



01-0433

Corporate Environmental Programs  
General Electric Company  
100 Woodlawn Avenue, Pittsfield, MA 01201

*Transmitted Via Federal Express*

October 30, 2001

Mr. Bryan Olson  
EPA Project Coordinator  
U.S. Environmental Protection Agency  
EPA New England  
One Congress Street, Suite 1100  
Boston, Massachusetts 02114-2023

**Re: GE- Pittsfield/Housatonic River Site  
On-Plant Consolidation Areas (GECD200)  
Proposal for Geophysical Survey - Hill 78 OPCA**

Dear Mr. Olson:

This letter summarizes the General Electric Company's (GE's) proposed activities related to the performance of a geophysical survey for portions of the Hill 78 On-Plant Consolidation Area (OPCA) in Pittsfield, Massachusetts. The scope of such activities has been previously discussed between GE and the U.S. Environmental Protection Agency (EPA) on several occasions over the last two years in the context of EPA's review and approval of various GE work plans (and related documents) associated with the Hill 78 and Building 71 OPCAs. The contents of this letter are therefore consistent with the approach previously discussed with EPA (summarized below). Supplemental information concerning the performance of the geophysical survey is included herein.

## **I. Background**

In June 1999, GE prepared a document titled *Detailed Work Plan for On-Plant Consolidation Areas* (Detailed Work Plan). In a letter dated July 6, 1999, EPA provided conditional approval of the Detailed Work Plan, and required that GE address certain EPA comments. In response, on August 12, 1999, GE submitted an Addendum to the Detailed Work Plan, and EPA comments regarding the Addendum were provided in a letter dated April 27, 2000. Then, in a letter dated June 13, 2000, GE responded to comments contained in EPA's July 6, 1999 and April 27, 2000 letters.

Specific to the performance of a geophysical survey for portions of the Hill 78 OPCA, the general scope of activities was initially presented in GE's August 12, 1999 Addendum. As outlined therein, GE proposed a geophysical survey focusing on two areas of the Hill 78 OPCA: 1) portions of the outer perimeter associated with the anticipated final configuration of the Hill 78 OPCA; and 2) the area of existing monitoring well H78B-8R where non-aqueous phase liquid (NAPL) has been observed. As noted in GE's letter of June 13, 2000, EPA concurred with GE's proposed approach, but required that GE submit a written proposal and obtain EPA approval for the geophysical survey 30 days prior to the initiation of fieldwork. Further, EPA required that the geophysical survey be completed prior to expanding the Hill 78 OPCA south of the current access road. In subsequent letters of September 8, 2000, and March 9, 2001, GE clarified that it would not place any materials in the portions of the Hill 78

OPCA subject to the survey and related investigations until the survey and related investigations were completed. Details pertaining to the proposed geophysical survey activities, potential future activities to respond to potential anomalies detected during the survey, and a schedule for implementation of such activities are provided below.

## **II. Proposed Geophysical Survey Activities**

Consistent with its prior proposal to EPA, the proposed geophysical survey will focus on the outer perimeter of the anticipated final configuration of the Hill 78 OPCA and an area around an existing monitoring well within the Hill 78 perimeter (monitoring well H78B-8R). The proposed locations and scope of the geophysical survey activities, as well as anticipated field procedures, are described below.

### **A. Hill 78 OPCA**

Based on the anticipated final configuration of the Hill 78 OPCA, a geophysical survey will be performed within an approximate 50-foot-wide band centered along the anticipated outer perimeter of the final OPCA. A figure depicting the general areas subject to the geophysical survey is attached to this letter (Figure 1). To the extent possible, GE will avoid clearing large amounts of vegetation in order to perform the geophysical survey. Additionally, the approximate 50-foot-wide band may need to be modified in certain areas due to the presence of permanent structures (e.g., roadways, buildings, etc.) which limit access or due to other existing site features. Such areas include the following:

- North of the Former Hill 78 Landfill - Due to the presence of security fencing located to the north of the former Hill 78 Landfill, the limits of the geophysical survey have been reduced to an approximate 25- to 40-foot width for approximately 500 linear feet, as shown on Figure 1.
- South of the Former Hill 78 Landfill - Due to the presence of the Pittsfield Generating Company Facility, geophysical survey activities may not be able to be performed over a portion (approximately 300 linear feet) in this area.
- East of the Hill 78 OPCA Perimeter - In the planned final configuration of the OPCAs, the Building 71 OPCA will partially extend onto the Hill 78 OPCA. In this area, the limits of the geophysical survey have been reduced to an approximate 25-foot-wide band (see Figure 1) since the extent of the final cover system will encompass this area.

Details pertaining to the collection and evaluation of geophysical data (i.e., equipment to be utilized, anticipated survey design, etc.) are further discussed in Section C below.

### **B. Monitoring Well H78B-8R**

In addition to the performance of geophysical survey activities along the anticipated outer perimeter of the final Hill 78 OPCA, a geophysical survey will be performed in the area of existing monitoring well H78B-8R. As shown on Figure 1, an approximate 25-foot by 25-foot area (centered on monitoring well H78B-8R) will be subject to the geophysical survey. Details pertaining to the collection and evaluation of geophysical data (i.e., equipment to be utilized, anticipated survey design, etc.) are further discussed in Section C below.

### C. Field Procedures

Prior to the performance of geophysical survey activities, a ground survey will be performed to establish the general areas subject to the geophysical survey (i.e., the centerline and outer edges of the perimeter survey area and the area associated with well H78B-8R). Once the survey limits have been established, the geophysical survey will be performed.

The geophysical survey will be performed by Geophysical Applications, Inc., using electromagnetic (EM) methods. To the extent possible (based on accessibility considerations), a Geonics Model EM-61 time domain metal detector will be used to obtain the geophysical data. This device contains vertically-aligned, one meter by one meter transmitter and receiver coils separated by 40 centimeters. The transmitter generates a pulsed primary magnetic field in the earth, which induces eddy currents in nearby metallic objects and a secondary magnetic field that is measured by the receiver coil. The system can be trailer-mounted and pulled over the survey area with readings collected approximately every 0.6 feet. The instrument can also be carried utilizing a shoulder harness and set to record up to three readings per second. Under either approach, the spacing of the transects will be field determined; however, a spacing of 3 to 10 feet is anticipated.

If portions of the survey area are inaccessible with the EM-61, a Geonics Model EM-31 terrain conductivity meter will be used to obtain the geophysical data. This device contains transmitter and receiver coils in either end of a 13-foot-long boom. The fixed inter-coil spacing allows the EM-31 to detect lateral variations in electrical conductivity while the instrument is carried along transects that are perpendicular to the centerline of the survey area. During the performance of any supplemental EM-31 geophysical survey, two components will be recorded: 1) electromagnetic (EM) conductivity values that respond to metallic and non-metallic sources of elevated conductivity; and 2) EM in-phase values that respond primarily to metallic objects. Both of these values will be recorded at 0.5-second time intervals. EM values will be recorded at approximately 2- to 3-foot distance intervals along the transects.

Following collection of EM data, EM-61 contour maps (and EM-31 contour maps, if necessary) will be prepared and examined for potential anomalies. These contour maps will be included in the letter report to EPA (discussed below) that summarizes the results of the geophysical survey activities.

