05-0118

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

SDMS 204479

Transmitted Via Overnight Courier

January 28, 2004

Mr. Michael Nalipinski
U.S. Environmental Protection Agency
EPA New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site
Former Oxbow Areas J and K (GECD420)
Preliminary Remedial Evaluations and Proposal for Supplemental Pre-Design Investigations

Dear Mr. Nalipinski:

In July 2003, the General Electric Company (GE) submitted to the U.S. Environmental Protection Agency (EPA) a document titled *Pre-Design Investigation Report for the Former Oxbow Areas J and K Removal Action* (PDI Report). The PDI Report included the results of soil investigations conducted by GE and EPA at the Former Oxbow Areas J and K Removal Action Area (RAA), and it assessed the overall adequacy of the data set to satisfy applicable pre-design investigation requirements and to support future Removal Design/Removal Action (RD/RA) activities. That report stated that the available soil data may or may not be sufficient to support the necessary RD/RA evaluations for this RAA, depending upon the resolution of matters related to the appropriate RD/RA evaluation areas, decisions from various property owners regarding their willingness to execute Grants of Environmental Restrictions and Easements (EREs) for their properties, and preliminary evaluations of the need for and scope of remediation at the properties within the RAA. To account for these unresolved matters, GE proposed in the PDI Report to address these matters and to perform preliminary evaluations to determine if any additional soil sampling may be needed to support future RD/RA activities.

In a letter dated September 29, 2003, EPA provided conditional approval of the PDI Report. While concurring with GE's approach for performing preliminary RD/RA evaluations (and submitting a proposal for any further sampling activities), EPA also identified certain potential data needs to be addressed by GE as part of its preliminary evaluations and/or through additional soil sampling and analysis.

This letter provides an update on the status of the site survey and mapping, the evaluation areas, and EREs for this RAA; and it presents the results of GE's preliminary RD/RA evaluations and its proposal for supplemental soil sampling at this RAA. The supplemental sampling proposed herein addresses the conditions included in EPA's approval letter, and also includes soil sampling identified by GE based on the results of preliminary evaluations (which reflect and incorporate GE's current understanding regarding the status of EREs and identification of appropriate RD/RA evaluation areas) concerning polychlorinated biphenyls (PCBs) and the other constituents listed in Appendix IX of 40 CFR Part 264 (excluding pesticides and herbicides), plus three additional constituents (benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3).

To supplement this letter, GE has prepared tables and figures (attached) to summarize the proposed supplemental sampling. Table 1 summarizes the scope and rationale for the proposed supplemental sampling activities, based on EPA's conditional approval letter and the results of the preliminary evaluation of the data. Figure 1 depicts the RAA, including GE's understanding of the current configurations and use areas of the properties within the RAA. (As discussed below, the parcel boundaries and parcel numbers shown on this figure differ in certain respects from those reflected in the land title records, but are consistent with current uses of the properties and represent the areas that GE proposes to use in evaluating these properties.) Figure 2 shows the proposed locations for supplemental PCB sampling, and Figures 3 through 7 show the proposed locations for supplemental Appendix IX+3 sampling.

Future activities for this RAA, including potential impacts on the schedule for developing and submitting a Conceptual RD/RA Work Plan, are discussed in Section 4 of this letter.

1.0 STATUS OF ACTIVITIES RELATED TO SURVEYS, EVALUATION AREAS, AND EREs

In addition to conducting the preliminary RD/RA evaluations presented in this letter, GE has performed several related activities since submittal of the PDI Report in July 2003. Consistent with the course of action outlined in the PDI Report, GE has initiated the development of a detailed site survey and mapping effort, has reviewed the appropriate evaluation (i.e., averaging) areas for the RD/RA evaluations, and has contacted the owners of non-residential properties within the RAA to discuss their willingness to execute EREs. The current status of those activities, which have a direct bearing on the performance of RD/RA evaluations, is summarized below.

1.1 Status of Site Survey/Mapping and Impact on Property Boundaries

As described in the PDI Report, the mapping depicted in that report was primarily generated from aerial photogrammetry mapping conducted in 1990. Although this mapping is useful for identifying prominent features within this RAA (e.g., buildings, roadways, river banks, etc.) and the soil sampling locations, additional site mapping was required to support RD/RA activities. The field survey and land title research conducted in support of this mapping has determined that the boundaries reflected in the legal title to certain of the properties within this RAA, particularly the properties in Former Oxbow Area K that abut the Housatonic River, are different in some respects from those depicted in the PDI Report and related documents. These differences appear to be related to the fact that some of the title records were based on the configuration of the properties prior to the rechannelization of the Housatonic River by the U.S. Army Corps of Engineering in the early 1940s, and thus do not reflect the current configuration.

GE is continuing efforts to accurately identify the legal boundaries of these properties based on survey data and the title records. However, it appears, based on present information, that it may not be possible to do so in all cases. Moreover, as noted above, some of those property boundaries do not match the current property configurations and uses by the owners. In these circumstances, GE believes that the most practical way to address this issue is to evaluate the properties within this RAA based on their current configurations and uses. Those current configurations are depicted on Figure 1 (although the boundaries and parcel numbers shown on that figure may not correspond with the title information in the land title records, particularly for the Former Oxbow Area K properties that abut the river). GE has conducted its preliminary evaluations described in this letter report based on the configurations and parcel numbers shown on that figure, and it proposes to continue to do so for the more detailed RD/RA evaluations. Although these configurations and parcel numbers may not match the title information in some respects, they do reflect current usage by the owners (i.e., the configurations considered by the owners to constitute their properties) and thus are more appropriate for determining averaging areas in the RD/RA evaluations.

In light of this issue, GE has not yet developed Theissen polygons to determine PCB spatial averages concentrations for the properties at this RAA. Instead, solely for purposes of the preliminary RD/RA evaluations to assess the need for further sampling, arithmetic average PCB concentrations have been considered, based on the property configurations shown on Figure 1. Following agreement with EPA on the appropriate property configurations to use, GE will conduct the detailed RD/RA evaluations for both PCBs and other constituents consistent with the procedures outlined in the Consent Decree (CD) and the *Statement of Work for Removal Actions Outside the River* (SOW), and the results will be presented in the Conceptual RD/RA Work Plan.

1.2 Evaluation/Averaging Areas

As discussed above, GE proposes to evaluate the properties at Former Oxbow Areas J and K based on the property configurations shown on Figure 1, which are consistent with current property uses. This issue primarily affects the properties at Former Oxbow Area K.

In addition, the averaging areas to be evaluated need to take into account the fact that although the properties at Former Oxbow Area J are primarily commercial in nature, certain small and discontinuous areas within Former Oxbow Area J are designated in the CD and SOW as recreational areas. The PDI Report noted that GE planned to discuss these areas with EPA with respect to the selection of appropriate recreational averaging areas for the RD/RA evaluations. Since that time, GE has discussed this issue with EPA. As a result of these discussions, the recreational areas located at the City-owned, undeveloped Longview Terrace, the southern end of the west branch of the Zeno Street right-of-way, and the southwestern part of Parcel K10-12-1 are combined into a single recreational area designated as "R1," as shown on Figure 1. Similarly, the recreational areas located at the east side of Parcel K10-11-1, the southeastern part of Parcel K10-12-1, the southern end of the east branch of the Zeno Street right-of-way, and the western side of Parcel K10-11-2 are combined into a single recreational area designated as "R2" (Figure 1). Finally, the small recreational area at the southeastern part of Parcel K10-11-2 has been identified as recreational area "R3A," and the small recreational area in the southern part of Parcel K10-11-3 and the southwestern part of Parcel K10-11-5 has been designated as recreational area "R3B" (Figure 1). These designated recreational areas, shown on Figure 1, have been considered as separate averaging areas in the preliminary RD/RA evaluations.

1.3 Status of EREs

For each of the non-residential properties within the Former Oxbow Areas J and K (for which the Performance Standards for residential properties are not met), the CD requires GE to make "best efforts" (as defined in the CD) to obtain an ERE. If an ERE cannot be obtained, GE must implement a Conditional Solution in accordance with the CD.

For the six non-residential properties at Former Oxbow Area J, a preliminary review of the data indicated that the properties may not meet the Performance Standards for residential properties, either for PCBs or for other constituents. As a result, GE wrote letters to each of these property owners in April 2003 providing information regarding the owner's option of either agreeing to an ERE or having a Conditional Solution implemented at his/her property. In those letters, GE offered to pay the owner an amount equal to 18% of the most recent assessed value of the property in exchange for an ERE, as required by the CD. As noted in a letter to EPA and the Massachusetts Department of Environmental Protection (MDEP) dated September 11, 2003, the owners of Parcels K10-11-3, K10-12-1, and K10-13-1 have each advised GE that they have decided not to impose EREs on their properties and, instead, have chosen the Conditional Solution approach. Thereafter, the owner of Parcel K10-11-5 has advised GE that he has decided to agree to an ERE for his property. For the remaining two properties at Former Oxbow Area J – Parcels K10-11-1 and K10-11-2 – GE was unable to obtain a response from the owners despite numerous efforts to do so. Thus, GE sent follow-up letters to these owners in December 2003 reiterating its request

for a decision regarding EREs and stating that if GE did not receive a response by January 13, 2004, GE would advise EPA that a Conditional Solution would be implemented at these properties. GE has not received any response to these follow-up letters and therefore plans to implement Conditional Solutions at these properties.

