

Report

70010

Hudson River Project Fall 1990 Sampling and Analysis Program

General Electric Company
Corporate Environmental Programs
Fairfield, Connecticut

June 1991



O'BRIEN & GERE

REPORT

HUDSON RIVER PROJECT

FALL 1990

SAMPLING AND ANALYSIS PROGRAM

GENERAL ELECTRIC COMPANY

CORPORATE ENVIRONMENTAL PROGRAMS

FAIRFIELD, CONNECTICUT

JUNE 1991

**O'BRIEN & GERE ENGINEERS, INC.
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SECTION 1 - INTRODUCTION

O'Brien & Gere Engineers, Inc. (O'Brien & Gere) was contracted by the General Electric Company (GE) to conduct sampling and analysis activities on the Upper Hudson River, New York during Fall 1990. This report describes the study site, program objectives, sampling and analysis methodologies, and presents the analytical testing results of the Fall 1990 Sampling and Analysis Program.

1.01 Site Background

The Hudson River originates in the Adirondack Mountains of northern New York State and flows into the Atlantic Ocean at the Battery in New York City (Figure 1-1). The Lower Hudson River is the 150 mile stretch between New York Harbor and the river's confluence with the Mohawk River at Albany, New York. This length of the river is maintained and regulated as a federal waterway by the Army Corps of Engineers to provide waterborne access to the Port of Albany and the New York State Barge Canal system.

The portion of the river north of Albany has been designated as the Upper Hudson River. The approximately 40 mile length of River between Troy and Fort Edward, New York was the principal study area for the Fall 1990 Sampling and Analysis Program (Figure 1-1). This portion of the River is a part of the New York State Barge Canal System and is maintained and regulated by the New York State Department of Transportation (NYSDOT).

1.02 Program Objectives

The Fall 1990 Hudson River Sampling and Analysis Program consisted of the following elements:

- Thompson Island Pool (TIP) Sediment Sampling and Analysis,
- Upper River Sediment Sampling and Analysis,
- Supplemental Sediment Sampling and Analysis,
- Water Column Sampling and Analysis, and
- Hydrologic Measurements.

The principal objective of each of these program elements is briefly described in the sections below.

1.02.01 TIP Sediment Sampling and Analysis

The objective of the TIP Sediment Sampling and Analysis Program was to sample and analyze sediments for PCBs along a 20 foot by 20 foot sampling grid, established within three previously designed "Hot Spots" within the Thompson Island Pool (Figure 1-1). The sites chosen for this program were three of the polygons described in NYSDEC (1988).¹

¹ New York State Department of Environmental Conservation (NYSDEC). 1988 Distribution of PCBs in the Thompson Island Pool of the Hudson River: Final Report of the Hudson River PCB Reclamation Demonstration Project Sediment Survey. M.P. Brown, M. Werner, C. Carusone, and M. Klein. Bureau of Technical Services and Research, Division of Water. Albany, N.Y. May 1988.

1.02.02 Upper River Sediment Sampling and Analysis

The major objective of the Upper River Sediment Sampling and Analysis Program was to provide a current, but limited sediment PCB database for the 40 mile reach of the Upper Hudson River extending from Troy to Fort Edward, New York (Figure 1-1). This program consisted of sampling and analyzing sediments from approximately 30 sediment stations.

1.02.03 Supplemental Sediment Sampling and Analysis

The principal purpose of the Supplemental Sediment Sampling and Analysis Program was to sample sediments within portions of the river, both upstream and downstream from the main study area, and analyze these sediments for PCBs. This program involved the collection of sediment cores near the Corinth and Spiers Falls Dams as well as from within Albany Turning Basin-South (Figure 1-1).

1.02.04 Water Column Sampling and Analysis

The principal objective of the Water Column Sampling and Analysis Program was to provide a congener specific characterization of PCBs in water sampled at designated locations within the Upper Hudson River. This program involved the collection and analysis of River water samples from 13 water quality stations located between Troy and Fort Edward, New York (Figure 1-1).

1.02.05 Hydrologic Measurements

The Hydrologic Measurement Program consisted of a one-time measurement of river flow and surface water elevations at sixteen river stations located along the 40 mile study area extending from Troy to Fort Edward, New York (Figure 1-1).

SECTION 2 - METHODS

2.01 TIP Sediment Sampling and Analysis

2.01.01 Sampling Scheme

The TIP Sediment Sampling and Analysis Program was designed to collect sediment-borne PCB data along a fine-scale grid at three previously determined "Hot Spots" within the Thompson Island Pool. The three sites chosen for this program were three of the polygons described in NYSDEC (1988)² as follows:

- Site I: polygon 127, former hot spot 17
- Site II: polygon 5, former hot spot 3
- Site III: polygon 44, former hot spot 6

A map depicting the location of each of these polygons is presented in Figure 2-1.

Sediment cores were collected from each node produced by the 20 foot by 20 foot sampling grid superimposed on each site. For Sites I and II, this sampling grid covered the area defined by the polygons borders and extended into adjacent areas (Figures 2-2 and 2-3). For Site III, the sampling grid included only the northern most portion of polygon 44 (Figure 2-4). In addition to the 20 by 20 foot sampling grid, one transect perpendicular to river flow was sampled at 10 foot intervals at each site.

² New York State Department of Environmental Conservation (NYSDEC). 1988.

2.01.02 Sampling Equipment and Procedures

The vessel employed for the TIP Sediment Sampling and Analysis Program was a customized 24 foot pontoon boat powered by a 50 HP engine. The sampling vessel was located at each predetermined sampling station using an IMC Hydro I automated range-azimuth positioning system. This laser-based system provided a position accuracy of ± 0.6 meters and allowed the vessel captain to locate and record the real time x-y position of the vessel at one second intervals from a ship-board computer.

Once the boat had been located at a sampling station, a single sediment core was collected using a gasoline powered vibracorer. The vibracorer was equipped with 2½ inch diameter, three foot long, aluminum sampling barrels. Once collected, the sediment cores were maintained within the aluminum coring barrels in an upright and secure position on the boat. The vibracorer was scrubbed with a brush and river water between each sample.

When sediment cores could not be obtained from any of the sampling locations, a Ponar Dredge was employed to collect surficial sediments. The dredged samples were placed in labeled and precleaned sample bottles. The dredge was scrubbed with a brush and river water, wiped with acetone, then hexane, then distilled water, and finally river water between samples.

Sediment sampling procedures were verified in a daily log kept by the field crew chief. Daily entries into the field crew chief's logbook included: date, weather conditions, time of each core collection, depth of overlying

water, as well as other pertinent observations such as apparent texture of sediment, or presence of macrophytic plants or wood debris.

2.01.03 Sample Processing

At the end of each working day the sediment cores and dredge samples were transported in an upright position to the field laboratory located at the Coveville Marina in Schuylerville, NY. Upon arrival, the sediment cores were placed within a chest freezer and frozen overnight. The frozen sediment cores were sectioned into 3 inch segments within the top 12 inches of the core and six inch segments for the remaining length of the core (8 sections per three foot core). Sediment core processing proceeded according to the procedure described below.

- 1) Frozen sediment cores were placed horizontally in a vice.
- 2) The core was measured and marked into 3 inch segments within the top 12 inches of the core and six inch segments for the remaining length of the core.
- 3) The aluminum core tubes, and the sediment cores were cut using a pipe cutter and hacksaw, respectively.
- 4) Sediments were extruded from the aluminum core tubes into a precleaned sample container.
- 5) The sample container was labeled according to the following sample code:

Sampling Date: <mm/dd/yy>

Sample Site: <Site-Coordinates>

Core Section: <xx-yy inches>.

- 6) Sediment core samples were packed in coolers and transported to OBG Laboratories, Inc. for analysis.

Hacksaw blades used to segment the sediment cores were scrubbed with a brush and water, then wiped with acetone, then hexane, and finally distilled water between samples.

Field laboratory documentation consisted of daily entries in the field laboratory logbook which included the date, list of sediment cores processed, number of sections obtained for each core, general description of each sample, the time the core was processed, and the time the samples were dispatched to the laboratory. Photographic records of the sample processing procedure as well as a written record of the vertical stratification of sediment color and texture were obtained for all sediment cores.

2.01.04 Analysis Scheme

Each of the 3 inch core sections from the top one foot of each sediment core collected as part of the TIP Sediment Sampling and Analysis Program were subsampled, composited, and analyzed for total PCBs. Compositing and analysis was performed by OBG Laboratories as described below.

- 1) Sediment core sections obtained from the top 12 inches from a single sediment core (e.g. 0-3", 3-6", 6-9", and 9-12" segments) were identified from sample labels.
- 2) The contents of each sample container was thoroughly mixed using a clean and dedicated stainless steel spatula.
- 3) Approximately 5.0 (+/- 0.1) grams of wet sample from each of the core sections comprising the top 12 inches of a sediment core were composited. If the total length of the core was less than 12 inches then 5.0 +/- 0.1 grams were composited from the available sections (eg. 0-3", 3-6", and 6-9" for a 9 inch core).
- 4) Composite samples were analyzed for total PCBs, percent total solids, and percent organic matter.

2.02 Upper River Sediment Characterization

2.02.01 Sampling Scheme

The Upper River Sediment Sampling and Analysis Program involved the collection and subsequent analysis of sediment cores and grab samples collected from 10 sampling stations along the approximately 40 mile reach of the Hudson River extending from Troy to Fort Edward, New York. The sediment sampling stations included station 1,3,6,9,10,11,13,15,16, and 19 as described in Table 2-1.

Each station was sampled at three sites: the eastern shore, the western shore, and the center of the river channel. At sites where sediment cores

could be collected, five cores were obtained and subsequently composited to provide sufficient sample to conduct the various analytical tests.

2.02.02 Sampling Equipment and Procedures

Core samples were collected using a WILDCO Model 2400 gravity coring device. This device uses lexan tubes which were inserted into the core barrel of the sampler and held in place with a plastic nose cone. Sediments were collected with the gravity corer according to the following procedures described below.

- 1) The gravity corer was gently lowered into the sediment.
- 2) The corer was activated with the line messenger.
- 3) The corer was slowly retrieved to the river surface.
- 4) The sampling cone from the head of the coring barrel was removed while keeping the corer upright.
- 5) The core tube cap was placed over the bottom of the lexan core tube.
- 6) The suction cup was released from the top of the core barrel.
- 7) The core tube was removed from the core barrel.
- 8) The top of the sediment core was capped with a core cap.
- 9) The sediment core tube was labelled indicating date, sample location, and top and bottom of sediment core.
- 10) The sediment core was placed upright in the core rack and transported to the field lab for processing.

The sediment core barrel was scrubbed with a brush and river water between samples. The nose cone was scrubbed with a brush and river water, rinsed in acetone, then hexane, and then distilled water between samples.

At shallow locations where the corer was unable to penetrate the sediments, an extension was added to the corer and it was manually pushed into the sediment. At locations where cores were not obtainable with the gravity corer, grab samples were collected using an ECKMAN dredge. The dredge samples were placed in precleaned and appropriately labeled sample bottles. The dredge was scrubbed with a brush and river water, rinsed in acetone, then hexane, and finally distilled water between samples.

2.02.03 Sample Processing

The sediment cores were transported in an upright position to the field laboratory located at the Coveville Marina in Schuylerville, N.Y. The cores were frozen overnight then sectioned at the 2, 5, and 10 cm depths. Multiple cores collected from the same sampling site were composited after segmentation. The sample processing details are presented below.

- 1) Frozen sediment cores were placed horizontally in a vice.
- 2) Cores were measured and marked at the 2, 5, and 10 cm depths.
- 3) Lexan core tubes and the sediments were cut using a hacksaw.
- 4) Sediments were extruded from the core tubes into precleaned sample containers.

- 5) Sample containers were labeled according to the following sample code:

Sampling Date: <dd/mm/yy>

Sample Site: <Station/Site>

Core Section: <xx-yy cm>

Hacksaw blades used to segment frozen cores were scrubbed with a brush and water, wiped with acetone, hexane, and finally distilled water between samples.

Sample handling procedures were recorded in a daily log kept by the sample processing personnel. Daily entries into the log book included: the date, list of sediment cores processed, number of sections obtained for each core, general description of sediment color and texture, and the time the core was processed.

Composited sediment core samples were transported to the Syracuse Office of O'Brien & Gere Engineers where bulk sediment samples were subsampled and sediment pore water was extracted from the 0-2 and 2-5 cm core sections. The pore water extraction procedure was a modification of the procedure described by Brownwill and Farrington³ and consisted of centrifugation of bulk sediments with subsequent filtration of supernatant pore water.

³ Brownwill and Farrington. 1986. *Geochimica et Cosmochimica Acta*. 50:157.

2.02.04 Analysis Scheme

Bulk sediment samples were transported to Northeast Analytical Laboratories, Inc. for congener specific PCB analysis and to OBG Laboratories, Inc. where they were analyzed for bulk density, moisture content, and soluble organic carbon. Pore water was transported to Northeast Analytical Laboratories for total organic carbon and congener specific PCB analysis.

2.03 Supplemental Sediment Sampling and Analysis

2.03.01 Sampling Scheme

The Supplemental Sediment Sampling and Analysis Program consisted of sampling and subsequent PCB analysis of sediments from locations both upstream and downstream of the main study area. These locations included:

- Sediments near Spiers Falls Dam
- Sediments near Corinth Dam
- Sediments within Albany Turning Basin-South

Four sediment cores were collected from sediments both upstream and downstream of Corinth Dam and Spiers Falls Dam (See Figure 1-1 for location of dams). Twenty sediment cores were collected from the Albany Turning Basin-South and were located near the shoreline relative to existing geographic reference points (e.g. mouths of drainage swales, discharge outfalls, etc.; Figure 2-5).

2.03.02 Sampling Equipment and Procedures

Sediment cores were collected using the same equipment and procedures described in Section 2.02.02.

2.03.03 Sample Processing

Sample processing for the Supplemental Sediment Sampling and Analysis Program generally proceeded according to details presented in Section 2.02.03. Notable exceptions include: 1) bulk sediments were transported directly to the laboratory for analytical testing, and 2) sediment pore water was not extracted for subsequent testing.

2.03.04 Analysis Scheme

Sediment cores collected from Spiers Falls Dam and Corinth Dam were analyzed for total organic carbon and congener specific PCBs. Sediment cores collected from the Albany Turning Basin-South were analyzed for total organic carbon and total PCBs.

2.04 Water Column Sampling and Analysis

2.04.01 Sampling Scheme

Vertically stratified composite water column samples were collected from sampling stations 1, 3, 6, 9, 10, 11, 13, 15, 16, 19, 20, 21 and 22 (Table 2-1). At each station the river was visually divided into thirds along a transect perpendicular to river flow. Composite samples were collected from the 1/4

point, 1/2 point, and the 3/4 points at each station (identified as "east", "center", and "west").

A single grab sample was collected from Station 20 due to swift currents and shallow water. Station 21 was sampled from the Route 32 bridge in Cohoes, New York.

2.04.02 Sampling Equipment and Procedures

Discrete samples were obtained at 3 feet depth intervals from the water column using a pre-cleaned stainless steel Kemmerer sampler and composited in a clean stainless steel pail prior to placement in sample containers.

The Kemmerer Bottle and stainless steel compositing pail were decontaminated by rinsing in acetone, then hexane, and finally distilled water between sites.

2.04.03 Analysis scheme

Water column sampling and analysis samples were submitted to Northeast Analytical Laboratories for dissolved and total congener specific PCB testing and to OBG Laboratories for total suspended solids, total dissolved solids, particle count, and total organic carbon testing.

2.05 Hydrologic Measurements

2.05.01 Sampling Scheme

Hydrologic measurements including surface water elevations and water velocities were collected at 15 hydraulic stations located approximately 0.1 miles upstream from the Thompson Island Dam, Lock 6 Dam, Northumberland Dam, Lock 4 Dam, Lock 3 Dam, Lock 2 Dam, and Lock 1 Dam (Figure 1-1) as well as sampling stations 4, 7, 10, 11, 13, 15, 16, 17, and 18 (Table 2-1). Mid-depth water velocity measurements were taken at three locations at each sampling station from a small boat. The river was divided visually into quarters with readings obtained at the 1/4 point, 1/2 point, and 3/4 point (designated "east", "center", and "west").

2.05.02 Sampling Equipment and Procedures

Surface water velocities were measured using a Marsh-McBurney Model 201 portable water current meter.

Surface water elevations were determined by measuring the vertical distance between established benchmarks and the surface of the river. The elevation of these bench marks were determined by surveying from nearby USGS datums.

2.06 Quality Assurance/Quality Control

Quality assurance samples collected as part of each of the sampling and analysis programs included: field duplicates and field equipment blanks which were

collected at the end of each working day at approximately the 5 percent rate as prescribed in the QAPP (Appendix F). Field duplicate samples were collected from the same sampling station after a single approach by the sampling vessel. Matrix spikes and matrix spike duplicates were performed by the laboratories on samples submitted for analysis. Field equipment blanks were obtained by collecting runoff while washing sampling equipment with organic free water obtained from OBG Laboratories.

The QAPP (Appendix F) discusses in greater detail the quality assurance and quality control measures employed during the sampling and analysis programs described in this report.

SECTION 3 - DATA PRODUCTION AND REPORTING

3.01 OBG Laboratories, Inc.

OBG Laboratories, Inc. was responsible for the analysis of 416 sediment and 22 equipment rinse samples collected during the TIP Sediment Sampling and Analysis Program. The sediment and rinse samples were collected between October 25 and December 13, 1990. Analytical methods employed in sample handling and analysis were as follows: Total PCBs - EPA Method 8080⁴ (modified) and Percent Solids and Percent Volatile Solids - Standard Methods 209F⁵.

