



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

Transmitted Via Federal Express

October 22, 2004

Mr. William P. Lovely, Jr.
U.S. Environmental Protection Agency
EPA New England
One Congress Street, Suite 100
Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site
East Street Area 2-South (GECD150)
Interim Letter Report – Proposed Additional RD/RA-Related Investigations

Dear Mr. Lovely:

On February 12, 2004, the General Electric Company (GE) submitted a document to the U.S. Environmental Protection Agency (EPA) titled *Addendum to Supplemental Pre-Design Investigation Report* (Supplemental PDI Report Addendum). That document provided supplemental information related to certain EPA-approved pre-design investigation activities performed by GE for the East Street Area 2-South Removal Action Area (RAA) in Pittsfield, Massachusetts (Figure 1), pursuant to the Consent Decree (CD) for the GE-Pittsfield/ Housatonic River Site. That document also noted that GE would initiate the Removal Design/Removal Action (RD/RA) evaluations necessary to prepare the Conceptual RD/RA Work Plan (Conceptual Work Plan) for this RAA, and would submit an Interim Letter Report indicating whether GE had identified any additional data needs in the course of performing those RD/RA evaluations, and, if so, describing those data needs and setting forth a proposal and schedule for addressing them, along with a schedule for submitting the Conceptual Work Plan. EPA conditionally approved the Supplemental PDI Report Addendum in a letter to GE dated April 26, 2004. The present letter constitutes GE's Interim Letter Report on additional data needs.

I. Background

Upon receipt of EPA's April 26, 2004 conditional approval letter, and in accordance with the Supplemental PDI Report Addendum, GE initiated RD/RA evaluations as necessary to prepare the Conceptual Work Plan. These evaluations were based on the existing soil data for both PCBs and other constituents listed in Appendix IX of 40 CFR 264 (excluding pesticides and herbicides), plus benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX +3). Such evaluations were performed to assess the need for and extent of soil remediation and the need for and scope of additional sampling to develop the Conceptual Work Plan for such remediation. In accordance with the *Statement of Work for Removal Actions Outside the River* (SOW), the specific averaging areas subject to these evaluations are as follows:

- 60s Complex, Averaging Area 4A;
- Former Gas Plant/Scrap Yard Area, Averaging Area 4B;
- City Recreational Area (CRA), Averaging Area 4C (0- to 3-foot depth increment previously evaluated, 3- to 15-foot depth increment evaluated as part of Averaging Area 4B);
- 200 Foot Industrial Averaging Strip, Averaging Area 4D; and
- 200 Foot Riparian Removal Zone (RRZ), Averaging Area 4E.

All of these averaging areas are considered commercial/industrial areas under the CD and SOW, with the exception of Averaging Area 4E (200-foot RRZ) and the top three feet of Averaging Area 4C (CRA), which are considered recreational areas. All of these areas are owned by GE (with the CRA leased to the City of Pittsfield) and all will be subject to Grants of Environmental Restrictions and Easements (EREs).

During the course of these preliminary evaluations, GE identified a number of data needs that should be addressed prior to preparation of the Conceptual Work Plan. These data needs relate to: (1) the collection of additional PCB and non-PCB soil data from the 200-Foot RRZ (Averaging Area 4E) to address changes to the boundary of this area and potential changes to the extent of the vegetative engineered barrier in this area; (2) additional PCB investigations to characterize utility corridors; and (3) additional soil sampling to delineate elevated levels of certain non-PCB constituents which GE's preliminary evaluations indicate will need to be remediated and will not be addressed by the PCB-related remediation.

The remainder of this Interim Letter Report describes the data needs identified during GE's preliminary RD/RA evaluations, proposes additional soil sampling activities to satisfy the identified data needs, and provides a proposed schedule for future investigation and reporting activities. Several tables and figures were developed to supplement this report. Table 1 presents a summary of the PCB and non-PCB soil samples proposed herein; Table 2 presents information regarding the PCB samples that will satisfy grid-based sampling requirements in the additional portions of Averaging Area 4E that have been added to that area or may not be covered by an engineered barrier (as discussed further in Section II); and Table 3 presents some additional information used in screening non-PCB compounds (as discussed in Section IV). Figure 2 shows the proposed additional sampling locations for PCBs, while Figures 3 through 5 depict the additional sampling locations for non-PCB constituents in the 0- to 1-foot, 1- to 3-foot, and 3- to 6-foot depth increments, respectively.

II. Additional Investigations for Averaging Area 4E

As indicated in recent discussions with EPA, GE has agreed to modify the extent of the RRZ that comprises Averaging Area 4E. This modification will include the addition to the RRZ of an area measuring approximately 20,000 square feet that will be subject to the Natural Resource Restoration/Enhancement Activities specified in Attachment I of the SOW, in lieu of similar activities at an approximate 20,000 square foot section of Parcel I9-8-1 (the GE Lyman Street Parking Lot) located within the Lyman Street Area. In support of this modification, GE is proposing to extend the northern boundary of Averaging Area 4E approximately 15 feet to the north, as shown on Figure 2.

Based on this proposed modification, GE has evaluated the need for additional data to satisfy the pre-design sampling requirements for Averaging Area 4E. Such an evaluation is necessary since Averaging Area 4E was subject to the grid-based surface sampling requirements for recreational areas (i.e., a 50-foot grid), while adjacent Averaging Areas 4A and 4B (which abut the northern boundary of Averaging Area 4E) were subject to the grid-based sampling requirements for commercial/industrial areas (i.e., a 100-foot grid).