For the three non-residential properties at Former Oxbow Area K (Parcels K10-10-3, K10-10-4, and the portion of K10-10-33 within this RAA), GE's September 11, 2003 letter noted that the available data indicate that each of these properties meets the residential Performance Standards. However, because those properties had not been sampled at the frequency that would be required for residential properties, EPA advised GE that it could not accept the conclusion that these properties meet residential standards. As a result, GE sent letters to each of these owners in December 2003 providing the information regarding the owner's option of either agreeing to an ERE or having a Conditional Solution implemented at his/her property, and offering to pay the owner an amount equal to 18% of the most recent assessed value of the property in exchange for an ERE. The owners of Parcels K10-10-3 and K10-10-33 have since advised GE that they do not wish to execute EREs on their properties and instead have chosen the Conditional Solution approach. GE is currently awaiting a response from the owner of Parcel K10-10-4 regarding the acceptance of an ERE.

In these circumstances, GE has assumed for purposes of the preliminary evaluations presented in this letter report that an ERE will be executed for Parcel K10-11-5 and that Conditional Solutions will be implemented at all other non-residential properties at Former Oxbow Areas J and K. Further, unless GE obtains information to the contrary in the meantime, the evaluations to be provided in the Conceptual RD/RA Work Plan will be based, for Parcel K10-11-5, on the Performance Standards for properties with EREs and, for all other non-residential properties at this RAA, on the Performance Standards for properties subject to Conditional Solutions.

2.0 EVALUATIONS AND PROPOSED SAMPLING IN RESPONSE TO EPA'S SEPTEMBER 29, 2003 CONDITIONAL APPROVAL LETTER

EPA's September 29, 2003 conditional approval letter identified certain additional sampling and/or evaluations to be performed by GE to address pre-design investigation data needs and/or support future RD/RA activities. The evaluations were conducted and, where necessary, sampling proposed in response to the conditions in EPA's letter are described below, organized by each condition in EPA's letter.

2.1 EPA's Condition No. 1

As required in Condition No. 1 of EPA's conditional approval letter, GE will advance an additional boring at the location of existing boring YB-1 and collect samples from the 3- to 6-foot, 6- to 10-foot, and 10- to 15-foot depth intervals for PCB analysis. This activity will provide PCB soil data in close proximity to pre-design sample location RAA15-A11, where previous attempts to drill beyond a surface obstruction were unsuccessful (so that samples were only collected from the 0- to 1-foot and 1- to 3-foot depth intervals at that location). As shown on Figure 2, sample location YB-1 is located approximately 5 feet northwest of RAA15-A11 within Parcel K10-11-2.

2.2 EPA's Condition No.2

Condition No. 2 of EPA's conditional approval letter requires that GE perform additional Appendix IX+3 sampling to replace two samples that were originally proposed in the *Pre-Design Investigation Work Plan for the Former Oxbow Areas J and K Removal Action* (PDI Work Plan) but could not be collected due to subsurface refusals: RAA15-C6 (10 to 15 feet), and RAA15-C11 (10 to 15 feet). In previous discussions, EPA has agreed that the specific locations of the two proposed sample locations could be modified from their originally proposed locations if a review of the available Appendix IX+3 data

identified an insufficient amount of Appendix IX+3 data in a nearby RD/RA evaluation area. Based on review of the data, GE makes the following sampling proposal:

- The replacement sample for RAA15-C6 (which is located within the recreational evaluation area designated as R2) will be collected at location RAA15-C5, which is located on Parcel K10-11-1 (Figure 7). This proposed change in sample location is based on the need for additional Appendix IX+3 data for subsurface soils within Parcel K10-11-1, whereas there is already a sufficient amount of Appendix IX+3 data for subsurface soils within recreational area R2. This sample will be collected from the 10- to 15-foot depth increment and will be analyzed for Appendix IX+3 constituents.

- The replacement sample for RAA15-C11 will be collected at a location approximately 10 feet east of RAA15-C11. This location is shown on Figure 7 as RAA15-C11E and, like RAA15-C11, is within Parcel K10-11-2. The sample at this location will be collected from the 10- to 15-foot depth increment and will be analyzed for Appendix IX+3 constituents.

2.3 EPA's Condition No. 3

In its Condition No. 3, EPA noted that several pre-design sample results contained non-detectable levels of certain "commonly detected" semi-volatile organic compounds (SVOCs) but at elevated analytical detection limits. As a result, EPA required that GE evaluate the need to re-collect samples from the following pre-design sample locations for SVOC analysis: RAA15-B15 (0 to 1 foot), RAA15-C6 (0 to 1 foot), RAA15-E6 (6 to 10 feet), RAA15-G4 (3 to 6 feet), and RAA15-G20 (10 to 15 feet).

To address this EPA condition, GE has conducted preliminary evaluations, consistent with the procedures outlined in Attachment F of the SOW, for the various RD/RA evaluation areas and depths associated with the above pre-design samples. For purposes of these evaluations, the non-detect results for the above-listed SVOC samples with high detection limits were assigned, in all averaging calculations, concentrations equal to ½ the detection limits. If those preliminary evaluations indicated that no response actions are needed to achieve the applicable Performance Standards, then no re-sampling is proposed. Conversely, if the preliminary evaluations indicated that existing conditions will likely not achieve the applicable Performance Standards and that this condition is due in part to elevated SVOC detection limits, then GE has proposed re-sampling for SVOCs in an effort to possibly achieve lower analytical detection limits.

A summary of the preliminary evaluations for each of the samples identified by EPA is presented below. Please note that, for the purposes of this letter, the discussion of the RD/RA evaluation procedures and results has been abbreviated (e.g., discussions regarding initial Appendix IX+3 screening steps have been omitted). Detailed information concerning these evaluations will be presented in the forthcoming Conceptual RD/RA Work Plan. The discussions below focus on the SVOCs that were retained after the initial screening and whose average concentrations exceed their corresponding Method 1 soil standards set out in the Massachusetts Contingency Plan (MCP). These SVOCs typically include one or more of the seven carcinogenic polycyclic aromatic hydrocarbons (PAHs) [i.e., benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene].

In addition, where the concentrations of one or more of these carcinogenic PAHs exceed the Method 1 soil standards, the preliminary evaluations have applied an additional screening step to assess the need for re-sampling. This step is based on the assumption that an area-specific risk assessment will be conducted for these areas in accordance with the SOW; and it uses preliminary risk-based concentrations (PRBCs) for these PAHs, which have been back-calculated based on the same exposure and toxicity assumptions that will be used in the area-specific risk assessments (i.e., the assumptions prescribed in the SOW). Such

PRBCs have been developed for the seven carcinogenic PAHs as a group and are expressed in terms of total toxicity equivalents of benzo(a)pyrene [B(a)P equivalents], since, in an area-specific risk assessment, these PAHs are evaluated through the use of Cancer Slope Factors that are adjusted by application of Relative Potency Factors (RPFs) based on their assumed potency relative to benzo(a)pyrene. These PRBCs are 13 ppm B(a)P equivalents for the commercial groundskeeper scenario (applicable to the 0- to 1-foot and, where relevant, 0- to 3-foot depth increments at commercial areas), 41 ppm B(a)P equivalents for the utility worker scenario (applicable to the 1- to 6-foot depth increment at commercial areas), and 4 ppm B(a)P equivalents for the child recreator scenario (applicable to the 0- to 1-foot and 1- to 3-foot or 0- to 3-foot depth increments at recreational areas). These levels represent the maximum levels at which concentrations of B(a)P equivalents would not present a significant risk. To apply these PRBCs, the average concentrations of the seven carcinogenic PAHs for a given area and depth increment are adjusted through the use of the same RPFs described above to derive a total B(a)P equivalent concentration for that area and depth increment, and the resulting total B(a)P equivalent concentration is compared to the applicable PRBC. If that concentration is well below the PRBC (and assuming there are no other carcinogenic constituents with significantly elevated concentrations), then it can be concluded that the area-specific risk assessment will most likely find no exceedance of the cancer-risk Performance Standard specified in the SOW (an excess lifetime cancer risk of 1×10^{-5}), and that thus additional sampling is not needed. However, if the total B(a)P equivalent concentration is close to or above the PRBC, then it is assumed that the area-specific risk assessment may find an exceedance of that Performance Standard under existing conditions, and that hence additional sampling is warranted.

- **RAA15-B15 (0 to 1 foot)** – This sample is located at the commercial portion of Parcel K10-11-2 (Figure 3). For the 0- to 1-foot depth increment at Parcel K10-11-2, the average concentrations of several carcinogenic PAHs exceed their corresponding MCP Method 1 soil standards. However, it is anticipated that an area-specific risk assessment will be performed for this property in accordance with the SOW. Thus, for purposes of this preliminary evaluation, GE has applied the PRBC for total B(a)P equivalents in a commercial groundskeeper scenario. For the 0- to 1-foot depth increment at this parcel, the total B(a)P equivalent concentration is well below that PRBC (even when incorporating ½ the detection limit for the non-detect samples with elevated detection limits). As a result, it is unlikely that remediation actions will be needed to address the SVOCs. There is therefore no need to resample any of the non-detect samples with high detection limits.

- **RAA15-C6 (0 to 1 foot)** – This sample is located within the recreational area designated as R2 (Figure 3). For the 0- to 1-foot depth increment within this area, the average concentrations of all seven carcinogenic PAHs exceed their corresponding MCP Method 1 soil standards. In addition, the total B(a)P equivalent concentration for this area exceeds the PRBC for B(a)P equivalents in a child recreator scenario. This exceedance is due in large part to the high detection limits for the non-detect sample results at location RAA15-C6. Therefore, GE proposes to resample this location for SVOCs in an effort to achieve lower detection limits.