Modifications to EPA Method 8080 involved the following modifications to the extraction and quantification procedures. Normally, EPA Method 8080 requires sediment samples to be extracted by sonication (EPA Method 3550) or soxhlet (EPA Method 3540) methods. The extraction method employed during the investigation was as follows: A 30 gram sediment sample was mixed with 60 grams of sodium sulfate, 20 ml of acetone, and 100 ml of hexane. This extraction mixture was then placed in an autosshaker for 30 minutes. The hexane layer was decanted and the extraction was repeated two more times with the addition of 100 ml portions of hexane. The EPA Method 8080 quantitation procedure was modified by calculating and reporting the PCB concentration based upon nine indicator peaks determined

⁴Test Methods for Evaluating Solid Waste, SW-846 Third Edition, US EPA November 1986.

⁵Standard Methods for the Examination of Water and Wastewater, 16th Edition, American Public Health Association, 1985.

after evaluation of numerous sample chromatograms. PCB concentrations were reported as Arochlor 1242 following visual verification of peak patterns.

A data report entitled Laboratory Report, General Electric Company, Hudson River Project, October-December 1990 (six volumes) was generated by OBG Laboratories, Inc. The laboratory report was prepared consistent with New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP) Category B reporting requirements. The total PCBs data package contained the following components:

- Title Page
- Sign-off Sheet
- Table of Contents
- Case Narrative
- Sample Result Forms
- Copies of Chains of Custody
- Sample Log-in Sheet
- Internal Sample Control Record (internal sample tracking sheet)
- Matrix Spike Summary Table
- Duplicate Summary Table
- Method Blank Summary Table
- Sample Raw Data
- Analyst Sample Injection Log
- Standards Summary Tables
- Standards/QC Sample (blanks, matrix spikes, duplicates) Raw Data

3.02 Northeast Analytical, Inc.

Northeast Analytical, Inc. was responsible for the analysis of sediment and water samples from the Water Column, Supplemental Sediment and Upper River Sediment Sampling and Analysis Programs. Northeast Analytical performed approximately 386 congener specific PCB analyses⁶, 103 total PCB analyses (EPA Method 8080⁷), and 253 total organic carbon (TOC) analyses⁴.

Since a specific NYSDEC ASP reporting protocol does not exist for congener specific PCB analyses, a reporting package and quality control program was developed which adheres to the guidelines set forth in the NYSDEC ASP Superfund PCB/pesticide requirements. Therefore, a data reporting package and quality control program was developed for congener specific PCB analyses which contains those components listed in Section 3.01. During this program congener specific PCB analyses were performed according to this quality control program.

⁶Method NEA-608CAP, Revision 2.0, Northeast Analytical, Inc. The method includes guidelines set forth in the document: Quality Assurance Plan, Green Bay Mass Balance Study, I. PCBs and Dieldrin, U.S. EPA Great Lakes National Program Office, December 11, 1987.

⁷Test Methods for Evaluating Solid Waste, SW-846 Third Edition, US EPA November 1986.

SECTION 4 - SAMPLING AND ANALYSIS RESULTS

4.01 TIP Sediment Sampling and Analysis

The TIP Sediment Sampling and Analysis Program consisted of close grid sampling of sediments from three regions within the Thompson Island Pool which have been previously designated by NYSDEC as polygons 5, 44, 127. Observations and analysis of sediments collected as a part of this program included:

- color and texture,
- solids and organic matter content, and
- total PCBs.

Generalized color and texture observations for the three sites are summarized in Table 4-1. Table 4-2 presents observations and analytical testing results for each of the sediment sampling stations. In addition to total PCB, percent organics, and percent solids results, Table 4-2 includes sample location information, observations of surface water depth, total core length collected at the site, and the length of the core that was analyzed as a composite sample. Supporting field and laboratory documentation is contained in Appendix A.

4.02 Upper River Sediment Sampling and Analysis

The Upper River Sediment Sampling and Analysis Program involved the collection and analysis of sediments from selected locations within the 40 mile reach of the Upper Hudson River extending from Troy to Fort Edward, New York. Samples were collected from 30 sediment sampling stations. The sediment samples

were visually characterized for color and texture (Table 4-3). Vertically stratified bulk sediment testing results are presented in Table 4-4. Table 4-4 includes laboratory results for:

- soluble organic carbon,
- bulk density,
- moisture content,
- porosity, and
- congener specific PCB.

Congener specific PCB data is summarized in Table 4-4 as weight percent of each homolog group and the total PCB concentration calculated from the sum of the individual congeners. Data for each congener is presented in Appendix B along with supporting field and laboratory documentation.

The Upper River Sediment Sampling and Analysis Program also included dissolved organic carbon and congener specific PCB analysis of pore water extracted from the surficial layers of sediment cores. The results of these pore water analyses are presented in Table 4-5. PCB data appearing in Table 4-5 are presented as the weight percent of each homolog group and the total PCB concentration calculated from the sum of the individual congeners. Congener data on PCBs in each sample are presented in Appendix B along with supporting field and laboratory documentation.

4.03 Supplemental Sediment Sampling and Analysis

The Supplemental Sediment Sampling and Analysis Program involved the collection and analysis of sediment samples collected both upstream and downstream of the main study area. Sampling locations included areas both upstream and downstream of Spiers Falls and Corinth Dams as well as from within the Albany Turning Basin-South. General physical characteristics of sediments collected from near the Corinth and Spiers Falls Dams are presented in Table 4-6. Table 4-7 contains bulk sediment testing results for samples collected from near the two dams, including total organic carbon and congener specific PCB analyses. PCB data appearing in Table 4-5 are presented as the weight percent of each homolog group and the total PCB concentration calculated from the sum of the individual congeners. Congener data for each sample are presented in Appendix C along with supporting field and laboratory documentation.

Twenty sediment samples were collected from the Albany Turning Basin-South. Analysis of these samples included vertically stratified color and texture observations as well as total PCB and total organic carbon testing. The results of the Albany Turning Basin-south characterization are presented in Table 4-8 while supporting field and laboratory documentation appears in Appendix C.

4.04 Water Column Sampling and Analysis

The water column sampling and analysis program was designed to provide a congener specific characterization of water borne PCBs within the Upper Hudson River. The program involved a one-time collection and analysis of river water

samples from 13 water quality stations located between Troy and Fort Edward, New York. The analytical program included testing for:

- total dissolved solids,
- total organic carbon,
- total suspended solids,
- particle size distribution, and
- total and dissolved congener specific PCB.

The conventional parameter testing results appear in Table 4-9.

The PCB data generated during the Water Column Sampling and Analysis Program were evaluated for quality control/quality assurance purposes. During this evaluation the two field blanks collected as part of this program were found to be contaminated with 63.6 and 558.8 ng/L PCBs (Appendix D). When contamination such as this occurs, the convention is to qualify the data set as suspect or to invalidate the data set. Due to the magnitude of the contamination problem relative to the sample concentrations which ranged between approximately 28 and 1900 ng/L, we chose to invalidate the entire water column data set.

For completeness, the total and dissolved congener specific PCB results designated as "invalid" as described above are presented in Table 4-10 and 4-11. PCB data appearing in the tables are presented as the weight percent of each homolog group and the total PCB concentration calculated from the sum of the individual congeners. Congener data for each sample is presented in Appendix D along with supporting field and laboratory documentation including quality assurance and quality control results.

4.05 Hydrologic Measurements

Hydrologic measurements consisted of surface water elevations and water velocities at 15 hydraulic stations located along the entire length of the Upper Hudson River. River flow velocities are presented in Table 4-12. Surface water elevations are presented in Table 4-13. Supporting field documentation, including field sampling notes and bench mark descriptions are contained in Appendix E.

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Tables



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TABLE 2-1
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Sampling Station Locations (a)
May 30, 1991

Reach Point	Station	Descriptive Location	River Mile
1	1	East channel hot spot @ Rogers Island.	194.0
1	2	East channel @ Rogers Island.	193.9
1	3	0.2 miles downstream of overhead cable.	192.7
1	4	0.5 miles upstream of Snook Kill.	191.9
1	5	0.1 miles below Snook Kill.	191.3
1	6	Vicinity of Spoil Area.	190.7
1	7	0.4 miles below Spoil Area.	190.3
1	8	East channel @ Griffin Island.	189.9
1	9	Upstream of Champlain Canal diversion.	189.0
2	10	0.1 miles downstream of Thompson Island.	187.6
3	11	1 mile upstream of Northumberland Dam.	184.4
4	12	1.4 miles below Rt. 29 bridge in Schuylerville.	181.0
4	13	8.2 miles above Lock 4 Dam.	175.8
4	14	1.8 miles above Lock 4 Dam.	169.4
5	15	0.4 miles above Mechanicville Dam.	166.3
6	16	0.6 miles above Lock 2 Dam.	164.1
7	17	Middle of reach.	161.5
8	18	1.6 miles downstream of Waterford Dam.	157.8
8	19	0.4 miles upstream of Troy Dam.	154.3
Trib	20	Hoesic River, 1 mile above confluence w/Hudson	-
Trib	21	Mohawk River at Rt. 32 bridge in Cohoes	-
Trib	22	Hudson River at Glens Falls (above Feeder Dam) (as upstream boundry condition)	200.0

(a) Established for upper river sediment characterization and water column characterization programs.

Table 4-1
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
General Physical Characteristics
May 30, 1991

Site	Sediment Color	Sediment Texture
I	Dark Brown	Fine Sand and Silt
II	Light Brown	Coarse Sand
III	Dark Brown	Fine Sand and Silt

320426

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water Depth	Sample Type (b)	Total Core Length (in)	Core Depth Analyzed (in.) (c)	Total PCBs (d) (mg/kg)	Percent Solids	Percent Organics (e)
Site	Location	Easting	Northing	(ft.)						
I	B 11	699502	1165162	13.5	C	6.5	6.5	< 1.2	85	1.4
I	B 12	699494	1165140	11.8	C	8.5	8.5	< 1.0	86	1.1
I	C 10	699520	1165180	9.8	C	26.0	12.0	< 0.8	83	1.2
I	C 11	699520	1165163	9.4	C	23.0	12.0	< 0.9	81	1.9
I	C 12	699518	1165139	9.0	C	17.0	12.0	< 0.8	83	1.3
I	C 13	699520	1165118	2.5	C	15.5	12.0	< 0.9	78	2.1
I	C 14	699522	1165098	8.2	C	13.0	12.0	< 0.9	80	2.5
I	D 9	699539	1165198	9.5	C	13.0	13.0	< 0.9	74	2.4
I	D 10	699541	1165178	9.7	C	12.0	12.0	1.7	77	2.4
I	D 11	699542	1165160	9.5	C	9.0	9.0	< 1.1	82	0.9
I	D 12	699540	1165142	9.0	C	15.0	12.0	< 0.9	80	1.3
I	D 14	699539	1165102	8.1	C	1.5	1.5	5.0		
I	D 15	699539	1165078	2.0	C	21.0	12.0	< 0.9	82	1.4
I	D 16	699541	1165063	7.3	C	3.0	3.0	11.0	66	4.8
I	D 17	699541	1165042	7.0	C	9.0	9.0	< 1.1	83	1.6
I	D# 18	699545	1165019	5.6	C	6.0	6.0	2.6	82	2.0
I	D# 18 D	699545	1165019	5.6	C	8.5	8.5	< 1.9	77	1.6
I	E 9	699560	1165203	6.4	C	8.5	8.5	< 1.1	80	1.8
I	E 10	699560	1165178	9.2	C	30.0	12.0	11.0	55	7.8
I	E 11	699561	1165162	9.3	C	17.0	12.0	27.0	49	8.1
I	E 12	699560	1165138	7.5	C	9.0	9.0	14.0	52	8.1
I	E 13	699560	1165123	8.0	C	9.0	9.0	6.5	49	9.0
I	E 14	699559	1165098	8.0	C	11.0	11.0	< 1.4	73	2.9
I	E 15	699560	1165081	6.5	C	9.0	9.0	2.0	71	3.0
I	E 15 D	699561	1165079	6.8	C	11.5	11.5	5.4	71	3.7
I	E 16 D	699560	1165082	6.0	C	12.0	12.0	6.1	74	2.8
I	E 16	699559	1165059	7.0	C	6.0	6.0	6.6	58	8.4
I	E 17 D	699558	1165041	5.3	C	4.0	4.0	1.8	80	3.0
I	E 17	699559	1165037	6.6	C	6.0	6.0	< 4.5	66	6.7
I	E 18	699560	1165018	6.6	C	12.0	12.0	8.4	70	4.4
I	E 19	699560	1165002	6.7	C	13.0	13.0	2.2	77	3.2
I	E# 18	699567	1165018	4.3	C	8.0	8.0	20.0	64	5.9
I	E #18 D	699567	1165018	4.3	C	12.0	12.0	65.0	46	9.2
I	F 8	699579	1165222	4.0	C	7.5	7.5	< 1.4	73	2.5
I	F 9	699580	1165198	6.4	C	4.0	4.0	12.0	61	6.1

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

A trailing D indicates the sample is a field duplicate.

(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)	Type (b)	Core Length (in)	Analyzed (in.) (c)	PCBs (d) (mg/kg)	Solids	Organics (e)
I	F 10	699578	1185180	6.6	C	12.0	12.0	14.0	49	9.4
I	F 11	699582	1185159	5.9	C	12.0	12.0	14.0	50	9.5
I	F 12	699579	1185141	6.8	C	24.5	12.0	27.0	45	11.0
I	F 13	699580	1185120	5.5	C	11.0	11.0	17.0	42	13.0
I	F 14	699580	1185103	4.9	C	21.0	12.0	14.0	44	12.0
I	F 15	699579	1185082	4.3	C	20.0	12.0	15.0	44	13.0
I	F 16	699579	1185061	4.6	C	11.5	11.5	5.3	57	7.1
I	F 17	699580	1185038	4.8	C	9.0	9.0	14.0	44	13.0
I	F 18	699580	1185022	5.0	C	23.0	12.0	11.0	43	14.0
I	F 19	699578	1184998	4.5	C	9.0	9.0	13.0	44	13.0
I	F 20	699579	1184978	5.7	C	16.0	12.0	5.6	41	14.0
I	F 21	699577	1184957	5.2	C	9.0	9.0	4.5	44	14.0
I	F# 18D	699586	1185020	3.4	C	19.5	12.0	110.0	41	11.0
I	F #18	699586	1185020	3.4	C	16.0	12.0	120.0	40	13.0
I	G 8	699599	1185222	4.4	C	9.0	9.0	25.0	53	8.1
I	G 9	699601	1185200	5.5	C	7.5	7.5	18.0	56	6.6
I	G 10	699598	1185180	5.2	C	18.0	12.0	24.0	46	10.0
I	G 11	699599	1185160	5.3	C	24.0	12.0	4.5	42	10.0
I	G 12	699600	1185137	4.1	C	12.0	12.0	18.0	41	12.0
I	G 13	699599	1185121	4.9	C	10.5	10.5	6.3	51	8.4
I	G 14	699600	1185100	3.8	C	25.5	12.0	17.0	42	12.0
I	G 15	699602	1185080	3.9	C	20.5	12.0	23.0	41	11.0
I	G 16	699598	1185060	3.8	C	26.5	12.0	21.0	39	13.0
I	G 17	699598	1185041	4.5	C	12.0	12.0	24.0	41	12.0
I	G 18	699600	1185023	4.5	C	20.0	12.0	20.0	41	13.0
I	G 19	699600	1185000	4.5	C	20.0	12.0	16.0	37	14.0
I	G 20	699599	1184982	5.1	C	17.0	12.0	17.0	38	14.0
I	G 21	699601	1184959	5.4	C	20.0	12.0	8.7	39	13.0
I	G 22	699598	1184941	5.4	C	14.0	12.0	20.0	55	8.1
I	G 23	699599	1184922	5.7	C	17.0	12.0	7.3	45	12.0
I	G 24	699601	1184901	6.1	C	6.0	6.0	20.0	46	10.0
I	G# 18	699605	1185020	3.9	C	26.5	12.0	86.0	43	11.0
I	G# 18D	699605	1185020	3.9	C	28.0	12.0	100.0	39	12.0
I	H 10	699620	1185179	3.1	C	17.0	12.0	45.0	40	13.0
I	H 11	699620	1185160	4.3	C	18.0	12.0	80.0	41	13.0
I	H 12	699620	1185142	<2.5	C	17.0	12.0	39.0	44	12.0
I	H 13	699620	1185122	3.0	C	12.0	12.0	22.0	41	14.0

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

A trailing D indicates the sample is a field duplicate.

