



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1  
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BOSTON, MASSACHUSETTS 02114-2023

01-0445

SDms 38178

December 28, 2001

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 April 2001 submittal *Baseline Monitoring Proposal for Plant Site 3 Groundwater Management Area (GMA-4)*, General Electric (GE) Housatonic River Project Site, Pittsfield, Massachusetts.**

Dear Mr. Silfer:

This letter contains the Environmental Protection Agency's (EPA) conditional approval of the above-referenced Baseline Monitoring Proposal for Plant Site 3 Groundwater Management Area (GMA-4).

This Baseline Monitoring Proposal for Plant Site 3 Groundwater Management Area 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. Because the GMA-4 Baseline Monitoring Program will be conducted prior to the pre-design investigations at Removal Action Areas (RAAs) 7, 8, 9 and part of 10, EPA reserves the right to modify or expand the GMA-4 monitoring program, based on the results of the RAA investigations and any additional soil investigations conducted at the site.
2. Several potential preferential pathways exist at GMA-4; however, there is inadequate site characterization data available at this time to make any determinations concerning the future investigations regarding preferential pathways. EPA reserves the right to require additional evaluation of these pathways when evaluating GE's work plans for the RAAs within GMA-4. The evaluations of the preferential pathways will not be limited to areas near occupied buildings.

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3. The considerable size of Buildings OP-1 and OP-2, the local groundwater flow direction and the location of the oil line preferential pathway between the buildings dictate that an additional GW-2 sentinel well is needed between Buildings OP-1 and OP-2 to adequately monitor groundwater conditions. GE shall install an additional GW-2 sentinel well (GMA4-2, see EPA Figure 1) between Buildings OP-1 and OP-2, near the oil line depicted on BB&L Figure 5.
4. Based on the groundwater flow contours provided in Figure 4 of the Proposal, EPA believes that the use of well RF-14 (northeast corner of Building OP-1) as a GW-2 sentinel and GW-3 perimeter well is unnecessary. Well RF-14 only monitors upgradient groundwater passing through a small portion of GMA-4. GE shall install a replacement GW-2 sentinel and GW-3 perimeter well (GMA 4-3, see EPA Figure 1) east of Building OP-1 (approx. 125 ft south of the building entrance), along Plastics Avenue.
5. Building OP-2, which measures approximately 850 feet long and 350 feet wide, requires additional GW-2 monitoring on the western side of the building. GE shall monitor well UB-MW-5, located in the northwestern corner of building OP-2 for GW-2 compliance, to better assess groundwater conditions at the northwestern corner of Building OP-2. Well 78-2 shall only be monitored for water level measurements and not for analytical compounds.
6. Due to the loss of wells ES1-6 and RF-13 within GMA-1, a groundwater-monitoring well needs to be located along the old streambed located under New York Avenue. Groundwater flow from both GMA-1 and GMA-4 converges at New York Avenue as it moves southward to the Housatonic River. GE shall substitute well H78B-13 for well NY-2 (GW-3 perimeter well), to better access the groundwater quality in the old streambed under New York Avenue. If well H78B-13 no longer exists GE shall propose an alternate existing well for EPA's concurrence or shall propose to install a new well in this area.
7. A former GE scrap handling foreman identified the Hill 78 area near the "Gas Plant Site" (Building 78) as one of two locations (the other location was Newell Street Area II) where the scrap handling crew dumped "all types of wastes" including Pyranol liquids during the 1940s, 1950s and early 1960s.

If a significant amount of Pyranol was dumped near Building 78, it would likely have migrated down into a topographic low. The 1948 USGS topographic quadrangle map of the Pittsfield area generally coinciding with a stormwater drain line located under the western portion of the Hill 78 landfill. To investigate the potential for dense non-aqueous phase liquids (DNAPLs) in this former topographic low area, GE shall move the till interface investigation borings RAA9-1 and RAA9-2 to locations within the former topographic low area. EPA will recommend specific locations for these borings after evaluating the geophysical data which EPA is gathering. Following discussions with GE, the final locations of the borings will be selected, subject to EPA approval, and will be installed by GE.