- **RAA15-E6 (6 to 10 feet)** – This sample is located at the commercial portion of Parcel K10-11-1 (Figure 6). For the 0- to 15-foot depth increment at Parcel K10-11-1, the average concentrations of several carcinogenic PAHs exceed their corresponding MCP Method 1 soil standards. As a result, GE will likely address this parcel in a site-specific risk assessment as part of detailed RD/RA evaluations. For the 0- to 15-foot depth increment, the site-specific risk assessment will involve comparison of the average SVOC concentrations to their MCP Upper Concentration Limits (UCLs), consistent with the basis for the PCB-related Performance Standard for the 0- to 15-foot depth increment, as well as the RD/RA evaluation procedures that have been used at other RAAs. The average concentrations of the PAHs at this parcel and depth increment are far below the corresponding UCLs for these substances, even when incorporating the non-detect results from sample RAA15-E6. Therefore, it is concluded that remediation will likely not be necessary at this property to address the SVOCs, and hence no additional sampling is necessary.

- **RAA15-G4 (3 to 6 feet)** - This sample is located at the commercial portion of Parcel K10-12-1 (Figure 5). For the 1- to 6-foot depth increment at Parcel K10-12-1, the average concentration of one carcinogenic PAH exceeds its corresponding MCP Method 1 soil standard. As a result, it is anticipated that an area-specific risk assessment will be performed for this property in accordance with the SOW. Thus, for purposes of this preliminary evaluation, GE has applied the PRBC for total B(a)P equivalents in a utility worker scenario. For the 1- to 6-foot depth increment at this parcel, the total B(a)P equivalent concentration is well below that PRBC. Accordingly, it is concluded that remediation actions will likely not be needed to address the SVOCs, and there is therefore no need to resample any of the non-detect samples with high detection limits.

- **RAA15-G20 (10 to 15 feet)** – This sample is located at Parcel K10-10-33 (Figure 7). For the 0- to 15-foot depth increment at Parcel K10-10-33, the average concentrations of all SVOCs are below their corresponding MCP Method 1 soil standards, even when incorporating ½ of the high detection limits from the non-detect results from sample RAA15-G20. As a result, no remediation actions will be necessary, and hence no additional sampling is needed.

2.4 EPA's Condition No. 4

Condition No. 4 of EPA's conditional approval letter requires that GE evaluate the need for additional sampling to delineate the lateral and vertical extent of PAHs at and around the following sample locations: RAA15-A19, RAA15-B11, RAA15-C11, RAA15-D8, RAA15-E5, RAA15-E7, RAA15-E8, and RAA15-E11. In response to this EPA condition, GE has conducted preliminary evaluations of the PAH data at each of the evaluation areas containing these samples, using the same procedures described above. In cases where the results of the preliminary evaluations indicate that existing conditions may not meet the applicable Performance Standards related to PAHs, GE has identified additional soil sampling activities and has developed a proposal for such additional sampling. Otherwise, no additional sampling is proposed at this time (although it is possible that such additional sampling may be identified after more detailed RD/RA evaluations are completed). The results of GE's evaluations regarding the need for additional sampling to delineate the horizontal extent of PAHs are described in Section 2.4.1, while GE's evaluations regarding the need for additional sampling for vertical delineation purposes are addressed in Section 2.4.2

2.4.1 *Horizontal Delineation Sampling*

GE's preliminary evaluations regarding the need for additional sampling to delineate the horizontal extent of elevated PAHs at the locations identified in Condition No. 4 of EPA's letter followed the same procedures described in Section 2.3. The results of these preliminary evaluations are described below.

- **RAA15-A19** – This boring is located within the commercial portion of Parcel K10-11-3. Based on the preliminary evaluations of the PAH data for this parcel, GE has determined that existing soil conditions will likely not achieve the applicable Performance Standards for Appendix IX+3 constituents, and that thus some remediation actions will likely be required. These exceedances are driven primarily by the elevated PAH results from the 1- to 3-foot and 3- to 6-foot depth increments at location RAA15-A19. To support further evaluations and assist in identifying the scope of remediation actions, GE proposes to conduct additional sampling in the vicinity of sample RAA15-A19 – specifically at new locations RAA15-A19NE, RAA15-A19SE, and RAA15-A19NW, and RAA15A19-SW, as shown on Figures 4 and 5. At each of these locations, samples will be collected from the 1- to 3-foot and 3- to 6-foot depth increments and submitted for analysis of SVOCs. (In addition, as discussed in Section 3 of this letter, additional Appendix IX sampling is also proposed at other depth intervals at the commercial portion of this property to provide a more complete Appendix IX+3 data set. Further sampling at the recreational area that includes a portion of this parcel is also discussed in Section 3.)

- **RAA15-B11 and RAA15-D8** – These surface soil sample locations are within the commercial portion of Parcel K10-11-2 (Figure 3). As part of its preliminary evaluation of surface soils within this parcel (in response to Condition No. 3 of EPA's conditional approval letter), GE considered all of the surface soil PAH data for this parcel (including the results from RAA15-B11 and -D8), and concluded that since the total B(a)P equivalent concentration is well below the PRBC for a commercial groundskeeper scenario, remediation actions are not likely to be needed to address PAHs at this property. Therefore, no additional sampling is proposed at this time.

- **RAA15-C11** – This boring is located within the commercial portion of Parcel K10-11-2, with elevated PAHs present in the 1- to 3-foot depth increment. Based on the preliminary evaluations of the PAH data for this parcel, GE has determined that existing soil conditions will likely not achieve the applicable Performance Standards for Appendix IX+3 constituents, and that thus some remediation actions will likely be required. To support further evaluations and assist in identifying the scope of remediation actions, GE proposes to conduct additional sampling in the vicinity of sample RAA15-C11. Specifically, additional samples will be collected from the 1- to 3-foot depth increment at new locations RAA15-C11E, RAA15-C11NE, and RAA15-C11NW, as shown on Figure 4. These samples will be submitted for SVOC analysis.

- **RAA15-E5** – This surface soil sample is located within the commercial portion of Parcel K10-11-1 (Figure 3). As part of its preliminary evaluation of surface soils within this parcel, GE considered all of the surface soil PAH data for this parcel and determined that the total B(a)P equivalent concentration is close to the PRBC for total B(a)P equivalents in a commercial groundskeeper scenario, and that hence remediation actions may be necessary. To support further evaluation and assist in identifying the scope of remediation actions (if necessary), GE proposes to conduct additional sampling in the vicinity of RAA15-E5 – specifically at new locations RAA15-E5NE, RAA15-E5SE, RAA15-E5NW, and RAA15-E5SW, as shown on Figure 3. At each of these locations, samples will be collected from the 0- to 1-foot depth increment and submitted for analysis of SVOCs.

- **RAA15-E7 and RAA15-E8** – These sample locations are within the recreational area identified as R2. Based on the preliminary evaluations of the PAH data for this area, GE has determined that existing soil conditions will likely not achieve the applicable Performance Standards for Appendix IX+3 constituents, and that thus some remediation actions will likely be required. These exceedances are due in large part to the elevated PAH results from the surface soil sample at RAA15-E7 and the 1- to 3-foot depth sample from RAA15-E8. To support further evaluations and assist in identifying the scope of remediation actions, GE proposes to conduct additional sampling in the vicinity of both of these sample locations. Specifically, 0- to 1-foot samples will be collected from four new locations around RAA17-E7 – at locations RAA15-E7NE, RAA15-E7NW, RAA15-E7SE, and RAA15-E7SW, as shown on Figure 3. In addition, 1- to 3-foot samples will be collected from four new locations around RAA17-E8 – at locations RAA15-E8NE, RAA15-E8NW, RAA15-E8SE, and RAA15-E8SW, as shown on Figure 4. (For the proposed new sample locations around both RAA15-E7 and -E8, the locations shown on these figures are approximate and may be adjusted in the field in an effort to ensure that they are collected from the same approximate depths as the target samples, considering the existing topography.) These samples will be submitted for SVOC analysis.

2.4.2 *Vertical Delineation Sampling*

The preceding section of this letter evaluated the need for additional sampling to delineate the horizontal extent of elevated PAHs at the pre-design samples identified by EPA in Condition No. 4 of its approval letter. That EPA condition also required that GE assess the need for additional sampling to delineate the

vertical extent of PAHs at the same pre-design sample locations. As GE has expressed to EPA in the past, there are no requirements in the SOW -- either within the context of pre-design investigations or as part of detailed RD/RA evaluations -- to specifically assess the vertical extent of detected PCBs or other Appendix IX+3 constituents. To the contrary, the nature of the pre-design investigation requirements (i.e., grid-based sampling for PCBs and sampling to obtain an appropriate horizontal and vertical spatial distribution of Appendix IX+3 samples throughout the RAA), as well as the Performance Standards established in the CD and SOW for non-residential properties (which are based on pre-established areas and depth increments, and utilize data averaging as the means for evaluation), indicate that vertical delineation sampling for PCBs and other Appendix IX+3 constituents was neither contemplated nor required. Rather, the RD/RA evaluations are based on the data collected for the specified depth increments at the representative locations identified in the applicable work plans and approved by EPA.

Nevertheless, in response to EPA's Condition No. 4 (and without agreeing that this has any precedential implications for other RAAs), GE has conducted an assessment of the pre-design sample locations identified by EPA at this RAA to determine whether additional information regarding the vertical presence of PAHs may be warranted. To conduct this assessment, GE made the conservative assumption that the elevated PAH concentrations found in each of the samples identified by EPA would also be found in the next deepest soil depth increment at which there are no existing PAH data. For example, at location RAA15-E5, this assessment assumed that the elevated PAH concentrations found in the 0- to 1-foot depth increment would also be found in the 1- to 3-foot depth increment. Then, the new data set, including both the existing samples and the assumed samples, were evaluated for the relevant deeper increments, using the same procedures described above, to assess whether the assumed PAH concentration for the deeper increment could potentially require the need for soil remediation activities (if not already determined to be necessary).

