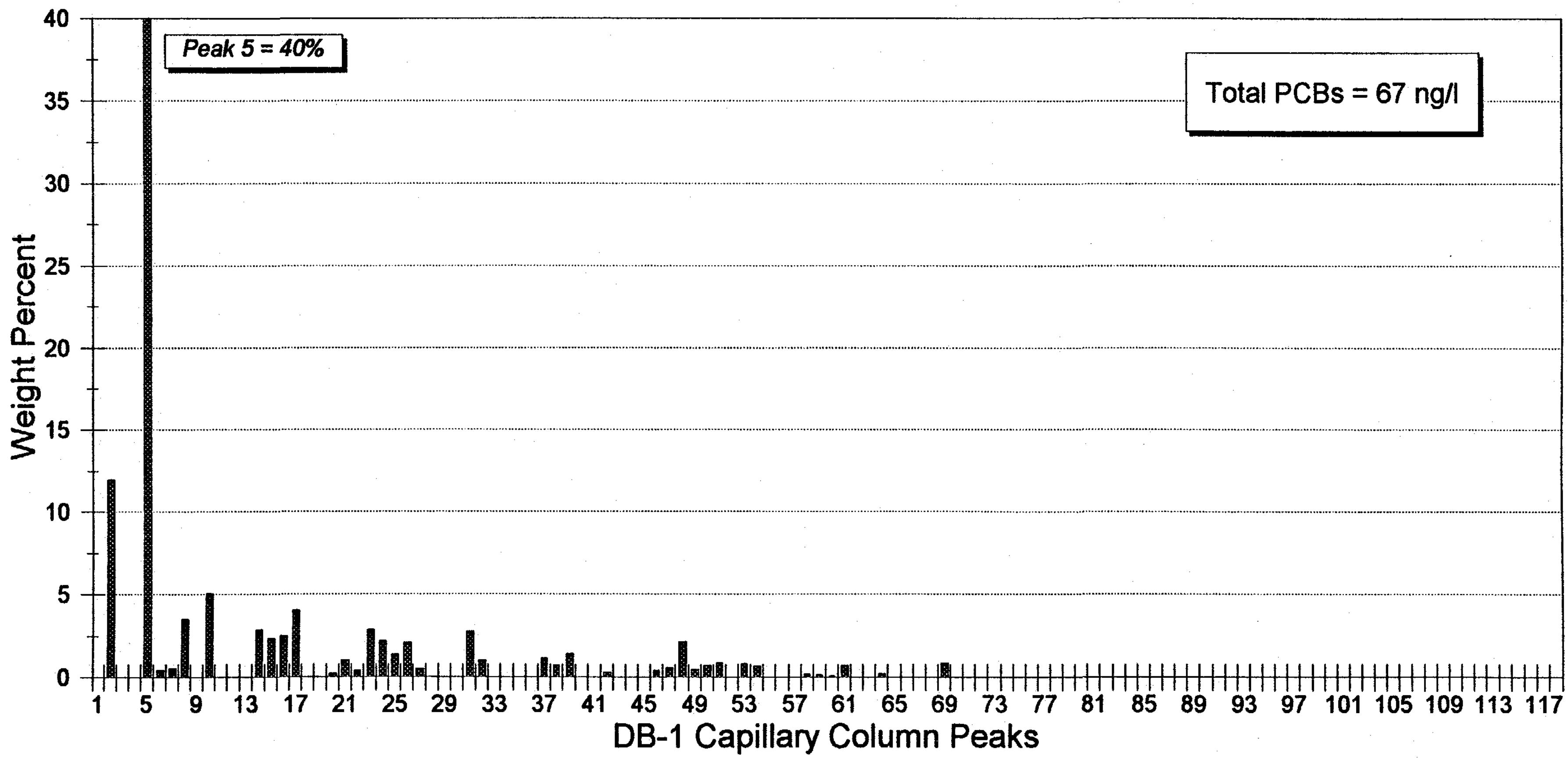
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-15E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310904

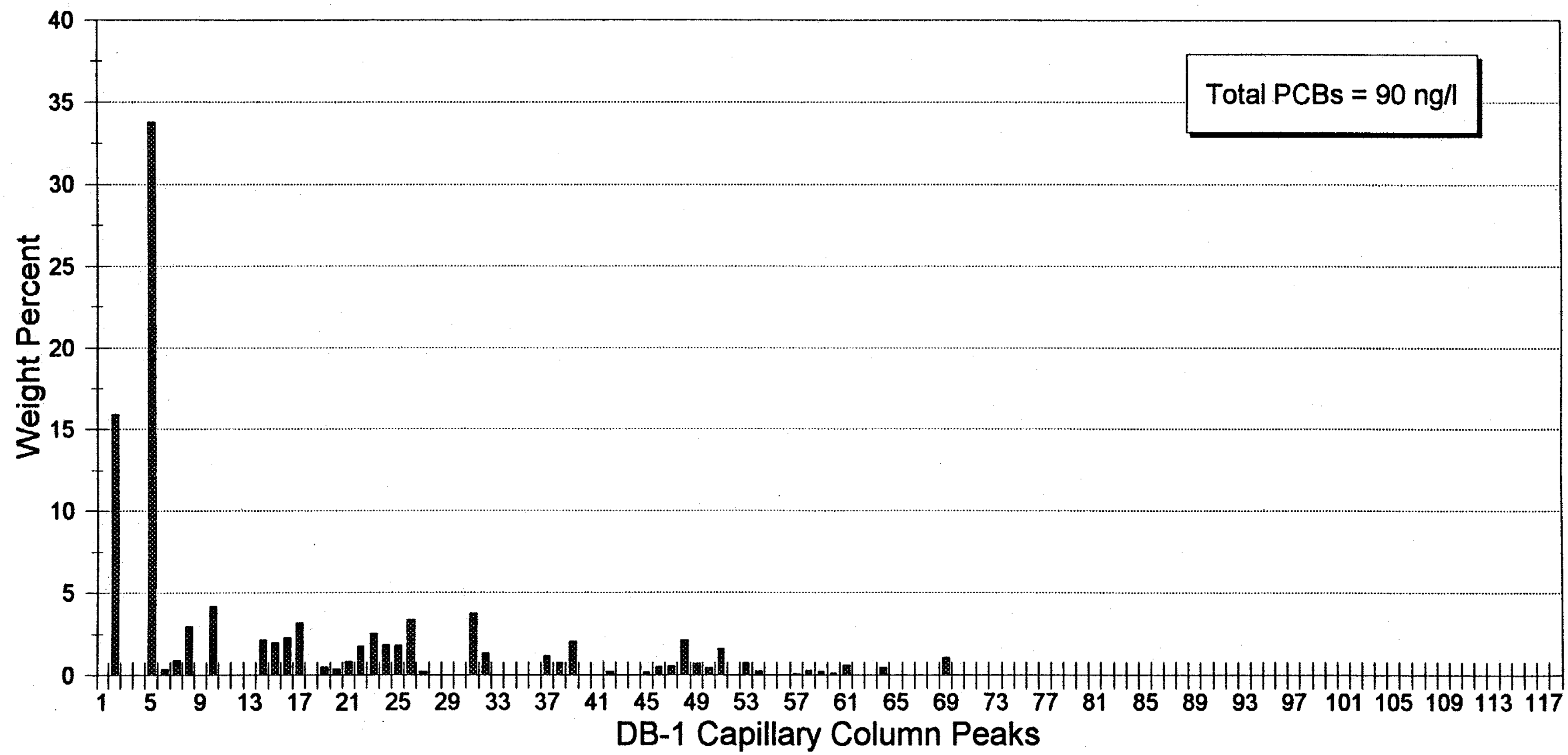
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-16C



310905

Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

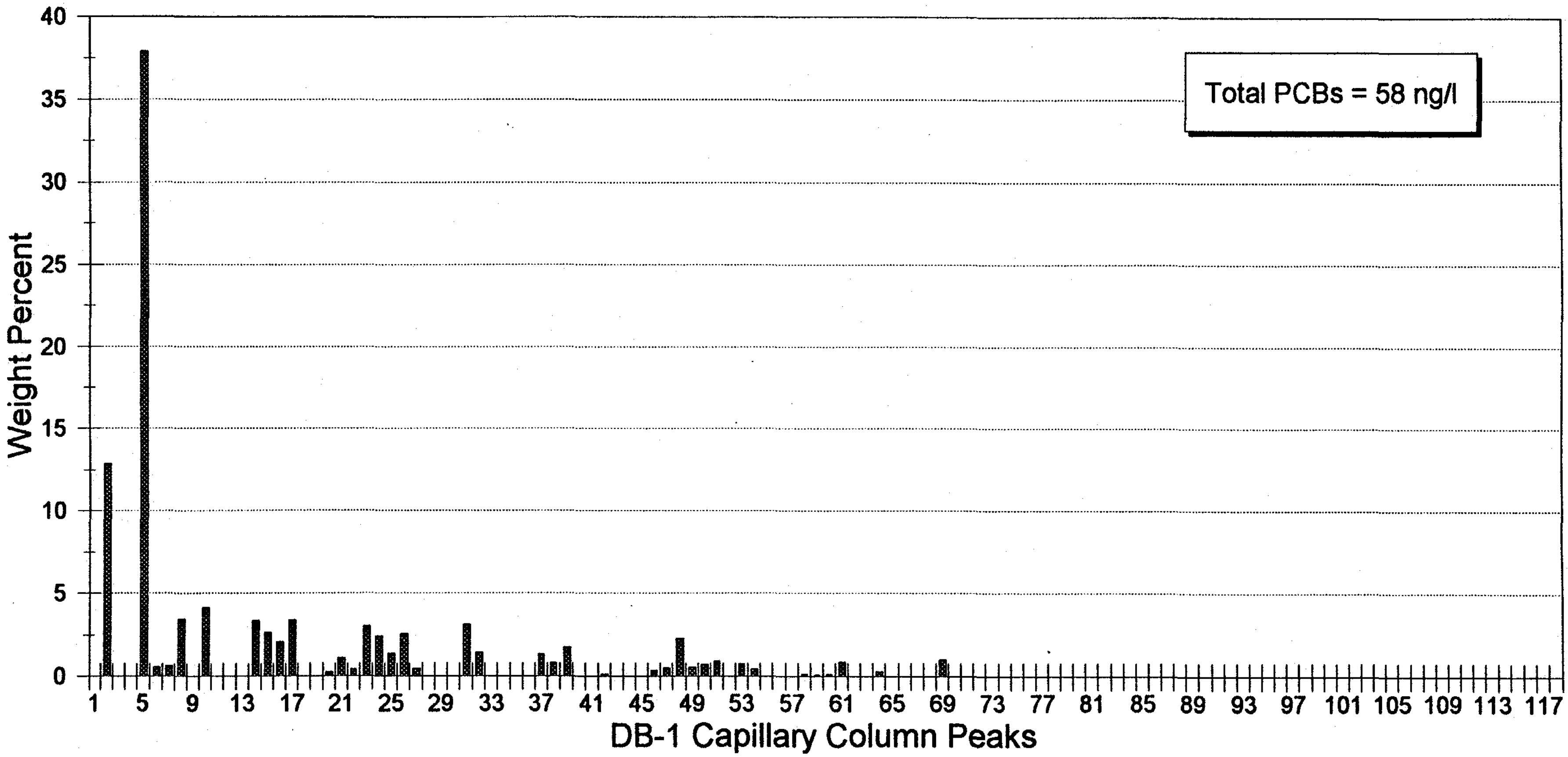
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-16E



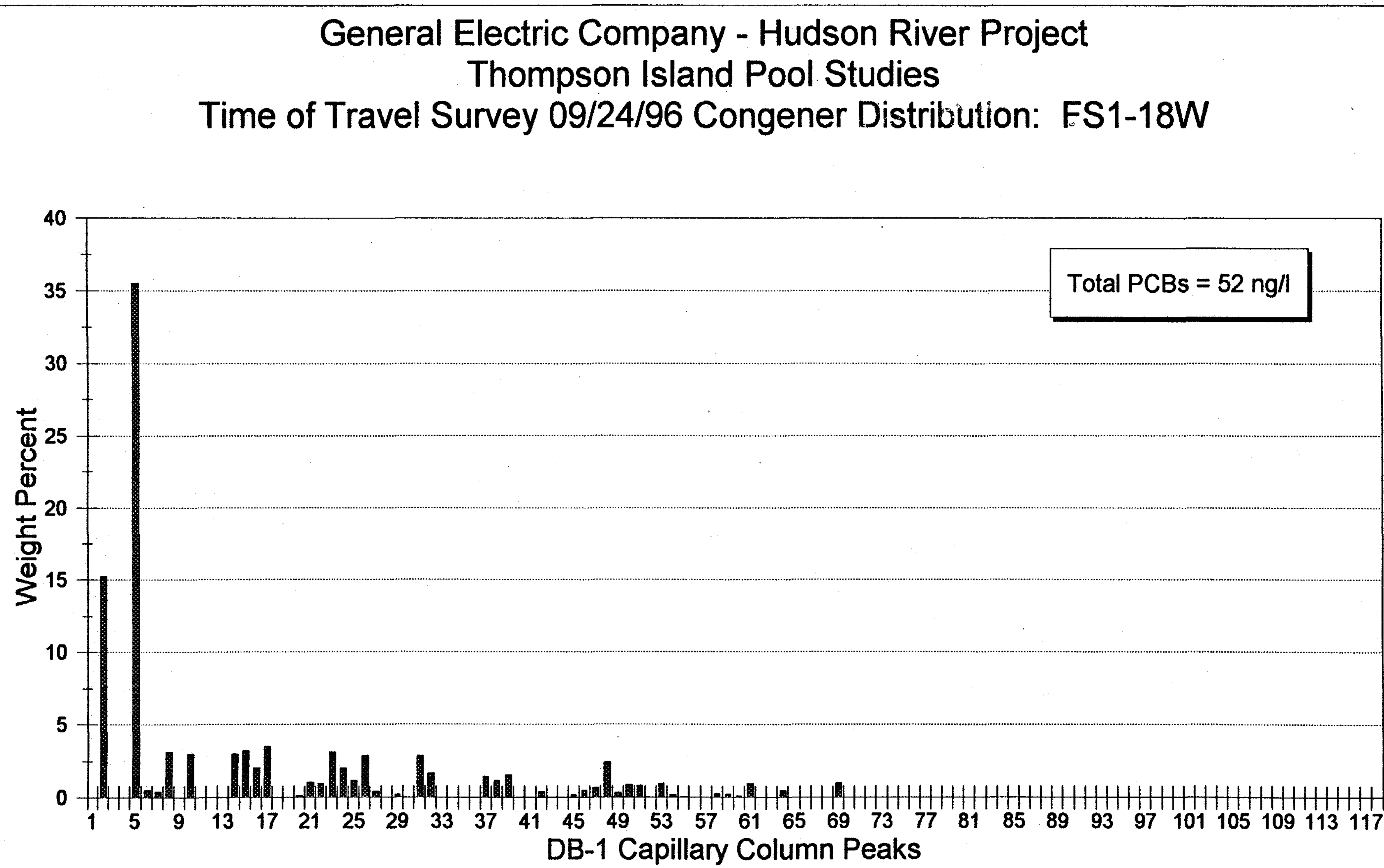
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310906

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-17C



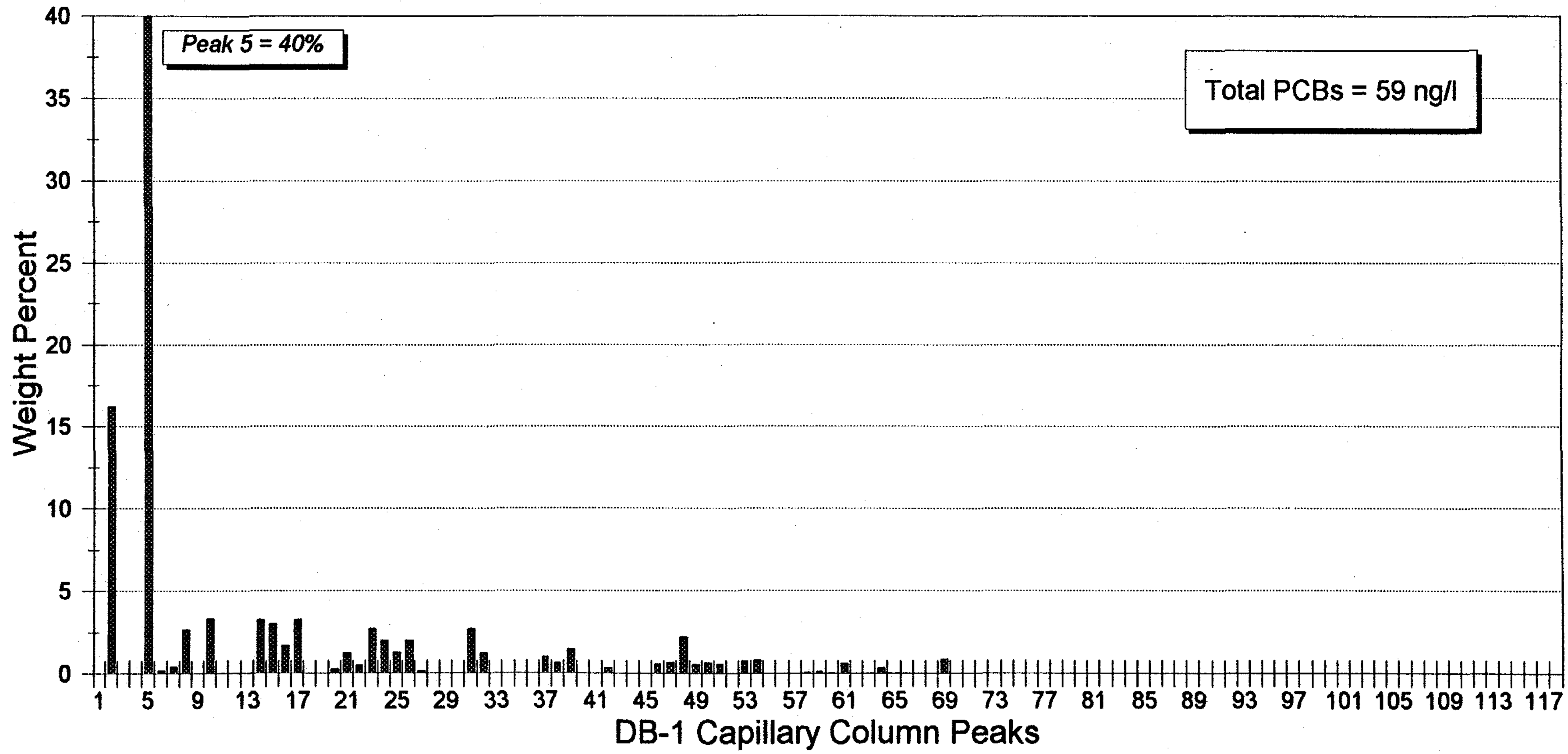
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

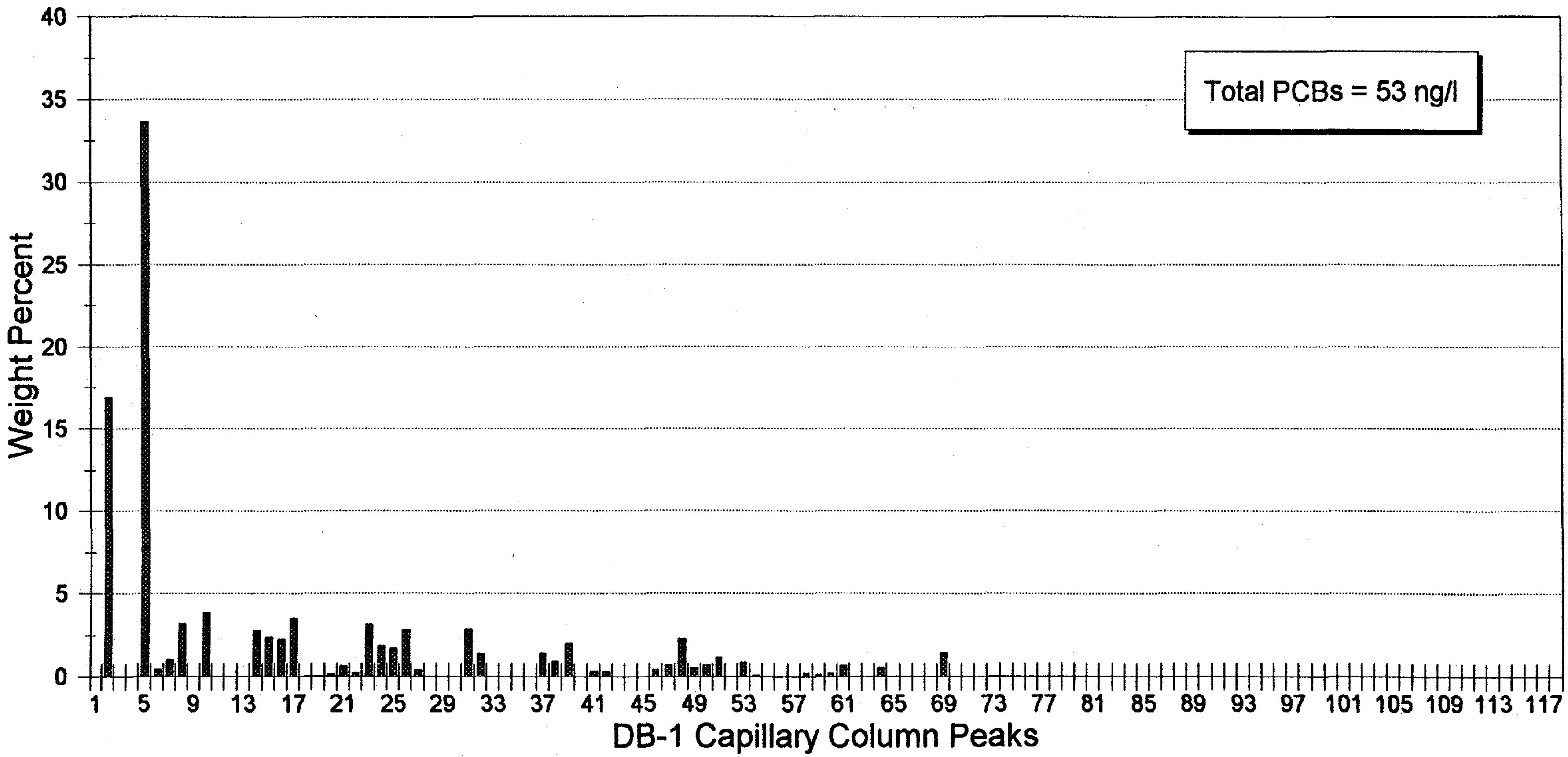
310908

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-18C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/24/96 Congener Distribution: FS1-18E

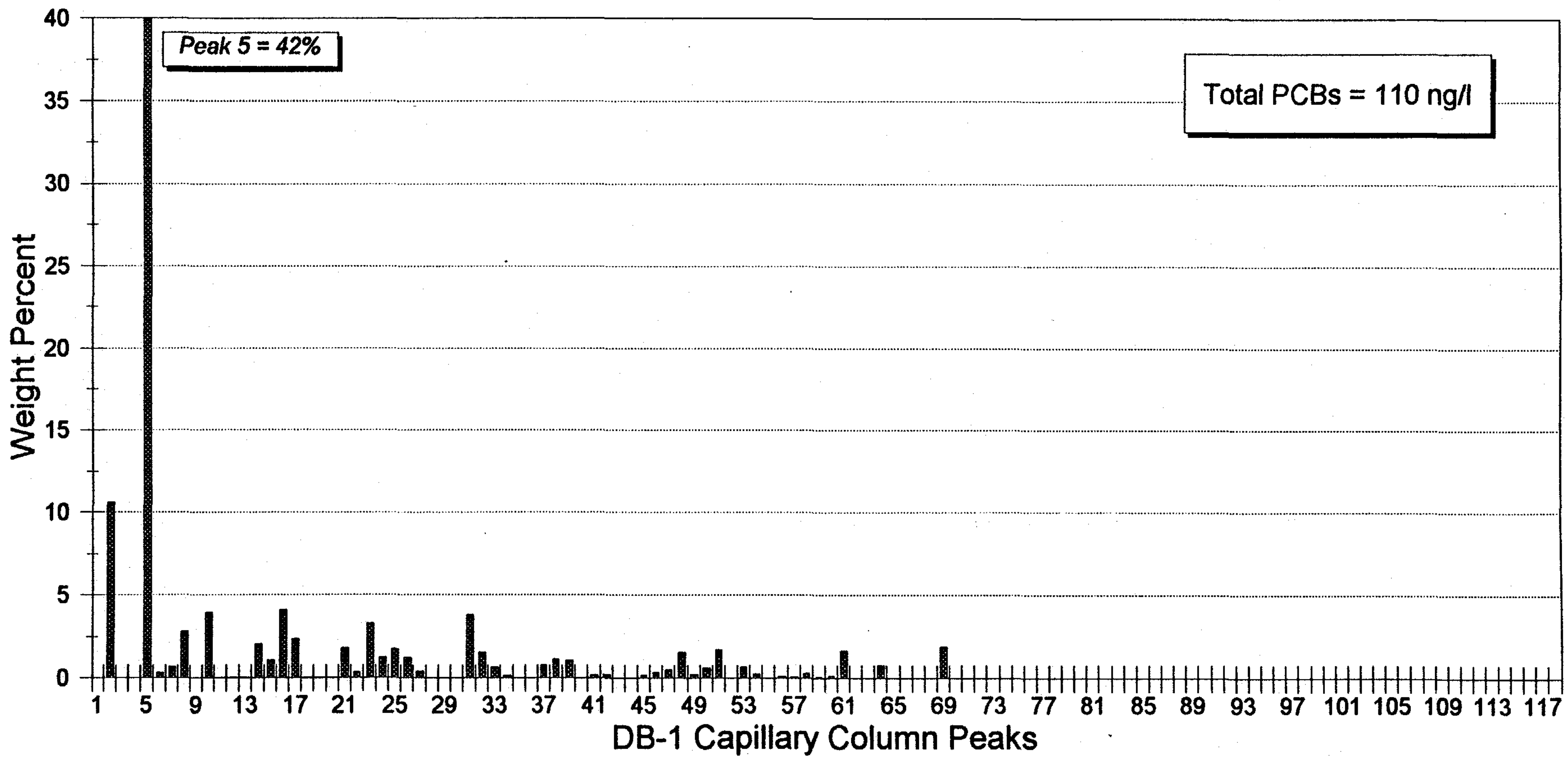


Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310910

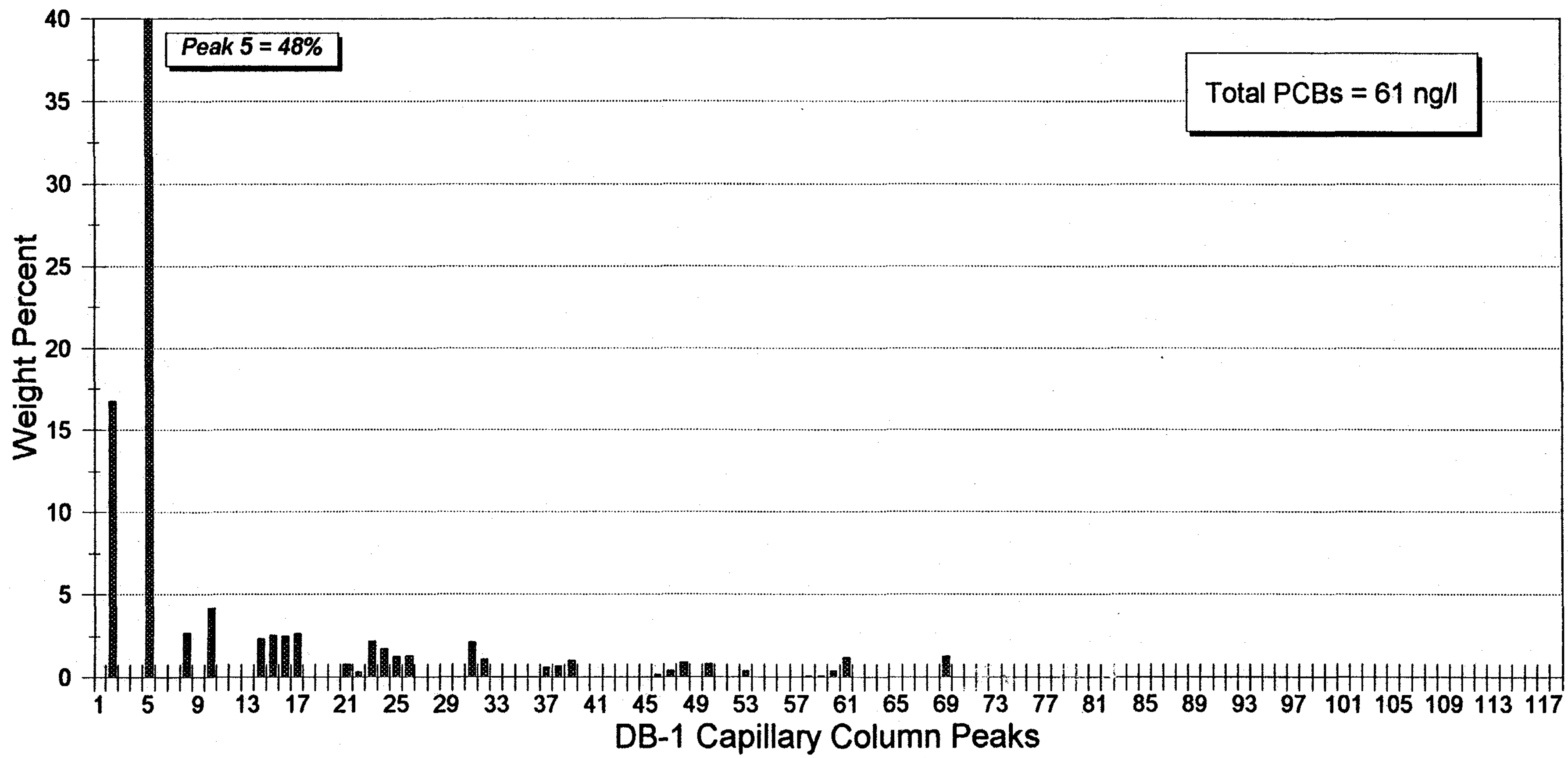
Thompson Island Pool
Time of Travel Survey
September 25, 1996

