



70255

**GE Corporate  
Environmental Programs**

**John G. Haggard**

Engineering Project Manager  
Hudson River Project

General Electric Company  
1 Computer Drive South  
Albany, NY 12205  
(518) 458-6619  
Fax: (518) 458-1014  
E-Mail: John.Haggard@corporate.ge.com  
Pager: 518-484-3177

October 9, 1997

Douglas Tomchuk  
U.S. Environmental Protection Agency  
290 Broadway  
New York, N.Y. 10007

Re: Interpretation of TIP  
Time of Travel Surveys

Dear Mr. Tomchuk:

As part of the extensive research efforts undertaken by the General Electric Company (GE) to understand the movement and fate of PCBs within the Hudson River, GE and its' contractors have collected and analyzed a large number of water samples for PCBs from within the Thompson Island Pool (TIP). One of these studies, previously described in a work plan submitted to you on March 20, 1997, is the TIP time of travel study. In this study, water samples were collected from both shoreline areas and the center channel of the river at approximately 20 lateral transects along the length of the TIP. The results of these surveys have been presented to you as part of the weekly Hudson Falls report. We have also made a number of presentations to you on the 1996 TIP time of travel survey results.

Enclosed is a memorandum from HydroQual, Inc. (HydroQual) presenting their preliminary analysis of the 1996 and 1997 time of travel survey results. In general, the results from the two sets of surveys are similar. One pronounced feature common to all the surveys is the high PCB concentrations observed in water samples collected near a series of islands along the eastern shore across the river from the confluence with the Snook Kill.

High PCB concentrations in the water do not necessarily indicate that the underlying sediments are supplying a disproportionate amount of PCB to the river. When interpreting these data it is necessary to translate from the PCB concentration in the water to the

322715

Douglas Tomchuk  
October 9, 1997  
Page 2

sediment PCB mass flux which depends on the flow within that region of the river. The TIP hydrodynamic model developed by HydroQual indicates that the areas of high concentration are areas of low river flow. Sediment flux rates calculated from the model's flow estimates and the measured PCB concentrations suggest that the flux from the sediments in the areas of high concentration are similar to flux rates in other areas of the river. In other words, the high concentrations are probably the result of relatively stagnant conditions and not a disproportionally high flux from sediments.

There are uncertainties in these calculations, since our estimate of the flow was based on limited knowledge of the river geometry and flow rates in the vicinity of the Snook Kill, particularly in the areas of the island along the eastern shore of the river. As a result, GE commissioned a study of this area by O'Brien and Gere Engineers and HydroQual to gather the data necessary to quantitatively interpret the water column PCB data. Attached is a memorandum prepared by O'Brien and Gere Engineers describing this effort and documenting the data collected.

As you may recall, HydroQual is currently updating the PCB fate and transport model in the TIP. The main change will be to model the river in two dimensions to facilitate the quantitative interpretation of the TIP time of travel survey data and allow more accurate estimates of the PCB mass flux from given areas of the TIP.

Let me know if you have any questions. Please place a copy of this letter and attached material into the Site Administrative Record.

Very truly yours,

  
John G. Haggard  
Engineering Project Manager

cc: Walt Demick (NYSDEC)  
Anders Carlson (NYSDOH)  
Al D'Bernardo (TAMS)  
Vic Bierman (Limno-Tech)  
Robert Montione (NYSDOH)  
Jay Field (NOAA)  
William Ports (NYSDEC)