For 5 of the 8 sample locations identified by EPA, these evaluations showed that, even with the assumption that the elevated PAH concentrations extend to the next deepest depth increment, the resulting concentrations of total benzo(a)pyrene equivalents for the deeper increments (after taking into account any PAH-related remediation identified above) are well below the relevant PRBCs or UCLs. As a result, no additional vertical delineation sampling is proposed at these locations. However, for three of the identified locations, the evaluations showed that, if the elevated PAH concentrations that were detected extended to the next deepest depth increment, the resulting total benzo(a)pyrene equivalent concentration for that depth increment would be close to or above the relevant PRBC and thus may result in the need for additional soil remediation. This is the case for the 0- to 1-foot sample from RAA15-E5, the 1- to 3-foot sample from RAA15-C11, and the 0- to 1-foot sample from RAA15-E7. Thus, GE proposes additional sampling to delineate the vertical extent of the elevated PAHs at these locations. Specifically, GE proposes to collect the samples at the following locations (shown on Figures 4 and 5) and depth increments for analysis of SVOCs:

RAA15-E5 (1- to 3-feet);
RAA15-C11 (3- to 6-feet); and
RAA15-E7 (1- to 3-feet).

3.0 ADDITIONAL PRELIMINARY RD/RA EVALUATIONS AND SAMPLING

In addition to the specific preliminary evaluations required by EPA's conditional approval letter and described above, GE has conducted preliminary evaluations of each RD/RA evaluation area and relevant depth increment to identify areas where additional data are warranted to complete the detailed RD/RA evaluations. In general, these preliminary evaluations were conducted consistent with the procedures outlined in the CD and SOW and focused on those constituents that are typically retained for detailed RD/RA evaluations and/or dictate the need for remediation actions to achieve the applicable Performance Standards. These constituents include the following: PCBs, the carcinogenic PAHs discussed above,

polychlorinated dibenzo-p-dioxins and dibenzofurans [PCDDs/PCDFs, expressed as dioxin toxicity equivalents (TEQs)], lead, and arsenic. Evaluation of these constituents provides a fairly reliable basis for identifying the need for and the scope of necessary response actions.

For PCBs, the available data set is generally sufficient to support detailed RD/RA evaluations. However, at the commercial portion of Parcel K10-11-3, due to its very small size, there are no PCB data available from the subsurface soils. Thus, GE proposes to advance a soil boring at location RAA15-A19SW on that parcel, as shown on Figure 2, and to collect soil samples from the 1- to 3-foot, 3- to 6-foot, 6- to 10-foot, and 10- to 15-foot depth intervals at this location for PCB analysis. In addition, as GE develops the Conceptual RD/RA Work Plan, it is possible (although not currently anticipated) that GE may identify the need for additional PCB sampling at this RAA to support the actual delineation of specific remediation actions. In that event, GE will propose such additional sampling in the Conceptual RD/RA Work Plan.

For the select Appendix IX+3 constituents listed above, the preliminary evaluations conducted by GE have resulted in the identification of the need for additional sampling in a few locations to facilitate the RD/RA evaluations, as well as the need for additional soil characterization data for the discrete recreational areas within Former Oxbow Area J. Additional information is presented below.

- **Additional Appendix IX+3 data at Parcel K10-11-3** – At the present time, there is only one location within the commercial portion of Parcel K10-11-3 that has been sampled for Appendix IX+3 constituents – location RAA15-A19. As discussed above in Part 2.4.1, additional sampling is proposed for SVOCs in the 1- to 3-foot and 3- to 6-foot depth increments at four new locations around location RAA15-A19. In addition, to provide a more complete Appendix IX+3 data base for this averaging area, GE proposes further Appendix IX+3 sampling. Specifically, GE proposes to collect samples from the 0- to 1-foot and 6- to 10-foot depths from location RAA15-A19SW (one of the locations proposed for SVOC sampling) for analysis of Appendix IX+3 constituents (as shown on Figures 3 and 6), and also to analyze the 1- to 3-foot sample collected from that location for the other Appendix IX+3 constituents in addition to SVOCs (see Figure 4).

- **Additional delineation data for inorganics around RAA15-E2 (1 to 3 feet)** - Based on the results of the preliminary evaluation of the Appendix IX+3 data for Parcel K10-13-1, GE has determined that additional delineation sampling will be needed around sample RAA15-E2 due to the presence of elevated levels of lead and antimony in the 1- to 3-foot sample from that location. Therefore, GE proposes to collect samples from the 1- to 3-foot depth at locations RAA15-E2NE, RAA15-E2NW, RAA15-E2SE, and RAA15-E2SW, as shown on Figure 4. These samples will be submitted for analysis of lead and antimony.

- **Additional Appendix IX+3 soil characterization data at recreational areas** – As discussed above, certain small and discontinuous areas within Former Oxbow Area J are designated in the CD and SOW as recreational areas; and these areas have been grouped, for purposes of the RD/RA evaluations, into recreational areas designated R1, R2, R3A, and R3B, as shown on Figure 1. Based on the preliminary evaluation of the data set available for these recreational RD/RA evaluation areas described above, GE has determined that additional Appendix IX+3 samples are needed in recreational areas R3A and R3B to provide a sufficient number of pre-design samples to support future RD/RA evaluations. A summary is provided in the table below, while the proposed sampling locations are shown on Figures 3 through 7.

Parcel ID	Nearest Grid Node	Sample ID	Sample Depth (ft)	Analysis			
				VOCs	SVOCs	Inorganics	PCDD/ PCDF
R3A	E15	RAA15-E15N	0-1	X	X	X	X
			1-3	X	X	X	X
			3-6	X	X	X	X
			6-10	X	--	--	X
	E15	RAA15-E15W	0-1	X	X	X	X
			1-3	X	X	X	X
			3-6	X	X	X	X
			10-15	X	X	X	X
R3B	B19	RAA15-B19S	1-3	X	X	X	X
			10-15	X	X	X	X

An overall summary of the supplemental sampling proposed in this letter report is provided in Table 1.

4.0 FUTURE ACTIVITIES AND SCHEDULE

In its September 29, 2003 conditional approval letter for the PDI Report, EPA indicated that the Conceptual RD/RA Work Plan for Former Oxbow Areas J and K should be submitted within nine months of that letter – i.e., by June 29, 2004. As described in the present letter report, GE has initiated several of the activities that are typically associated with the preparation of a Conceptual RD/RA Work Plan. However, as also described in this letter, there are certain matters that need to be resolved prior to development of that Work Plan. These matters include resolution of the appropriate evaluation areas where the parcel boundaries shown on the figures attached to this letter do not correspond to the legal boundaries as shown by the site survey and title records, as well as completion of the supplemental sampling proposed in this letter (summarized in Table 1). In addition, as described above, the RD/RA evaluations presented in this letter are preliminary. As more detailed evaluations are conducted, other data needs and/or potential response action activities may be identified that require additional investigations.

In these circumstances, GE proposes to carry out the supplemental sampling and analysis activities described in this letter, to discuss the boundary issue described above with EPA, and to submit a Supplemental PDI Report to EPA within three months from EPA approval of this letter report. That submittal will include the results of the sampling proposed herein, updates (as appropriate) concerning the matters discussed in Section 1 of this letter, and an evaluation of further data needs. That submittal will also include, if necessary, a proposed revised date for submittal of the Conceptual RD/RA Work Plan to EPA.

Please call me with any questions.

Sincerely,

Richard W. Gates, DAT

Richard W. Gates
Remediation Project Manager

Attachments
V:\GE_Pittsfield_CD_Former_Oxbow_Areas_J_and_K\Reports and Presentations\04642196.doc

cc: Bryan Olson, EPA
Tim Conway, EPA
Holly Inglis, EPA
Rose Howell, EPA
Dawn Jamros, Weston
K.C. Mitkevicius, USACE
Susan Steenstrup, MDEP (2 copies)
Anna Symington, MDEP*
Robert Bell, MDEP*
Thomas Angus, MDEP*
Nancy E. Harper, MA AG*
Dale Young, MA EOEA*
Mayor James Ruberto, City of Pittsfield
Pittsfield Department of Health
Jeffrey Bernstein, Bernstein, Cushner & Kimmel
Teresa Bowers, Gradient
Michael Carroll, GE*
Rod McLaren, GE
Andrew Silfer, GE
James Nuss, BBL
James Bieke, Shea & Gardner
Property Owner - Parcel K10-10-3
Property Owner - Parcel K10-10-4
Property Owner - Parcel K10-10-5/6
Property Owner - Parcel K10-10-33
Property Owner - Parcel K10-11-1
Property Owner - Parcel K10-11-2
Anthony Doyle, Esq.
Property Owner - Parcel K10-11-3
Property Owner - Parcel K10-11-5
Emil George, Esq., George, Degregario, Massimiano & McCarthy
Property Owner - Parcel K10-12-1
Property Owner - Parcel K10-13-1
Public Information Repositories
GE Internal Repository

* *without attachments*

Table

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TABLE 1
PROPOSED SUPPLEMENTAL SAMPLES