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-12E

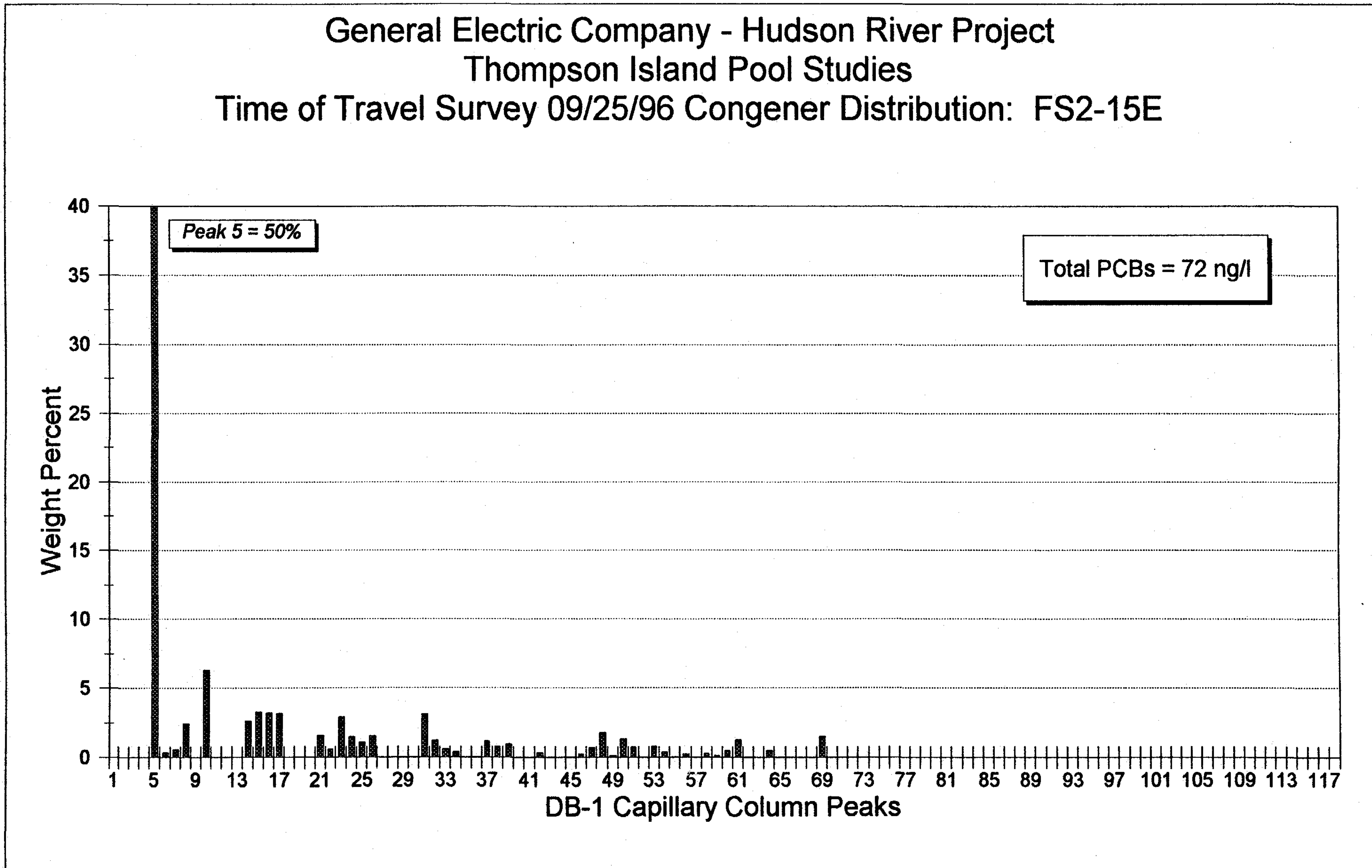


Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-14E



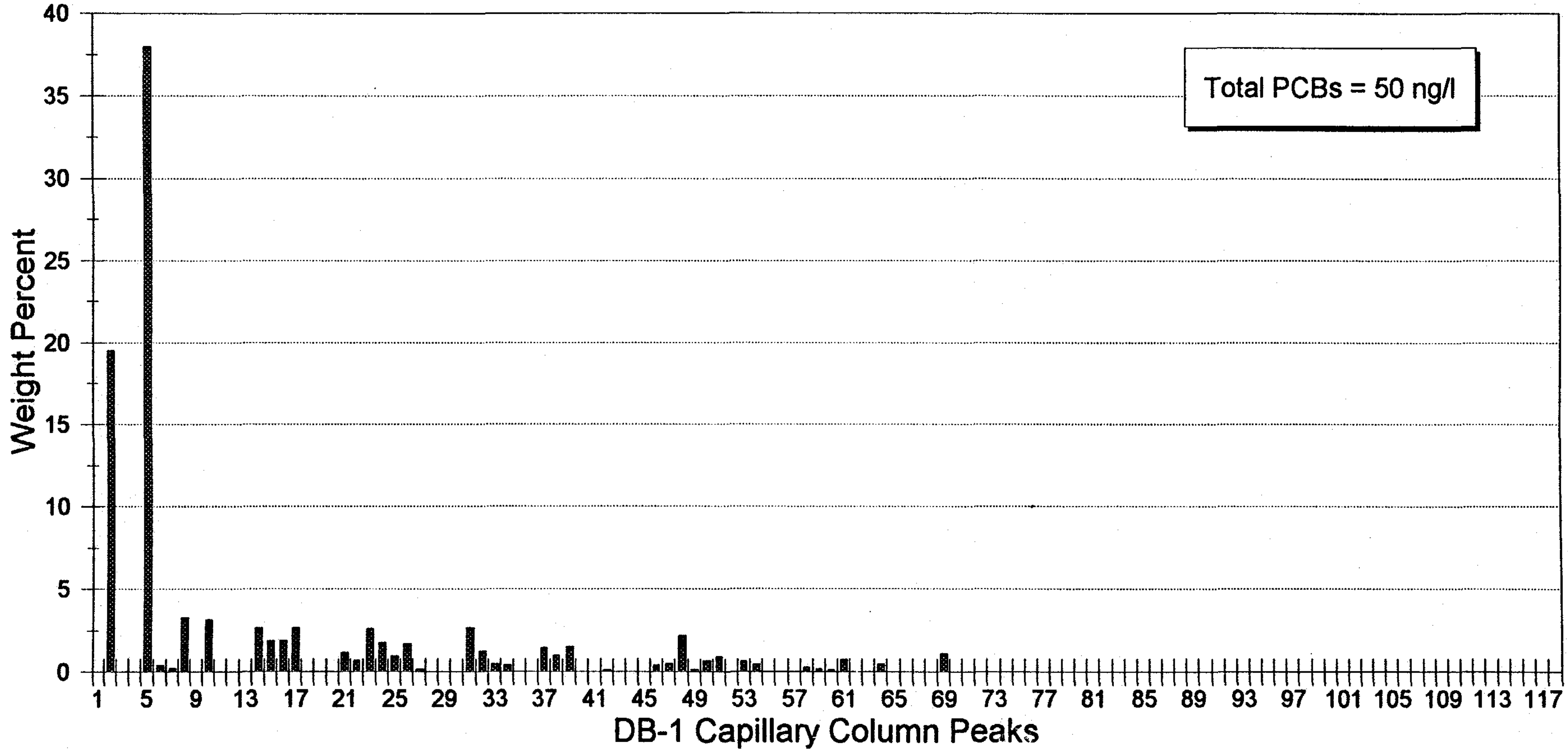
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

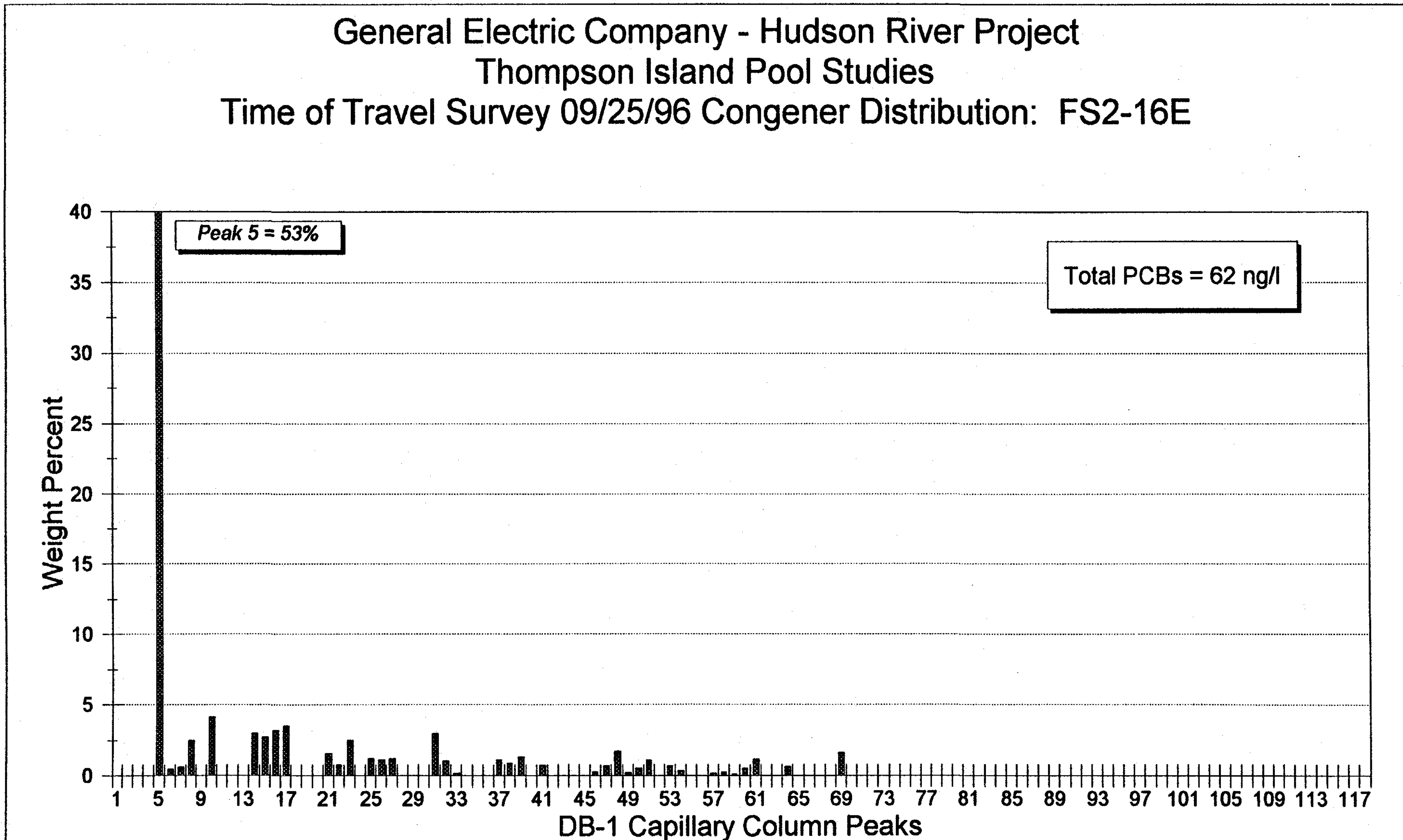
310914

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-16C



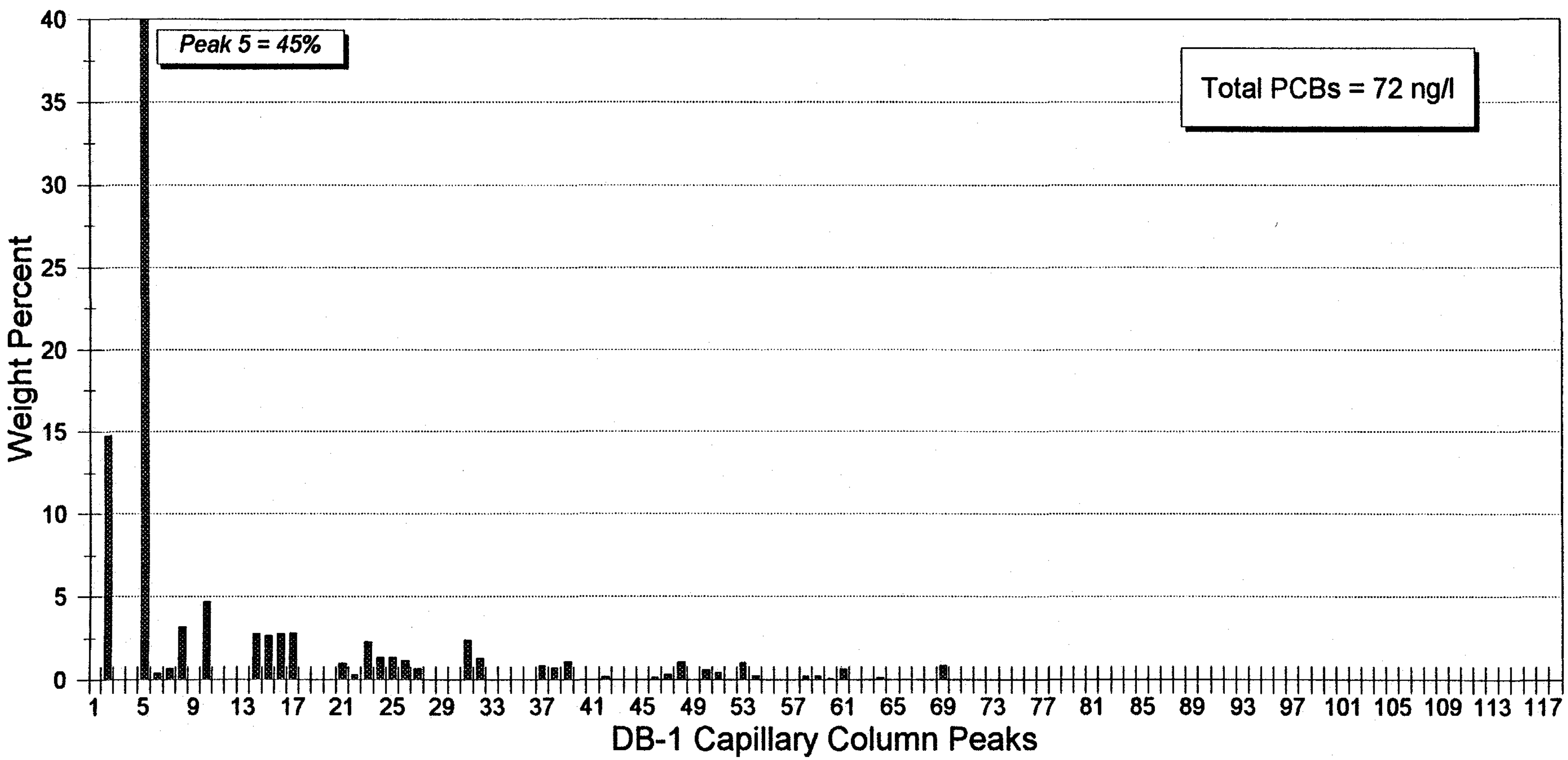
310915

Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)



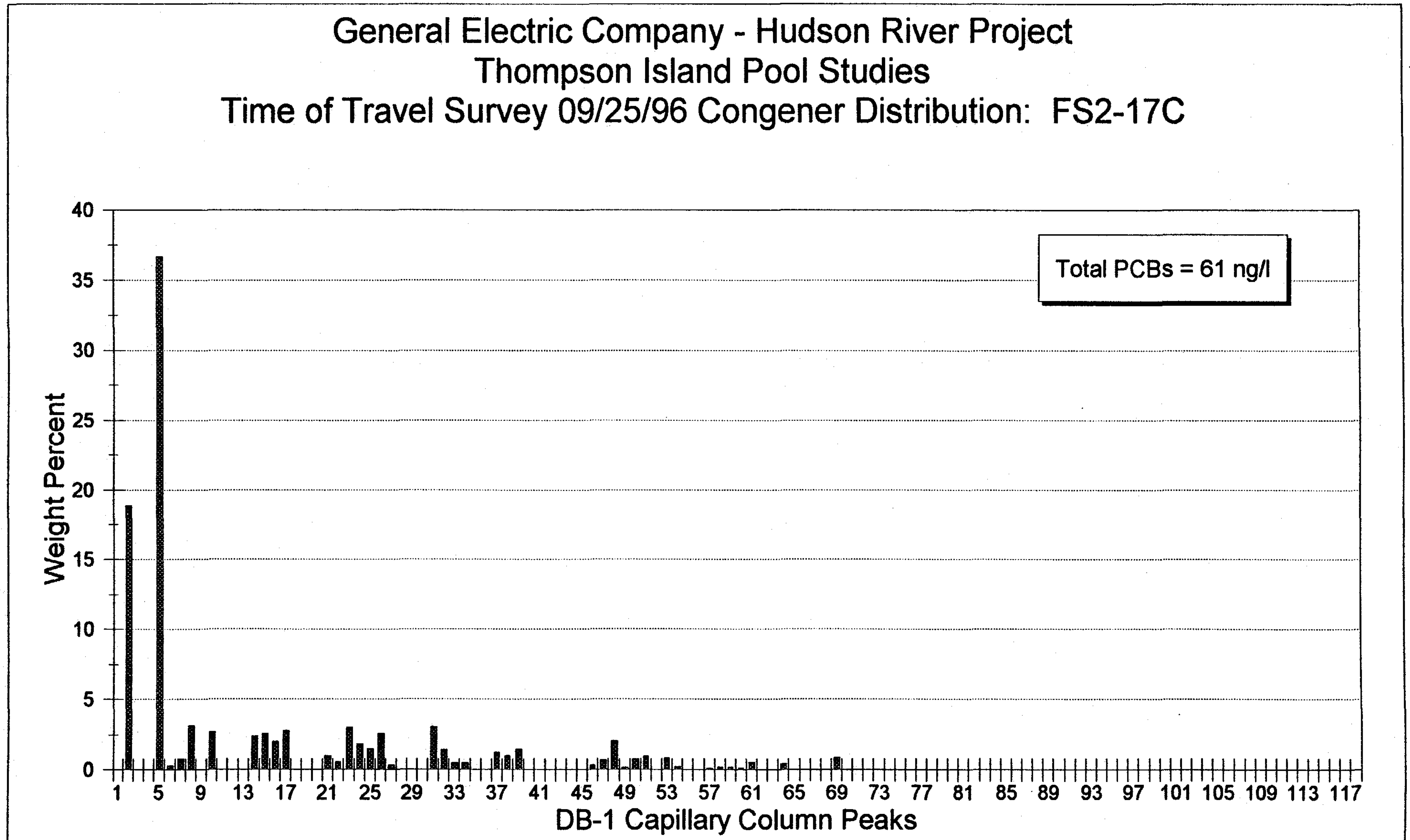
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-16E-Dup



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

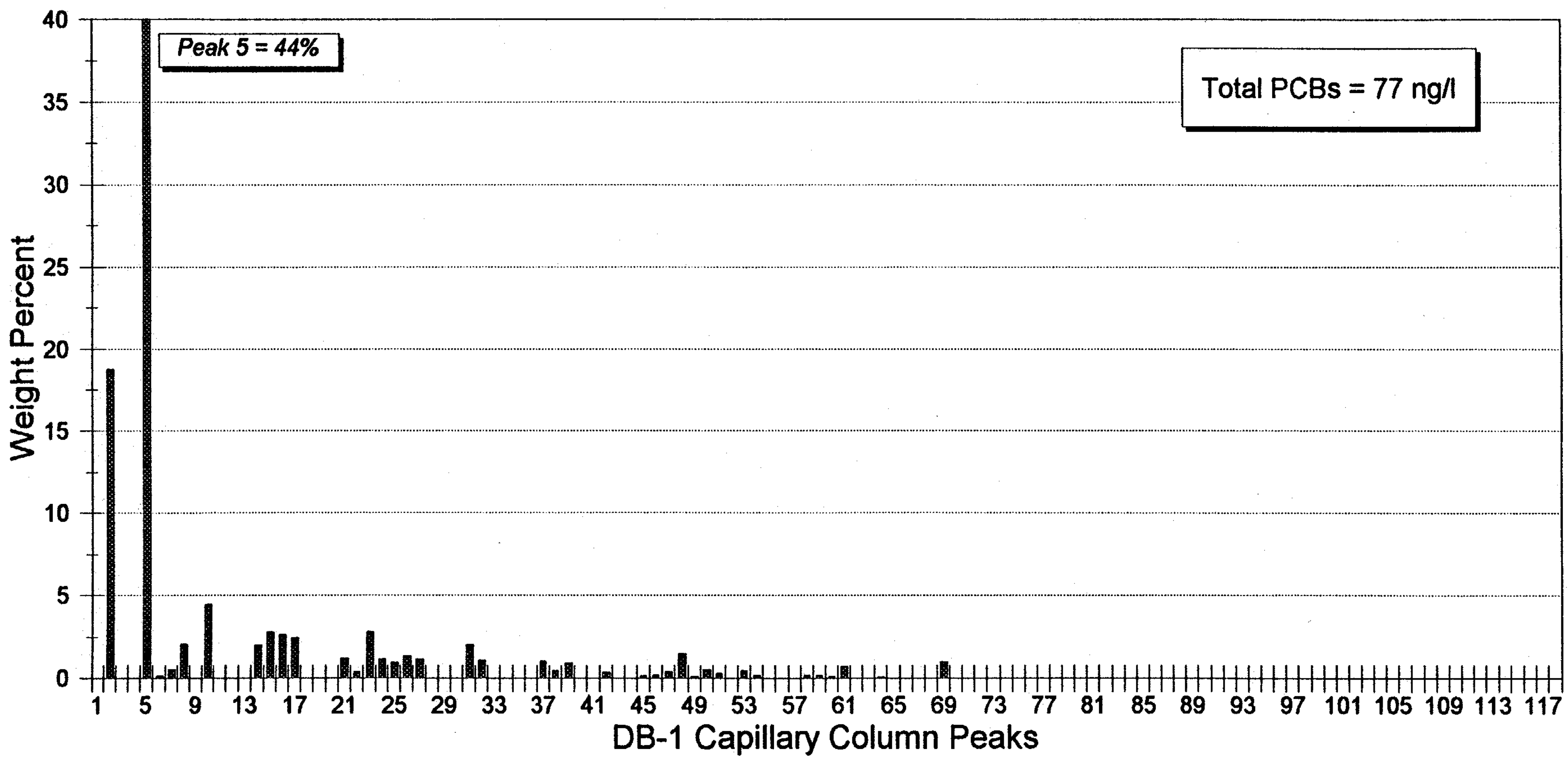
310917



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310918

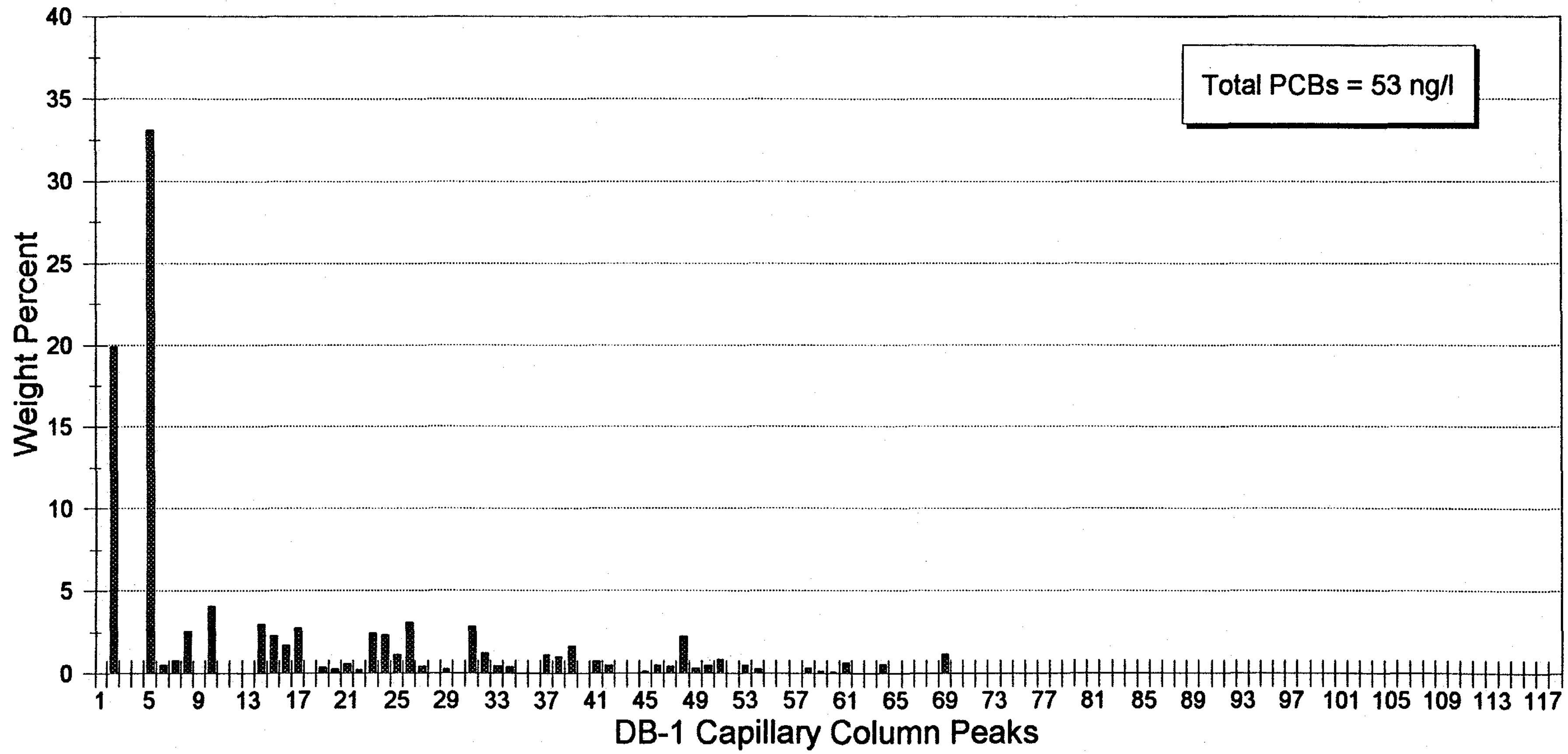
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-17E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310919

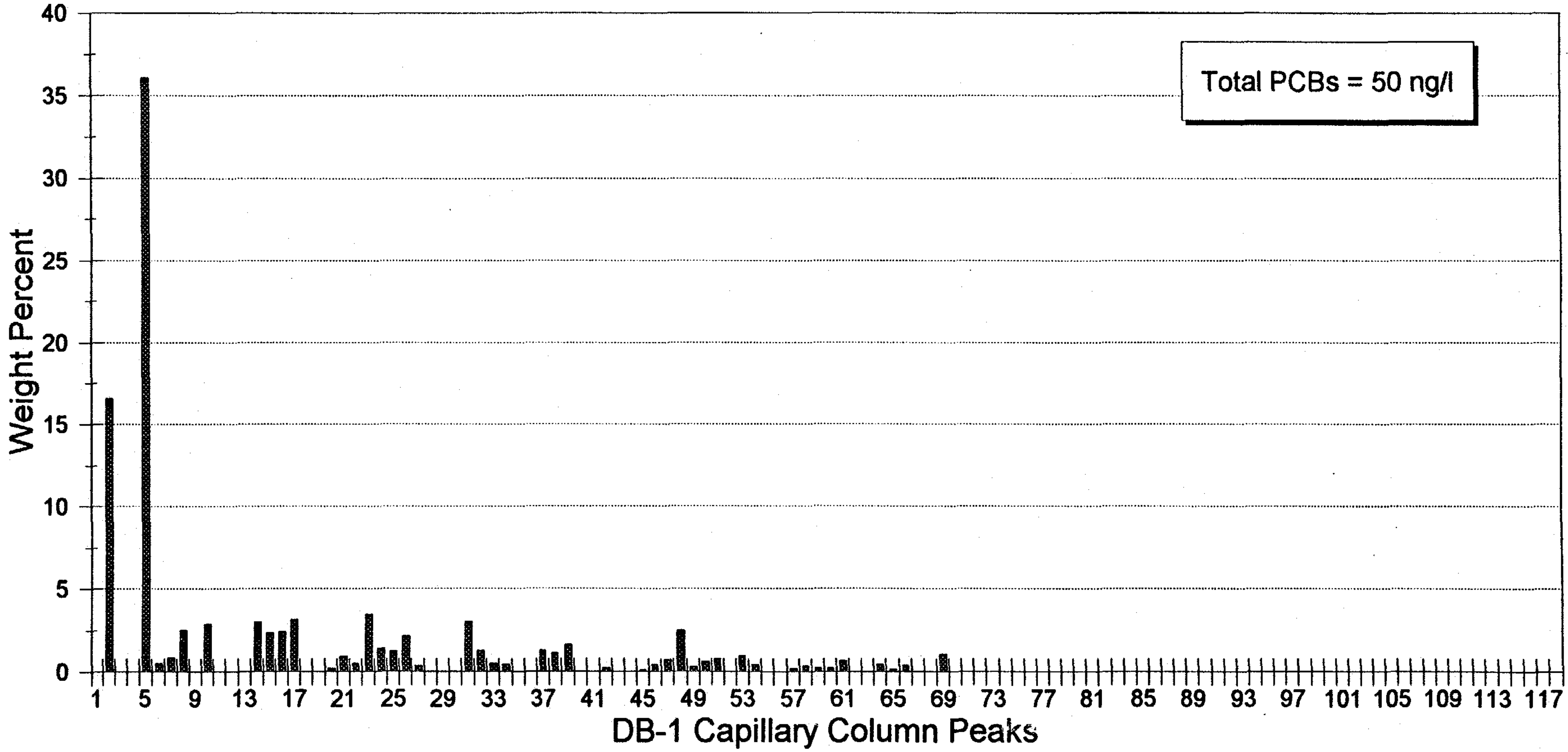
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-18W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

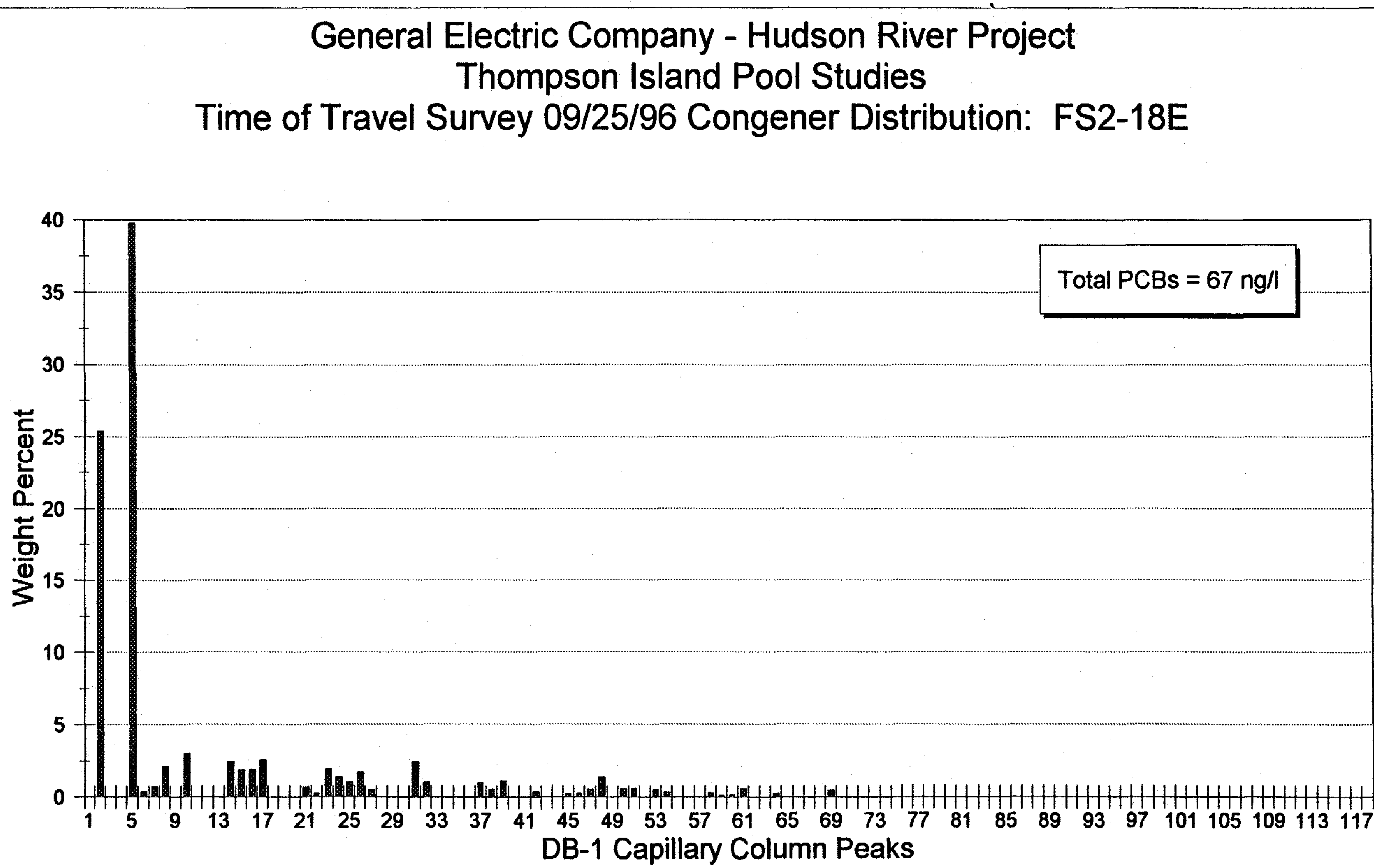
310920

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 09/25/96 Congener Distribution: FS2-18C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310921