The results of that evaluation indicated that the collection of additional surface soil samples (0- to 1-foot depth increment) for analysis of PCBs is appropriate at the following ten locations (shown on Figure 2): RAA4-HH30, RAA4-I28, RAA4-J27, RAA4-L9, RAA4-L10, RAA4-L19, RAA4-L23, RAA4-N3, RAA4-N4, and RAA4-N6. Since these additional PCB samples are proposed to satisfy grid-based sampling requirements for Averaging Area 4E, GE also proposes to submit samples from locations RAA4-N4, RAA4-N6, and RAA4-J27 for analyses of other Appendix IX+3 constituents (approximately one-third of the samples proposed for PCB analysis), as shown on Figure 3.

In addition to this modification, GE has further evaluated the need for and desirability of installing a vegetative engineered barrier over the entire area where such a barrier was assumed to be needed in prior submittals on East Street Area 2-South (as shown on Figure 2). Specifically, based on a more detailed review and evaluation of the data, GE is considering the removal and replacement of soil in portions of this area, so as to achieve the applicable PCB Performance Standards for recreational areas (i.e., less than 10 ppm PCB average in the top foot, less than 15 ppm PCB average in the 1- to 3-foot depth increment, and less than 100 ppm PCB average in the top 15 feet) in such portions. Under such an approach, the vegetative engineered barrier would be limited to a smaller area in the eastern portion of the RRZ.

To allow for the proposal of such an approach in the Conceptual Work Plan, GE proposes to collect additional surface soil (0- to 1-foot) samples for PCB analysis within certain portions of the RRZ that were previously assumed to be subject to the engineered barrier but may, instead, be subject to soil removal and replacement. Such sampling is necessary to complete the 50-foot grid-based surface soil sampling in these portions of the RRZ. Specifically, GE proposes to collect 0- to 1-foot soil samples for PCB analysis at the following locations (shown on Figure 2):

| RAA4-K26 | RAA4-M25 | RAA4-O24 |
|-----------------------|-----------------------|----------|
| RAA4-L18 | RAA4-N17 through -N25 | RAA4-P21 |
| RAA4-L24 through -L26 | RAA4-N27 | RAA4-P22 |
| RAA4-M18 | RAA4-N28 | RAA4-P24 |
| RAA4-M20 | RAA4-O18 | RAA4-P25 |
| RAA4-M22 | RAA4-O22 | |

In addition, since these additional PCB samples are proposed to satisfy grid-based sampling requirements for Averaging Area 4E, GE also proposes to submit samples from nine of these locations (approximately one-third) for analyses of other Appendix IX+3 constituents. These nine locations are: RAA4-L18, RAA4-L26, RAA4-M25, RAA4-N19, RAA4-N28, RAA4-O18, RAA4-O22, RAA4-P21, and RAA4-P24 (see Figure 3).

In total, GE is proposing to collect 37 additional surface soil samples for PCB analysis to satisfy the grid-based sampling requirements associated with (1) moving the northern boundary of Averaging Area 4E approximately 15 feet to the north and (2) potentially conducting soil removal/replacement to meet recreational-area Performance Standards (in lieu of installing an engineered barrier) in portions of this averaging area where installation of an engineered barrier was previously assumed. In addition, GE is proposing to submit samples from 12 of these locations for analyses of other Appendix IX+3 constituents. The proposed sample locations are listed in Table 1 and shown on Figures 2 and 3. Table 2 shows how the proposed PCB samples, together with existing PCB samples, will satisfy the grid-based sampling requirements in these portions of Averaging Area 4E.

III. Additional PCB Investigations Based on RD/RA Evaluations and Review of Utility Corridor Data

As noted above, GE has conducted RD/RA evaluations for PCBs for each of the relevant averaging areas at East Street Area 2-South (considering the 3- to 15-foot depth increment at Averaging Area 4C to be a part of Averaging Area 4B). These evaluations were based on the spatial averaging procedures described in Attachment E to the SOW. These evaluations indicate that that the applicable PCB Performance Standards are already satisfied at Averaging Area 4A under existing conditions, and that soil remediation actions will be necessary to address PCB-containing soils at the three other averaging areas – i.e., Averaging Areas 4B (which includes the 3- to 15-foot depth increment for Averaging Area 4C), 4D, and 4E. Based on these evaluations, GE has determined that, with the exception of the utility corridor evaluations (discussed below), the existing PCB data are sufficient to complete the RD/RA evaluations at this RAA and to determine the scope of the required removal actions to address PCBs in Averaging Areas 4B, 4D, and 4E.

However, the performance of site survey activities and a review of historical site drawings have resulted in the identification of additional PCB soil characterization data needs for certain subgrade utility corridors for active utilities potentially subject to emergency repair. The approximate locations of these subgrade utilities (based on information gathered during site survey activities and a review of historical site drawings) are shown on Figure 2, along with the corresponding 50-foot-wide bands used to identify the data for characterizing the soils associated with such utility corridors. To determine if sufficient PCB data exist to perform the required utility corridor evaluations, GE reviewed the existing PCB data set to determine whether: (1) soil samples are distributed at one location per 100 to 150 linear feet within the approximate 50-foot wide band centered on each such utility, and (2) sufficient soil sample data are available to evaluate the soils in the 1- to 6-foot depth increment associated with each such utility, as required by the SOW.

