#### **MEMO TO FILE**

From: W Ayling 1998 January High Flow Event Sampling Re: File: 0612245 Date: January 27, 1998

**CC**:

JK Farmer (52) JG Haggard - GE MD LaRue A Macbeth - Sidley & Austin J Rhea - HydroQual D. Tomchuk - USEPA W. Ports - NYSDEC

O'Brien & Gere Engineers, Inc. (O'Brien & Gere) and HydroQual, Inc. (HydroQual) conducted water column sampling in the upper Hudson River (Figure 1) during the high flow event that occurred between January 8 and 11, 1998. The sampling was conducted on behalf of General Electric Company (General Electric). This memorandum is intended to document the sampling. A separate report summarizing and interpreting the results will follow.

The January 1998 high flow event sampling will provide additional data to evaluate PCB loading in the reach of the river between Bakers Falls and Schuylerville. At Fort Edward, peak river flows during the January 1998 event (35,300 cfs) exceeded previous sampling conducted for this purpose (O'Brien & Gere and HydroQual 1998; O'Brien & Gere 1993). This information will be useful for calibrating the PCB fate and transport model of the Hudson River being developed by HydroQual, Inc.

The remainder of this memo summarizes this monitoring event as follows:

- Background
- Objectives
- Approach
- Sample locations
- Sample collection procedures
- Sample analyses
- Sample handling
- Field equipment cleaning
- Quality Assurance/Quality Control
- Health and Safety

#### Background

During the week of January 5, 1998 a slow moving warm weather storm system resulted in significant rainfall in the upper Hudson River watershed. As a result of the partial melting of the existing snowpack and local rainfall (an estimated 4.6 inches of rain fell at the General Electric Hudson Falls plant site; Dames & Moore 1998) flows in the river increased. At Fort Edward, Hudson River flows increased from a low flow of 3,300 cfs on Tuesday, January 6, 1998 to a peak flow of 35,300 cfs on Saturday, January 10, 1998 before flow subsided. River flow and stage hydrograghs are presented in Figure 2. The peak flow was approximately a 15-

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year reoccurrence event based on data summarized by the U.S. Environmental Protection Agency (USEPA 1991):

Estimated daily flood events				
Reoccurrence Period (years)	1931-1989 Flood Flow (cfs)			
5	28,000			
10	32,000			
25	36,900			
50	40,300			
100	43,600			
Source: USEPA 19	91			

The high flow event was the highest recorded flow recorded at Fort Edward since the US Geological Survey (USGS) gage was installed in 1977 (Attachment 2). Since removal of the Fort Edward dam in 1973, two flood events of similar magnitude occurred. One event occurred in April 1976 (33,400 cfs at Hadley) and the other occurred in May 1983 (35,200 cfs at Fort Edward).

#### **Objectives**

General Electric is currently developing a PCB fate and transport model for the upper Hudson River. PCB movement during high flow events is an integral part of the model. Since this is the largest flow event that has occurred in 15 years, it presents a unique opportunity to develop a high quality data set for further calibration of the model. Sampling teams were mobilized when it was determined that a high flow event was underway.

#### Approach

Sampling and analysis methods employed were consistent with the 1997 High Flow Monitoring Program, Upper Hudson River, Sampling and Analysis Plan (HydroQual and O'Brien & Gere 1997). The river was sampled at approximately 3,300 cfs on January 6, 1998 during weekly PCRDMP sampling, prior to the high flow event.

Several sampling rounds were conducted during the high flow event. Sampling times and corresponding river flows are presented in Table 2. A single sample was collected at HRM 194.2 on the morning of January 9, 1998 at 32,000 cfs. Field personnel were mobilized later that same day, when river flows exceeding 43,000 cfs were anticipated. The high flow forecast was based on data obtained from the Northeast River Forecast Center (NERFC) via the internet site and instantaneous flow monitoring of the USGS gaging station at Fort Edward. Nine additional rounds of high flow sampling were conducted January 9 through 12, 1998 (Table 2). Round 1 sampling began at the Fort Edward sampling station upon arrival at the river at approximately 23:00.

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Subsequent sampling rounds were initiated at the Fort Edward sampling station as flow increased at approximately 1,000 cfs increments based on instantaneous flow monitoring at the Fort Edward gaging station or 2.5-hour sampling intervals, whichever came first. Round 1 and 2 were collected near the peak flows on the rising limb of the hydro graph, at 34,000 and 34,800 cfs, respectively. During round 3, the river flow crested at 35,300 cfs (Figure 2). Rounds 4 through 9 were collected as river flows dropped from 35,000 cfs to 16,100 cfs. Between Rounds 4 and 5, USGS was observed preparing to sample at the HRM 194.2 bridges. Round 9 was collected as the weekly PCRDMP sampling. Photographs of the river in the reach of the river sampled are presented in Attachment 1.

#### Sample locations

For this monitoring event, the sampling primarily focused on obtaining data from the river at the Route 197 bridges at Fort Edward (HRM 194.2), the west dam abutment at Thompson Island Dam (HRM 188.5W), and the Route 29 bridge at Schuylerville (SCH, Figure 1, Table 1). These stations are sampled weekly for the PCRDMP. In addition, samples were collected less frequently at the background station at the Route 27 bridge in Hudson Falls (HRM 197.0) and the east dan. abutment at Thompson Island Dam (HRM 188.5E; Table 2).

The Snook Kill and Moses Kill, two tributaries to the HudsonTable River with confluences in Thompson Island Pool, were also included in three sampling rounds (Figure 1, Table 1).

#### Sample collection procedures

Sample collection was generally consistent with procedures used for the PCRDMP. For PCB and total suspended solids (TSS) analyses, depth-composite samples were collected at the bridge sampling stations using Kemmerer samplers and surface grab samples were collected at the Thompson Island Dam sampling stations using stainless steel buckets. Sampling differed from the PCRDMP in three respects:

- Sampling at Thompson Island Dam included the east dam abutment during daylight hours.
- High flow sampling included monitoring during the night. During night sampling, the west channel of HRM 194.2 and the east channel at Thompson Island Dam were excluded due to safety concerns associated with accessing these stations in the dark.
- Separate east and west channel samples were collected from the Route 197 bridges at Fort Edward (HRM 194.2) during the rising limb of the hydro graph. (Sampling for the PCRDMP at the Fort Edward sampling station consists of a single sample composited from aliquots collected at both bridges.)

For PCRDMP sampling on January 6 and 12, samples were collected by Dames & Moore in the vicinity of the boat launch at the base of Bakers Falls. Samples collected at the profile station at the Thompson Island dam (TID-PRW2) were included with the January 6 PCRDMP sampling, but were not included with high flow sampling due to unsafe river access conditions.

