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SDMS 37728

Pre-Design Investigation Work Plan for the East Street Area 1-North Removal Action

General Electric Company
Pittsfield, Massachusetts

May 2002

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BLASLAND, BOUCK & LEE, INC.
engineers & scientists

01-0487

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

May 24, 2002

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
East Street Area 1-North (GECD430)
Pre-Design Investigation Work Plan

Dear Mr. Olson:

In accordance with the schedule in the revised Attachment A to the *Statement of Work for Removal Actions Outside the River*, enclosed for review is General Electric Company's *Pre-Design Investigation Work Plan for East Street Area 1-North.*

Please call John Novotny or me if you have any questions regarding this Work Plan.

Very truly yours,

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

Enclosure

cc: Tim Conway, EPA
Holly Inglis, EPA
Michael Nalipinski, EPA
K.C. Mitkevicius, USACE
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Property Owner - Parcel K10-14-1
Public Information Repositories
GE Internal Repository
(* w/out enclosure)

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Appendix

A Compilation of Prior Soil Sampling Data

1. Introduction

1.1 General

On October 27, 2000, a Consent Decree (CD) executed in 1999 by the General Electric Company (GE), the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MDEP), and several other government agencies was entered by the United States District Court for the District of Massachusetts. The CD governs (among other things) the performance of response actions to address polychlorinated biphenyls (PCBs) and other hazardous constituents in soils, sediment, and groundwater in several Removal Action Areas (RAAs) located in or near Pittsfield, Massachusetts that are included within the GE-Pittsfield/Housatonic River Site (the Site). For each Removal Action, the CD and accompanying *Statement of Work for Removal Actions Outside the River* (SOW) (Appendix E to the CD) establish Performance Standards that must be achieved, as well as specific work plans and other documents that must be prepared to support the response actions for each RAA. For most of the Removal Actions, these work plans/documents include the following: Pre-Design Investigation Work Plan, Pre-Design Investigation Report, Conceptual Removal Design/Removal Action (RD/RA) Work Plan, and Final RD/RA Work Plan.

This *Pre-Design Investigation Work Plan for East Street Area 1-North* (PDI Work Plan) describes the soil investigations proposed by GE to support the evaluation and design of soil-related response actions for the East Street Area 1-North RAA, one of several RAAs that comprise the "GE Plant Area" under the CD. The results of these investigations, in combination with usable information from prior investigations within East Street Area 1-North, will support the development of a Conceptual RD/RA Work Plan. Following EPA approval of that document, GE will then prepare a Final RD/RA Work Plan for this Removal Action.

This PDI Work Plan includes a summary of available soils information related to East Street Area 1-North, an assessment of the adequacy of this information to characterize this area (relative to the soil investigation requirements established in the CD and SOW), and a proposal for additional soil investigations. Although the CD and SOW establish Performance Standards for response actions relating to soil, groundwater, and non-aqueous-phase liquid (NAPL), this PDI Work Plan focuses only on soils. Response actions related to groundwater and NAPL at East Street Area 1-North are being addressed separately as part of activities for the Plant Site 1 Groundwater Management Area (GMA 1) pursuant to the CD and SOW. At the present time, these activities consist of the performance of a baseline monitoring program in accordance with GE's *Baseline Monitoring Program Proposal for Plant Site 1 Groundwater Management Area*, as conditionally approved by EPA.

It should also be noted that certain existing areas and buildings within the GE Plant Area are included in an agreement known as the Definitive Economic Development Agreement (DEDA) executed by GE, the City of Pittsfield, and the Pittsfield Economic Development Authority (PEDA) relating to the redevelopment of certain areas of GE's Pittsfield facility. Under the DEDA, GE will demolish the above-grade portions of the existing GE-owned building in East Street Area 1-North (Building 69). Following demolition of Building 69, the existing floor slab and subsurface building foundation will remain. As such, for the purposes of the CD, SOW, and this PDI Work Plan, the footprint of Building 69 will be considered a paved area and the soils underlying the building will be subject to pre-design soil investigations consistent with the requirements established for GE-owned paved areas at the GE Plant Area.

1.2 Format of Document

The remainder of this PDI Work Plan is presented in five sections. Section 2 provides a summary of background information concerning East Street Area 1-North, including a brief description of the area and a summary of prior soil investigations and available soil analytical data. Section 3 discusses the applicable Performance Standards identified in the CD and SOW for soils within East Street Area 1-North and the pre-design soil investigation requirements. Section 4 identifies the current data needs to support RD/RA activities for East Street Area 1-North, presents an assessment of the general usability of existing data to satisfy those data needs, and proposes soil investigations to obtain the necessary additional data to fill those data needs. Section 5 presents a proposed schedule for performing the pre-design investigations. Finally, Section 6 provides a summary of anticipated Post-Removal Site Control activities for East Street Area 1-North following completion of the Removal Action.

2. Background Information

2.1 General

This section of the PDI Work Plan provides a general summary of information concerning East Street Area 1-North, with an emphasis on the soil analytical data available from prior investigations performed by GE in this area. Section 2.2 describes the physical boundaries and site features of East Street Area 1-North, while Section 2.3 summarizes the prior soil investigations and available soil analytical data. Several tables and figures are included in this PDI Work Plan to supplement the information presented in this section.

2.2 Description of East Street Area 1-North

East Street Area 1-North occupies an area of approximately 5 acres and is located immediately south of the East Street Area 2-North RAA and east of the 20s Complex. This area is generally bounded by a non-GE-owned railway property and right-of-way to the north, Merrill Road to the west, East Street to the south, and a non-GE-owned commercial area to the east (Figure 1). East Street Area 1-North is located outside of the 100-year floodplain of the Housatonic River, Silver Lake, and Unkamet Brook.

As shown on Figure 2, there are seven separate tax parcels (as well as certain adjacent City-owned road easements and/or rights-of-way) within East Street Area 1-North. The separate parcels consist of the following:

- Parcel J10-8-1;
- Parcel J10-8-2;
- Parcel J10-8-3;
- Parcel J10-8-4;
- Parcel J10-8-5;
- Parcel J10-8-6; and
- Parcel K10-14-1.

Pursuant to the CD and SOW, all of East Street Area 1-North is considered a "commercial/industrial" area. Of the parcels identified above, the first six are owned by GE and the remaining parcel (Parcel K10-14-1) is owned by another private party. Present within Parcel K10-14-1 is an existing structure that extends onto a portion of GE-owned property; the portion of the structure located on GE-owned Parcel J10-8-6 is referred to as Building 69. The area to the west of this structure (owned by GE) is unpaved, while the area to the east of the structure (non-GE-owned) is mostly paved, as shown on Figure 2. The GE-owned property also contains a NAPL containment/recovery system, referred to as the East Street Area 1 Northside Recovery System.

2.3 Summary of Available Soil Analytical Data

Prior to executing the CD, the area currently referred to as East Street Area 1-North was part of a larger area known as East Street Area 1/USEPA Area 3. Previous soil investigations focused on the larger East Street Area 1/USEPA Area 3; however, for the purposes of this PDI Work Plan, only data obtained from within East Street Area 1-North have been considered and summarized in this section.

Beginning in the early 1980s, several soil investigations have been conducted within East Street Area 1-North. These included investigations conducted by GE in the 1990s pursuant to an Administrative Consent Order executed in July 1990 by GE and MDEP and/or a Resource Conservation and Recovery Act (RCRA) Corrective Action Permit issued by EPA to GE effective in January 1994.

Information concerning East Street Area 1-North and, in particular, the results of the prior soil investigations have been presented in numerous documents submitted by GE to EPA and/or MDEP. Certain of these documents include summaries of earlier existing data. The primary documents that provide such information include:

- *East Street Area 1 MCP Phase II Supplemental Data Summary,* Blasland & Bouck Engineers, P.C., May 1990;
- *Interim Phase II – Comprehensive Site Assessment/Current Assessment Summary Report for East Street Area 1/USEPA Area 3,* Geraghty & Miller, November 1991;
- *MCP Interim Phase II Report and Current Assessment Summary for East Street Area 1/USEPA Area 3,* Blasland, Bouck & Lee, Inc. (BBL), October 1994;
- *MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation for East Street Area 1/USEPA Area 3,* BBL, October 1995;
- *Assessment of Potential Preferential Pathways in East Street Area 1/USEPA Area 3,* BBL, November 1996; and
- *Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3,* Golder Associates, November 1996.

The investigations previously performed by GE that are described in the reports listed above have resulted in the collection of 34 soil samples (including duplicates) for PCB analysis from or adjacent to this RAA. In addition, 5 soil samples (including duplicates) collected from this RAA during prior investigations have been analyzed for one or more groups of non-PCB constituents listed in Appendix IX of 40 CFR Part 264, plus three additional constituents (benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine) (Appendix IX+3). Figure 2 illustrates the prior sampling locations and includes (on that figure) tabular summaries of the resulting PCB data. The soil sampling locations and depths previously sampled for PCBs are also listed in Table 1. The soil sampling locations and depths previously sampled for non-PCB Appendix IX+3 constituents, along with the groups of such constituents that were analyzed for, are listed in Table 2. The analytical results from these samples for both PCBs and other Appendix IX+3 constituents are presented in Appendix A in tables from prior reports.

Subject to certain conditions, the CD and SOW allow the existing soil data to be incorporated into the pre-design soil investigations for East Street Area 1-North. Section 4.3 of this PDI Work Plan describes the process by which these data were evaluated for usability and, if appropriate, included in the development of the proposed pre-design investigations.

3. Applicable Performance Standards and Related Requirements

3.1 General

This section summarizes the Performance Standards established in the CD and SOW that are applicable to the East Street Area 1-North soils, as well as the applicable pre-design soil investigation requirements.

3.2 Soil-Related Performance Standards

Response actions for soils at East Street Area 1-North must achieve the relevant Performance Standards included in the CD and SOW for the GE Plant Area. The Performance Standards established for soils at the GE Plant Area, including East Street Area 1-North, are set forth in Paragraph 26 of the CD and Section 2.2.2 of the SOW. In general, the need for and extent of response actions to address PCBs and non-PCB Appendix IX+3 constituents in soils are to be determined based on the available soils data and using evaluation procedures established in the CD and SOW.

For PCBs, response actions are to be based on the results of spatial averaging conducted for soils at East Street Area 1-North. Attachment E to the SOW identifies the averaging areas, the methods to be used to determine existing spatial average PCB concentrations, and the procedures to be used to assess whether the anticipated response actions will achieve the PCB Performance Standards. For non-PCB Appendix IX+3 constituents in soils, the evaluation is to address the same areas evaluated for PCBs, to take into account the response actions necessary to address the PCBs, and to be conducted in accordance with the protocols described in Attachment F to the SOW. For both PCBs and other Appendix IX+3 constituents, there are two averaging/evaluation areas at East Street Area 1-North – one consisting of the GE-owned portion and the other consisting of the non-GE-owned property. (For purposes of this PDI Work Plan, the areas described as the GE-owned portion and the non-GE-owned property are considered to include the adjacent City-owned road easements/rights-of-way except with respect to property ownership considerations.)

The applicable Performance Standards for PCBs in soils at East Street Area 1-North are summarized below:

For the GE-owned portion of East Street Area 1-North, GE shall conduct the following response actions as needed based on the results of PCB spatial average calculations:

- For the unpaved portion of this area, if the spatial average PCB concentration in the top foot exceeds 25 parts per million (ppm), GE shall either remove and replace soils or install a soil cover in accordance with the specifications for soil covers described in Attachment G of the SOW as necessary to achieve a spatial average PCB concentration of 25 ppm or less. In addition, since this entire area will constitute a single averaging area in excess of 1 acre in size, GE shall remove any soils containing PCB concentrations greater than 125 ppm from the top foot in this unpaved portion.

