



## United States Environmental Protection Agency - Region 2

### HUDSON RIVER OFFICE

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December 26, 2018

Mr. John Haggard  
General Electric Company  
33-41 Farnsworth Street  
Boston, MA 02210

Re: General Electric Company's December 2016 Hudson River PCBs Superfund Site  
Remedial Action Completion Report

Dear Mr. Haggard:

This letter provides EPA's comments on GE's December 2016 Remedial Action Completion Report (RA Report), in which GE requested EPA's Certification of Completion of the Remedial Action and which was received by EPA's Hudson River Office on January 3, 2017. In November 2017 EPA received comments on GE's RA Report from the National Oceanic and Atmospheric Administration, the New York State Department of Environmental Conservation and the New York State Office of the Attorney General. We have considered that input in preparing the comments below. EPA continues to consider GE's request for Certification of Completion of the Remedial Action.

The following comments should be addressed in the RA Report.

1. The background section should include a listing of the Remedial Action Objectives for the project.
2. Provide the names and addresses for the major design and remediation contractors, EPA oversight contractors and project managers, and State and GE project managers. Pg. 1-17 is a possible location for this information.
3. Include a summary description of institutional controls that were in-place during the remedial action, including the parties responsible for implementing them.
4. Include a table listing the major events/milestones for the remedial action. The table should include dates.
5. Please add additional details regarding the Pre-Final Inspections of the in-river dredge/cap areas, habitat restoration areas and remediated areas of the shoreline. Include descriptions of when and how those inspections were accomplished.
6. Provide a list of primary reports that were generated and submitted to EPA for the Phase 2 Remedial Action between the ROD and completion of the remedial action.

7. Page 1-4, Section 1.1 (third full paragraph): Please revise the discussion of “final inspections” as follows so that it is consistent with the August 11, 2016, email exchange between Douglas Fischer and Eric Merrifield:

In 2016, GE and EPA agreed that...final early inspections would be conducted of those support properties prior to GE’s determination that the overall Remedial Action was complete and would be considered to satisfy RA Completion Pre-Final Inspection requirement for those properties...The final early inspections of all project support properties were conducted on November 10, 2016, attended by GE, EPA, NYSDEC, and the New York State Canal Corporation (NYSCC), with no items identified for follow-up actions. On November 30, 2016, the final early inspection was conducted at the sediment processing facility...

8. Page 1-5: In the last sentence of Section 1.2, the reference to Figure 1-1 should be changed to refer to Figures 1-1 through 1-5.
9. Page 1-13, Table 1-1, 2011 and 2012 Submittals; and Page 10-2, Section 10: Please check the release dates of the final design reports (FDRs). Based on our records it appears that the Phase 2 FDR for 2011 should be cited as Revised April 2011 and the Phase 2 FDR for 2012 as Revised May 2012. Also, please list in Table 1-1 all the addenda (including the purpose of each addenda) to design reports and any memoranda reflecting modifications to the design that are not otherwise presented, and insert those citations in the Reference Section 10.
10. Page 1-14, Section 1.6: Please remove “all” from the second sentence and “supervision” from the third sentence. Also please remove subjective and unnecessary adjectives such as “pervasive” that are sometimes used to describe remedial oversight activities.
11. Page 1-17: In the last sentence of Section 1.8, the statement that the appendices are provided on compact discs should be changed to indicate that the appendices are provided on a flash drive.
12. Page 2-2: In the fifth sentence of the second paragraph, the statement that “[t]here were 60 CUs in River Section 2” should be changed to state that there were 60 CUs in River Section 1.
13. Page 2-6, Section 2.1.3: Please include a discussion of the trans-loading of sediment from the small barges to the large barges. This was a significant activity that should be described in the RA Report.
14. Page 2-8, Section 2.1.5: Please include a discussion of access dredging conducted as part of the remedial action. This was a significant activity that resulted in additional PCB removal.