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Details of the procedures and specifications are defined in the Field Sampling Plan (FSP), FSP addendum, and Quality Assurance Project Plan (QAPP) for the PCRDMP (O'Brien & Gere 1992a, 1996, 1992b). In addition, high volume (5-gallon) surface water grab samples were collected in two, plastic, 2.5-gallon containers by dispensing water from stainless steel sampling buckets. The high volume samples were collected at the tributaries during Rounds 1, 3, and 5 (Table 1). The Round 5 high volume sampling also included river stations at HRM 194.2E and W, HRM 188.5E and W, and Schuylerville.

#### Sample analyses

Whole water (unfiltered) samples will be analyzed for PCBs and TSS by Northeast Analytical, Inc. (NEA). PCBs will be analyzed by capillary column methodology, NEA608CAP, and TSS will be analyzed by USEPA 160.2. Details of analytical methodologies are provided in the PCRDMP QAPP (O'Brien & Gere 1992b, O'Brien & Gere 1997).

The 5-gallon grab samples were also submitted to NEA for processing and solids analysis. The processing will consist of allowing the samples to settle for three days, followed by removal of the supernatant, and centrifugation to obtain a solids sample. The supernatant will be analyzed for TSS by USEPA Method 160.2, and the solids will be analyzed for total organic carbon (TOC) by USEPA Method 415.2 (USEPA 1983) and loss on ignition. An aliquot of the solids will be provided to the University of Minnesota Limnological Research Center External Services Organization for laser-based particle size analysis.

#### Sample handling

Samples were handled according to procedures presented in the QAPP (O'Brien & Gere 1992b). Samples were assigned a unique sample designation identifying sample location, date and time of sample collection. Upon collection, PCB samples were placed in 1-liter clear glass Boston type bottles and TSS samples were placed in 1-liter plastic bottles. Samples were chilled with ice to approximately 4°C. Following completion of field activities, samples were transported to NEA for analysis. Standard chain-of-custody procedures were followed, as detailed in the QAPP (O'Brien & Gere 1992b). Copies of field logs and chain-of-custody forms documenting field activities are provided in Attachment 3.

#### Field equipment cleaning

For this high flow water column monitoring program, sampling equipment was cleaned prior to initiation of field sampling activities, according to procedures presented in the Field Sampling Plan addendum presented in the Fort Edward Dam PCB Remnant Containment 1995 Post-Construction Monitoring Program report (O'Brien & Gere 1996, Appendix L). In addition, sampling equipment was cleaned in the field between sampling rounds. Equipment used for collection of samples for PCB analysis was cleaned in the field using the following three sequential rinse steps:

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

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Subsequently, the sampling equipment was rinsed with river water prior to sampling.

#### **Quality Assurance/Quality Control**

Prior to sampling, equipment blanks were collected from each piece of sampling equipment used in this program. Field QA/QC activities were conducted according to procedures presented in the QAPP developed for the PCRDMP (O'Brien & Gere 1992b) and the addendum to the QAPP presented in the *Hudson River Project River Monitoring Test* Sampling and Analysis Plan (O'Brien & Gere 1995). QA/QC field samples for PCB analyses consisted of a matrix spike, a duplicate and an equipment blanks. QA/QC field samples for TSS analyses consisted of duplicate analyses. The QA/QC field samples collected and analyzed for PCBs are summarized for the high flow water column sampling (Table 2). PCRDMP sampling conducted on January 6 and 12, 1998 along with the high flow water column sampling also included a matrix spike, a blind duplicate and an equipment blank, as required by that program.

On receipt of analytical data, evaluation of PCB QA/QC will consist of Tier 1 review of analytical holding times, matrix spike recoveries, duplicate relative percent differences (RPD), and equipment blank results. The results of this review will be used to evaluate the acceptability of data quality for the intended uses (Table 2).

#### Health and safety

Field activities were conducted in accordance with health and safety procedures described in the Health and Safety Plan developed for the PCRDMP (O'Brien & Gere 1992c) and the addendum to the Health and Safety Plan provided in the *Hudson River Project River Monitoring Test* Sampling and Analysis Plan (O'Brien & Gere 1995).

#### **References**

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Table 1. Sample	Table 1. Sample locations and collection times											
	Round	PCRDMP	1. A.	1	2	3	4	5	6	7	8	9-PCRDMP
Sample	Date	01/06	01/09	1/09-1/10	01/10	01/10	01/10	01/10	01/10	01/11	01/11	01/12
location	Flow (cfs)	3300	32000	34000	34800	35300	35000	35000	34700	27200	22400	16100
PCB and TSS san	nples									/æ		
HRM 197.0		900		1/10-0100					<del>ية بن 17</del> ك	0840		1055
HRM 194.2E		1000	0915	1/09-2330	0200	0430	0815*	1020*	1250	0935 (C)	545 (C)	1200 (C,D)
HRM 194.2W		(C)	(C)		***		0815 (D)*	1020*	1250	(C)	(C)	(C)
HRM 188.5W		1130		1/09-2350	0225	0455	0855	1125	1315	0955 (D)	1610	1220
HRM 188.5E							0835	1115	1310			
TID-PRW2		1155										
SCH		1245		1/09-2355	0200	0445	0900	1145	1340 (D)	1020	1630	1240
High Volume sam	ples											
Snook Kill				1/10-0015		0510		1050				
Moses Kill				1/10-0025		0500		1100				
<b>River Stations</b>					·			Х		***		

Notes:

Flows = instantaneous readings obtained from the USGS gaging station at Fort Edward, recorded during sampling at Fort Edward.

\* = USGS observed preparing to collect samples at Fort Edward station at appox. 0940.

(D) = duplicate sample collected.

River stations = all river stations sampled for high volume samples, except HRM 197.0. Approximate sampling times for high volume samples

(X) are noted in PCB and TSS sampling summary, above.

(C) = Sample collected as composite of east and west channels, sample collection time indicated for HRM 194.2E

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QA/QC Sample Type	Purpose	Evaluation Procedure	Criteria	1998 High Flow Event Quantity
Matrix spike	Evaluate accuracy of PCB quantification in the field media.	Duplicate samples are spiked with a known quantity of analyte by the laboratory. The percent recovery is calculated.	Spike recoveries are expected to be in the 70 to 130 recovery range.	5
Duplicate	Evaluate the precision of analyses.	A relative percent difference (RPD) is calculated as:	The RPD is expected to be less than 35%.	5
		RPD = (C1 - C2) / ([C1+C2]) / 2)	RPD is not calculated (NC) for samples	
		where C1 is the original sample and C2 is the duplicate sample.	and duplicates with total PCBs <11 ng/l.	
Equipment blank	Evaluate the effectiveness of equipment cleaning procedures.	Detection of PCBs in the equipment blank requires evaluation of source and correction of contamination problem.	Detection of PCBs in the equipment blank results in qualification of the associated field samples. Field sample concentrations <5 times the concentration of the equipment blank are qualified with a "U." Field sample concentrations >5 times the detection limit are qualified with a "J."	8

#### Table 2. Field Sampling PCB Quality Assurance/Quality Control

Source: O'Brien & Gere Engineers, Inc.