Based on this review, GE has identified several areas along existing active utility lines where additional PCB data are needed to characterize the soils in the 1- to 6-foot depth increment in those utility corridors. Specifically, GE proposes to collect 15 additional soil samples for analysis of PCBs at the following 14 locations, at the indicated depth increments:

| Sample ID | Depth Increment (ft.) | Sample ID | Depth Increment (ft.) |
|-----------|------------------------------|-----------|-----------------------|
| RAA4-16NW | 1-6' | RAA4-F9 | 1-6' |
| RAA4-C25N | 1-6' | RAA4-F11N | 1-6' |
| RAA4-C27N | 1-6' | RAA4-G7N | 1-6' |
| RAA4-D21N | 1-6' | RAA4-G23 | 3-6' |
| RAA4-D26 | 1-6' | RAA4-G27E | 1-6' |
| RAA4-E15N | 1-6' | RAA4-H4N | 1-6' |
| RAA4-E17N | 1-6' | RAA4-N17 | 1-3', 3-6' |

The locations of these proposed samples are presented on Figure 2 and summarized in Table 1.

IV. Additional Investigations for Non-PCB Constituents Based on RD/RA Evaluations

For other Appendix IX+3 constituents, the RD/RA evaluations conducted to date by GE were consistent with the procedures outlined in Attachment F to the SOW, and took into account the preliminarily identified removal actions to address PCBs in soils. The Appendix IX+3 evaluations generally included the following procedures for each relevant averaging area and depth increment:

• For dioxins and furans, total Toxicity Equivalency Quotient (TEQ) concentrations were calculated for all samples using the Toxicity Equivalency Factors (TEFs) developed by the World Health Organization (WHO), as specified in the SOW. The maximum TEQ concentration for each relevant averaging area and depth increment was then identified and compared to the applicable Preliminary Remediation Goal (PRG) specified in the SOW for dioxin/furan TEQs. For the commercial/industrial averaging areas at this RAA, those PRGs are 5 ppb for the top foot of soil and 20 ppb for the 1- to 15-foot depth increment. For Averaging Area 4E, the only recreational averaging area subject to evaluation at this RAA (since the evaluations for the top three feet of the CRA were previously documented), those PRGs are 1 ppb for the top foot of soil and 1.5 ppb for the 1- to 3-foot depth increment. In addition, although not specified in the SOW, EPA requested in comments on the Conceptual Work Plan for Newell Street Area I that GE utilize 20 ppb as a comparison criterion for the 3- to 15-foot depth increment at recreational averaging areas. Where the maximum TEQ level for a given averaging area and depth increment exceeded the applicable PRG (or other comparison level), the 95% upper confidence limit on the mean (95% UCL) of the TEQ data for that area and depth increment was calculated and compared to the PRG (or other comparison level). If either the maximum TEQ concentration or the 95% UCL is less than the PRG (or other

comparison level), it was assumed that no remediation will be necessary to address dioxins/furans. If the area and depth increment contains one or more discrete TEQ levels above the PRG (or other comparison level) and the 95% UCL also exceeds the PRG (or other comparison level), then it was assumed that remediation may be necessary to address the TEQ levels. In that case, the need for additional sampling for dioxins/furans was considered to delineate the extent of such remediation.

- The remainder of the non-PCB constituents were evaluated using the following general procedures for each averaging area:
 - First, the maximum concentrations of all detected constituents were compared to the appropriate EPA Region 9 PRGs (as set forth in Exhibit F-1 to Attachment F to the SOW) or, for constituents for which such PRGs do not exist, to surrogate PRGs (i.e., PRGs for chemically similar substances). The surrogate PRGs used include several that are set forth in the SOW or have been previously approved by EPA for use at other RAAs at this Site, and also include, for certain constituents that have not been encountered at other RAAs, proposed surrogate PRGs that have been identified for this RAA by GE's risk assessment consultants at AMEC Earth & Environmental. The latter were based on an effort to utilize the PRGs for constituents that are as chemically and toxicologically similar as possible to the constituents in question; these proposed new surrogate PRGs are listed in Table 3. Any constituent whose maximum concentration was below the applicable PRG or surrogate PRG was eliminated from further consideration.

In addition, in a few cases, constituents were screened out based on low frequency of detection. For example, at Averaging Area 4B (which includes the 3- to 15-foot depth increment for Area 4C), benzidine was detected in only one sample out of a total of 141 Appendix IX+3 samples from that area, and at Averaging Area 4E, benzidine was detected in only one sample out of a total of 70 Appendix IX+3 samples from that area. In both cases, while the detected concentrations (2.3 and 6.1 ppm, respectively) exceeded the PRG for benzidine, the detection occurred only in one sample in each area (in both cases, a 1991 subsurface sample); and GE believes that it is reasonable to screen out this constituent on the basis of very low frequency of detection.

- Second, for all detected constituents retained after the initial screening step, the average constituent concentrations in each relevant depth increment were compared to the corresponding Method 1 soil standards specified in the Massachusetts Contingency Plan (MCP) or, for certain constituents for which Method 1 soil standards do not exist, to Method 2 soil standards derived using the procedures specified in the MCP. These comparisons showed that, for each relevant averaging area at this RAA, one or more constituents had average concentrations exceeding the MCP Method 1 (or Method 2) soil standards.
- Third, given the results of the comparisons to the Method 1 soil standards, it is anticipated that an area-specific risk assessment will be conducted for each averaging area, in accordance with the SOW, as part of the RD/RA evaluations to be included in the Conceptual Work Plan. Accordingly, as part of the evaluations performed to date, AMEC has conducted a preliminary risk evaluation of each relevant averaging area, based on the current data set, in order to determine which constituents, if any, would require remediation to meet the applicable Performance Standards i.e., an Excess Lifetime Cancer Risk (ELCR) of 1 x 10⁻⁵ and a non-cancer Hazard Index of 1.0.