(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)	Type (b)	Core Length (in)	Analyzed (in.) (c)	PCBs (d) (mg/kg)	Solids	Organics (e)
I	H 14	699618	1165100	3.5	C	21.0	12.0	26.0	43	11.0
I	H 15	699619	1165080	3.7	C	18.0	12.0	9.8	41	12.0
I	H 16	699620	1165061	3.5	C	17.5	12.0	14.0	43	11.0
I	H 17	699620	1165042	3.7	C	18.0	12.0	17.0	45	11.0
I	H 18	699618	1165022	3.7	C	18.0	12.0	21.0	41	13.0
I	H 19	699620	1165001	4.4	C	15.0	12.0	27.0	41	12.0
I	H 20	699619	1164978	3.7	C	13.0	12.0	11.0	43	12.0
I	H 21	699620	1164961	3.8	C	9.0	9.0	9.3	44	12.0
I	H 22	699620	1164939	3.6	C	16.0	12.0	14.0	43	12.0
I	H 23	699619	1164922	5.5	C	24.0	12.0	8.0	41	11.0
I	H 24	699622	1164901	5.9	C	23.0	12.0	2.3	52	8.1
I	H 25	699621	1164879	5.5	C	15.5	12.0	1.5	65	4.8
I	H 26	699620	1164859	6.0	C	12.0	12.0	8.8	43	12.0
I	H# 18	699624	1165019	3.5	C	13.0	12.0	51.0	41	10.0
I	H# 18D	699624	1165019	3.5	C	11.0	11.0	45.0	40	11.0
I	I 12	699639	1165139	4.0	C	22.0	12.0	50.0	34	13.0
I	I 13	699639	1165121	4.0	C	27.0	12.0	58.0	40	12.0
I	I 14	699640	1165103	3.9	C	24.0	12.0	20.0	40	12.0
I	I 15	699640	1165080	4.0	C	20.5	12.0	58.0	38	14.0
I	I 16	699639	1165062	3.9	C	25.5	12.0	16.0	40	12.0
I	I 17	699638	1165040	4.8	C	15.0	12.0	24.0	37	13.0
I	I 18	699642	1165021	3.9	C	20.0	12.0	89.0	36	14.0
I	I 19	699638	1165001	4.2	C	25.0	12.0	23.0	32	15.0
I	I 20	699642	1164978	4.8	C	11.0	11.0	43.0	37	14.0
I	I 21	699640	1164960	4.9	C	30.0	12.0	11.0	35	16.0
I	I 22	699639	1164940	5.0	C	33.0	12.0	16.0	37	29.0
I	I 23	699641	1164920	4.7	C	35.0	12.0	5.0	36	15.0
I	I 24	699640	1164900	5.3	C	36.0	12.0	6.7	39	13.0
I	I 25	699638	1164880	5.5	C	18.0	12.0	14.0	41	13.0
I	I 26	699639	1164861	5.3	C	24.0	12.0	1.7	35	15.0
I	I 27	699641	1164838	6.0	C	18.5	12.0	7.6	42	12.0
I	I 28	699642	1164822	6.3	C	22.0	12.0	14.0	55	7.3
I	I 29	699640	1164801	6.0	C	21.0	12.0	0.8	69	3.8
I	I# 18D	699646	1165022	3.8	C	17.5	12.0	210.0	35	14.0
I	I# 18	699646	1165022	3.8	C	15.0	12.0	160.0	38	13.0
I	J 7	699660	1165240	15.0	C	4.0	4.0	2.8	66	4.3
I	J 8	699662	1165222	9.0	C	10.0	9.0	1.5	81	2.3

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

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(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)	Type (b)	Core Length (in)	Analyzed (in.) (c)	PCBs (d) (mg/kg)	Solids	Organics (e)
I	J 9	899658	1165200	6.8	C	8.5	8.5	2.3	34	14.0
I	J 10	899660	1165181	6.6	C	25.0	12.0	6.8	41	11.0
I	J 11	899659	1165161	6.1	C	11.0	12.0	16.0	39	12.0
I	J 12	899661	1165141	6.0	C	29.5	12.0	37.0	38	15.0
I	J 13	899661	1165120	6.6	C	26.0	12.0	26.0	36	15.0
I	J 14	899663	1165099	6.6	C	10.0	10.0	3.4	38	12.0
I	J 15	899658	1165079	4.9	C	21.0	12.0	38.0	42	11.0
I	J 16	899659	1165059	5.0	C	31.5	12.0	50.0	38	12.0
I	J 17	899660	1165040	5.2	C	25.0	12.0	50.0	36	13.0
I	J 18	899657	1165022	5.6	C	19.0	12.0	59.0	37	13.0
I	J 19	899660	1165001	5.7	C	17.0	12.0	23.0	37	13.0
I	J 20	899662	1164982	5.7	C	16.0	12.0	29.0	38	13.0
I	J 21	899662	1164960	5.5	C	18.0	12.0	23.0	34	14.0
I	J 22	899660	1164941	5.5	C	18.5	9.0	3.4	35	13.0
I	J 23	899662	1164918	5.0	C	16.5	12.0	26.0	37	12.0
I	J 24	899661	1164902	4.5	C	30.0	12.0	19.0	40	12.0
I	J 25	899660	1164878	4.5	C	20.5	12.0	25.0	40	12.0
I	J 26	899663	1164859	4.5	C	20.5	12.0	11.0	39	12.0
I	J 27	899659	1164839	5.4	C	16.5	12.0	20.0	46	9.1
I	J 28	899661	1164818	5.0	C	19.5	12.0	21.0	38	12.0
I	J 29	899661	1164801	5.2	C	18.5	12.0	33.0	39	12.0
I	J 30	899661	1164780	5.5	C	28.5	12.0	46.0	39	13.0
I	J 31	899658	1164757	5.4	C	8.0	8.0	27.0	51	7.7
I	J 32	899658	1164741	5.2	C	20.5	12.0	67.0	42	11.0
I	J# 18	899665	1165022	4.1	C	17.0	12.0	160.0	36	15.0
I	J# 18D	899665	1165022	4.1	C	16.0	12.0	110.0	35	14.0
I	K 11	899683	1165162	5.9	C	11.5	11.5	43.0	37	14.0
I	K 12	899682	1165141	5.5	C	9.5	9.5	73.0	37	14.0
I	K 13	899680	1165124	5.0	C	13.0	13.0	17.0	38	12.0
I	K 14	899680	1165098	5.4	C	13.0	12.5	55.0	38	13.0
I	K 15	899679	1165083	5.3	C	7.0	7.0	50.0	37	15.0
I	K 16	899680	1165062	5.5	C	14.0	14.0	50.0	38	12.0
I	K 17	899682	1165045	5.8	C	10.0	10.0	38.0	42	10.0
I	K 18	899678	1165023	5.3	C	13.5	13.5	34.0	38	12.0
I	K 19	899680	1165002	5.0	C	25.0	12.0	6.9	35	13.0
I	K 20	899680	1164982	4.7	C	17.0	12.0	50.0	34	15.0
I	K 21	899677	1164960	4.5	C	17.0	12.0	19.0	36	15.0
I	K 22	899679	1164940	4.3	C	9.5	9.0	22.0	45	10.0

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

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(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water Depth	Sample Type (b)	Total Core Length (in)	Core Depth Analyzed (in.) (c)	Total PCBs (d) (mg/kg)	Percent Solids	Percent Organics (e)
Site	Location	Easting	Northing	(ft.)						
I	K 23	699677	1164922	4.5	C	9.5	9.0	5.3	38	11.0
I	K 24	699681	1164903	4.5	C	14.0	14.0	22.0	46	8.7
I	K 25	699677	1164882	4.7	C	17.0	12.0	45.0	42	12.0
I	K 26	699684	1164862	4.3	C	25.5	12.0	140.0	38	13.0
I	K 27	699680	1164841	4.1	C	27.0	12.0	61.0	41	12.0
I	K 28	699683	1164823	4.0	C	25.0	12.0	66.0	41	13.0
I	K 29	699683	1164799	3.9	C	27.0	12.0	69.0	42	11.0
I	K 30	699681	1164781	4.0	C	18.0	12.0	40.0	42	11.0
I	K 31	699684	1164760	4.0	C	17.5	12.0	70.0	40	12.0
I	K 32	699678	1164740	4.2	C	25.5	12.0	120.0	40	13.0
I	K 33	699675	1164725	4.5	C	18.0	12.0	78.0	40	13.0
I	K# 18	699685	1165020	4.7	C	30.0	12.0	43.0	37	14.0
I	K# 18 D	699685	1165020	4.7	C	23.0	12.0	11.0	38	12.0
I	L 17	699700	1165042	6.2	C	6.0	6.0	120.0	25	5.6
I	L 18	699700	1165020	6.0	C	18.0	12.0	10.0	49	7.7
I	L 19	699700	1165003	5.9	C	6.0	6.0	6.6	35	14.0
I	L 20	699698	1164982	6.6	C	22.0	12.0	26.0	34	15.0
I	L 21	699702	1164960	5.0	C	13.5	12.0	8.5	40	11.0
I	L 22	699699	1164942	2.9	C	22.0	12.0	4.0	62	4.8
I	L 23	699699	1164920	2.5	C	6.0	6.0	18.0	44	10.0
I	L 24	699699	1164901	2.6	C	23.0	12.0	22.0	41	12.0
I	L 25	699700	1164877	2.5	C	18.0	12.0	32.0	38	12.0
I	L 26	699700	1164857	2.5	C	23.0	12.0	16.0	39	11.0
I	L 27	699700	1164839	2.5	C	24.0	12.0	33.0	42	11.0
I	L 28	699702	1164822	2.5	C	24.0	12.0	14.0	38	11.0
I	L 29	699695	1164805	3.1	C	27.0	12.0	11.0	38	9.7
I	L# 18D	699702	1165020	5.5	C	21.0	12.0	32.0	53	7.1
I	L# 18	699702	1165020	5.5	C	24.5	12.0	50.0	37	12.0
I	M 18	699719	1165022	6.6	C	9.0	9.0	< 2.6	35	11.0
I	M 19	699718	1164999	7.0	C	30.0	12.0	< 1.8	34	13.0
I	M 20	699721	1164980	5.7	C	11.0	11.0	54.0	37	11.0
I	M 21	699720	1164959	3.7	C	12.0	12.0	45.0	38	10.0
I	M 22	699719	1164943	3.2	C	12.0	12.0	42.0	38	11.0
I	M 23	699721	1164922	2.9	C	12.0	12.0	61.0	38	11.0
I	M 24	699721	1164900	2.4	C	23.0	12.0	49.0	41	10.0
I	M 25	699720	1164880	<2.5	C	20.0	12.0	100.0	41	11.0

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A trailing D indicates the sample is a field duplicate.

(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)	Type (b)	Core Length (in.)	Analyzed (in.) (c)	PCBs (d) (mg/kg)	Solids	Organics (e)
I	N 21	699740	1184962	3.0	C	26.0	12.0	89.0	36	12.0
II	C 4	699392	1189416	9.0	C	7.5	7.5	28.0	61	6.2
II	C 5	699380	1189379	4.4	C	18.0	12.0	39.0	49	8.6
II	D 4	699402	1189399	9.3	C	12.0	12.0	28.0	46	12.0
II	D 5	699402	1189380	9.1	C	32.0	12.0	27.0	44	15.0
II	D 6	699400	1189360	4.6	C	8.0	8.0	66.0	47	9.8
II	D 7	699405	1189337	3.1	C	18.0	12.0	26.0	53	9.1
II	E 4	699421	1189400	13.5	C	15.0	12.0	13.0	76	2.6
II	E 5	699422	1189380	11.3	C	14.0	12.0	29.0	56	10.0
II	E 6	699419	1189360	12.0	C	5.0	5.0	41.0	17	48.0
II	E 7	699419	1189340	12.0	C	8.5	8.5	35.0	69	3.7
II	E 8	699422	1189320	10.2	C	11.5	11.5	26.0	58	8.3
II	E 9	699420	1189299	11.5	C	14.0	12.0	32.0	59	5.5
II	E 10	699418	1189284	12.1	C	10.0	10.0	14.0	71	3.4
II	G 4	699462	1189402	14.7	C	6.0	6.0	5.1	78	2.4
II	G 5	699462	1189382	14.2	G	3.0	3.0	7.4	78	3.8
II	G 6	699461	1189360	13.2	G	7.5	7.5	4.5	77	2.9
II	G 7	699462	1189340	13.5	G	5.5	5.5	6.3	76	2.2
II	G 8	699459	1189321	13.5	G	6.5	6.5	4.0	75	1.8
II	G 9	699462	1189298	13.2	C	7.5	7.5	19.0	78	0.6
II	G 10	699460	1189279	13.2	C	8.0	8.0	9.7	71	4.5
II	G 11	699460	1189262	13.3	G	3.0	3.0	16.0	63	7.9
II	G 12	699460	1189240	12.5	C	9.0	9.0	24.0	72	14.0
II	G 13	699463	1189220	13.1	C	4.0	4.0	19.0	68	4.8
II	G 14	699450	1189204	13.5	G	3.0	3.0	24.0	63	4.5
II	G 15	699460	1189181	13.5	G	3.0	3.0	21.0	62	16.0
II	G 16 D	699464	1189155	14.3	C	9.0	9.0	19.0	73	3.8
II	G 16	699464	1189155	14.3	C	12.0	12.0	19.0	62	7.7
II	G 20	699461	1189078	12.4	C	11.0	12.0	12.0	60	6.7
II	G 20 D	699461	1189078	12.4	C	6.0	6.0	33.0	52	9.2
II	GA 19	699461	1189108	13.2	C	10.5	6.0	43.0	67	4.2
II	GA 19	699461	1189108	13.2	C	7.0	6.5	17.0	72	3.4
II	GB 19D	699461	1189108	13.2	C	14.0	12.0	19.0	77	2.8
II	GB 19D	699461	1189108	13.2	C	6.5	12.0	2.4	80	1.3
II	G# 19	699472	1189100	12.3	C	-	-	-	-	-

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Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)	Type (b)	Core Length (in)	Analyzed (in.) (c)	PCBs (d) (mg/kg)	Solids	Organics (e)
II	G# 19	699472	1189100	12.3	C	-	-	-	-	-
II	H 4	699480	1189398	13.8	C	4.0	4.0	30.0	76	3.2
II	H 5	699479	1189381	13.3	C	7.0	7.0	7.1	78	2.6
II	H 6	699483	1189361	13.1	C	5.5	5.5	5.9	80	2.0
II	H 7	699482	1189340	12.8	C	6.0	6.0	4.3	75	2.5
II	H 8	699479	1189320	12.6	C	8.0	8.0	7.2	76	3.7
II	H 9	699482	1189303	12.6	C	13.5	12.0	12.0	84	6.9
II	H 10	699482	1189279	12.6	C	10.0	10.0	11.0	72	3.7
II	H 11	699483	1189259	13.2	C	10.0	10.0	12.0	81	2.8
II	H 12	699482	1189240	13.0	G	7.0	7.0	5.9	75	2.1
II	H 13	699480	1189219	14.5	G	7.0	7.0	34.0	65	6.6
II	H 14	699478	1189199	14.0	G	3.0	3.0	9.6	68	4.6
II	H 15	699478	1189179	13.5	C	8.0	8.0	14.0	70	6.7
II	H 19	699479	1189101	13.0	C	12.0	12.0	27.0	62	8.5
II	H 20	699478	1189080	12.1	G	3.0	3.0	46.0	61	4.8
II	H 21 D	699473	1189061	12.0	C	8.5	9.0	11.0	82	2.5
II	H 21	699473	1189061	12.0	C	12.5	12.0	11.0	75	2.9
II	H 25	699477	1188976	9.6	C	16.5	12.0	24.0	63	6.0
II	H 26	699475	1188957	10.2	C	8.5	8.5	5.0	60	8.0
II	H 27	699481	1188941	11.2	C	23.0	12.0	5.2	64	8.6
II	H 28	699482	1188913	9.4	G	9.5	9.5	4.2	81	1.8
II	H# 19	699490	1189100	12.2	C	11.0	11.0	22.0	60	6.5
II	I 4	699499	1189399	13.6	G	3.0	3.0	17.0	78	2.4
II	I 5	699500	1189380	13.3	G	3.0	3.0	5.6	78	2.3
II	I 6	699499	1189359	13.5	G	3.0	3.0	4.5	82	3.1
II	I 7	699501	1189339	13.1	G	3.0	3.0	6.1	82	1.2
II	I 8	699499	1189321	12.3	C	7.0	6.0	6.2	79	3.8
II	I 9	699501	1189299	12.4	C	12.5	12.0	4.9	76	3.4
II	I 10	699502	1189281	12.4	C	11.0	11.0	4.9	77	3.3
II	I 11	699501	1189261	12.4	C	8.5	8.5	6.8	75	4.7
II	I 12	699499	1189239	12.4	C	6.0	6.0	9.6	73	3.5
II	I 13	699499	1189219	12.9	C	15.0	12.0	11.0	73	3.6
II	I 14	699499	1189199	13.3	C	4.0	4.0	8.9	75	4.4
II	I 15	699501	1189182	13.4	C	6.0	6.0	17.0	72	4.4
II	I 16	699501	1189159	14.1	G	3.0	3.0	20.0	69	6.5
II	I 17	699498	1189140	14.0	G	3.0	3.0	3.4	77	1.4
II	I 18	699499	1189120	14.3	G	3.0	3.0	16.0	61	8.4

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Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)		Core Length (in)	Analyzed (in.) (c)	PCBs (d) (mg/kg)		
II	I 19	699500	1189099	13.9	C	10.0	10.0	15.0	78	1.3
II	I 20	699501	1189082	13.1	C	15.0	12.0	13.0	73	3.1
II	I 21	699500	1189058	13.1	C	8.5	8.5	20.0	66	2.8
II	I 22	699502	1189040	11.3	C	11.0	11.0	17.0	66	4.1
II	I 23	699501	1189020	12.3	C	8.0	8.0	19.0	57	6.2
II	I 24	699501	1189000	11.5	C	11.0	11.0	28.0	64	8.4
II	I 25	699500	1188982	10.5	C	5.0	5.0	59.0	59	7.2
II	I 26	699501	1188962	11.5	C	8.5	8.5	51.0	59	7.1
II	I 27	699500	1188942	10.5	C	6.0	6.0	32.0	66	5.3
II	I 28	699500	1188919	11.5	C	19.5	12.0	25.0	64	3.9
II	I# 19	699511	11889100	13.2	C	6.0	6.0	11.0	73	12.0
II	J 5	699519	1189380	12.1	G	3.0	3.0	6.4	69	0.0
II	J 6	699519	1189361	12.6	G	3.0	3.0	7.3	80	1.4
II	J 7	699521	1189341	12.5	C	10.0	10.0	9.2	75	2.6
II	J 8	699522	1189321	12.6	C	11.0	11.0	36.0	80	2.2
II	J 9	699521	1189301	12.7	C	3.0	3.0	4.9	85	1.8
II	J 10	699522	1189281	12.7	C	17.0	12.0	9.2	87	4.3
II	J 11	699522	1189262	12.7	C	13.0	13.0	13.0	83	2.8
II	J 12	699523	1189240	12.6	C	12.0	12.0	6.2	78	3.7
II	J 13	699521	1189220	12.4	C	9.5	9.0	14.0	77	4.1
II	J 13 D	699519	1189220	12.4	C	15.5	12.0	12.0	80	6.4
II	J 14	699519	1189201	13.0	C	14.5	12.0	12.0	84	2.9
II	J 14 D	699519	1189201	13.0	C	15.0	12.0	15.0	75	4.8
II	J 15 D	699521	1189183	12.9	G	3.0	3.0	10.0	73	5.8
II	J 15	699521	1189183	12.9	G	3.0	3.0	15.0	73	9.5
II	J 16	699520	1189162	13.5	C	4.0	4.0	20.0	64	9.1
II	J 17	699522	1189139	13.8	C	6.5	6.5	14.0	72	5.3
II	J 18	699521	1189121	13.8	C	9.0	9.0	20.0	74	5.5
II	J 19	699522	1189099	13.8	C	10.0	9.0	17.0	77	5.7
II	J 20	699522	1189080	13.7	C	4.0	4.0	13.0	77	1.8
II	J 21	699522	1189063	12.8	C	9.0	9.0	8.9	78	4.1
II	J 22	699519	1189041	14.1	C	4.0	4.0	29.0	59	8.2
II	J 23	699521	1189020	14.9	G	3.0	3.0	12.0	75	2.9
II	J 24	699519	1189001	13.7	C	4.0	4.0	67.0	75	2.3
II	J 25	699520	1188981	14.4	C	8.0	8.0	51.0	51	9.7
II	J 26	699522	1188962	14.0	C	11.0	11.0	37.0	68	4.8
II	J 27	699520	1188941	14.4	C	6.0	6.0	39.0	70	3.2
II	J 28	699523	1188919	12.1	C	9.0	9.0	21.0	58	12.0