- For the entire area -- including both the unpaved portion and the slab at Building 69 (which will be considered a paved area) -- if the spatial average PCB concentration in the top foot exceeds 25 ppm, GE shall recalculate the spatial average PCB concentration for the top foot after incorporating the anticipated performance of the response actions described above for the unpaved portion. If that recalculated spatial

average PCB concentration still exceeds 25 ppm, GE shall maintain and enhance the existing concrete slab surface in those areas of the slab determined to cause the exceedance of the 25 ppm spatial average concentration for the top foot in the entire area. Such enhancements will be in accordance with the specifications described for pavement enhancement in Attachment G of the SOW.

- If the spatial average PCB concentration in the 1- to 6-foot depth increment in the entire area exceeds 200 ppm, GE shall undertake a combination of removal and replacement of soils in the unpaved portion and/or enhancement of the existing concrete slab surface in the paved area (in accordance with the specifications for pavement enhancement in Attachment G of the SOW) as necessary to ensure that the PCB concentrations causing the spatial average to exceed 200 ppm are removed or covered by enhanced pavement.

- If, after incorporating the anticipated performance of response actions in accordance with the foregoing Performance Standards, the spatial average PCB concentration for the 0- to 15-foot depth increment exceeds 100 ppm, GE shall install an engineered barrier either over the soil (in the unpaved portion) or over the concrete slab (in the Building 69 area) in accordance with the specifications for engineered barriers in Attachment G of the SOW.

- Where utilities potentially subject to emergency repair requirements are present and the spatial average PCB concentration for the soils in the utility corridor that may need to be removed during an emergency repair exceeds 200 ppm in the 1- to 6-foot depth increment, GE shall evaluate whether additional response actions are necessary for that corridor and submit that evaluation, and a proposal for such response actions if needed, to EPA. In addition, if a new subgrade utility is installed or an existing subgrade utility is repaired or replaced in the future, GE shall ensure that the spatial average PCB concentration of the backfill material does not exceed 25 ppm.

For the non-GE-owned property within East Street Area 1-North (i.e., Parcel K10-14-1), GE shall make "best efforts" (as defined in the CD) to obtain a Grant of Environmental Restriction and Easement (ERE). If an ERE cannot be obtained, GE shall implement a Conditional Solution in accordance with Paragraph 34 of the CD. The applicable Performance Standards for PCB response actions at this property depend on whether an ERE is obtained or a Conditional Solution will be implemented. Those Performance Standards are as follows:

If an ERE is obtained:

- If the spatial average PCB concentration in the top foot in the unpaved portion of this property exceeds 25 ppm, GE shall remove and replace soils as necessary to achieve that spatial average PCB concentration. In addition, GE shall remove any soils containing PCB concentrations greater than 125 ppm in the top foot of this unpaved portion.

- If the spatial average PCB concentration in the top foot in the paved portion of this property exceeds 25 ppm, GE shall either remove and replace soils as necessary to achieve that spatial average concentration or enhance the existing concrete/asphalt surface in accordance with the specifications for pavement enhancement in Attachment G to the SOW.

- If the spatial average PCB concentration in the 1- to 6-foot depth increment at this property exceeds 200 ppm (considering the paved and unpaved portions together), GE shall remove and replace soils as necessary to achieve that spatial average PCB concentration.

- If the remaining spatial average PCB concentration in the top 15 feet of soil exceeds 100 ppm (after incorporating the anticipated performance of any response actions for the top foot and 1- to 6-foot depth increment), GE shall install an engineered barrier in those areas determined to cause the exceedance of the 100 ppm spatial average concentration.

- Where utilities potentially subject to emergency repair requirements are present and the spatial average PCB concentration for the soils in the utility corridor that may need to be removed during an emergency repair exceeds 200 ppm, GE shall evaluate whether additional response actions are necessary for that corridor and submit that evaluation, and a proposal for such response actions if needed, to EPA. In addition, if a new subgrade utility is installed or an existing subgrade utility is repaired or replaced in the future, GE shall ensure that the spatial average PCB concentration of the backfill material does not exceed 25 ppm.

If an ERE is not obtained:

- GE shall conduct response actions as necessary to meet the same Performance Standards described above, except that GE must remove and replace soils as necessary to meet a spatial average PCB concentration of 25 ppm in both the top foot and 0- to 3-foot depth increment.

- GE must also meet the other conditions for a Conditional Solution specified in the CD.

The CD provides, in Paragraph 56.b, that GE must notify EPA and MDEP at the time of submittal of the PDI Work Plan for a given Removal Action, or within such other time as is proposed by GE and approved by EPA, whether each person who owns or controls a non-GE-owned property within that RAA agrees to execute and record an ERE on the property. As documented in a February 15, 2002 letter from GE to EPA, EPA agreed that GE's written ERE notice for East Street Area 1-North will be submitted one month after submission of the Pre-Design Investigation Report for this RAA, or at such other time as is proposed by GE and approved by EPA at the time of submission of that report.

3.3 Pre-Design Soil Sampling Requirements

To achieve the Performance Standards discussed in Section 3.2 above, Section 2.2.3 and Attachment D to the SOW establish specific requirements for soil sampling at the GE Plant Area within the GE-Pittsfield/Housatonic River Site. Those that are applicable to East Street Area 1-North are summarized below.

For the GE-owned portion of this RAA, the applicable pre-design soil sampling requirements for PCBs differ between unpaved and paved areas. For unpaved areas, the SOW requires the performance of a grid-based sampling program, taking into account the existing, usable PCB data. Specifically, the SOW requires the collection of surface and subsurface soil samples on an approximate 100-foot grid sampling pattern, with samples to be collected from the 0- to 1-, 1- to 6-, and 6- to 15-foot depth intervals. For paved areas, soil sampling and analysis must be conducted at an approximate frequency of two locations per acre, with an emphasis on those areas with limited or no existing data. At each of these sampling locations, soil samples are to be collected from the same depth intervals as in unpaved areas, to the extent practicable given the conditions in the area. As previously discussed, the soil beneath the area occupied by the GE-owned Building 69 (scheduled for future demolition) will be treated as a paved area for the purposes of this PDI Work Plan.

For the non-GE-owned property within this RAA (Parcel K10-14-1), the SOW does not set out any different soil sampling requirements from those specified for the remainder of East Street Area 1-North. However, due to the non-GE ownership of this property and current uncertainties regarding whether an ERE will be obtained for the

property, GE believes that it makes sense to sample this property in accordance with the same requirements specified in the SOW for non-GE-owned commercial/industrial properties located in the Unkamet Brook Area (which are likewise contained within the overall GE Plant Area under the CD). For PCBs, those requirements call for the collection of surface soil samples (from the 0- to 1-foot depth increment) on an approximate 50-foot grid pattern and the collection of subsurface samples on an approximate 100-foot grid pattern, with such samples to be collected from the 1- to 3-, 3- to 6-, and 6- to 15-foot depth intervals. The soil beneath the building on this parcel is not required to be sampled.

In addition to PCBs, certain soil samples must be analyzed for other Appendix IX+3 constituents. As provided in Attachment D to the SOW, the total number of non-PCB Appendix IX+3 analyses must be approximately one-third the number of PCB samples (existing and proposed) needed to meet pre-design investigation requirements, and must be approximately evenly distributed between surface soil samples (from the top foot of soil) and subsurface soils (from the various deeper intervals). The actual selection of sample locations and depths for Appendix IX+3 analyses is to be based on the spatial distribution of the available data and may be modified based on field observations at the time of sampling (e.g., photoionization detector [PID] readings, evidence of staining, etc.).

4. Identification of Data Needs and Proposed Pre-Design Investigations

4.1 General

As summarized in Section 3.3 of this PDI Work Plan, the SOW establishes soil investigation requirements to support the performance of RD/RA activities and achievement of applicable Performance Standards for soils within East Street Area 1-North. This section considers these requirements and the soil data currently available from prior investigations in this area to identify the necessary pre-design soil investigations for East Street Area 1-North. Section 4.2 identifies the sampling data needs to satisfy pre-design investigation requirements, and Section 4.3 summarizes the available soil analytical data and provides an assessment of the usability of those data to satisfy such data needs. Section 4.4 then describes the additional soil sampling proposed by GE to address the remaining data needs, while Section 4.5 summarizes the sampling procedures.

The Data Quality Objective (DQO) for the pre-design investigations is to collect the necessary soil analytical data on PCBs and other Appendix IX+3 constituents to meet the applicable soil sampling requirements specified in the SOW, and thus to support future RD/RA evaluations to assess achievement of the applicable Performance Standards for this area.

4.2 Identification of Data Needs

As discussed in Section 3.3 of this PDI Work Plan, the pre-design soil sampling requirements for PCBs at East Street Area 1-North call for the collection (or availability) of sampling data: (1) on an approximate 100-foot grid pattern in the unpaved portion of the GE-owned area; (2) at a frequency of approximately two locations per acre within the area of existing Building 69 (to be considered as a 0.35-acre paved area); and (3) on approximate 50-foot and 100-foot grid patterns at Parcel K10-14-1 (for surface and subsurface soil samples, respectively). Accordingly, the relevant grids were established for the unpaved portion of the GE-owned area and for Parcel K10-14-1, as shown on Figure 3. In identifying proposed sample locations, grid nodes that fall outside of, but are within 15 feet of, the RAA boundary were relocated to a position within the RAA; and grid nodes that fall within the footprint of the building on Parcel K10-14-1, but are within 15 feet of the exterior of that structure were relocated to a position outside the structure. In addition, as discussed below, the locations of subsurface utilities potentially subject to emergency repair were considered and due to the narrow configuration of this RAA, certain sampling locations at the GE-owned portion were relocated inward from the precise grid nodes to provide more representative spatial coverage of the RAA.

Based on the applicable pre-design soil sampling requirements and the relevant grids, and without consideration of any existing usable PCB sampling data, the pre-design soil investigation criteria require PCB data from a total of 78 samples. These include 30 samples from 10 locations at the GE-owned portion of this RAA and 48 samples (27 surface soil samples from 27 locations and 21 subsurface soil samples from seven locations) at Parcel K10-14-1. An assessment of the extent to which the existing PCB data can be used to satisfy these data needs is provided in Section 4.3.1 below.

For non-PCB Appendix IX+3 constituents, based on the pre-design investigation requirements presented in the SOW, the number of available Appendix IX+3 analyses must be approximately one-third the number of PCB samples required to characterize the RAA, with these data approximately evenly distributed between the top foot

of soil and various subsurface sampling increments. Based on the PCB soil sampling requirements summarized above, this will require approximately 26 samples for Appendix IX+3 analyses. An assessment of the usability of the existing Appendix IX+3 data to satisfy these data needs is provided in Section 4.3.2.

