

~~DN: GEP3-011701-AADF~~

08-0026  
SDMS: 159271

**United States Environmental Protection Agency**

**EPA New England  
One Congress Street, Suite 1100  
Boston, MA 02114-2023**

January XX, 2001

Mr. Andrew T. Silfer, P.E.  
Corporate Environmental Programs  
General Electric Company  
100 Woodlawn Avenue  
Pittsfield, Massachusetts 01201

10971-230-001-0110

**RE: Conditional Approval of GE's submittal entitled *Results of Cell G3 DNAPL Investigation and Proposal to Address Presence of DNAPL in Cell G3*  
Upper ½-Mile Reach Removal Action  
General Electric-Housatonic River Site, Pittsfield, Massachusetts**

Dear Mr. Silfer:

On January 4, 2001, GE submitted a document entitled *Results of Cell G3 DNAPL Investigation and Proposal to Address Presence of DNAPL in Cell G3*. This document is subject to the terms and conditions specified in the Consent Decree that was entered in District Court on October 27, 2000 (the "Consent Decree"). Pursuant to the Upper ½-Mile Reach Removal Action Work Plan and Paragraph 73(b) of the Consent Decree, EPA, after consulting with the Massachusetts DEP, approves the above-referenced submittal subject to the following conditions:

1. The lateral extent of the sheetpile shall be extended along the bank a minimum of 15 feet in the upstream direction and a minimum of 20 feet in the downstream direction. The wing wall on the upstream end of the sheetpile wall shall remain on an angle and shall extend up to the top of the bank. The wing wall at the downstream end of the riverbank shall bend at a 90° angle and shall extend up to the top of the bank. The downstream wing wall shall be in alignment with, or downstream of, boring HR-G3-SB10. The proposed perimeter monitoring wells shall be relocated ten feet beyond the ends of the new sheetpile alignment. See attached figure.
1. GE shall excavate the bank soils located between the sheetpile, as revised in item 1 (excluding the wing walls), and the river down to the peat layer. In addition, sufficient soil shall be excavated behind the sheetpile (excluding the wing walls) down to the peat layer to allow for the installation of the proposed grout seal (see Figure 4). All excavation shall be performed prior to sheetpile installation.
1. If any additional NAPL or NAPL-impacted bank soils or sediments are encountered outside the limits of the sheetpile wall, then additional response actions will be required.
1. GE shall tremie grout at the intersection of the wing walls and the peat layer to prevent the migration of the DNAPL down along the sheetpile walls.
1. GE's submittal contains a long-term analysis of the structural stability of the Waterloo sheetpile. No short-term analysis is included. This conditional approval letter does not relieve GE of its responsibility to ensure that the proposed sheetpile wall is structurally stable in the short-term.
1. GE may install an interim cut-off wall in Cell G3 as long as it is located twenty feet away from the revised alignment of the Waterloo sheets. The twenty-foot distance is reportedly the minimum distance required by MTI's subcontractor, C3; the company providing the warranty for the proper installation of the Waterloo sheetpile.

1. GE shall remove an additional three inches of sediments and lower bank soils to ensure that any NAPL that migrated during the December 17 and 18 high flow event is removed. GE shall then resurvey the banks and sediments to ensure that the minimum excavation grades have been achieved. Additional activities may be required pursuant to Section 7.4.3 of the Upper ½-Mile Reach Removal Action Work Plan after Cell G3 is dewatered and a visual inspection is performed.
1. GE shall notify EPA within 24 hours if NAPL is detected in either of the two proposed perimeter wells.
1. GE and EPA will agree on the actual location of the proposed monitoring wells prior to installation.
1. GE shall collect groundwater elevation measurements in addition to NAPL measurements at all three proposed wells.
1. GE shall collect NAPL/groundwater elevation measurements at all three proposed wells during high flow events. For the purposes of this monitoring requirement, high flow events shall be defined as peak river flows in excess of 1,000 cubic feet per second as measured at the Coltsville, Massachusetts USGS gauging station.
1. Following the initial four week monitoring period, GE shall conduct monthly groundwater elevation monitoring/NAPL measurements of the three proposed wells until GE proposes, and EPA approves, an alternate monitoring program.
1. EPA reserves the right to add any additional monitoring wells it deems necessary as perimeter compliance wells (for NAPL and/or GW-3 performance standards pursuant to Technical Attachment H of Appendix E to the Consent Decree) in this area. Since volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) have been detected in NAPLs in this area, the analytical requirements for the above-mentioned perimeter compliance wells may include, but are not limited to, VOCs and SVOCs.
1. Within two weeks of the completion of the initial four week monitoring period, GE shall submit a report evaluating the monitoring data. This report shall include:
  - A local groundwater elevation map using actual field measurements for the three proposed wells;
  - A comparison of the field monitoring data to groundwater elevations calculated by the model included as Attachment C; and,
  - An evaluation of, and if appropriate a proposal for, additional investigative, monitoring or response actions (including additional groundwater controls) in this area.