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Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)	Coordinates	Water Depth	Sample Type (b)	Total Core Length (in)	Core Depth Analyzed (in.) (c)	Total PCBs (d) (mg/kg)	Percent Solids	Percent Organics (e)
Site Location	Easting Northing	(ft.)						
II J# 19	699532 1189100	13.1	C	14.5	12.0	14.0	79	6.6
II K 15	699546 1189180	13.9	G	3.0	3.0	11.0	75	3.5
II K 16	699541 1189181	13.0	G	3.0	3.0	17.0	75	3.5
II K 16	699541 1189181	13.0	C	3.0	3.0	6.2	74	3.8
II K 17	699540 1189140	11.5	C	9.0	9.0	9.4	65	10.0
II K 18	699541 1189121	11.9	C	3.0	3.0	4.5	76	2.1
II K 19	699540 1189102	11.7	C	9.0	9.0	12.0	68	5.7
II K 20	699539 1189082	11.3	C	8.5	8.5	16.0	76	2.7
II K 21	699540 1189059	11.9	C	8.5	8.5	8.9	75	2.9
II K 22	699539 1189039	11.7	C	3.0	3.0	8.5	71	3.7
II K 23	699540 1189020	11.7	C	7.0	7.0	23.0	73	3.7
II K 24	699540 1189000	12.4	C	11.0	11.0	8.3	76	1.8
II K 25	699540 1188980	12.3	C	7.0	7.0	7.8	74	2.9
II K 26	699538 1188959	12.1	C	7.0	7.0	9.9	74	2.3
II K 27	699540 1188940	12.5	C	6.5	6.5	14.0	68	7.1
II K 28	699542 1188920	12.8	C	3.0	3.0	12.0	72	3.4
III D 4	- -		C	12.0	12.0	29.0	63	5.7
III D 8	695586 1182580	2.5	C	21.0	12.0	5.3	68	6.4
III D 9	695580 1182560	4.0	C	17.5	12.0	12.0	65	6.4
III D 10	695582 1182540	4.3	C	7.0	7.0	25.0	52	8.5
III D 11	695583 1182525	5.1	C	9.0	9.0	8.0	54	7.9
III D# 8	695591 1182581	2.5	C	23.0	12.0	5.9	69	5.8
III E 4	695599 1182659	2.5	C	18.5	12.0	31.0	55	9.5
III E 5	695601 1182639	2.5	C	21.0	12.0	20.0	65	6.3
III E 6	695603 1182621	3.2	C	18.5	12.0	3.9	74	4.6
III E 7	695597 1182600	3.4	C	16.0	12.0	3.7	71	5.1
III E 8	695600 1182580	5.2	C	20.0	12.0	8.1	63	6.6
III E 9	695599 1182560	5.1	C	18.0	12.0	4.7	55	8.7
III E 10	695601 1182540	2.6	C	23.5	12.0	9.1	55	6.7
III E 11	695603 1182521	3.1	C	24.0	12.0	16.0	53	7.8
III E# 8	695612 1182579	9.0	C	8.5	8.5	6.4	55	8.2
III F 4	695621 1182662	2.9	C	7.0	6.0	19.0	36	13.0
III F 4D	695621 1182662	2.9	C	20.5	12.0	22.0	45	11.0
III F 5	695621 1182639	2.8	C	24.5	12.0	22.0	46	9.1
III F 6	695621 1182621	2.7	C	11.0	11.0	5.6	55	8.5

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Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)		Core Length (in)	Analyzed (in.) (c)	PCBs (d) (mg/kg)		
III	F 7	695622	1182600	3.5	C	15.0	12.0	8.5	68	5.3
III	F 8	695621	1182579	4.0	C	28.0	12.0	14.0	49	8.4
III	F 9	695623	1182559	5.3	C	18.5	12.0	42.0	59	5.4
III	F 10	695621	1182539	6.5	C	18.5	12.0	27.0	60	4.4
III	F 11	695622	1182522	6.6	C	21.0	12.0	52.0	81	5.7
III	F# 8	695628	1182582	5.0	C	24.0	12.0	31.0	58	6.6
III	G 4	695641	1182661	5.3	C	24.5	12.0	79.0	43	11.0
III	G 4D	695641	1182661	5.3	C	22.0	12.0	130.0	39	12.0
III	G 5	695639	1182641	3.8	C	22.0	12.0	60.0	42	11.0
III	G 6	695640	1182617	7.1	C	8.5	8.5	59.0	44	10.0
III	G 7	695639	1182602	7.1	C	6.0	6.0	33.0	45	9.3
III	G 8	695639	1182579	7.6	C	7.0	7.0	16.0	49	9.2
III	G 9	695638	1182581	7.3	C	12.0	12.0	89.0	76	43.0
III	G 10	695639	1182540	7.9	C	13.0	13.0	11.0	71	3.0
III	G 11	695641	1182521	8.5	C	14.0	12.0	42.0	52	8.4
III	G# 8	695652	1182579	7.0	C	9.0	9.0	13.0	66	5.7
III	H 4	695661	1182658	7.6	C	25.0	12.0	270.0	40	15.0
III	H 5	695662	1182640	8.4	C	6.5	6.5	81.0	43	11.0
III	H 6	695660	1182622	8.3	C	28.5	12.0	150.0	48	11.0
III	H 7	695660	1182603	8.1	C	15.5	12.0	56.0	43	7.9
III	H 8	695659	1182582	7.6	C	32.5	12.0	9.1	70	3.6
III	H 9	695660	1182562	8.0	C	18.0	12.0	44.0	48	10.0
III	H 10	695660	1182539	6.3	C	14.0	12.0	6.5	81	2.3
III	H 11	695659	1182521	8.4	C	16.0	12.0	11.0	79	2.8
III	H# 8	695670	1182580	9.0	C	9.0	9.0	3.5	86	1.2
III	I 4	695681	1182660	8.6	C	23.0	12.0	140.0	37	17.0
III	I 5	695680	1182641	8.6	C	26.5	12.0	140.0	41	15.0
III	I 6	695680	1182620	7.9	C	15.0	12.0	5.2	82	1.9
III	I 7	695679	1182602	5.9	C	32.0	12.0	15.0	65	4.5
III	I 8	695682	1182582	7.5	C	3.0	3.0	4.1	82	1.5
III	I 9	695680	1182561	5.4	C	9.0	9.0	28.0	64	6.8
III	I 10	695681	1182539	4.1	G	3.0	3.0	3.2	84	1.9
III	I 11	695679	1182521	7.5	C	6.0	6.0	5.1	76	2.4
III	I# 8	695691	1182579	7.3	C	3.5	3.5	3.8	80	1.5

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

A trailing D indicates the sample is a field duplicate.

(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)		Core Length (in.)	Analyzed (in.) (c)	PCBs (d) (mg/kg)		
III	J 4	695699	1182660	9.5	C	13.0	13.0	33.0	51	10.0
III	J 5	695700	1182642	9.5	C	19.0	12.0	43.0	49	12.0
III	J 6	695701	1182622	10.0	C	12.0	12.0	51.0	49	10.0
III	J 7	695701	1182601	9.9	C	14.0	12.0	83.0	41	13.0
III	J 8	695699	1182582	7.9	C	9.5	9.5	35.0	60	7.1
III	J 9	695699	1182561	8.2	C	10.0	10.0	3.8	74	3.2
III	J 10	695700	1182541	9.1	C	12.0	12.0	67.0	51	9.7
III	J 11	695702	1182521	9.5	C	15.5	12.0	94.0	50	11.0
III	J# 8	695711	1182579	9.1	C	15.0	12.0	140.0	43	18.0
III	K 4	695719	1182660	8.6	C	27.0	12.0	8.6	72	2.7
III	K 5	695720	1182642	9.5	C	24.0	12.0	15.0	62	5.8
III	K 6	695720	1182619	10.1	C	13.0	13.0	41.0	48	10.0
III	K 7	695720	1182600	10.3	C	19.0	12.0	53.0	49	11.0
III	K 8	695721	1182580	9.6	C	20.0	12.0	56.0	48	10.0
III	K 9	695718	1182561	10.4	C	10.5	10.5	12.0	72	4.2
III	K 10	695720	1182540	10.5	C	13.0	13.0	110.0	44	11.0
III	K 11	695718	1182519	9.0	C	18.5	12.0	58.0	50	9.9
III	K# 8	695731	1182579	10.1	C	7.5	7.5	19.0	39	12.0
III	L 4	695740	1182660	8.5	C	27.0	12.0	50.0	56	7.3
III	L 5	695738	1182640	8.5	C	12.5	12.5	19.0	63	5.2
III	L 6	695739	1182622	9.7	C	8.0	8.0	12.0	65	4.9
III	L 7	695740	1182600	7.7	C	20.5	12.0	67.0	57	6.8
III	L 8	695740	1182582	8.9	C	11.5	11.5	21.0	61	5.8
III	L 9	695740	1182561	9.2	C	12.0	12.0	25.0	60	6.3
III	L 10	695740	1182542	9.4	G	3.0	3.0	32.0	56	5.5
III	L 11	695740	1182520	9.7	C	8.0	8.0	69.0	49	10.0
III	L# 8	695750	1182580	7.1	C	7.0	7.0	6.1	69	2.2
III	M 4	695760	1182662	9.0	C	9.0	9.0	4.3	70	3.9
III	M 5	695759	1182639	8.6	C	16.5	12.0	71.0	56	7.1
III	M 6	695762	1182618	8.3	C	19.0	12.0	88.0	60	7.1
III	M 7	695761	1182600	8.8	C	9.0	9.0	30.0	54	7.2
III	M 8	695760	1182582	8.4	C	16.5	12.0	51.0	53	8.7
III	M 9	695761	1182561	9.3	C	19.0	12.0	24.0	62	5.3
III	M 10	695760	1182542	8.5	C	7.0	7.0	97.0	37	14.0
III	M 11	695760	1182518	8.4	C	12.5	12.5	15.0	73	3.7
III	M# 8	695770	1182579	9.9	G	3.0	3.0	160.0	62	8.2

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

A trailing D indicates the sample is a field duplicate.

(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-2
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Thompson Island Pool Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample ID (a)		Coordinates		Water	Sample	Total	Core Depth	Total	Percent	Percent
Site	Location	Easting	Northing	Depth (ft.)		Core Length (in.)	Analyzed (in.) (c)	PCBs (d) (mg/kg)		
III	N 4	695780	1182659	8.9	C	13.0	13.0	62.0	52	7.8
III	N 5	695779	1182640	10.1	C	21.0	12.0	120.0	53	9.1
III	N 6	695780	1182622	9.7	C	18.5	12.0	150.0	48	11.0
III	N 6D	695780	1182622	9.7	C	15.0	12.0	88.0	52	9.4
III	N 7D	695781	1182601	9.3	C	18.0	12.0	95.0	64	6.2
III	N 7	695781	1182601	9.3	C	26.0	12.0	87.0	63	7.3
III	N 8 D	695779	1182580	9.2	C	21.0	12.0	88.0	56	7.1
III	N 8	695779	1182580	9.2	C	24.0	12.0	47.0	60	6.6
III	N 9	695783	1182560	8.7	G	3.0	3.0	8.7	71	2.4
III	N 10	695780	1182541	8.4	C	3.0	3.0	36.0	55	7.3
III	N 11	695778	1182519	8.9	C	6.5	6.5	16.0	48	8.0
III	N# 8	695791	1182578	9.1	C	3.0	3.0	7.1	70	2.9
III	O 4	695803	1182660	9.4	C	13.0	13.0	46.0	59	6.6
III	O 5	695800	1182643	9.0	C	10.0	10.0	19.0	68	5.0
III	O 6	695800	1182622	9.4	C	10.5	10.5	25.0	60	5.2
III	O 7	695801	1182600	9.0	C	18.0	12.0	32.0	65	5.5
III	O 8	695801	1182580	9.1	C	13.5	13.5	45.0	60	6.2
III	O 9	695803	1182560	9.0	C	5.0	5.0	37.0	57	5.4
III	O 10	695798	1182541	9.5	C	12.5	12.5	34.0	71	3.8
III	O 11	695801	1182520	8.8	C	6.0	6.0	74.0	68	4.6

(a) A pound sign (#) indicates a station located between two lettered transects, (eg. D# falls between transect D and E).

A trailing D indicates the sample is a field duplicate.

(b) Grab (G) or Core (C).

(c) Depth of laboratory composite (eg. 12 indicates a composite sample consisting of the 0-3", 3-6", 6-9", and 9-12" core segments).

(d) Total PCBs reported on dry weight basis. A less than sign (<) indicates a PCB concentration less than the method detection limit indicated.

(e) Measured as loss on ignition.

Table 4-3
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Upper River Sediment Sampling and Analysis
General Physical Characteristics
May 30, 1991

Sample Station	Location (Site)	Approximate River Mile	Sampling Date	Sample Type (b)	Depth in Core (cm)	Color and Texture
1	West	194.0	11/06/90	G	-	Medium sand.
1	Center	194.0	11/06/90	G	-	Coarse sand.
1	East	194.0	11/06/90	G	-	Fine gravel and coarse sand.
3	West	192.7	11/06/90	C	0-2	Black org. silt and debris.
3	West	192.7	11/06/90	C	2-5	Sand, org. silt and debris.
3	West	192.7	11/06/90	C	5-10	Coarse sand, org. debris.
3	West	192.7	11/06/90	C	10-26	Coarse sand, org. debris.
3	Center	192.7	11/06/90	G	-	Gravel, shale frag. and sand.
3	East	192.7	11/06/90	G	-	Fine gravel, shale frag. and sand.
6	West	190.7	11/07/90	C	0-2	Black org. silt, sand.
6	West	190.7	11/07/90	C	2-5	Black org. silt, sand.
6	West	190.7	11/07/90	C	5-10	Black org. silt, sand.
6	West	190.7	11/07/90	C	10-20	Black org. silt, sand.
6	West	190.7	11/07/90	C	20-27	Black org. silt, sand.
6	Center	190.7	11/07/90	G	-	Coarse sand.
6	East	190.7	11/07/90	G	-	Coarse sand.
9	West	189.0	11/08/90	G	-	Brown org. silt and sand.
9	Center	189.0	11/08/90	G	-	Sand, gravel.
9	East	189.0	11/08/90	C	0-2	Brown org. silt.
9	East	189.0	11/08/90	C	2-5	Brown org. silt and debris.
9	East	189.0	11/08/90	C	5-10	Brown org. silt and debris.
9	East	189.0	11/08/90	C	10-20	Brown org. silt.
9	East	189.0	11/08/90	C	20-27	Brown org. silt.
10	West	187.6	11/16/90	G	-	Coarse sand.
10	Center	187.6	11/16/90	C	0-2	Sand, org. debris.
10	Center	187.6	11/16/90	C	2-5	Sand, org. debris.
10	Center	187.6	11/16/90	C	5-10	Sand, org. debris.
10	Center	187.6	11/16/90	C	10-20	Sand, brown org. silt, and debris.
10	Center	187.6	11/16/90	C	20-25	Sand, brown org. silt, and debris.

(a) Refer to Figure 1-1 for sample locations.

(b) Grab (G) or Core (C).

Table 4-3
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Upper River Sediment Sampling and Analysis
General Physical Characteristics
May 30, 1991

Sample Station	Location (Site)	Approximate River Mile	Sampling Date	Sample Type (b)	Depth in Core (cm)	Color and Texture
10	East	187.8	11/16/90	C	0-2	Brown org. silt and sand.
10	East	187.6	11/16/90	C	2-5	Brown org. silt and debris.
10	East	187.6	11/16/90	C	5-10	Brown org. silt and debris.
10	East	187.6	11/16/90	C	10-18	Brown org. silt and debris.
11	West	184.4	11/8/90	C	0-2	Brown org. silt.
11	West	184.4	11/8/90	C	2-5	Brown org. silt.
11	West	184.4	11/8/90	C	5-10	Brown org. silt.
11	West	184.4	11/8/90	C	10-20	Brown org. silt.
11	Center	184.4	11/8/90	G	-	Coarse sand.
11	East	184.4	11/8/90	C	0-2	Brown org. silt.
11	East	184.4	11/8/90	C	2-5	Brown org. silt.
11	East	184.4	11/8/90	C	5-10	Brown org. silt.
11	East	184.4	11/8/90	C	10-20	Brown org. silt.
11	East	184.4	11/8/90	C	20-21	Brown org. silt.
13	West	175.8	11/8/90	G	-	Brown org. silt.
13	Center	175.8	11/8/90	G	-	Coarse sand.
13	East	175.8	11/8/90	C	0-2	Coarse sand.
13	East	175.8	11/8/90	C	2-5	Coarse sand.
13	East	175.8	11/8/90	C	5-10	Coarse sand.
13	East	175.8	11/8/90	C	10-20	Coarse sand.
15	West	166.3	11/8/90	G	-	Coarse sand.
15	Center	166.3	11/8/90	G	-	Coarse sand.
15	East	166.3	11/8/90	G	-	Coarse sand.
16	West	164.1	11/9/90	C	0-2	Brown org. silt.
16	West	164.1	11/9/90	C	2-5	Brown org. silt.
16	West	164.1	11/9/90	C	5-10	Brown org. silt and clay.
16	West	164.1	11/9/90	C	10-20	Brown org. silt and clay.
16	Center	164.1	11/9/90	G	-	Stone and gravel.
16	East	164.1	11/9/90	G	-	Stone and gravel.
19	West	154.3	11/9/90	G	-	Coarse sand.
19	Center	154.3	11/9/90	G	-	Coarse sand.
19	East	154.3	11/9/90	G	-	Gravel.

