

Appendix I-F

New York State Department of Health:

Hudson River PCBs Superfund Site Public Water Supply Monitoring Program



STATE OF NEW YORK DEPARTMENT OF HEALTH

Flanigan Square 547 River Street Troy, New York 12180-2216

Richard F. Daines, M.D.
Commissioner

James W. Clyne, Jr.
Executive Deputy Commissioner

January 12, 2010

Re: Hudson River PCBs Superfund Site Public Water System Monitoring Program

In 2008 and 2009, staff of the Department of Health Bureau of Water Supply Protection collected water samples from public water systems that use the Hudson River as a source of water for the analysis of polychlorinated biphenyls (PCBs). The monitoring program provided information on PCB concentrations at these systems prior to and during the dredging of PCB-contaminated sediments from the Upper Hudson River by the General Electric Company. The results from the 2008 baseline sampling, conducted prior to dredging, were summarized and provided to you in a letter dated March 10, 2009. We recently completed our sampling for 2009, which occurred throughout the Phase 1 dredging period. All results from samples collected prior to and during Phase 1 dredging were below the Federal and State drinking water standard of 500 nanograms per liter (ng/L).

The Phase 1 monitoring plan originally included daily sampling at the Halfmoon and Waterford water treatment plants, frequent sampling at the Stillwater water treatment plant, and periodic sampling of four public water systems in the Lower Hudson River. These plans were amended in response to changes at the Upper Hudson River systems. At Stillwater, our sampling was limited to work confirming that the carbon filters installed by USEPA (which went on-line in early May 2009) were removing PCBs. Following that confirmation, the USEPA oversaw the routine monitoring as part of their operation and maintenance plan for the carbon filter system. During dredging, we did not sample at Halfmoon and Waterford, as these systems opted to obtain water from the Troy public water system instead of the river. Troy uses the Tomhannock Reservoir as its source of water. Since the end of Phase 1 dredging, we have done some PCB sampling to help Halfmoon evaluate if they want to return to the river as a source of water. The enclosed information sheets provide a summary of this work.

The NYSDOH monitoring programs were supported by a grant from the USEPA. We anticipate continued monitoring when dredging resumes in 2011 if funding can be secured. We are in the process of doing that work now. If you have any questions, please contact me or Mr. Patrick Palmer at (518) 402-7711.

Sincerely,

Lloyd Wilson, Ph.D.
Chief, Source Water Protection Section
Bureau of Water Supply Protection

cc: Mr. V. Pisani/Mr. J. Dunn - BWSP
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Ms. M. Lenchan - Albany County DOH
Mr. S. Capowski - Dutchess County DOH
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New York State Department of Health
Hudson River Public Water System
2009 Phase 1 Monitoring Program Summary

From May through November 2009, the New York State Department of Health (NYSDOH) collected water samples for polychlorinated biphenyl (PCB) analysis from public water systems on the Hudson River. The monitoring program was developed to provide information about the systems during the dredging of PCB-contaminated Hudson River sediments by the General Electric Company. These samples were compared to samples collected prior to dredging, to help us understand if water quality changed. Samples were collected before treatment (raw water) and after treatment (finished water). All samples were found to have a PCB concentration less than the Federal and State drinking water standard of 500 nanograms per liter (ng/L).

The baseline monitoring included systems in the Upper and Lower Hudson Rivers. We intended to include the same systems for the Phase 1 monitoring. However, prior to the start of dredging, Stillwater received a carbon filtration system from the USEPA (Environmental Protection Agency) to remove PCBs from their well water, while Waterford and Halfmoon decided to use finished drinking water from Troy. As there were no Upper Hudson River systems actively using the river as a water source during dredging, we focused on four Lower Hudson River systems: Green Island, Rhinebeck, Port Ewen, and Poughkeepsie. These systems were sampled approximately every two weeks.