8. Figure 4 of the GMA-4 Baseline Monitoring Plan presents groundwater elevation contours for the GMA-4 area. Groundwater contours presented for the westernmost area do not correlate with contours presented for this area in the GMA-1 Baseline Monitoring Proposal (September 2000). Figure 4 of the GMA-4 Baseline Monitoring Proposal presents a groundwater elevation contour of 990 feet mean sea level (msl) at well ES1-20 near New York Avenue, however, the GMA-1 Baseline Monitoring Proposal shows the 990 feet msl contour to be west of this location. For future submittals, GE shall incorporate groundwater elevation information from adjacent GMAs when constructing groundwater contours for a particular GMA.
9. The recent tour of GMA-3 conducted by GE (2 October 2001) identified a significant well surveying problem at monitoring well clusters 2 and 39. As part of GE's proposed well inventory/inspection program for GMA-4 (and all other GMAs), GE shall check or verify the survey coordinates and elevations of all the proposed GMA groundwater and NAPL monitoring wells.
10. Trichloroethene (TCE) has been detected in groundwater collected from several GMA-4 monitoring wells (78-4, 78-7, H78B-8R, H78B-16, and H78B-17R) along the till trough located east and south of the Pittsfield Generating Facility. It was also detected in the bedrock groundwater at production well ASW-5. The maximum detected TCE concentration was 1.2 ppm (1,200 ppb) at GE's proposed perimeter well H78B-17R, in a sample collected during 1996. GE's proposed monitoring well network appears to adequately monitor the TCE plume within GMA-4, however, there are no groundwater monitoring wells located downgradient of the detected TCE groundwater plume (beyond the GMA-4 boundary). The migration of this TCE plume needs to be investigated because there are occupied buildings 450 feet downgradient of well H78B-17R, along East Street.

The TCE detected in groundwater at well H78B-17R GW-2 exceeded the GW-2 standard for TCE (0.3 ppm) by a factor of four, so the potential for impacts to people occupying the downgradient buildings needs to be addressed by GE. As presented in the Statement of Work for Removal Actions Outside the River (SOW) Attachment H (page 8, Section 3.0), Plant Site 3 includes Removal Action Areas 7, 8, 9, part of 10 and any "migration areas." This area south of well H78B-17R appears to fall under the "migration area" category. GE has agreed to sample additional wells in the vicinity of H78B-17R for GW - 2 parameters during the initial monitoring events for GMA 4. Based on the results of those samplings GE shall evaluate the need for additional groundwater monitoring data downgradient of well H78B-17R (as part of the GMA 4 Baseline Monitoring Program) and including) the locations for such downgradient monitoring well(s), and shall make a proposal on this subject to EPA for review and approval.

11. Evidence of NAPL (sheens, odors, and elevated headspace readings) was detected in GE borings and wells 72-1, 72-4, H78B-8R, H78B-18, and H78B-28. Two years after its installation, 0.5 feet of LNAPL was observed in well H78B-8R, which indicates that NAPL may not initially be detected in monitoring wells, but may appear over time. The other monitoring wells installed have been checked subsequently for NAPL, with no NAPL

detected. In addition to continuing quarterly monitoring of Well H78B-8R for NAPL, GE shall monitor wells H78B-18 and H78B-28 for NAPL during the baseline monitoring period (until such time those wells are decommissioned as part of the OPCA operations) to be able to demonstrate that they remain NAPL- free.

12. GE shall address the conditions in this letter by providing an addendum to the GMA-4 Baseline Monitoring Proposal, for EPA's review and approval. The addendum shall include a revised schedule for the GMA - 4 baseline monitoring activities.

Figure 1 and Table 1 summarize the proposed GMA-4 Baseline Monitoring Program as amended by EPA.

EPA reserves its right to perform additional sampling in the area subject to the GMA-4 Proposal and/or require additional sampling or Response Actions, if necessary, to meet the requirements of the Consent Decree.

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

Sincerely,



Michael Nalipinski  
GE Facility Project Manager

#### Attachments

cc: John Novotny, GE  
J. Lyn Cutler, MDEP  
Sue Keydel, MDEP  
Bryan Olson, US EPA  
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Tom Hickey, PEDAC  
Teresa Bowers, Gradient  
James Nuss, BBL  
James Bieke, Shea & Gardner  
Public Information Repositories (4)  
Site File