FORMER OXBOW AREAS J AND K
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Parcel ID	Nearest Grid Node	Sample ID	Sample Depth (ft)	Analysis						Rationale
				PCBs	VOCs	SVOCs	Inorganics	Lead and Antimony	PCDD/PCDF	
K10-11-1	C5	RAA15-C5	10-15	--	X	X	X	--	X	Provide sufficient number of deeper Appendix IX+3 samples at commercial area in Parcel K10-11-1.
								--		
	E5	RAA15-E5NE	0-1	--	--	X	--	--	--	Delineation for SVOCs surrounding RAA15-E5 (0- to 1-foot) at commercial area in Parcel K10-11-1.
		RAA15-E5NW	0-1	--	--	X	--	--	--	
		RAA15-E5SE	0-1	--	--	X	--	--	--	
		RAA15-E5SW	0-1	--	--	X	--	--	--	
		RAA15-E5	1-3	--	--	X	--	--	--	Vertical delineation for SVOCs below RAA15-E5 (0- to 1-foot).
K10-11-2	A11	YB-1	3-6	X	--	--	--	--	--	Replacement for respective depth intervals at RAA15-A11 where sampling was unsuccessful due to refusal.
			6-10	X	--	--	--	--	--	
			10-15	X	--	--	--	--	--	
	C11	RAA15-C11	3-6	--	--	X	--	--	--	Vertical delineation for SVOCs below RAA15-C11 (1- to 3-foot).
	C11	RAA15-C11E	10-15	--	X	X	X	--	X	Replacement for prior sample at RAA15-C11 (10- to 15-foot) due to refusal.
								--		
	C11	RAA15-C11NW	1-3	--	--	X	--	--	--	Delineation for SVOCs surrounding RAA15-C11 (1- to 3-foot) at commercial area in Parcel K10-11-2.
		RAA15-C11E	1-3	--	--	X	--	--	--	
		RAA15-C11NE	1-3	--	--	X	--	--	--	
K10-11-3	A19	RAA15-A19SW	0-1	--	X	X	X	--	X	Provide additional PCB and Appendix IX+3 samples at commercial area in Parcel K10-11-3.
			1-3	X	X	X	X	--	X	
			3-6	X	--	--	--	--	--	
			6-10	X	X	X	X	--	X	
			10-15	X	--	--	--	--	--	
	A19	RAA15-A19NE	1-3	--	--	X	--	--	--	Delineation for SVOCs surrounding RAA15-A19 (1- to 3-foot) at commercial area in Parcel K10-11-3. Note that RAA15-A19SW (1- to 3-foot) is proposed above for Appendix IX+3.
		RAA15-A19NW	1-3	--	--	X	--	--	--	
		RAA15-A19SE	1-3	--	--	X	--	--	--	
	A19	RAA15-A19NE	3-6	--	--	X	--	--	--	Delineation for SVOCs surrounding RAA15-A19 (3- to 6-foot) at commercial area in Parcel K10-11-3.
		RAA15-A19NW	3-6	--	--	X	--	--	--	
		RAA15-A19SE	3-6	--	--	X	--	--	--	
		RAA15-A19SW	3-6	--	--	X	--	--	--	
K10-13-1	E2	RAA15-E2NE	1-3	--	--	--	--	X	--	Delineation of lead and antimony surrounding RAA15-E2 (1- to 3-foot) at commercial area in Parcel K10-13-1.
		RAA15-E2NW	1-3	--	--	--	--	X	--	
		RAA15-E2SE	1-3	--	--	--	--	X	--	
		RAA15-E2SW	1-3	--	--	--	--	X	--	

TABLE 1
PROPOSED SUPPLEMENTAL SAMPLES

FORMER OXBOW AREAS J AND K
GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

Parcel ID	Nearest Grid Node	Sample ID	Sample Depth (ft)	Analysis						Rationale
				PCBs	VOCs	SVOCs	Inorganics	Lead and Antimony	PCDD/PCDF	
R2	C6	RAA15-C6	0-1	--	--	X	--	--	--	Elevated detection limits in this sample leading to exceedances of Method 1 standards and PRBC at recreational area R2.
	E7	RAA15-E7NE	0-1	--	--	X	--	--	--	Delineation for SVOCs surrounding RAA15-E7 (0- to 1-foot) at recreational area R2.
		RAA15-E7NW	0-1	--	--	X	--	--	--	
		RAA15-E7SE	0-1	--	--	X	--	--	--	
		RAA15-E7SW	0-1	--	--	X	--	--	--	
	E7	RAA15-E7	1-3	--	--	X	--	--	--	Vertical delineation for SVOCs below RAA15-E7 (0- to 1-foot).
	E8	RAA15-E8N	1-3	--	--	X	--	--	--	Delineation for SVOCs surrounding RAA15-E8 (1- to 3-foot) at recreational area R2.
		RAA15-E8S	1-3	--	--	X	--	--	--	
		RAA15-E8E	1-3	--	--	X	--	--	--	
		RAA15-E8W	1-3	--	--	X	--	--	--	
R3A	E15	RAA15-E15N	0-1	--	X	X	X	--	X	Provide additional Appendix IX+3 samples at recreational area R3A.
			1-3	--	X	X	X	--	X	
			3-6	--	X	X	X	--	X	
			6-10	--	X	--	--	--	X	
	E15	RAA15-E15W	0-1	--	X	X	X	--	X	Provide additional Appendix IX+3 samples at recreational area R3A.
			1-3	--	X	X	X	--	X	
			3-6	--	X	X	X	--	X	
			10-15	--	X	X	X	--	X	
R3B	B19	RAA15-B19S	1-3	--	X	X	X	--	X	Provide additional Appendix IX+3 samples at recreational area R3B.
			10-15	--	X	X	X	--	X	

Figures

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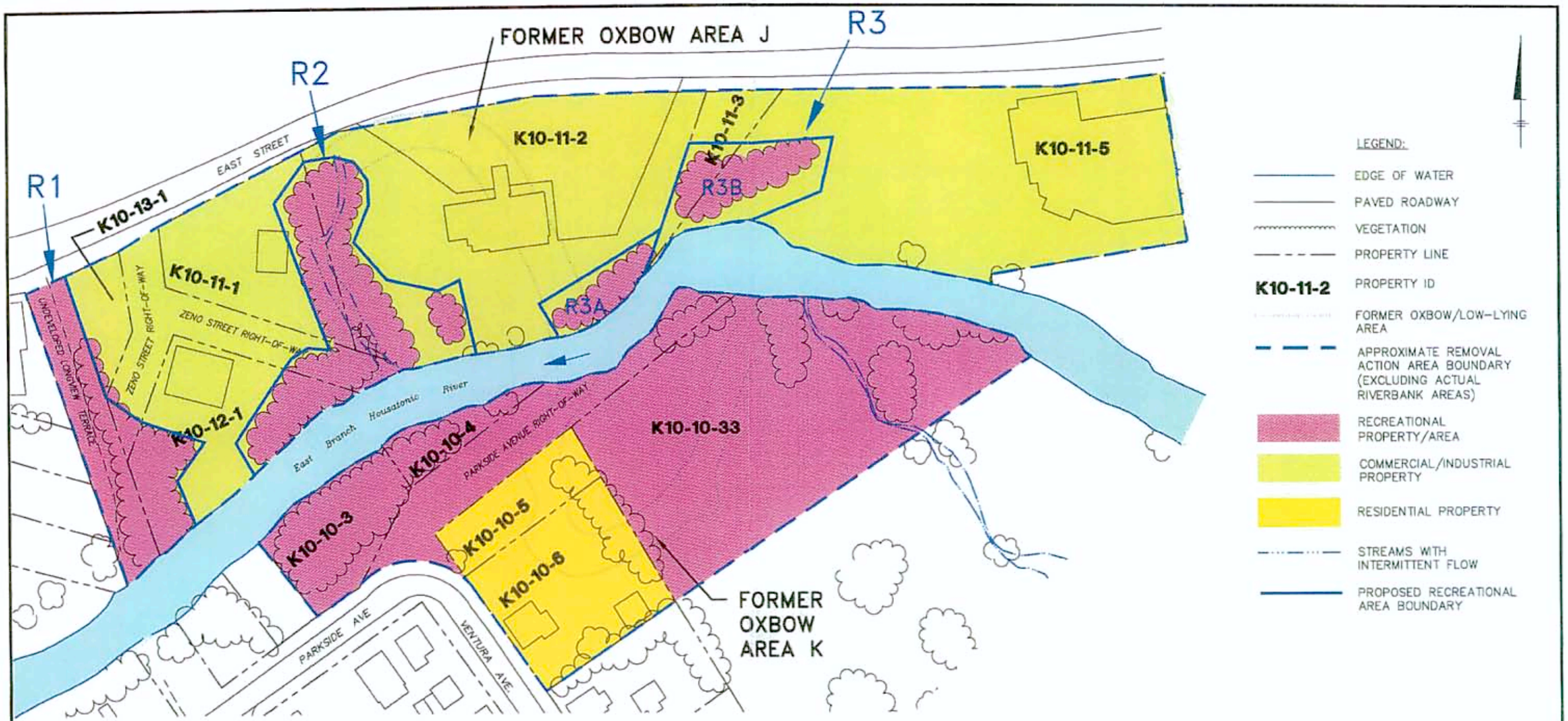

NOTES:

1. THE BASE MAP FEATURES PRESENTED ON THIS FIGURE WERE PHOTOGRAMMETRICALLY MAPPED FROM APRIL 1990 AERIAL PHOTOGRAPHS.
2. TAX ASSESSOR'S PARCEL IDENTIFICATION NUMBERS AND BOUNDARY INFORMATION OBTAINED FROM CITY OF PITTSFIELD'S TAX ASSESSOR'S OFFICE, CURRENT THROUGH MAY 2002.
3. PROPERTY USE DESIGNATIONS REFLECT CURRENT AND FORESEEABLE FUTURE USE.

