

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
New England Office – Region I
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

December 10, 2007

Mr. Andrew T. Silfer, P.E.
General Electric Company
159 Plastics Avenue

Pittsfield, Massachusetts 01201

Sent via US Mail and Electronic Mail

RE: EPA’s Conditional Approval of the Pilot Study Report for Silver Lake Sediments

Dear Mr. Silfer:

EPA has completed its review of GE’s report entitled “*Pilot Study Report for Silver Lake Sediments*” (hereinafter Report) submitted September 28, 2007.

With respect to any other work plans or submittals related to Silver Lake or Silver Lake Bank Soils, nothing in this conditional approval shall be interpreted to supersede the approval, the conditions in a conditional approval, or the disapproval of such GE submittals, unless expressly stated as such by EPA. EPA reserves all its review and compliance rights under the Consent Decree regarding such GE submittals.

Pursuant to Paragraph 73 of the CD, EPA, after consultation with the Massachusetts Department of Environmental Protection (MassDEP), conditionally approves the Report subject to the following conditions:

1. Section 3.1.2 (page 9) –The report shall mention that an additional lay down area for isolation materials was utilized at the Building 68 lay down area per EPA request. Prior to stockpiling materials at this location, GE swept the concrete, blocked off drainage swales, and laid down poly over the concrete.

2. Section 3.1.3 (page 10) – It is noted that a process modification was necessary to better screen the sand to remove oversized material. This modification shall be identified in Section 5 of the revised Report and carried forth to the final design.
3. Section 3.2 (page 12) – It shall be noted that divers inspected the study area for debris prior to the lay-down of the geotextile in the revised Report.
4. Section 3.2.2 (page 14) – The report states that geocomposite installation was completed on October 15, 2006. This is incorrect as the installation was completed on October 16, 2006 (per Weston’s field notes and Severson Daily Reports). This correction shall be made in the revised Report.
5. Section 3.4 (page 17) – For the Pilot Study, the associated area requiring removal of bank soil for the Silver Lake Bank Soil RAA was identified and coordinated with the construction of the shoreline armor layer. EPA has concerns about the integration of the bank soil removal with the armor layer construction during the implementation of the final design. GE shall integrate these two components of the project in the Conceptual RD/RA Work Plan.

There is no mention made of encountering stained bank soil while constructing the anchor trench excavation during the Pilot Study. Discussion of these stained soils shall be included in the revised report. The potential for encountering additional stained soil and/or NAPL and the inclusion of a stained soil/NAPL contingency plan shall be addressed in the Conceptual RD/RA Work Plan.

6. Section 3.4.3 (page 18) – The reference to riprap having a median diameter of 9 inches is incorrect. The median diameter (D50) is 5 to 6 inches. The maximum diameter is 9 inches. GE shall revise the text to be consistent with the design specification for the riprap.
7. Section 3.4.4 (page 18) – Upon completion of the Pilot Study, EPA/Weston observations suggest that the placement of the gravel habitat layer did not achieve the 3 inch minimum thickness required in the SOW in some areas. GE shall address this component of the cap design in the Conceptual RD/RA Work Plan with the objective of achieving a 3 inch minimum layer following completion of the placement of such material.

In addition, the performance standard for the gravel habitat layer is described as containing both sand and gravel. (“GE shall place a three-inch layer of gravel and sand over the armoring stone to facilitate fish usage of the shelf”, Appendix I, Section 6.1). In the Design document, GE shall provide a design specification for this material for consideration by the Agency.

8. Section 4.1.1 (page 21) – GE shall include the specific passes and associated thicknesses for the collection pan data in the revised Report.

9. Section 4.1.4 (page 23) – There is an error in the first paragraph regarding Cap Probing. GE states that on November 27, 2006, the cap thickness was measured at the same nine physical survey plate locations as was done for November 9, 2006 event. However, it appears by reviewing Figure 8 that only eight physical survey plates could be located during the November 9 event. The physical survey plate at location SP-D-3.5 in the isolation layer only test cell was not located. In addition, the maximum cap thickness measured is 21.3 inches according to Figure 8, and not 21.6 inches as stated in the text. It is also unclear why thickness measurements were not recorded during all three probing events: during construction, immediately following, and 6-months following construction. These shall be addressed in the revised Report.
10. Section 4.1.5 (page 24) – In the summary table there are cap thickness measurements presented for each of the measurement methods. The immediate post-construction and 6 month post-construction thickness measurements for acoustic sub-bottom profiles shall be modified to more accurately reflect the range of thickness estimates from the OSI surveys presented in Appendix D.

In the summary table there is an inconsistency regarding the maximum thickness measured in the immediate post-construction thickness for the physical survey plates. The maximum thickness measured according to information presented on Figure 8 is 21.3 inches, not 21.6 as presented in the table (same comment above), this shall be corrected.