4.3 Assessment of Existing Soil Analytical Data for Usability

The existing soil data for East Street Area 1-North are listed in Tables 1 and 2 (for PCBs and non-PCB constituents, respectively) and summaries of the analytical data from those samples are provided in Appendix A. These data have been reviewed to assess their usability to satisfy pre-design investigation requirements and/or to otherwise support future RD/RA activities for this area. As provided in Attachment D to the SOW, the criteria for determining the usability of existing data to support RD/RA activities include: (1) an evaluation of whether such data reflect the appropriate locations and depth increments necessary to meet the soil sampling requirements specified in the SOW, and to apply the Performance Standards for the Removal Action in question; and (2) an assessment of the quality of such data in terms of quality assurance/quality control. To perform this review, the existing soil analytical data were reviewed to determine whether and to what extent they meet the spatial- and depth-related pre-design sampling requirements (i.e., their location and depth increments relative to the requirements of the SOW). The data were also assessed for overall analytical usability based on several considerations, as discussed below.

4.3.1 Assessment of Existing PCB Data

For the existing soil PCB data set (33 total samples, excluding duplicate samples), the usability assessment involved, at the outset, review of the depth increments from which the samples were taken. This review indicated that three sample results are not usable for pre-design or RD/RA evaluation purposes because the samples were collected from an unspecified depth interval or one specified only as a single depth (i.e., "10 feet").

The remaining data, consisting of 30 PCB sample results, were then assessed to determine their overall data quality and usability to satisfy pre-design investigation requirements and/or in future RD/RA evaluations. This assessment indicated the following categories of PCB data:

- Twenty-four samples were collected and analyzed in 1996. For these data, full laboratory data packages are available. These data packages were reviewed for reporting completeness, analytical methodologies, and any apparent method/analytical discrepancies or other significant data quality issues noted in the data packages. Review of that documentation showed no deficiencies that would preclude the use of these PCB data in the response action evaluations for this RAA. Hence, these data are considered usable to satisfy the pre-design investigation requirements (if they meet the specific sampling requirements) or, alternately, as supplemental data in future RD/RA activities.

- One PCB sample was collected from just outside this RAA and analyzed in 1994. For this result, no form of laboratory documentation has been located. Nevertheless, GE proposes to use this result in future RD/RA evaluations since, based on the other PCB sample results for which laboratory documentation has been reviewed, there is no reason to believe that this PCB result would not be suitable for use in RD/RA evaluations. However, as a conservative measure, GE will only utilize this result as supplemental data and not to satisfy specific pre-design soil investigation requirements.

- Five samples were collected and analyzed in 1980. For these results, no form of laboratory documentation has been located and the PCB analytical methodology used at that time was somewhat different from the current method. Accordingly, these data will not be used to satisfy the pre-design investigation requirements. However, GE has seen no evidence at the GE-Pittsfield/Housatonic River Site that PCB data analyzed by the prior method are significantly different from those analyzed by the current method. Hence, GE may use the 1980 data as supplemental data in future RD/RA evaluations, subject to further review.

The next step in the assessment was to determine which of the 24 PCB sample results from 1996 could be used to satisfy the pre-design sampling requirements. First, the sample locations were reviewed in relation to the sampling grids (and Building 69 area) shown on Figure 2 (and discussed in Section 4.2). Consistent with other pre-design investigations performed pursuant to the CD and SOW, an existing PCB sample location was assumed to represent a sample grid node if it is located no more than one-half of the grid node spacing from the sample node in question (e.g., an existing sample location that is within 50 feet of a grid node was used to represent that grid node). Further, existing sample depths were assumed to satisfy a depth interval requirement if the existing depth(s) constitutes 50% or more of the depth requirement. Based on this evaluation, the usable existing PCB data adequately address the pre-design sampling requirements for seven soil sample locations/depths, as shown in Table 3.

Table 1 provides a summary of the categorization of all prior PCB samples based on their proposed use related to pre-design and future RD/RA activities. Specifically, the prior PCB data are categorized into one of the following three categories:

- PCB data that will be used to satisfy pre-design soil investigation requirements and will be incorporated into future RD/RA activities (designated "Characterization");

- PCB data that have not been incorporated into the proposed pre-design investigations but will be used in future RD/RA evaluations (designated "Supplemental");

- PCB data from analyses performed in 1980 that have not been incorporated into the proposed pre-design investigations but may potentially be used in future RD/RA evaluations, subject to further review (designated "Potential Supplemental"); or

- PCB data that have not been incorporated into the proposed pre-design investigations and will not be used in any future RD/RA activities (designated "Rejected").

4.3.2 Assessment of Existing Data on Non-PCB Appendix IX+3 Constituents

For non-PCB Appendix IX+3 constituents, data are available from four samples and one duplicate sample for all constituent groups (except pesticides and herbicides), as summarized in Table 2. These samples were all collected from depth increments that can be used in the RD/RA evaluations for this RAA; however, for pre-design evaluation purposes, the sample/duplicate pair will be considered as one sample. Full laboratory data packages are available for each of these samples. These data packages were reviewed for completeness and the analytical techniques used, as well as to identify any apparent discrepancies or other significant data quality issues noted by the analytical laboratory that would seem likely to render the data unusable. This review of the laboratory documentation revealed no deficiencies of the type that, based on GE's prior assessment of similar data, seem likely to cause these data to be rejected; and thus, these data appear to be of acceptable quality for use in future RD/RA evaluations. Accordingly, GE proposes to use these data to satisfy the pre-design investigation requirements for non-PCB constituents.

4.4 Proposed Soil Sampling Activities

This section describes the pre-design soil sampling proposed by GE to satisfy the pre-design investigation requirements, taking into account the existing data that are usable for these purposes as described in Section 4.3. To assist in describing the proposed sampling activities, Figure 3 shows the relevant sampling grids, the extent of the paved areas and buildings, the locations of the prior PCB soil samples that will be used to satisfy specific grid sampling requirements, and the proposed additional PCB soil sampling locations and depths. Figures 4 through 6 show, for each relevant depth increment, the locations of the prior Appendix IX+3 soil samples proposed for use to meet Appendix IX+3 pre-design characterization requirements and the proposed additional Appendix IX+3 soil sampling locations and depths to satisfy such requirements. Table 3 summarizes the existing and proposed soil sampling locations and depths that will collectively satisfy the PCB pre-design sampling requirements. Table 4 presents an overall summary of the proposed pre-design soil sampling program, listing, on a sample-by-sample basis, the proposed sampling locations, depths, and analytical parameters. A summary of the proposed pre-design activities is provided below.

PCB Sampling. As discussed in Section 4.3.1, existing PCB data can be used to satisfy the pre-design sampling requirements for seven soil sample locations/depths. GE proposes to collect soil samples for PCB analysis at the additional locations and depths necessary to satisfy the pre-design soil sampling requirements for PCBs. The proposed sampling locations are shown on Figure 3. Specifically, at the GE-owned area of East Street Area 1-North, GE proposes to install soil borings and collect soil samples at or near each of the remaining 100-foot grid locations in the unpaved portion of this area, plus one location within Building 69. However, due to the narrow configuration of the RAA, GE is proposing to adjust some of the proposed sampling locations slightly inward from the grid nodes, as shown on Figure 3, so as to provide more representative spatial coverage of this area. At Parcel K10-14-1, GE proposes to collect surface soil samples at or near each of the 50-foot grid locations and to install soil borings and collect soil samples from them at or near each of the 100-foot grid locations (in both cases, excluding the soil under the existing building).

In addition, based on recent discussions with EPA, GE has evaluated the locations of existing and proposed soil samples in relation to the known locations of existing subsurface utilities within East Street Area 1-North. Based on review of the available mapping (obtained from the City of Pittsfield), most of the utilities in this vicinity are located within East Street, rather than within this RAA. However, two service connections to the sewer line and 10 service connections to the water main under East Street have been identified within this RAA from available mapping and are shown on Figure 3, although one of the water main connections (the easternmost connection on Parcel K10-14-1) may no longer exist. This information has been utilized to ensure that sufficient PCB data will be available to represent the soil in these utility corridors (considered to be adequately represented by data collected within approximately 25 feet on either side of these utility connections). In addition to the service connections mentioned above, the possible existence of other subsurface utilities will be assessed as part of the initial pre-design site activities, and this assessment may lead to modifications/additions to the program presented herein. Any such changes would be proposed to EPA for approval.

The proposed PCB sampling locations are shown on Figure 3 and the proposed sample locations and depths are listed in Tables 3 and 4. This sampling effort will consist of the collection of a total of 71 samples for PCB analysis. In the event that site conditions (e.g., standing/flowing water, large trees, subsurface utilities, or other obstructions) prevent sampling at any of the proposed locations, the samples in question will be collected as close to the original location as site conditions allow.

Sampling for Other Appendix IX+3 Constituents. As noted above, the SOW requires that the total number of non-PCB Appendix IX+3 analyses for the pre-design investigation must be approximately one-third of the

number of PCB samples required to satisfy the pre-design investigation requirements. Based on the evaluation of PCB sampling requirements, the total number of PCB samples needed to satisfy the PCB characterization requirements is 78 samples. Thus, for non-PCB Appendix IX+3 constituents, there must be 26 sample analyses. Of these, approximately half must come from the top foot of soil, with the remaining samples distributed among the relevant subsurface sampling increments.

As discussed in Section 4.3.2, the existing Appendix IX+3 data can be used to satisfy four of these 26 required samples. GE proposes to obtain the remaining Appendix IX+3 data by collecting new samples for analysis of Appendix IX+3 constituents (excluding pesticides and herbicides, as discussed below). For the GE-owned portion of the RAA, these will include six soil samples from the top foot of soil and three soil samples (total) from the relevant subsurface depth increments (i.e., the 1- to 6-foot and 6- to 15-foot depths). For the non-GE-owned property, GE proposes to collect seven soil samples from the top foot and six soil samples (total) from the relevant subsurface depth increments (i.e., 1- to 3-foot, 3- to 6-foot, and 6- to 15-foot depths). When these new samples are considered along with the usable existing Appendix IX+3 data, 12 Appendix IX+3 sampling results will be available at the GE-owed area (six from the top foot and six from deeper increments) and 14 such sampling results will be available for Parcel K10-14-1 (seven from the top foot and seven from deeper increments). The locations of these samples are shown, for each relevant depth increment, on Figures 4 through 6, and the locations and depths of these samples are listed in Table 4.

For samples collected for Appendix IX+3 analyses as part of the pre-design soil investigations, GE proposes to exclude analyses for pesticides and herbicides for the following reasons: (1) in prior sampling and analysis activities performed at the GE Plant Area, including East Street Area 1-North, with EPA and/or MDEP approval, analyses for pesticides and herbicides were not required; and (2) the presence of these compounds, if detected, would likely be attributable to the application of weed and pest control materials in accordance with their intended and appropriate commercial application.

Table 4 lists on a sample-by-sample basis the proposed sampling locations, depths, and analytical parameters. However, the specific locations/depths of some of the non-PCB Appendix IX+3 samples may be modified in the field considering PID readings or other observations (e.g., odors or evidence of staining) or if site conditions (e.g., standing/flowing water, large trees, subsurface utilities, other obstructions) prevent sampling at any of the designated locations. If such field modifications are made, GE will endeavor to maintain the proper ratio of the number of non-PCB Appendix IX+3 analyses at the various depth intervals (e.g., approximately half from the top foot and half from deeper increments), to the extent practical.

4.5 Soil Sampling Analytical Procedures

The collection and analysis of the soil samples at East Street Area 1-North will be conducted following the procedures set forth in GE's approved *Field Sampling Plan/Quality Assurance Project Plan* (FSP/QAPP). Specifically, the analytical procedures for the analysis of soil samples will be consistent with the EPA-approved 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 East Street Area 1-North pre-design investigation 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 to be analyzed for other Appendix IX+3 constituents (excluding pesticides and herbicides) 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.