15. Page 2-10, top paragraph: Append “of Appendix A” after references to “Table 1,” “Table 2” and “Table 3”.
16. Page 2-11: In Table 2-4, there was a typographical error in the value of 27,200 kg given for the Total PCB mass removed in Phase 2, Year 1 (2011). The corrected value should be 27,020 kg. This error also caused an error in the project total for Total PCB mass removed, which was given as 146,015 kg, but should be corrected to 145,835 kg.
17. Pages 2-12 – 2-13: In Table 2-5, some of the shoreline and near-shore elevations were inadvertently reversed. The correct table is as follows:

Reach	Certification Unit(s)	Shoreline Elevation (feet, NAVD88)	Near-shore Elevation (feet, NAVD88)
Reach 8	CUs 9 - 60	119	117.5
Reach 7	CUs 61 - 66	114.9	114.5
Reach 6	CUs 67 - 78	102.1	100.9
Reach 5	CU 79, 83 & 84	84.1	82.5
	CU 80	84.1	82.5
	CUs 81-83, 85-91	83.6	82.2
Reach 4	CUs 92 & 93	70.0	68.9
Reach 3	CUs 94 - 96	47.8	46.2
Reach 2	CUs 97 & 98	29.6	28.0
Reach 1	CU 99	16	13.5
	CU 100	15.2	13.5

18. Page 2-13: The third paragraph, stating that “[t]he total area during Phase 2 that received backfill or cap material amounted to 493 acres with 111 of those acres receiving cap materials,” should be changed to indicate that those figures apply to the project as a whole, not just Phase 2.
19. Page 2-14, Table 2-6, Note and first full paragraph: Please define what constitutes “non-counted capping areas.”
20. Page 3-3, Table 3-1: The volume of water treated in 2011 is reported as 98.54 MGals, which is less than the reported volume of treated water discharged. Please correct or clarify this reference.
21. Page 3-3: The sentence immediately after Table 3-1 provides totals only for Phase 2, but was intended to provide totals for the entire project (Phase 1 plus Phase 2). That sentence should be revised to read: “Thus, for the project as a whole (Phase 1 and 2 together), the total volume of material processed was approximately 3,208,279 tons, and the total volume of treated water discharged to the Champlain Canal was approximately 805.3 million gallons.”

22. Page 4-3: In the first sentence of the last paragraph, the total number of Phase 2 CUs where SAV habitat was planted should be changed from 48 to 47, and the total number of Phase 2 CUs where SAV natural recolonization areas were designated should be changed from 78 to 77.
23. Section 4 (General): Please clarify that the extent of habitat reconstruction work required by the consent decree for the remedial action includes the initial installation of active habitat replacement/reconstruction measures, but does not include OM&M or adaptive management of the habitat replacement/reconstruction.
24. Page 4-1, Section 4, footnote 13: Please delete footnote 13 and revise text to indicate that during Phase 1 SAV Natural Recovery was established in CUs 2 through 8 as well as in CU17 and CU18 (i.e., not just in CU2).
25. Page 4-2, Section 4: The text indicates "...the installation of any shoreline replacement/reconstruction measures in Phase 2 areas, including reconstruction or repairs of disturbed areas above the shoreline elevations...is beyond the scope of this RA Completion Report." This statement is too broad and suggests that work done in barge loading areas and other support activities is beyond the scope of the report (which is not the case). Please clarify and revise the text to indicate how impacts from dredging were addressed in these areas.
26. Page 4-2, Section 4.2: Please expand the text to include discussion of SAV beds impacted by access dredging.
27. Page 4-4, Section 4.3: This section should also mention that impacts to certain riverine fringing wetland (RFW) areas above the design shoreline elevations were identified in CUs 50 and 51 (the "finger area") and in CU95-3 (resulting from dredging support activities) and were outside of dredge areas, and that RFW habitat reconstructed in these areas will be monitored under OM&M.
28. Page 4-4, Section 4.3, footnote 16: Please delete the text regarding dormant plants. It is not known, nor can it be proven, that replacement plants installed in the fall (in follow up to contractor compliance inspections) were dormant.
29. Section 5 should include a brief discussion of the performance of the caps during the 100-year flood event as evidence of compliance with the design requirements.
30. Page 5-1: In the last line of the text on the page, clause (b) should have the word "areas" added before "with low water velocities".
31. Page 5-3: In the last sentence of the first paragraph of Section 5.2, the statement that revisions to Attachment A to the Phase 2 Remedial Action Monitoring Quality Assurance Project Plan were "submitted in June 2014 and again in March 2016" should be supplemented to indicate that such revisions were submitted again in September 2016.

32. Pages 5-5 and 5-6, Section 5.2.3 (Fish Sampling), footnotes 20 & 21: Please delete footnote 20 regarding inclusion of the rib-cage material in fish filleting approaches used to process fish samples, and footnote 21 regarding inclusion of 2015 data in the 2015 Data Summary Report (DSR) due to a delay in receiving EPA approval for the analyses. The time taken was necessary for GE to provide all required information needed for EPA to complete its review.

