

Final Third Five-Year Review Report for the Hudson River PCBs Superfund Site

APPENDIX 9

CHRONOLOGY OF MAJOR SITE EVENTS

Prepared by:
WSP USA Solutions Inc.

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Date	Events
1947-1977	General Electric Company's (GE's) Hudson Falls and Fort Edward facilities discharge an estimated 1.3 million pounds (Sanders, 1989; page 16) of polychlorinated biphenyls (PCBs) into the Hudson River
1973	Fort Edward Dam is removed, allowing PCB-contaminated sediments to be transported downstream during subsequent spring floods. Five areas of PCB-contaminated sediments, known as the Remnant Deposits, were exposed
1975	First fish consumption health advisories issued by New York State Department of Health (NYSDOH) due to PCBs in fish
1976	New York State Department of Environmental Conservation (NYSDEC) bans all fishing in the Upper Hudson and most commercial fishing in the Lower Hudson, including striped bass
1976	GE and NYSDEC sign an agreement to address direct PCB discharges into the Hudson River from the two GE facilities
1984	EPA lists the Hudson River PCBs site on the National Priorities List
1984	EPA issues Record of Decision (ROD) for in-place containment of the Remnant Deposits, a study of the Waterford Water Works, and an interim no-action decision for Upper Hudson River sediments
1989	EPA announces that it will reassess the 1984 interim no-action decision for the Upper Hudson River sediments
1990-2000	EPA conducts Reassessment Remedial Investigation and Feasibility Study
1990	Court approves consent decree under which GE implements remedy for the Remnant Deposits (OU1)
1990-1992	In-place containment of Remnant Deposits 2, 3, 4, and 5 constructed
1992-current	Monitoring of the Remnant Deposit sites conducted
1995	NYSDEC replaces ban on fishing in the Upper Hudson River with catch-and-release directive
1999	EPA removes approximately 4,400 tons of contaminated soil from Roger's Island (OU3)
2002	EPA issues ROD calling for removal and monitored natural attenuation of PCB-contaminated sediments in the Upper Hudson River. EPA and GE sign administrative consent order under which GE performs sediment sampling needed to design the remedy
2002-2005	Sampling of river sediments for dredging design (Sediment Sampling and Analysis Program)
2003	EPA and GE sign an administrative consent order providing for GE's design of the remedial action
2004	EPA issues Phase 1 Engineering Performance Standards and Quality of Life Performance Standards for the dredging project
2004-2009	Baseline Monitoring Program (BMP) for water and fish conducted

Date	Events
2006	Final Design Report for Phase 1 dredging approved. Court approves consent decree under which GE conducts the remedial action selected in the 2002 ROD
2007	Sediment processing facility and rail yard construction begin
2007	EPA issues order to conduct removal actions on the floodplains
2007-current	Construction of the Short-Term Response Actions (STRAs) on the floodplains is ongoing
2008	EPA issues order to conduct sampling on the floodplains
2009	Tunnel Drain Collection System (TDCS) at plant sites completed under NYSDEC oversight
2009	Phase 1 dredging, habitat restoration, and capping were conducted. Habitat restoration continues into 2010
2009-2015	Remedial Action Monitoring Program conducted including water, fish, sediment, and air sampling
2010	EPA and GE release Phase 1 Evaluation Reports, which were peer reviewed. GE agrees to perform Phase 2 under the Consent Decree after EPA notifies GE of changes to the Engineering Performance Standards, Quality of Life Performance Standards, and other requirements for Phase 2
2010-current	EPA conducts the floodplain deposition sampling program
2010-current	Annual monitoring conducted in dredged areas for habitat
2010-2018	Surveys conducted annually of the sediment caps per the remedial action scope (future surveys consolidated in 2017)
2011-2013	Supplemental sampling of river sediments for dredging design (Supplemental Engineering Data Collection program)
2011-2015	Phase 2 dredging, habitat restoration, and capping conducted
2012	EPA issues first Five-Year Review Report
2012	EPA Certifies Completion of Phase 1 Field Activities (first of three certifications needed for GE to satisfy terms of the AOC)
2014	EPA issues an order to initiate an RI/FS in the Floodplains. EPA oversees the implementation of an RI/FS in the floodplain
2015-2016	Processing facility demobilization and restoration
2016-current	Post-dredging monitoring of water, fish, and sediment begins
2016	GE submits Remedial Action Completion Report to EPA
2016	Sediment sampling program conducted in the Upper Hudson River by GE with EPA oversight
2017	Supplemental sediment sampling program conducted in the Upper Hudson River by NYSDEC
2019	EPA issues Final Second Five-Year Review Report
2019	EPA certifies Completion of Remedial Action under 2006 Consent Decree (second of three certifications needed for GE to satisfy terms of the AOC)

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2021	Sediment sampling program conducted in the Upper Hudson River by GE with EPA oversight
2021	Demolition of the Fort Edward and Hudson Falls facilities completed under NYSDEC oversight
2017-2023	EPA in discussion with municipalities to discuss transfers of waterline and processing facility properties
2022	EPA issues order to conduct studies in the Lower Hudson River
2022	EPA reaches a legal agreement with National Grid and GE to oversee the deconstruction of the Powerhouse and Allen Mill
2022	Deconstruction of the Powerhouse begins
2022-2023	Additional studies conducted in the Upper Hudson River (recently deposited sediments, dissolved and particulate sampling, passive samplers, and additional water monitoring at the Mohawk River confluence)
2023-current	EPA oversees the implementation of studies in the Lower Hudson River
2023	Surveys conducted of the sediment caps per the consolidated schedule
Ongoing	Continued work throughout the Site including: <ul style="list-style-type: none"> • Remnant sites monitoring • Floodplain – construction and monitoring of STRAs • Floodplain – deposition sampling program • Floodplain – sampling for RI/FS • Upper Hudson River – habitat monitoring and response actions • Upper Hudson River – monitoring of caps, water, fish, and sediment • Lower Hudson River – investigations – fish, sediment, and water sampling

REFERENCES

Sanders, J.E. 1989. PCB-pollution problem in the Upper Hudson River: From environmental disaster to environmental gridlock.' *Northeastern Env. Sci.* 8(1): 1-86.

- The estimate of 1.3 million pounds was originally published by Professor John Sanders of Columbia University in a peer-reviewed journal (Sanders, 1989; page 16). According to the report, the estimate is based on historical use records of PCBs at the GE capacitor facilities between 1957 and 1975. The report stated that less than one percent of the PCB mass used during manufacturing at these facilities (estimated at 133,100,000 pounds) was discharged into the Upper Hudson River (i.e., about 1,331,000 pounds). Nonetheless, EPA acknowledges the possibility that the value may underestimate PCB release from the GE facilities and should not be interpreted as an upper bound estimate.