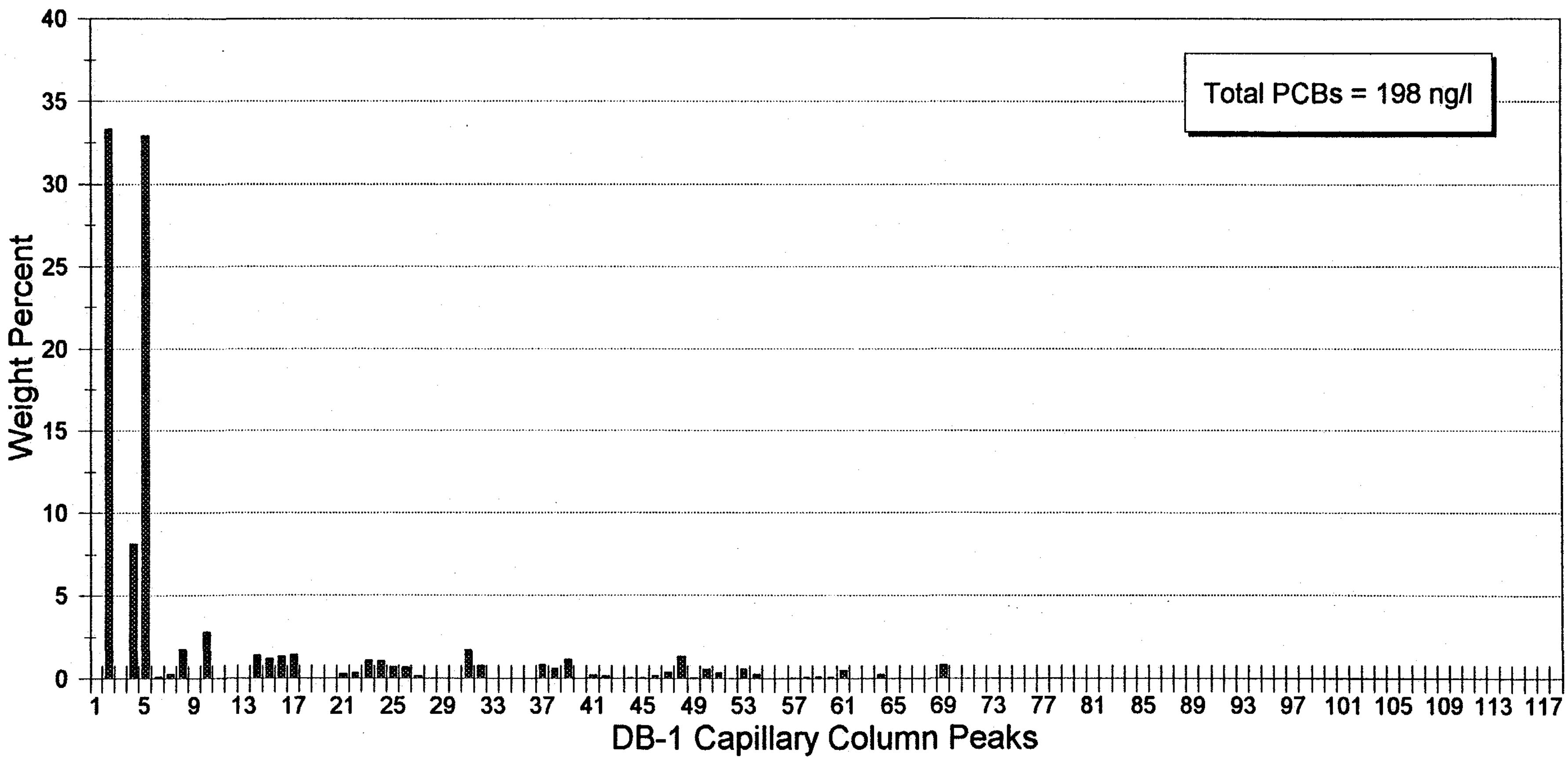


Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310922

Thompson Island Pool
Time of Travel Survey
June 4, 1997

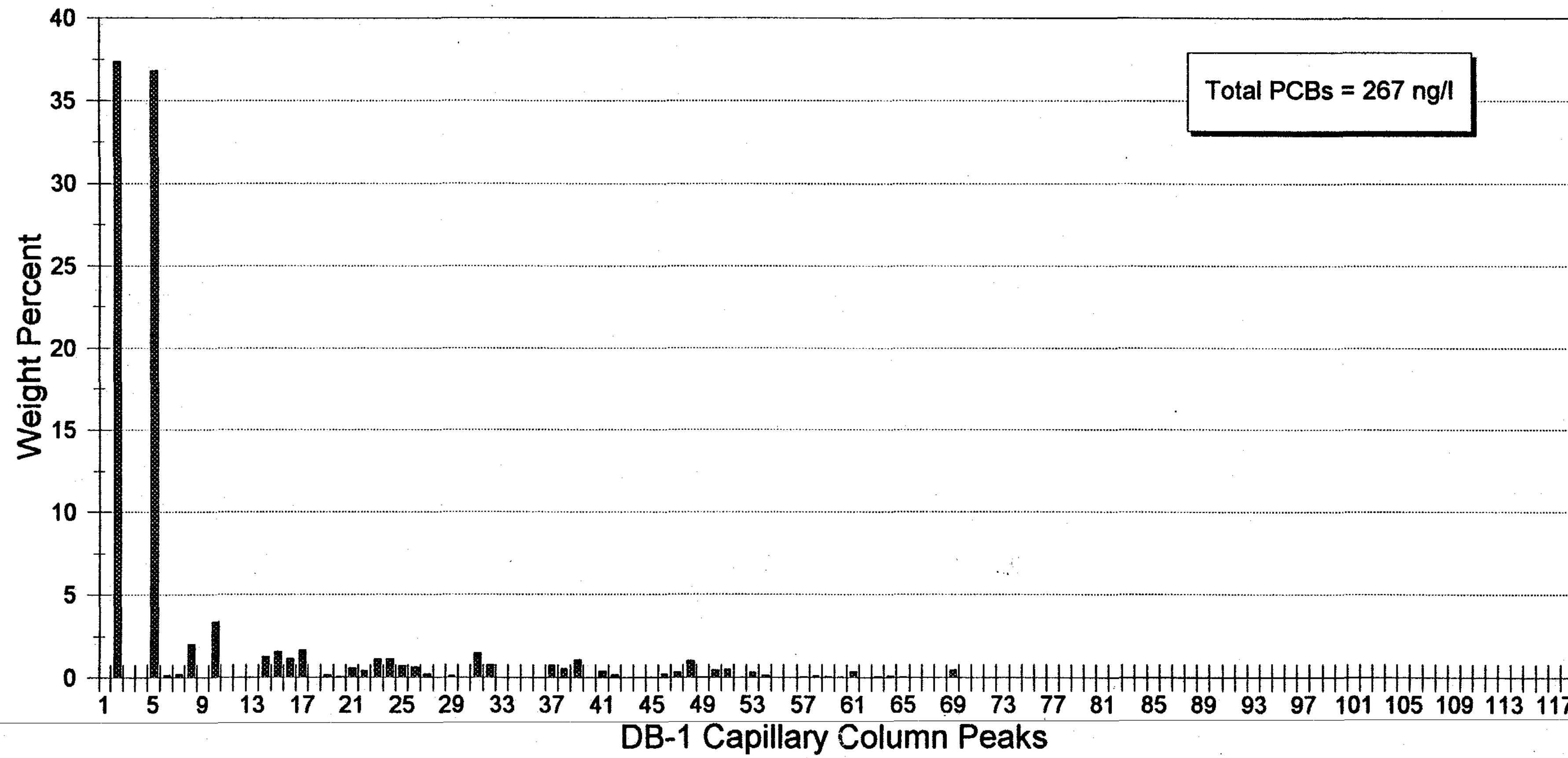
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/04/97 Congener Distribution: FS3-11BE



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310924

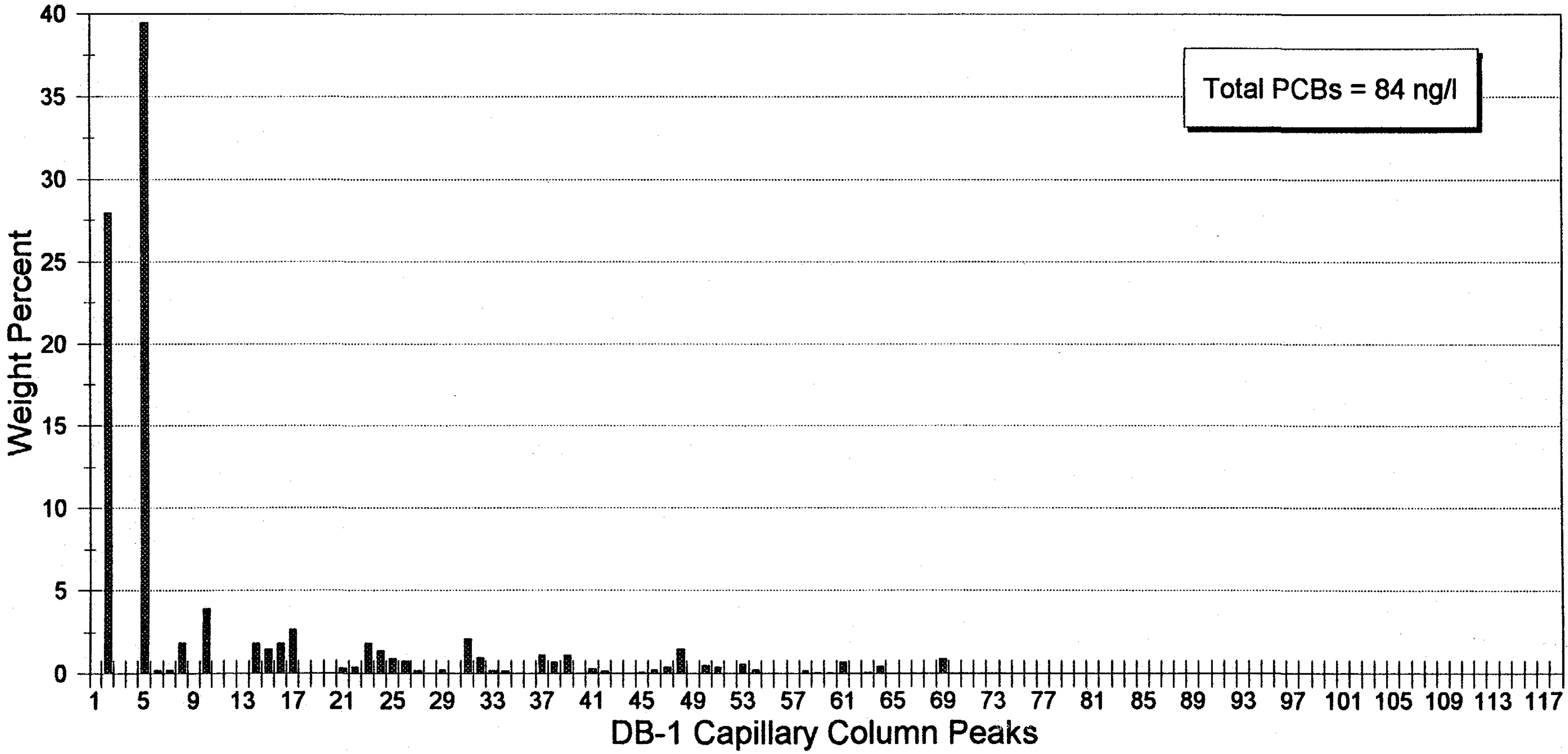
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/04/97 Congener Distribution: FS3-12E



310925

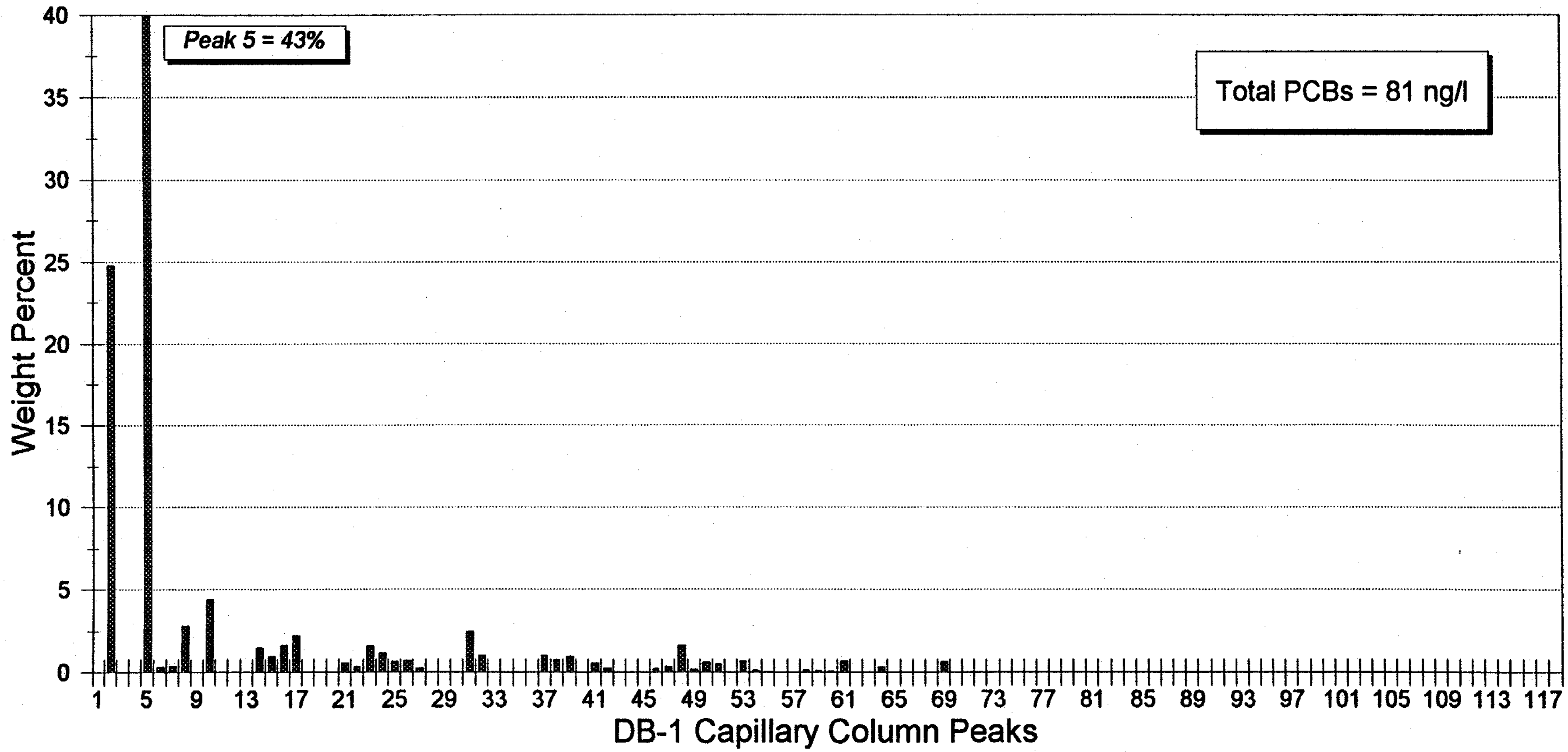
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/04/97 Congener Distribution: FS3-18C



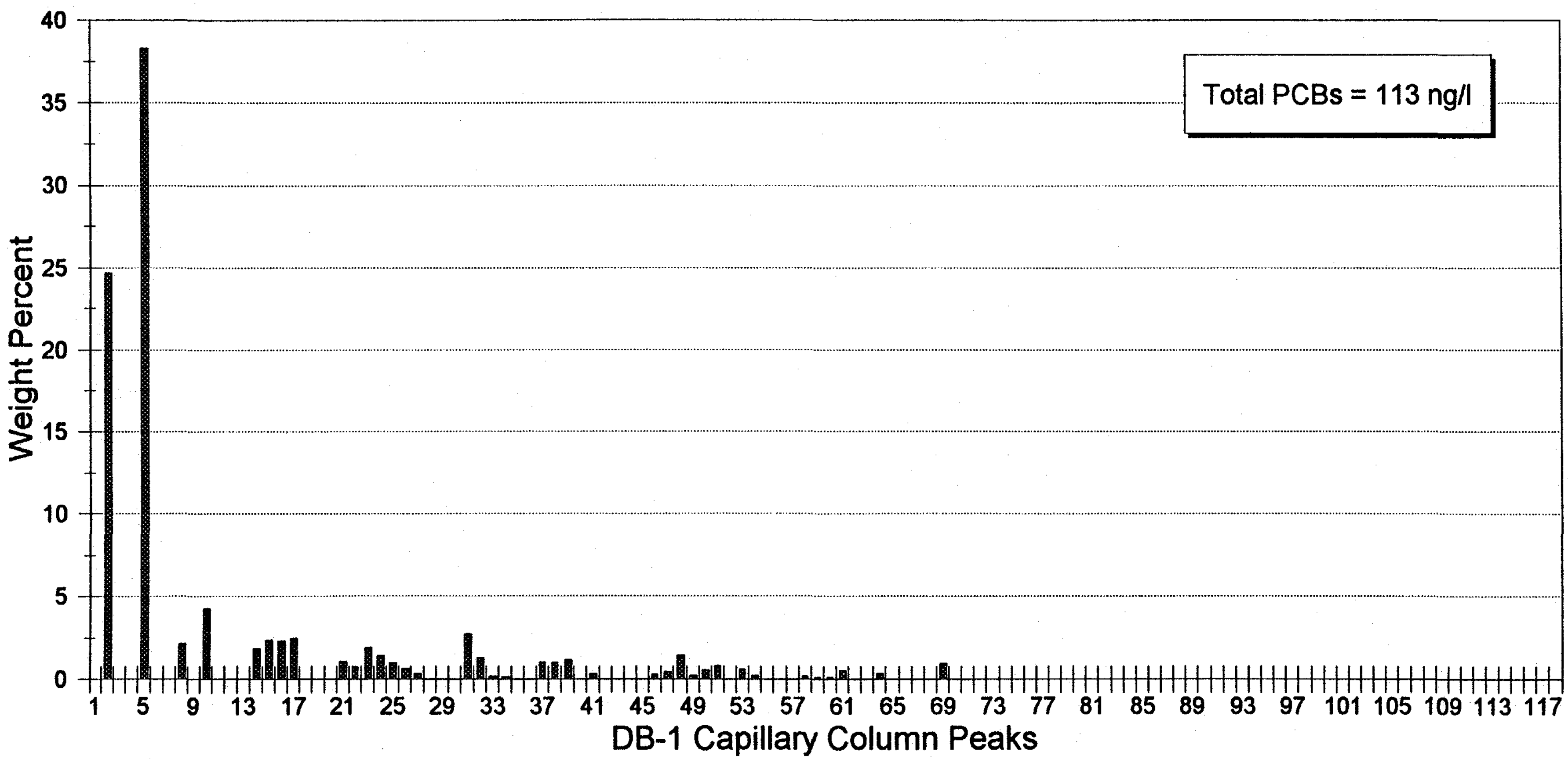
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/04/97 Congener Distribution: FS3-18C-DUP



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/04/97 Congener Distribution: HRM 188.5W

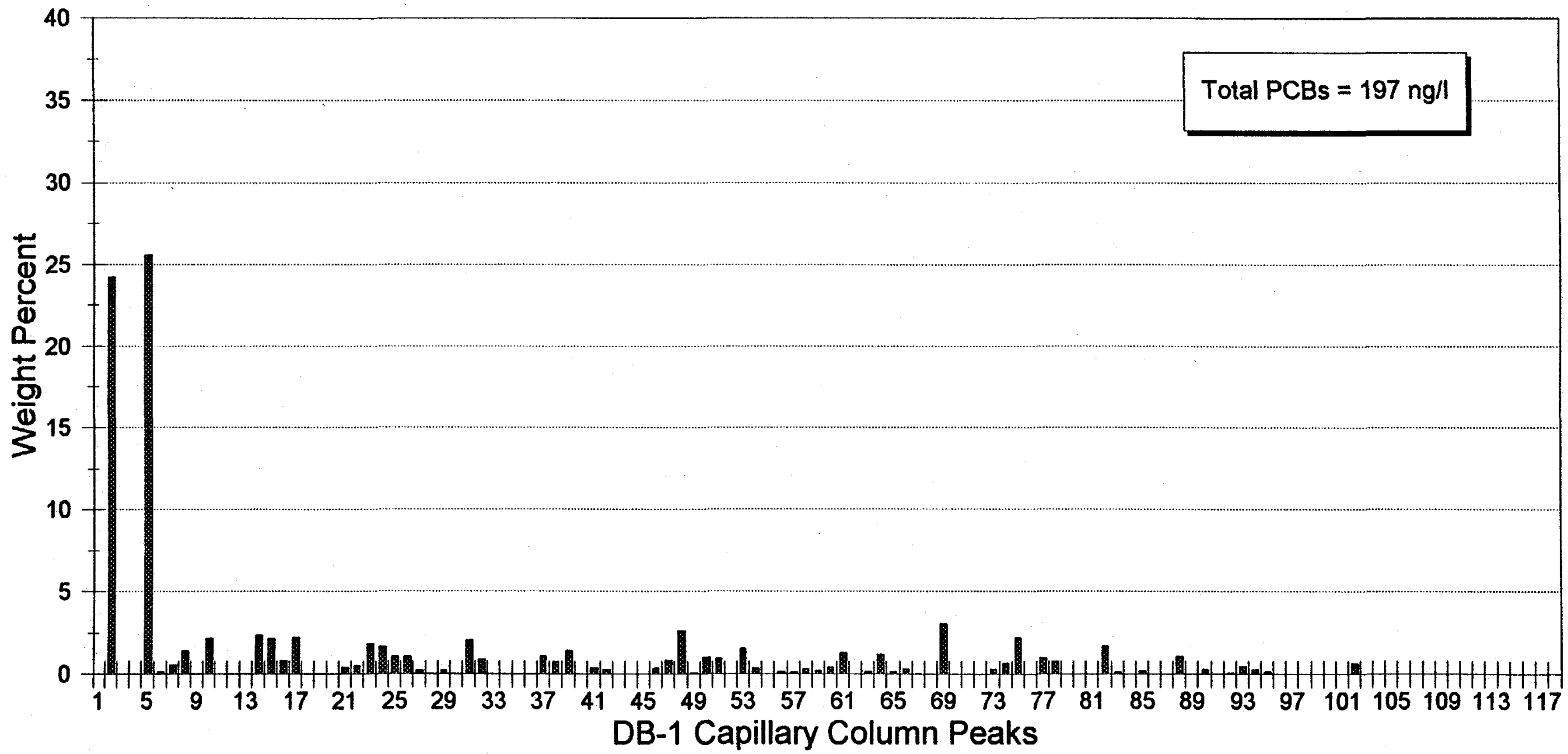


Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310928

Thompson Island Pool
Time of Travel Survey
June 17, 1997

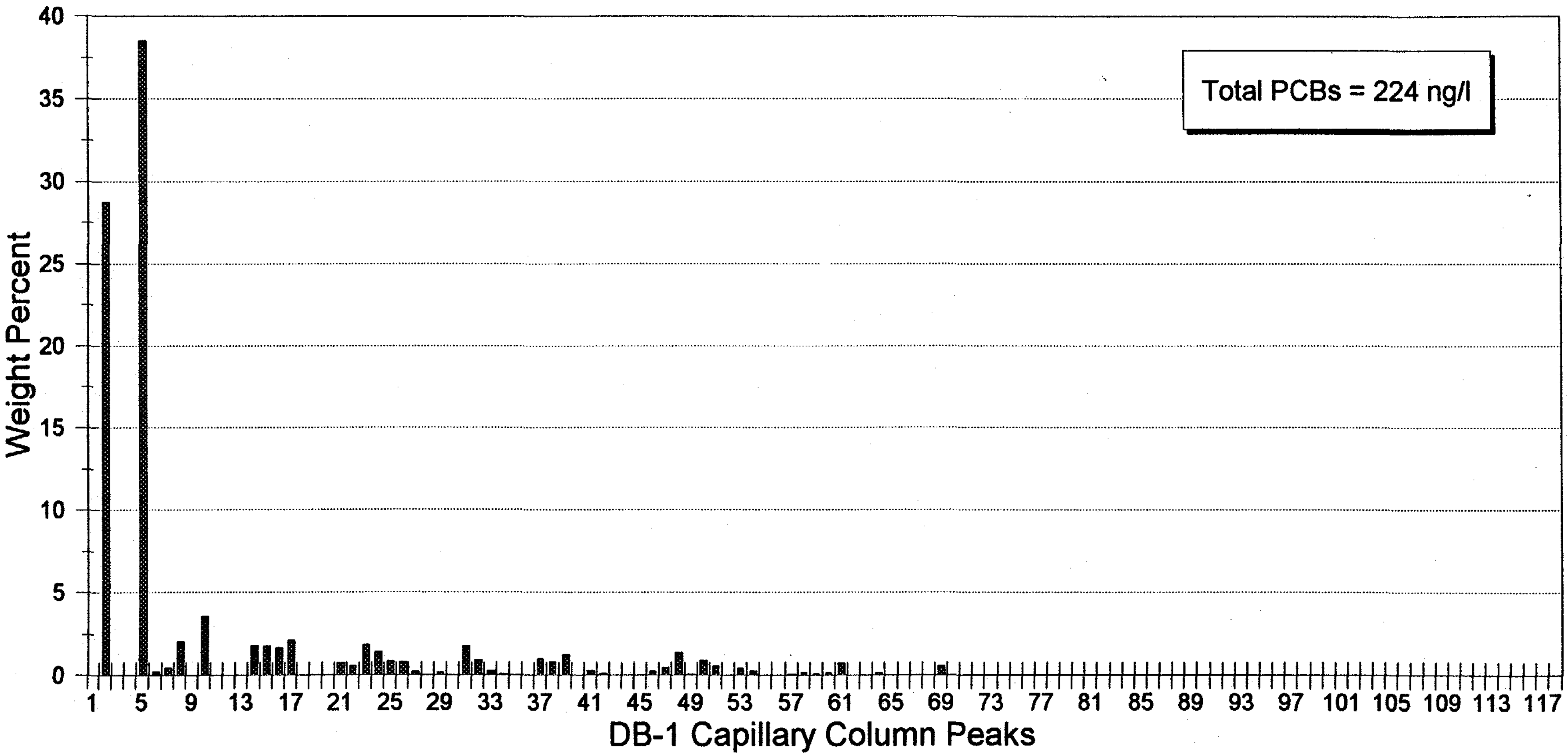
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-9W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

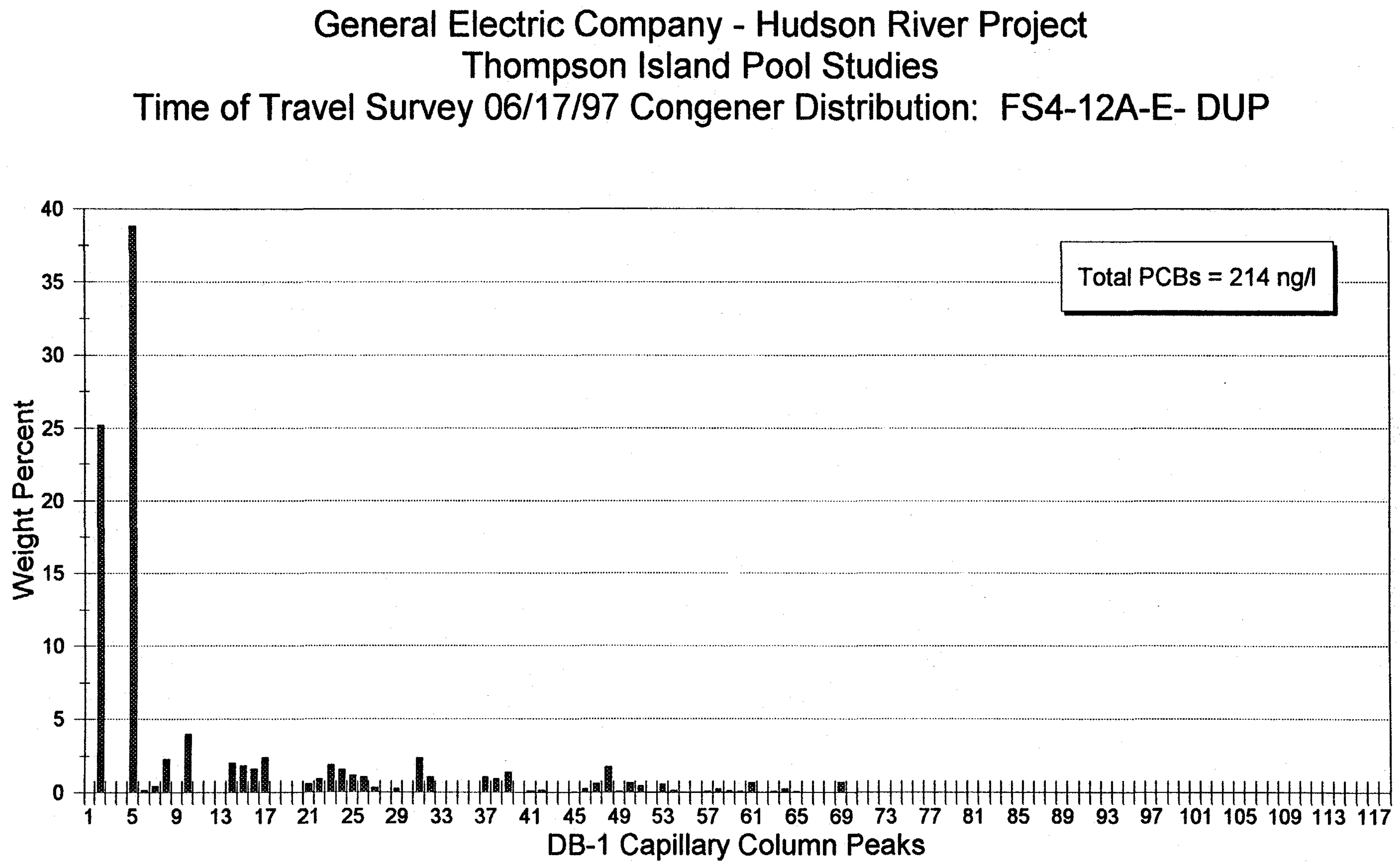
310930

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-12A-E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