Alternatively, footnote 20 can be replaced with the following text: From 2007 to 2013 the GE fillet samples were processed while excluding the ribs of the fillet (*i.e.*, “rib-out” fillets), which was not consistent with New York State protocols and project requirements. GE assisted EPA with conducting a special study regarding this issue.

33. Page 5-8: Footnote 25 on this page states that there were two measurements of total PCBs above 500 ng/L at the Thompson Island station in 2011, but they occurred before dredging began. Further review of the database used in the 2011 DSR indicates that there were six measurements above 500 ng/L in 2011 (one at Thompson Island, three at Lock 5, and two at Waterford), but they all occurred before dredging began. Thus, this note should be revised to read: “There were also six measurements of total PCBs above 500 ng/L at the far-field stations in 2011, but they all occurred before any dredging began (results not shown).”
34. Page 5-9, Section 5.3, Footnote 26: This footnote contains a typographical error: the footnote lists “Appendix II” as including the Annual Progress Reports. Appendix IV contains the Annual Progress Reports.
35. Page 5-10: The same typographical error identified in Table 2-4 (discussed above) appears in Table 5-2. Specifically, the value given for Total PCB mass removed in 2011 (27,200 kg) is incorrect and should be changed to 27,020 kg. This error also caused an error in the Phase 2 total for Total PCB mass removed, which was given as 127,785 kg, but should be corrected to 127,605 kg. The same error in Total PCB mass removed in 2011 (as well as in cumulative totals of Total PCB mass removed) is also present in the summary tables on PCB load and percent release past Waterford in appendices to the Phase 2 Annual Progress Reports contained in Appendix IV to the RA Completion Report. This change does not affect any of the other values given in Table 5-2 or the similar tables in the Annual Progress Reports.
36. Page 6-2, Section 6.1.2: Please make reference to the Phase 1 and Phase 2 Memoranda of Agreement (MOAs), dated 11/18/2008 and 5/19/2015, respectively. The MOAs include requirements for mitigation tasks associated with cultural resource impacts.
37. Page 7-3, Section 7.1.2, paragraphs 2 to 4; page 7-4, Section 7.1.3, paragraph 2; Section 7.1.4, paragraphs 2 and 3; and page 7-5, Section 7.1.5, first full paragraph: These paragraphs state that various post-decontamination sampling results “met the criteria for unrestricted use...” Please change this statement to “met the criteria required by EPA in consultation with DEC.”

38. Page 8-1: In Section 8.1, regarding the statement that “the complete Form 1 and Form 2 packages for the Phase 2 Year 1 CUs are provided in Annex A to Appendix IV-1,” the Annex is not labeled Annex A. Also, it should be clarified in this section that the Annex to Appendix IV-1 is included because GE did not include the Phase 2 Year 1 Form Packages as an attachment to the 2011 Annual Report.
39. Section 8.3: Please edit the discussion of the inspections consistent with the comments in item 7, above.
40. Page 10-2: The date in the reference for the Phase 2 Final Design Report for 2011 should be changed to “Revised April 2011”; and the date in the reference for the Phase 2 Final Design Report for 2012 should be changed to “Revised May 2012.”
41. As requested by EPA at the suggestion of NYSDEC, GE developed electronic shape files identifying the boundaries of all dredged and capped areas in the Upper Hudson River. These files have been provided to EPA and NYS and should be included with other similar files provided with the RA Report. These files are important for reference for any future work in the Upper Hudson River bottom (e.g. dock construction).

The DSRs, Annual Reports, and Monthly Progress Reports are included as appendices to the RA Report. These transmittals of project data and other information sometimes include GE’s interpretations of data or other information contained in the reports. Please note that such interpretations may not always represent EPA’s view.

EPA expects that from time to time data and other site-related information that is not contained in the RA Report may be requested by other governmental agencies or the public, and we anticipate and appreciate GE’s continued cooperation with any such requests, consistent with its obligations under the consent decree.

Please revise and resubmit the report after GE incorporates the comments noted above, and include with your submission the shape files requested in comment 41. If you have any questions, please contact me at the Hudson River Office at (518) 407-0400.

Sincerely,



Gary Klawinski, Project Director  
USEPA Hudson River Office