GENERAL ELECTRIC COMPANY
PITTSFIELD MASSACHUSETTS

FORMER OXBOW AREAS J AND K

SITE PLAN

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FIGURE 1

X: 20425X04.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-BL
1/27/04 SYR-54-LAF NES DWN
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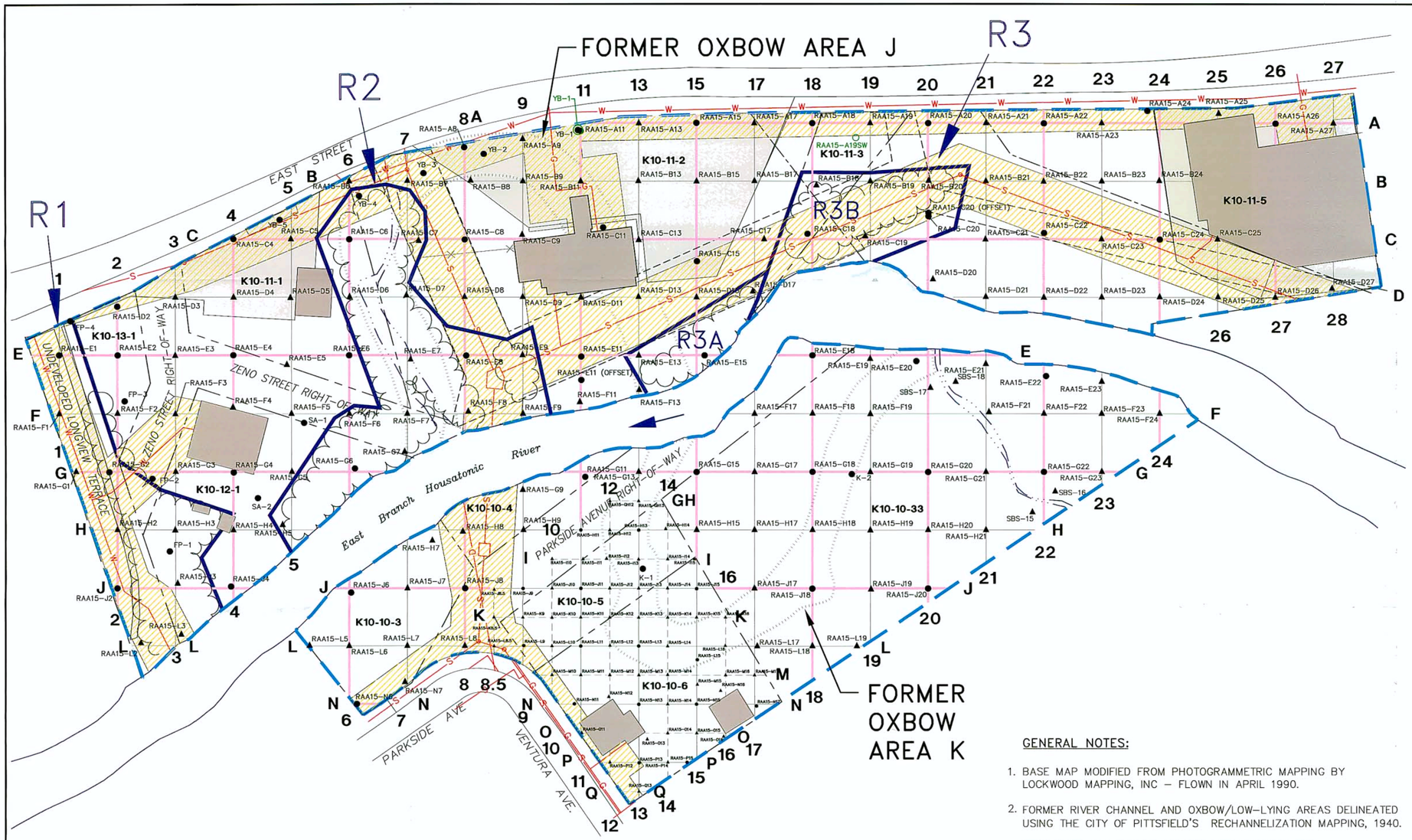

LEGEND

- APPROXIMATE REMOVAL ACTION AREA BOUNDARY
- PROPERTY LINE
- WESTERN MASS. ELECTRIC CO. EASEMENT
- SEWER EASEMENT
- K10-10-6 PROPERTY ID
- ▲FP-1 SURFACE SOIL SAMPLE LOCATION
- ●YB-3 SOIL BORING LOCATION
- ○YB-1 PROPOSED SOIL BORING LOCATION
- BUILDING
- PAVED AREA
- FORMER OXBOW/LOW-LYING AREA
- —S— APPROXIMATE SEWER LOCATION
- —D— APPROXIMATE STORM DRAIN LOCATION
- —W— APPROXIMATE WATER MAIN LOCATION
- —G— APPROXIMATE GAS LINE LOCATION
- APPROXIMATE LOCATION OF BAND SURROUNDING SUBSURFACE UTILITIES (25 FEET WIDE ON EACH SIDE OF UTILITY)
- STREAMS WITH INTERMITTENT FLOW
- 25-FOOT SAMPLING GRID
- 50-FOOT SAMPLING GRID
- 100-FOOT GRID SAMPLING GRID
- PROPOSED RECREATIONAL AREA BOUNDARY

GENERAL NOTES:

1. BASE MAP MODIFIED FROM PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC – FLOWN IN APRIL 1990.
2. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. EASEMENTS AND PROPERTY LINES ARE APPROXIMATE.
4. (OFFSET) REFERS TO ADDITIONAL DRILLING LOCATION NEEDED BECAUSE OF EQUIPMENT REFUSAL AT INITIAL BORING.

0 100' 200'

GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FORMER OXBOW AREAS J AND K

EXISTING AND PROPOSED PCB SOIL SAMPLE LOCATIONS

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FIGURE 2

X: 20425X05.DWG
L: ON=*, OFF=*REF
P: PAGESET/PLT-DL
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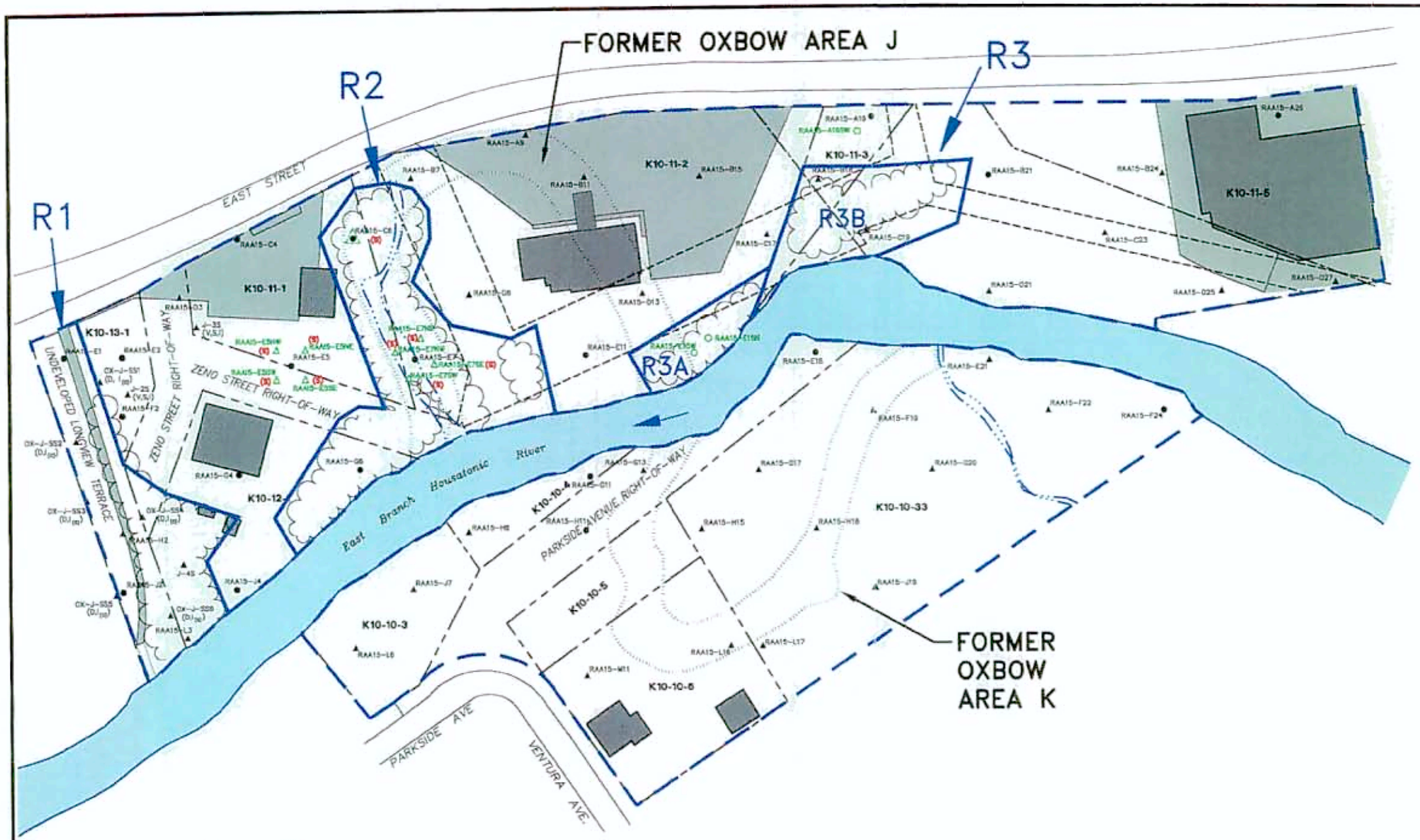
N/20425001/20425028.DWG



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2. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. EASEMENTS AND PROPERTY LINES ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN OR WILL BE ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS INDICATED IN PARENTHESES THAT THEY WERE OR WILL BE ANALYZED ONLY FOR ONE OR MORE OF THE FOLLOWING CONSTITUENT GROUPS:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS
   I_{CN} = SAMPLE WAS ANALYZED FOR CYANIDE ONLY