Analysis of samples for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) will be performed using EPA Method 8290 for samples collected from the top foot of soil at all areas of this RAA and Method 8280A for all other samples. Since Method 8290 has lower detection and reporting limits, it will be used for samples from depth increments for which the SOW prescribes lower Performance Standards for PCDD/PCDF Toxicity Equivalency Quotients (TEQs) [i.e., 5 parts per billion (ppb) for the top foot in commercial/industrial areas], while Method 8280A is wholly adequate to ensure achievement of the higher Performance Standard set forth in the SOW for subsurface soil at commercial/industrial areas (20 ppb). PCDD/PCDF results will be reported on a dry-weight basis for both total homologues and 2,3,7,8-substituted congeners, using sample detection limits consistent with those presented in Table 3 of the FSP/QAPP. In addition, total TEQ concentrations will be calculated for the PCDD/PCDF compounds using the Toxicity Equivalency Factors (TEFs) derived by the World Health Organization (WHO) and representing non-detected compounds as one-half the analytical detection limit.

Quality control samples (i.e., matrix spike/matrix spike duplicates, field duplicates, trip blanks, and field blanks) will be collected at the frequency specified in Table 4 of the FSP/QAPP for each sample matrix collected. Tables 4 and 5 of the FSP/QAPP present the quality control criteria and corrective action procedures to be followed for each of the analytical procedures listed in Table 1 and for field-generated quality control samples. Overall project quality assurance will be ensured by following the procedures specified in the FSP/QAPP for sample collection and analysis, corrective action, and data reporting and validation.

5. Schedule

GE proposes to complete the investigations described in this PDI Work Plan and submit a Pre-Design Investigation Report for East Street Area 1-North within 6 months after EPA's approval of this PDI Work Plan, subject to possible changes due to delays in obtaining access permission or weather-related delays. In the event that delays to this proposed schedule are identified, GE will notify EPA and propose a revised schedule for completing the investigations and submitting a Pre-Design Investigation Report. With respect to access, if GE is unable to obtain access permission from particular property owners after using "best efforts" (as defined in the CD) to do so, it will so advise EPA and MDEP and seek their assistance in obtaining such access pursuant to Paragraph 60.f(i) of the CD.

The Pre-Design Investigation Report will present the results of all investigations conducted pursuant to this PDI Work Plan. It will also consider the sufficiency of the available data to support RD/RA activities for this Removal Action. If it is determined that further data are needed to support RD/RA activities to achieve the soil-related Performance Standards, that report will propose supplemental investigations to fill those data needs and a schedule for performing those supplemental investigations and submitting a Supplemental Pre-Design Investigation Report. If GE concludes in the Pre-Design Investigation Report that the available data are sufficient to support RD/RA activities for the Removal Action at this RAA, then that report will include a proposed schedule for submission of a Conceptual RD/RA Work Plan for the East Street Area 1-North Removal Action.

6. Summary of Anticipated Post-Removal Site Control Activities

Following the completion of construction activities to implement the necessary response actions, GE will continue to inspect, maintain, and monitor the completed actions and to perform repairs and replacement as needed, so as to ensure that the completed response actions are performing as designed. The specific scope and methodologies for such inspection and maintenance activities will be detailed in a Post-Removal Site Control Plan for the East Street Area 1-North Removal Action. Such activities will include the periodic inspection and maintenance of any surface covers installed (e.g., engineered barriers, enhanced pavement), inspection and maintenance of any ancillary components of the response actions (e.g., fencing and warning signs, if any), and repair or replacement of response actions at areas exhibiting deficiencies or potential problems.

The Post-Removal Site Control activities will be conducted in accordance with the pertinent requirements specified in Attachment J (Inspection and Maintenance Activities) to the SOW, except as otherwise proposed in the specific Post-Removal Site Control Plan and approved by EPA. In addition, inspection reports on these activities will be prepared and submitted periodically in accordance with the requirements of Section 4 of Attachment J to the SOW.

Tables

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TABLE 1

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

EXISTING SOIL PCB DATA AND PROPOSED USAGE

Data Source	Sample Location	Sample ID	Depth Interval	Date Collected	Available Documentation	Proposed Data Usage
A	ES1-7	ES10700.5	0-0.5	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-7	ES107.502	0.5-2	10/9/96	Complete Laboratory Data Package	Characterization
A	ES1-7	ES1070204	2-4	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-7	ES1070406	4-6	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-7	ES1070608	6-8	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-7	ES1070608D	6-8	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-7	ES1071416	14-16	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-8	ES10800.5	0-0.5	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-8	ES108.502	0.5-2	10/9/96	Complete Laboratory Data Package	Characterization
A	ES1-8	ES1080204	2-4	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-8	ES1080406	4-6	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-8	ES1081416	14-16	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-9	ES10900.5	0-0.5	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-9	ES109.502	0.5-2	10/9/96	Complete Laboratory Data Package	Characterization
A	ES1-9	ES1090204	2-4	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-9	ES1090406	4-6	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-9	ES1090608	6-8	5/16/96	Complete Laboratory Data Package	Characterization
A	ES1-14	ES1140002	0-2	7/29/96	Complete Laboratory Data Package	Characterization
A	ES1-14	ES1140204	2-4	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)
A	ES1-14	ES1140406	4-6	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)
A	ES1-14	ES1140608	6-8	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)
A	ES1-14	ES1140810	8-10	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)
A	ES1-14	ES1141012	10-12	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)
A	ES1-14	ES1141214	12-14	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)
A	ES1-14	ES1141416	14-16	7/29/96	Complete Laboratory Data Package	Supplemental (note 5)

TABLE 1

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

EXISTING SOIL PCB DATA AND PROPOSED USAGE

Data Source	Sample Location	Sample ID	Depth Interval	Date Collected	Available Documentation	Proposed Data Usage
B	GEI-106	GEI106-SB3	5-7	6/8/94	None	Supplemental (note 6)
B	6	SL-49	Unspecified	3/4/80	None	Rejected
B	127	SL-62	10	3/80	None	Rejected
B	129	SL-63	10	3/80	None	Rejected
B	130	SL-56	2-2.5	3/3/80	None	Potential Supplemental
B	130	SL-57	4-5	3/3/80	None	Potential Supplemental
B	130	SL-59	6-7	3/3/80	None	Potential Supplemental
B	130	SL-60	8-9	3/3/80	None	Potential Supplemental
B	130	SL-61	9-10	3/3/80	None	Potential Supplemental

NOTES:

1. This table lists all existing PCB soil samples that Blasland, Bouck & Lee (BBL) and General Electric (GE) have on record for East Street Area 1-North. Included in this list are soil samples that are proposed to be used to satisfy the pre-design soil investigation requirements.
2. Unspecified = Depth that the sample was collected could not be confirmed.
3. None = No laboratory documentation available; data located only in prior data summary table(s).
4. Characterization = Laboratory data to be used to satisfy pre-design soil investigation requirements.
5. Supplemental (note 5) = Data will be used for supplemental purposes only due to the depth interval of the sample not satisfying a grid node requirement.
6. Supplemental (note 6) = Data will be used for supplemental purposes only due to no available laboratory documentation.
7. Potential Supplemental = Samples were analyzed prior to 1991; data may potentially be used for supplemental purposes, subject to further review (refer to text).
8. Rejected = Result was rejected because the depth (or depth interval) of the sample collected is "unspecified" or indicates a single depth.
9. Data Source Legend:

   A = Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates, November 1996

   B = MCP Interim Phase II Report and Current Assessment Summary for East Street Area 1/USEPA Area 3, Blasland, Bouck & Lee, Inc. (BBL), October 1994.

TABLE 2

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

EXISTING SOIL APPENDIX IX+3 DATA AND PROPOSED USAGE

Data Source	Sample Location	Sample ID	Depth Interval	Date Collected	Analyte Group				Available Documentation	Proposed Data Usage
					VOCs	SVOCs	PCDDs/PCDFs	Inorganics		
A	ES1-7	ES1070608	6-8	5/16/96	X	X	X	X	Complete Laboratory Data Package	Characterization
A	ES1-7	ES1070608D	6-8	5/16/96	X	X	X	X	Complete Laboratory Data Package	Characterization
A	ES1-8	ES1080406	4-6	5/16/96	X	X	X	X	Complete Laboratory Data Package	Characterization
A	ES1-9	ES1090406	4-6	5/16/96	X	X	X	X	Complete Laboratory Data Package	Characterization
A	ES1-14	ES1141416	14-16	7/29/96	X	X	X	X	Complete Laboratory Data Package	Characterization

NOTES:

1. This table lists all existing soil samples analyzed for some or all Appendix IX+3 constituents and corresponding parameter groups that Blasland, Bouck & Lee (BBL) and General Electric (GE) have on record for East Street Area 1-North.
2. X = analyses were performed for that parameter group.
3. Appendix IX characterization = Parameter groups having a complete data package available.
4. Data Source Legend:
   A = Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates, November 1996

TABLE 3

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

SUMMARY OF PROPOSED GRID CHARACTERIZATION OF PCBs

GRID COORDINATE	SAMPLE TYPE	0-1 ft	1-3 ft	3-6 ft	6-15 ft
PAVED AREAS					
A13	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-A13	RAA6-A13	RAA6-A13	RAA6-A13
A14	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-A14	--	--	--
A15	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-A15	RAA6-A15	RAA6-A15	RAA6-A15
A16	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-A16	--	--	--
A17	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-A17	RAA6-A17	RAA6-A17	RAA6-A17
B14	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-B14	--	--	--
B15	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-B15	--	--	--
B16	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-B16	--	--	--
B17	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-B17	--	--	--
C6	EXISTING:	--	--		--
	PROPOSED:	RAA6-C6	RAA6-C6		RAA6-C6
C14	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-C14	--	--	--
C15	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-C15	RAA6-C15	RAA6-C15	RAA6-C15
C16	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-C16	--	--	--
C17	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-C17	RAA6-C17	RAA6-C17	RAA6-C17
C18	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-C18	--	--	--
D14	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D14	--	--	--
D15	EXISTING:	ES1-14	--	--	--
	PROPOSED:	--	--	--	--
D16	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D16	--	--	--
D17	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D17	--	--	--
D18	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D18	--	--	--

TABLE 3

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

SUMMARY OF PROPOSED GRID CHARACTERIZATION OF PCBs

GRID COORDINATE	SAMPLE TYPE	0-1 ft	1-3 ft	3-6 ft	6-15 ft
UNPAVED AREAS					
B18	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-B18	--	--	--
C3	EXISTING:	ES1-7	ES1-7		--
	PROPOSED:	--	--		RAA6-C3
C4	EXISTING:	--	--		--
	PROPOSED:	RAA6-C4	RAA6-C4		RAA6-C4
C5	EXISTING:	--	--		--
	PROPOSED:	RAA6-C5	RAA6-C5		RAA6-C5
D7	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D7	RAA6-D7	RAA6-D7	RAA6-D7
D8	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D8	--	--	--
D9	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D9	RAA6-D9	RAA6-D9	RAA6-D9
D10	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D10	--	--	--
D11	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D11	--	--	--
D12	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D12	--	--	--
D13	EXISTING:	--	--	--	--
	PROPOSED:	RAA6-D13	--	--	--
E1	EXISTING:	ES1-9	ES1-9		--
	PROPOSED:	--	--		RAA6-E1
E2	EXISTING:	--	--		--
	PROPOSED:	RAA6-E2	RAA6-E2		RAA6-E2
E3	EXISTING:	--	--		--
	PROPOSED:	RAA6-E3	RAA6-E3		RAA6-E3
E4	EXISTING:	ES1-8	ES1-8		--
	PROPOSED:	--	--		RAA6-E4
E5	EXISTING:	--	--		--
	PROPOSED:	RAA6-E5	RAA6-E5		RAA6-E5
E6	EXISTING:	--	--		--
	PROPOSED:	RAA6-E6	RAA6-E6		RAA6-E6

