



SDMS - 39239

01-0462

Corporate Environmental Programs
General Electric Company
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Transmitted Via Facsimile and Overnight Courier

March 20, 2002

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EPA New England
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Boston, Massachusetts 02114-2023

Dean Tagliaferro
On Scene Coordinator
U.S. Environmental Protection Agency
c/o Roy F. Weston, Inc.
10 Lyman Street, Suite 2
Pittsfield, Massachusetts 01201

Re: **GE-Pittsfield/Housatonic River Site
Upper ½-Mile Reach Removal Action (GECD800) and Plant Site 1 Groundwater
Management Area (GMA 1) (GECD310)
Proposal for Assessment Impact of High Flow Conditions in Vicinity of Cell G2 Sheetpile
Containment Barrier**

Dear Messrs. Olson and Tagliaferro:

On November 28, 2001, GE submitted a document entitled *Results of Cell J1 DNAPL Investigation and Proposal to Address Presence of DNAPL in Cell J1* (Cell J1 Proposal). On December 17, 2001, EPA issued a response that conditionally approved the installation of the sheetpile component of GE's proposal, but not the proposed excavation or monitoring activities. In response, GE submitted a revised figure illustrating the estimated elevation of the apparent confining layer in the area on January 2, 2002. Shortly after, on January 7, 2002, EPA issued an interim conditional approval of the proposed excavation and restoration components for Cell J1. Finally, on March 11, 2002, EPA issued a final conditional approval addressing the remaining elements of the above referenced submittal -- i.e., the monitoring component.

One of the conditions listed in the March 11, 2002 letter requires GE to collect groundwater elevation measurements during at least one high flow event, using water level data loggers, in the vicinity of one of the permanent sheetpile containment barriers installed in the Upper ½-Mile Reach of the Housatonic River. This *Proposal for Assessment Impact of High Flow Conditions in Vicinity of Cell G2 Sheetpile Containment Barrier* outlines the objective of this monitoring, the subject sheetpile barrier location, wells to be monitored, monitoring procedures, and reporting schedule. GE will address the remaining conditions included in EPA's March 11, 2002 letter in future correspondence related to Cell J1.

Objective of High Flow Monitoring

The objective of this assessment is to determine whether high river stages may potentially alter groundwater flow conditions in the vicinity of the sheetpile containment barriers such that hydraulic control/containment of light non-aqueous phase liquid (LNAPL) by the sheetpile barriers is compromised.

Description of Cell G2 Area

GE, in consultation with EPA, has selected Cell G2 to conduct this assessment of high flow conditions. This area is shown on Figure 1. As part of the initial investigation associated with installation of the sheetpile containment barrier, GE installed three perimeter monitoring wells and one temporary NAPL recovery well on the landward side (i.e., north) of the containment barrier. Specifically, GE installed one monitoring well (HR-G2-MW-1) outside the east end of the containment barrier and one well (HR-G2-MW-2) between the ends of the containment barrier, and a third monitoring well (HR-G2-MW-3) outside the west end of the containment barrier. Finally, GE installed an angled well (HR-G2-RW-1) between the ends of the containment barrier on January 22, 2001, to potentially be utilized as a NAPL recovery well in the event that recoverable quantities of NAPL were present in this area. Two other older upgradient monitoring wells (ES2-2A and ES2-7) are also present in the vicinity of the Cell G2 containment barrier and are proposed to be utilized in this assessment.

Following well installation and development, GE initially monitored the wells on a weekly basis to confirm that NAPL is not present outside the limits of the containment barrier and to assess whether additional investigative or response actions are appropriate. Currently, the wells are monitored on a monthly basis as part of the routine groundwater and NAPL monitoring program for the Plant Site 1 Groundwater Management Area (GMA 1). To date, LNAPL has only been periodically observed in the recovery well (HR-G2-RW-1), each time at the minimum measurable thickness of 0.01 feet. However, LNAPL has not been detected in any of the perimeter or upgradient Cell G2 wells. DNAPL has not been observed in any of the wells in this area, including the recovery well. A slight groundwater mound has been identified behind the Cell G2 sheetpile, at well HR-G2-MW-2. The magnitude of this apparent mound (approximately 0.2 feet) is within the range predicted from prior groundwater flow modeling for this area.