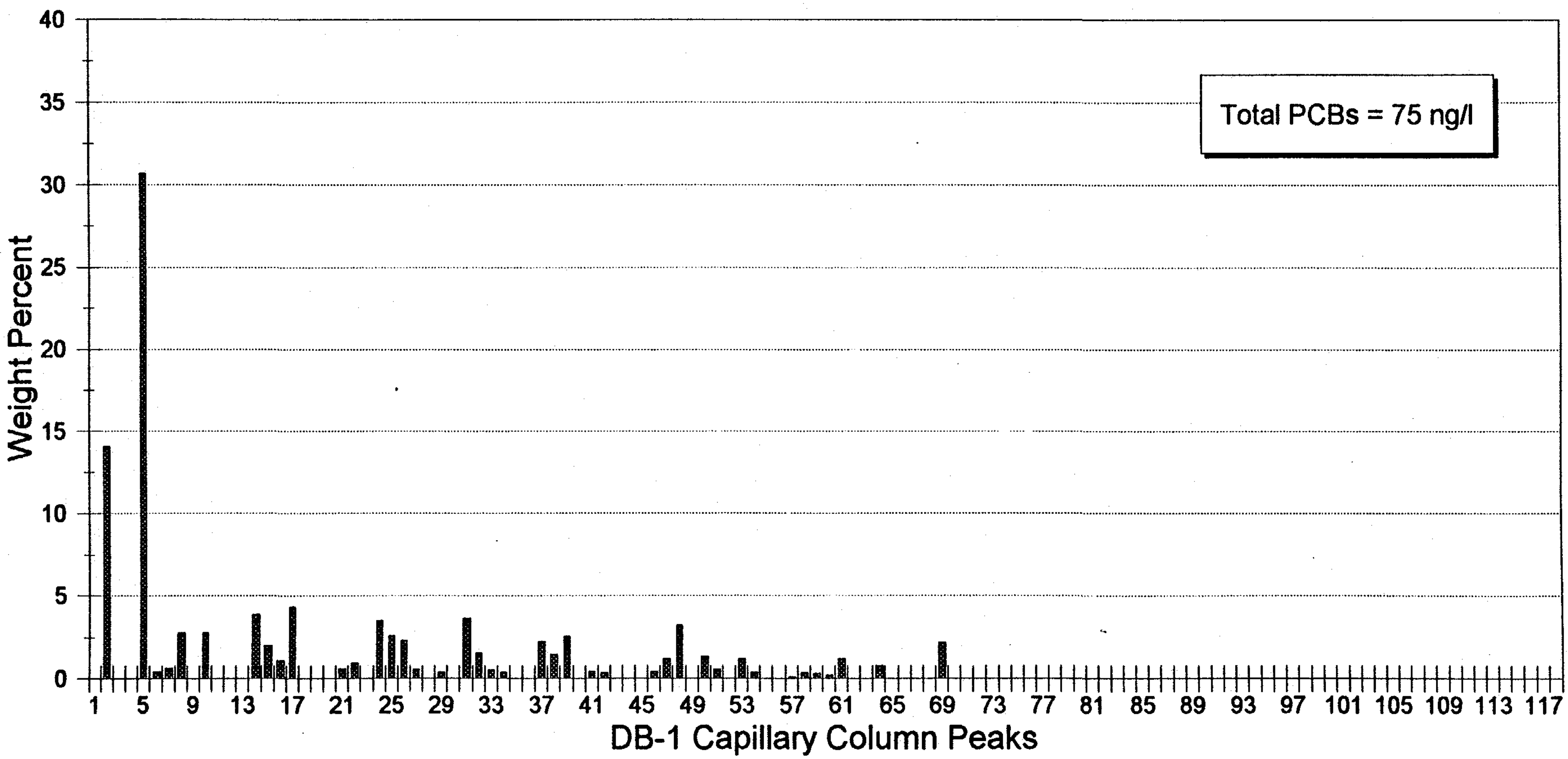
310931



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310932

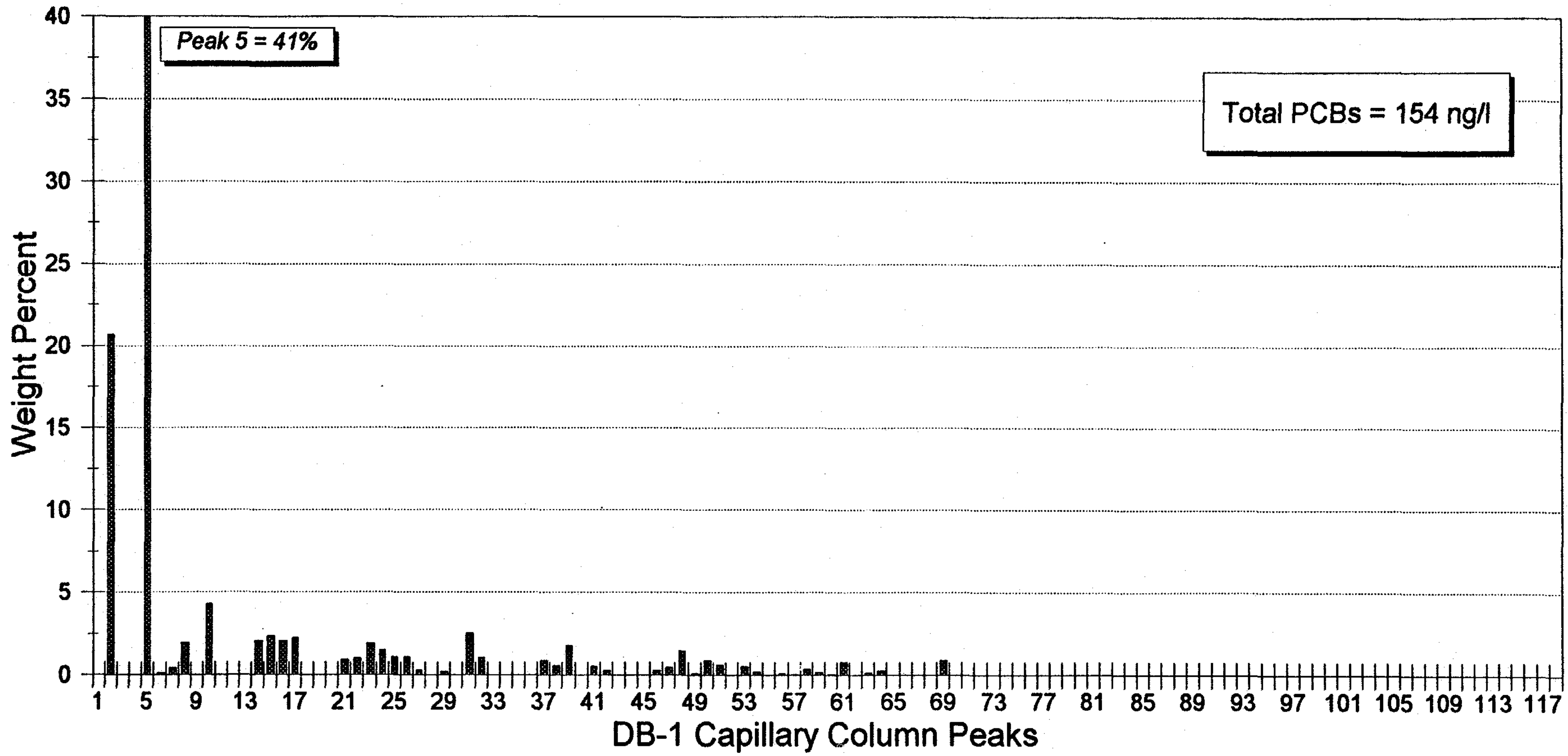
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-13A-C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310933

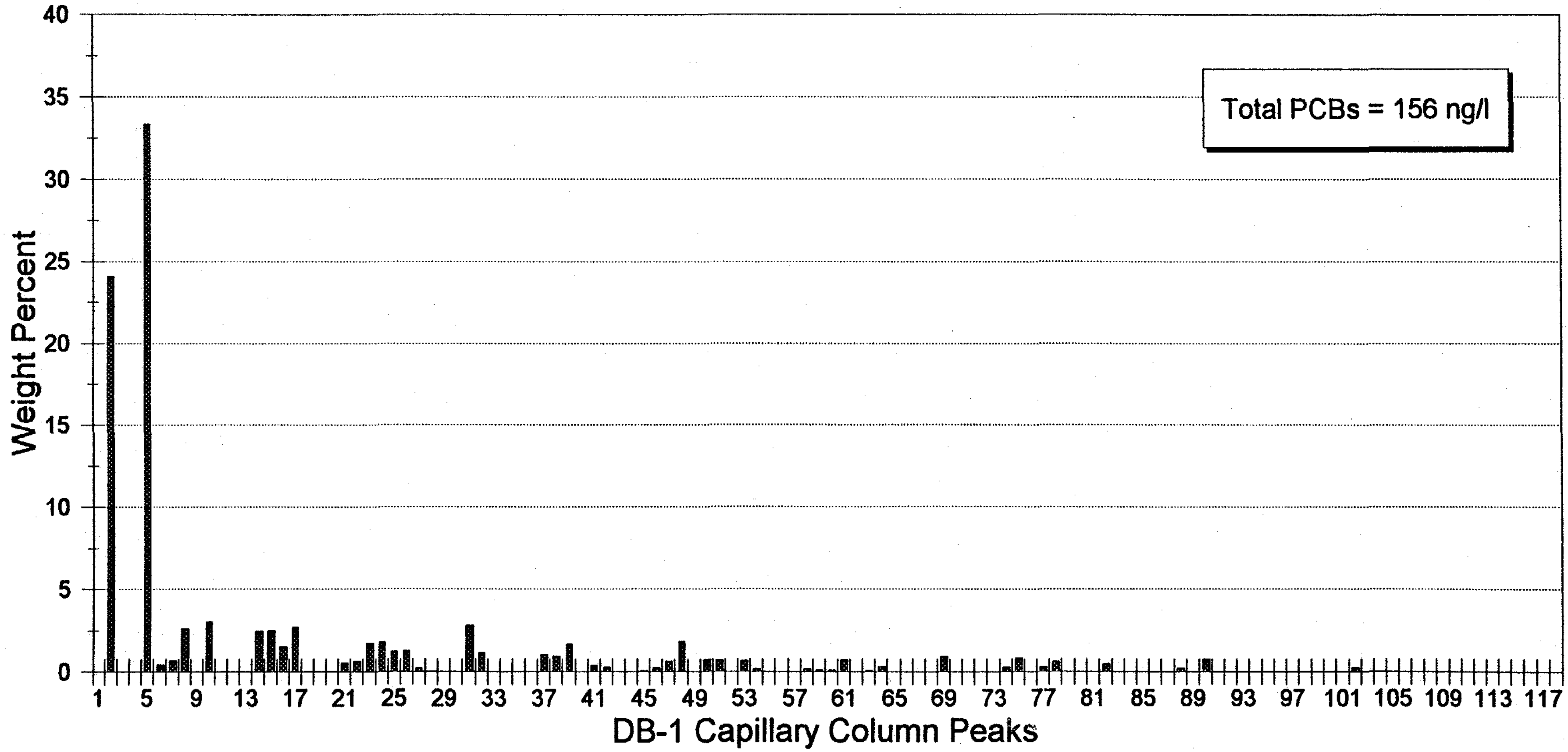
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-13A-E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310934

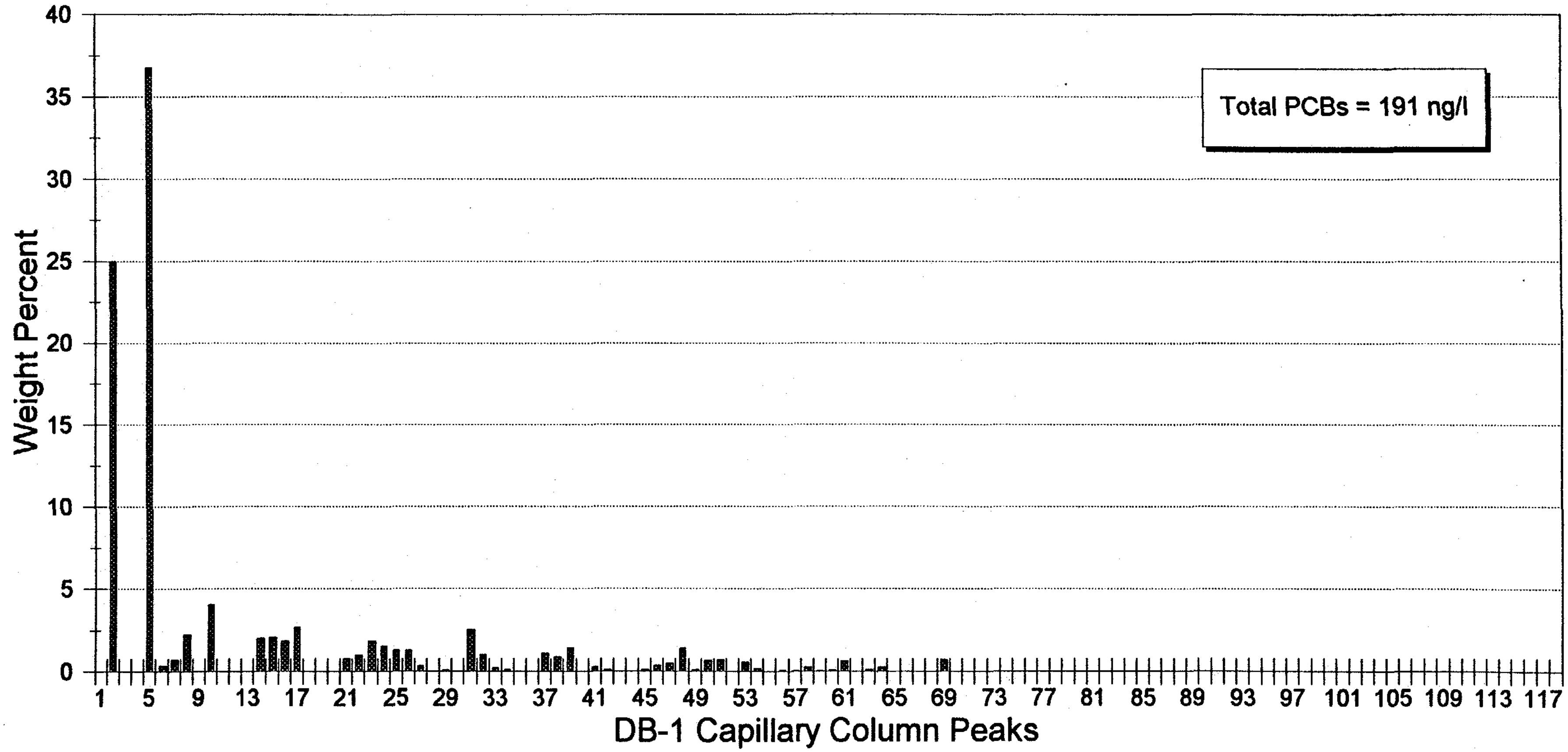
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-13A-W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310935

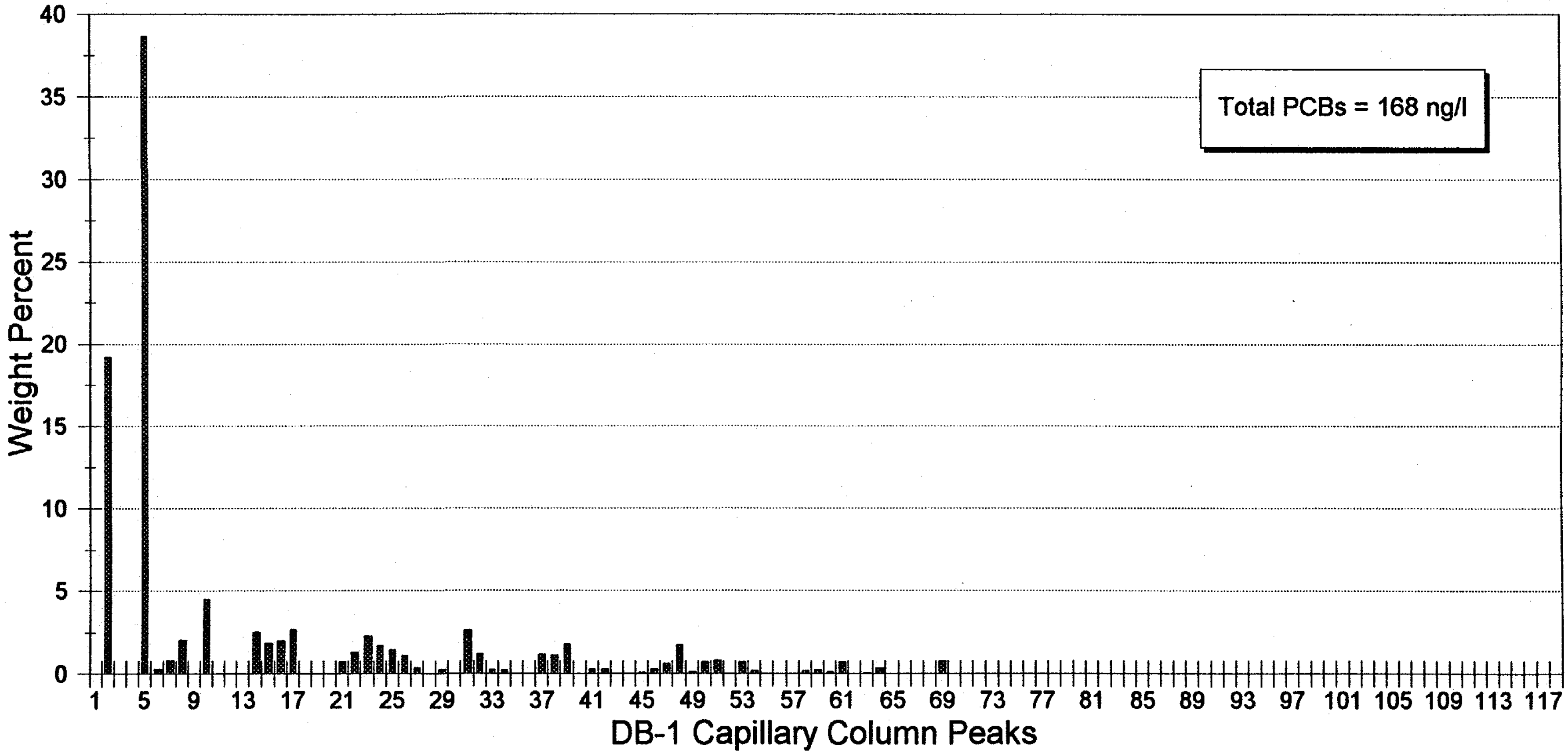
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-15-E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310936

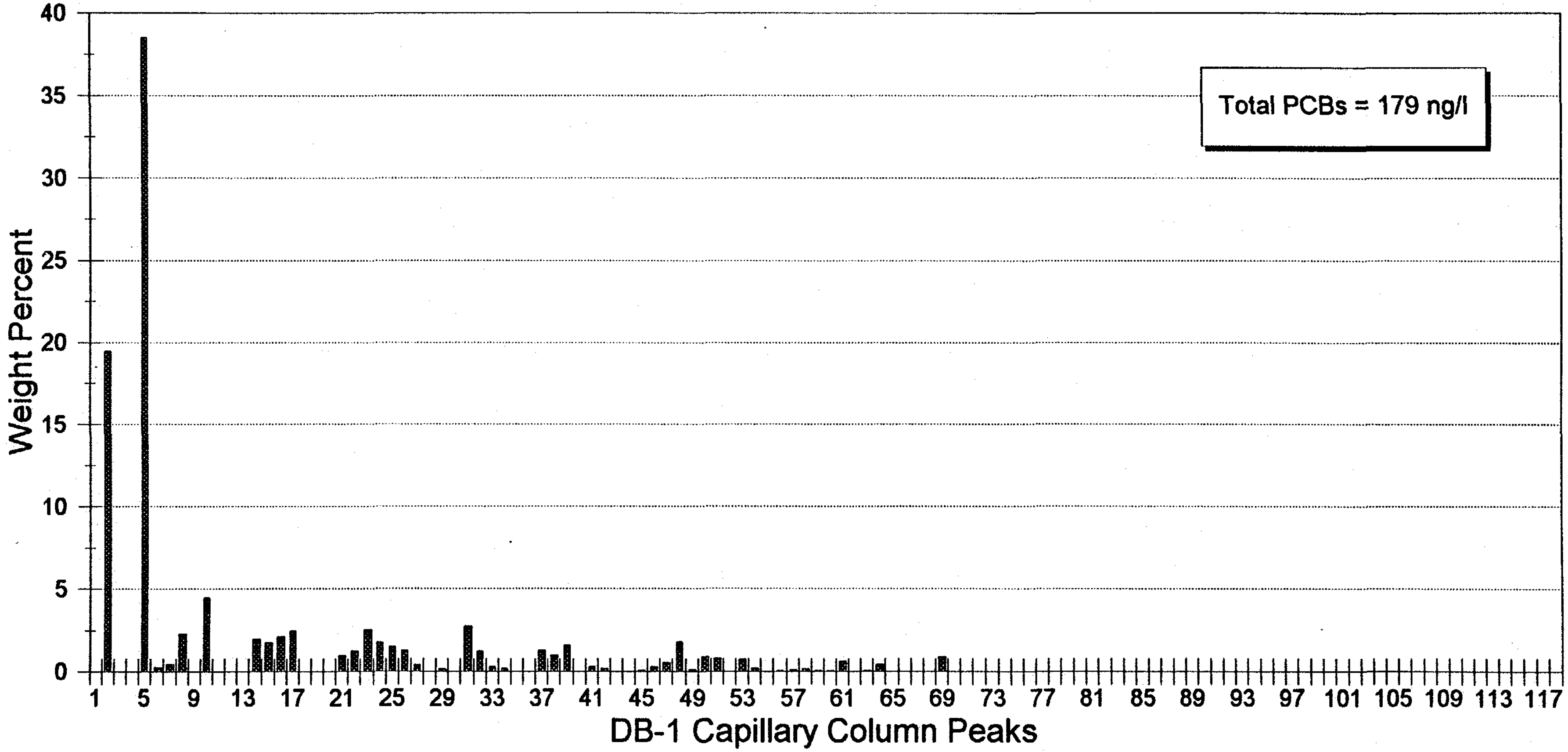
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-15A-E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310937

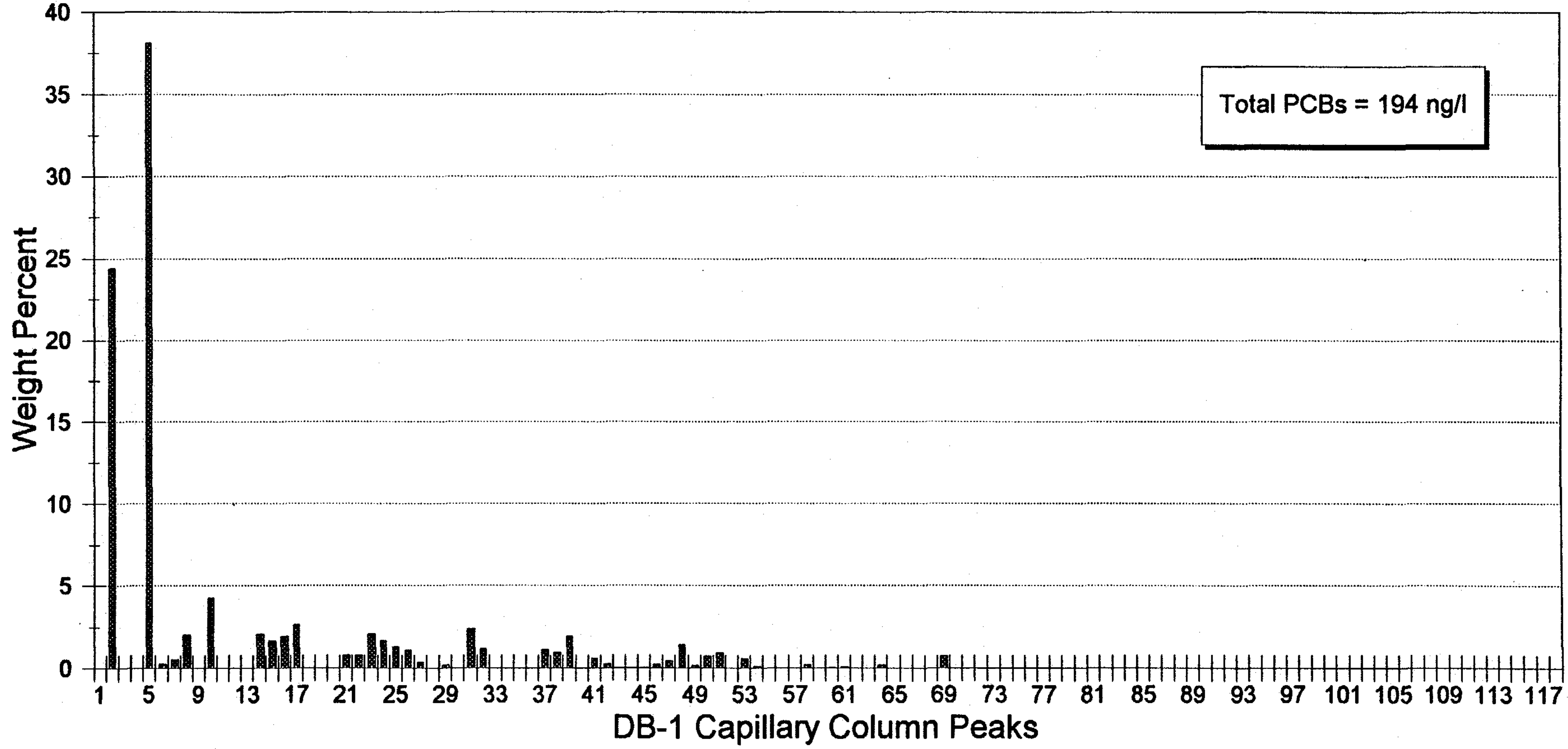
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-16E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310938

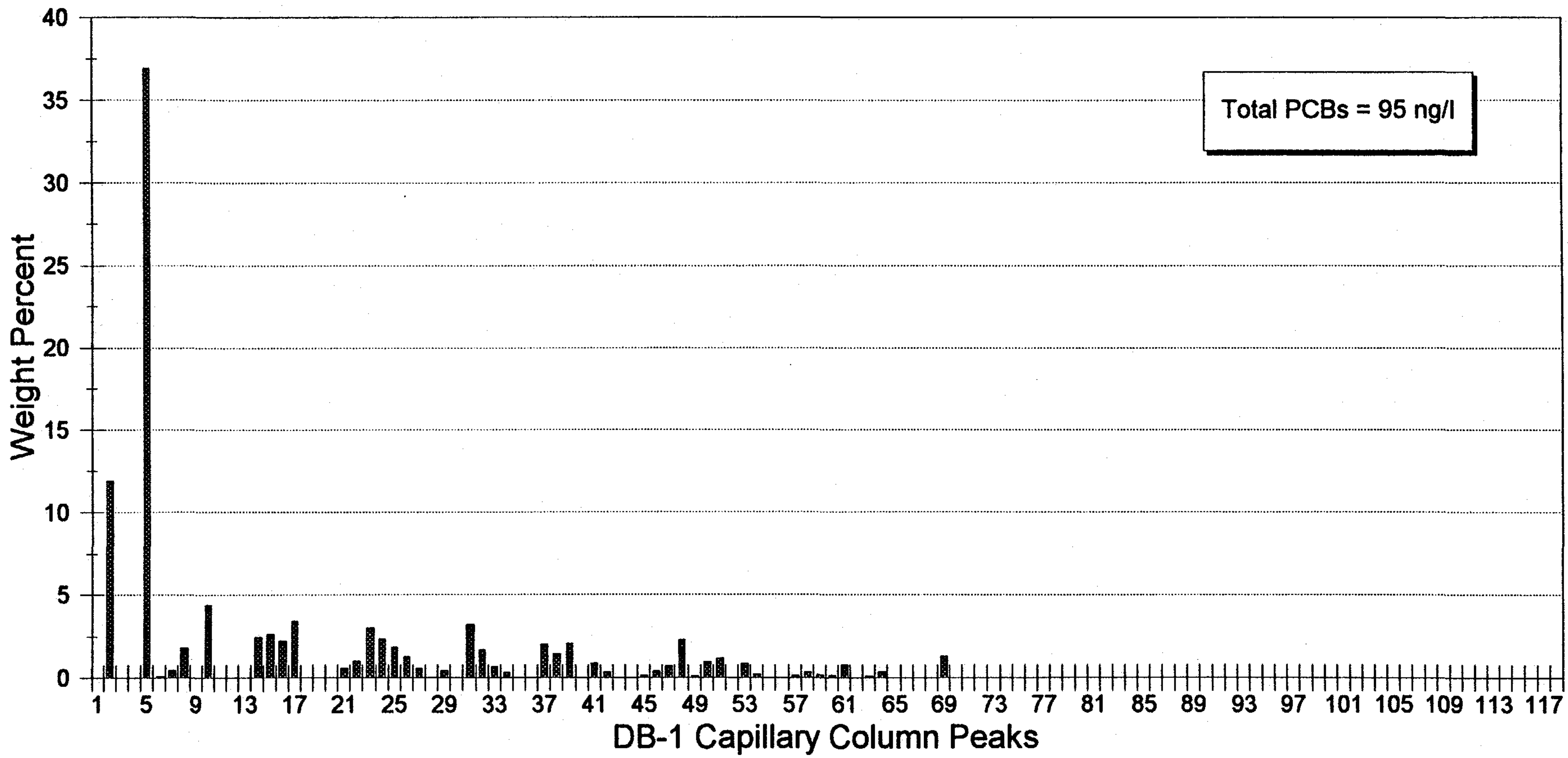
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-17E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310939

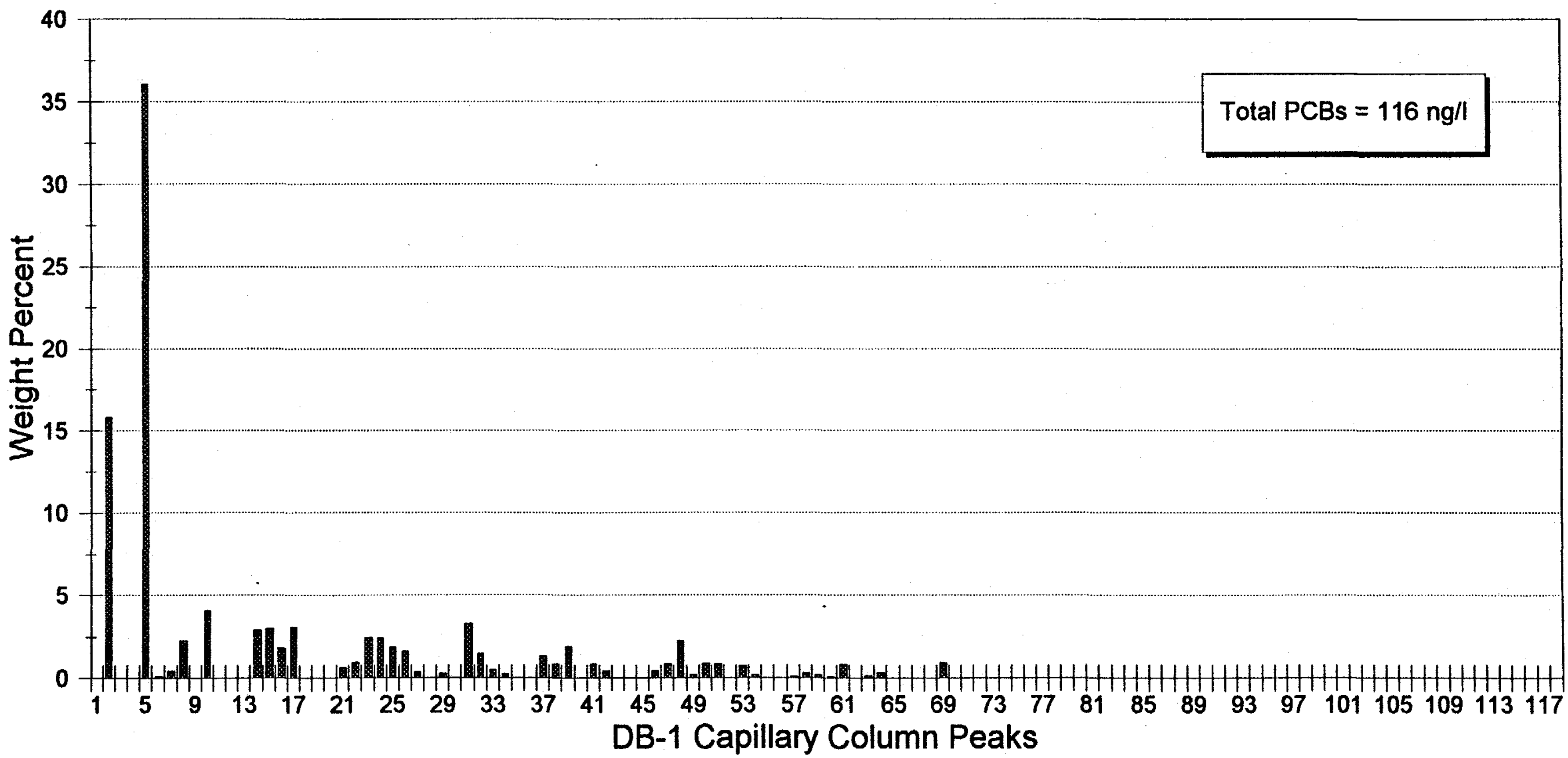
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-18C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310940