(a) Refer to Figure 1-1 for sample locations.

(b) Grab (G) or Core (C).

Table 4-4
HUDSON RIVER PROJECT
 Fall 1990 Sampling and Analysis Program
 Upper River Sediment Sampling and Analysis
 Bulk Sediment Results
 May 30, 1991

Sample Location		Sample Type (a)	Depth in core (cm)	Soluble Organic Carbon	Bulk Density	% Moisture	Porosity	Total PCBs	Homolog Distribution (wt%)										
				(mg/kg)	(g(dry)/mL(wet))	Content		(mg/kg)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca	
1	West	G	-	1250	0.87	43.1	0.66	16.80	6.37	21.42	34.07	27.78	7.86	1.87	0.47	0.12	0.04	0.00	
1	Center	G	-	346	1.22	30.2	0.53	8.27	2.24	14.52	36.16	36.42	8.70	1.53	0.34	0.08	0.02	0.00	
1	East	G	-	1050	1.21	29.4	0.50	1.94	11.21	21.64	32.26	25.15	7.08	1.94	0.52	0.12	0.07	0.00	
3	West	C	0-2	6800	0.05	94.9	0.92	26.31	2.35	17.00	33.77	32.62	10.24	2.72	0.88	0.31	0.12	0.00	
3	West	C	2-5	2000	0.37	68.1	0.79	22.46	11.11	25.16	32.32	21.98	6.74	1.98	0.48	0.15	0.06	0.01	
3	West	C	5-10	1400	0.77	45.1	0.63	23.40	10.97	28.75	32.09	18.04	7.09	2.18	0.60	0.18	0.07	0.01	
3	West	C	10-26	1750	0.77	45.9	0.65	42.55	18.78	29.91	28.73	13.94	5.57	2.11	0.67	0.19	0.09	0.01	
3	Center	G	-	290	1.41	24.0	0.44	3.36	7.72	29.21	38.76	19.12	4.16	0.80	0.18	0.03	0.01	0.00	
3	East	G	-	1350	0.79	43.2	0.60	9.92	6.19	22.35	35.66	25.64	7.66	1.96	0.50	0.10	0.03	0.00	
6	West	C	0-2	3300	0.21	80.5	0.86	5.31	6.76	20.20	31.82	27.22	9.43	2.88	1.12	0.39	0.16	0.03	
6	West	C	2-5	3500	0.42	65.6	0.81	5.76	11.25	21.65	30.21	24.41	8.28	2.68	1.02	0.35	0.14	0.02	
6	West	C	5-10	3100	0.46	61.9	0.74	7.16	13.05	25.17	29.26	21.12	7.45	2.48	0.99	0.33	0.12	0.02	
6	West	C	10-20	2900	0.50	60.2	0.75	12.18	8.65	28.34	32.57	20.40	6.78	2.10	0.77	0.26	0.10	0.03	
6	West	C	20-27	2000	0.49	61.9	0.79	20.70	12.64	31.47	30.10	15.64	6.61	2.14	0.95	0.31	0.12	0.02	
6	Center	G	-	970	1.01	36.7	0.58	13.94	5.77	29.97	36.94	20.92	4.92	1.10	0.29	0.07	0.03	0.00	
6	East	G	-	1270	0.88	41.3	0.62	8.75	0.87	21.40	38.80	27.76	8.20	2.16	0.59	0.16	0.06	0.01	
9	West	G	-	480	0.95	36.9	0.55	1.70	1.55	19.05	36.80	28.31	9.97	3.05	0.94	0.25	0.08	0.01	
9	Center	G	-	140	0.95	36.0	0.54	9.81	0.08	17.18	46.35	28.11	6.44	1.41	0.35	0.07	0.01	0.00	
9	East	C	0-2	3000	0.25	78.5	0.91	10.86	15.85	23.39	28.89	20.85	7.32	2.28	0.93	0.32	0.14	0.02	
9	East	C	2-5	2700	0.53	59.5	0.79	7.82	15.98	23.12	28.45	21.23	7.36	2.38	0.97	0.34	0.14	0.03	
9	East	C	5-10	2700	0.54	58.1	0.74	10.29	20.19	22.88	26.54	19.10	7.24	2.56	0.99	0.34	0.14	0.02	
9	East	C	10-20	2600	0.53	57.5	0.72	14.60	12.83	26.53	29.21	19.68	7.70	2.42	1.06	0.40	0.16	0.02	
9	East	C	20-27	3000	0.49	60.1	0.73	69.65	28.13	28.63	23.38	12.61	4.84	1.46	0.63	0.23	0.07	0.01	

(a) Grab (G) or Composite (C).

(b) Insufficient sample volume to perform analysis.

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Table 4-4
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Upper River Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample Location		Sample Type (a)	Depth In core (cm)	Soluble Organic Carbon	Bulk Density	% Moisture	Porosity	Total PCBs	Homolog Distribution (wt%)										
Station	Site			(mg/kg)	(g(dry)/mL(wet))	Content		(mg/kg)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca	
10	West	G	-	230	1.22	29.7	0.51	5.67	2.46	26.04	41.03	22.57	5.93	1.50	0.37	0.08	0.03	0.00	
10	Center	C	0-2	2700	0.44	64.3	0.79	72.10	6.10	21.85	34.62	24.51	9.34	2.50	0.76	0.23	0.07	0.01	
10	Center	C	2-5	1500	0.57	56.5	0.74	50.38	10.08	22.13	32.06	22.88	9.19	2.57	0.77	0.24	0.07	0.01	
10	Center	C	5-10	3200	0.59	55.8	0.74	94.70	20.46	25.41	27.58	16.84	6.47	2.06	0.82	0.28	0.08	0.01	
10	Center	C	10-20	2900	0.62	53.2	0.70	114.01	22.96	25.54	28.10	15.27	5.38	1.76	0.66	0.23	0.08	0.01	
10	Center	C	20-25	2500	0.66	51.0	0.69	39.45	4.87	19.34	35.98	25.79	10.06	2.79	0.85	0.25	0.08	0.01	
10	East	C	0-2	3800	0.17	63.4	0.84	24.23	4.50	17.96	33.88	28.11	10.57	3.25	1.20	0.37	0.14	0.02	
10	East	C	2-5	3100	0.39	66.0	0.76	27.18	8.32	21.28	33.51	23.66	8.76	2.80	1.10	0.39	0.15	0.02	
10	East	C	5-10	2900	0.45	62.7	0.75	119.08	19.69	29.00	27.49	14.52	5.72	2.04	0.98	0.39	0.15	0.02	
10	East	C	10-20	3200	0.48	59.9	0.72	156.07	22.61	32.14	25.80	12.13	4.21	1.77	0.75	0.35	0.20	0.03	
11	West	C	0-2	2100	0.42	65.1	0.78	5.59	4.85	23.75	33.20	23.95	8.91	3.03	1.56	0.48	0.25	0.02	
11	West	C	2-5	2050	0.80	45.0	0.66	5.15	3.07	23.39	34.83	21.65	10.53	4.08	1.51	0.61	0.29	0.03	
11	West	C	5-10	1700	0.95	38.2	0.58	6.55	9.18	27.59	33.53	17.32	7.59	2.92	1.21	0.44	0.21	0.03	
11	West	C	10-20	2000	0.89	39.7	0.59	11.59	7.92	29.69	34.88	15.32	6.59	3.06	1.56	0.59	0.34	0.05	
11	Center	G	-	190	1.39	22.2	0.40	8.72	3.23	22.69	40.94	25.30	6.06	1.41	0.30	0.06	0.01	0.00	
11	East	C	0-2	3500	0.26	75.8	0.83	28.65	9.96	26.47	31.70	18.53	7.88	3.06	1.43	0.60	0.32	0.04	
11	East	C	2-5	3200	0.51	58.5	0.72	31.91	10.79	27.37	32.11	17.88	7.24	2.76	1.15	0.45	0.22	0.03	
11	East	C	5-10	3600	0.43	62.6	0.72	143.75	19.90	29.31	29.48	14.06	4.57	1.55	0.73	0.29	0.11	0.01	
11	East	C	10-20	3100	0.43	62.3	0.72	100.07	16.37	30.28	30.56	14.78	4.62	1.84	0.92	0.40	0.20	0.03	
11	East	C	20-21	4400	0.39	66.1	0.76	79.66	7.03	29.87	31.16	16.94	7.60	4.08	2.12	0.74	0.41	0.05	
13	West	G	-	2200	0.57	56.6	0.75	3.36	5.84	21.17	34.42	24.29	8.25	2.80	1.07	0.76	1.22	0.18	
13	Center	G	-	210	1.38	22.1	0.39	1.51	2.48	23.05	43.36	23.83	5.70	1.21	0.29	0.05	0.02	0.00	

(a) Grab (G) or Composite (C).

(b) Insufficient sample volume to perform analysis.

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Table 4-4
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Upper River Sediment Sampling and Analysis
Bulk Sediment Results
May 30, 1991

Sample Location		Sample Type (a)	Depth in core (cm)	Soluble Organic Carbon (mg/kg)	Bulk Density (g(dry)/mL(wet))	% Moisture Content	Porosity	Total PCBs (mg/kg)	Homolog Distribution (wt%)									
Station	Site								Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca
13	East	C	0-2	2400	0.46	63.2	0.79	2.12	1.95	14.61	30.87	33.77	12.81	4.27	1.13	0.38	0.19	0.03
13	East	C	2-5	1800	0.89	41.2	0.63	0.95	2.23	13.59	30.97	33.73	12.65	4.23	1.99	0.40	0.20	0.03
13	East	C	5-10	1600	1.04	35.4	0.57	1.58	4.27	17.22	31.58	29.10	10.18	3.11	1.28	1.19	1.88	0.21
13	East	C	10-20	1100	1.15	29.6	0.48	1.47	3.38	21.69	32.74	26.33	10.02	3.75	1.03	0.46	0.48	0.11
15	West	G	-	4600	0.25	77.5	0.85	5.17	5.02	17.69	31.78	27.85	10.96	3.69	1.08	0.84	0.99	0.10
15	Center	G	-	260	1.44	22.7	0.42	4.48	6.83	28.46	38.93	19.63	4.68	1.05	0.28	0.08	0.04	0.01
15	East	G	-	1900	0.77	45.7	0.65	0.81	0.42	11.34	33.58	31.74	14.16	5.62	1.87	0.69	0.42	0.15
16	West	C	0-2	2900	0.35	69.9	0.82	3.89	2.75	15.23	30.75	31.55	11.18	3.53	1.55	1.33	1.93	0.21
16	West	C	2-5	2000	0.73	46.9	0.65	4.80	2.56	15.57	35.44	31.31	10.50	2.94	0.94	0.39	0.32	0.05
16	West	C	5-10	3400	0.55	57.1	0.73	20.53	1.04	15.94	40.83	31.55	8.20	1.73	0.45	0.17	0.09	0.01
16	West	C	10-20	3900	0.41	61.9	0.74	47.11	0.43	10.50	43.74	34.94	8.43	1.37	0.35	0.14	0.09	0.01
16	Center	G	-	(b)	(b)	(b)	(b)	2.54	0.00	2.83	53.33	33.03	9.99	0.83	0.00	0.00	0.00	0.00
16	East	G	-	1600	0.96	37.1	0.57	3.47	4.39	28.72	40.51	19.83	4.82	1.17	0.41	0.09	0.06	0.01
19	West	G	-	1700	0.78	46.0	0.66	0.30	5.86	10.80	21.25	28.66	17.60	8.12	3.17	0.69	2.07	1.78
19	Center	G	-	230	1.40	22.5	0.41	3.11	2.01	20.17	47.77	24.50	4.64	0.74	0.15	0.02	0.00	0.00
19	East	G	-	30	1.43	14.8	0.25	0.31	7.87	15.57	30.27	30.38	9.60	4.08	1.42	0.49	0.33	0.00

(a) Grab (G) or Composite (C).

(b) Insufficient sample volume to perform analysis.

Table 4-5
HUDSON RIVER PROJECT
 Fall 1990 Sampling and Analysis Program

Upper River Sediment Sampling and Analysis
 Pore Water Results
 May 30, 1991

Sample Station	Location Site	Sample Type (a)	Depth in core (cm)	Dissolved Organic Carbon (mg/l)	Total PCBs (ng/l)	Homolog Distribution (wt%)									
						Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca
3	West	C	0-2	348	520	0.00	9.99	28.95	34.48	14.93	7.26	3.79	0.80	0.00	0.00
3	West	C	2-5	199	1466	0.00	10.90	29.75	35.12	15.06	5.91	2.42	0.84	0.00	0.00
6	West	C	0-2	117	697	0.00	30.60	24.47	23.29	11.07	6.53	3.17	0.86	0.00	0.00
6	West	C	2-5	311	573	0.00	42.03	21.05	18.75	8.63	6.03	3.29	0.21	0.00	0.00
9	East	C	0-2	182	1555	0.00	32.47	28.52	21.44	9.80	4.96	2.15	0.67	0.00	0.00
9	East	C	2-5	21	2174	0.00	32.40	25.85	22.24	10.88	5.69	2.23	0.71	0.00	0.00
10	Center	C	0-2	36	11290	0.00	9.16	34.63	29.23	13.54	7.36	4.40	1.35	0.32	0.00
10	Center	C	2-5	25	19714	0.00	12.62	34.26	29.00	13.16	6.25	3.42	1.07	0.21	0.00
10	East	C	0-2	163	9557	0.00	9.41	28.68	29.61	14.71	9.41	5.94	1.84	0.40	0.00
10	East	C	2-5	275	12939	0.00	11.70	31.08	29.00	13.88	7.66	4.73	1.55	0.41	0.00
11	West	C	0-2	17	1574	6.03	33.78	25.77	18.44	7.88	5.29	2.14	0.57	0.11	0.00
11	West	C	2-5	11	2223	0.00	30.55	24.75	20.05	10.21	8.96	4.14	1.33	0.00	0.00
11	East	C	0-2	293	6034	0.00	21.61	32.79	25.01	9.70	4.80	3.64	1.53	0.80	0.13
11	East	C	2-5	13	1941	0.00	38.00	30.49	14.92	7.06	6.05	2.80	0.67	0.00	0.00
13	East	C	0-2	37	1409	0.00	21.20	26.43	29.82	11.43	7.37	2.87	0.74	0.14	0.00
13	East	C	2-5	20	3631	0.00	14.28	29.42	29.51	13.40	9.59	3.81	0.00	0.00	0.00
16	West	C	0-2	16	5558	0.00	8.16	29.57	30.64	14.37	9.07	6.38	1.65	0.17	0.00
16	West	C	2-5	10	13919	0.00	9.47	29.60	26.74	15.56	10.02	6.65	1.81	0.15	0.00

(a) Grab (G) or Composite (C).

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TABLE 4-6
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Supplemental Sediment Sampling and Analysis
Corinth and Spiers Falls Dams
General Physical Characteristics
May 30, 1991

Sample Location			Sampling	Sample	Depth in Core	Color and Texture
Station	Site (a)	Core #	Date	Type (b)	(Inches)	
Corinth	Down	1	10/9/90	C	0-3	Dark brown, organic silt, organic debris.
Corinth	Down	1	10/9/90	C	3-6	Dark brown, organic silt, organic debris.
Corinth	Down	1	10/9/90	C	6-9	Dark brown, organic silt, organic debris.
Corinth	Down	1	10/9/90	C	9-12	Dark brown, organic silt, organic debris.
Corinth	Down	1	10/9/90	C	12-12.7	Dark brown, organic silt, organic debris.
Corinth	Down	2	10/9/90	C	0-3	Dark brown organic silt and clay, organic debris.
Corinth	Down	2	10/9/90	C	3-6	Dark brown organic silt and clay, organic debris.
Corinth	Down	2	10/9/90	C	6-9	Dark brown organic silt and clay, organic debris.
Corinth	Down	2	10/9/90	C	9-10	Dark brown organic silt and clay, organic debris.
Corinth	Up	1	10/17/90	G	-	Coarse brown sand.
Corinth	Up	2	10/17/90	G	-	Coarse brown sand.
Spiers Falls	Down	1	10/9/90	C	0-3	Light brown organic silt, organic debris and wood chips.
Spiers Falls	Down	1	10/9/90	C	3-4.8	Light brown organic silt, organic debris and wood chips.
Spiers Falls	Down	2	10/9/90	C	0-3	Dark brown organic silt, organic debris, and wood chips.
Spiers Falls	Down	2	10/9/90	C	3-6	Dark brown organic silt, organic debris, and wood chips.
Spiers Falls	Down	2	10/9/90	C	6-9	Dark brown organic silt, organic debris, and wood chips.
Spiers Falls	Down	2	10/9/90	C	9-11	Dark brown organic silt, organic debris, and wood chips.
Spiers Falls	Up	1	10/17/90	C	0-3	Dark brown organic silt, organic debris.
Spiers Falls	Up	1	10/17/90	C	3-6	Dark brown organic silt, organic debris.
Spiers Falls	Up	1	10/17/90	C	6-9	Dark brown organic silt, organic debris.
Spiers Falls	Up	1	10/17/90	C	9-10.6	Dark brown organic silt, organic debris.
Spiers Falls	Up	2	10/17/90	C	0-3	Dark brown organic silt, organic debris.
Spiers Falls	Up	2	10/17/90	C	3-6	Dark brown organic silt, organic debris.

