01-0444

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02114-2023

2 January 2002

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

Via Electronic and U.S. Mail

Re: **Conditional Approval of General Electric's October 2001 submittal *Semi-annual Groundwater Monitoring Report, Hill 78 and Building 71 On-Plant Consolidation Areas (OPCAs)*, General Electric (GE) Housatonic River Project Site, Pittsfield, Massachusetts.**

Dear Mr. Silfer:

This letter contains the Environmental Protection Agency's (EPA) comments regarding the above-referenced *Semi-annual Groundwater Monitoring Report, Hill 78 and Building 71 OPCAs* (Report).

This *Semi-annual Groundwater Monitoring Report, Hill 78 and Building 71 OPCAs* is subject to the terms and conditions specified in the Consent Decree (CD) that was entered in U.S. District Court on October 27, 2000.

Pursuant to Paragraph 73 of the CD, EPA, after consultation with the Massachusetts Department of Environmental Protection (MDEP), approves the above referenced submittal subject to the following conditions:

Conditions

1. Subsequent to the negotiation of the baseline groundwater investigation for the OPCAs, non-aqueous phase liquid (NAPL) was detected in monitoring well H78B-8R, which is located within the OPCA monitoring perimeter (between well OPCA-MW-2 and the Hill 78 OPCA as depicted in Figure 1). The discovery of NAPL in the OPCA monitoring perimeter is significant and monitoring well H78B-8R will be included in the Plant Site 3 Groundwater Management Area (GMA 4) baseline monitoring program. However, although depicted in Figures 1 through 3, the Semi-annual Groundwater Monitoring Report does not include information regarding NAPL composition or thickness in well H78B-8R, and no analytical results are reported for groundwater quality at the well.

   As GE indicates in Section 2.1, at least one additional Semi-annual Groundwater Monitoring Report for the OPCAs will be produced before the GMA 4 baseline monitoring program is initiated. Therefore, monitoring well H78B-8R should be incorporated into the next Semi-annual Groundwater Monitoring Report for the OPCAs. If NAPL is observed in well H78B-8R the composition and thickness, and groundwater quality in well should be reported in the subsequent Semi-annual Groundwater Monitoring Report for the OPCAs.

2. Review of the Groundwater Sampling Field Logs indicates that well purging was not conducted at a sufficiently low rate to maintain drawdown of less than 10% in three of the 12 wells sampled (OPCA-MW-1, OPCA-MW-4, and NY-4), resulting in non-stable drawdowns between 10.2% and 25.8%. In addition, one of the 12 wells, H78B-15, that is 1 inch diameter, was not monitored for water level during sampling, as its narrow

diameter did not allow the water level meter and the pump to be in the well simultaneously, as called for in GE's Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP).

In the future, GE's contractors should use equipment capable of pumping at rates lower than 0.2 liters per minute in the three slow-recharging wells and develop an approach to monitor water levels within 1-inch diameter wells during purging, to the extent feasible and in compliance with the FSP/QAPP .

3. Tabulated data summaries (such as Table 3 and Table A-1) are not the most effective way to present data for comparison with previous data and identify trends. Graphical presentation of data is the most effective way to accomplish comparison with previous data and identify trends within data. Although available data for the eight OPCA-MW-series wells comprises only two data points each, the four pre-existing wells used for OPCA monitoring (78-1, 78-6, H78B-15, and NY-4), as well as the Pittsfield Generating Company water supply well (ASW-5) have extensive historic groundwater quality data sets. The historic groundwater quality data should have been included (such as the 1996 data cited in Section 4.3.3) and should have been presented in graphical form, in order to clearly identify changes and trends potentially attributable to the operation of the OPCAs. Therefore, GE shall include historical groundwater quality data and present it in graphical form (along with the current data) in future OPCA and GMA monitoring reports.

Additional specific EPA comments concerning the Semi-annual Groundwater Monitoring Report are included with this letter as Attachment 1.

If you have any questions, please contact me at (617) 918-1268.

Sincerely,

M J Nalipinski

Michael J. Nalipinski
GE Facility Project Manager

cc: John Novotny, GE
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Dawn Jamros, Roy F. Weston
Pittsfield MA Office, US EPA
Mayor Gerald Doyle, City of Pittsfield
Tom Hickey, PEDA
Teresa Bowers, Gradient
Public Information Repositories (4)

Attachment 1
Additional Comments

EPA also provides the following technical comments relevant to its review of the Report.

1. **Figure 2.** The groundwater contours depicted in Figure 2 extend beyond the vicinity of the OPCA, apparently based on GE's knowledge of groundwater flow at wells recently surveyed during the preparation of the GMA 4 Baseline Monitoring Proposal. However, the contours presented at the edges of the field presented do not necessarily match groundwater contours presented in adjacent GMAs (specifically, to the west in GMA 1 and to the east in GMA 3). In the future, extrapolated data should be noted when accounting for groundwater flow data from locations outside the field of concern when presenting data at the edges of the field of concern.

2. **Appendix B – Groundwater Sampling Field Logs.** The following issues were identified during review of BBL's Groundwater Sampling Field Logs.

   - A concern indicated in the data reported on BBL's Groundwater Sampling Field Logs was the report of a slight chemical odor in the initial purge water removed from monitoring well OPCA-MW-3, and the report that final purge water/sample water was odorless. The analytical results for the sample indicated only trace dioxins/furans and two inorganic elements. Given the slight chemical odor noted in the initial purgewater, special attention should be given to this well during future sampling rounds, especially regarding the possible presence of NAPL.

   - GE reports that final turbidity readings for monitoring well NY-4 were 72.6 NTUs. The EPA's low flow method recommends that, as a goal the final turbidity target value should be 5 NTUs or less. The maximum final turbidity should not exceed 50 NTUs. EPA's low-flow method recommends well redevelopment in cases where low turbidity cannot be achieved. In addition, monitoring well NY-4 was one of the wells where excessive drawdown (23.1%) was induced during sampling. EPA recommends redevelopment of monitoring well NY-4, which may reduce turbidity during subsequent sampling rounds as well as improve recharge rate. It is also possible that reduction of the purge rate to 0.1 liters per minute (recorded as 0.2 liters per minute) will reduce drawdown and may reduce the turbidity of the groundwater samples.

3. **Section 4.3.** In Section 4.3, GE indicates that filtered groundwater samples were used for comparison with Massachusetts Contingency Plan (MCP) groundwater standards, instead of the unfiltered samples called for in GE's Sampling and Analysis Plan. GE's rationale for using filtered groundwater analytical results is sound, and reflects the techniques used prior to the adoption of low-flow sampling methods, which are designed to collect representative groundwater samples with minimal turbidity, eliminating the need for sample filtration. GE's comment reinforces EPA's position in Comment 2 discussing the need for low-flow sampling.