**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

01-0438

SDMS 159622

21 November 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 2 Groundwater Management Area* (GMA-3), 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 2 Groundwater Management Area (GMA-3).

This Baseline Monitoring Proposal for Plant Site 2 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-3 Baseline Monitoring Program will be conducted prior to the Removal Action Area 10 (RAA-10) pre-design investigations, EPA reserves the right to modify or expand the GMA-3 monitoring program, based on the results of the RAA-10 investigations and any additional soil investigations conducted at the Site.

   EPA reserves the right to require GE to modify or extend the time period for the GMA-3 Baseline Monitoring Program and to conduct additional investigations, if needed. The two-year period for the GMA-3 Baseline Monitoring Program may be over before commencement of the soil-related investigation at this part of the

Unkamet Brook Area; EPA may require GE to modify and/or extend the GMA-3 Baseline Monitoring Program to allow the soil and groundwater investigations adequate overlap.

2. It is critical that the well screens of all GW-2 sentinel wells and all shallow wells that will be monitored for the presence of light non-aqueous phase liquids (LNAPL) intersect the top of the groundwater table. Thus, GE shall verify that all of the proposed GW-2 sentinel wells and all of the proposed shallow monitoring wells downgradient of and proximate to known or suspected LNAPL sources are screened across the water table, and, if they are not, GE shall provide replacement wells. GE shall specify which GMA-3 monitoring wells fall within these two categories in the addendum to the GMA-3 Baseline Monitoring Program Proposal, which is specified in EPA Condition 10.

3. The extent of known groundwater contamination approaches the boundaries of GMA-3 in several areas: at the southwestern boundary beyond wells 33, 34 and 111; at the western boundary along Plastics Avenue (beyond which is GMA-4); and, near the Housatonic River, beyond well 114. GE shall continue to collect groundwater elevation measurements from the existing monitoring wells that are located beyond the current GMA-3 boundary, as part of the GMA-3 baseline monitoring program. EPA reserves the right to expand the limits of GMA-3, as needed, to address groundwater contamination that extends beyond current GMA-3 boundaries.

4. GE's proposed GMA-3 baseline monitoring well network requires several modifications. GE shall conduct the GMA-3 baseline monitoring activities at the locations listed in Table 1, which are depicted on Figure 1 and listed below:

   a) EPA does not concur with GE's proposed replacement of GW-2 compliance well OBG-2 with well OBG-1. GE shall utilize OBG-2 as a GW-2 compliance well.

   b) Three additional GW-2 compliance wells shall be added to properly monitor occupied buildings in GMA-3:

      - GMA3-2 - South of Merrill Road near the location of abandoned well 57. The two nearby buildings need to be monitored, since the delineated extent of the VOC groundwater plume passes near or under the two buildings.
      - GMA3-4 - Between Buildings 105 and 51, replacing well 27(B).
      - GMA3-6 - West of Building 109 next to the former Building 109 Wastewater Tank Farm.

   c) One additional GW-3 upgradient perimeter well shall be added to the GMA-3

baseline monitoring program. GMA3-3, depicted on Figure 1, shall be located south of Dalton Avenue near the former location of abandoned well 46, replacing GW-3 perimeter wells 50B and 43B (which will be retained for groundwater level measurements, with wells 43A and 43B also retained as natural attenuation monitoring locations, as proposed).

d) A GW-3 source area monitoring well, GMA3-6 (also listed above as a new GW-2 compliance well), shall be added to the Baseline Monitoring Program near the former Building 109 Wastewater Tank Farm, to provide source characterization data.

e) Two additional GW-3 downgradient perimeter monitoring points, GMA3-5 and 82B, are required southeast of Building OP-3, to provide adequate groundwater quality and hydrologic coverage for the area.

5. EPA shall require GE to analyze NAPL for Appendix IX parameters wherever NAPL is detected in GW-2 compliance areas, in accordance with the NAPL Performance Criteria specified in the Statement of Work for Removal Actions Outside the River (SOW). If NAPL is not detected during a given sampling round in a GW-2 compliance well that has previously contained NAPL, the groundwater should be sampled and analyzed for GW-2 compliance parameters. Analytical results for either NAPL or groundwater in a GW-2 well shall be evaluated for compliance with GW-2 standards.

6. The Building 51/59 LNAPL plumes have not been sampled since 1996. The plumes appear to consist of LNAPL from two different sources consisting of 10C mineral oil and No. 6 fuel oil. Current physical and chemical characterization data is required for these two LNAPL sources. GE shall propose additional NAPL sampling activities to be conducted at the Building 51/59 LNAPL plumes in the addendum to the GMA-3 Baseline Monitoring Program Proposal, which is specified in EPA Condition 10.