(a) Downstream (Down) or Upstream (Up) from Dam (see Figure 1-1 for location of sample stations).

(b) Grab (G) or Core (C).

Table 4-7
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Supplemental Sediment Sampling and Analysis
Corinth and Spiers Falls Dams
Bulk Sediment Results
May 30, 1991

Sample Location			Sampling Date	Sample Type (b)	Depth in Core (inches)	TOC (mg/kg)	Total PCBs (mg/kg)	Homolog Distribution (wt%)									
Station	Site (a)	Core #						Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca
Corinth	Down	1	10/9/90	C	0-3	44,880	0.11	1.10	2.89	7.44	14.56	18.00	23.43	23.90	6.98	1.45	0.25
Corinth	Down	1	10/9/90	C	3-6	45,970	0.14	0.69	3.79	5.74	15.32	26.03	29.27	14.19	4.07	0.67	0.22
Corinth	Down	1	10/9/90	C	6-9	40,700	0.12	0.82	4.13	6.50	13.66	15.96	24.35	24.78	8.09	1.38	0.34
Corinth	Down	1	10/9/90	C	9-12	32,767	0.10	1.02	4.02	7.33	14.36	15.79	24.51	24.24	7.19	1.29	0.26
Corinth	Down	1	10/9/90	C	12-12.7	19,610	0.11	1.24	3.79	7.92	15.60	17.40	25.28	21.91	5.77	0.91	0.18
Corinth	Down	2	10/9/90	C	0-3	31,840	0.08	1.37	5.41	8.42	16.25	15.62	22.58	22.12	6.95	1.14	0.25
Corinth	Down	2	10/9/90	C	3-6	30,000	0.08	1.73	2.81	7.32	17.13	20.11	23.68	20.03	6.02	0.93	0.24
Corinth	Down	2	10/9/90	C	6-9	47,540	0.07	1.34	6.42	10.27	18.17	16.19	20.33	19.82	5.94	1.17	0.35
Corinth	Down	2	10/9/90	C	9-10	41,260	0.06	1.54	5.57	13.91	22.11	15.84	19.59	16.08	4.10	0.92	0.32
Corinth	Up	1	10/17/90	G	-	465	0.00	0.00	0.00	28.90	37.30	9.67	10.90	10.29	2.94	0.00	0.00
Corinth	Up	2	10/17/90	G	-	634	0.00	0.00	0.00	15.58	17.59	8.63	10.04	19.04	24.48	4.64	0.00
Spiers Falls	Down	1	10/9/90	C	0-3	104,850	0.32	0.50	3.06	10.96	19.29	14.12	22.98	20.44	8.09	0.47	0.08
Spiers Falls	Down	1	10/9/90	C	3-4.8	151,100	0.88	0.42	2.15	8.40	16.16	16.19	22.33	24.47	9.07	0.76	0.05
Spiers Falls	Down	2	10/9/90	C	0-3	38,170	0.06	1.80	3.13	9.72	17.41	18.26	23.82	18.56	6.08	0.92	0.30
Spiers Falls	Down	2	10/9/90	C	3-6	43,150	0.18	0.70	3.09	12.61	20.49	15.53	20.26	19.92	6.54	0.69	0.16
Spiers Falls	Down	2	10/9/90	C	6-9	121,900	0.64	0.39	2.58	11.43	19.11	16.77	23.98	18.01	7.05	0.62	0.06
Spiers Falls	Down	2	10/9/90	C	9-11	182,200	1.01	0.31	2.22	9.22	16.45	15.42	22.11	24.55	9.02	0.68	0.03
Spiers Falls	Up	1	10/17/90	C	0-3	69,550	0.08	0.00	0.29	9.79	21.88	18.35	24.75	18.73	5.26	0.95	0.00

(a) Downstream (Down) or Upstream (Up) from Dam (see Figure 1-1 for location of sample stations).

(b) Grab (G) or Core (C).

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Table 4-7
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Supplemental Sediment Sampling and Analysis
 Corinth and Spiers Falls Dams
 Bulk Sediment Results
 May 30, 1991

Sample Location		Core #	Sampling Date	Sample Type (b)	Depth in Core (inches)	TOC (mg/kg)	Total PCBs (mg/kg)	Homolog Distribution (wt%)									
Station	Site (a)							Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca
Spiers Falls	Up	1	10/17/90	C	3-6	67,625	0.09	0.00	1.36	6.13	16.66	20.38	28.01	22.13	4.64	0.70	0.00
Spiers Falls	Up	1	10/17/90	C	6-9	57,310	0.08	0.00	2.05	8.85	16.85	17.01	24.49	22.67	5.98	1.20	0.90
Spiers Falls	Up	1	10/17/90	C	9-10.6	51,650	0.09	32.25	1.97	7.82	15.80	11.41	14.35	11.53	3.56	0.80	0.52
Spiers Falls	Up	2	10/17/90	C	0-3	57,678	0.20	42.40	2.16	6.22	12.96	9.42	12.22	10.95	2.42	0.71	0.54
Spiers Falls	Up	2	10/17/90	C	3-6	60,480	0.07	5.86	2.97	7.17	19.41	17.90	22.73	17.43	4.73	1.09	0.72

(a) Downstream (Down) or Upstream (Up) from Dam (see Figure 1-1 for location of sample stations).

(b) Grab (G) or Core (C).

Table 4-8
HUDSON RIVER PROJECT
 Fall 1990 Sampling and Analysis Program
 Supplemental Sediment Sampling and Analysis
 Albany Turning Basin - South
 General Physical Characterization and Bulk Sediment Results
 May 30, 1991

Sample Location (a)	Sampling Date	Sample Type (b)	Depth in Core (inches)	TOC (mg/kg)	Total PCBs (mg/kg) (c)	Color and Texture
ATB 1	10/10/90	G	-	4,748	0.47	Coarse brown sand.
ATB 2	10/10/90	C	0-3	23,145	2.05	Dark gray, organic silt, organic debris.
		C	3-6	25,490	1.71	Dark gray, organic silt, organic debris.
		C	6-9	19,180	1.39	Dark gray, organic silt, organic debris.
		C	9-9.9	18,225	1.70	Dark gray, organic silt, organic debris.
ATB 3	10/10/90	C	0-3	21,590	1.69	Dark gray, organic silt, organic debris.
		C	3-6	22,640	1.84	Dark gray, organic silt, organic debris.
		C	6-8.8	21,670	1.18	Dark gray, organic silt, organic debris.
ATB 4	10/10/90	G	-	664	< 0.25	Coarse brown sand.
ATB 5	10/10/90	C	0-3	28,770	1.29	Dark gray, organic silt, organic debris.
		C	3-6	16,700	1.15	Dark gray, organic silt, organic debris.
		C	6-9	14,940	1.00	Dark gray, organic silt, organic debris.
		C	9-10.4	28,283	1.38	Dark gray, organic silt, organic debris.
ATB 6	10/10/90	C	0-3	22,165	2.19	Dark gray, organic silt and debris.
		C	3-6	22,640	2.00	Dark gray, organic silt and debris.
		C	6-9	22,840	2.10	Dark gray, organic silt and debris.
		C	9-12	18,740	3.30	Dark gray, organic silt and debris.
		C	12-14.8	21,990	4.29	Dark gray, organic silt and debris.
ATB 7	10/10/90	C	0-3	22,795	2.07	Dark gray, organic silt and debris.
		C	3-6	27,272	1.67	Dark gray, organic silt and debris.
		C	6-9	22,940	1.62	Dark gray, organic silt and debris.
		C	9-9.8	16,930	1.12	Dark gray, organic silt and debris.
ATB 8	10/10/90	C	0-3	27,445	2.04	Dark gray, organic silt and debris.
		C	3-6	24,850	1.94	Dark gray, organic silt and debris.
		C	6-9	13,790	1.30	Dark gray, organic silt and debris.
		C	9-12	16,105	1.48	Dark gray, organic silt and debris.
		C	12-14.8	25,840	1.78	Dark gray, organic silt and debris.
ATB 9	10/10/90	C	0-3	21,250	1.93	Dark gray, organic silt and debris.
		C	3-6	22,020	2.14	Dark gray, organic silt and debris.
		C	6-9	22,955	1.73	Dark gray, organic silt and debris.
		C	9-12	23,035	1.69	Dark gray, organic silt and debris.
		C	12-14.7	24,985	2.92	Dark gray, organic silt and debris.

(a) Refer to Figure 2-5 for sample locations.

(b) Grab (G) or Core (C).

(c) Less than (<) sign indicates PCBs were less than the method limit indicated.

Table 4-8
HUDSON RIVER PROJECT
 Fall 1990 Sampling and Analysis Program
 Supplemental Sediment Sampling and Analysis
 Albany Turning Basin - South
 General Physical Characterization and Bulk Sediment Results
 May 30, 1991

Sample Location (a)	Sampling Date	Sample Type (b)	Depth in Core (inches)	TOC (mg/kg)	Total PCBs (mg/kg) (c)	Color and Texture
ATB 10	10/10/90	C	0-3	20,975	2.23	Dark gray, organic silt and debris.
		C	3-6	28,120	1.97	Dark gray, organic silt and debris.
		C	6-9	25,175	2.46	Dark gray, organic silt and debris.
		C	9-12	18,940	1.63	Dark gray, organic silt and debris.
		C	12-15	23,625	1.68	Dark gray, organic silt and debris.
ATB 11	10/10/90	C	0-3	22,230	1.97	Dark gray, organic silt and debris.
		C	3-6	15,750	1.96	Dark gray, organic silt and debris.
		C	6-9	24,140	1.85	Dark gray, organic silt and debris.
		C	9-12	21,525	2.20	Dark gray, organic silt and debris.
		C	12-14.3	15,235	0.83	Dark gray, organic silt and debris.
ATB 12	10/10/90	C	0-3	25,495	2.00	Dark gray, organic silt and debris.
		C	3-6	20,090	1.85	Dark gray, organic silt and debris.
		C	6-9	28,565	1.92	Dark gray, organic silt and debris.
		C	9-12	20,380	2.09	Dark gray, organic silt and debris.
		C	12-16.7	21,460	1.26	Dark gray, organic silt and debris.
ATB 13	10/10/90	C	0-3	28,150	1.83	Dark gray, organic silt and debris.
		C	3-6	28,920	1.65	Dark gray, organic silt and debris.
		C	6-9	16,670	2.62	Dark gray, organic silt and debris.
		C	9-12	15,975	1.31	Dark gray, organic silt and debris.
		C	12-15	25,740	1.72	Dark gray, organic silt and debris.
ATB 14	10/10/90	C	0-3	18,395	1.91	Dark gray, organic silt and debris.
		C	3-6	25,870	2.09	Dark gray, organic silt and debris.
		C	6-9	24,435	2.16	Dark gray, organic silt and debris.
		C	9-12	27,700	2.46	Dark gray, organic silt and debris.
		C	12-16.1	21,005	1.42	Dark gray, organic silt and debris.
ATB 15	10/10/90	C	0-3	23,855	2.24	Dark gray, organic silt and debris.
		C	3-6	23,015	1.97	Dark gray, organic silt and debris.
		C	6-9	29,065	1.92	Dark gray, organic silt and debris.
		C	9-12	29,825	2.19	Dark gray, organic silt and debris.
ATB 16	10/10/90	C	0-3	18,715	2.86	Dark gray, organic silt and debris.
		C	3-6	23,905	1.58	Dark gray, organic silt and debris.
		C	6-9	24,895	2.12	Dark gray, organic silt and debris.
		C	9-12	22,206	2.72	Dark gray, organic silt and debris.
		C	12-16.2	20,760	3.27	Dark gray, organic silt and debris.

(a) Refer to Figure 2-5 for sample locations.

(b) Grab (G) or Core (C).

(c) Less than (<) sign indicates PCBs were less than the method limit indicated.

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Table 4-8
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Supplemental Sediment Sampling and Analysis
Albany Turning Basin - South
General Physical Characterization and Bulk Sediment Results
May 30, 1991

Sample Location (a)	Sampling Date	Sample Type (b)	Depth in Core (inches)	TOC (mg/kg)	Total PCBs (mg/kg) (c)	Color and Texture
ATB 17	10/10/90	C	0-3	16,770	2.13	Dark gray, organic silt and debris.
		C	3-6	20,175	3.09	Dark gray, organic silt and debris.
		C	6-9	28,865	3.45	Dark gray, organic silt and debris.
		C	9-11.6	24,735	7.00	Dark gray, organic silt and debris.
ATB 18	10/10/90	C	0-3	23,220	2.51	Dark gray, organic silt and debris.
		C	3-6	19,035	3.51	Dark gray, organic silt and debris.
		C	6-9	20,930	1.89	Dark gray, organic silt and debris.
		C	9-12	18,185	2.42	Dark gray, organic silt and debris.
		C	12-12.5	20,690	9.09	Dark gray, organic silt and debris.
ATB 19	10/10/90	C	0-3	17,340	2.97	Dark gray, organic silt and debris.
		C	3-6	22,010	1.82	Dark gray, organic silt and debris.
		C	6-9	30,180	2.38	Dark gray, organic silt and debris.
		C	9-12	18,110	4.07	Dark gray, organic silt and debris.
		C	12-13.7	27,490	2.36	Dark gray, organic silt and debris.
ATB 20	10/10/90	C	0-3	21,710	2.19	Dark gray, organic silt and debris.
		C	3-6	20,450	2.27	Dark gray, organic silt and debris.
		C	6-9	22,665	0.84	Dark gray, organic silt and debris.
		C	9-12	26,740	2.37	Dark gray, organic silt and debris.
		C	12-13.4	17,975	2.08	Dark gray, organic silt and debris.

(a) Refer to Figure 2-5 for sample locations.

(b) Grab (G) or Core (C).

(c) Less than (<) sign indicates PCBs were less than the method limit indicated.

Table 4-9
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis program

Water Column Sampling and Analysis
Conventional Parameter Results
May 30, 1991

Sample Location (a)		Approximate River Mile	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Suspended Solids (mg/L)	Particle Distribution				
Station	Site					5-10 Micron	10-20 Micron	20-30 Micron	30-50 Micron	>50 Micron
1	West	194.0	43	7	4	51,000	32,000	13,000	7,200	0
1	Center	194.0	40	8	8	87,000	44,000	20,000	11,000	0
1	East	194.0	32	7	8	93,000	60,000	25,000	14,000	0
3	West	192.7	54	8	7	59,000	35,000	13,000	7,100	0
3	Center	192.7	44	8	6	66,000	40,000	16,000	9,600	0
3	East	192.7	77	5	5	68,000	42,000	17,000	9,300	0
6	West	190.7	180	6	4	53,000	32,000	13,000	79,000	0
6	Center	190.7	39	6	6	63,000	39,000	14,000	7,900	0
6	East	190.7	49	6	5	72,000	44,000	18,000	10,000	0
9	West	189.0	59	5	5	77,000	46,000	18,000	9,900	0
9	Center	189.0	83	7	5	74,000	46,000	18,000	9,700	0
9	East	189.0	65	6	7	74,000	45,000	17,000	9,900	0
10	West	187.6	50	10	5	78,000	50,000	20,000	11,000	0
10	Center	187.6	60	5	4	74,000	47,000	19,000	10,000	0
10	East	187.6	81	5	5	80,000	52,000	23,000	13,000	0
11	West	184.4	70	6	5	67,000	40,000	15,000	8,000	0
11	Center	184.4	60	6	6	88,000	51,000	19,000	9,700	0
11	East	184.4	76	6	7	90,000	56,000	23,000	12,000	0
13	West	175.8	70	7	7	110,000	69,000	29,000	15,000	0
13	Center	175.8	66	7	5	110,000	68,000	28,000	15,000	0
13	East	175.8	71	7	7	100,000	64,000	27,000	15,000	0
15	West	166.3	76	9	7	130,000	88,000	39,000	20,000	0
15	Center	166.3	88	7	6	120,000	76,000	31,000	15,000	0
15	East	166.3	95	9	9	140,000	99,000	45,000	24,000	0
16	West	164.1	78	7	7	140,000	99,000	46,000	25,000	0
16	Center	164.1	80	9	8	130,000	88,000	39,000	22,000	0
16	East	164.1	77	8	7	130,000	94,000	43,000	23,000	0
19	West	154.3	120	10	33	32,000	31,000	28,000	25,000	0
19	Center	154.3	110	8	30	38,000	34,000	31,000	27,000	0
19	East	154.3	62	6	14	150,000	120,000	66,000	35,000	0
20	(East)	-	78	7	23	110,000	95,000	68,000	43,000	0
21	North	-	140	10	30	30,000	29,000	27,000	24,000	0
21	Center	-	120	10	37	28,000	26,000	25,000	23,000	0
21	South	-	120	12	32	33,000	32,000	29,000	26,000	0
22	West	200.0	48	5	7	73,000	43,000	14,000	6,600	0
22	Center	200.0	39	6	6	64,000	37,000	13,000	5,900	0
22	East	200.0	44	6	13	66,000	40,000	16,000	9,100	0

(a) Refer to Figure 1-1 for sample locations.