### **III. Observations of Potential Anomalies**

The results of this initial geophysical survey will be evaluated to identify potential subsurface anomalies (if any). If warranted based upon the initial results, additional geophysical survey methods (e.g., ground-penetrating radar, electrical resistivity) may be utilized to further evaluate the nature, depth, and potential size of the features that may be causing the anomalies. Following completion of the geophysical survey(s), a report will be submitted to EPA which will identify the location(s) and characteristics of the geophysical anomalies and will present a proposal regarding further activities. As provided in GE's August 12, 1999 Addendum, if such anomalies are identified and depending on their location, GE will consider and implement one of the two options discussed below:

1. GE may install a soil boring hydraulically downgradient of the anomaly. The boring will be advanced until the water table is encountered, with representative soil samples collected at 2-foot depth intervals for visual classification and screening of organic vapors using a photionization detector (PID). In the event that a possible source of contamination is identified (e.g., foreign materials, visual evidence of NAPL, or elevated PID readings) GE will review existing hydrogeologic information that is available for the area in question to assess downgradient

migration potential. If the existing information is not sufficient to support such an assessment, GE will install a new monitoring well downgradient of the area and/or extend the cover system over the area containing the anomaly.

2. In lieu of subsurface investigations in response to a detected anomaly, GE may elect to extend the final cover system into the area in question.

The need for and scope of any follow-up activities based on the results of the geophysical survey will be addressed in the previously referenced summary letter.

#### IV. Schedule

From an overall timing perspective, GE anticipates that an expansion of the Hill 78 OPCA may be necessary as early as spring 2002, and anticipates performing any related expansion designs before such time (i.e., probably during early 2002). Therefore, GE would like to proceed with the geophysical survey this fall.

The proposed geophysical survey activities outlined above will be implemented following EPA approval of this proposal. Once the initial survey (and any necessary follow-up geophysical work) is performed, GE will prepare a letter report that summarizes the results and contains proposals for further activities if warranted. It is anticipated that the field activities will take approximately 1 to 2 weeks. Accordingly, GE proposes to submit that report within 45 days from EPA's approval of this proposal.

Please feel free to contact me at (413) 494-3177 with any questions or comments.

