



Transmitted via Overnight Courier

May 4, 2006

Mr. William P. Lovely, Jr.
U.S. Environmental Protection Agency
EPA New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site Newell Street Area II (GECD450)

Proposal for Engineered Barrier Modifications

Dear Mr. Lovely:

By this letter, the General Electric Company (GE) is proposing two slight modifications to the extent of the engineered barriers to be installed in portions of the Newell Street Area II Removal Action Area (RAA), as depicted in GE's March 2005 Final Removal Design/Removal Action Work Plan for Newell Street Area II (Final Work Plan). That Final Work Plan was approved by the U.S. Environmental Protection Agency (EPA) by letter dated May 12, 2005, and was subsequently amended (in respects not relevant to the extent of the barriers) by GE's May 25, 2005 Final RD/RA Work Plan Addendum for Newell Street Area II (Final Work Plan Addendum), which was approved by EPA on June 9, 2005. As described in those documents, the remediation actions at Newell Street Area II to address the presence of polychlorinated biphenyls (PCBs) and other constituents listed in Appendix IX of 40 CFR 264 (excluding pesticides and herbicides) plus benzidine, 2-chloroethyl vinyl ether, and 1,2-diphenylhydrazine (Appendix IX+3) in soil consist of soil removal/replacement and the construction of engineered barriers in various portions of the RAA. The majority of those remediation actions have been completed.

At this time, GE is proposing to slightly modify the limits of the engineered barrier that remains to be installed within two portions of this RAA: (1) a small portion of Parcel J9-23-8 adjacent to the western side of residential Parcel J9-23-9, which is outside the RAA; and (2) a narrow strip of land within Parcels J9-23-8 and J9-23-12 adjacent to the northern side of Parcel J9-23-9 and to the western side of residential Parcel J9-23-10 (also outside the RAA) and the adjoining part of Parcel J9-23-12 that is used by the owner of Parcel J9-23-10. These proposed modifications are based on review of previous response actions conducted by GE within and adjacent to these areas during the Off-Site Residential Properties Program supervised by the Massachusetts Department of Environmental Protection (MDEP), as well as on survey activities and constructability considerations. Each of these modifications is described below, along with an evaluation of the modified barrier limits in accordance with the applicable Performance Standards specified in the Consent Decree (CD) and associated Statement of Work for Removal Actions Outside the River (SOW).

#### A. Portion of Parcel J9-23-8 Adjacent to and West of Parcel J9-23-9

The area subject to this proposed modification consists of a small triangular area within Parcel J9-23-8 that is located between the paved access road in the southern portion of that parcel and the western side of adjacent residential Parcel J9-23-9. This area is shown in blue on Figure 1 and is referred to herein as the "area west of Parcel J9-23-9." This area was previously evaluated with Parcel J9-23-9 during the Off-Site Residential Properties Program (based on residential cleanup standards) and was subject to remediation and restoration activities under that program.

This area was also evaluated as part of Parcel J9-23-8 in GE's Conceptual Removal Design/Removal Action Work Plan for Newell Street Area II (Conceptual Work Plan), which was submitted to EPA in July 2004 and conditionally approved by EPA in a letter dated November 4, 2004. The Conceptual Work Plan presented the results of both PCB and non-PCB evaluations for Parcel J9-23-8. The results of those evaluations indicated that soil removal/replacement and engineered barrier installation activities were necessary to satisfy applicable recreational Performance Standards at this parcel. However, as shown on Figure 4-1 of the Conceptual Work Plan, neither soil removal/replacement nor installation of an engineered barrier was necessary in the area west of Parcel J9-23-9 to meet those Performance Standards. Figure 1 provided herein shows the limits of the engineered barrier previously specified on Figure 4-1 of the Conceptual Work Plan in the vicinity of Parcel J9-23-9.

In response to EPA's November 4, 2004 letter conditionally approving the Conceptual Work Plan, GE expanded the limits of the engineered barrier to cover a different triangular area north of Parcel J9-23-9 (in the vicinity of sample locations RAA13-F94 and NS-21). In addition, GE expanded the limits of the engineered barrier from the eastern side of the barrier proposed in the Conceptual Work Plan to the western boundary of Parcel J9-23-9 (including the area west of Parcel J9-23-9) based solely on constructability considerations. The revised barrier limits were shown on the technical drawings in the Final Work Plan.

The installation of the engineered barrier within the area west of Parcel J9-23-9 would impact the restoration previously conducted in that area as part of the response actions related to Parcel J9-23-9, including requiring the removal of several trees previously placed by GE during those restoration activities. In these circumstances, and given that this area was already evaluated and subject to response actions under the Off-Site Residential Properties Program, GE proposes to modify the limits of the engineered barrier to exclude the area west of Parcel J9-23-9 (i.e., the area depicted in blue on Figure 1). These modified barrier limits are shown on the revised technical drawings provided in Attachment A. As demonstrated in the Conceptual Work Plan, neither soil removal/replacement nor installation of an engineered barrier is necessary in the area west of Parcel J9-23-9 to meet the applicable Performance Standards. Accordingly, the proposed modifications to the engineered barrier limits in that area will still allow the remediation to satisfy those Performance Standards.