## FIGURE 1



Figure 2

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# **USGS** PROVISIONAL DATA SUBJECT TO REVISION

### 01327750-- Hudson River At Fort Edward NY

Latest Conditions				
Flow (ft <sup>3</sup> /s)	Stage (ft)	Date	Time	
13,900	23.8	01713	06:30	





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ATTACHMENTS

Attachment 1

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1 Baker's Falls during high flow: approximately 32,000 cfs at the Fort Edward USGS gaging station. January 9, 1998.



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2 Tributary sampling station during high flow - Snook Kill. January 10, 1998.

O'Brien & Gere Engineers, Inc.

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3 Thompson Island Pool during high flow event. January 10, 1998.



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4 Thompson Island Pool during high flow event. January 10, 1998.

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5 West channel at Thompson Island Dam during high flow event. January 10, 1998.

# Attachment 2

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#### GENERAL ELECTRIC COMPANY HUDSON RIVER PROJECT PEAK FLOW SUMMARY AT FORT EDWARD GAGING STATION (1 Sorted by Peak Instantaneous Flow 1900 - 1922, 1977 - 1998

Date	PeakDischarge (cfs)	Stage (ft)
03/28/1913 (2)	89,100	18.59
04/13/1922 (2)	58,000	16.30
04/21/1914 (2)	52,200	15.33
04/23/1900 (2)	43,900	
04/23/1901 (2)	42,800	
04/16/1909 (2)	41,400	
06/12/1917 (2)	38,100	12.82
04/01/1905 (2)	37,500	
03/24/1903 (2)	35,800	
01/10/1998 (3)	35,300	28.36
05/03/1983 (3)	35,200	28.34
04/19/1912 (2)	34,800	
04/04/1918 (2)	34,500	12.16
04/29/1979 (3)	34,000	28.09
03/31/1907 (2)	34,000	. <b></b>
03/22/1921 (2)	32,800	11.79
04/01/1910 (2)	32,600	-
04/13/1919 (2)	32,000	11.64
04/11/1904 (2)	31,600	
04/18/1993 (3)	31,500	27.53
04/29/1908 (2)	31,400	
04/26/1977 (3)	31,000	27.50
04/01/1987 (3)	30,000	27.22
03/17/1902 (2)	29.700	
04/01/1920 (2)	29.000	11.03
04/20/1906 (2)	28,200	-
05/19/1916 (2)	28.000	10.80
05/22/1990 (3)	27,900	26.76
04/19/1982 (3)	27,800	26.73
04/17/1994 (3)	27,700	(daily mean)
02/22/1981 (3)	27,600	26.68
12/14/1983 (3)	27,600	26.67
04/13/1915 (2)	26,600	10.50
04/24/1996 (3)	26,300	(daily mean)
05/03/1911 (2)	25,700	
04/10/1980 (3)	23,300	25.68
04/01/1986 (3)	22,400	25.47
05/04/1992 (3)	20,500	25.22
10/18/1977 (3)	20,200	24.96
10/23/1995 (3)	19,700	(daily mean)
12/31/1984 (3)	19,500	24.79
05/13/1989 (3)	19,300	24.96

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#### GENERAL ELECTRIC COMPANY HUDSON RIVER PROJECT PEAK FLOW SUMMARY AT FORT EDWARD GAGING STATION (1 Sorted by Peak Instantaneous Flow 1900 - 1922, 1977 - 1998

Date	PeakDischarge (cfs)	Stage (ft)	
. 10/24/1990 (3)	18,900	24.89	
05/05/1997 (3)	18,750	24.85	
04/05/1988 (3)	12,700	23.53	

(1) - data from Spiers Falls gaging station from 1900 - 1922, data from Fort Edward gaging station 1977 - 1998

(2) - Prior to completion of Sacandaga Reservoir in 1930.

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#### GENERAL ELECTRIC COMPANY HUDSON RIVER PROJECT PEAK FLOW SUMMARY AT HADLEY GAGING STATION Sorted by Peak Instantaneous Discharge 1913 - 1998

Date	Peak Discharge (cfs)	Stage (ft)
03/27/1913 (1)	49,000	
01/01/1949	42,700	21.21
03/18/1936	41,200	19.59
04/02/1976 (2)	33,400	17.49
04/12/1922 (1)	33,100	19.71
06/04/1947	33,000	17.32
01/10/1998 (2)	31,600	16.75
03/28/1953	31,400	16.68
05/05/1972	30,100	16.14
02/21/1981 (2)	30,000	16.12
04/17/1993 (2)	29,700	15.99
04/01/1987 (2)	28,500	15.46
04/19/1933	28,100	17.23
04/28/1979 (2)	27,400	14.98
04/18/1982 (2)	26,800	14.74
03/16/1990 (2)	26,200	14.52
04/25/1926 (1)	26,100	16.40
04/17/1994 (2)	26,100	(daily mean)
04/22/1958	26,100	14.47
04/23/1969	25,800	14.32
04/25/1977 (2)	24,800	13.90
03/18/1973	24,400	13.73
04/29/1925 (1)	23,800	15.30
04/09/1928 (1)	23,800	15.40
04/06/1952	23,300	13.29
09/22/1938	23,200	12.96
12/14/1983 (2)	22,900	13.17
04/10/1980 (2)	22,700	13.03
04/28/1939	22,500	12.68
04/05/1960	22,300	12.89
05/03/1940	21,900	12.45
04/18/1954	21,600	12.58
03/31/1951	21,500	12.54
05/02/1983 (2)	21,300	12.50
03/31/1986 (2)	20,600	12.22
09/28/1942	20,400	11.90
03/22/1945	20,400	12.03
10/22/1995 (2)	20,100	(daily mean)
03/28/1948	19,800	11.82
04/05/1963	19,800	11.82
04/09/1962	19,700	11.80
04/10/1955	19,600	11.76
04/26/1944	19.600	11 70

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#### GENERAL ELECTRIC COMPANY HUDSON RIVER PROJECT PEAK FLOW SUMMARY AT HADLEY GAGING STATION Sorted by Peak Instantaneous Discharge 1913 - 1998

Date	Peak Discharge (crs)	Stage (II)
05/04/1924 (1)	19,500	13.25
12/30/1984 (2)	19,200	11.60
04/24/1996 (2)	19,000	(daily mean)
05/04/1971	18,800	11.43
05/05/1997 (2)	18,750	(daily mean)(3)
04/21/1950	18,700	11.38
04/09/1923 (1)	18,700	12.91
04/23/1992 (2)	18,300	11.24
04/26/1970	18,300	11.22
05/14/1943	18,000	10.90
04/16/1941	17,900	10.88
04/04/1967	17,600	10.92
10/03/1945	17,300	10.78
05/01/1956	17,000	10.67
04/15/1974 (2)	16,900	10.61
04/08/1930	16,700	12.10
05/16/1937	16,700	10.41
03/26/1929 (1)	16,500	12.00
03/24/1968	16,300	10.36
10/24/1990 (2)	16,200	10.35
04/16/1964	16,200	10.33
04/12/1932	15,900	11.68
04/20/1959	15,400	10.00
04/14/1978 (2)	15,200	9.92
04/18/1934	14,700	11.09
04/12/1931	14,700	11.10
04/26/1975 (2)	14,400	9.58
04/24/1961	14,300	9.51
05/06/1989 (2)	14,300	9.55
04/05/1988 (2)	12,500	8.77
07/09/1935	11,300	8.49
04/23/1965	11,100	8.15
11/18/1926 (1)	11,000	9.10
05/21/1966	10,900	8.04
05/21/1957	7,900	6.75

(1) - Prior to completion of Sacandage Reservoir in 1930.