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Table 4-10
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Water Column Sampling and Analysis
Total Congener Specific PCB Results Summary (a)
May 30, 1991

Sample Location (b)		Approximate	Total PCB	Homolog Distribution (wt%)									
Station	Site	River Mile	Concentration (ng/L)	Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca
1	West	194.0	492.79	2.99	6.77	25.24	22.80	17.14	16.92	7.30	0.75	0.09	0.00
1	Center	194.0	180.04	1.82	15.03	25.14	26.26	12.79	13.88	4.17	1.12	0.00	0.00
1	East	194.0	195.04	8.87	13.08	21.74	25.17	13.73	13.09	3.90	0.42	0.00	0.00
3	West	192.7	252.71	6.77	11.08	32.13	23.00	12.27	10.31	3.97	0.48	0.00	0.00
3	Center	192.7	202.32	10.21	8.33	26.55	27.24	12.85	10.84	3.77	0.41	0.00	0.00
3	East	192.7	1925.57	3.60	7.68	22.88	21.25	17.57	17.76	8.36	0.87	0.03	0.00
6	West	190.7	39.60	18.79	15.67	28.90	20.78	6.73	4.31	3.98	0.84	0.00	0.00
6	Center	190.7	627.66	3.03	13.33	31.26	21.77	14.75	12.04	3.50	0.32	0.00	0.00
6	East	190.7	701.92	5.35	12.90	31.04	21.63	14.46	10.62	3.39	0.31	0.31	0.00
9	West	189.0	236.85	7.15	10.58	30.39	23.97	12.61	10.59	4.47	0.24	0.00	0.00
9	Center	189.0	275.97	7.86	8.56	30.10	26.70	12.57	10.09	3.81	0.32	0.00	0.00
9	East	189.0	128.34	7.74	0.10	11.04	24.79	23.13	20.89	11.08	1.25	0.00	0.00
10	West	187.6	222.74	1.22	30.49	22.76	25.15	8.57	8.33	2.91	0.57	0.00	0.00
10	Center	187.6	148.77	0.00	12.94	26.90	26.55	12.94	12.82	6.02	1.84	0.00	0.00
10	East	187.6	180.34	0.00	9.25	31.06	28.67	15.05	11.06	4.03	0.89	0.00	0.00
11	West	184.4	98.83	3.53	1.84	19.03	25.36	21.43	19.33	9.19	0.50	0.00	0.00
11	Center	184.4	28.10	21.97	18.76	28.73	22.22	4.66	2.13	1.52	0.00	0.00	0.00
11	East	184.4	135.37	6.03	8.47	28.57	27.62	13.46	11.11	4.41	0.33	0.00	0.00
13	West	175.8	351.24	5.70	12.69	29.72	22.86	14.57	10.51	3.68	0.28	0.00	0.00
13	Center	175.8	847.84	3.52	11.17	30.38	21.91	15.51	12.82	4.39	0.31	0.00	0.00
13	East	175.8	153.14	6.70	5.63	19.34	28.09	16.98	15.40	7.41	0.46	0.00	0.00
15	West	166.3	181.97	6.76	12.46	28.63	21.65	9.77	8.20	12.19	0.34	0.00	0.00
15	Center	166.3	105.36	0.00	7.38	29.40	30.24	14.10	11.82	6.57	0.49	0.00	0.00
15	East	166.3	734.77	4.31	8.19	22.64	22.80	17.11	17.14	7.30	0.51	0.00	0.00
16	West	164.1	279.12	7.87	13.04	31.41	22.71	12.01	9.45	3.24	0.28	0.00	0.00
16	Center	164.1	1108.02	5.04	14.07	30.98	19.99	13.98	11.55	4.10	0.30	0.00	0.00
16	East	164.1	505.04	6.92	12.55	32.21	21.23	12.75	10.20	3.90	0.23	0.00	0.00
19	West	154.3	310.98	6.31	11.64	30.65	23.19	13.21	10.72	3.92	0.35	0.00	0.00
19	Center	154.3	295.60	5.01	10.24	29.83	25.84	14.00	11.10	3.67	0.31	0.00	0.00
19	East	154.3	85.16	0.00	0.00	10.83	30.18	21.24	25.56	11.42	0.78	0.00	0.00
20	(East)	-	640.26	0.91	13.89	28.19	25.66	13.51	13.06	4.50	0.28	0.00	0.00
21	North	-	288.51	4.28	10.14	29.44	27.19	14.33	10.55	3.71	0.36	0.00	0.00
21	Center	-	1007.11	4.16	16.74	25.35	22.61	12.85	13.13	4.66	0.43	0.06	0.00
21	South	-	350.59	1.25	35.07	18.42	23.28	8.60	10.86	2.18	0.33	0.00	0.00
22	West	200.0	1096.66	6.02	13.23	30.22	20.29	13.86	11.30	4.78	0.30	0.00	0.00
22	Center	200.0	328.69	2.14	22.82	22.32	26.57	10.23	11.35	3.95	0.40	0.23	0.00
22	East	200.0	351.10	2.83	25.88	22.92	22.35	9.81	11.22	4.34	0.65	0.00	0.00

(a) Data not valid due to elevated PCB concentrations in QA/QC samples (see text for explanation).

(b) Refer to Figure 1-1 for sample locations.

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Table 4-11
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Water Column Sampling and Analysis
Dissolved Congener Specific PCB Results Summary (a)
May 30, 1991

Sample Location (b)		Total Dissolved PCB Concentration (ng/L)	Homolog Distribution (wt%)									
Station	Site		Mono	Di	Tri	Tetra	Penta	Hexa	Hepta	Octa	Nona	Deca
1	West	14.16	36.63	16.67	26.95	10.62	4.94	3.74	0.45	0.00	0.00	0.00
1	Center	14.17	41.81	11.28	26.92	10.60	5.54	3.86	0.00	0.00	0.00	0.00
1	East	15.65	40.56	12.16	24.12	10.61	6.88	4.15	1.51	0.00	0.00	0.00
3	West	11.32	38.69	6.34	37.13	5.98	6.38	4.75	0.73	0.00	0.00	0.00
3	Center	26.51	36.13	24.28	22.28	8.15	5.16	3.67	0.33	0.00	0.00	0.00
3	East	19.58	24.13	10.52	31.37	21.00	8.22	4.17	0.59	0.00	0.00	0.00
6	West	12.51	25.35	11.59	38.85	14.44	5.28	3.59	0.91	0.00	0.00	0.00
6	Center	10.79	0.00	27.04	45.84	13.48	6.36	5.66	1.63	0.00	0.00	0.00
6	East	15.47	32.21	11.16	34.15	13.05	3.48	4.13	1.82	0.00	0.00	0.00
9	West	21.48	50.93	17.83	14.22	9.35	3.88	3.55	0.25	0.00	0.00	0.00
9	Center	19.42	32.60	15.98	27.85	11.79	5.63	4.65	1.50	0.00	0.00	0.00
9	East	26.76	62.13	10.39	13.99	7.62	3.03	2.66	0.17	0.00	0.00	0.00
10	West	16.25	39.48	12.93	27.19	9.69	4.60	4.36	1.75	0.00	0.00	0.00
10	Center	19.89	17.79	23.21	31.95	16.24	5.56	4.02	1.23	0.00	0.00	0.00
10	East	21.19	26.10	19.07	33.65	12.75	4.69	3.24	0.50	0.00	0.00	0.00
11	West	18.20	48.05	20.16	15.61	9.25	3.19	2.73	1.02	0.00	0.00	0.00
11	Center	32.41	53.75	16.22	13.69	9.52	4.00	2.45	0.38	0.00	0.00	0.00
11	East	20.91	58.21	13.16	12.11	10.19	2.80	3.20	0.33	0.00	0.00	0.00
13	West	16.58	42.87	20.19	16.37	10.60	3.88	5.45	0.64	0.00	0.00	0.00
13	Center	22.74	47.86	17.40	17.05	10.96	3.42	3.01	0.31	0.00	0.00	0.00
13	East	11.10	53.35	11.19	13.09	14.57	3.98	3.82	0.00	0.00	0.00	0.00
15	West	14.24	50.35	17.53	13.38	10.18	4.31	3.87	0.38	0.00	0.00	0.00
15	Center	13.16	61.10	15.51	12.64	8.77	1.99	0.00	0.00	0.00	0.00	0.00
15	East	19.00	36.13	20.77	14.63	15.53	7.42	5.23	0.28	0.00	0.00	0.00
16	West	21.71	63.77	13.62	12.12	5.74	2.90	1.45	0.40	0.00	0.00	0.00
16	Center	25.13	49.14	18.26	12.97	10.00	4.11	4.68	0.85	0.00	0.00	0.00
16	East	31.08	57.44	17.08	11.94	7.13	3.21	2.73	0.47	0.00	0.00	0.00
19	West	10.02	32.18	6.62	26.26	17.54	8.50	7.51	1.39	0.00	0.00	0.00
19	Center	9.36	31.06	8.23	29.26	16.03	7.37	6.69	1.36	0.00	0.00	0.00
19	East	7.95	46.09	6.01	22.41	13.52	4.94	6.06	0.97	0.00	0.00	0.00
20	(East)	4.27	0.00	15.82	35.58	25.69	9.85	11.31	1.94	0.00	0.00	0.00
21	North	16.55	28.02	17.32	33.13	13.60	3.44	3.72	0.76	0.00	0.00	0.00
21	Center	6.64	62.83	0.00	24.01	3.88	4.35	4.93	0.00	0.00	0.00	0.00
21	South	14.55	26.93	16.57	32.93	14.15	3.62	4.54	1.26	0.00	0.00	0.00
22	West	15.19	39.68	6.82	26.20	9.36	7.37	6.30	3.78	0.50	0.00	0.00
22	Center	12.97	37.71	0.99	32.90	8.85	9.60	6.90	3.06	0.00	0.00	0.00
22	East	13.25	41.42	7.72	30.79	8.42	5.26	4.37	2.00	0.00	0.00	0.00

(a) Data not valid due to elevated PCB concentrations in QA/QC samples (see text for explanation).

(b) Refer to Figure 1-1 for sample locations.

Table 4-12
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Hydrologic Measurements
River Flow Velocities
May 30, 1991

Sample Location (a) Station	Site	Approximate River Mile	Sampling Date	Sampling Time	Water Depth (ft)	Mid Depth Flow Velocity (ft/sec)
4	West	191.9	11/28/90		15	1.05
4	Center	191.9	11/28/90	7:10	19	1.30
4	East	191.9	11/28/90		9	0.80
7	West	190.3	11/28/90		15	1.35
7	Center	190.3	11/28/90	7:30	11	1.45
7	East	190.3	11/28/90		10	1.00
11	West	184.4	11/28/90		22	0.92
11	Center	184.4	11/28/90	8:20	13	0.75
11	East	184.4	11/28/90		9	0.80
Northumberland Dam	West	183.4	11/28/90		16	0.62
Northumberland Dam	Center	183.4	11/28/90	8:40	15	1.05
Northumberland Dam	East	183.4	11/28/90		14	1.10
13	West	175.8	11/28/90		21	1.20
13	Center	175.8	11/28/90	9:30	22	0.68
13	East	175.8	11/28/90		22	1.02
Lock 4 Dam	West	168.0	11/28/90		8	1.45
Lock 4 Dam	Center	168.0	11/28/90	10:15	7	2.25
Lock 4 Dam	East	168.0	11/28/90		8	2.20
15	West	166.3	11/28/90		6	0.90
15	Center	166.3	11/28/90	10:50	14	0.65
15	East	166.3	11/28/90		18	0.85
Lock 3 Dam	West	165.9	11/28/90		13	0.60
Lock 3 Dam	Center	165.9	11/28/90	11:20	17	0.30
Lock 3 Dam	East	165.9	11/28/90		20	0.44
16	West	164.1	11/28/90		19	0.90
16	Center	164.1	11/28/90	11:50	13	0.75
16	East	164.1	11/28/90		4	0.95
Lock 2 Dam	West	163.5	11/28/90		12	0.96
Lock 2 Dam	Center	163.5	11/28/90	12:15	10	0.65
Lock 2 Dam	East	163.5	11/28/90		8	0.82
17	West	161.5	11/28/90		19	1.64
17	Center	161.5	11/28/90	13:00	9	0.50
17	East	161.5	11/28/90		7	0.75

(a) Refer to Figure 1-1 for sample locations.

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Table 4-12
HUDSON RIVER PROJECT
Fall 1990 Sampling and Analysis Program

Hydrologic Measurements
River Flow Velocities
May 30, 1991

Sample Location (a) Station	Site	Approximate River Mile	Sampling Date	Sampling Time	Water Depth (ft)	Mid Depth Flow Velocity (ft/sec)
Lock 1 Dam	West	159.4	11/28/90		14	0.76
Lock 1 Dam	Center	159.4	11/28/90	13:35	15	0.95
Lock 1 Dam	East	159.4	11/28/90		14	0.58
18	West	157.8	11/28/90		10	1.00
18	Center	157.8	11/28/90	14:30	17	1.42
18	East	157.8	11/28/90		19	1.36
Troy Dam	West	153.9	11/28/90		12	0.62
Troy Dam	Center	153.9	11/28/90	15:15	19	1.48
Troy Dam	East	153.9	11/28/90		18	1.00
Thompson Island Dam	West	187.7	11/29/90		5	0.65
Thompson Island Dam	Center	187.7	11/29/90	9:50	7	1.05
Thompson Island Dam	East	187.7	11/29/90		7	1.30
10	West	187.6	11/29/90		2	0.55
10	Center	187.6	11/29/90	10:15	4	0.90
10	East	187.6	11/29/90		6	0.95
Lock 6 Dam	West	186.0	11/29/90		5	2.40
Lock 6 Dam	Center	186.0	11/29/90	11:00	3	2.30
Lock 6 Dam	East	186.0	11/29/90		3	2.05

(a) Refer to Figure 1-1 for sample locations.

Table 4-13
HUDSON RIVER PROJECT
 Fall 1990 Sampling and Analysis Program

Hydrologic Measurements
 Water Surface Elevations (a)
 May 30, 1991

Sample Station (b)	Approximate River Mile	USGS 1929 Datum Water Elevation
4	191.9	120.82
7	190.3	120.46
Thompson Island Dam	187.7	120.11
10	187.6	116.18
Lock 6 Dam	186.0	115.62
11	184.4	103.62
Northumberland Dam	183.4	103.66
13	175.8	85.16
Lock 4 Dam	168.0	84.97
15	166.3	70.46
Lock 3 Dam	165.9	70.72
16	164.1	50.63
Lock 2 Dam	163.5	49.38
17	161.5	33.25
Lock 1 Dam	159.4	31.08
18	157.8	17.86
Troy Dam	153.9	17.38

(a) Measured November 28, 1990.

(b) Refer to Figure 1-1 for sample locations.

Figures



O'BRIEN & GERE

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FIGURE 1-1

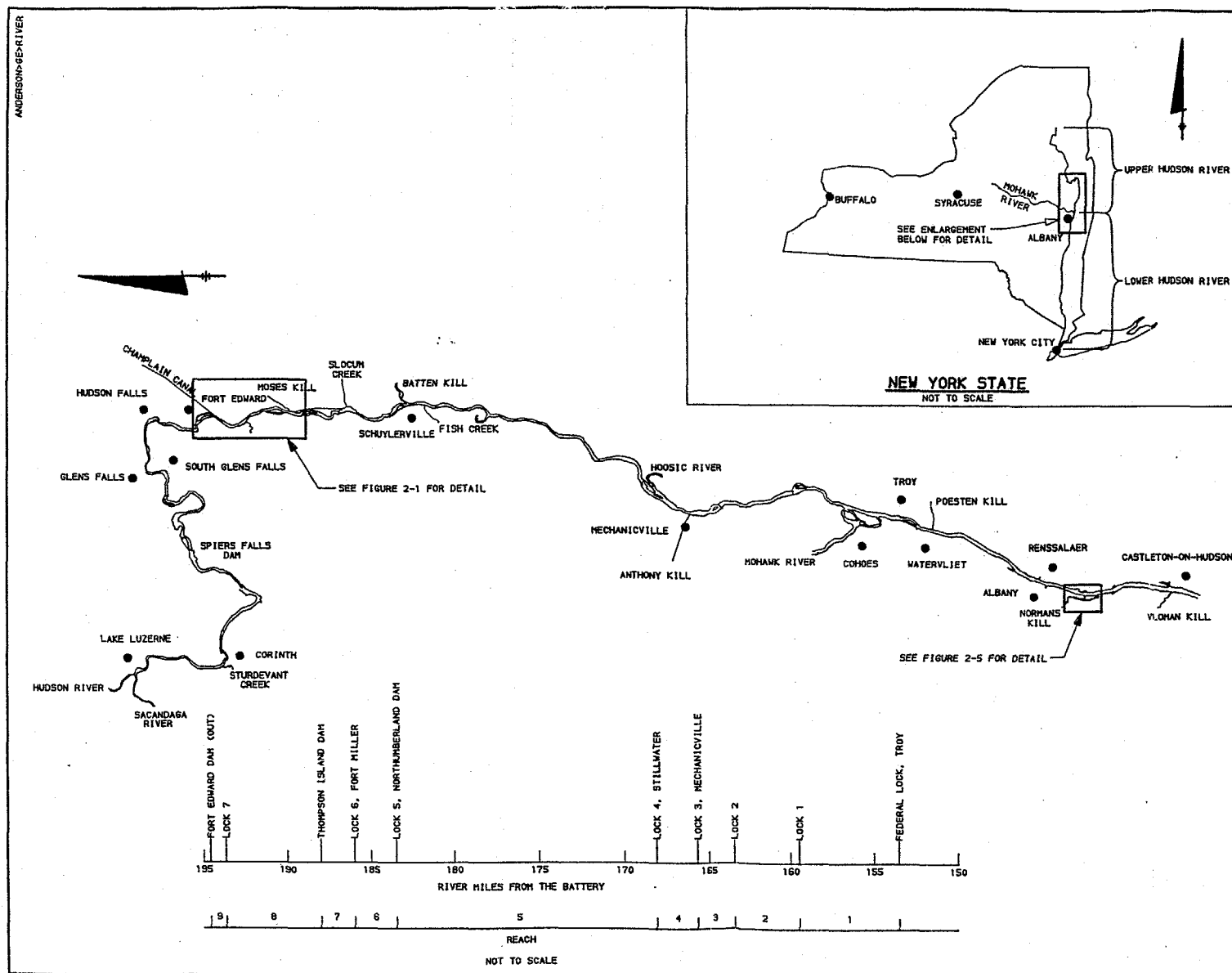


FIGURE 2-1

NOTE:
POLYGONS FROM NYSDEC (1988)

GENERAL ELECTRIC
HUDSON RIVER PROJECT
FALL 1990
SAMPLING AND
ANALYSIS PROGRAM

THOMPSON ISLAND POOL
SITE LOCATIONS

200 0 200
1" = 200'

3000 0 3000
1" = 3000'

MAY 1991

G O'DRIEN & DEERE
ENGINEERS, INC.