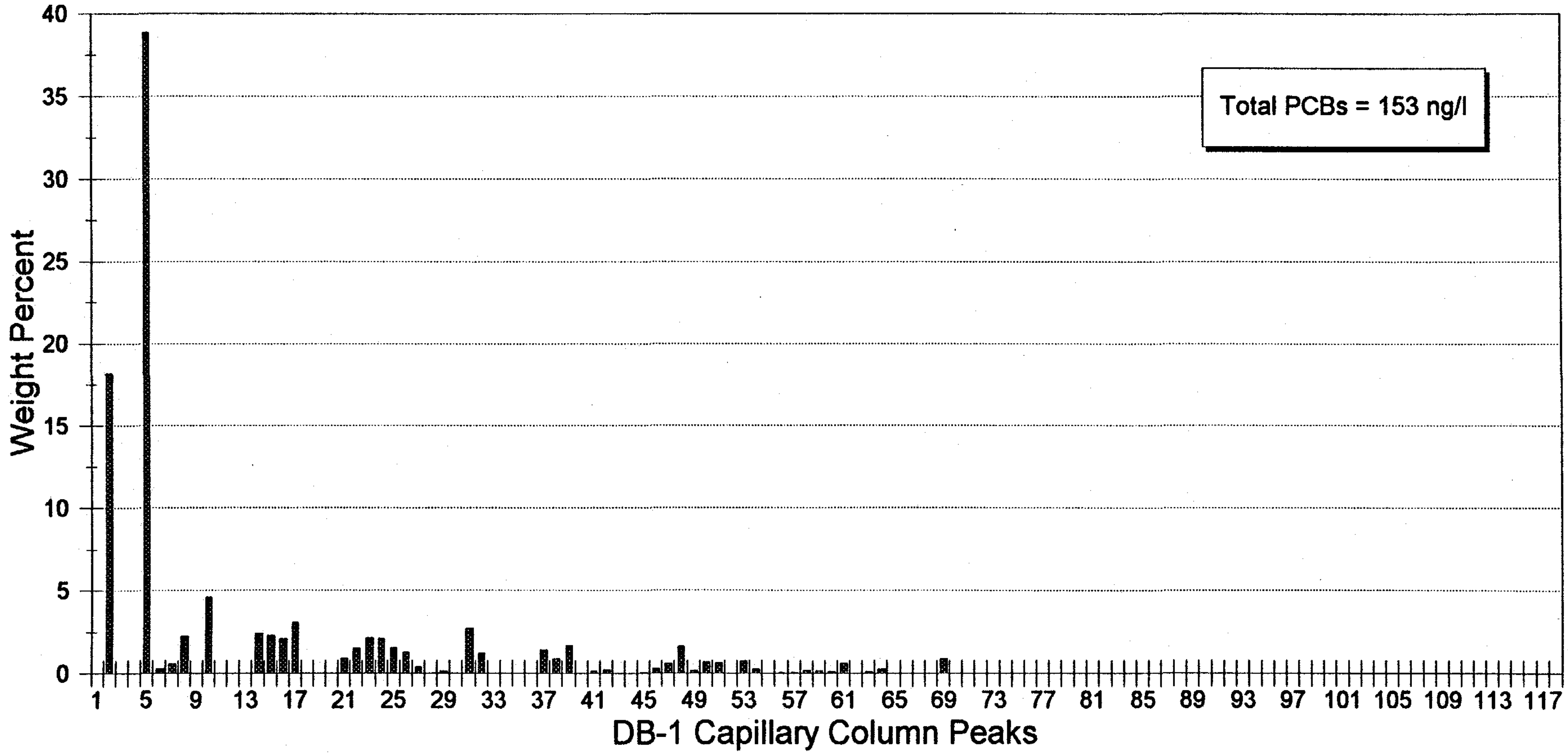
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-18C-DUP



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310941

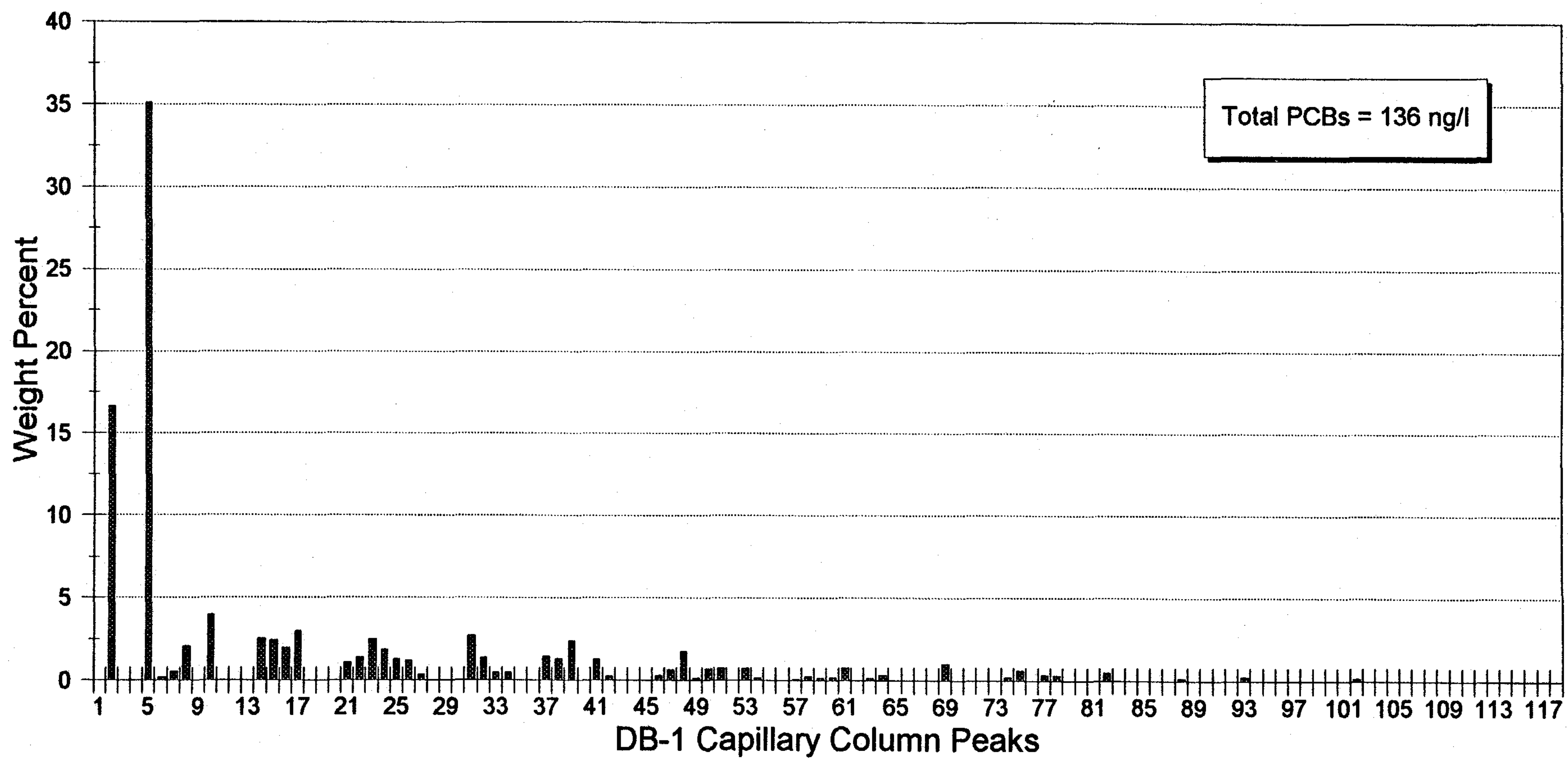
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-18E



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310942

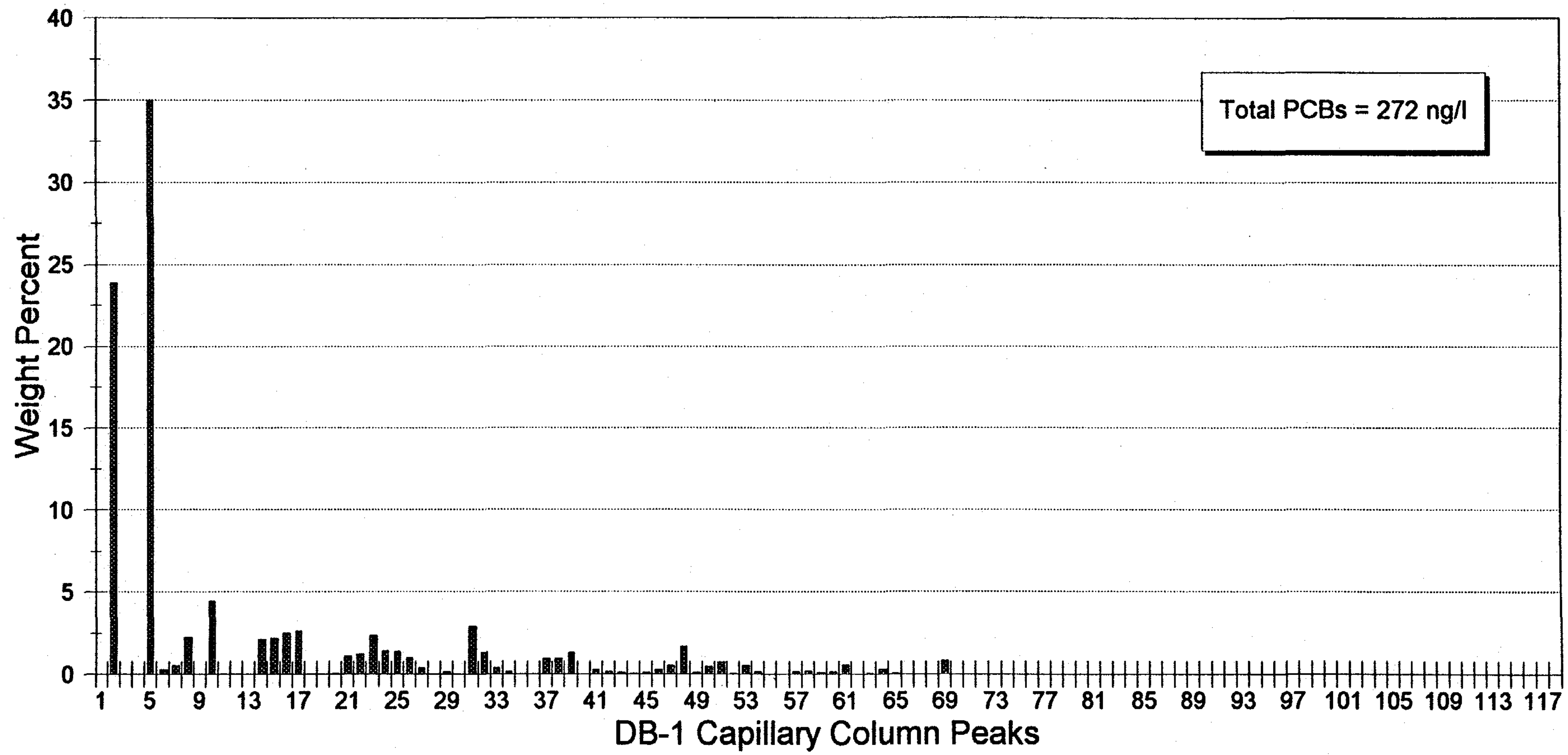
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-18W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310943

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 06/17/97 Congener Distribution: FS4-188.5W

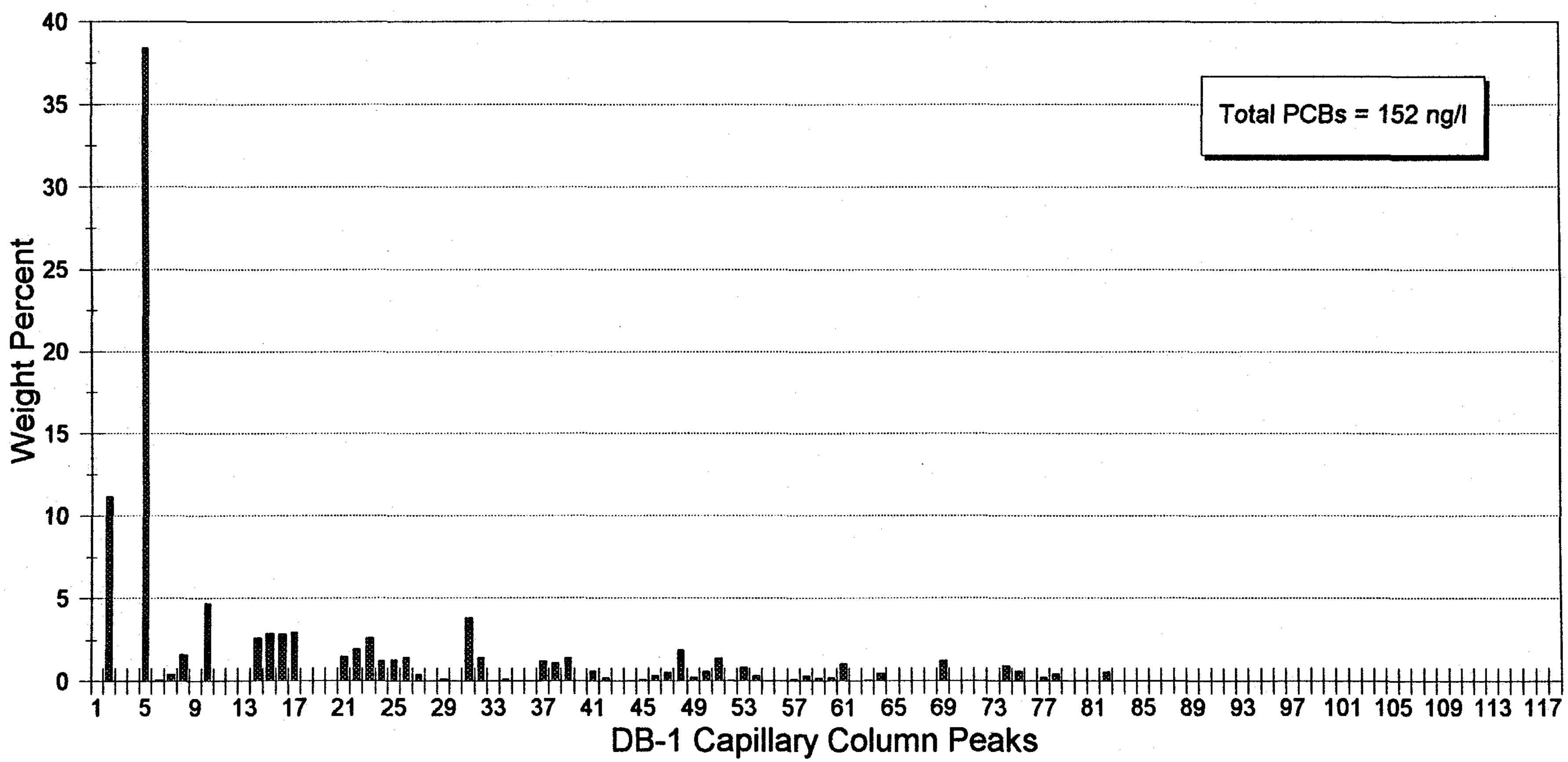


Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310944

Thompson Island Dam Evaluation
October 1997

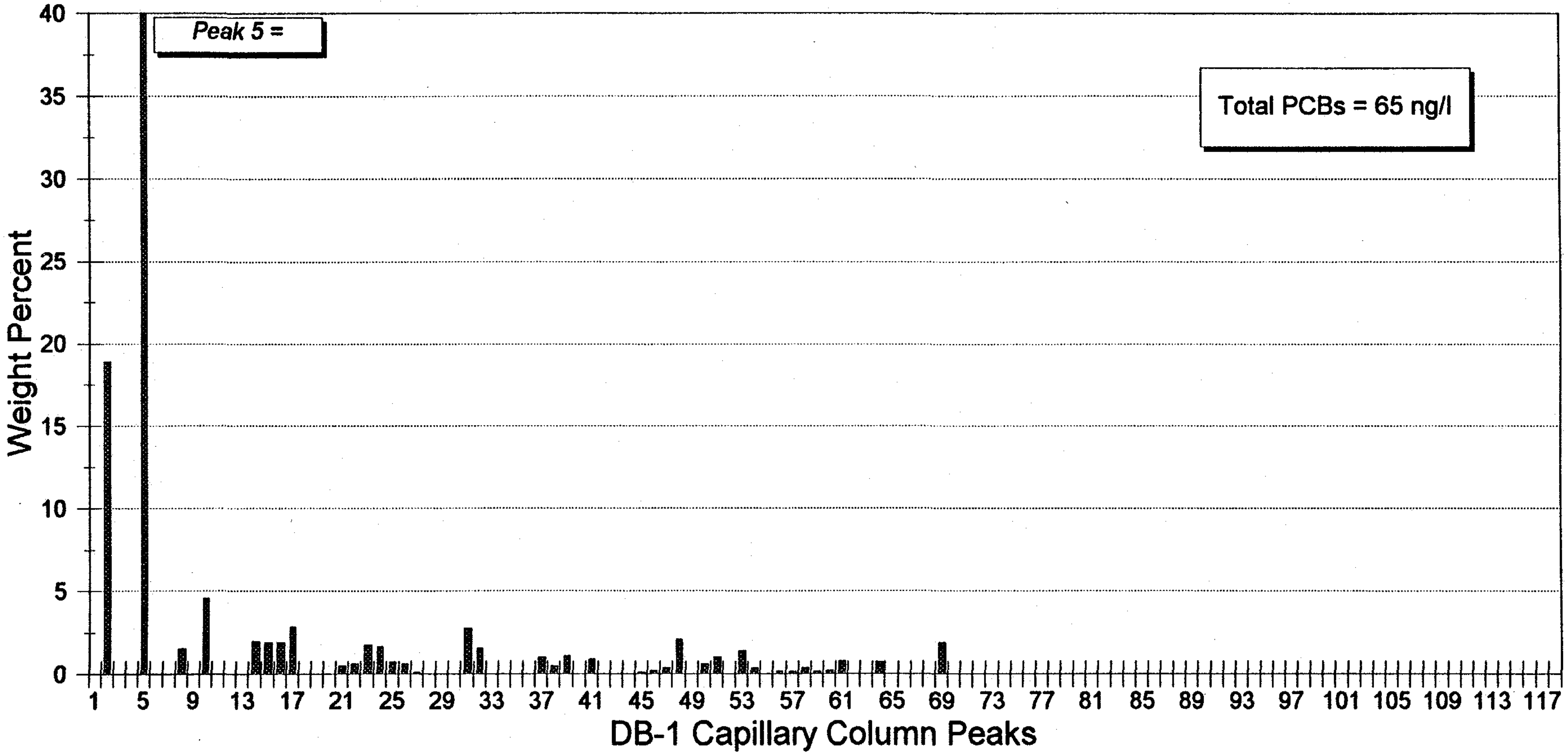
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/01/97 Congener Distribution: TIP 18SW Archive



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

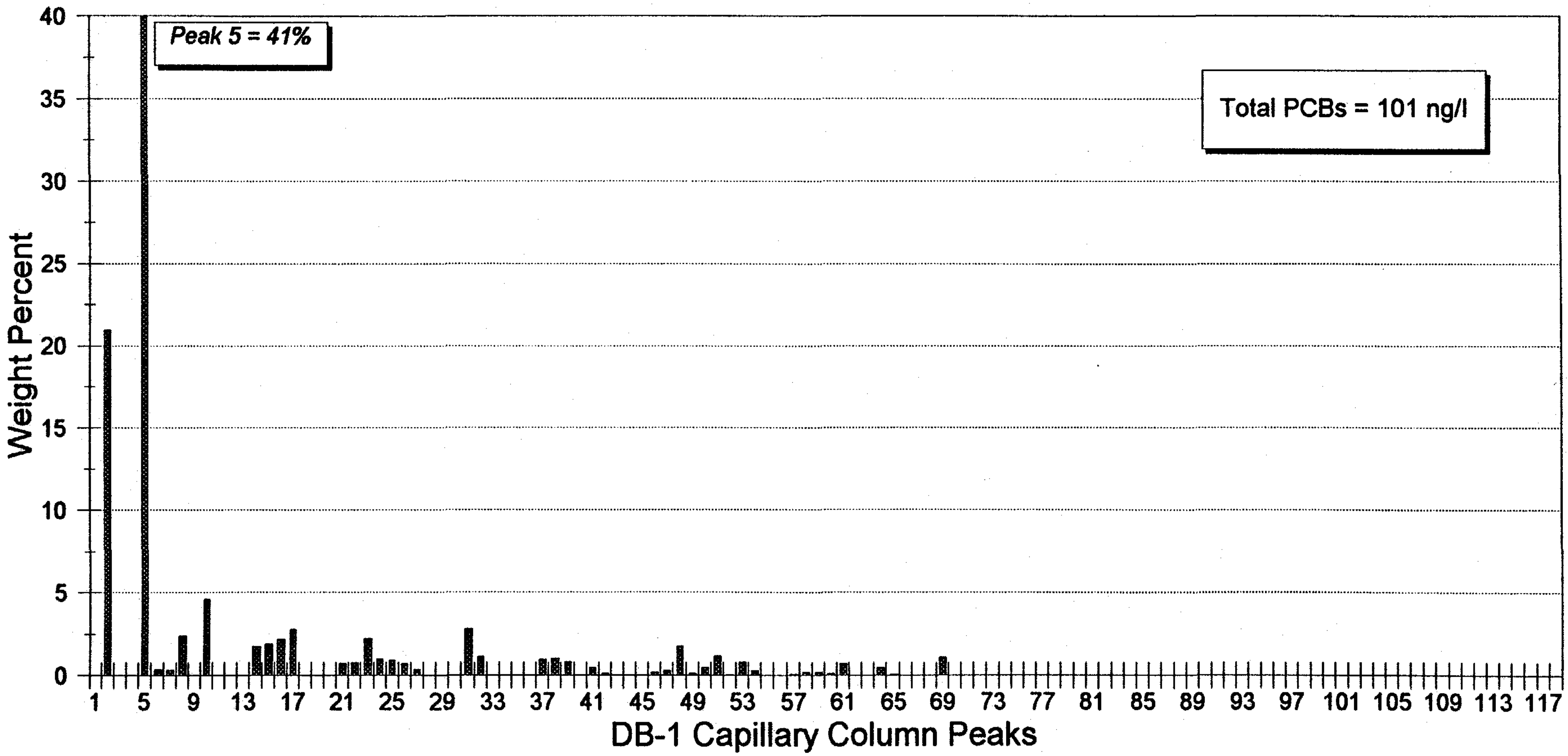
310946

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/01/97 Congener Distribution: TIP 18C



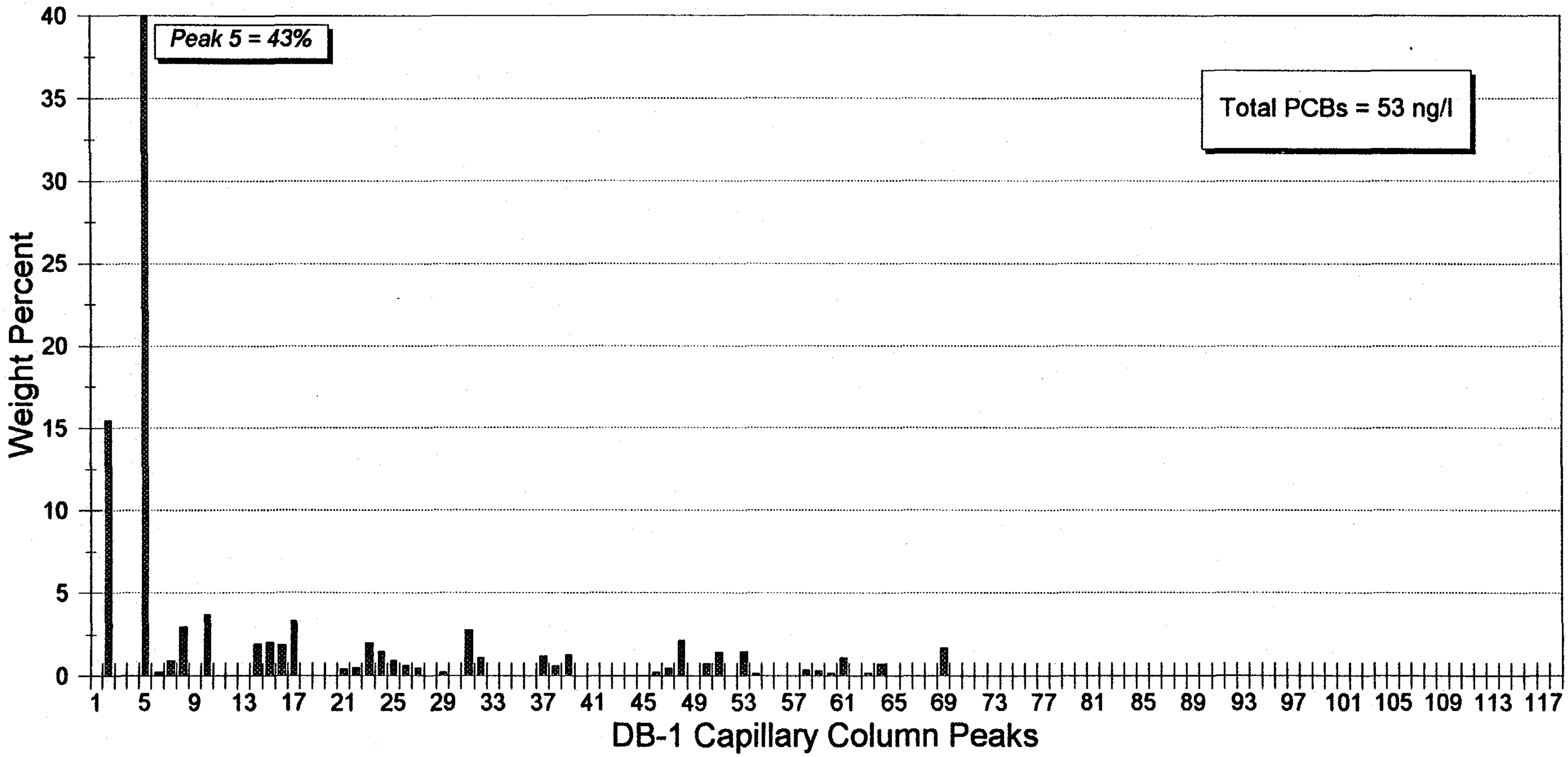
Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/01/97 Congener Distribution: HRM 188.5W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

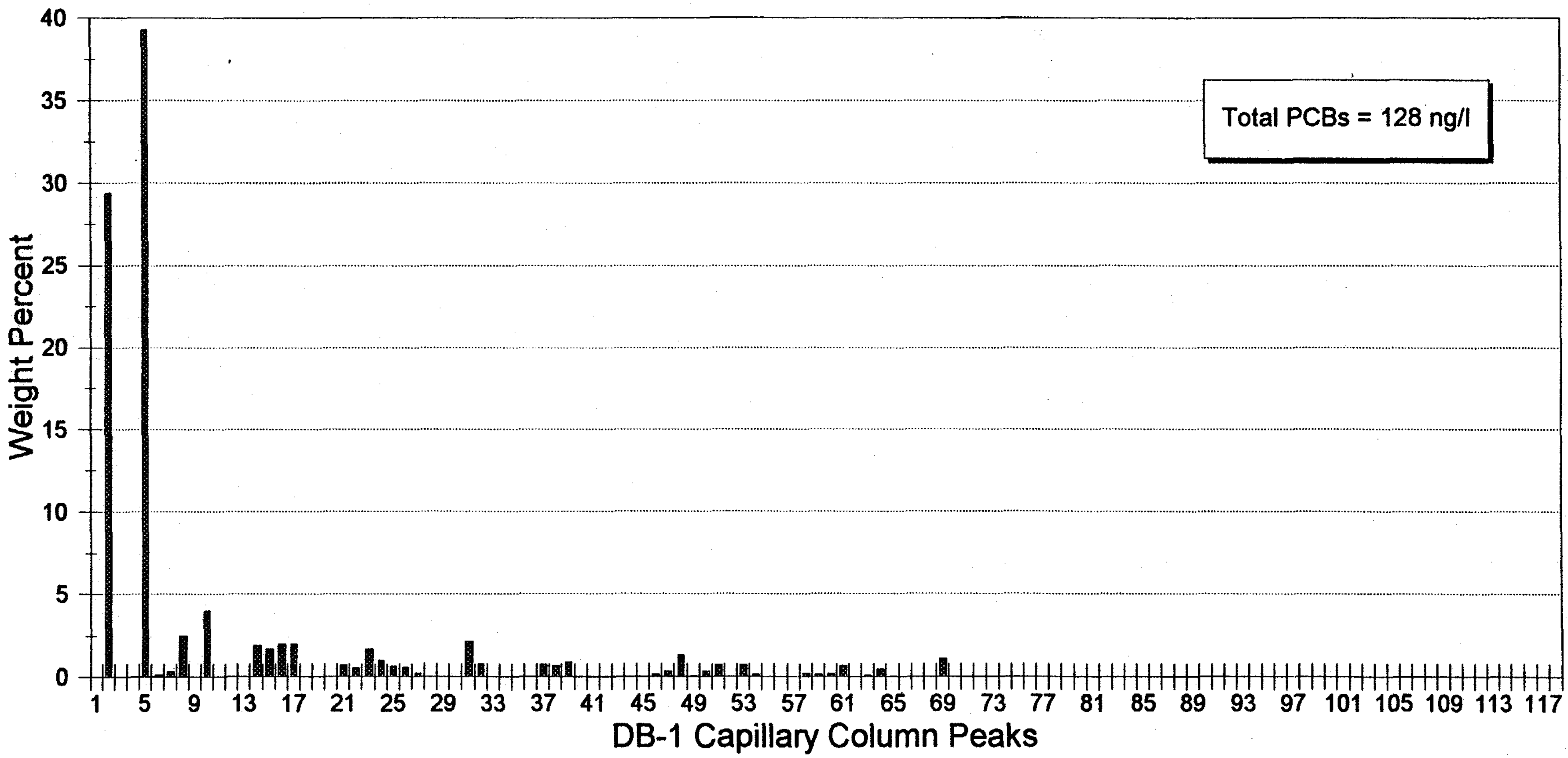
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/01/97 Congener Distribution: TID-PRW2



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

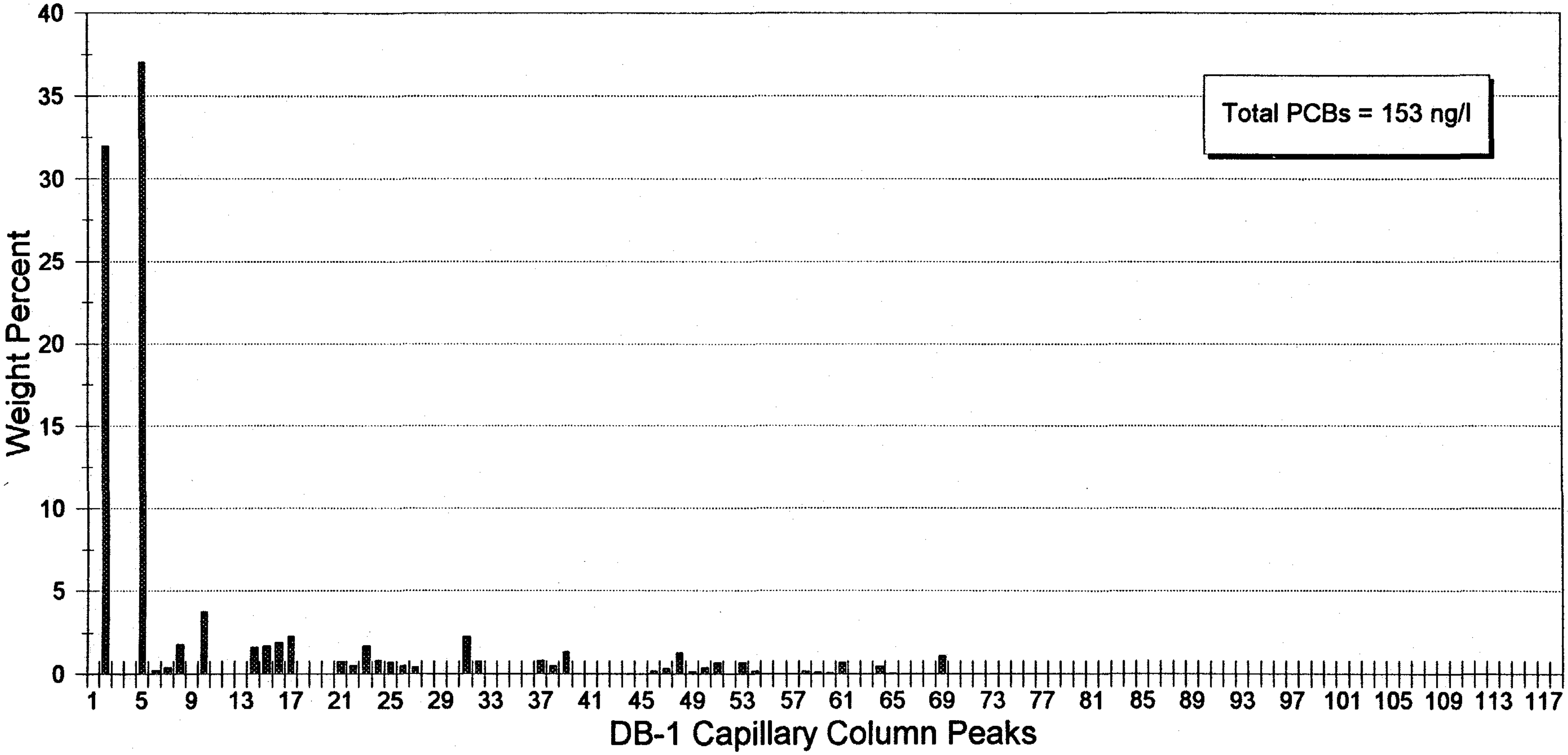
310949

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/09/97 Congener Distribution: TIP-18SW