Two methods were used to analyze the samples for PCBs. One was an Aroclor Method, similar to the USEPA Method 508 that is used by most public water systems for routine testing of PCBs. We required the laboratory to report a lower detection limit than is commonly used. (A detection limit is the smallest amount that can be measured). We used an Aroclor Method because it allows for a direct comparison to existing data from the water systems. The other method is called the Green Bay Method, which provides more detailed information about specific types of PCBs, called congeners.

Using the Green Bay Method, PCBs in raw water ranged from less than 9.1 ng/L to 57.5 ng/L, and PCBs in finished water ranged from less than 9.1 ng/L to 29.7 ng/L. Using the Aroclor Method, PCBs in finished water ranged from less than 6.1 ng/L to 71.5 ng/L (see Table 1). These data are within the range of the PCB concentrations measured during the 2008 baseline monitoring.

Our 2008 and 2009 monitoring programs were funded by the USEPA. The USEPA expects dredging to resume in May 2011. The NYSDOH will continue to monitor the Hudson River public water systems during dredging if funding is extended.

The NYSDOH will continue to work with water systems, local health departments, the NYS Department of Environmental Conservation, local elected officials, and the USEPA to protect public water systems during dredging. If you have any questions, please call the NYSDOH Environmental Infoline at 1-800-458-1158, extension 27711.

Table 1. Results of May – November 2009 Phase 1 Monitoring at Lower Hudson River Public Water Systems.
Data are in nanograms per liter (ng/L).

Location	Finished Drinking Water Aroclor Method				Finished Drinking Water Green Bay Method				Raw Water Green Bay Method			
	Samples	Average	Minimum	Maximum	Samples	Average	Minimum	Maximum	Samples	Average	Minimum	Maximum
Green Island	9	8.3	<6.1 ^a	33.7	9	<9.1 ^b	<9.1	<9.1	9	<9.1	<9.1	<9.1
Rhinebeck	11	20.9	<6.1	47.2	11	16.0	<9.1	28.8	11	26.1	10.2	53.6
Port Ewen	11	22.1	<6.1	41.0	11	13.2	<9.1	19.0	11	26.1	16.9	36.1
Poughkeepsie	11	23.2	<6.1	71.5	11	12.4	<9.1	29.7	11	29.5	10.9	57.5

^a<6.1 indicates the sample (or average of samples) was less than the detection limit of 6.1 ng/L for the Aroclor Method

^b<9.1 indicates the sample (or average of samples) was less than the detection limit of 9.1 ng/L for GBM.

Table 2. Results of May 2009 Monitoring at Stillwater to Confirm PCB Removal by GAC Filters.
Data are in nanograms per liter (ng/L).

Location	Finished Drinking Water Aroclor Method				Finished Drinking Water Green Bay Method				Raw Water Green Bay Method			
	Samples	Average	Minimum	Maximum	Samples	Average	Minimum	Maximum	Samples	Average	Minimum	Maximum
Upper River												
Stillwater	2	<6.1 ^a	<6.1	<6.1	2	<9.1 ^b	<9.1	<9.1	2	88.5	84.0	93.0

^a<6.1 indicates the sample (or average of samples) was less than the detection limit of 6.1 ng/L for the Aroclor Method.

^b<9.1 indicates the sample (or average of samples) was less than the detection limit of 9.1 ng/L for the Green Bay Method.

Table 3. Results of November – December 2009 Monitoring at Halfmoon to Confirm Decline in PCB Concentrations Post-Dredging.
Data are in nanograms per liter (ng/L).

Location	Post-Filter, Pre-Chlorination Water Aroclor Method				Raw Water from River Intake Pipe Aroclor Method			
	Samples	Average	Minimum	Maximum	Samples	Average	Minimum	Maximum
Upper River								
Halfmoon	5	8.4	<6.1 ^a	13.9	8	28.2	17.9	34.3

^a<6.1 indicates the sample (or average of samples) was less than the detection limit of 6.1 ng/L for the Aroclor Method.