**Table 1**  
**GE/Housatonic River Project**  
**Proposed GMA-4 Baseline Monitoring Program**

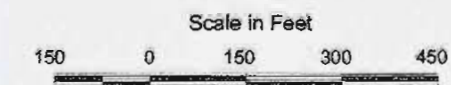
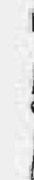
Well or Boring ID	Proposed By	EPA's Proposed Changes	Monitoring Well Type	Groundwater Performance Standard	Rationale
78-1	GE		Perimeter/OPCA	GW-3	Upgradient perimeter; part of OPCA monitoring program
78-2	GE	Change Type	Groundwater Elevation	Not Applicable	Proposed upgradient GW-3 perimeterwell replaced by UB-MW-5
78-3	GE		Perimeter	GW-3	Downgradient perimeter
78-5	GE		Perimeter	GW-3	Downgradient perimeter
78-6	GE		Perimeter/OPCA	GW-3	Upgradient perimeter; part of OPCA monitoring program
H78B-8	GE		Groundwater Elevation/NAPL	Not Applicable	Vertical gradient assessment (paired with well H78B-8R)
H78B-8R	GE		Groundwater Elevation/NAPL	Not Applicable	Weekly NAPL monitoring and removal
H78B-15	GE		GW-2 Sentinel/ Source Area Sentinel/OPCA	GW-2/GW-3	Near Pittsfield Generating Company Warehouse Storage Buildings; part of OPCA monitoring program
H78B-16	GE		Groundwater Elevation/NAPL	Not Applicable	NAPL monitoring within till trough
H78B-17	GE		Perimeter	GW-3	Downgradient perimeter
H78B-17R	GE		Groundwater Elevation/NAPL	Not Applicable	Vertical gradient assessment (paired with well H78B-17)
H78B-13	GE/EPA	Replace Well	Perimeter	GW-3	Proposed by EPA as replacement for NY-2 as a better location for a GW-3 perimeter well to monitor groundwater that flows under New York Avenue.
NY-2	GE/EPA	Drop Well	Perimeter	GW-3	Downgradient perimeter replaced by H78B-13
NY-4	GE		Perimeter/OPCA	GW-3	Upgradient perimeter; part of OPCA monitoring program

**Table 1**  
**GE/Housatonic River Project**  
**Proposed GMA-4 Baseline Monitoring Program**

Well or Boring ID	Proposed By	EPA's Proposed Changes	Monitoring Well Type	Groundwater Performance Standard	Rationale
RF-14	GE/EPA	Drop Well	Groundwater Elevation	Not Applicable	Downgradient perimeter near Building OP-1 replaced by GMA4-3
RF-15	GE		GW-2 Sentinel/Perimeter	GW-2/GW-3	Downgradient perimeter near Buildings OP-1, OP-1B Garage, and OP-2B Boiler House
60B	GE		GW-2 Sentinel/Perimeter	GW-2/GW-3	Downgradient perimeter near Bldg. OP-1
60A	GE		Groundwater Elevation/NAPL	Not Applicable	Vertical gradient assessment (paired with well 60B)
UB-MW-5	GE/EPA	Add Well	GW-2 Sentinel/ GW-3 Perimeter	GW-2/GW-3	Proposed by EPA as a GW-2 sentinel well at the northwest corner of Building OP-2, also replaces GW-3 perimeter well 78-2
UB-MW-6	GE		Groundwater Elevation/NAPL	Not Applicable	Spatial representation near change in topography
GMA4-1	GE		GW-2 Sentinel	GW-2	Near Pittsfield Generating Company Steam Turbine Generator Building
OPCA-MW-1	GE		GW-2 Sentinel/ Source Area Sentinel/OPCA	GW-2/GW-3	Near Bldg. 78; part of OPCA monitoring program
OPCA-MW-2	GE		Source Area Sentinel/OPCA	GW-3	Part of OPCA monitoring program
OPCA-MW-3	GE		Source Area Sentinel/OPCA	GW-3	Part of OPCA monitoring program
OPCA-MW-5R	GE		GW-2 Sentinel/ Source Area Sentinel/OPCA	GW-2/GW-3	Near Pittsfield Generating Company Gas Turbine Generator Bldg.; part of OPCA monitoring program
OPCA-MW-6	GE/EPA		Source Area Sentinel/OPCA	GW-3	Part of OPCA monitoring program
OPCA-MW-7	GE		Source Area Sentinel/OPCA	GW-3	Part of OPCA monitoring program
OPCA-MW-8	GE		Source Area Sentinel/OPCA	GW-3	Part of OPCA monitoring program

**LEGEND:**

-  Existing Monitoring Well
-  Proposed Monitoring Well
-  Proposed Soil Boring
-  Deep Water Supply Well
-  Proposed GW-2 Sentinel/Compliance Well
-  OPCA Program Monitoring Well
-  Proposed General / Source Area Sentinel Well (GW-3)
-  Proposed GW-3 Perimeter Well
-  Average Groundwater Elevation Contour Line (5 ft interval)
-  Stormwater Drainage Lines
-  Unpaved
-  Paved
-  Surface Water



Housatonic River Project  
Pittsfield, Massachusetts

**FIGURE-1  
PROPOSED GMA-4 BASELINE  
MONITORING PROGRAM**