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

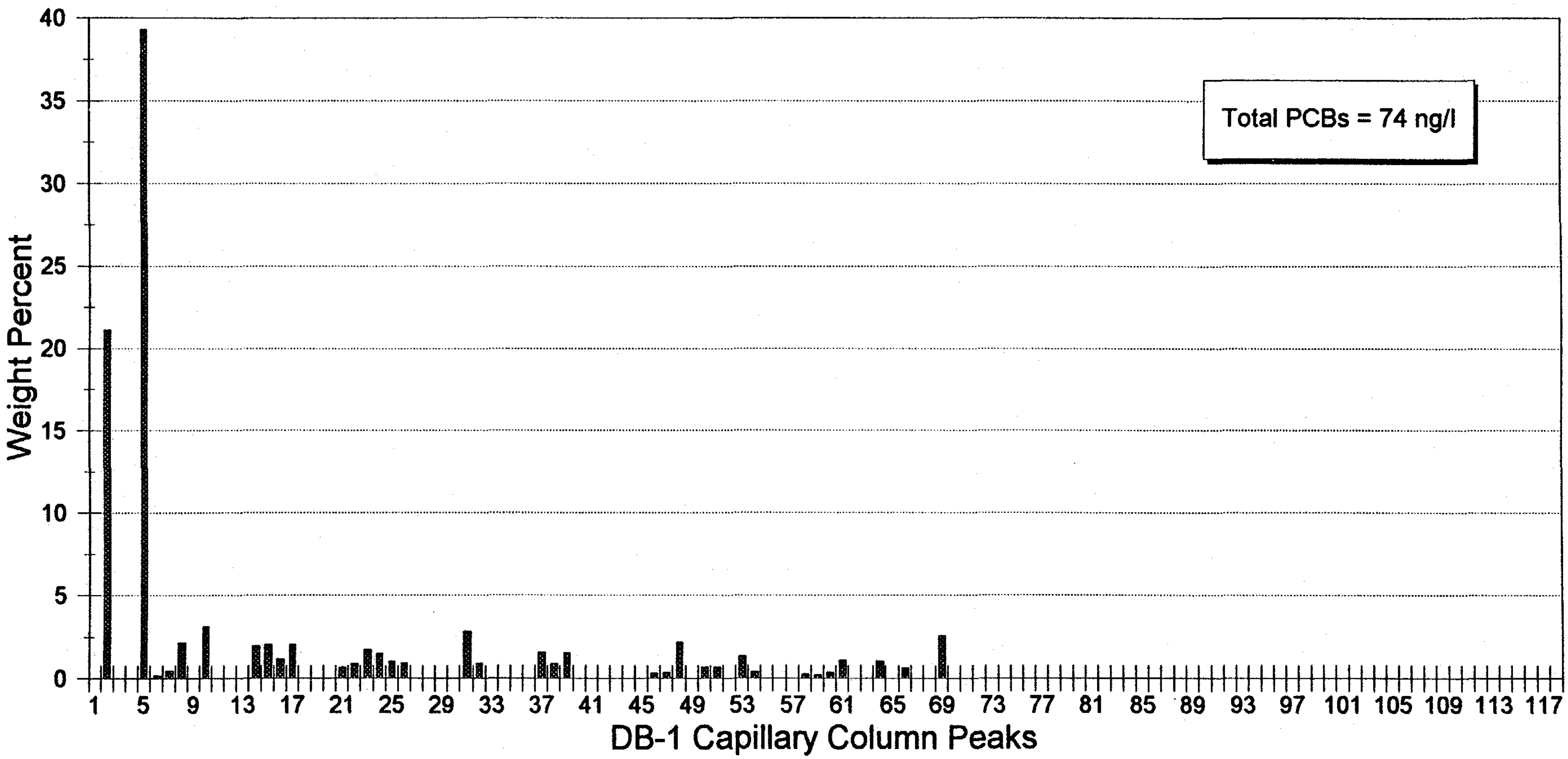
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/09/97 Congener Distribution: TIP-18SW-DUP



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310951

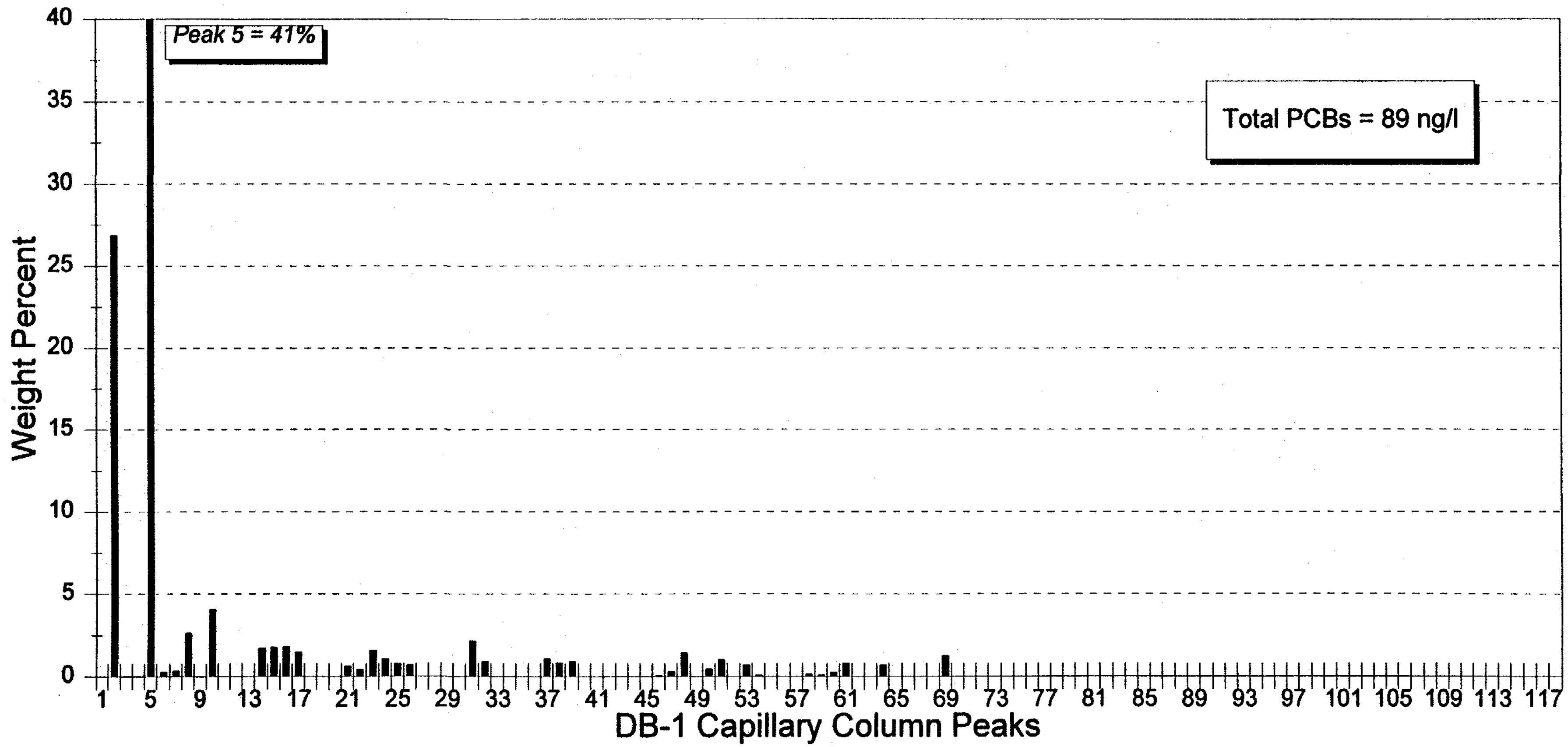
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/09/97 Congener Distribution: TIP-18C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

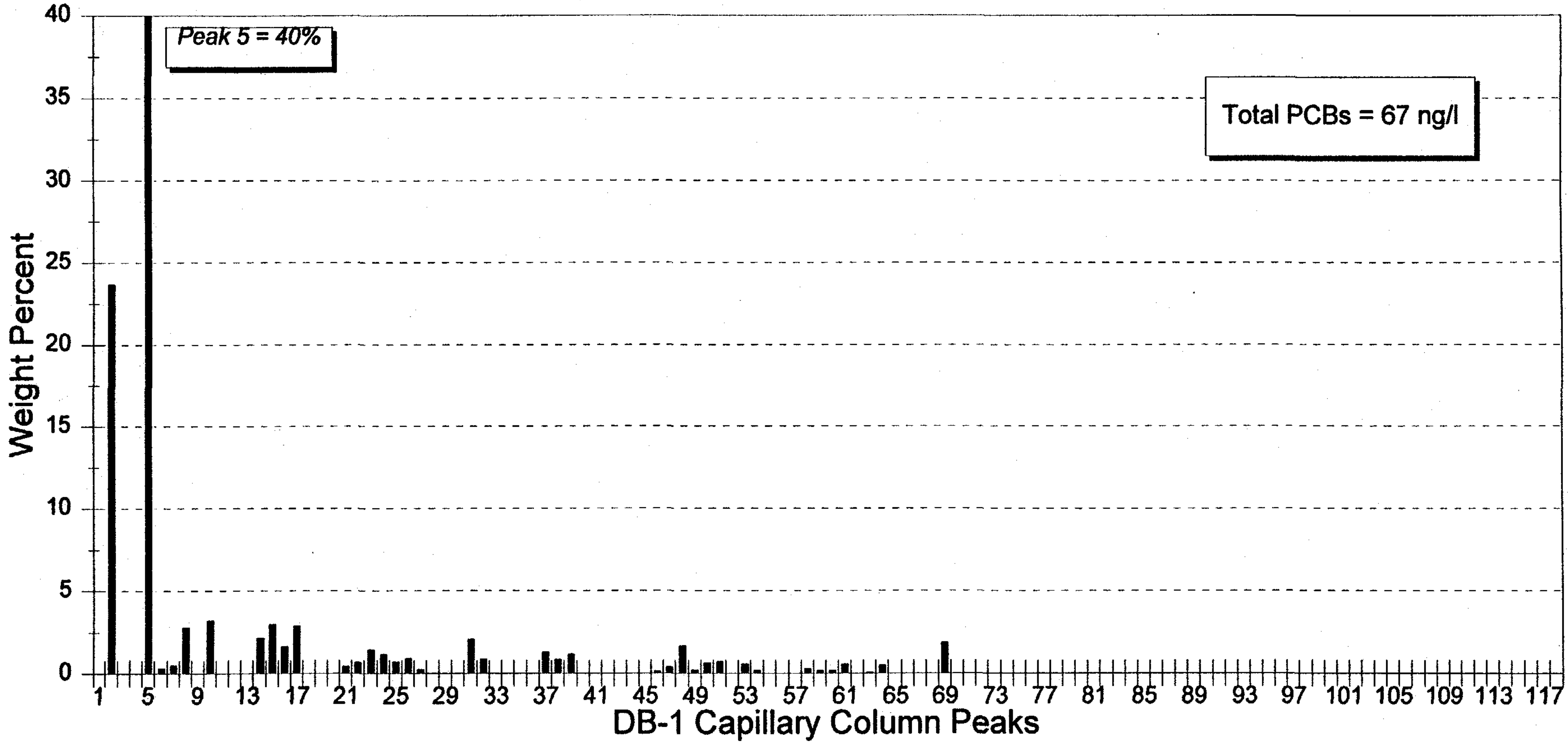
310952

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/09/97 Congener Distribution: HRM 188.5W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

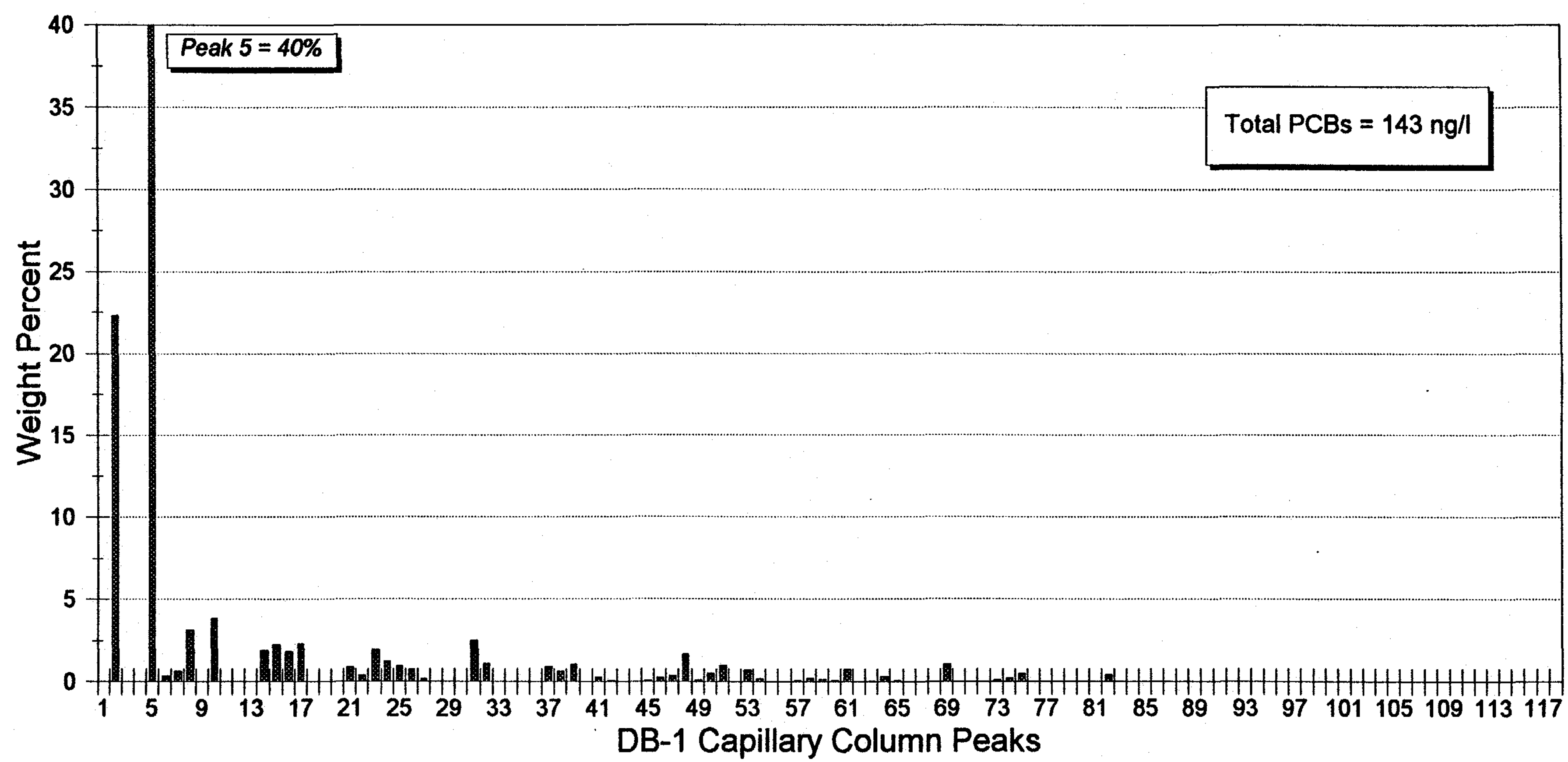
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/09/97 Congener Distribution: TID-PRW2



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310954

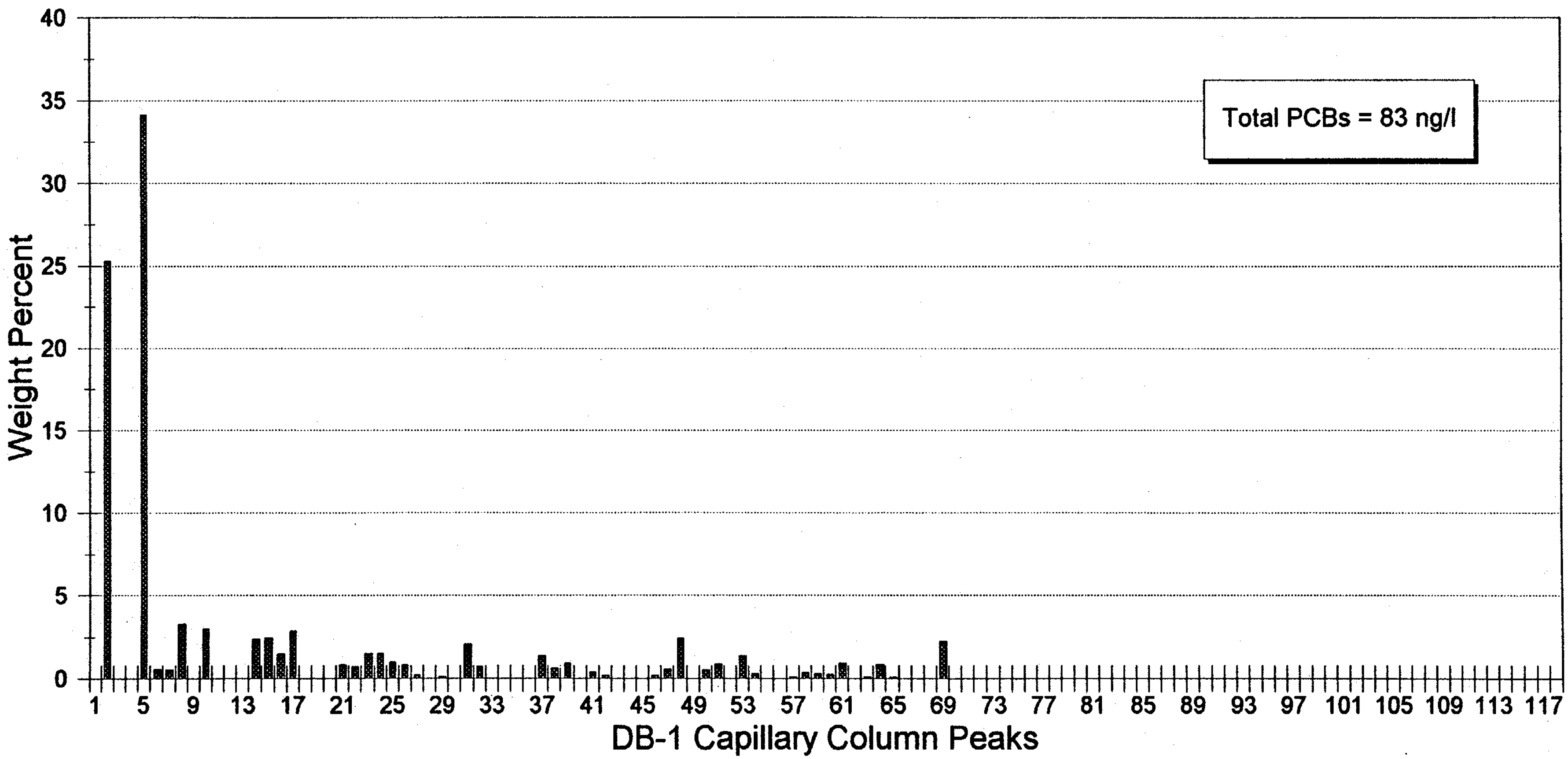
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/16/97 Congener Distribution: TIP-18SW



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310955

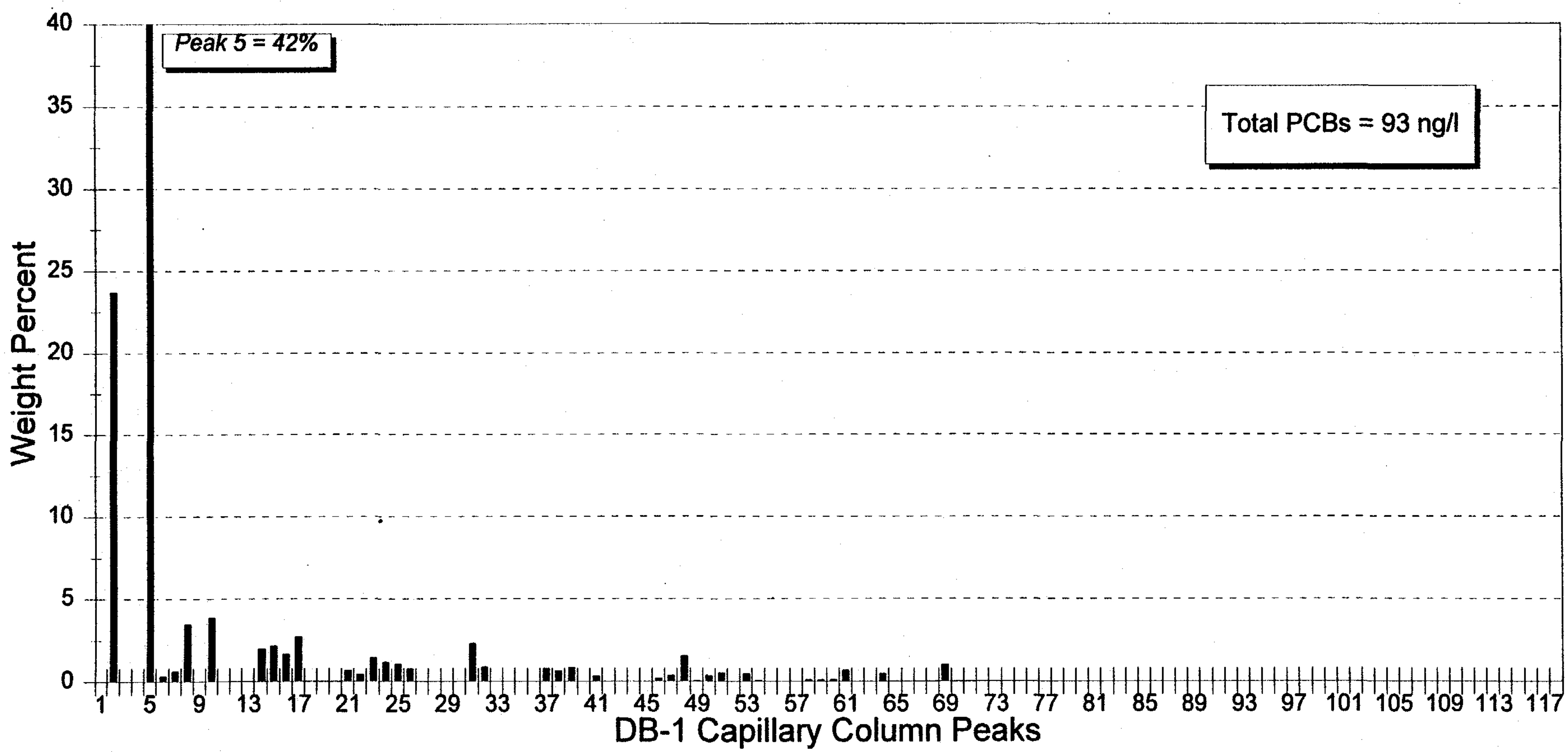
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/16/97 Congener Distribution: TIP-18C



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

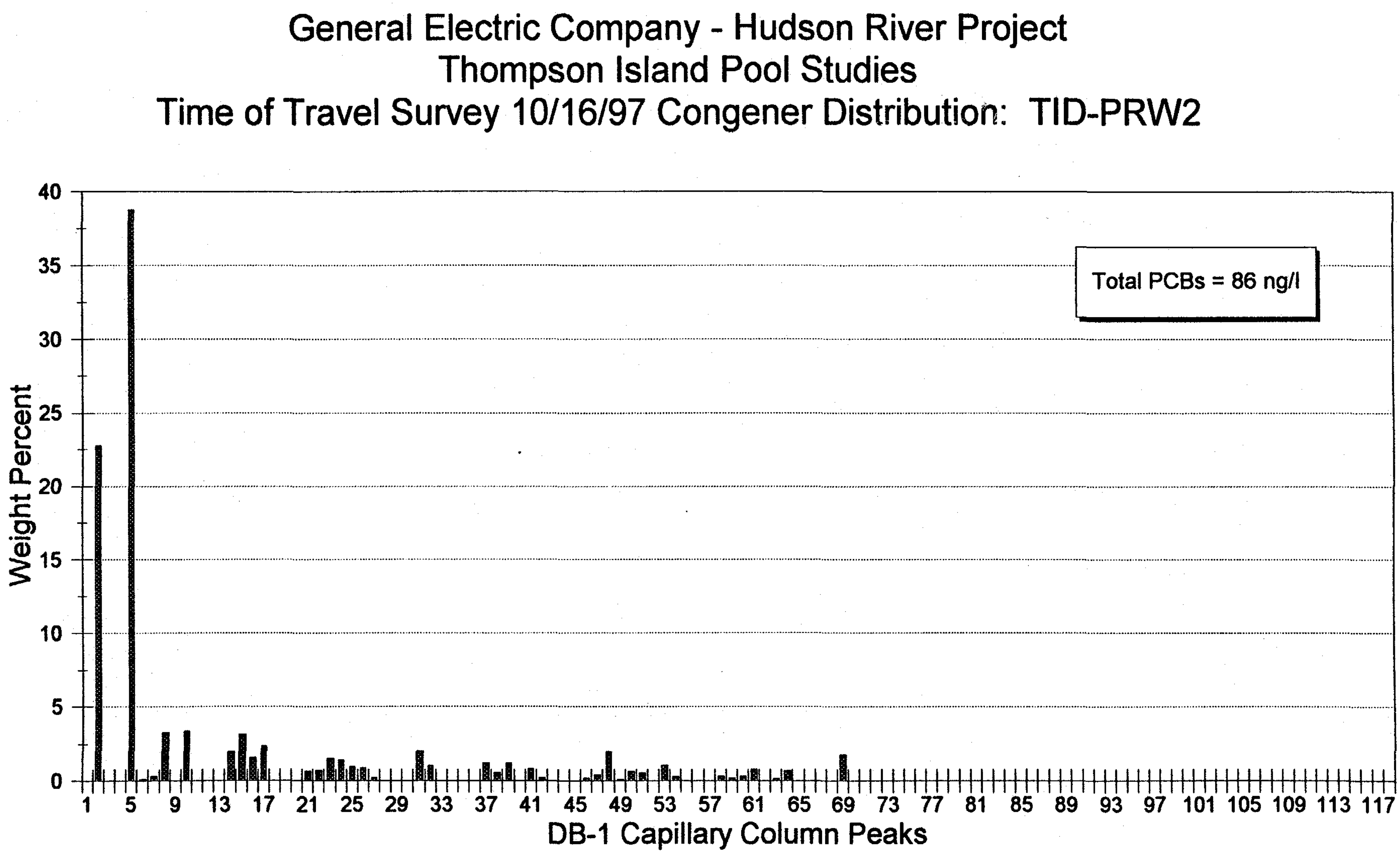
310956

General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/16/97 Congener Distribution: HRM 188.5W



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

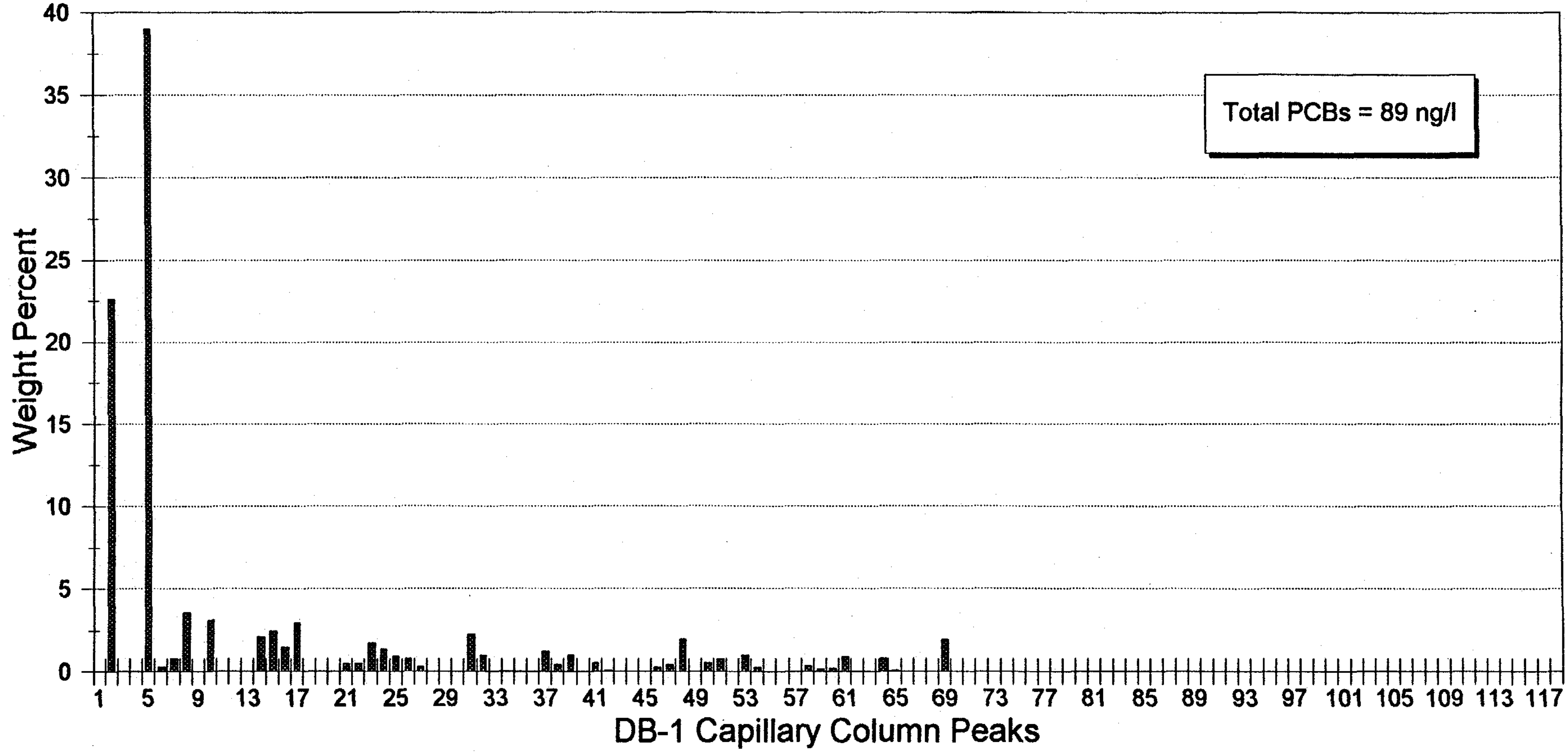
310957



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

310958

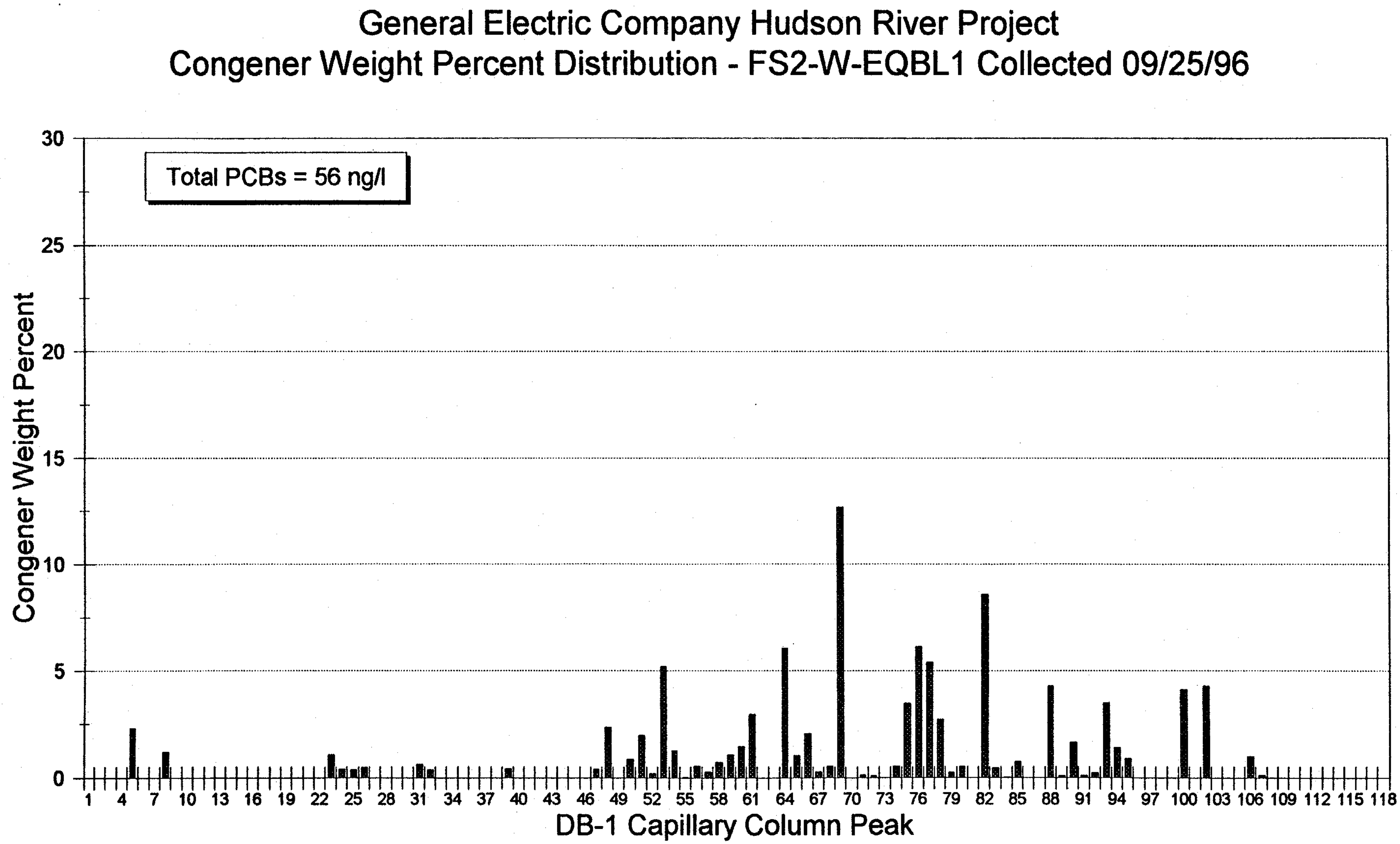
General Electric Company - Hudson River Project
Thompson Island Pool Studies
Time of Travel Survey 10/16/97 Congener Distribution: TID-PRW2-DUP