In accordance with the SOW, these evaluations were made for all constituents (other than PCBs and dioxins/furans) that were retained prior to the comparisons to the Method 1 soil standards; and they utilized the exposure and toxicity assumptions prescribed in the SOW (i.e., the same exposure scenarios and assumptions set forth in the CD to establish the PCB Performance Standards, together

with standard EPA toxicity and absorption values). Thus, for the commercial/industrial averaging areas, AMEC evaluated the groundskeeper scenario for the 0- to 1-foot depth increment and the utility worker scenario for the 1- to 6-foot depth increment. For the recreational averaging area (Area 4E), AMEC evaluated the child recreator scenario for both the 0- to 1-foot and 1- to 3-foot depth increments. For the 0- to 15-foot depth increment, consistent with the approach that has been approved for area-specific risk assessments at other RAAs, the MCP Upper Concentration Limits (UCLs) for soil were used as a basis for comparison for both commercial/industrial and recreational areas.

For lead, given the lack of standard toxicity values, the average concentrations were compared to risk-based concentrations (RBCs) that have previously been approved by EPA for use at other RAAs. For commercial/industrial areas, these RBCs are 2,008 ppm for the 0- to 1-foot depth increment and 6,000 ppm (based on the MCP UCL) for the 1- to 6-foot and 0- to 15-foot depth increments. For the recreational area, the lead RBCs are 1,313 ppm for the 0- to 1-foot and 1- to 3-foot depth increments and 6,000 ppm for the 0- to 15-foot depth increment.

In cases where these preliminary risk evaluations indicated that additional soil remediation (beyond the remediation required to address PCBs) will be necessary to address certain non-PCB constituents, the need for additional sampling for such constituents to delineate the extent of such additional remediation was considered.

Performance of these Appendix IX+3 evaluations has resulted in the identification of several averaging areas and depth increments where it appears, based on the current data set, that additional remediation, beyond the remediation necessary to address PCBs, will be required to achieve the applicable Performance Standards specified in the SOW for certain non-PCB constituents. The following discussion presents a summary of the area-specific evaluations that led to identification of additional data needs; identifies samples for which such additional remediation will likely be necessary, and proposes supplemental investigation activities to determine the extent of such additional remediation. Only those preliminary evaluations that resulted in additional delineation data needs are summarized below.

Averaging Area 4B

The preliminary Appendix IX+3 risk evaluations for this area indicate that there are elevated concentrations of polycyclic aromatic hydrocarbons (PAHs) and other semi-volatile organic compounds (SVOCs) in the sample collected from the 0- to 1-foot depth increment at location 206S, and that this sample will require remediation to achieve the applicable Performance Standards. This sample will not be addressed by PCB-related remediation. Based on these evaluations, GE is proposing to collect the following samples (shown on Figure 3) to assist in determining the limits of remediation to address the elevated SVOC concentrations at sample location 206S:

| Sample ID | Depth Increment (ft.) | <u>Analyses</u> |
|------------|-----------------------|-----------------|
| 206S-North | 0 to 1 | SVOCs |
| 206S-East | 0 to 1 | SVOCs |
| 206S-South | 0 to 1 | SVOCs |
| 206S-West | 0 to 1 | SVOCs |

In addition, it should be noted that elevated concentrations of SVOCs were found in the 8- to 10-foot sample collected in 1991 from location X-19, adjacent to East Street. These concentrations, however, do not cause the average concentrations for the 0- to 15-foot depth increment in this averaging area to exceed the applicable

UCLs, with one exception: the average existing concentration of bis(2-chloroethyl)ether in the 0- to 15-foot depth increment (11 ppm) is higher than the current MCP UCL of 7 ppm, and will still slightly exceed that UCL following the removal of sample 206S, due to a very high non-detect value of 650 ppm for this constituent in the 8- to 10-foot sample from location X-19. However, GE proposes not to include this high non-detect value in the average calculations because the laboratory's inability to achieve a more appropriate detection limit was likely due to interferences from the high levels of other SVOCs in the same sample. In any event, we note that the Massachusetts Department of Environmental Protection (MDEP) has proposed (in its September 2004 proposed revisions to the MCP) to revise the soil UCL for bis(2-chloroethyl)ether to 90 ppm; and it is likely that that revision will be finalized prior to the remediation of East Street Area 2-South. In that case, the average concentration of bis(2-chloroethyl)ether in the 0- to 15-foot depth increment would not exceed the UCL.