TABLE 3

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

SUMMARY OF PROPOSED GRID CHARACTERIZATION OF PCBs

NOTES:

1. This table defines the soil sampling locations which will be utilized to satisfy grid-based sampling requirements for PCBs for the East Street Area 1-North pre-design investigation.
2. Other existing soil data will not be utilized in support of the pre-design sampling requirements, but may be used in the design of the Removal Action (as discussed in the text).
3. Shaded depth increments indicate that soil sampling is not required.
4. Existing samples are assumed to represent a grid node if they are located less than 50 feet from 100-foot grid nodes.
5. Existing sample depths are assumed to satisfy the depth interval requirements (i.e., either 0 to 1, 1 to 3, 3 to 6, or 6 to 15 feet, as applicable) if the existing depth(s) constitute at least 50% of the depth requirement. For example, existing data for 10- to 12-foot and 12- to 14-foot depths will satisfy the 6- to 15-foot requirements at a node, but existing data for the 10- to 12-foot depth alone will not.
6. This table does not include all existing soil PCB samples collected at East Street Area 1-North. Refer to Table 1 for a complete list of all existing soil PCB samples.
7. -- = Not Applicable

TABLE 4

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

PROPOSED SOIL SAMPLING LOCATIONS, DEPTHS, AND PARAMETERS

SAMPLE ID	GRID COORDINATE	SAMPLE DEPTH	ANALYSES				
			PCBs	VOCs	SVOCs	INORGANICS	PCDDs/PCDFs
PAVED AREAS							
RAA6-A13	A13	0-1 ft	X	--	--	--	--
		1-3 ft	X	--	--	--	--
		3-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-A14	A14	0-1 ft	X	--	--	--	--
RAA6-A15	A15	0-1 ft	X	--	--	--	--
		1-3 ft	X	--	--	--	--
		3-6 ft	X	X	X	X	X
		6-15 ft	X	--	--	--	--
RAA6-A16	A16	0-1 ft	X	--	--	--	--
RAA6-A17	A17	0-1 ft	X	--	--	--	--
		1-3 ft	X	X	X	X	X
		3-6 ft	X	--	--	--	--
		6-15 ft	X	X	X	X	X
RAA6-B14	B14	0-1 ft	X	X	X	X	X
RAA6-B15	B15	0-1 ft	X	--	--	--	--
RAA6-B16	B16	0-1 ft	X	--	--	--	--
RAA6-B17	B17	0-1 ft	X	X	X	X	X
RAA6-C6	C6	0-1 ft	X	X	X	X	X
		1-6 ft	X	--	--	--	--
		6-15 ft	X	X	X	X	X
RAA6-C14	C14	0-1 ft	X	--	--	--	--
RAA6-C15	C15	0-1 ft	X	--	--	--	--
		1-3 ft	X	--	--	--	--
		3-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-C16	C16	0-1 ft	X	--	--	--	--
RAA6-C17	C17	0-1 ft	X	X	X	X	X
		1-3 ft	X	--	--	--	--
		3-6 ft	X	X	X	X	X
		6-15 ft	X	--	--	--	--
RAA6-C18	C18	0-1 ft	X	--	--	--	--
RAA6-D14	D14	0-1 ft	X	X	X	X	X
RAA6-D16	D16	0-1 ft	X	--	--	--	--
RAA6-D17	D17	0-1 ft	X	--	--	--	--
RAA6-D18	D18	0-1 ft	X	--	--	--	--

TABLE 4

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

PROPOSED SOIL SAMPLING LOCATIONS, DEPTHS, AND PARAMETERS

SAMPLE ID	GRID COORDINATE	SAMPLE DEPTH	ANALYSES				
			PCBs	VOCs	SVOCs	INORGANICS	PCDDs/PCDFs
UNPAVED AREAS							
RAA6-B18	B18	0-1 ft	X	--	--	--	--
RAA6-C3	C3	6-15 ft	X	--	--	--	--
RAA6-C4	C4	0-1 ft	X	X	X	X	X
		1-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-C5	C5	0-1 ft	X	X	X	X	X
		1-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-D7	D7	0-1 ft	X	X	X	X	X
		1-3 ft	X	X	X	X	X
		3-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-D8	D8	0-1 ft	X	--	--	--	--
RAA6-D9	D9	0-1 ft	X	X	X	X	X
		1-3 ft	X	--	--	--	--
		3-6 ft	X	--	--	--	--
		6-15 ft	X	X	X	X	X
RAA6-D10	D10	0-1 ft	X	--	--	--	--
RAA6-D11	D11	0-1 ft	X	--	--	--	--
RAA6-D12	D12	0-1 ft	X	X	X	X	X
RAA6-D13	D13	0-1 ft	X	--	--	--	--
RAA6-E1	E1	0-1 ft	--	X	X	X	X
		6-15 ft	X	X	X	X	X
RAA6-E2	E2	0-1 ft	X	--	--	--	--
		1-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-E3	E3	0-1 ft	X	X	X	X	X
		1-6 ft	X	X	X	X	X
		6-15 ft	X	--	--	--	--
RAA6-E4	E4	6-15 ft	X	--	--	--	--
RAA6-E5	E5	0-1 ft	X	X	X	X	X
		1-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--
RAA6-E6	E6	0-1 ft	X	--	--	--	--
		1-6 ft	X	--	--	--	--
		6-15 ft	X	--	--	--	--

TABLE 4

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1 - NORTH REMOVAL ACTION

PROPOSED SOIL SAMPLING LOCATIONS, DEPTHS, AND PARAMETERS

NOTES:

1. This table identifies soil samples to be collected and the analyses to be performed as part of the pre-design investigation at East Street Area 1-North.
2. The Appendix IX+3 sample intervals shown above may be modified in the field based on the results of photoionization detector (PID) readings and visual observations at the time of sample collection.
3. -- = Not Applicable

Figures

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engineers & scientists

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 AND BOUCK ENGINEERS, P.C. P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES/LIMITS ARE APPROXIMATE.

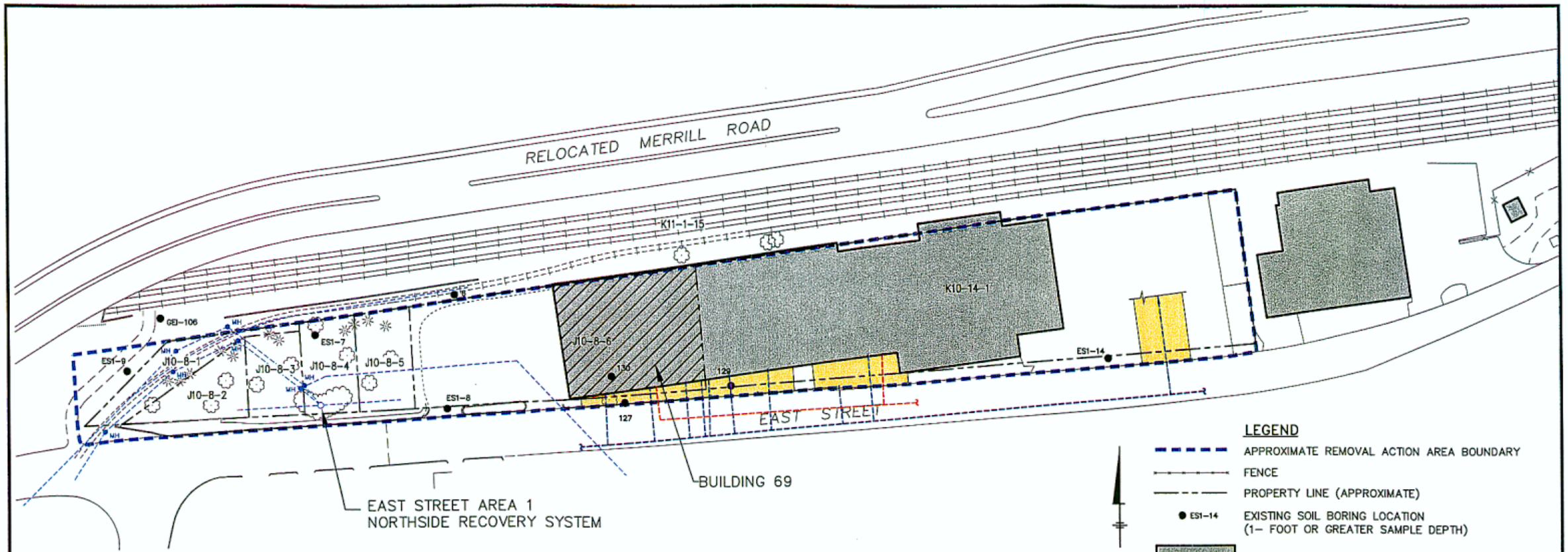
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PRE–DESIGN INVESTIGATION WORK PLAN
FOR EAST STREET AREA 1 – NORTH

SITE LOCATION

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

FIGURE 1

L: ON=*, OFF=REF
P: PAGESET/PLTD20L
05/21/02 SYR-54-DMW KMD DMW
M:\40189001\40189002.DWG



SUMMARY OF SOIL PCB SAMPLE RESULTS

(PPM DRY WT.)(SAMPLE INCREMENTS IN FEET)

Location ID	0 – 0.5	0 – 2	0.5 – 2	2 – 2.5	2 – 4	4 – 5	4 – 6	5 – 7	6 – 7	6 – 8	8 – 9	8 – 10	9 – 10	10	10 – 12	12 – 14	14 – 16
127	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	--	--	--
129	--	--	--	--	--	--	--	--	--	--	--	--	--	1.8	--	--	--
130	--	--	--	1.3	--	ND	--	--	2.6	--	3.1	--	0.1	--	--	--	--
ES1-7	0.45	--	1.4	--	1.7	--	6.4	--	--	1.8 [2.7]	--	--	--	--	--	--	ND
ES1-8	1.1	--	0.34	--	1.4	--	7.7	--	--	--	--	--	--	--	--	--	ND
ES1-9	1.9	--	2.2	--	0.73	--	ND	--	--	ND	--	--	--	--	--	--	--
ES1-14	--	1.8	--	--	0.23	--	ND	--	--	ND	--	5	--	--	0.06	ND	0.3
GEI-106	--	--	--	--	--	--	--	ND	--	--	--	--	--	--	--	--	--

TABLE NOTES:

1. -- = No sample collected.
2. ND = Not detected.
3. [2.7] = Duplicate analysis result shown in brackets.

SUMMARY OF SOIL PCB SAMPLE RESULTS WITH UNKNOWN DEPTHS

(PPM DRY WT.)

Location ID	PCB Concentration
6	13

FIGURE NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. -FLOWN IN APRIL 1990; DATA DIGITZED FROM PHOTOCOPIES OF MASSACHUSETTS HIGHWAY DEPARTMENT DRAWINGS DEPICTING MERRILL ROAD REALIGNMENT, 1/14/98; AND SURVEY INFORMATION PROVIDED BY WHITE ENGINEERING DEPICTING RELOCATED EAST STREET, 5/7/01.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. UTILITY LOCATIONS ARE APPROXIMATE.