(2) - After removal of Fort Edward dam in 1973.

(3) - Flow at Fort Edward, Hadley data not yet available.

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Attachment 3

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**GENERAL ELECTRIC COMPANY 1998 POST-CONSTRUCTION REMNANT DEPOSIT MONITORING PROGRAM** 

#### FIELD LOG FOR Jammy 6, 1998 (Sampling Date)

Station	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
HRM 197.0 (County Rt. 27 Bridge)	(1900)	Type: Composite Kemmerer: <sub>95</sub> -	36	0-7'	ms		Bakers Falls: No flow over falls,
HRM 194.2 (Rt. 197 Bridges Comp East and Main Channel)	1000	Type: Composite Kemmerer: 964	2.5	0-6'E 0-5'W		~	
HRM 188.5 (Thompson Island Dam)	1130	Type: Grab	2°C	Support	- Dof		Total depth at N. face of dame 3. 3'
Equipment blank: HRM 1985	1005-	Type: Grab Kemmerer:					
TID-PRW2	1155	Type: Composite Kemmerer: <i>968</i>	2°C	0-8'	Dur	~	Total dept - 10.4'
SCH	1245	Type: Composite Kemmerer: <i>96</i> &	2"	0-12'		-	
Ft, Edward Staff Gage (518) 747-9900	0927						Level: 21.33 ~ 3,300 cfs
Additional Notes:	· · · · · · · · · · · · · · · · · · ·					· · · ·	· · ·
					•		
Weather Data			<u></u>				Sampled by:
Description: <u>foqqu</u> Temperature: <u></u>	mis Cr D	<u>7</u> 0926					$\langle \mathcal{A} \rangle$

January 5, 1998 (:61220225/4/1dlog2)

Precipitation:

Calm Mist

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#### **GENERAL ELECTRIC COMPANY 1998 POST-CONSTRUCTION REMNANT DEPOSIT MONITORING PROGRAM**

		FIELD L	OG FOR	- TAN	wary 9	1198	(Sampling Date)	STORM Evens Stample
Station	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample		Comments
HRM 197.0 (County Rt. 27 Bridge)		Type: Composite Kemmerer:	· · · · · · · · · · · · · · · · · · ·				Bakers Falls:	
HRM 194.2 (Rt. 197 Bridges Comp East and Main Channel)	1905h	Type: Composite Kemmerer: 96 A		0-10W D-10.SE				
HRM 188.5 (Thompson Island Dam)		Type: Grab		-10-10-10-10-5E	- 1			
Equipment blank: HRM \94.2	0900	Type: Grab Kemmerer: 96A						· · · · · · · · · · · · · · · · · · ·
TID-PRW2		Type: Composite Kemmerer:						
SCH		Type: Composite Kemmerer:						
Ft. Edward Staff Gage (518) 747-9900	0842						Level: 27.66	
Additional Notes:		·				· .		
Weather Data         Description: <u>Overcan</u> Temperature:	<†			<u> </u>	99 99 99 99 99 99 99 99 99 99 99 99 99	<u>, , , , , , , , , , , , , , , , , , , </u>	Sampled	1 by: W. Ayling

Precipitation:

Chm none

310575

O'Brien & Gere Engineers, Inc.

P AP 124

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 197.0

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
PAOLE MARK	110	0100	Type: Composite Kemmerer: 45		0-8'	MG		28,19 ~ 34,900 lupp
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:			2.		
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:					
Additional Notes	: Kein	95-20	BCI 1/9/98 23	132				
							••••••••••••••••••••••••••••••••••••••	

Weather Data

Description: Temperature Wind: Precipitation

310576

ture:	ACPE
ui 0.	CAN
lion <sup>.</sup>	NONE
	· ·

O'Brien & Gere Engineers, Inc.

Sampled by: \_

100

January 9, 1998

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 194.2E (east channel)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments Samak
HPm 194.20-1	1/9/9	2330	Type: Composite Kemmerer: 96A	-	0-9,5	NO	~	28.10 34000 4,000 h
H7:m 194-2E-Z	1/10/98	0,200	Type: Composite Kemmerer: 914	<b>_</b>	0-9.5	NO	-	28.25 3,4,900 28.33 35,100 @ 0325 JTL
Hpm 19428-3	1/10/2	0430	Type: Composite Kemmerer: 96/Y	-	0-9.5	NO	-	28,36 3530000413 28,31 @ 527 WAM
HRM 194.2E4	1/ 10/ 18	0815	Type: Composite Kemmerer:	-	0 -9.5		-	flow has been holding steady wmD
HRM 199.2 E+5	1/10/98	1020	Type: Composite Kemmerer:	-	0-9.5	00		stacked coolers and sompled over topol Lence (much beHer!)
HRM 1942E-6	1/10/48	1250	Type: Composite Kemmerer:		0-9.5	~0	4	CUSGS is checking flows)
			Type: Composite Kemmerer:					
Additional Notes	· Kem ?	16A-20	BLI 1/9/98 2	229			-	
@ 104	o took	: a 5	gal bulk samp	ole (11	'10) HRM	n 194.2	E	
Weather Data Description: Temperature:	Q I MOSTL	250 hi 7 <u>clou</u> 40 s	5 1/10/98 87				5	Sampled by: _ W. Aylog / J. La Manche_

Wind: Precipitation: licht

NOIVE

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 194.2W (west channel)