Averaging Area 4D

The preliminary Appendix IX+3 risk evaluations for this area indicate that there are elevated PAH concentrations in the sample collected from the 0- to 1-foot depth increment at location 211S, and that this sample will require remediation to meet the applicable Performance Standards. This sample will not be addressed by PCB-related remediation. Based on these evaluations, GE is proposing to collect the following samples (shown on Figure 3) to assist in determining the limits of remediation to address the elevated PAH concentrations at sample location 211S:

| Sample ID | Depth Increment (ft.) | <u>Analyses</u> |
|------------|-----------------------|-----------------|
| 211S-North | 0 to 1 | SVOCs |
| 211S-East | 0 to 1 | SVOCs |
| 211S-South | 0 to 1 | SVOCs |
| 211S-West | 0 to 1 | SVOCs |

Averaging Area 4E

The Appendix IX+3 evaluations for this area indicate that two samples – the 0- to 1-foot samples at locations RAA4-I30 and RAA4-M23 – have dioxin/furan TEQ concentrations (7.5 ppb and 13 ppb, respectively) that exceed the applicable PRG of 1 ppb and cause the 95% UCL of the TEQ data for that depth increment to exceed that PRG. In addition, the preliminary Appendix IX+3 risk evaluations for this area indicate that there are elevated PAH concentrations in the sample collected from the 1- to 3-foot depth increment at location RAA4-O19, and that this sample will require remediation to achieve the applicable Performance Standards. Soils associated with these sample locations will not be fully addressed by the PCB-related remediation. As a result, GE is proposing to collect the following samples (shown on Figures 3 and 4) to assist in determining the limits of additional remediation to address the elevated dioxin/furan TEQ concentrations at sample locations RAA4-I30 and RAA4-M23 and the elevated PAH concentrations at sample location RAA4-O19:

| RAA4-I30-North 0 to 1 Dioxins/ | Furans |
|--------------------------------|--------|
| RAA4-I30-East 0 to 1 Dioxins/ | Furans |
| RAA4-I30-South 0 to 1 Dioxins/ | Furans |
| RAA4-I30-West 0 to 1 Dioxins/ | Furans |
| RAA4-M23-North 0 to 1 Dioxins/ | Furans |
| RAA4-M23-East 0 to 1 Dioxins/ | Furans |
| RAA4-M23-South 0 to 1 Dioxins/ | Furans |

| Sample ID | Depth Increment (ft.) | Analyses |
|----------------|-----------------------|-----------------|
| RAA4-M23-West | 0 to 1 | Dioxins/Furans |
| RAA4-O19-North | 1 to 3 | SVOCs |
| RAA4-O19-East | 1 to 3 | SVOCs |
| RAA4-O19-South | 1 to 3 | SVOCs |
| RAA4-O19-West | 1 to 3 | SVOCs |

In addition to the samples described above, elevated concentrations of PAHs were found in the 1- to 6-foot sample from location 2S-BH000750-0-0010, which may also require remediation. That sample was collected from the 1- to 6-foot depth increment because it was previously located in a commercial/industrial area, but would now be located in Averaging Area 4E (a recreational area) due to the revision in the RRZ boundary. In these circumstances, GE proposes to return to that location and to collect samples from the 1- to 3-foot and 3-to 6-foot depth increments (the relevant depth increments for recreational areas) for SVOC analysis. In addition, GE will collect 1- to 3-foot and 3- to 6-foot samples from four locations around that location (designated as 2S-BH000750-0-0010-North, -East, -South, and -West on Figures 4 and 5). These samples will be held for possible SVOC analysis depending on the SVOC results from the corresponding depth increment at location 2S-BH000750-0-0010.

V. Sampling Procedures, Analytical Reporting, and Quality Control

The collection and analysis of the above-referenced soil samples will be conducted following the procedures set forth in GE's approved *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP) and will be consistent with the procedures that were used during the previous pre-design investigations for this RAA. Specifically, the analytical procedures for the analysis of soil samples will be consistent with the procedures presented in Table 1 of the FSP/QAPP. The field procedures will follow the Standard Operating Procedures (SOPs) presented in Appendices B through X of the FSP/QAPP.

Soil samples collected during the investigation activities described herein will utilize EPA Method 8082 for the analysis of Aroclor-specific PCBs. Results for PCBs will be reported on a dry-weight basis with a detection limit of 0.05 ppm for all Aroclors. Soil samples for other Appendix IX+3 constituents will be analyzed following the methods presented in Table 1 of the FSP/QAPP. Sample results will be presented on a dry-weight basis with detection limits consistent with those presented in Table 3 of the FSP/QAPP. Also, consistent with the previous pre-design investigations performed by GE in this area, analysis of dioxins and furans will be performed using EPA Method 8290.

VI. Summary of Proposed Additional Sampling

The additional PCB and Appendix IX+3 soil sampling and analyses proposed herein are summarized in Table 1. Specifically, as indicated in Table 1, GE is proposing to collect 52 soil samples for PCB analysis and 42 soil samples for analysis of other Appendix IX+3 constituents. However, as noted in Section IV above, 8 of the latter samples (i.e., the 1- to 3-foot and 3- to 6-foot samples from locations 2S-BH000750-0-0010-North, - East, -South, and -West) will be held for possible SVOC analysis depending on the SVOC results from the corresponding depth increment at location 2S-BH000750-0-0010.