0 100' 200'

GRAPHIC SCALE

LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- FENCE
- PROPERTY LINE (APPROXIMATE)
- ES1-14 EXISTING SOIL BORING LOCATION (1– FOOT OR GREATER SAMPLE DEPTH)
- BUILDING
- BUILDING 69 TO BE DEMOLISHED
- PAVED AREA
- WATER LINE
- SEWER LINE
- RECOVERY SYSTEM
- MH MANHOLE
- APPROXIMATE LOCATION OF BAND SURROUNDING SUBSURFACE UTILITIES (25 FEET WIDE ON EACH SIDE OF UTILITY)

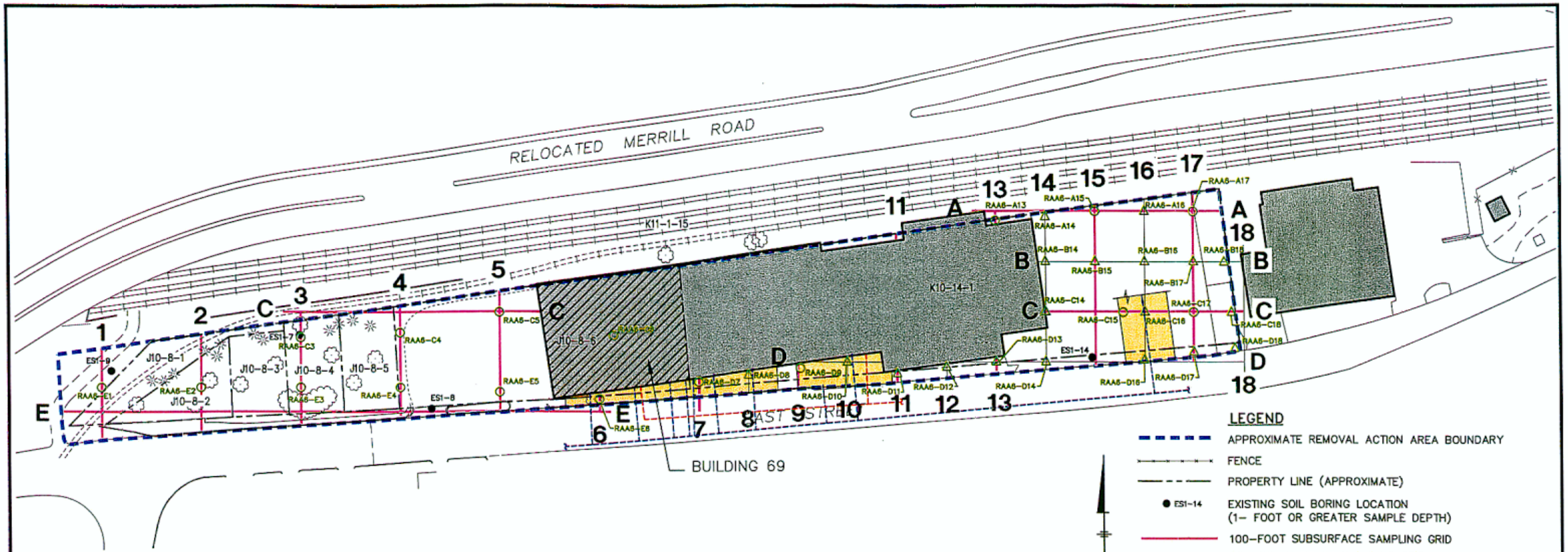
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PRE–DESIGN INVESTIGATION WORK PLAN FOR EAST STREET AREA 1 – NORTH

EXISTING SAMPLING LOCATIONS

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

FIGURE 2

X: 40189X01.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-BL
05/21/02 SYR-54-DMW DJP DMW
N/40189001/40189903.DWG



SUMMARY OF SOIL PCB SAMPLE RESULTS

(PPM DRY WT.)(SAMPLE INCREMENTS IN FEET)

Location ID	0 – 0.5	0 – 2	0.5 – 2	2 – 2.5	2 – 4	4 – 5	4 – 6	6 – 7	6 – 8	8 – 9	8 – 10	9 – 10	10	10 – 12	12 – 14	14 – 16
ES1-7	0.45	--	1.4	--	1.7	--	6.4	--	1.8 [2.7]	--	--	--	--	--	--	ND
ES1-8	1.1	--	0.34	--	1.4	--	7.7	--	--	--	--	--	--	--	--	ND
ES1-9	1.9	--	2.2	--	0.73	--	ND	--	ND	--	--	--	--	--	--	--
ES1-14	--	1.8	--	--	0.23	--	ND	--	ND	--	5	--	--	0.06	ND	0.3

TABLE NOTES:

1. -- = No sample collected.
2. ND = Not detected.
3. [2.7] = Duplicate analysis result shown in brackets.

FIGURE NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. -FLOWN IN APRIL 1990; DATA DIGITIZED FROM PHOTOCOPIES OF MASSACHUSETTS HIGHWAY DEPARTMENT DRAWINGS DEPICTING MERRILL ROAD REALIGNMENT, 1/14/98; AND SURVEY INFORMATION PROVIDED BY WHITE ENGINEERING DEPICTING RELOCATED EAST STREET, 5/7/01.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.

0 100' 200'

GRAPHIC SCALE

X: 40189X01.DWG
L: ON=*;OFF=REF*
P: PAGESET/PLT-BL
05/21/02 SYR-54-DMW KMD DMW
N/40189001/40189B04.DWG

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PRE-DESIGN INVESTIGATION WORK PLAN FOR EAST STREET AREA 1 – NORTH

PROPOSED PCB CHARACTERIZATION LOCATIONS

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

FIGURE 3

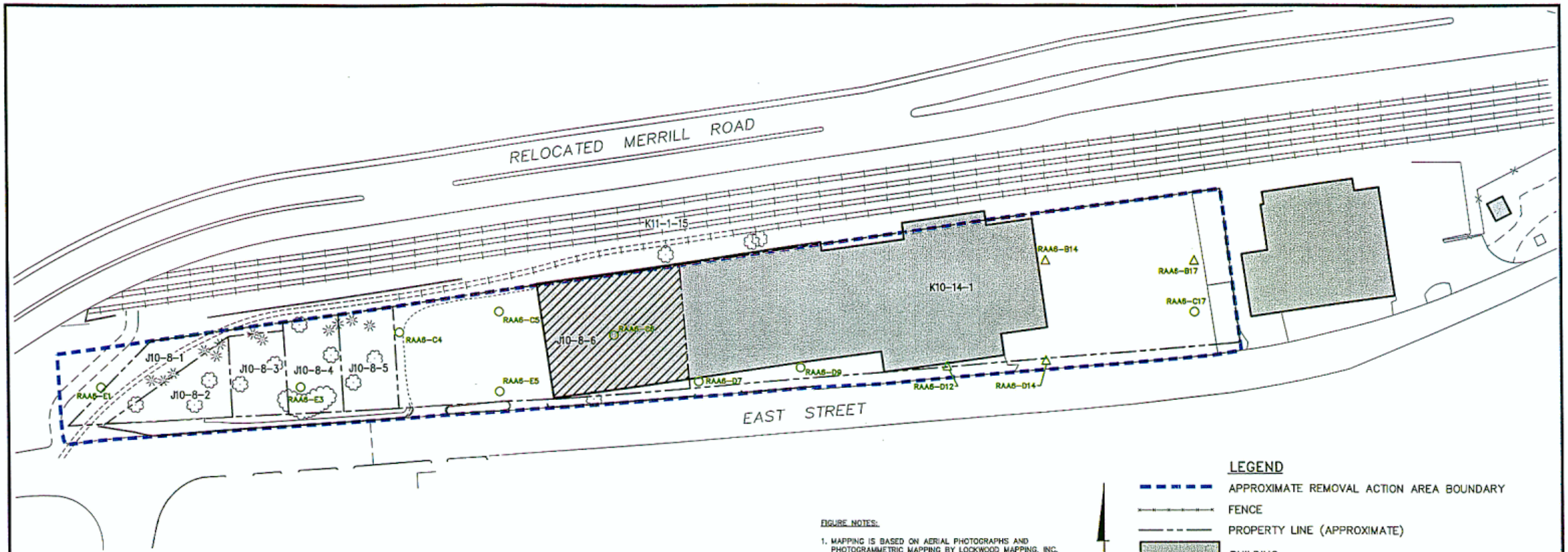


FIGURE NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. -FLOWN IN APRIL 1990; DATA DIGITZED FROM PHOTOCOPIES OF MASSACHUSETTS HIGHWAY DEPARTMENT DRAWINGS DEPICTING MERRILL ROAD REALIGNMENT, 1/14/98; AND SURVEY INFORMATION PROVIDED BY WHITE ENGINEERING DEPICTING RELOCATED EAST STREET, 5/7/01.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. EXISTING AND PROPOSED SOIL SAMPLES USED TO SATISFY APPENDIX IX+3 CHARACTERIZATION INCLUDES ANALYSES FOR VOLATILE ORGANIC COMPOUNDS (VOCs), SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs), POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs)/POLYCHLORINATED DIBENZOFURANS (PCDFs) AND INORGANICS.

0 100' 200'

GRAPHIC SCALE

LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- FENCE
- PROPERTY LINE (APPROXIMATE)
- BUILDING
- BUILDING 69 TO BE DEMOLISHED
- PAVED AREA
- ○ RAA6-C5 PROPOSED SOIL BORING LOCATION
- △ RAA6-D12 PROPOSED SURFACE SOIL SAMPLE LOCATION

X: 40189X01.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-BL
05/23/02 SYR-54-DMW DMW LAS
N/40189001/40189B05.DWG

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PRE-DESIGN INVESTIGATION WORK PLAN
FOR EAST STREET AREA 1 - NORTH

PROPOSED APPENDIX IX+3 SAMPLING LOCATIONS (0- TO 1-FOOT DEPTH INTERVAL)