$0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$		0-6'	dur.		WAR
10 Zo Type: Composite			1 1		porticulate in Dup.
Kemmerer: 95		0-81			INCLUDE HIEH VOL. SAMPLE
7/250 Type: Composite Kemmerer:		0-8'			um.
Type: Composite Kemmerer:					
Type: Composite Kemmerer:					
Type: Composite Kemmerer:					
/05 <sup>:0</sup> Type: Composite Kemmerer: —		Gros			MB
65 propanin 6 To SAM	NPLE E	0940 1	ETASS I	BRIDEL	
· · · · ·				•	
	<ul> <li>1250 Type: Composite Kemmerer:</li> <li>Type: Composite Kemmerer:</li> <li>Type: Composite Kemmerer:</li> <li>1050 Type: Composite Kemmerer:</li> <li>1050 Type: Composite Kemmerer:</li> <li>1050 Type: Composite Kemmerer:</li> </ul>	1/250       Type: Composite         Kemmerer:       Type: Composite         Kemmerer:       Type: Composite         Kemmerer:       Type: Composite         Kemmerer:       Type: Composite         1050       Type: Composite         Kemmerer:	1/250     Type: Composite     0-0       Type: Composite     Kemmerer:       Type: Composite     Kemmerer:       Type: Composite     Kemmerer:       Type: Composite     Kemmerer:       1050     Type: Composite       1050 <td>1/250     Type: Composite       Kemmerer:     Type: Composite       Kemmerer:     Type: Composite       Kemmerer:     Type: Composite       Kemmerer:     Type: Composite       1050     Type: Composite       Kemmerer:     Game       1050     Type: Composite       Kemmerer:     Game       1050     Type: Composite       Kemmerer:     Game       1050     Type: Composite       Kemmerer:     Game</td> <td>1/250     Type: Composite       Kemmerer:     0-0       Type: Composite     1       Kemmerer:     1       1050     Type: Composite       1050     Type: Composite       1050     Type: Composite       1050</td>	1/250     Type: Composite       Kemmerer:     Type: Composite       Kemmerer:     Type: Composite       Kemmerer:     Type: Composite       Kemmerer:     Type: Composite       1050     Type: Composite       Kemmerer:     Game       1050     Type: Composite       Kemmerer:     Game       1050     Type: Composite       Kemmerer:     Game       1050     Type: Composite       Kemmerer:     Game	1/250     Type: Composite       Kemmerer:     0-0       Type: Composite     1       Kemmerer:     1       1050     Type: Composite       1050     Type: Composite       1050     Type: Composite       1050

January 9, 1998 (:61220225/4/wcfidlog)

Wind:

Precipitation:

CAM

Nones

310578

O'Brien & Gere Engineers, Inc.

**7** - 1

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 188.5W (west dam abutment)

Hom 188.541-1 1/9/	, ]				and the second secon	■ こうちょうない かくちょう ひんし ひとうし しょう かいしん ななし かっかい アイビー しょう アイアイ アイアイ しょうかん からない かんがい かいがい かいかい かいがい しょうかい ひろん しょうかい ひろん
	98 235	Type: Grab		Surre		WINGLE TO COULER SAMPLE
Hum 188.5W-2 1/10	kin 022	Type: Grab		)		、 、 、 、 、 、 、 、 、 、 、 、 、 、
Hom 188.5w-3 /11	98 04	55 Type: Grab				ho
HTEN 18855W-4 /10/	98 085	55 Type: Grab				
Hum 188.56-5 Y10	48 112	Type: Grab				
Sprock 1/14	48 051	O Type: Grab		SURFAC		JJL
SNOCK 1/10	198 001	Type: Grab		SURFACE		Lon
Additional Notes: H	PH 188	SW-EBBLI . /9/	98 223	34		

Description: Temperature:

Wind: Precipitation:

310579

# HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 188.5W (west dam abutment)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	
Ham 188.5W-6	1/10/47	1315	Type: Grab	T	Surprice		Cemple	Comments
			Type: Grab					
			Type: Grab					
			Type: Grab					
			Type: Grab					
			Type: Grab					
			Type: Grab					
Idditional Notes:					I	<u>_</u>		
Weather Data Description: Temperature: Wind: Precipitation:							San	npled by: hAyhig

January 9, 1998 (:61220225/4/wcfldlog) £ .

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 188.5E (east dam abutment)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
12+3	-	-	Type: Grab	-	-	-	-	Not sampled at night due to dangerous conditions wap
4 HRM 188.5E	501	0835	Type: Grab	-	surface	-		well out into allow wmp
5 HRM 189-5 E	Sat 1/10/48	1115	Type: Grab		surkace		-	see wore 3
6 4pm 1885 E	Sqt 1/10/98	1310	Type: Grab	-	surfice			- wm0
			Type: Grab		· · · · · · · · · · · · · · · · · · ·			
			Type: Grab					
			Type: Grab					
Additional Notes	: 3 (	Cilled	boik sample e	ابدو ک	(2 + 2	1/2571	plastic)	1125 hrs 1/10/48
H	n 188.	se-Ee	KOLI 1/9/98	2227	• •			
Weather Data Description: Temperature: Wind:		······					S	ampled by: <u>wm Dunner ME Miller</u>

Precipitation:

.

Carl Carl Carl

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OBtémale . 196 1300

Note 3

# Took the 5 gal bulk sample @ 1200 has (2221/2321 plastic Jugs) how sta SCH SI

#### GENERAL ELECTRIC COMPANY 1998 WATER COLUMN MONITORING STUDY (Project 612.245)

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: SCH (Schuylerville Route 29 Bridge)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
SCH - 1	fri 1/9/98	2355	Type: Composite Kemmerer:	-	Note ()	טע	<b>.</b>	Overs strong Glow . Kemmerer CQ insuliciant woight to sink proports
SCH -2	Sat 1110/98	0200	Type: Composite Kemmerer:	-	same	NO	-	lots of ice flowing down
ScH - 3	547	c445	Type: Composite Kemmerer:		sane	~0	-	same worther but colder
SCH -4	SAT 1 1 10 98	0900	Type: Composite Kemmerer:	-	NOTE	20		B Glow so strong hampler stars on surkace! was afte to get some denth by lowering raised by
SCH-5	_sht 1/ 10/48	1145	Type: Composite Kemmerer:	<b>,</b>	Symo	~0		tremendous amount el Alorting debus Neres
scit -6	54 T 1   10 48	1340	Type: Composite Kemmerer:		same	Dup #2		possibly Ginal simple ?
Kem 968-E09	1 1/4/98	2230	Type: Composite Kemmerer: <i>96B</i>		_			
Additional Notes	: Samp	led ma	oses Creek @ 00	25 ho-	TSS (ILI	>lalice)	and a b	oik sample (2.5 sol plax 2)
	ιt.		" " (° os	°00 "	11	11	H	
			<u> </u>	00 <sup>n</sup>	<b>I</b> I	<u>u</u>	10	11 /L 71

310582

Weather Data @ 2355 1/4/98 Description: <u>overest</u> Temperature: <u>above Greeving - high</u> 30s Wind: <u>light + variable</u> Precipitation: <u>Nowe but has rained</u> have Ro- last 5 days

Sampled by: WM Doune / MEMiller

Note: Re: Moses Creek

debuis (mostly plant materials)

January 9, 1998 (:61220225/4/wc/idlog)

#### **HIGH FLOW MONITORING STUDY - EVENT 1** SAMPLING STATION: HRM-194:2W (west channel)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
Hom 197-0-7	1/11/97	0840	Type: Composite Kemmerer: <i>₊9<del>5-</del>96</i> A		0-81	im	- -	
Hpm 194:2-7		0915N 0935E	Type: Composite <i>g</i> Kemmerer: <i>964</i>		0-8'	175		26.60 Lots of debois in hest change
HRM 188.5W=	<b>ř</b>   .	0755	Type: Composite Kemmerer: —	-	Jurine	DUP		
5011-7		1720	Type: Composite Kemmerer: 968		0-15'	. —		Simpled from South side of brilge 26.55
HAM 1942-2	OBL	0905	Type: Composite Kemmerer: <i>95</i>		—	1 <u></u>		
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:					
Additional Notes	•							
Weather Data	<u> </u>						S. S. S.	Sampled by: W Pyling / W DUNNE / MM