Note: PCBs analyzed by Method NEA608CAP. Data has been adjusted for analytical bias (O'Brien & Gere "Correction of Analytical Biases in the 1991-1997 GE Hudson River PCB Database", September 1997)

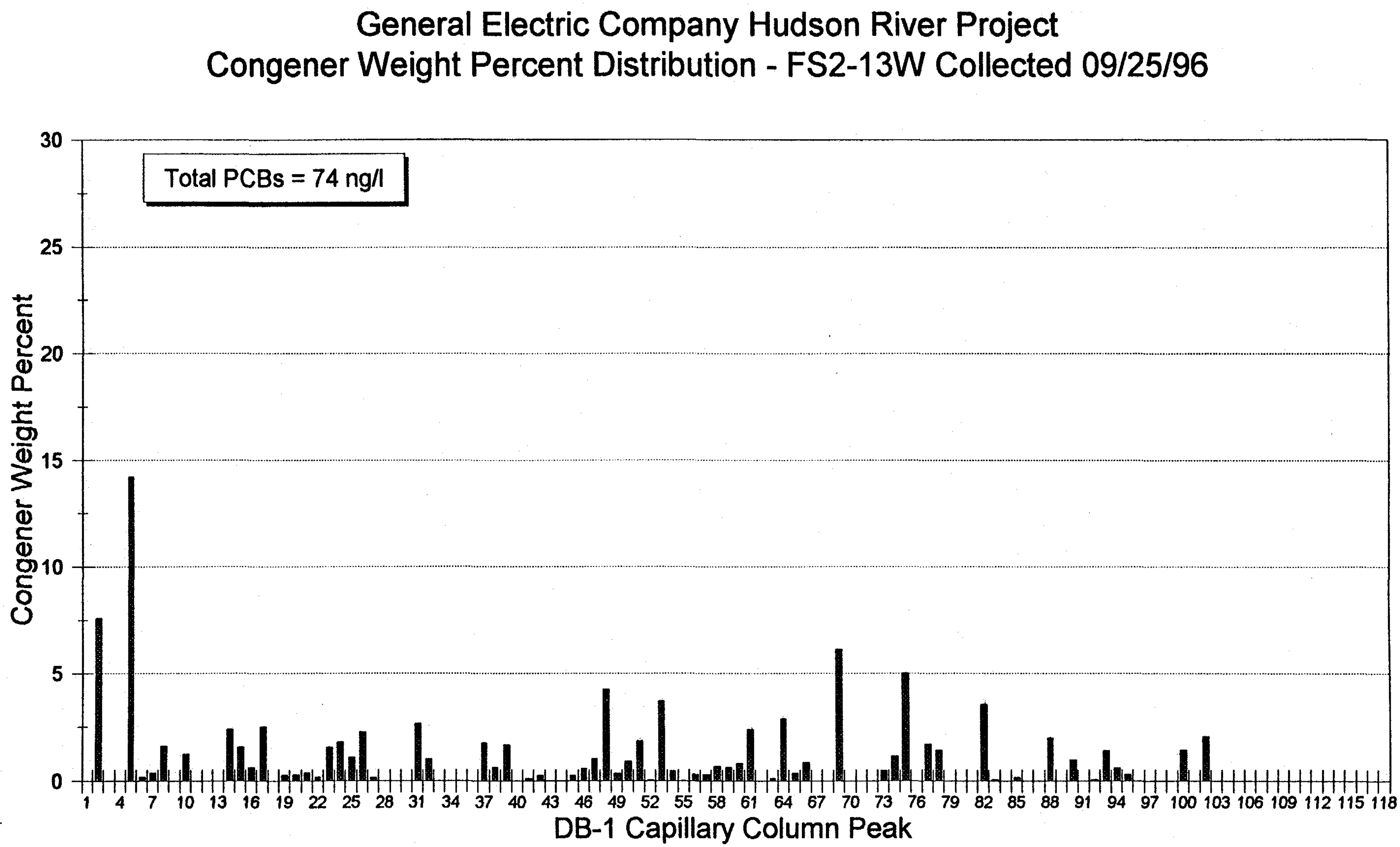
310959

PCB Congener Distributions
Aroclor 1260 Contamination Evaluation



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

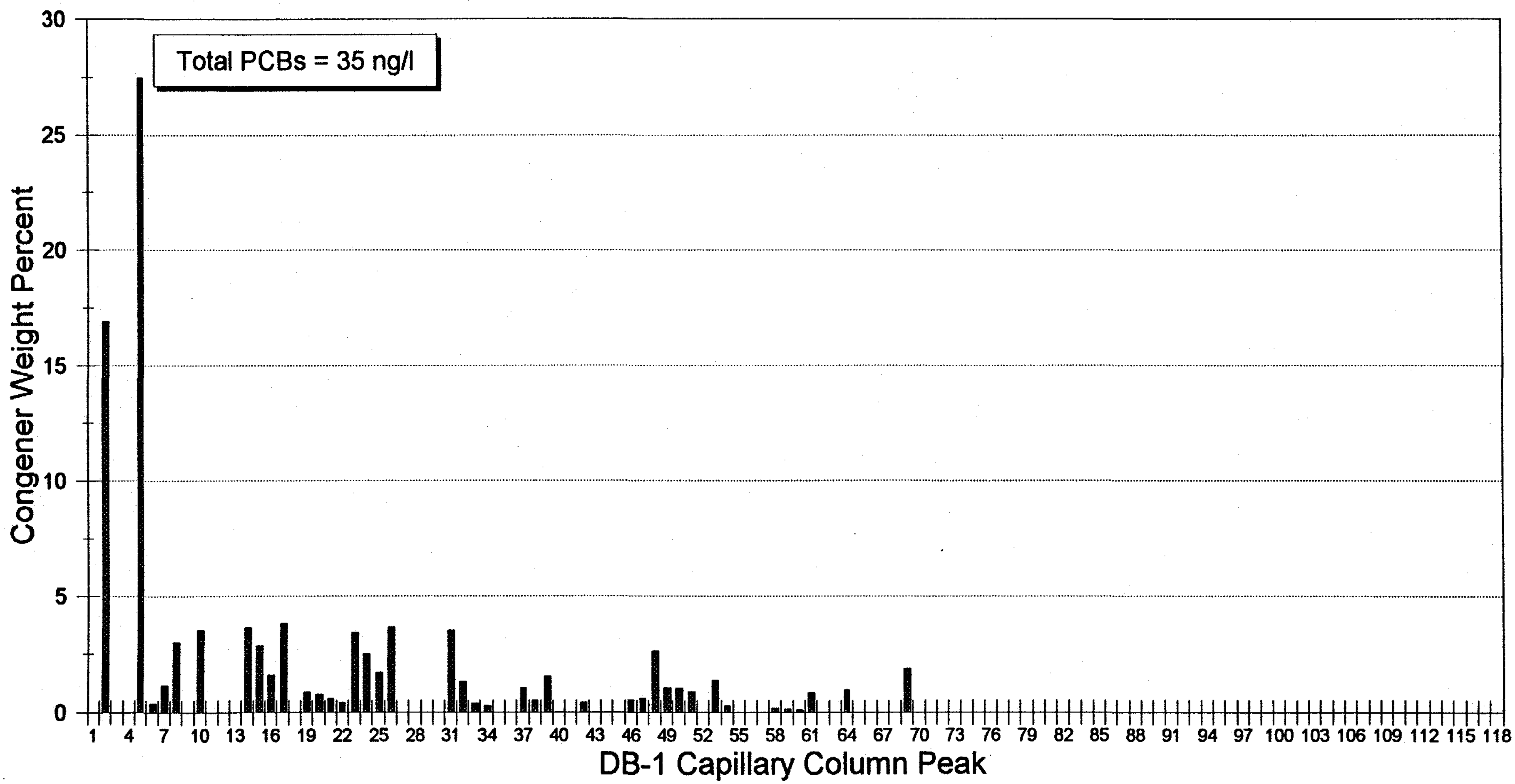
310961



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310962

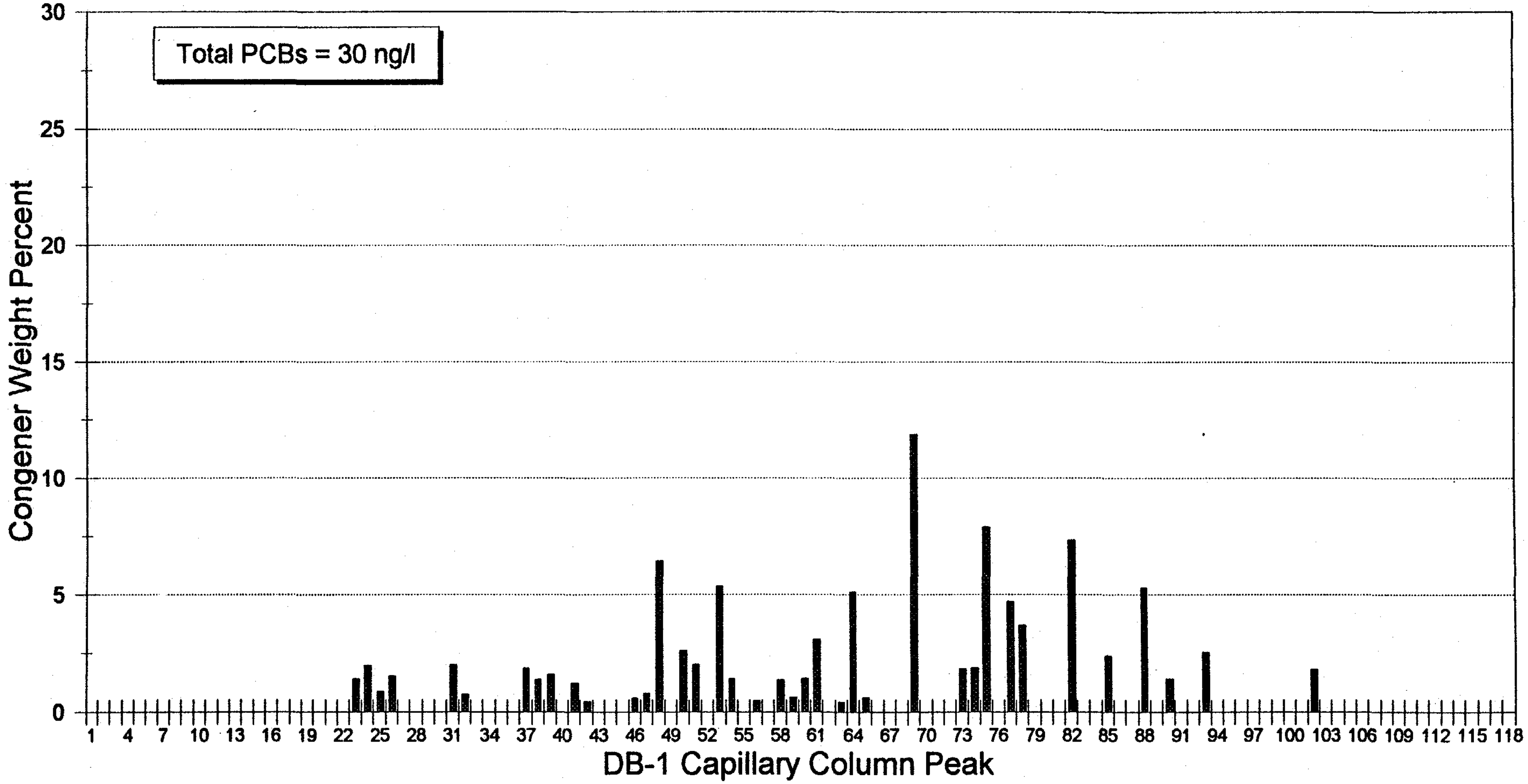
General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS2-13W Duplicate Collected 09/25/96



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

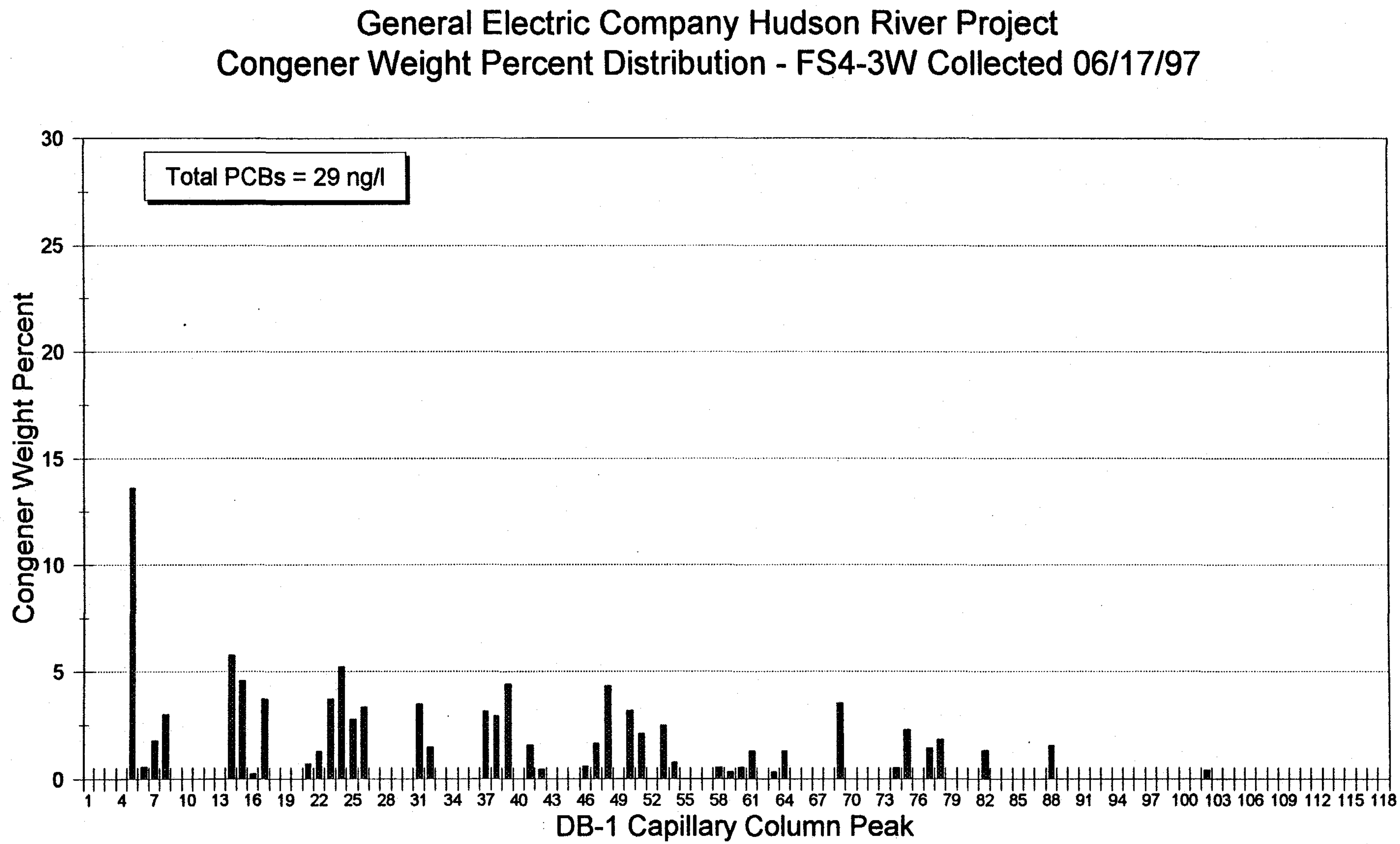
310963

General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS3-3E Collected 06/04/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

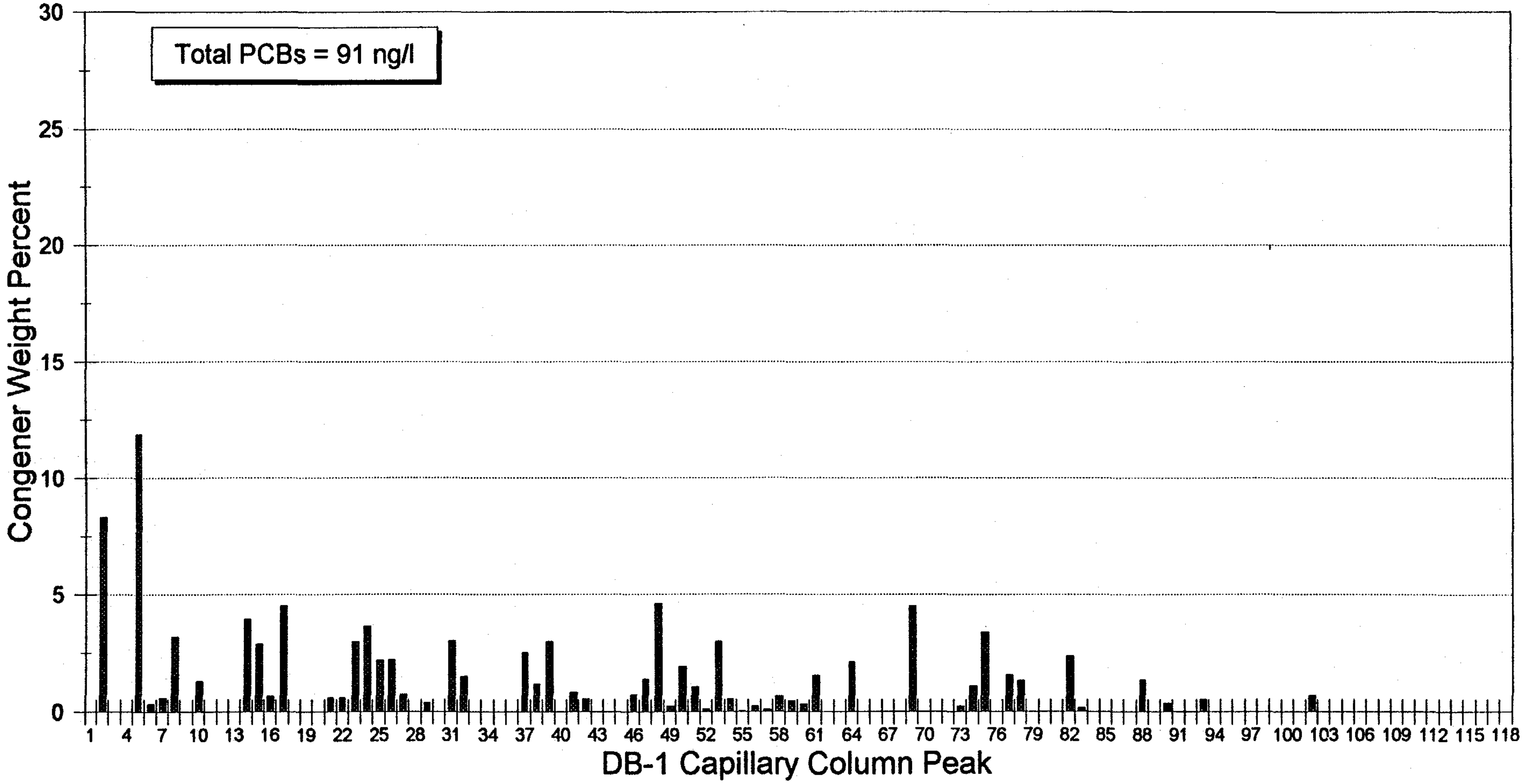
310964



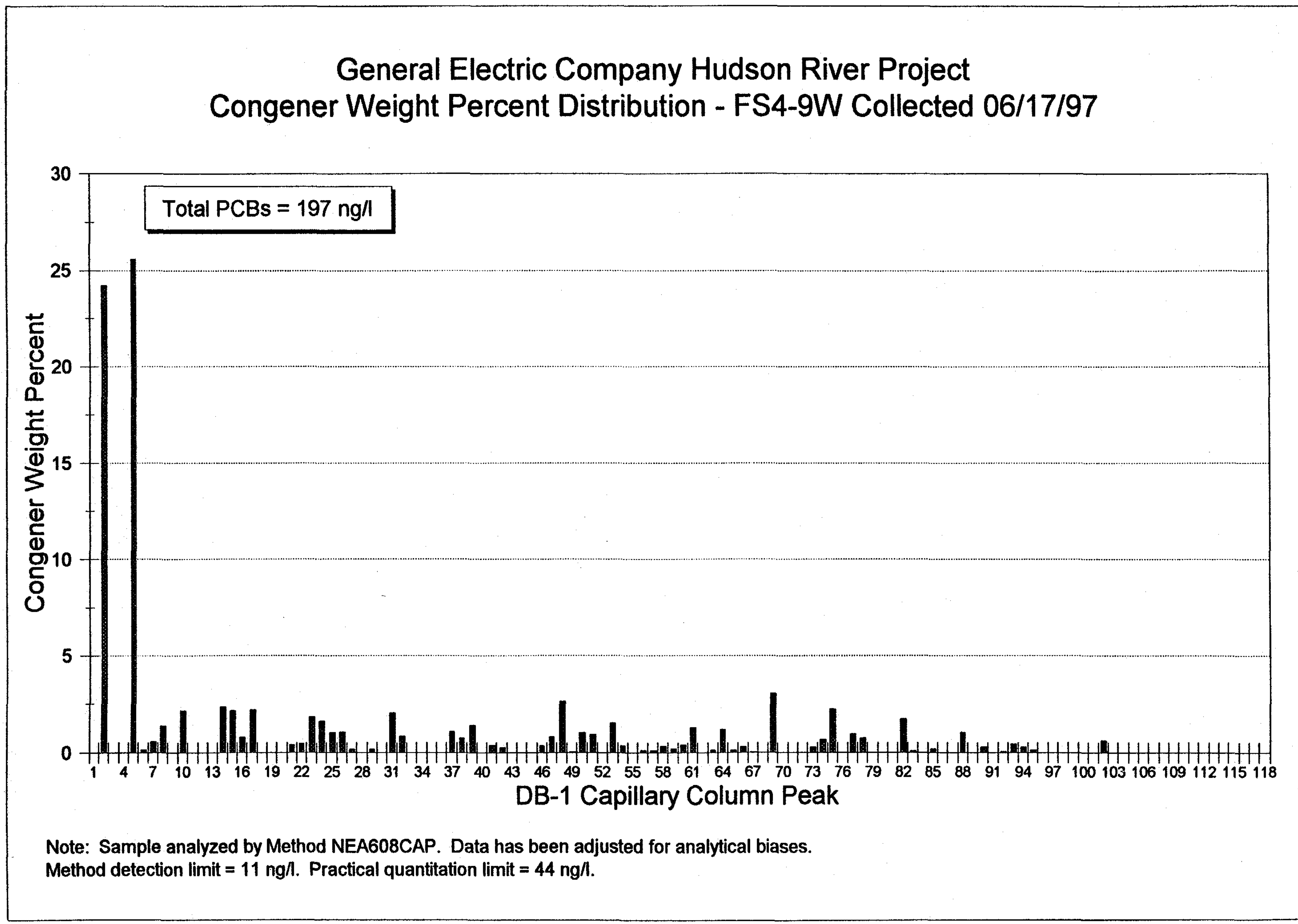
Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310965

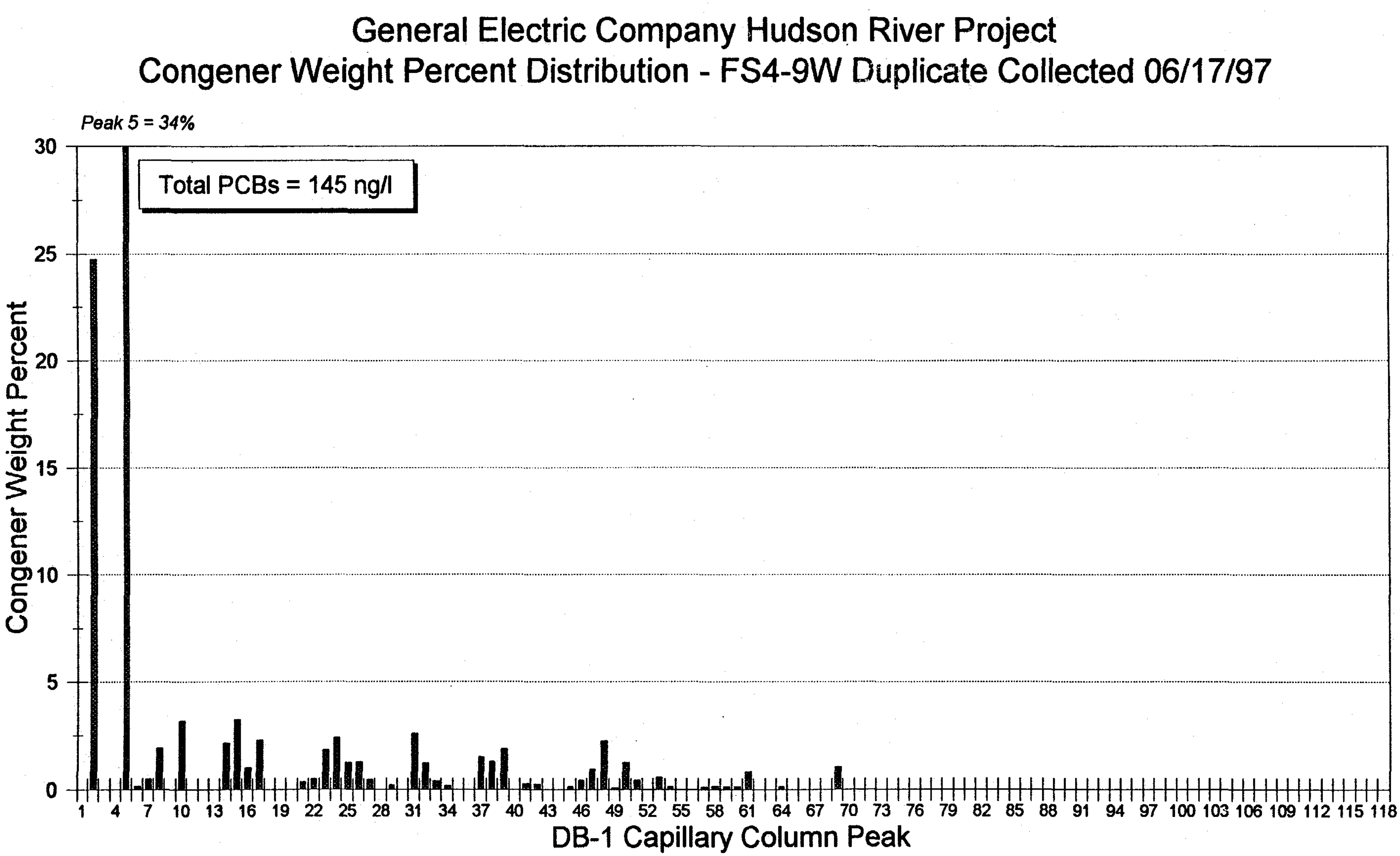
General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-7W Collected 06/17/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.