VII. Proposed Schedule

The EPA-approved Supplemental PDI Report Addendum stated that if additional data needs are identified, the Interim Letter Report would propose a schedule for addressing those data needs and submitting the Conceptual Work Plan. Based on the scope of the investigation activities proposed herein (including the collection of 20 samples for dioxin/furan analyses) and the potentially significant revisions to the PCB and Appendix IX+3 RD/RA evaluations that may be necessary to incorporate these additional data, GE proposes the following schedule:

GE anticipates that the investigation activities and receipt of the analytical data for these samples will be completed in approximately 2 months. Thereafter, assuming that the supplemental sampling data are sufficient to complete the RD/RA evaluations and to identify the limits of any appropriate remediation actions, it will take approximately 2-3 months to revise the PCB and Appendix IX+3 evaluations and complete the Conceptual RD/RA Work Plan (allowing time for review by the Berkshire Gas Company as well as GE). In this situation, GE proposes to submit the Conceptual RD/RA Work Plan to EPA within 5 months of receiving EPA's approval of this Interim Letter Report. However, if review of the supplemental sampling data indicate that these data are not sufficient to complete the RD/RA evaluations (e.g., because additional delineation sampling is necessary for PCBs or other constituents), then GE will submit a letter to that effect within 4 months from EPA's approval of this Interim Letter Report. That letter will describe the additional data needs, propose additional sampling to satisfy those data needs, and propose a revised schedule for submission of the Conceptual Work Plan.

Please contact me with any questions or comments you have regarding this proposal.

Sincerely,

John F. Novotny / CAA John F. Novotny, P.E.

Manager - Facilities & Brownfields Programs

Attachments

V:\GE_Pittsfield_CD_ESA_2_South\Reports and Presentations\Interim Ltr Rpt\62942196LtrRpt.doc

cc: Dean Tagliaferro, EPA

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Pittsfield Department of Health

Public Information Repositories

GE Internal Repository

(*without attachments)

Tables



TABLE 1 SUMMARY OF PROPOSED SAMPLING LOCATIONS

EAST STREET AREA 2 - SOUTH GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

| Parcel ID | Nearest Grid Coordinate | Sample ID | Sample Depth | PCBs | VOCs | Analysis SVOCs | Inorganics | PCDD/PCDF | Notes |
|------------------|---|--|--------------|------|--|--|--------------|-----------|--|
| Area 4A | F9 | RAA4-F9 | 1-6 | X | | | | | Utility corridor characterization. |
| 71100 771 | F11 | RAA4-F11N | 1-6 | X | | | | | Utility corridor characterization. |
| | G7 | RAA4-G7N | 1-6 | T X | | | | | Utility corridor characterization. |
| | H4 | RAA4-H4N | 1-6 | 1 × | | | w. | ** | Utility corridor characterization. |
| | | | | | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | L9 | RAA4-L9 | 0-1 | X | | | | | boundary. |
| | | | | | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | L10 | RAA4-L10 | 0-1 | X | | | | | boundary. |
| | | | | | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | N3 | RAA4-N3 | 0-1 | × | | | | | boundary. |
| Area 4B | C25 | RAA4-C25N | 1-6 | X | | | | | Utility corridor characterization. |
| | C27 | RAA4-C27N | 1-6 | X | | | ** | | Utility corridor characterization. |
| | D21 | RAA4-D21N | 1-6 | X | | | | | Utility corridor characterization. |
| | D26 | RAA4-D26 | 1-6 | X | ** | | | | Utility corridor characterization. |
| | D37 | RAA4-16NW | 1-6 | X | | | | | Utility corridor characterization. |
| | E15 | RAA4-E15N | 1-6 | X | | | | | Utility corridor characterization. |
| | E17 | RAA4-E17N | 1-6 | X | | | | | Utility corridor characterization. |
| | G23 | RAA4-G23 | 3-6 | X | | | | | Utility corridor characterization. |
| | G27 | RAA4-G27E | 1-6 | X | | | ** | | Utility corridor characterization. |
| | HH30 | RAA4-HH30 | 0-1 | X | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | *************************************** | | | - 1 | | | | | boundary. |
| | 128 | RAA4-128 | 0-1 | l x | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | | | | | | | | | boundary. |
| | L19 | RAA4-L19 | 0-1 | X | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | | PER A STERNING TO THE STREET OF THE STREET O | | | | | | | boundary. |
| | L23 | RAA4-L23 | 0-1 | X | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | | 2021 | | ļ | | | | *** | boundary. Delineation of Sample Location 206S |
| | | 206S-N | 0-1 | ** | | X | | | Delineation of Sample Location 206S |
| | | 206S-E 206S-S | 0-1 | #4 W | ### ### ### ### ### ### ### ### ### ## | | *** | | Delineation of Sample Location 206S |
| | P.W. | 206S-W | 0-1 | | | | | | Delineation of Sample Location 2005 Delineation of Sample Location 2005 |
| Area 4D | *** | 211S-N | 0-1 | | | l | | ~~ | Delineation of Sample Location 211S |
| MICG TO | | 211S-E | 0-1 | | | | | ** | Delineation of Sample Location 211S |
| | A-4- | 211S-S | 0-1 | | | | +- | | Delineation of Sample Location 211S |
| | | 211S-W | 0-1 | | | l | | ** | Delineation of Sample Location 211S |
| Area 4E | | *************************************** | | | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| 7 11 60 60 1 400 | J27 | RAA4-J27 | 0-1 | X | X | X | X | X | boundary. |
| | K26 | RAA4-K26 | 0-1 | X | | ** | | ** | Grid characterization associated with potential reduction in barrier. |
| | L18 | RAA4-L18 | 0-1 | X | X | X | T × | X | Grid characterization associated with potential reduction in barrier. |
| | L24 | RAA4-L24 | 0-1 | T X | 1 | 4- | ** | ** | Grid characterization associated with potential reduction in barrier. |
| | L25 | RAA4-L25 | 0-1 | X | ** | | | ** | Grid characterization associated with potential reduction in barrier. |
| | L26 | RAA4-L26 | 0-1 | X | † | X | X | X | Grid characterization associated with potential reduction in barrier. |
| | M18 | RAA4-M18 | 0-1 | X | | *- | ** | | Grid characterization associated with potential reduction in barrier. |
| | M20 | RAA4-M20 | 0-1 | X | | | ~~ | ** | Grid characterization associated with potential reduction in barrier. |
| | M22 | RAA4-M22 | 0-1 | X | ** | ** | | *** | Grid characterization associated with potential reduction in barrier. |
| | M25 | RAA4-M25 | 0-1 | X | X | X | X | X | Grid characterization associated with potential reduction in barrier. |
| | b14 | FD A A A A LA | 0.4 | | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | N4 | RAA4-N4 | 0-1 | × | × | × | × | × | boundary. |
| | N6 | RAA4-N6 | 0-1 | | | | | | Grid characterization associated with modification to Averaging Area 4E northern |
| | 140 | FCACA4-IND | U-1 | × | × | X | × | X | boundary. |
| | | | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. |
| | N17 | RAA4-N17 | 1-3 | X | | | | | Utility corridor characterization. |
| | | | 3-6 | X | | | | *- | |