Weather Data Description: Temperature: Wind:

310583

January 9, 1998 (:61220225/4/wcfidlog)

Precipitation:

SUNNY

CAM

NUNE

#### HIGH FLOW MONITORING STUDY - EVENT 1 SAMPLING STATION: HRM 194.2E (east channel)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
H71m 1942-8	11/98	1545	Type: Composite Kemmerer: <i>96</i> 7	0.5°C	072 0-6W		~	25.61
Itom 1885W8		1610	Type: Composite Kemmerer:		Gurme	-		
6сн-8	<b>V</b> .	1630	Type: Composite Kemmerer: <i>96B</i>	l	0-12'		V	
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:	•				
		•	Type: Composite Kemmerer:					

Additional Notes:

310584

Clearing / partly over cast Weather Data Description: Temperature: CARM Wind: NONE Precipitation:

Sampled by: \_ NAGA

Billion and the

.

#### **HIGH FLOW MONITORING STUDY - EVENT 1** SAMPLING STATION: HRM 194.2E (east channel)

Sampling Round	Date	Time	Sample Data	Water Temp.	Sample Depths	QA/QC Sample	Inspect Sample	Comments
HAN 19710-9	'/12/98	11:55	Type: Composite Kemmerer: 95	o°c	0-7	ms	N	Water flowing over falls
HRM 194.2-9		1200	Type: Composite Kemmerer: <i>96A</i> -	oc	0-6'	DUP		24.31
HRM188.5W-9		1220	Type: Composite Kemmerer: —		Suppose	Def	1	
MAR Schi-9		1240	Type: Composite Kemmerer: 968		6-12		1	
Ham 188.5W-E	sec.	0930	Type: Composite Kemmerer: —		_		-	
			Type: Composite Kemmerer:					
			Type: Composite Kemmerer:					
Additional Notes					•			
						· ·	• •	1
<b>Weather Data</b> Description: Temperature:	<u> </u>	~~4 28°12	<u>e 113</u> 0	<u> </u>			s	sampled by:

12.95

January 9, 1998

Wind: Precipitation: mm

NUNE

310585

Job No. <u>612.225.118</u> Sheet <u>(</u> of \_\_\_\_\_

Office: Syracuse

Address:

CHAIN OF CUSTODY

Phone: (315) 437-6100

	CLIENT: General Electric Cor LOCATION: Hudson River - Po	npan CRD	y MP		COL	COLLECTED BY: 1 William Ayling (Signature) William Hybrig						
	SAMPLE DESCRIPTION	Date		Time	Sar Ma	nple trix <sup>1</sup>	Sample Type <sup>2</sup>	No. of Containe	ANALYSIS F	ANALYSIS REQUESTE		
- B	IRM 197.0	1/6/9	8 0	1900	1	v	Comp.	Comp. 3 PCBs,				
· H	IRM 194.2			Comp.								
н	IRM 188.5		1	130		-	Grab '					
В	lind duplicate											
: <b>_</b>	ID-PRW2		1	155			Comp.	-				
. <u>s</u>	СН		1	245			Comp	¥				
H	RM 197.0 MS		C	900			Comp	2	PCBs, NEA 608C	AP	-	
Н	RM 1985 EQBL	.]	1	<i>cos</i>	<u> </u>	1	GRAPE	*	+			
1						- 						
í												
					1 -	Matrix Tvpe =	= water, wastev grab, compos	vater, air, ite	sludge, sediment, etc.			
R	elinquished by:			Date	Tim	e Re	ceived by:			Date	Time	
of	•					of:		<u></u>				
R	elinquished by:			Date	Tim	e Re	ceived by:			Date	Time	
of						of:						
U R	se this space if shipped via courier (e.g., Fed elinquished by:	Ex)		Date	Tim	e Co	urier Name:			Date	Time	
of			••	ttach delivery/co	urier recei	pt to Chain of Custody						
R	elinquished by: Willier Adu	Tim	e Re	ceived by:	Date	Time						
of	·O'Brien & Gere Engineers, Inc	3 135	3 <sub>of:</sub>	Northez	ist Analy	tical, Inc.	1/6/98	1353				

I:\DIV52\PROJECTS\0612225\4\_N&D\COCSCH.FRM

January 5, 1998

U	O'BRIEN & GERE ENGINEERS, INC

Office:	HYRAULE.
Address:	
Phone:	315-437 -6100.

**CHAIN OF CUSTODY** 

CLIENT: GENERAL 22 LOCATION: Hudson RW	el ser	L	(Signature) Milla Aylong								
SAMPLE DESCRIPTION	Date	Time	Sample Matrix <sup>1</sup>	Sample Type <sup>2</sup>	No. Containers	ANALYSIS REQUESTED					
HEM 194.2	1/4 440	0915	W	comp	· 3	ALBS NEAGOECAP; TES					
HRAN 194.2- EUBL	I	0900	J	GRAB	2	PEBS USERA 80 EZ					
			•								
OC cooler temp											

			<sup>1</sup> Ma <sup>2</sup> Typ	trix = water, wastewater, air, sludge, sediment, etc. be = grab, composite		
	Relinquished by: // lllen fryking	Date	Time	Received by Melilla Dergherty	Date	Time
	of Brien El Deke	19 198	1050	of Northeast Analytical	1/9/98	10:50
	Relinquished by:	Date	Time	Received by:	Date	Time
	of:			of:		
	Relinquished by:	Date	Time	Received by:	Date	Time
	of:			of:		
	Use this space if shipped via courier (e.g., Fed Ex) Relinquished by:	Date	Time	Courier Name:	Date	Time
/ 	of			*Attach delivery/courier receipt to Chain of Custody		
	Relinquished by:	Date	Time	Received by:	Date	Time
	of:			of:		

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Sheet /

of

Office: Syracuse

Address:

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Phone: (315) 437-6100

### CHAIN OF CUSTODY

CLIENT: General Electric Co LOCATION: Hudson River -WC	mpany M Higł	1 Flow	COLLECTED BY: William Aylong Mark bewent Min Mel						
SAMPLE DESCRIPTION	Date	Time	Sample Matrix <sup>1</sup>	Sample Type <sup>2</sup>	No. of Containers	ANALYSIS REQUESTED			
HRM 197.0 - )	111043	0160	W	Comp.	2	PCBs, NEA 608CAP. TSS			
11111-1 Shask Kill-1	116193	0015	W	Comp.	<b>x</b> 3	POBS, NEA 608CAP. TSS, SoliAS			
HRM 194.2E - j	119198	2330	w	Comp.	2	PCBs, NEA 608CAP. TSS			
HRM 188.5W -	119193	2330	w	Grab	2	PCBs, NEA 608CAP. TSS			
HEMLISSISE MOSIS DENSI Cr	1110193	0025	W	Grab	23	PORS, NEA GOTCAP. TSS SOLIP			
SCH - 1	1/9/48	2355	W	Comp.	2	PCBs, NEA 608CAP. TSS			
HPM 197.0-1M5	1/1/92	0100	W	Comp	1	PCBS, NEMGOBCAP			
HRM 197.0- Shook Kill-2	1110190	0510	w	Comp.	<b>z</b> 3	PEBS, NEA BOSCAP. TSS Solids			
HRM 19421 Mosey Co	1/10193	0500	w	Comp.	23	PGBS NEA GOSCAR TSS SOLO			
HRM 194.2E - 2	1/10/278	0200	w	Comp.	2	PCBs, NEA 608CAP. TSS			
HRM 188.5W - こ	110/99	0225	w	Grab	2	PCBs, NEA 608CAP. TSS			
HRM 188.5E-			w	Grab	2	PCBs, NEA 608CAP. TSS			
SCH - Z	1/10/48	0200	w	Comp.	2	PCBs, NEA 608CAP. TSS			
DUP.1	1/10/18	-	N		2	ALS NEACOECAP, TSS			

<sup>1</sup> Matrix = water, wastewater, air, sludge, sediment, etc.
 <sup>2</sup> Type = grab, composite

Relinquished by:	Date	Time	Received by:	Date	Time
of:			of:		
Relinquished by:	Date	Time	Received by:	Date	Time
of:			of:		
Use this space if shipped via courier (e.g., Fed Ex) Relinquished by:	Date	Time	Courier Name:	Date	Time
of:			*Attach delivery/courier receipt to Chain of Custody		
Relinquished by:	Date	Time	Received by: Klat 5. Weyner	Date	Time
of:O'Brien & Gere Engineers, Inc	1/1:199	5:050	of:Northeast Analytical, Inc.	1/10/98	5:25pm

PCBs, NEA 608CAP. TSS

PCBs, NEA 608CAP. TSS

PCBs, NEA 608CAP. TSS

PCBs. NEA 608CAP. TSS

PCBS NEAGECOP : MS

		·		····.		Sheet <u>2</u> o
Office: Syracuse	`			СНА	IN OF CI	ISTODY
Phone: (315) 437-6100						
CLIENT: General Electric Cor LOCATION: Hudson River -WC	npany M Higł	1 Flow	COLLECTE (Signature)	D BY: Mult	Benneti Benneti	Wid Millie Africa
		<i></i>	Sample	Sample	No. of	
SAMPLE DESCRIPTION	Date	Time	Matrix	Туре-	Containers	ANALYSIS REQUESTEI
HRM-1020 HPM 188.5W-EOB.	iAA	22.34	w	Comp.	12	PCBs, NEA 608CAP. TSS
HRM-194.2W HRM 188.5E-EBB	1/9/R	2227	W	Gomp.	12	PCBs, NEA 608CAP. 755
HRM 194.2E - 3	1/10pp	0430	W	Comp.	2	PCBs, NEA 608CAP. TSS
HRM 188.5W ~ 3	1/10/93	0455	w	Grab	2	PCBs, NEA 608CAP. TSS
HRM 188.5E-				Grab		-PCBs, NEA 608CAP. TSS-
scн – }	1/10/18	0445	w	Comp.	2	PCBs, NEA 608CAP. TSS
KEM 96 B-EGBLI	1/4/18	2230	W	GRAB	1	ALS, NEAGE CAP
HRM-197-9				Comp.		PCBS, NEA 608CAP. TSS
HRM 194.2W - 4	1/10/93	0915	w	Comp.	2	PCBs, NEA 608CAP. TSS
	111.					

1/10/78 0815

1/10/98 0935

1:0/18

10/98

iloke

0835

0400

<sup>1</sup> Matrix = water, wastewater, air, sludge, sediment, etc. <sup>2</sup> Type = grab, composite

Comp.

Grab

Grab

Comp.

2

2

2

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Relinquished by:	Date	Time	Received by:	Date	Time
of:			of:		
Relinquished by:	Date	Time	Received by:	Date	Time
of:			of:		
Use this space if shipped via courier (e.g., Fed Ex) Relinquished by:	Date	Time	Courier Name:	Date	Time
of:			*Attach delivery/courier receipt to Chain of Custody		
Relinquished by:	Date	Time	Received by: Robert Z. Ways	Date	Time
of: O'Brien & Gere Engineers, Inc.	1/10/95	545-	of:Northeast Analytical, Inc.	1/10/3	5:25/74

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Job No. \_\_\_\_612.245.518

CHAIN OF CUSTODY

Sheet 3 of 3

Office: Syracuse

Address:

Phone: (315) 437-6100

#### COLLECTED BY: 1 Phylin Aylu AN IM CLIENT: **General Electric Company** LOCATION: Hudson River -WCM High Flow (Signature) Sample Sample No. of Date Time Matrix<sup>1</sup> Type<sup>2</sup> Containers ANALYSIS REQUESTED SAMPLE DESCRIPTION GRAB 2222 KEM 95-EbGLI MAG مير ا HRM 197.9 Con w PCBs, NEA 608CAP. TSS 111:193 HRM 194.2W - 5 1020 W X 4 PCBs, NEA 608CAP. TSS, Solids Comp. 1/10/16 1020 HRM 194.2E - 5 W Comp. 24 PCBs, NEA 608CAP. TSS Soulds 11099 1125 HRM 188.5W - 5 w Grab 14 PCBS, NEA 608CAP. TSS , Solid 1/10/78 1115 HRM 188.5E - 5 w Grab ¥4 PCBS, NEA 608CAP. TSS , Solids scн — 5 10/49 1145 ×4 w Comp. PCBs, NEA 608CAP. TSS Solide W KEMGEA-ECOLI 2229 lg |4% GRAD Pibs NOT 608 CAP i HRM 197.0 W Comp. 2 PCBs, NEA 608CAP. TSS lickie 1250 HRM 194.2W -6 w Comp. 2 PCBs, NEA 608CAP. TSS 1250 HRM 194.2E - (2 w Comp. 2 PCBs, NEA 608CAP. TSS 1315 2 HRM 188.5W - 6 w Grab PCBs, NEA 608CAP. TSS 1310 HRM 188.5E $-l_{i}$ w Grab 2 PCBs, NEA 608CAP. TSS SCH -1340 W PCBs, NEA 608CAP. TSS Comp. 2 HRM 194.2-6M5 110/10 W Comp 1250 £ RBS NEAGECAP

<sup>1</sup> Matrix = water, wastewater, air, sludge, sediment, etc.