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FORMER OXBOW AREAS J AND K

EXISTING AND PROPOSED APPENDIX IX + 3 SOIL SAMPLE LOCATIONS (0- TO 1- FOOT INTERVAL)

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

FIGURE 3

X: 20425X05.DWG
L: ON=*; OFF=REF*; [EASE-25, FENCE, *GRID, [SEWER, [SHO-CONT, [STORM, *U-
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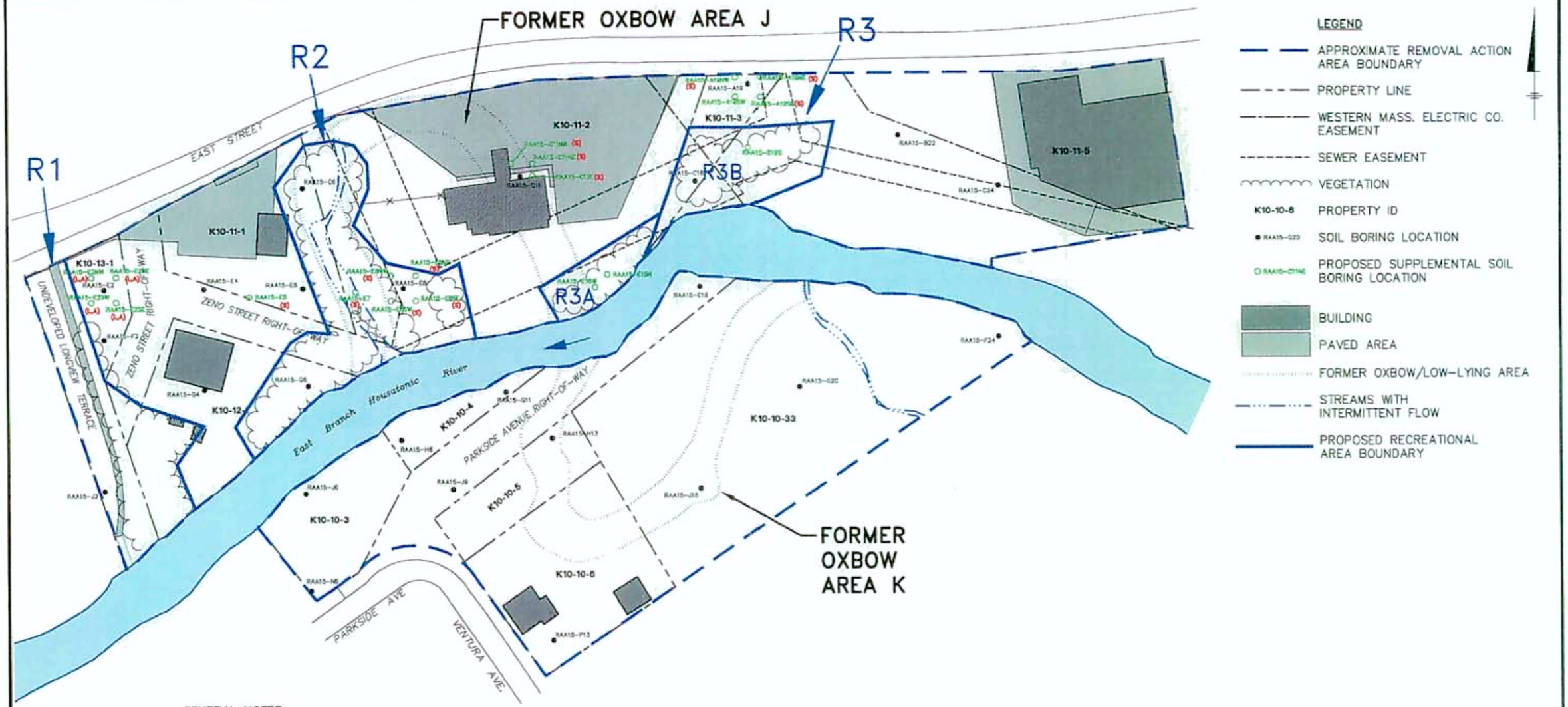
1/28/04 SYR-54-NES DWN LJP
N/20425001/20425029.DWG



GENERAL NOTES:

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2. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. EASEMENTS AND PROPERTY LINES ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN OR WILL BE ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS INDICATED IN PARENTHESES THAT THEY WERE OR WILL BE ANALYZED ONLY FOR ONE OR MORE OF THE FOLLOWING CONSTITUENT GROUPS:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS
   L,A = LEAD AND ANTIMONY ONLY

0 100' 200'
GRAPHIC SCALE

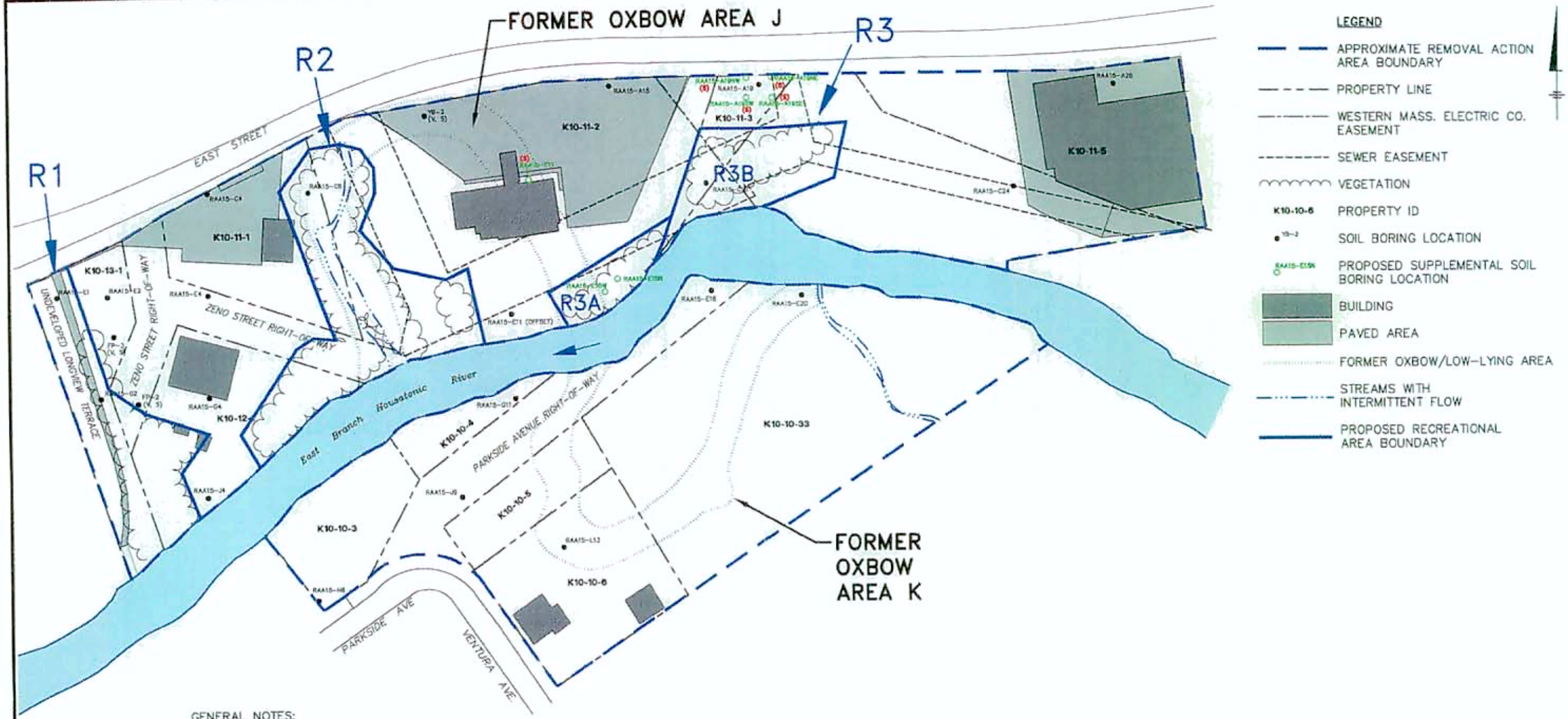
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FORMER OXBOW AREAS J AND K

EXISTING AND PROPOSED APPENDIX IX + 3 SOIL SAMPLE LOCATIONS (1- TO 3- FOOT INTERVAL)

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

FIGURE 4

X: 20425X05.DWG
L: ON=*; OFF=REF*; EASE-25, FENCE, *GRID, *SEWER, SHD-ESMT, STORM, *U-
P: PAGESET/PLT-BL
1/28/04 SYR-85-NES DMW LJP
N/20425001/20425030.DWG



GENERAL NOTES:

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2. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. EASEMENTS AND PROPERTY LINES ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN OR WILL BE ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS INDICATED IN PARENTHESES THAT THEY WERE OR WILL BE ANALYZED ONLY FOR ONE OR MORE OF THE FOLLOWING CONSTITUENT GROUPS:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

5. (OFFSET) REFERS TO ADDITIONAL DRILLING LOCATION NEEDED BECAUSE OF EQUIPMENT REFUSAL AT INITIAL BORING.