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

FIGURE 4

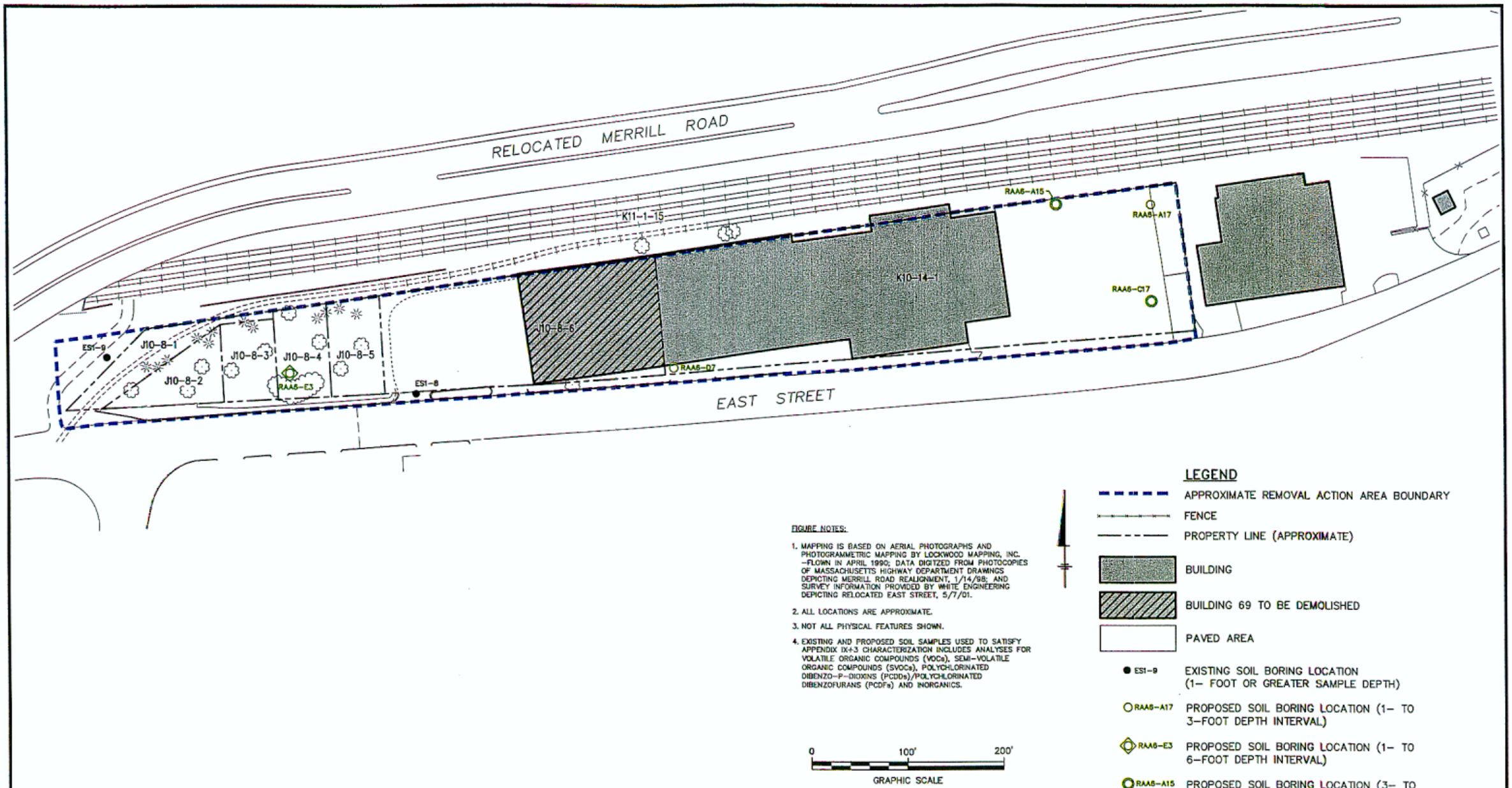


FIGURE NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. -FLOWN IN APRIL 1990; DATA DIGITZED FROM PHOTOCOPIES OF MASSACHUSETTS HIGHWAY DEPARTMENT DRAWINGS DEPICTING MERRILL ROAD REALIGNMENT, 1/14/98; AND SURVEY INFORMATION PROVIDED BY WHITE ENGINEERING DEPICTING RELOCATED EAST STREET, 5/7/01.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. EXISTING AND PROPOSED SOIL SAMPLES USED TO SATISFY APPENDIX IX+3 CHARACTERIZATION INCLUDES ANALYSES FOR VOLATILE ORGANIC COMPOUNDS (VOCs), SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs), POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs)/POLYCHLORINATED DIBENZOFURANS (PCDFs) AND INORGANICS.

0 100' 200'

GRAPHIC SCALE

LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- FENCE
- PROPERTY LINE (APPROXIMATE)
- BUILDING
- BUILDING 69 TO BE DEMOLISHED
- PAVED AREA
- ● ES1-9 EXISTING SOIL BORING LOCATION (1- FOOT OR GREATER SAMPLE DEPTH)
- ○ RAA6-A17 PROPOSED SOIL BORING LOCATION (1- TO 3-FOOT DEPTH INTERVAL)
- ◇ RAA6-E3 PROPOSED SOIL BORING LOCATION (1- TO 6-FOOT DEPTH INTERVAL)
- ○ RAA6-A15 PROPOSED SOIL BORING LOCATION (3- TO 6-FOOT DEPTH INTERVAL)

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PRE-DESIGN INVESTIGATION WORK PLAN FOR EAST STREET AREA 1 - NORTH

PROPOSED APPENDIX IX+3 SAMPLING LOCATIONS (1- TO 6-FOOT DEPTH INTERVAL)

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

FIGURE 5

X: 40189X01.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-BL
05/21/02 SYR-54-DMW KMD DMW
N/40189001/40189B05.DWG

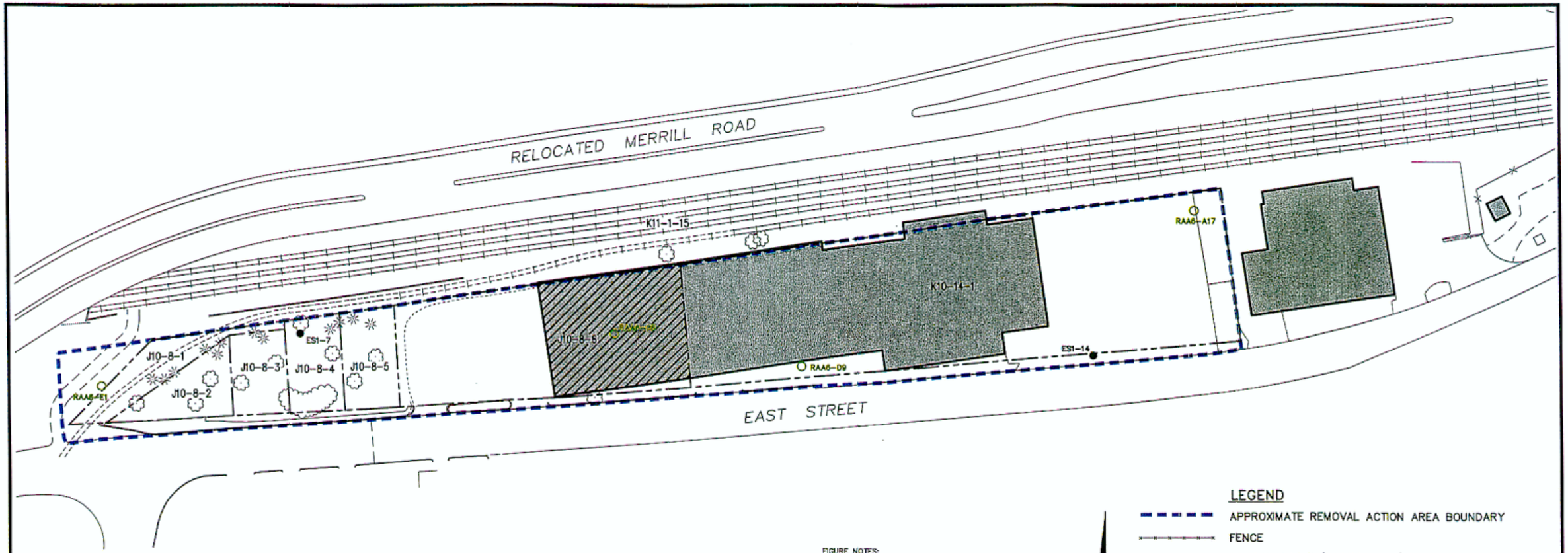


FIGURE NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. -FLOWN IN APRIL 1990; DATA DIGITIZED FROM PHOTOCOPIES OF MASSACHUSETTS HIGHWAY DEPARTMENT DRAWINGS DEPICTING MERRILL ROAD REALIGNMENT, 1/14/98; AND SURVEY INFORMATION PROVIDED BY WHITE ENGINEERING DEPICTING RELOCATED EAST STREET, 5/7/01.
2. ALL LOCATIONS ARE APPROXIMATE.
3. NOT ALL PHYSICAL FEATURES SHOWN.
4. EXISTING AND PROPOSED SOIL SAMPLES USED TO SATISFY APPENDIX IX+3 CHARACTERIZATION INCLUDES ANALYSES FOR VOLATILE ORGANIC COMPOUNDS (VOCs), SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs), POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs)/POLYCHLORINATED DIBENZOFURANS (PCDFs) AND INORGANICS.

LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- FENCE
- PROPERTY LINE (APPROXIMATE)
- ● ES1-14 EXISTING SOIL BORING LOCATION (1- FOOT OR GREATER SAMPLE DEPTH)
- BUILDING
- BUILDING 69 TO BE DEMOLISHED
- PAVED AREA
- ○ RAA8-E1 PROPOSED SOIL BORING LOCATION

0 100' 200'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
PRE-DESIGN INVESTIGATION WORK PLAN
FOR EAST STREET AREA 1 - NORTH

PROPOSED APPENDIX IX+3 SAMPLING LOCATIONS (6- TO 15-FOOT DEPTH INTERVAL)

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

FIGURE 6

X: 40189X01.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-BL
05/21/02 SYR-54-DMW KMD DMW
N/40189001/40189B08.DWG

Appendices

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Appendix A

Compilation of Prior Soil Sampling Data

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Appendix A – Assessment of Prior Soil Data

Analytical results relating to soils at East Street Area 1-North have been summarized in several reports prepared under various regulatory programs. The documents listed below provide information concerning the results of prior soil investigations at this area:

- *MCP Interim Phase II Report and Current Assessment Summary for East Street Area 1/USEPA Area 3,* Blasland, Bouck & Lee, Inc. (BBL), October 1994;

- *Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3,* Golder Associates, November 1996.

This Appendix presents a summary of the existing soil analytical data at East Street Area 1-North. The following data tables, which summarize the concentrations of PCBs and non-PCB Appendix IX+3 constituents detected in soil samples collected at East Street Area 1-North, have been previously presented in the above reports.

PRIOR PCB SOIL DATA

TABLE A-1

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
EAST STREET AREA 1 - NORTH REMOVAL ACTION

SUMMARY OF PCB DETECTIONS IN SUBSURFACE SOIL

Sample Location	Sample ID	Depth Interval (feet)	Date Collected	Total PCBs Concentration (ppm)
ES1-7	ES10700.5	0-0.5	5/16/96	0.45
ES1-7	ES107.502	0.5-2	10/9/96	1.4
ES1-7	ES1070204	2-4	5/16/96	1.7
ES1-7	ES1070406	4-6	5/16/96	6.4
ES1-7	ES1070608	6-8	5/16/96	1.8 P
ES1-7	ES1070608D	6-8	5/16/96	2.7 P
ES1-7	ES1071416	14-16	5/16/96	ND
ES1-8	ES10800.5	0-0.5	5/16/96	1.1
ES1-8	ES108.502	0.5-2	10/9/96	0.34
ES1-8	ES1080204	2-4	5/16/96	1.4
ES1-8	ES1080406	4-6	5/16/96	7.7
ES1-8	ES1081416	14-16	5/16/96	ND
ES1-9	ES10900.5	0-0.5	5/16/96	1.9
ES1-9	ES109.502	0.5-2	10/9/96	2.2
ES1-9	ES1090204	2-4	5/16/96	0.73
ES1-9	ES1090406	4-6	5/16/96	ND
ES1-9	ES1090608	6-8	5/16/96	ND
ES1-14	ES1140002	0-2	7/29/96	1.8 P
ES1-14	ES1140204	2-4	7/29/96	0.23
ES1-14	ES1140406	4-6	7/29/96	ND
ES1-14	ES1140608	6-8	7/29/96	ND
ES1-14	ES1140810	8-10	7/29/96	5
ES1-14	ES1141012	10-12	7/29/96	0.06 P
ES1-14	ES1141214	12-14	7/29/96	ND
ES1-14	ES1141416	14-16	7/29/96	0.3
GEI-106	GEI106-SB3	5-7	6/8/94	ND
6	SL-49	Unspecified	3/4/80	13
127	SL-62	10	3/80	1.5
129	SL-63	10	3/80	1.8
130	SL-56	2-2.5	3/3/80	1.3
130	SL-57	4-5	3/3/80	ND
130	SL-59	6-7	3/3/80	2.6
130	SL-60	8-9	3/3/80	3.1
130	SL-61	9-10	3/3/80	0.1

TABLE A-1

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
EAST STREET AREA 1 - NORTH REMOVAL ACTION

SUMMARY OF PCB DETECTIONS IN SUBSURFACE SOIL

NOTES:

1. This table lists all existing PCB soil samples that Blasland, Bouck & Lee (BBL) and General Electric (GE) have on record for East Street Area 1-North. Included in this list are soil samples that are proposed to be used to satisfy the pre-design soil investigation requirements.
2. Unspecified = Depth that the sample was collected could not be confirmed.
3. ND - Analyte was not detected
4. P - The analyte is detected in the sample. The percent differences in the concentrations calculated from two dissimilar GC columns is greater than 25%. The value should be considered estimated.
5. Data obtained from:

Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates, November 1996.