7. To adequately contour the groundwater elevations on the western side of GMA-3, GE shall coordinate the collection of groundwater level measurements with GMA-4 and present groundwater contour maps in future GMA-3 reports that utilize both the GMA-3 and GMA-4 groundwater elevation data.

8. Additional characterization data is required for the Former Waste Stabilization Basin outfall locations. GE shall install borings in this area as part of the pre-design soil investigations for the Unkamet Brook RAA. If these borings indicate potential NAPL sources, GE shall propose additional investigation activities to further characterize these potential NAPL sources.

9. GE shall install an additional staff gauge along Unkamet Brook and another on the unnamed brook south of Building OP-3 (former Unkamet Brook channel), for

inclusion in the quarterly groundwater elevation monitoring. The two additional staff gauge locations are depicted on Figure 1 and are listed below:

- Upper Unkamet Brook – at Dalton Avenue (SG-3)
- At the confluence of the unnamed brook and its tributary – north-northwest of well cluster 90 (SG-4).

10. GE shall address the conditions in this letter by providing an addendum to the GMA-3 Baseline Monitoring Program Proposal, for EPA's review and approval. The addendum shall include a revised schedule for the GMA-3 baseline monitoring activities.

EPA reserves its right to perform additional sampling in the area subject to the GMA-3 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,

M.J. Nalipinski

Michael Nalipinski
GE Facility Project Manager

Attachments

cc: John Novotny, GE
J. Lyn Cutler, MDEP
Sue Keydel, MDEP
Bryan Olson, US EPA
Holly Inglis, US EPA
John Kilborn, US EPA
K.C. Mitkevicius, USACE
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)
Site File

# Table 1
# GE/Housatonic River Project
# Proposed GMA 3 Baseline Monitoring Wells

| Well ID | Compliance Type | Well Type | Rationale |
|---|---|---|---|
| 2A | Natural Attenuation Monitoring | Water Table | Adjacent to Former Waste Stabilization Basin |
| 6B | Perimeter GW-3 | Shallow Aquifer | Adjacent to Former Waste Stabilization Basin |
| 16A | Natural Attenuation Monitoring | Middle Aquifer | 250 feet downgradient of Former Waste Stabilization Basin |
| 16B-R | Sentinel GW-2, Perimeter GW-3 & Natural Attenuation Monitoring | Shallow Aquifer | 250 feet downgradient of Former Waste Stabilization Basin |
| 16C | Natural Attenuation Monitoring | Deep Aquifer | 250 feet downgradient of Former Waste Stabilization Basin |
| 16E | Natural Attenuation Monitoring | Very Deep Aquifer | 250 feet downgradient of Former Waste Stabilization Basin |
| 33B | Sentinel GW-2 | Shallow Aquifer | Monitor one of the buildings south of Merrill Road. |
| 34B | Sentinel GW-2 & Perimeter GW-3 | Shallow Aquifer | Sentinel well near Building 59 and downgradient perimeter well near southern boundary of GMA 3. |
| 39B | Natural Attenuation Monitoring | Shallow Aquifer | Adjacent to Former Waste Stabilization Basin |
| 39D | Natural Attenuation Monitoring | Deep Aquifer | Adjacent to Former Waste Stabilization Basin |
| 39E | Natural Attenuation Monitoring | Very Deep Aquifer | Adjacent to Former Waste Stabilization Basin |
| 43A | Natural Attenuation Monitoring | Middle Aquifer | Upgradient of groundwater plume south of Dalton Avenue |
| 43B | Natural Attenuation Monitoring | Shallow Aquifer | Upgradient of groundwater plume south of Dalton Avenue |
| 51-14 | Sentinel GW-2 | Water Table | Sentinel well between Buildings 52 and 119 |
| 54B | Perimeter GW-3 | Shallow Aquifer | Eastern perimeter monitoring well |
| 74B | Sentinel GW-2 | Shallow Aquifer | Monitor area near Buildings 105 and 125 and Interior Landfill. |
| 78B-R | Perimeter GW-3 | Shallow Aquifer | Perimeter well near southern boundary of former Interior Landfill |
| 82B | Perimeter GW-3 | Shallow Aquifer | Downgradient perimeter well southeast of Building OP-3 |
| 89A | Natural Attenuation Monitoring | Middle Aquifer | Middle of groundwater plume downgradient of former Waste Stabilization Basin |
| 89B | Perimeter GW-3 & Natural Attenuation Monitoring | Shallow Aquifer | Middle of groundwater plume downgradient of former Waste Stabilization Basin |
| 89D | Natural Attenuation Monitoring | Deep Aquifer | Middle of groundwater plume downgradient of former Waste Stabilization Basin |
| 90A | Natural Attenuation Monitoring | Middle Aquifer | East side of groundwater plume downgradient of former Waste Stabilization Basin |
| 90B | Perimeter GW-3 & Natural Attenuation Monitoring | Shallow Aquifer | East side of groundwater plume downgradient of former Waste Stabilization Basin |
| 95A | Natural Attenuation Monitoring | Middle Aquifer | Middle of groundwater plume downgradient of former Waste Stabilization Basin |