General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-9W Collected 06/17/97
Total PCBs = 197 ng/l
Congener Weight Percent
DB-1 Capillary Column Peak
Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

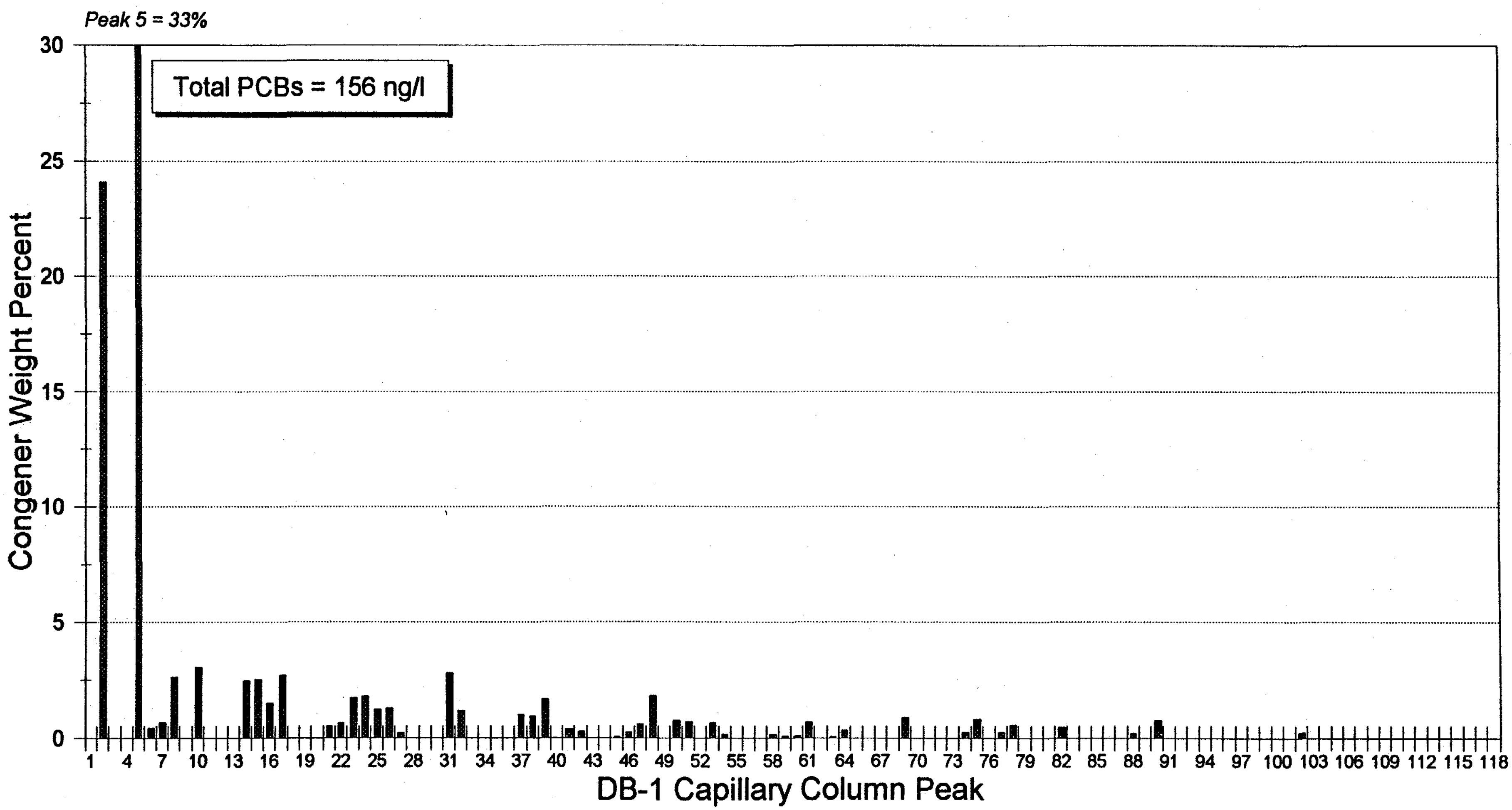
310967



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

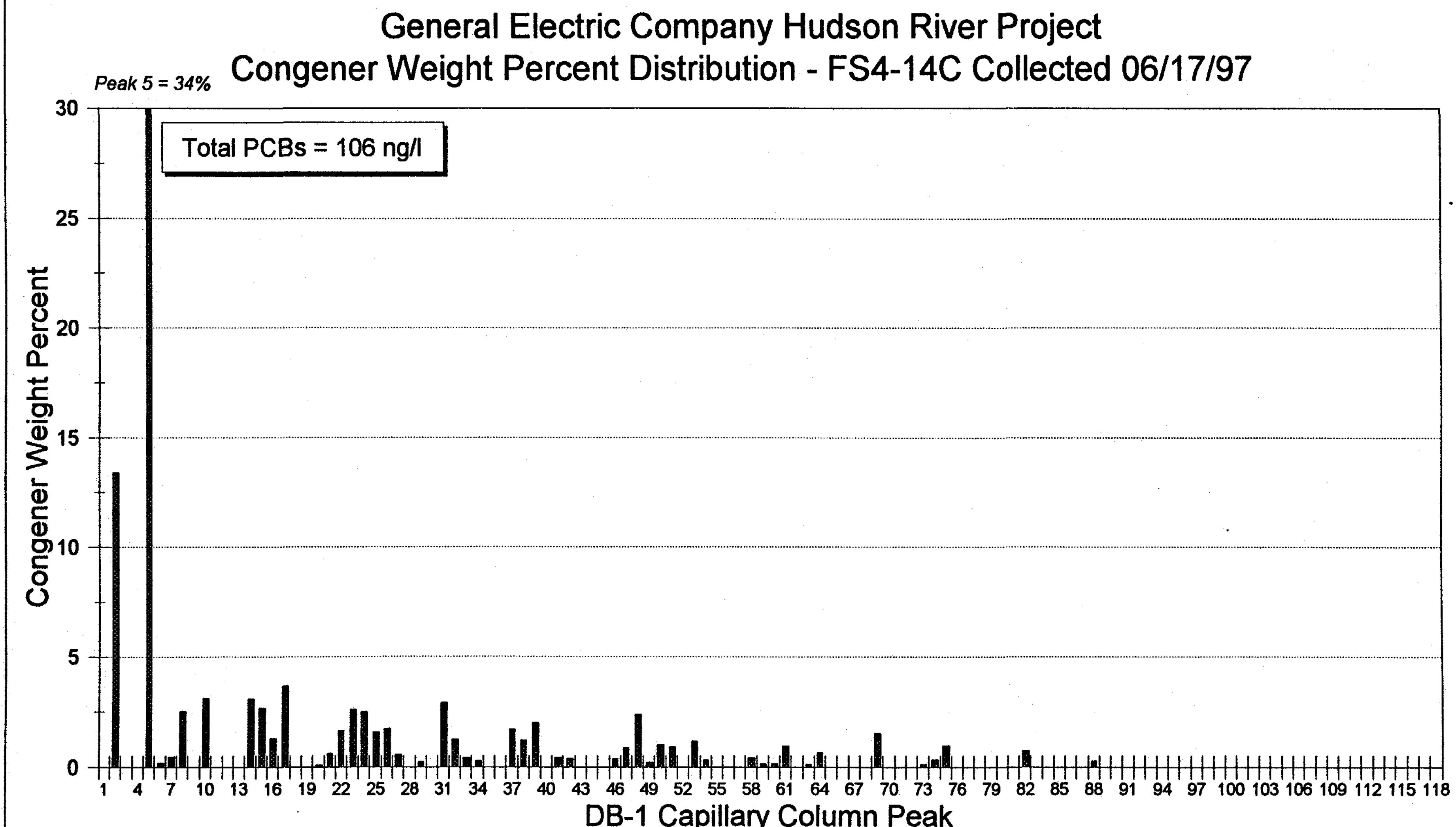
310968

General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-13A-W Collected 06/17/97

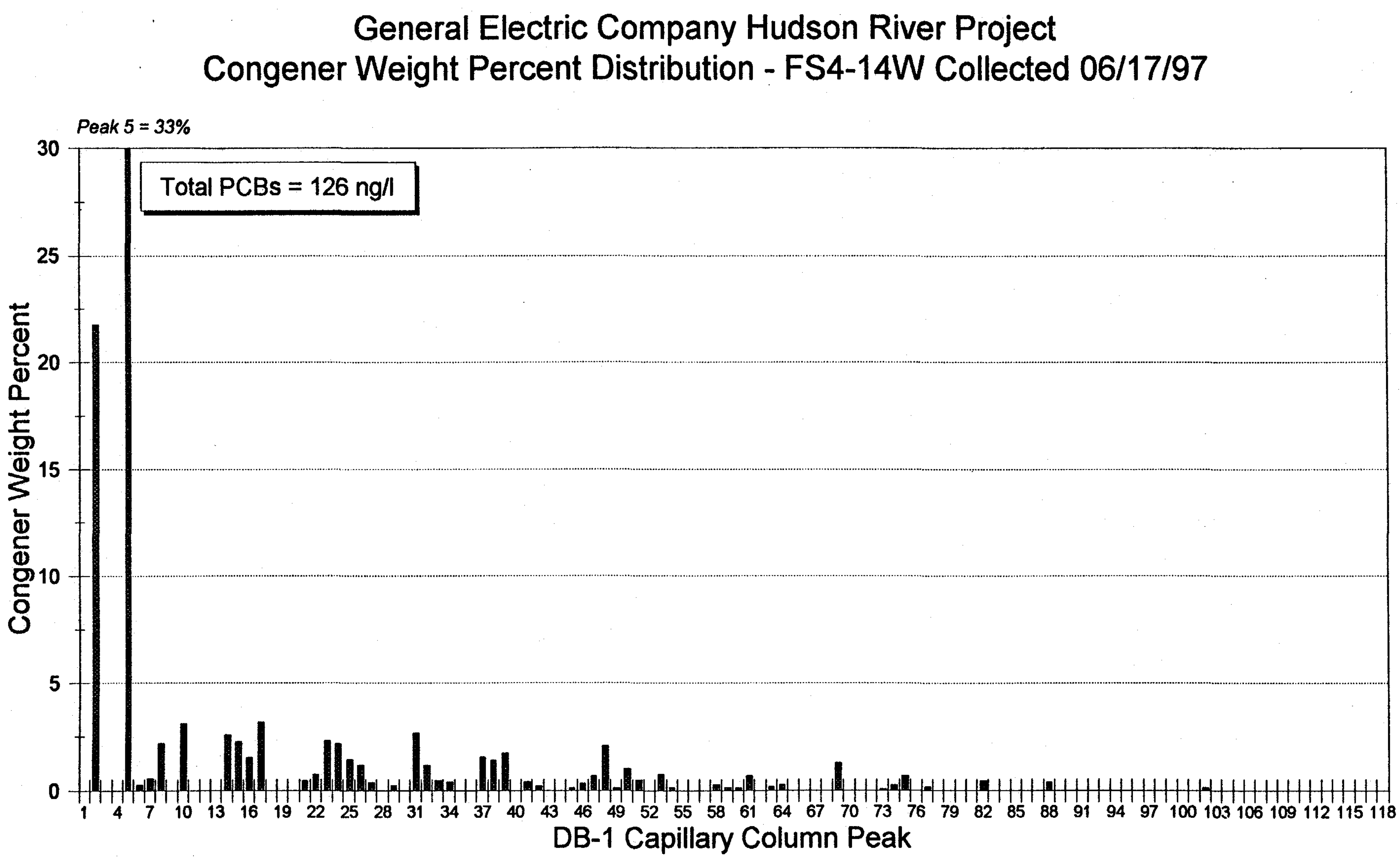


Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310969



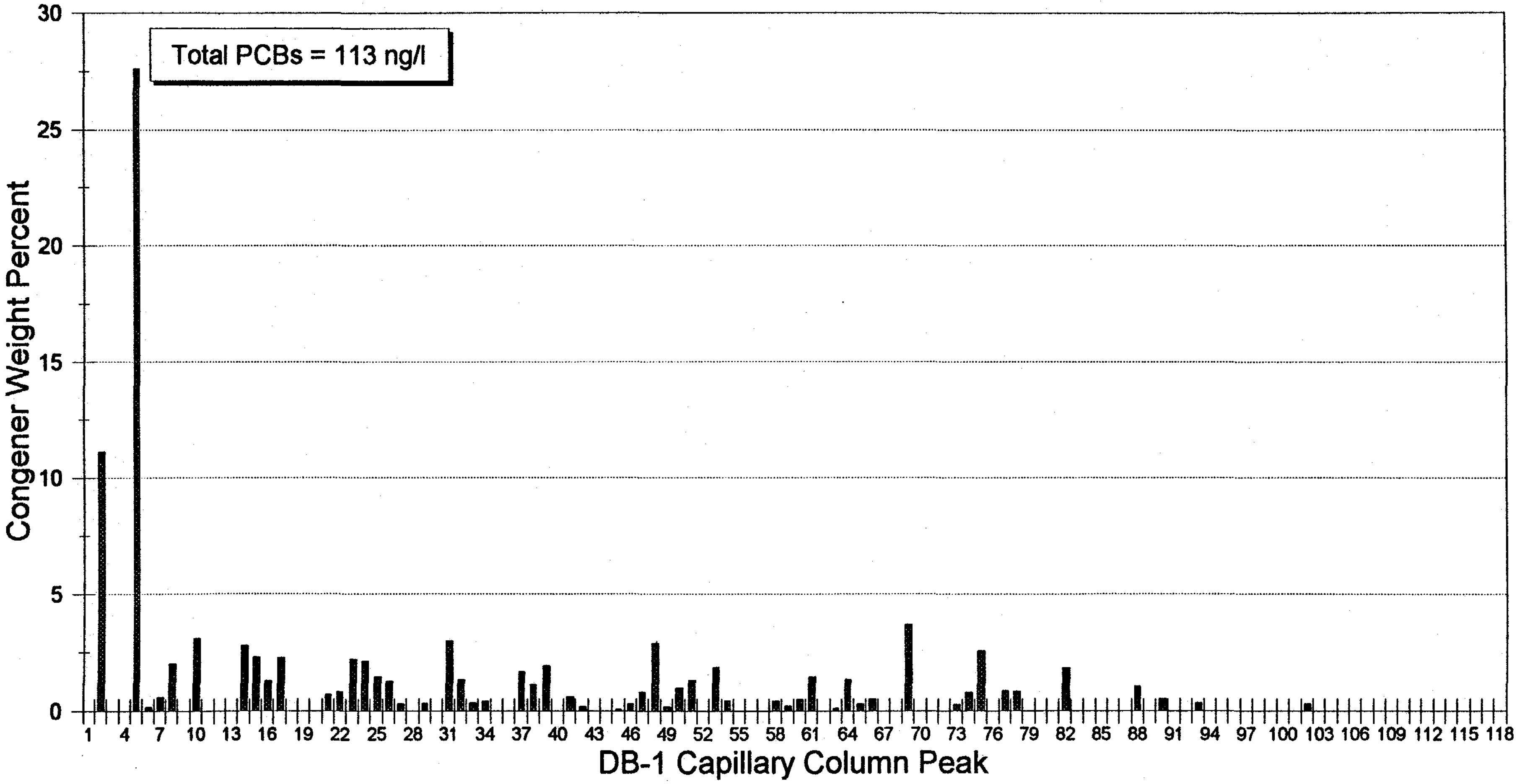
Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310971

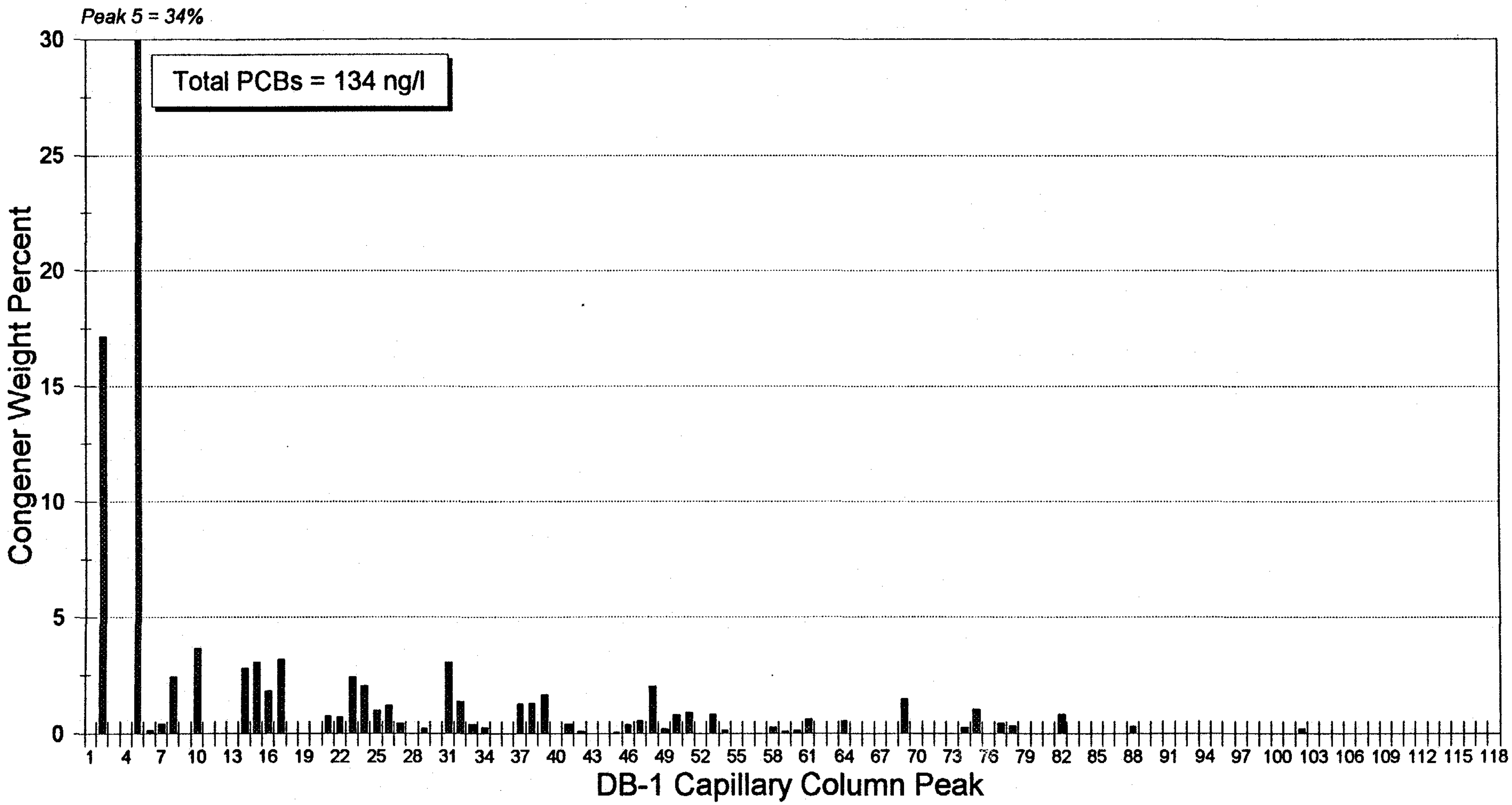
General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-15C Collected 06/17/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310972

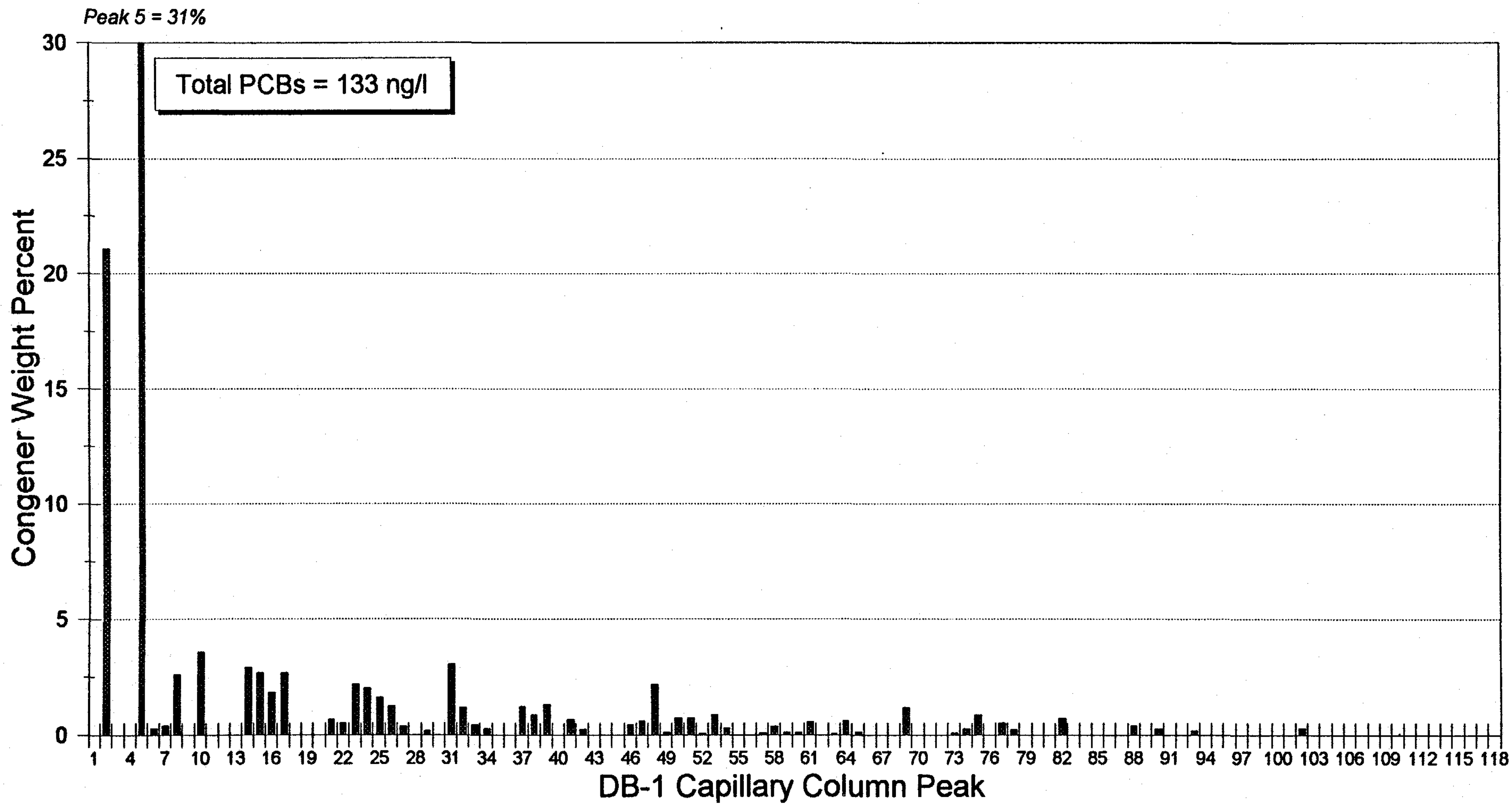
General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-15W Collected 06/17/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310973

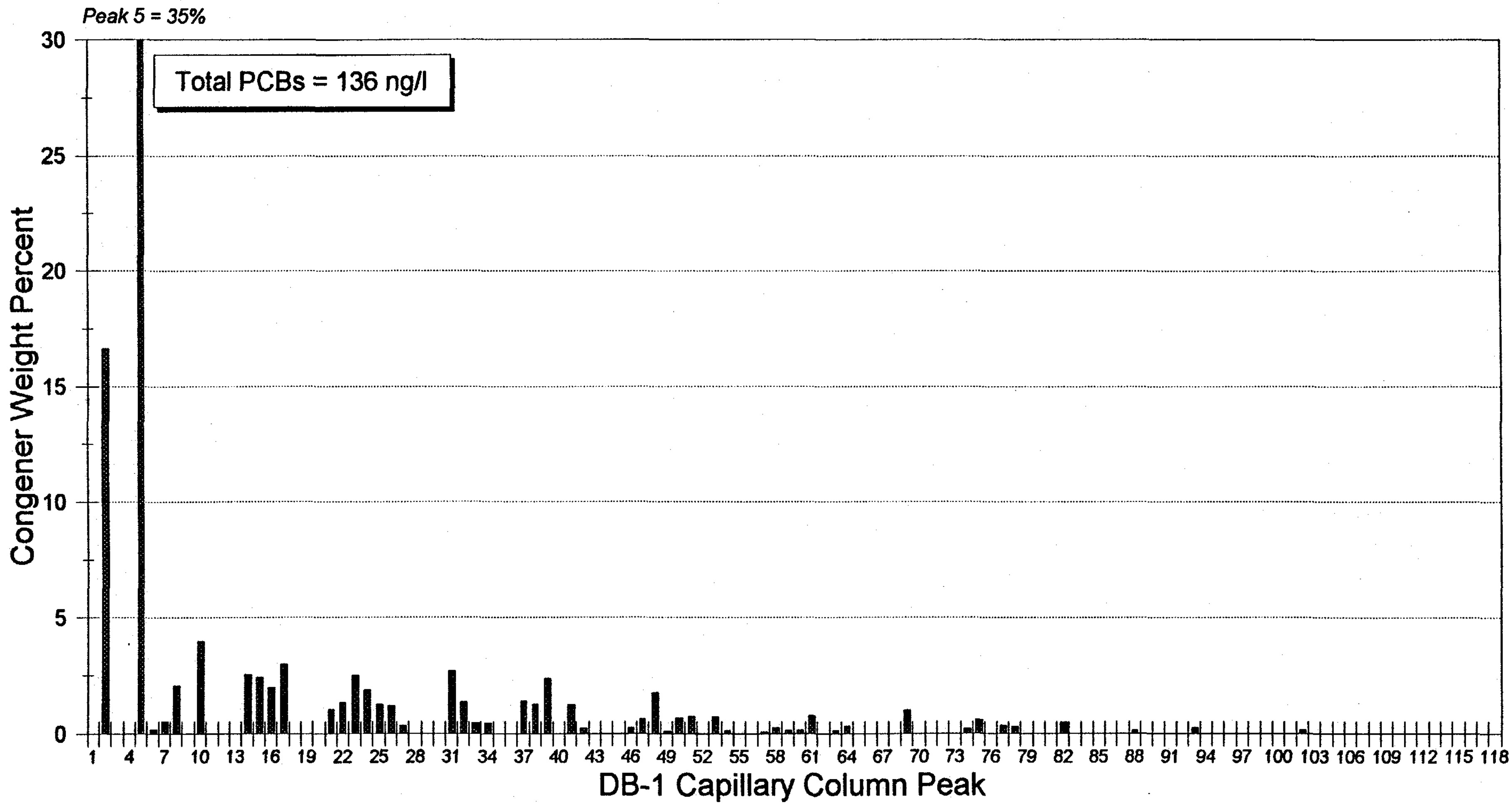
General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-15A-W Collected 06/17/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310974

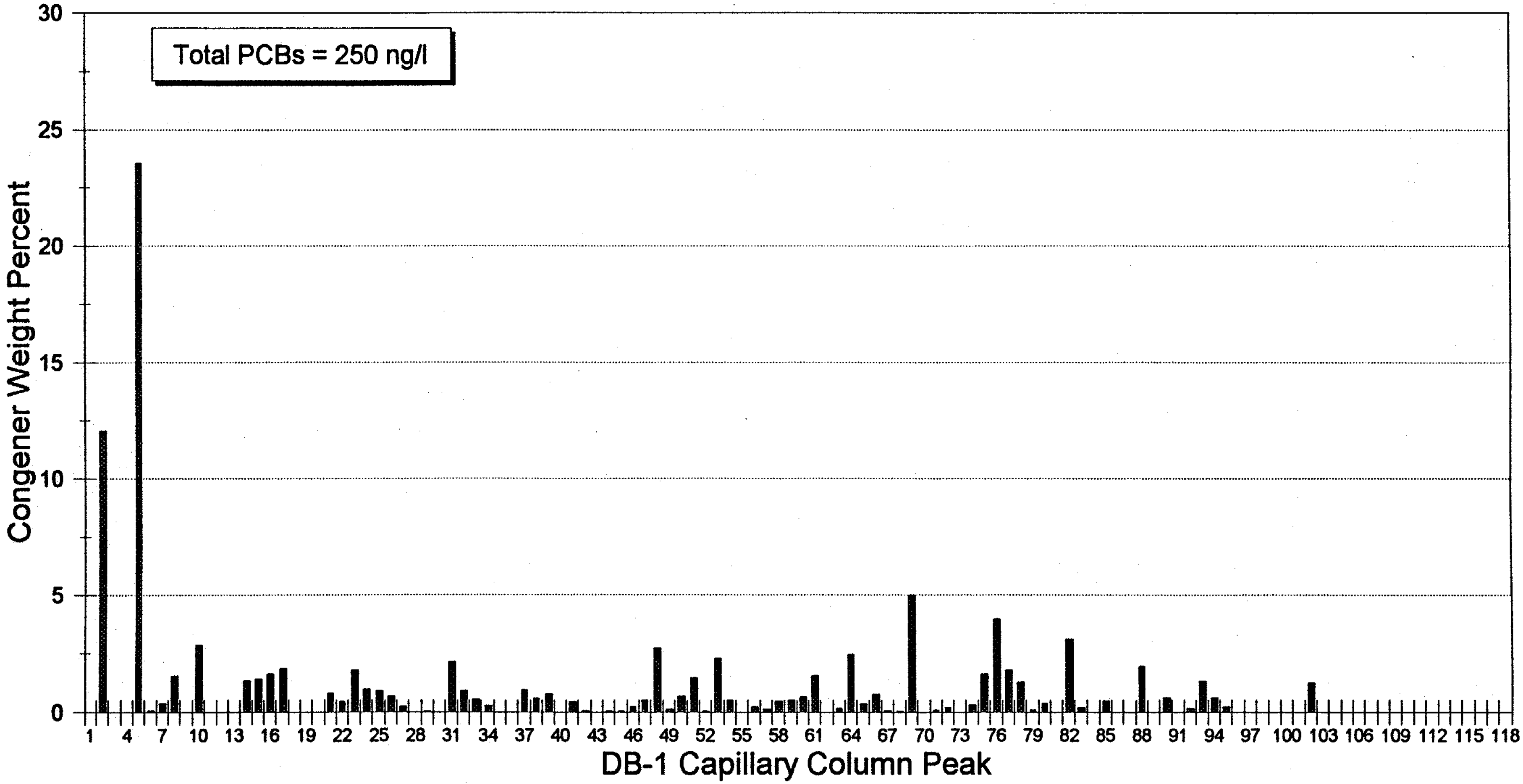
General Electric Company Hudson River Project
Congener Weight Percent Distribution - FS4-18W Collected 06/17/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310975

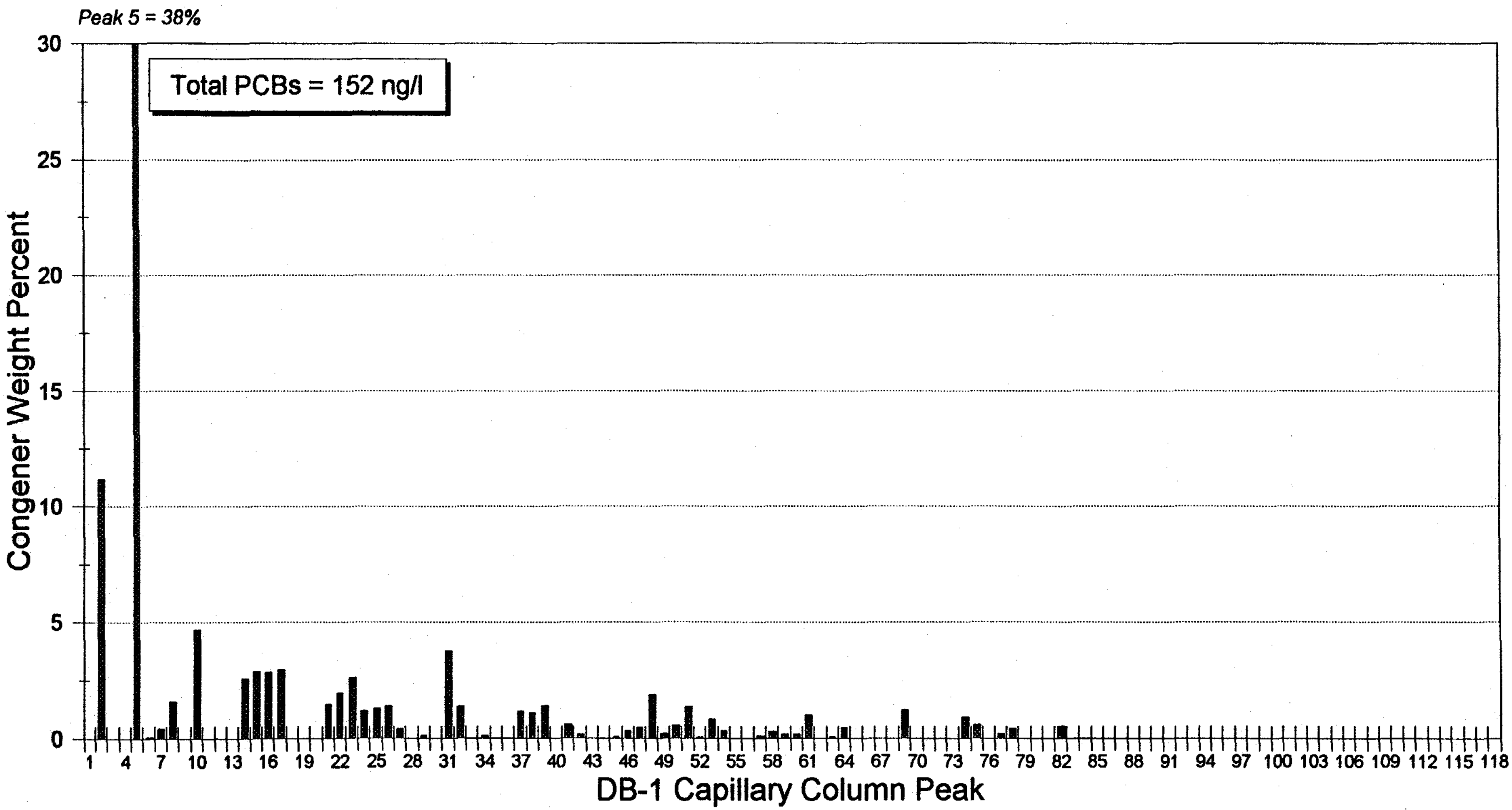
General Electric Company Hudson River Project
Congener Weight Percent Distribution - TIP-18SW Collected 10/01/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310976

General Electric Company Hudson River Project
Congener Weight Percent Distribution - TIP-18SW Archive Collected 10/01/97



Note: Sample analyzed by Method NEA608CAP. Data has been adjusted for analytical biases.
Method detection limit = 11 ng/l. Practical quantitation limit = 44 ng/l.

310977