Proposed Field Activities

To determine whether the degree of groundwater mounding behind the sheetpile barriers is temporarily altered during high flow events, GE will install automated data loggers in the five monitoring wells associated with the Cell G2 sheetpile containment barrier. Due to the angled construction of the Cell G2 recovery well, a data logger will not be installed in well HR-G2-RW-1. GE will also install a sixth data logger within the river, preferably near the sheetpile containment barrier, provided that a location can be identified where the data logger can be safely and securely installed and accessed during a high flow event. If such a location cannot be identified in the field, GE will utilize river level data from the Coltsville, Massachusetts United States Geological Survey gauging station.

Initially, the data loggers will be set up to record groundwater elevations at an extended interval (e.g. 8 to 24 hours, depending on available instrument options) to provide a background data set. Upon onset of a high flow event (defined as peak river flows in excess of 1,000 cubic feet per second as measured at the Coltsville gauging station), the data loggers will be re-set to collect readings on an hourly basis for the duration of the high flow event. Readings will continue to be collected until the groundwater elevations have stabilized.

In addition, GE will manually collect groundwater elevation readings at each of the monitoring wells, as well as at recovery well HR-G2-RW-1 to supplement the automated data collection and to assist in data processing. GE will perform three rounds of this manual monitoring during the first day of a high flow event, and will monitor on a daily basis until the groundwater elevations have stabilized.

At the completion of the first high flow event, GE will download the data from the data loggers and perform a preliminary quality assessment to identify any apparent instrument malfunctions or data omissions. If such data deficiencies are identified, GE may leave the data loggers in place to record the next high flow event.

Reporting

Once a suitable data set is obtained, GE will process the data and prepare a brief summary report to be submitted to EPA. That report will describe the field activities undertaken and present the results in tabular and graphic formats. GE will also present groundwater elevation contour maps developed from the background monitoring data and at key stages of the high flow event. Finally, the report will assess whether the high river stage which was monitored altered groundwater flow conditions in the vicinity of the sheetpile containment barrier such that hydraulic control/containment of LNAPL by the sheetpile barriers may not have been maintained during a portion of the event. If necessary, GE may also propose to perform additional field activities or an assessment of additional hydraulic controls to be implemented during high flow events.

Schedule

GE proposes to install the data loggers in the wells by April 10, 2002, assuming timely approval of this proposal by EPA and availability of the appropriate equipment. The remaining activities are subject to weather conditions and cannot be definitively scheduled at this time. Following installation, GE will obtain river flow data from the Coltsville gauging station on a daily basis until a high flow event is identified. At that point, GE will begin the high flow assessment and continue to collect data until the river flow levels off.

After collection and processing of the field data, GE will prepare a summary report containing the elements described above. GE will submit that report for EPA review within 30 days following completion of the field activities.

If you have any questions, please feel free to contact me.