GE shall include procedures to insure that minimum cap thicknesses are attained in all locations in the Conceptual RD/RA Work Plan.

11. Section 4.2.1 (page 25) – The entire section is confusing and is inconsistent with the summary table in Section 4.1.5 and information presented on Figure 8 and shall be revised in the Report to address the issues described below.

Footnote ² on the bottom of page 25 references a September 2006 survey event that should likely be changed to October 2006 (as per Weston field notes and the report on page 25). Based on information presented in Figure 8, it appears as if probing measurements were obtained from plate SP-B-1.5 during both events in November, 2006 which is inconsistent with the footnote at the bottom of page 25.

12. Section 4.2.2 (page 26) – There is an error regarding the figure reference for the locations of the 28 VW cells. The text states that the VW locations are depicted on Figure 11, whereas they are actually depicted on Figure 10. Figure 11 shows the time series data output from the useable VW cells.

There is an additional VW data gap, not explained in the text, for approximately 14 cells starting near May 24, 2007 and ending close to the first week in June 2007. These items shall be addressed in the revised Report.

Provide an explanation for the reversal of settlement observed on Figure 12.

13. Section 4.2.2 (page 27) Footnote 3 – Data adjustments referenced, based on inconsistent large shifts in data, are not transparent and shall be further explained.
14. Section 4.2.4 Summary (page 30) – GE shall summarize the depth of settlement for all three measurement methods and provide a table similar to the table on page 24 for cap thicknesses.
15. Section 4.2.4 (page 30) – The heading for the next section appears to have been copied and pasted into the last line of the Summary Section.
16. Section 4.3.1 (page 30) – GE mentions that isolation material cores were collected with 4-inch diameter cores. This is a minor point, but the cores were more likely 3-inches in diameter.

Given the observation of a loss of approximately 50% of the TOC content of the isolation layer material during placement and the conclusion that the percent TOC ranged from 0.24% to 0.58%, GE shall include procedures in the Conceptual RD/RA Work Plan to insure that the cap achieves the performance standard of a minimum of 0.5% TOC in the isolation layer.

17. Section 4.3.2 (page 31) – The post-construction PCB concentration data in some of the surficial samples suggest that thought should be given in the Conceptual RD/RA Work Plan to the sequence of placement of initial lifts to reduce the opportunities for this to reoccur.

Clarify in the discussion in the revised Report which locations showed mixing in the post-construction sampling and the cores collected after 6 months, and if the locations were the same for both events.

There is some confusion in the text referring the reader back to Section 4.1 for a discussion of mixing which does not appear to exist. This shall be corrected in the revised Report by including the discussion in one place or the other.

Quantify “low” PCB concentrations.

18. Section 5 (Page 37) – It is stated in the report that the cap provides an effective physical and chemical barrier, however this conclusion should be modified as it can not be made from the Pilot Study alone.

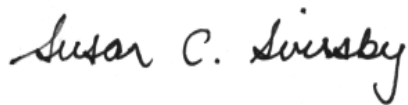
(Page 38) – As was noted in Section 3.3.2, there were difficulties with near-shore placement of cap material. GE shall consider modifications to the spreader and/or other actions that will allow the placement of the isolation layer near-shore in the Conceptual RD/RA Work Plan.

(Page 40) – It shall be noted in the Conclusions that increased turbidity was observed with the shift to placement of 2 inch lifts rather than 1 inch lifts as noted in Section 4.4.1 on page 35. GE shall take this and other measures for controlling turbidity (e.g. potentially drawing down the lake, sorptive barriers), particularly in the discharge to the River, into consideration in the Conceptual RD/RA Work Plan.

19. Table 3: For consistency between Table 2 and 3, EPA recommends that the PCB detection limits be presented in Table 3 rather than the dashed line for non-detected concentrations.
20. Table 5: There appear to be two errors regarding the TOC concentrations from the during construction core program. Although, the concentrations presented in text on page 31 are most likely correct, the average percent TOC concentrations for samples SL-CAP-B-3.5 and SL-CAP-F-3.5 are incorrect by a factor of 10 in Table 5. In addition, similar inaccuracies appear in Table 2 for the Pond-1 sample and in Table 3 for samples SL-BF-102706-1 and SL-BF-110306-1.
21. Note #2 on Figure 17 seems to be incorrect. This note states that the samples shown on the figure were collected on 27 December 2006, whereas the text indicates that these samples were collected on 12 June 2007. This note should be corrected on the figure to list the correct sampling date.

GE shall submit a revised Report addressing the conditions applicable to the Report within 30 days of receipt of this letter, and submit a Conceptual RD/RA Work Plan (that shall also address the integration of the bank soil removal and GE-lead NRD projects) 90 days after approval of the revised Pilot Study Report. If you have any questions please give me a call.

Sincerely,



Susan C. Svirsky, Project Manager

cc: Mike Carroll, GE
Rod McLaren, GE

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