TABLE 1 SUMMARY OF PROPOSED SAMPLING LOCATIONS

EAST STREET AREA 2 - SOUTH

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

| | Nearest Grid | Sample | Sample Depth | | | Analysis | | | Notes | |
|-----------|--------------|------------|--------------|-------|------|-------------|------------|-----------|---|--|
| Parcel ID | Coordinate | ID | (ft) | PCBs | VOCs | SVOCs | Inorganics | PCDD/PCDF | | |
| Area 4E | N18 | RAA4-N18 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| 71100 40 | N19 | RAA4-N19 | 0-1 | X | X | X | X | X | Grid characterization associated with potential reduction in barrier. | |
| | N20 | RAA4-N20 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | N21 | RAA4-N21 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | N22 | RAA4-N22 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | N23 | RAA4-N23 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | N24 | RAA4-N24 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | N25 | RAA4-N25 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | N27 | RAA4-N27 | 0-1 | X | | | | ** | Grid characterization associated with potential reduction in barrier. | |
| | N28 | RAA4-N28 | 0-1 | X | X | X | X | X | Grid characterization associated with potential reduction in barrier. | |
| | 018 | RAA4-018 | 0-1 | X | X | X | X | X | Grid characterization associated with potential reduction in barrier. | |
| | 022 | RAA4-022 | 0-1 | X | X | X | X | X | Grid characterization associated with potential reduction in barrier. | |
| | 024 | RAA4-024 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | P21 | RAA4-P21 | 0-1 | X | X | X | † × | X | Grid characterization associated with potential reduction in barrier. | |
| | P22 | RAA4-P22 | 0-1 | X | | | - | ** | Grid characterization associated with potential reduction in barrier. | |
| | P24 | RAA4-P24 | 0-1 | X | X | X | X | T x | Grid characterization associated with potential reduction in barrier. | |
| | P25 | RAA4-P25 | 0-1 | X | | | | | Grid characterization associated with potential reduction in barrier. | |
| | | RAA4-I30N | 0-1 | | ** | | | 1 x | Delineation of Sample Location RAA4-I30 | |
| | | RAA4-I30E | 0-1 | | | | | X | | |
| | | RAA4-130S | 0-1 | *** | | | ** | X | | |
| | | RAA4-I30W | 0-1 | | | | | X | | |
| | | RAA4-M23N | 0-1 | | ~ | | ** | X | Delineation of Sample Location RAA4-M23 | |
| | | RAA4-M23E | 0-1 | | | | | X | | |
| | | RAA4-M23S | 0-1 | *** | | | | X | | |
| | | RAA4-M23W | 0-1 | | ** | | | X | | |
| | *** | RAA4-O19N | 1-3 | *** | | X | | | Delineation of Sample Location RAA4-O19 | |
| | | RAA4-019E | 1-3 | 40 AA | | X | | | | |
| | | RAA4-019S | 1-3 | | | X | | | | |
| | | RAA4-019W | 1-3 | | | X | •• | | | |
| | | BH000750 | 1-3, 3-6 | | | X | | | Collection of SVOC samples at relevant depth intervals for recreational area. | |
| | | BH000750-N | 1-3, 3-6 | *** | | Y | | | Hold samples pending SVOC results of new samples at 2S-BH000750-0-0010 for | |
| | | BH000750-E | 1-3, 3-6 | | | Y | | | potential delineation of latter. | |
| | | BH000750-S | 1-3, 3-6 | | | Y | | | | |
| | | BH000750-W | 1-3, 3-6 | | | <u>Y</u> | | | | |

Notes:

- 1. X = Identifies location and depth for which a soil sample will be collected and submitted for analysis.
- 2. Y = Idetifies location and depth for which a soil sample will be collected and held for possible future analysis.