Sincerely,

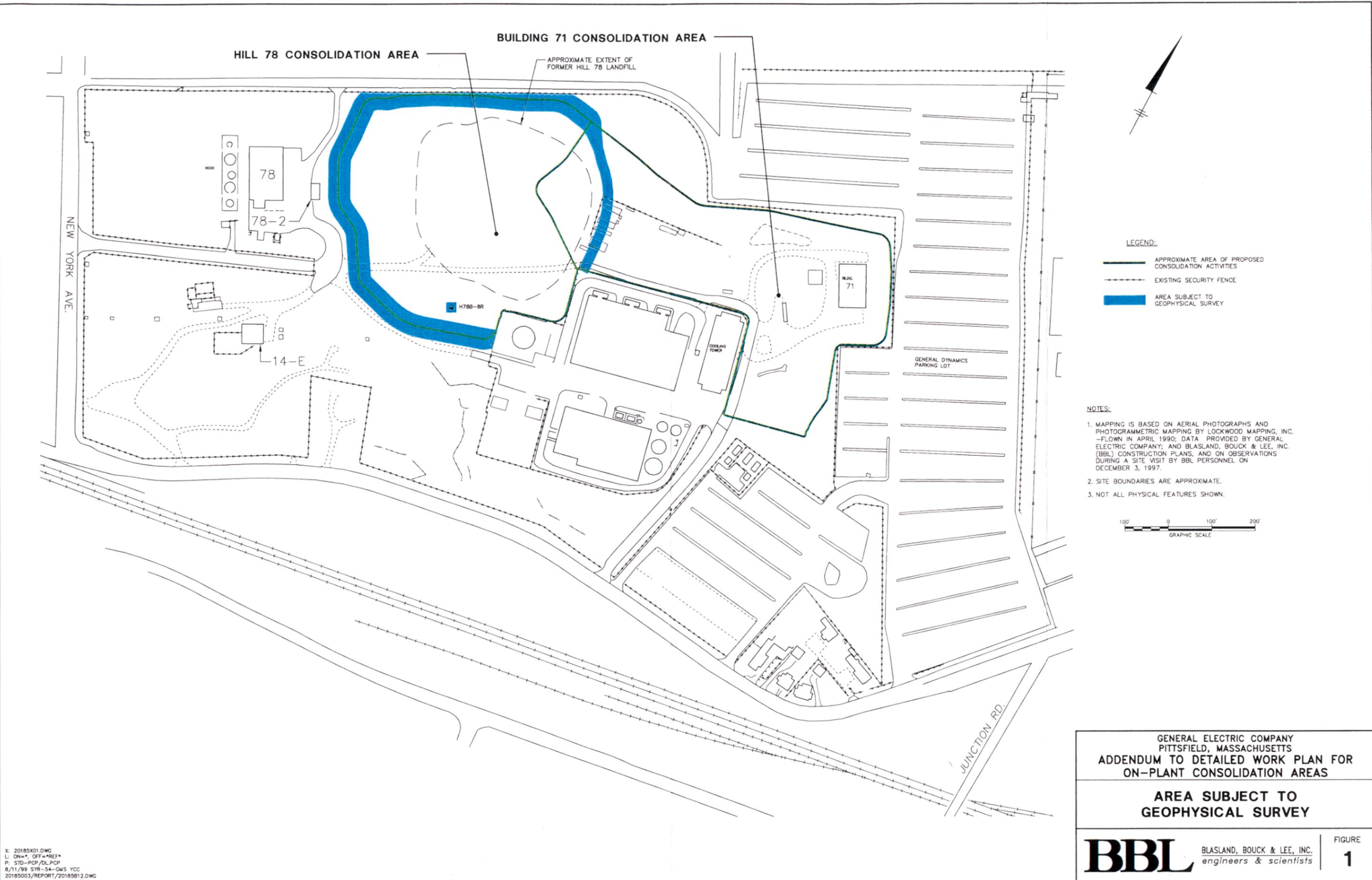


John F. Novotny, P.E.  
Manager - Facilities & Brownfields Programs

JJL/meg  
Attachment

cc: M. Nalipinski, EPA  
T. Conway, EPA  
H. Inglis, EPA  
K.C. Mitkevicius, USACE  
D. Jamros, Weston  
A. Weinberg, MDEP (cover letter only)  
R. Bell, MDEP (cover letter only)  
J.L. Cutler, MDEP (2 copies)  
S. Keydel, MDEP  
T. Angus, MDEP (cover letter only)  
Mayor G. Doyle, City of Pittsfield  
T. Hickey, Director, PED

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T. Bowers, Gradient  
N.E. Harper, MA AG  
D. Young, MA EOE  
M. Carroll, GE  
R. Gates, GE  
R. McLaren, GE  
J. Bieke, Shea & Gardner  
J. Nuss, BBL  
J. Ciampa, SPECTRA  
Public Information Repositories  
GE Internal Repositories



HILL 78 CONSOLIDATION AREA

BUILDING 71 CONSOLIDATION AREA

APPROXIMATE EXTENT OF FORMER HILL 78 LANDFILL

LEGEND:

- APPROXIMATE AREA OF PROPOSED CONSOLIDATION ACTIVITIES
- EXISTING SECURITY FENCE
- AREA SUBJECT TO GEOPHYSICAL SURVEY

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. - FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY; AND BLASLAND, BOUCK & LEE, INC. (BBL) CONSTRUCTION PLANS, AND ON OBSERVATIONS DURING A SITE VISIT BY BBL PERSONNEL ON DECEMBER 3, 1997.
2. SITE BOUNDARIES ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.



GENERAL ELECTRIC COMPANY  
PITTSFIELD, MASSACHUSETTS  
ADDENDUM TO DETAILED WORK PLAN FOR  
ON-PLANT CONSOLIDATION AREAS

**AREA SUBJECT TO  
GEOPHYSICAL SURVEY**

**BBL** BLASLAND, BOUCK & LEE, INC.  
engineers & scientists

X: 20185X01.DWG  
L: ONA\*, OFF\*REF\*  
P: STD-PCP/DL/PCP  
8/11/99 SYR-S4-GMS YCC  
20185003/REPORT/20185812.DWG