This evaluation report can be combined with the similar report required for the Cell G2 monitoring wells (See EPA's January 12, 2001 Cell G2 Conditional Approval letter).

15. EPA reserves the right to require future long-term monitoring of VOCs and SVOCs in sediments and/or surface water in the area near the DNAPL seeps.

The above-listed requirements are the minimum requirements that GE shall meet. However, this conditional approval letter does not waive or modify any of the performance standards specified in the Upper ½-Mile Reach Removal Action Work Plan or the Consent Decree. As you know, Section 4.2 -- Non-Aqueous Phase Liquid Standards of Technical Attachment H of Appendix E to the Consent Decree includes the following performance standards:

- "Containment, defined as no discharge of NAPL to surface water or sediments, which shall include no sheens on surface waters and no bank seeps of NAPL."
- "For areas near surface waters in which there is no physical containment barrier between the wells and the surface water, elimination of measurable NAPL (i.e., detectable with an oil/water interface probe) in wells near the surface water bank that could potentially discharge NAPL into the

surface water, in order to prevent such discharge and assist in achieving groundwater quality Performance Standards.”

- “For areas adjacent to physical contamination barriers, prevention of any measurable LNAPL migration around the ends of the physical containment barriers.”

Therefore, if there are violations of these performance standards in the future, GE is subject to corrective action requirements.

EPA’s conditional approval of this submittal does not preclude EPA from requiring additional investigations and response activities pursuant to the Consent Decree and/or the *Statement of Work for Removal Actions Outside the River* (Appendix E to the Consent Decree) in the future. Furthermore, this conditional approval letter does not modify any of the performance standards contained in the Upper ½-Mile Reach Removal Action Work Plan, the Consent Decree and/or the *Statement of Work for Removal Actions Outside the River* (Appendix E to the Consent Decree).

If you have any questions, please contact me at (617) 918-1282.

Sincerely,

Dean Tagliaferro

Attachment

cc: Tim Conway, EPA  
Bryan Olson, EPA  
Mike Nalipinski, EPA  
Holly Inglis, EPA  
J. Lyn Cutler, DEP  
Sue Steenstrup, DEP  
Andrew Thomas, GE  
William Horne, GE  
Mark Graveling, BBL  
Ray Goff, USACE  
Dawn Veilleux, Weston  
Site File

Cell G3

CLIENT/SUBJECT \_\_\_\_\_ SHEET \_\_\_\_\_ of \_\_\_\_\_

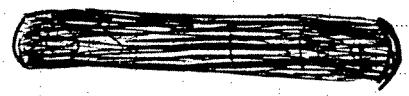
TASK DESCRIPTION \_\_\_\_\_ W.O. NO. \_\_\_\_\_

PREPARED BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_ TASK NO. \_\_\_\_\_

MATH CHECK BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

METHOD REV. BY \_\_\_\_\_ DEPT \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED BY	
DEPT _____	DATE _____

- ① What will grout seal composition be?  
Cement or bentonite grout? Need bentonite
  - ② Place grout along all 3 sides.
  - ③ Poor quality logs & poor 50% recovery in critical zone. Change procedures.
  - ④ Need to model including other Cell G1 + G2 barriers
  - ⑤ Need to model what will happen when WAPL pumping wells turned off. <sup>Likely future scenario</sup> hydraulic control in area of Cells G1/G2/G3 in the future. <sup>May need</sup>
  - ⑥ Future predictive <sup>boring</sup> sampling on bank not @ river edge. should be higher
  - ⑦ Wells screened <sup>slightly</sup> into peat. 
- Peat is thin so well locations should be pre probed, or next to previous borings.
- ⑧ For GMA-1 model area with no wells & no recharge Pond. Dave