MCP Interim Phase II Report and Current Assessment Summary for East Street Area 1/USEPA Area 3, Blasland, Bouck & Lee, Inc. (BBL), October 1994.

Geotechnical and Environmental Investigation for Reconstruction of Merrill Road, GEI Consultants, December 29, 1994.

PRIOR NON-PCB
APPENDIX IX+3 SOIL DATA

TABLE A-2

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR THE EAST STREET AREA 1-NORTH REMOVAL ACTION

SUMMARY OF VOC DETECTIONS IN SUBSURFACE SOIL

Parameter	Sample ID ES1070608 Depth: 6' - 8' Date Sampled: 5/16/96	Sample ID ES1070608D Depth: 6' - 8' DUP Date Sampled: 5/16/96	Sample ID ES1080406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1090406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1141416 Depth: 14' - 16' Date Sampled: 7/29/96
Methylene Chloride	ND	ND	ND	ND	0.014 JB
Acetone	ND	ND	ND	ND	0.023 JB
Trichloroethene	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	ND	ND	ND	ND	ND

NOTES:

1. Units are in ppm (parts per million).
2. ND - Analyte was not detected.
3. J - The analyte was detected and is considered an estimated value.
4. B - The analyte was found to be present in the associated laboratory method blanks.
5. Data obtained from : *Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates, November 1996.*

TABLE A-3

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1-NORTH REMOVAL ACTION

SUMMARY OF SVOC DETECTIONS IN SUBSURFACE SOIL

Parameter	Sample ID ES1070608 Depth: 6' - 8' Date Sampled: 5/16/96	Sample ID ES1070608D Depth: 6' - 8' DUP Date Sampled: 5/16/96	Sample ID ES1080406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1090406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1141416 Depth: 14' - 16' Date Sampled: 7/29/96
1,3-Dichlorobenzene	0.064 J	ND	ND	ND	ND
1,4-Dichlorobenzene	0.46 J	ND	ND	ND	ND
Acetophenone	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ND	ND	0.34 J	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)Phthalate	ND	ND	ND	ND	0.47 J
Benzo(a)Anthracene	ND	ND	ND	ND	ND
7,12-Dimethylbenzanthracene	ND	ND	ND	ND	ND
Benzo(b)Fluoranthene	ND	ND	ND	ND	ND
Benzo(k)Fluoranthene	ND	ND	ND	ND	ND
Benzo(a)Pyrene	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	ND	ND	ND	ND	ND
Dibenz(a,h)Anthracene	ND	ND	ND	ND	ND
Benzo(g,h,i)Perylene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND

NOTES:
1. Units are in ppm (parts per million).
2. ND - Analyte was not detected.
3. J - The analyte was detected and is considered an estimated value.
4. Data obtained from: *Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates,* November 1996.

TABLE A-4

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1-NORTH REMOVAL ACTION

SUMMARY OF DIOXIN AND FURAN DETECTIONS IN SUBSURFACE SOIL

Parameter	Sample ID ES1070608 Depth: 6' - 8' Date Sampled: 5/16/96	Sample ID ES1070608D Depth: 6' - 8' DUP Date Sampled: 5/16/96	Sample ID ES1080406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1090406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1141416 Depth: 14' - 16' Date Sampled: 7/29/96
Furans					
2,3,7,8-TCDF	ND(0.00000025)	ND(0.00000035)	0.00000079 J	ND(0.000000067)	ND(0.00010)
TCDFs (total)	ND(0.00000025)	ND(0.00000035)	0.00000079	ND(0.00000010)	ND(0.00010)
1,2,3,7,8-PeCDF	ND(0.000000091)	ND(0.00000011)	ND(0.0000038) Y	ND(0.00000011)	ND(0.000051)
2,3,4,7,8-PeCDF	ND(0.00000017)	ND(0.00000025)	ND(0.00000066)	ND(0.000000092)	ND(0.000056)
PeCDFs (total)	ND(0.00000050)	ND(0.00000088)	ND(0.0000038)	ND(0.00000025)	ND(0.000051)
1,2,3,4,7,8-HxCDF	ND(0.00000057)	ND(0.0000010)	0.0000036 J	ND(0.000000066)	ND(0.000043)
1,2,3,6,7,8-HxCDF	ND(0.00000020)	ND(0.00000018)	ND(0.00000059)	ND(0.000000066)	ND(0.000035)
1,2,3,7,8,9-HxCDF	ND(0.00000020)	ND(0.00000020)	ND(0.00000055)	ND(0.000000051)	ND(0.000047)
2,3,4,6,7,8-HxCDF	ND(0.00000021)	ND(0.00000034)	ND(0.00000093)	ND(0.000000093)	ND(0.000041)
HxCDFs (total)	ND(0.00000096)	ND(0.0000016)	0.0000036	ND(0.00000051)	ND(0.000035)
1,2,3,4,6,7,8-HpCDF	ND(0.0000012)	ND(0.0000014)	0.0000045 J	ND(0.00000026)	ND(0.000028)
1,2,3,4,7,8,9-HpCDF	ND(0.00000079)	ND(0.00000078)	ND(0.0000031)	ND(0.00000021)	ND(0.000032)
HpCDFs (total)	ND(0.0000017)	ND(0.0000023)	0.000011	ND(0.00000045)	ND(0.000028)
OCDF	0.000017	ND(0.0000061)	0.000015	ND(0.0000038)	ND(0.000058)
Total Furans	0.000017	ND(0.0000061)	0.000030	ND(0.0000038)	ND(0.00010)
Dioxins					
2,3,7,8-TCDD	ND(0.000000085)	ND(0.00000020)	ND(0.00000013)	ND(0.00000012)	ND(0.000067)
TCDDs (total)	ND(0.00000028)	ND(0.00000020)	ND(0.00000054)	ND(0.00000012)	ND(0.000067)
1,2,3,7,8-PeCDD	ND(0.00000020)	ND(0.00000011)	ND(0.00000045)	ND(0.000000087)	ND(0.00010)
PeCDDs (total)	ND(0.00000045)	ND(0.00000020)	ND(0.00000075)	ND(0.00000017)	ND(0.00010)
1,2,3,4,7,8-HxCDD	ND(0.000000092)	ND(0.000000072)	ND(0.00000036)	ND(0.000000055)	ND(0.000071)
1,2,3,6,7,8-HxCDD	ND(0.000000093)	ND(0.00000017)	ND(0.00000066)	ND(0.000000053)	ND(0.000059)
1,2,3,7,8,9-HxCDD	ND(0.000000097)	ND(0.000000075)	ND(0.00000070)	ND(0.000000085)	ND(0.000063)
HxCDDs (total)	ND(0.00000031)	ND(0.00000048)	0.0000043	ND(0.00000017)	ND(0.000059)
1,2,3,4,6,7,8-HpCDD	ND(0.0000021)	ND(0.0000031)	0.0000060 J	ND(0.00000052)	ND(0.000060)
HpCDDs (total)	ND(0.0000021)	ND(0.0000031)	0.000011	ND(0.00000057)	ND(0.000060)
OCDD	0.000021	0.000029	0.000045	ND(0.0000065)	ND(0.000084)
Total Dioxins	0.000021	0.000029	0.000060	ND(0.0000065)	ND(0.00010)
WHO TEQ (WHO TEFs)	0.00000030	0.00000037	0.0000013	0.00000016	0.00012

TABLE A-4

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1-NORTH REMOVAL ACTION

SUMMARY OF DIOXIN AND FURAN DETECTIONS IN SUBSURFACE SOIL

NOTES:

1. Samples were collected by Blasland Bouck & Lee, Inc., and were submitted to Quanterra Environmental Services, Inc. for analysis of dioxin and furans.
2. ND - Analyte was not detected. The number in parentheses is the associated detection limit.
3. Total dioxins/furans determined as the sum of the total homolog concentrations; non-detect values considered as zero.
4. Total 2,3,7,8-TCDD toxicity equivalents (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) derived by the World Health Organization (WHO) and published by Van den Berg et al. In Environmental Health Perspectives 106(2), December 1998.
5. Data Qualifiers:
   J - The compound or analyte was positively identified, but the associated numerical value is an estimated concentration.
   Y - 2,3,7,8-TCDF results have been confirmed on a DB-225 column.
6. All results are in parts per million (ppm).
7. Data obtained from: *Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates, November 1996.*

TABLE A-5

GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

PRE-DESIGN INVESTIGATION WORK PLAN FOR
THE EAST STREET AREA 1-NORTH REMOVAL ACTION

SUMMARY OF INORGANIC DETECTIONS IN SUBSURFACE SOIL

Parameter	Sample ID ES1070608 Depth: 6' - 8' Date Sampled: 5/16/96	Sample ID ES1070608D Depth: 6' - 8' DUP Date Sampled: 5/16/96	Sample ID ES1080406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1090406 Depth: 4' - 6' Date Sampled: 5/16/96	Sample ID ES1141416 Depth: 14' - 16' Date Sampled: 7/29/96
Antimony	0.5 J	ND	ND	ND	ND
Arsenic	7.1	7.6	4.9	3	3.8
Barium	35.1	20.5 B	10.7 B	16.4 B	22.7
Beryllium	0.39 J	ND	ND	ND	0.18 B
Chromium	11.4	8.5	5.7	4.7	7.3
Cobalt	12.1	9.8	15.6	5.8	7.9 E
Copper	29.2	36 J	29.2 J	12.3 J	14.7
Lead	9.2	9.4	7.8	5.5	7.4 E
Mercury	ND	ND	ND	0.13	ND
Nickel	22.9	17.8	20.6	10.1	14.5 E
Selenium	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND
Vanadium	8.3	5.7 B	3.6 B	3.6 B	5.4 B
Zinc	74.7 J	50.9 J	42.4 J	35 J	46.6
Tin	ND	ND	ND	ND	1.4 B
Cyanide	ND	ND	ND	ND	ND
Sulfide	ND	ND	ND	ND	ND

NOTES:

1. Units are in ppm (parts per million).
2. ND - Analyte was not detected
3. J - The analyte was detected and is considered an estimated value.
4. B - Analyte was detected at a concentration above the IDL but less than the CRDL.
5. E - The reported value is estimated because of a reported interference.
6. Data obtained from: *Addendum to MCP Supplemental Phase II Scope of Work and Proposal for RCRA Facility Investigation of East Street Area 1/ USEPA Area 3, Golder Associates, November 1996.*