320459

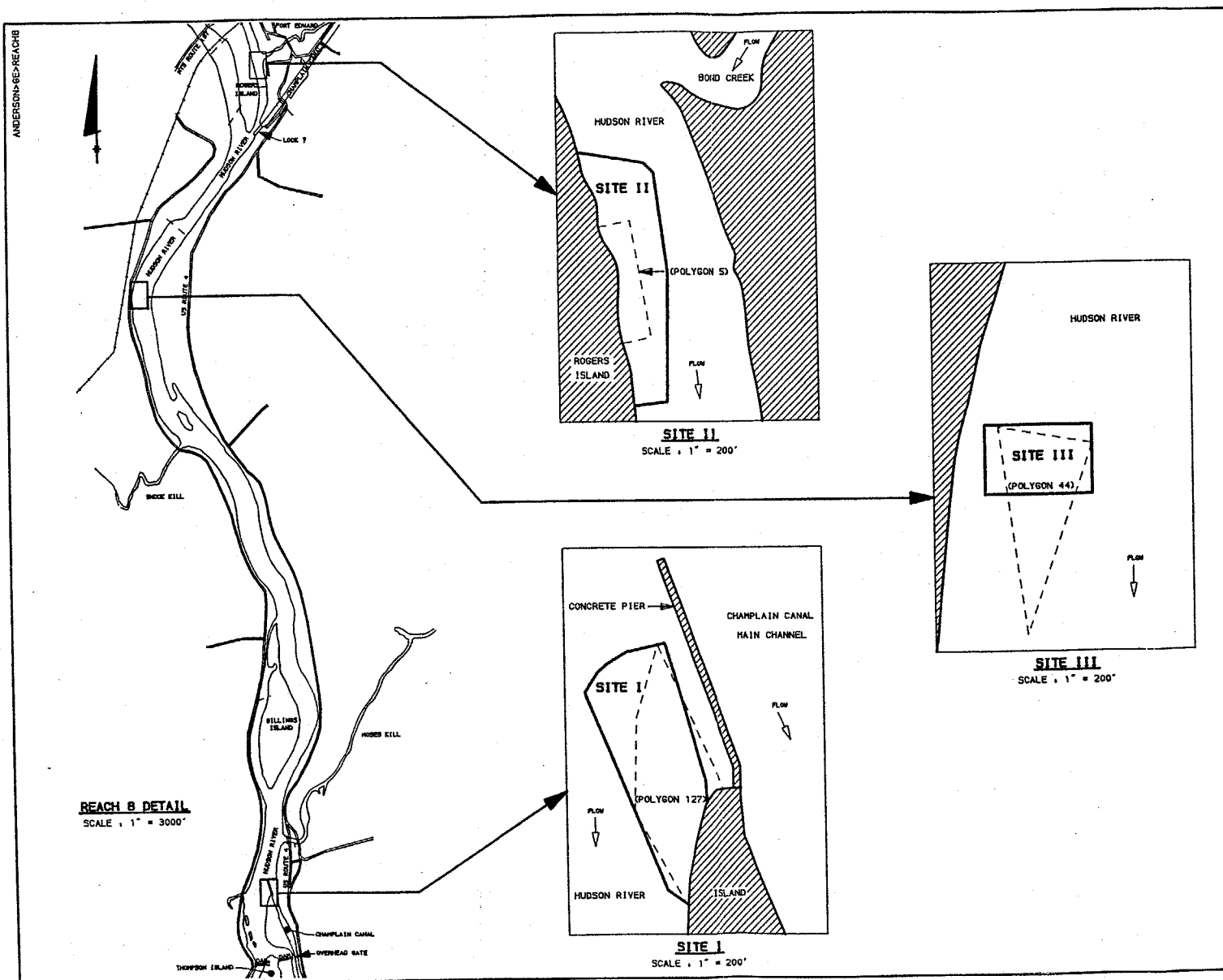
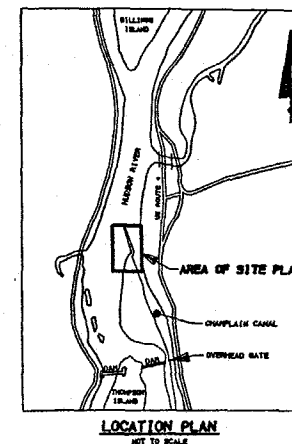


FIGURE 2-2



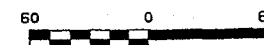
LEGEND

- ACTUAL CORING LOCATION

NOTE:
POLYGONS FROM NYSDEC (1988)

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FALL 1990
SAMPLING AND
ANALYSIS PROGRAM

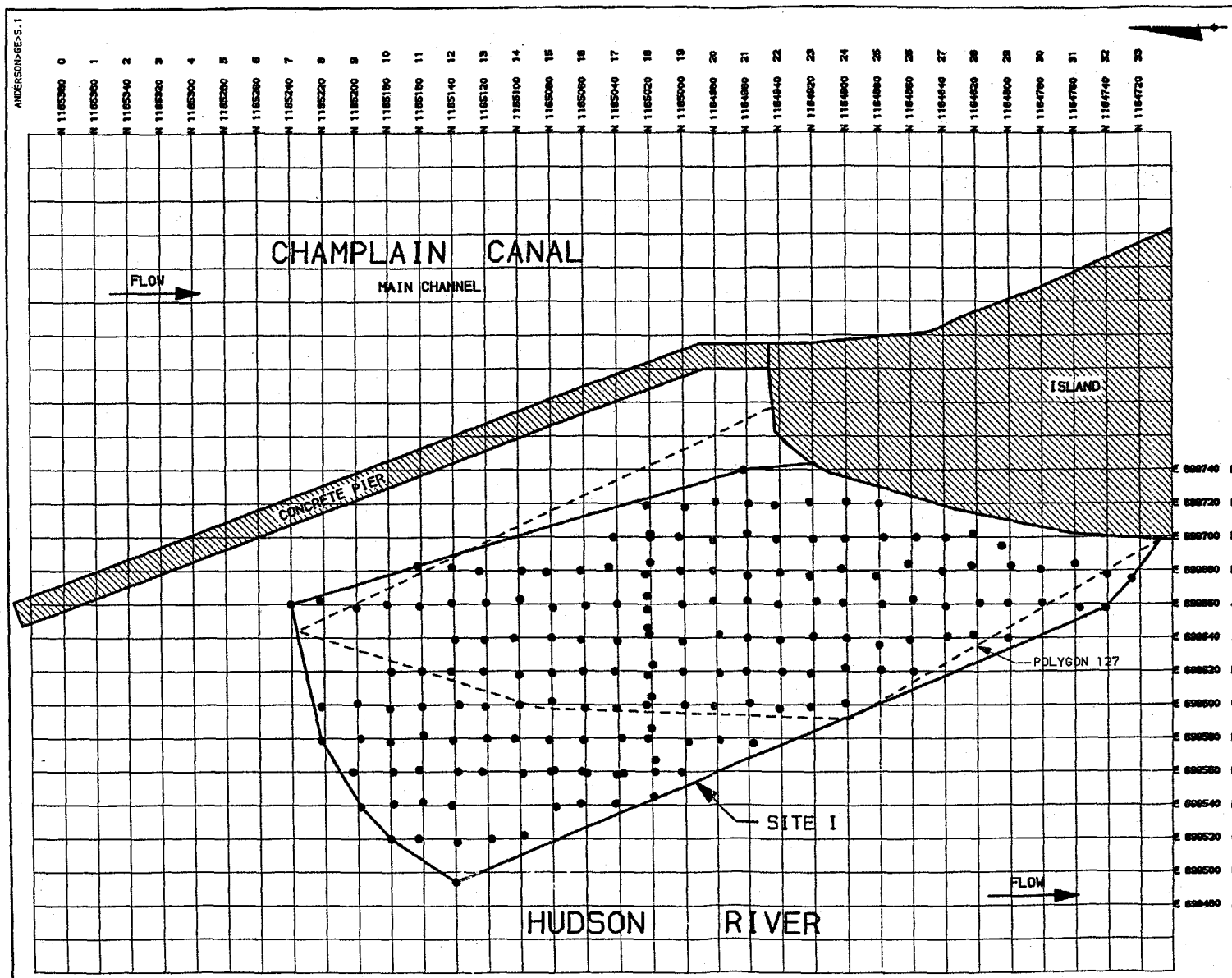
SITE I PLAN
SEDIMENT SAMPLING STATIONS



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ANDERSON-GE-S-2

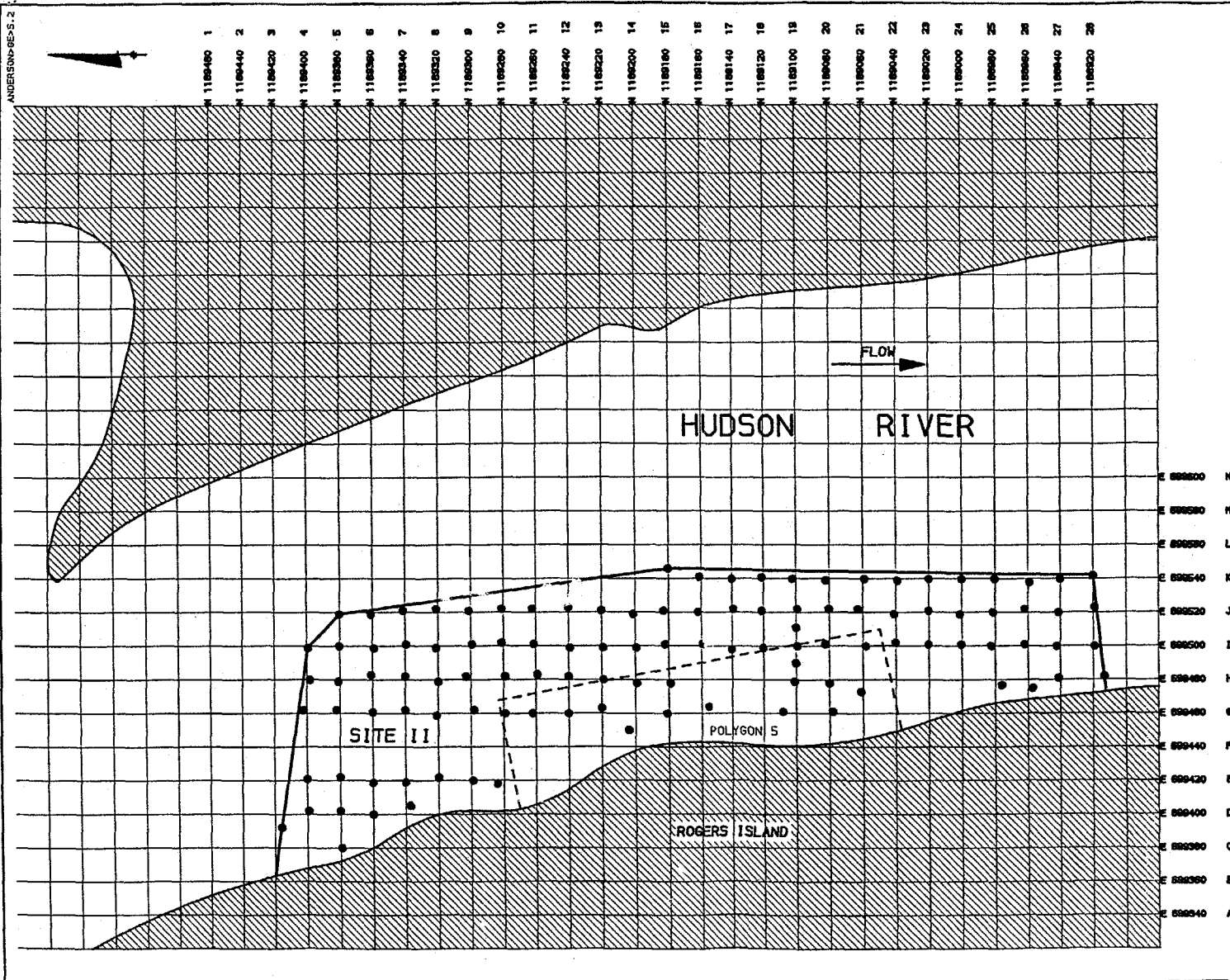
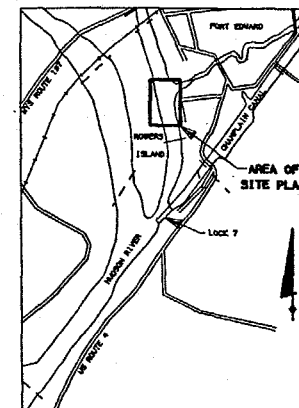


FIGURE 2-3



LOCATION PLAN
NOT TO SCALE

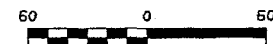
LEGEND

- ACTUAL CORING LOCATION

NOTE:
POLYGONS FROM NYSDEC (1988)

GENERAL ELECTRIC
HUDSON RIVER PROJECT
FALL 1990
SAMPLING AND
ANALYSIS PROGRAM

**SITE II PLAN
SEDIMENT SAMPLING STATIONS**

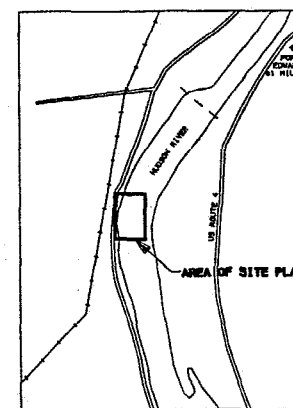


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FIGURE 2-4



LOCATION PLAN
NOT TO SCALE

LEGEND

- ACTUAL CORING LOCATION

NOTE:
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**SITE III PLAN
SEDIMENT SAMPLING STATIONS**



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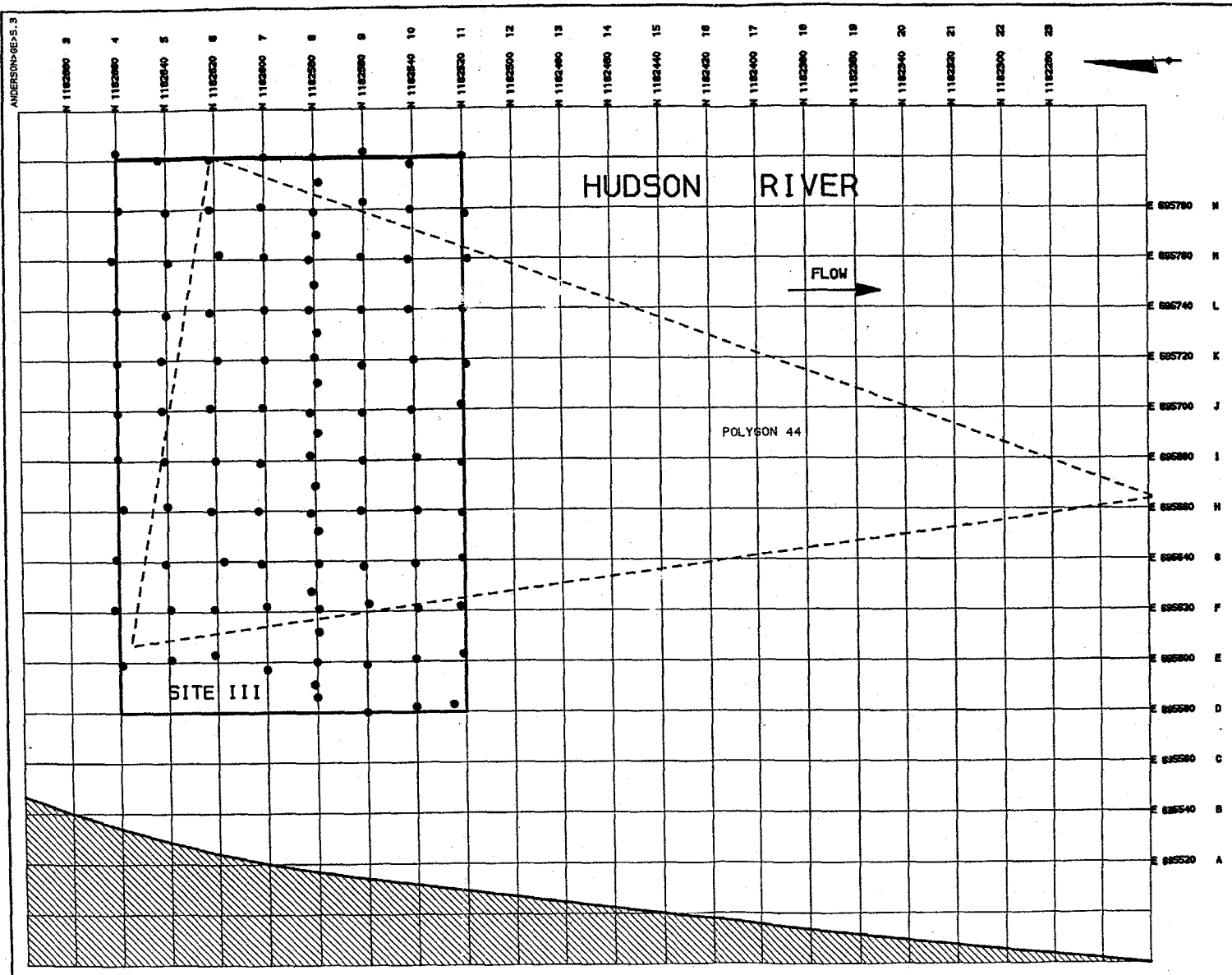
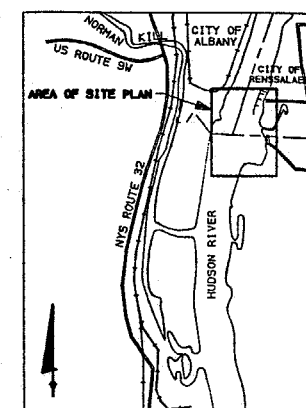


FIGURE 2-5

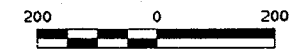


LEGEND

- ACTUAL CORING LOCATION (APPROXIMATE)

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ALBANY TURNING BASIN - SOUTH
SITE PLAN
SEDIMENT SAMPLING STATIONS



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