<sup>2</sup> Type = grab, composite

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Relinguistient by	Date	Time	Received by: Rlt Z Warre	Date	Time
of: _O'Brien & Gere Engineers, Inc	1/11/93	5.050-	of: <u>Northeast Analytical, Inc.</u>	1/10/98	s:**ph

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Job No. <u>612.245.518</u> Sheet of

Office: Syracuse

Address:

Phone: (315) 437-6100

### CHAIN OF CUSTODY

CLIENT: **General Electric Company** COLLECTED BY: William Ayling (Signature) LOCATION: Hudson River -WCM High Flow Sample Sample No <u>co</u>f Date Time Matrix<sup>1</sup> Type<sup>2</sup> Containers ANALYSIS REQUESTED SAMPLE DESCRIPTION 1, ba 0040 HRM 197.0 -X w Comp. 2 PCBs, NEA 608CAP. TSS HRM 194.2W - 7 0935 2 w Comp. PCBs, NEA 608CAP. TSS 0935 HRM 194.21 - アハム -2w Comp. PCBs, NEA 608CAP.-TSS 0955 HRM 188.5W - 7 w Grab 2 PCBs, NEA 608CAP. TSS HEM. 188.5E TUP-3 w Grab 2 PCBs, NEA 608CAP. TSS SCH -7 1020 Comp. 2 PCBs, NEA 608CAP. TSS w HRM 194.2- 20BL نرا 09:5 110 (RBS NETA ECECAP GRAB ł HRM 197:0 Comp. PCB: NEA 608CAP. ISS -----HRM-194.2W Comp. PCRs. NEA 608CAP. TSS 1545 HRM 194.28-\$ w Comp. 2 PCBs, NEA 608CAP. TSS 1610 11/99 HRM 188.5W - S W Grab 2 PCBs, NEA 608CAP. TSS HRM 188.5E -Grab PCBA-NEA 608CAP. TSS-1/1/98 1630 SCH — 🕄 w PCBs, NEA 608CAP. TSS Comp. 2

Temp coolar #1 4°C Temp. coeler #2 3°C

<sup>1</sup> Matrix = water, wastewater, air, sludge, sediment, etc.

<sup>2</sup> Type = grab, composite

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Relinquished by: William Aying	Date	Time	Received by R. Figh	Date	Time
of:O'Brien & Gere Engineers, Inc	1/12/20	1348	of:Northeast Analytical, Inc	0/12/15	13:48

310591

Job No. 612.245.518

Sheet of

Office: Syracuse\_\_\_\_\_

Address:

Phone: (315) 437-6100

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### **CHAIN OF CUSTODY**

CLIENT: General Electric Con LOCATION: Hudson River -WC!	npany M Higł	ı Flow	COLLECTED BY: William Aying (Signature)						
SAMPLE DESCRIPTION	Date	Time	Sample Matrix <sup>1</sup>	Sample Type <sup>2</sup>	No. of Containers	ANALYSIS REQUESTED			
HRM 197.0 - 9	1/12/4	E 1055	W	Comp.	2	PCBs, NEA 608CAP. TSS			
197.0-9195 HRM 104.3W	1	1055	W	Comp.	12	PCBs, NEA 608CAP. TSS			
HRM 194.22 - 9		1200	w	Comp.	2	PCBs, NEA 608CAP. TSS			
HRM 188.5W -9		1220	w	Grab	2	PCBs, NEA 608CAP. TSS			
HRM 188.50 W - EOBL		0930	W	Grab	1-2-	PCBs, NEA 608CAP. TOS			
sch - 9	$\downarrow$	1240	W	Comp.	2	PCBs, NEA 608CAP. TSS			
DUP-4	1	(	č~	-	2	PEBS NER GOBCAP, J35			
НКМ 197.0			W	Comp.	2	PCBs, NEA 608CAP. TSS			
HRM 194.2W			W	Comp.	2	PCBs, NEA 608CAP. TSS			
HRM 194.2E			W	Comp.	2	PCBs, NEA 608CAP. TSS			
HRM 188.5W			W	Grab	2	PCBs, NEA 608CAP. TSS			
HRM 188.5E			W	Grab	2	PCBs, NEA 608CAP. TSS			
SCH			W	Comp.	2	PCBs, NEA 608CAP. TSS			

<sup>1</sup> Matrix = water, wastewater, air, sludge, sediment, etc.
 <sup>2</sup> Type = grab, composite

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Use this space if shipped via courier (e.g., Fed Ex) Relinquished by:	Date	Time	Courier Name:	Date	Time
of:			*Attach delivery/courier receipt to Chain of Custody		
Relinquished by:// Alla Ayling	Date	Time	Received by: Recei	Date	Time
of:O'Brien & Gere Engineers, Inc	1/12/20	1348	of:Northeast Analytical, Inc	pilizha	13:48

djb/i:52/0612245/4/hghfl.coc

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January 9, 1998

# NORTHEAST ANALYTICAL, INC.

# CHAIN OF CUSTODY RECORD

301 Nott Street,	Schenectady, N.Y. 12305
(518)346-4592	Fax (518)381-6055

CLIENT: A	CLIENT: A PROJECT NAME:														REQUIRED TURN	AROUND TIM	E:
be end El	endru 1	ongin	Hulson	When River WCM High Flow					· ·								
CLIENT CONTACT: John	Henry	A	LOCATION (CIT	Y/STATE) ADDRESS:	C		CON- TAIN-							-			
DUE DATE: PHON	NEN: ])		<b>]</b> .				ERS										
SAMPLE ID	DATE	TIME	MATRIX	GRAB/COMP	NEA USE	ONLY	1	1	2	3	4	5	6	7	REN	IARKS	
Music Cr	1/10/75	1100	With	Fris			2										
Sin, KKin-5	111/24	1051)	Where	Gab			2										
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PARAMETER AND METHOD	1	LS/	I MPLE BOTTLE:	туре	SIZE	SAMPLED BY (PRINT):						NAME OF COURIER (IF USED):					
1 5011 MG	a aya an And Alamany alama ana a			Plate	2.5 ril	None	John Lamanch H					HA	IND Delive	red			
2					J		0.011	0	'Y	حك	Gene						
3							RELING	QUISHED	BY:	th	Ad	An	il	RECEI	VED BY: R.E.	Wagne,	
4							DATE:	. 1		J	U.	TIME:		DATE:	lula	U TIME:	ĺ
5								111	0196	)	د	5:05	-nh		1/10/48	5:05P	m
6							RELING	QUISHED	BY:				ηU	RECEI	VED BY:		<b>N</b>
7							DATE:					TIME:		DATE:		TIME:	ω
NOTE: THE NUMBERED COLUMNS	ABOVE CROSS REP	FERENCE THE	NUMBERED COLU	MNS FROM TOP RIG	GHT OF SHEET												10
AMBIENT OR CHILLED	TEMP _		PROPERLY PRES	ERVED: Y N	COC TAPE NOTE:	YN	RELINQUISHED BY:						RECEIVED BY:				
RECEIVED BROKEN OR LEAKING NOTE:	<u></u>	YES NO	RCVD W/I HOLD NOTE:	ING TIMES: Y N	COC DISCREPATINOTE:	NCIES Y N	DATE:					TIME:		DATE:		TIME:	

YELLOW COPY TO GENERATOR

PINK COPY TO SAMPLER