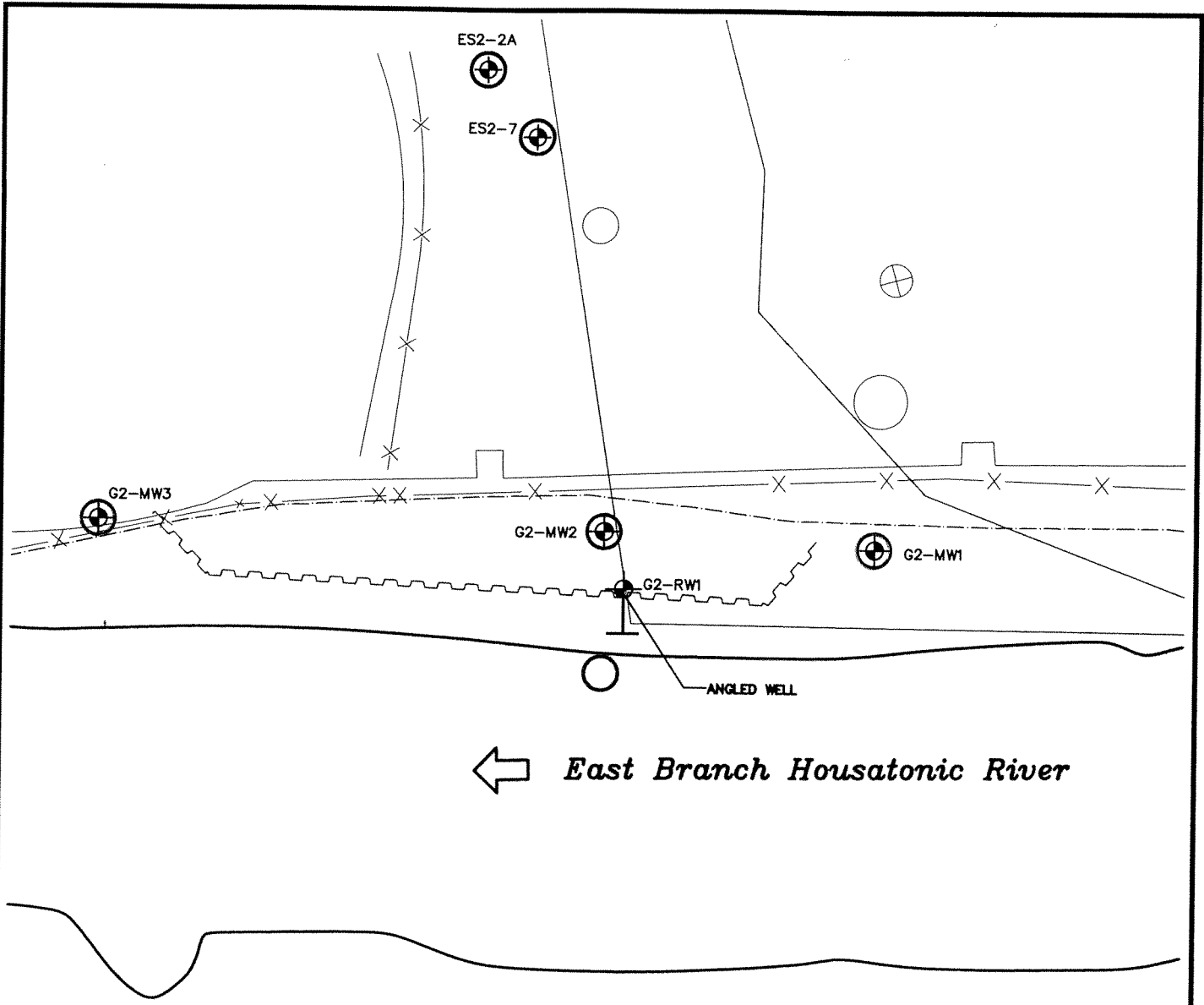
Sincerely,



Andrew T. Silfer, P.E.
GE Project Coordinator

Enclosure

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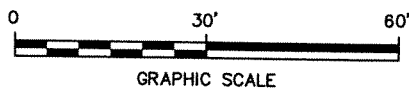
← *East Branch Housatonic River*


NOTES:

1. MAPPING IS BEST AVAILABLE INFORMATION AS OF 12/10/98 BASED ON MAPPING PROVIDED BY LOCKWOOD MAPPING, INC. PREPARED FROM 1990 AERIAL PHOTOGRAPHY; DATA PROVIDED BY GENERAL ELECTRIC; AND BLASLAND AND BOUCK, P.C. CONSTRUCTION PLANS. RIVERBANK AND RIVER BED TOPOGRAPHIC INFORMATION PROVIDED BBL FROM OCTOBER 12-23, 1998 FIELD SURVEY.
2. THE LOCATION OF THE AUTOMATED MONITORING LOCATION WITHIN THE RIVER IS SUBJECT TO CHANGE BASED ON FIELD CONDITIONS.

LEGEND:

-  CONTAINMENT BARRIER LOCATION
-  ES2-2A
-  MONITORING WELL LOCATION
-  AUTOMATED MONITORING LOCATION



GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS PLANT SITE 1 GROUNDWATER MANAGEMENT AREA	
HIGH FLOW MONITORING LOCATIONS	
 BLASLAND, BOUCK & LEE, INC. <i>engineers & scientists</i>	FIGURE 1