# Table 1
## GE/Housatonic River Project
## Proposed GMA 3 Baseline Monitoring Wells

| Well ID | Compliance Type | Well Type | Rationale |
|---|---|---|---|
| 95B | Perimeter GW-3 & Natural Attenuation Monitoring | Shallow Aquifer | Middle of groundwater plume downgradient of former Waste Stabilization Basin |
| 95C | Natural Attenuation Monitoring | Deep Aquifer | Middle of groundwater plume downgradient of former Waste Stabilization Basin |
| 111A | Natural Attenuation Monitoring | Middle Aquifer | West side of groundwater plume downgradient of former Waste Stabilization Basin |
| 111B | Perimeter GW-3 & Natural Attenuation Monitoring | Shallow Aquifer | West side of groundwater plume downgradient of former Waste Stabilization Basin |
| 114A | Natural Attenuation Monitoring | Middle Aquifer | Distal (downgradient) end of groundwater plume near the Housatonic River |
| 114B | Perimeter GW-3 & Natural Attenuation Monitoring | Shallow Aquifer | Distal (downgradient) end of groundwater plume near the Housatonic River |
| 114C | Natural Attenuation Monitoring | Deep Aquifer | Distal (downgradient) end of groundwater plume near the Housatonic River |
| OBG-2 | Sentinel GW-2 | Water Table | Sentinel well near Building OP-3, replaces OBG-1 |
| *GMA3-1* | Perimeter GW-3 | Water Table | Downgradient perimeter well near former Interior Landfill and Unkamet Brook (SOW well PROP-15) |
| *GMA3-2* | Sentinel GW-2 | Water Table | Sentinel well downgradient of Former Waste Stabilization Basin |
| *GMA3-3* | Perimeter GW-3 | Water Table | Ugradient perimeter well south of Dalton Avenue, replaces 43B and 50B |
| *GMA3-4* | Sentinel GW-2 | Water Table | Sentinel well near Buildings 51 and 105, replaces well 27B |
| *GMA3-5* | Perimeter GW-3 | Water Table | Downgradient perimeter well southeast of Building OP-3 |
| *GMA3-6* | Sentinel GW-2 & GW-3 Source | Water Table | Sentinel/source well near Building 109, replaces 101B |

Wells in italics are new wells to be constructed.

**Solid Waste Management Units (SWMU's)**

| Swmu Id | Name | Material |
|---|---|---|
| G-11 | Interior Landfill | Phenolic resins & PCBs |
| G-12 | Former Waste Stabilization Basin | Chlorobenzene, benzene, TCE, methylene chloride & phenol |
| O-46 | Bldg. OP-1 Circuit Design Lab Sump | Hydrofluoric acid, Hydrochloric acid, Sulfuric acid |
| O-45 | Bldg. OP-3 Abandoned Storage Tank | Hydrofluoric acid; Nickel; Chromium |
| O-41 | Bldg. OP-3 Metal Treat Area | Sulfuric acid; Chromic acid |
| G-17 | Bldg. 119W Oil/Water Separator | Wastewater contains oil & grease & hazardous constituents |
| P-K | Plastics Division Inactive Product USTs | No. 2 fuel oil |
| P-4 | Bldg. 109 Wastewater Tank Farm | Acid, Caustic, Toluene, Methylene Chloride & Methanol |
| O-8 | Bldg. 51 Elementary Neutralization Unit | Acidic and caustic wastewater, and precipitated metals |
| O-B | Bldg. 51 Underground Drainage Pipe | Acidic washwater |
| P-G/I | Plastics Division Inactive Product USTs | Unknown raw materials |
| P-J | Plastics Division Inactive Product UST | No. 2 fuel oil |
| | Former Fuel Oil UST 51-05 | |
| | Former Fuel Oil UST 51-01 | |
| | Former Benzene/Phenol UST's P-D, P-E, and P-F | |



Housatonic River Project
Pittsfield, Massachusetts

**FIGURE 1**
**PROPOSED GMA3**
**MONITORING LOCATIONS**

[ o:/gepitt/aprs/gma-3.apr | layout - Fig1-epa | o:\gepitt\epsfiles\portrait24x36\ln\gma-3-epa-final.eps | 9:36 AM, 11/20/2001 ]