0 100' 200'
GRAPHIC SCALE

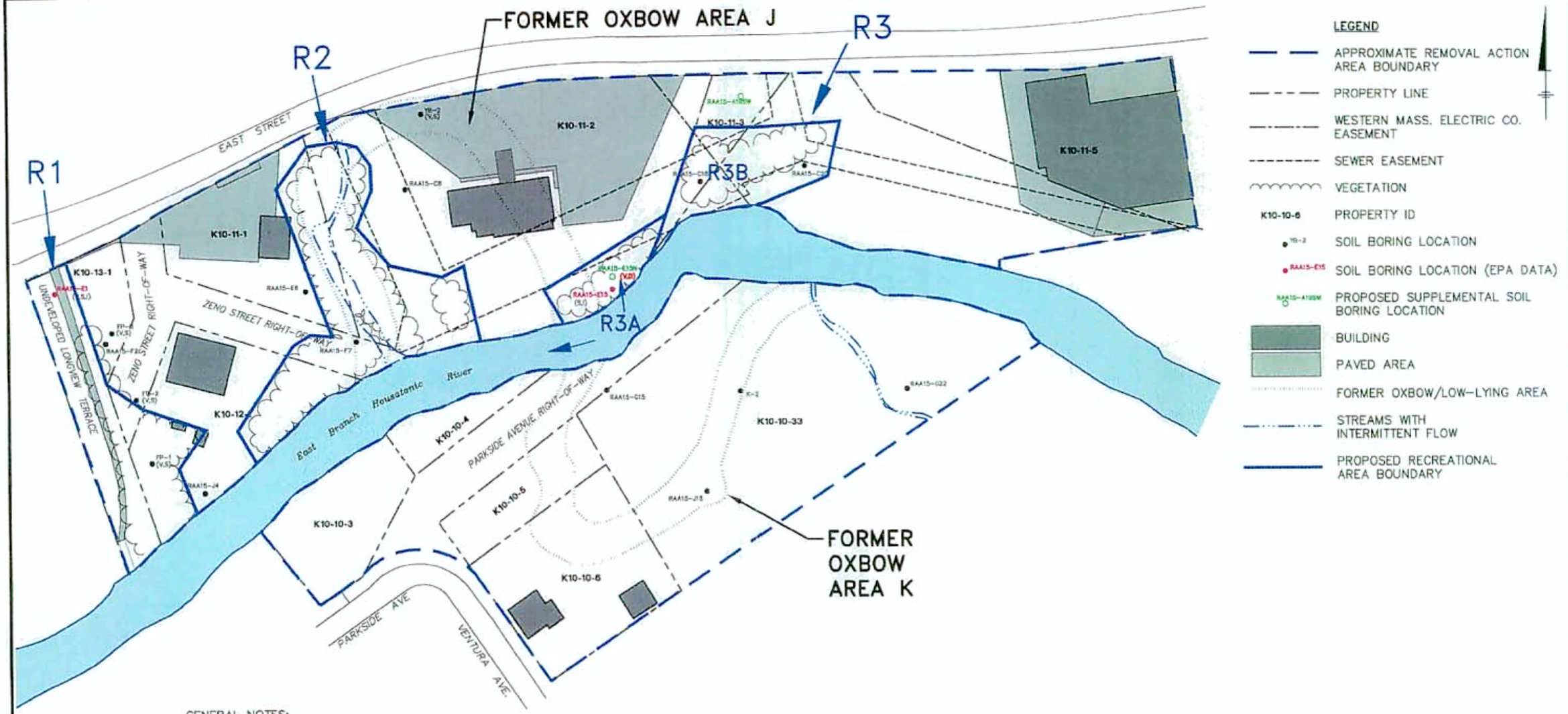
GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FORMER OXBOW AREAS J AND K

EXISTING AND PROPOSED APPENDIX IX + 3 SOIL SAMPLE LOCATIONS (3- TO 6- FOOT INTERVAL)

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

FIGURE 5

X: 20425X05.DWG
L: ON=*, OFF=REF*, EASE-25, FENCE, *GRID, SEWER, SHID-CSMT, STORM, *U-
P: PAGESET,PLT-BL
1/28/04 SYR-S4-LAS LAF LJP
N/20425001/20425G31.DWG



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3. EASEMENTS AND PROPERTY LINES ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN OR WILL BE ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS INDICATED IN PARENTHESES THAT THEY WERE OR WILL BE ANALYZED ONLY FOR ONE OR MORE OF THE FOLLOWING CONSTITUENT GROUPS:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FORMER OXBOW AREAS J AND K

EXISTING AND PROPOSED APPENDIX IX + 3 SOIL SAMPLE LOCATIONS (6- TO 10- FOOT INTERVAL)

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

FIGURE 6

X: 20425X03.DWG
L: ON=*, OFF=REF*, [EASE-25, [FENCE, [*GRID, [SEWER, [SHD-ESMT, [STORM, *[U-
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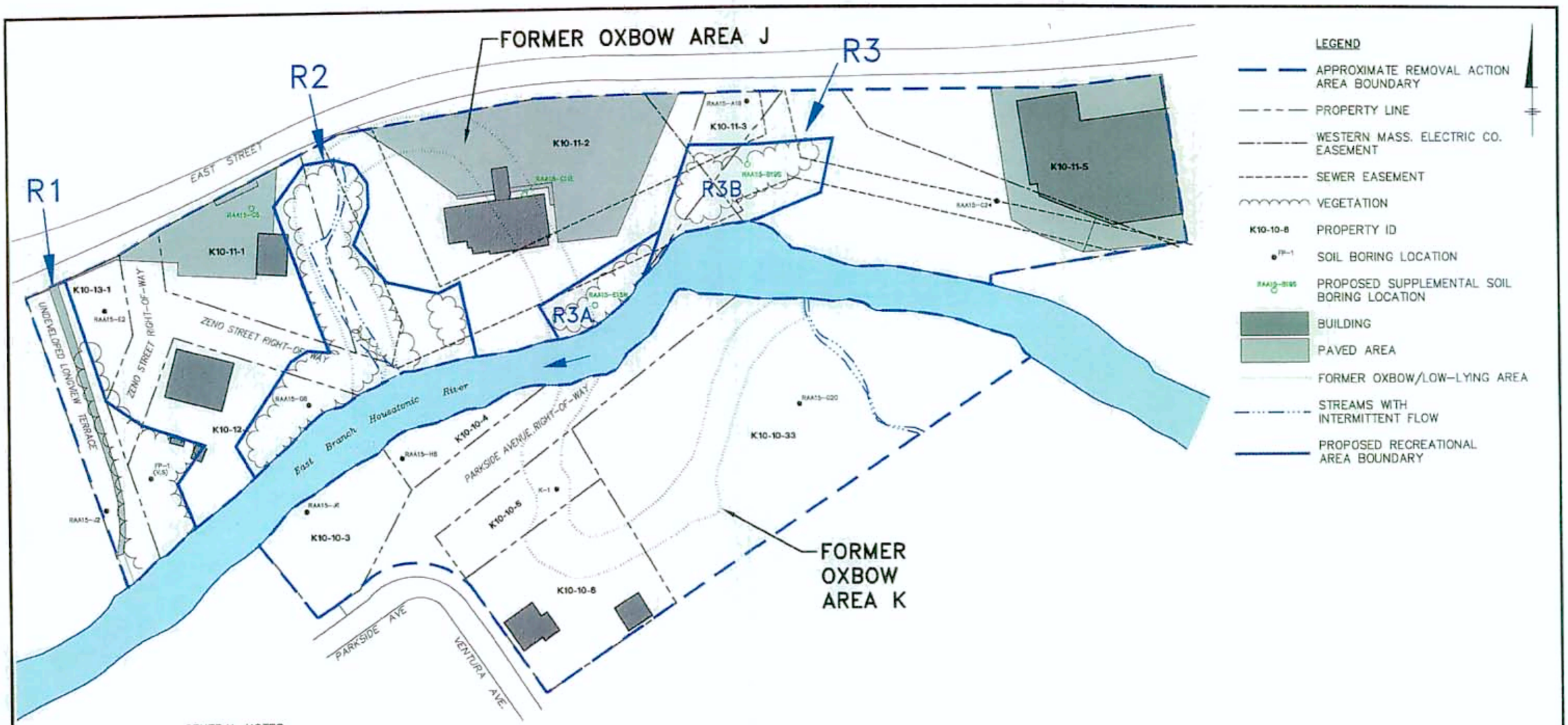

GENERAL NOTES:

1. BASE MAP MODIFIED FROM PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC – FLOWN IN APRIL 1990.
2. FORMER RIVER CHANNEL AND OXBOW/LOW-LYING AREAS DELINEATED USING THE CITY OF PITTSFIELD'S RECHANNELIZATION MAPPING, 1940.
3. EASEMENTS AND PROPERTY LINES ARE APPROXIMATE.
4. SOIL SAMPLES HAVE BEEN OR WILL BE ANALYZED FOR ALL APPENDIX IX+3 CONSTITUENTS (EXCLUDING PESTICIDES AND HERBICIDES) UNLESS INDICATED IN PARENTHESES THAT THEY WERE OR WILL BE ANALYZED ONLY FOR ONE OR MORE OF THE FOLLOWING CONSTITUENT GROUPS:

   V = VOLATILE ORGANIC COMPOUNDS (VOCs)
   S = SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)
   D = POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDs) AND POLYCHLORINATED DIBENZOFURANS (PCDFs)
   I = INORGANICS

0 100' 200'
GRAPHIC SCALE

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS
FORMER OXBOW AREAS J AND K

EXISTING AND PROPOSED APPENDIX IX + 3 SOIL SAMPLE LOCATIONS (10- TO 15- FOOT INTERVAL)

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

FIGURE 7

X: 20425X05.DWG
L: ON=*, OFF=REF*, [EASE-25, FENCE, *GRID, [SEWER, [SHD-ESMT, [STORM, *U-
P: PAGESET/SYR-BL
1/27/04 SYR-BS-NES LAF DWG
N/20425001/20425033.DWG