TABLE 2 EXISTING AND PROPOSED PCB SAMPLES TO SATISFY SELECT RECREATIONAL (50-FOOT) GRID-BASED REQUIREMENTS⁽¹⁾ EAST STREET AREA 2 - SOUTH AVERAGING AREA 4E

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

| PITTSFIELD, MASSACHUSETTS | | | | | | |
|---------------------------|-------------------------------|--|--|--|--|--|
| | 0- to 1-foot Depth Interval | | | | | |
| Grid Node | PCBs | | | | | |
| HH30 | P P | | | | | |
| 128 | 95-02 (0- to 0.5-Foot Sample) | | | | | |
| 129 | | | | | | |
| J27 | P | | | | | |
| K25 | RAA4-K25 | | | | | |
| K26 | P | | | | | |
| L.8 | RAA4-L8 | | | | | |
| L9 | P | | | | | |
| L10 | | | | | | |
| L11 | RAA4-L11 | | | | | |
| L12 | RAA4-L12 | | | | | |
| L13 | RAA4-L13 RAA4-L14 | | | | | |
| L14 | RAA4-L15 | | | | | |
| L15 | PAA4-L15 | | | | | |
| L16 | RAA4-L16 | | | | | |
| L17 | RAA4-L17 | | | | | |
| L18 | P P | | | | | |
| L19 | | | | | | |
| L20 | Y-8 | | | | | |
| L23 | P | | | | | |
| L24 | P | | | | | |
| L25 | P | | | | | |
| L26 | P | | | | | |
| L27 | RAA4-L27 | | | | | |
| M6 | RAA4-M6 | | | | | |
| M7 | RAA4-M7 | | | | | |
| M8 | RAA4-M8 | | | | | |
| M18 | P | | | | | |
| M20 | P | | | | | |
| M22 | P | | | | | |
| M24 | RAA4-M24 | | | | | |
| M25 | P | | | | | |
| M26 | X-1 | | | | | |
| M28 | RAA4-M28 | | | | | |
| N3 | P | | | | | |
| N4 | P | | | | | |
| N5 | RAA4-N5 | | | | | |
| N6 | P | | | | | |
| N17 | P | | | | | |
| N18 | P | | | | | |
| N19 | P | | | | | |
| N20 | P | | | | | |
| N21 | P | | | | | |
| N22 | P | | | | | |
| N23 | P | | | | | |
| N24 | P | | | | | |
| N25 | P | | | | | |
| N27 | P | | | | | |
| N28 | P | | | | | |
| 01 | RAA4-01 | | | | | |
| O2 | RAA4-02 | | | | | |
| O18 | Р | | | | | |
| O20 | 68-EAST-2 | | | | | |
| O22 | P | | | | | |
| O24 | P | | | | | |
| O26 | Y-1 | | | | | |
| P17 | PGS-4 | | | | | |
| P18 | Y-4 | | | | | |
| P19 | 60-4 | | | | | |
| P20 | 68-EAST-3 | | | | | |
| P21 | P | | | | | |
| P22 | P | | | | | |
| P23 | ES2-3 | | | | | |
| P24 | P | | | | | |
| P25 | P | | | | | |
| 120 | | | | | | |

Notes

- 1. Since GE characterized all of the 100-foot grid nodes in East Street Area 2 South / Averaging Area 4E in accordance with the requirements of the Scope of Work for Removal Actions Outside the River, only recreational (50-foot) grid nodes associated with the revision of northern boundary of this area and the potential reduction in engineered barrier were considered in this evaluation.
- 2. The corresponding grid node locations are shown on Figure 2 for soil sampling associated with investigations for PCBs.
- 3. P Indicates proposed sample location.

TABLE 3 PROPOSED ADDITIONAL PRELIMINARY REMEDIATION GOAL (PRG) SURROGATES EAST STREET AREA 2 - SOUTH

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

| The second secon | The state of the s | Surrogate PRG Concentration | | | |
|--|--|-----------------------------|----------------|--|--|
| Constituent | Proposed Surrogate Constituent | Residential PRG | Industrial PRG | | |
| Volatile Organic Constituents | | | | | |
| 2-Chloroethylvinylether | Bis(2-Chloroethyl)ether | 0.18 | 0.56 | | |
| Propionitrile | Acetonitrile | 200 | 1,300 | | |
| Semi-Volatile Organic Constituen | ts | | | | |
| 1,2,3,4-Tetrachlorobenzene | 1,2,4,5-Tetrachlorobenzene | 16 | 320 | | |
| 1,2,3,5-Tetrachlorobenzene | 1,2,4,5-Tetrachlorobenzene | 16 | 320 | | |
| 1,2,3-Trichlorobenzene | 1,2,4-Trichlorobenzene | 480 | 1,700 | | |
| 1,3,5-Trichlorobenzene | 1,2,4-Trichlorobenzene | 480 | 1,700 | | |
| 1-Chloronapthalene | beta-Chloronapthalene | 3,700 | 24,000 | | |
| 1-Methylnapthalene | Napthalene | 55 | 190 | | |
| 2,6-Dichlorophenol | 2,4-Dichlorophenol | 160 | 3,200 | | |
| 2-Acetoaminofluorene | Benzo(a)anthracene | 0.56 | 3.6 | | |
| 2-Picoline | Pyridine | 55 | 1,100 | | |
| 3-Methylcholanthrene | Dibenz(a,h)anthracene | 0.056 | 0.36 | | |
| 4,6-Dinitro-2-methylphenol | 2,6-Dinitrotoluene | 55 | 1,100 | | |
| 4-Chlorobenzilate | Chlorobenzilate | 1.6 | 11 | | |
| 7,12-Dimethylbenz(a)anthracene | Benzo(a)anthracene | 0.56 | 3.6 | | |
| Cyclophosphamide | Fenamiphos | 14 | 270 | | |
| p-Dimethylaminoazobenzene | 3,3-Dichlorobenzidine | 0.99 | 6.7 | | |

Figures