#### B. Strip on Parcels J9-23-8 and J9-23-12 Adjacent to Parcels J9-23-9 and J9-23-10

The second area in which GE proposes to modify the extent of the engineered barrier consists of a strip of land on Parcels J9-23-8 and J9-23-12 along the northern boundary of Parcel J9-23-9 and the western boundary of Parcel J9-23-10 (and the adjoining part of Parcel J9-23-12 used by the owner of Parcel J9-23-10). This proposal consists of two modifications.

The first relates to a portion of the engineered barrier that was proposed for the GE-Newell Street parking lot at Parcel J9-23-12 but slightly extends into an area used by the owners of adjacent residential Parcels J9-23-9 and J9-23-10 as part of their backyards. This area is shown in yellow on Figure 1 and is described further below.

In accordance with the CD and SOW (as well as a subsequent agreement between GE and EPA embodied in a letter from GE to EPA dated July 16, 2001), the required remediation of the GE-Newell Street parking lot consists of the installation of a 1-foot thick vegetative engineered barrier over the existing pavement/soil, except that such a barrier is not needed in discrete portions of this area where spatial average PCB concentrations satisfy the Performance Standards for recreational areas – 10 parts per million (ppm) in the top foot, 15 ppm in the 1- to 3-foot depth increment, and 100 ppm in the top 15 feet. In the Conceptual and Final Work Plans, GE proposed to install an engineered barrier over the entire GE-Newell Street parking lot area. However, GE subsequently determined, through survey activities, that fencing associated with adjacent Parcels J9-23-9 and J9-23-10 is actually located within that GE-owned property, such that the owners of those parcels use a small strip within the GE property as part of their backyards. In this situation, GE proposes not to install an engineered barrier over the portion of the GE property that is used by those owners as part of their backyards.

Instead, GE has evaluated the area between the property line (dividing Parcel J9-23-12 from Parcels J9-23-9 and J9-23-10) and the existing fence line, shown in yellow on Figure 1, to determine whether soil removal/replacement would be needed in that area to achieve the Performance Standards. As a conservative measure, even though this area is located within GE-owned Parcel J9-23-12, GE has evaluated this area in accordance with the PCB Performance Standards for residential areas due to the current land use of this area. PCB evaluations for this area were performed in accordance with the spatial averaging procedures specified in the SOW. The results of the evaluations are provided in Attachment B and are summarized in the following table.

Depth Attachment B Table Increment Reference		Existing Average PCB Concentration (ppm)	Residential Performance Standard (ppm)	
0-1'	B-1	10.04	2	
1-X'	B-2	0.2	2	

Note

As indicated in the preceding table, the existing average PCB concentration for the 0- to 1-foot depth increment exceeds the residential Performance Standard. In addition, PCBs were detected within the 0- to 1-foot depth increment above the residential non-to-exceed (NTE) concentration of 10 ppm at two locations: J9-23-9-SB-2 and RAA13-F96. As a result, GE has elected to perform soil removal/replacement activities to a depth of 1 foot in select portions of the subject area to meet the residential Performance Standards. Proposed activities involve the removal of approximately 8 cubic yards of soil from the area specified on Figure 2, backfilling the excavation with topsoil, and restoring that area with seed and mulch.

The soil removal/replacement activities discussed above will result in the achievement of the residential PCB Performance Standards in the subject area, as indicated in the following table, thus obviating the need for installation of an engineered barrier in that area.

<sup>1.</sup> X = the depth at which PCBs were detected below ground surface. For this evaluation X has been determined to equal 15 feet.

Depth Increment	Attachment B Table Reference	Existing Average PCB Concentration (ppm)	Residential Performance Standard (ppm)		
0-1"	B-3	1.28	2		
1-X'	B-2	0.2	2		

The second proposed modification to the engineered barrier limits relates to an approximately 5-foot-wide strip within Parcels J9-23-8 and J9-23-12 adjacent to the existing fence line that separates those parcels from areas used by the owners of Parcels J9-23-9 and J9-23-10. That strip is shown in pink on Figure 1. (As discussed above, the owners of Parcels J9-23-9 and J9-23-10 use a small strip on the GE-owned Parcel J9-23-12 as part of their backyards. In addition, as shown on Figure 1, the owner of Parcel J9-23-10 uses a larger portion of Parcel J9-23-12, outside the GE-Newell Street parking lot area, for such purposes.)

GE has evaluated this strip of land to determine whether it can be excluded from the engineered barrier in order to facilitate construction of the barrier without disturbing the existing fencing or the areas used by the owners of Parcels J9-23-9 and J9-23-10. Since this "buffer strip" is located outside the fencing associated with Parcels J9-23-9 and J9-23-10 (i.e., outside the areas used by those parcel owners as part of their backyards) and is within Parcels J9-23-8 and J9-23-12 (both of which are considered recreational areas), it was evaluated in accordance with the PCB Performance Standards for recreational areas. The results of this evaluation are provided in Attachment B and are summarized in the following table.

Depth Increment	Attachment B Table Reference	Existing Average PCB Concentration (ppm)	Recreational Performance Standard (ppm)		
0-1	B-4	9.22	10		
1-3'	B-5	3.39	15		
0-15	B-6	15.91	100		

As indicated in the preceding table, the existing average PCB concentrations for each depth increment within this buffer strip are below the applicable Performance Standards for recreational areas. In addition, no PCB concentrations within the 0- to 1-foot depth increment exceed the NTE concentration of 50 ppm for recreational properties. As a result, there is no need for installation of an engineered barrier (or other remediation) within this 5-foot-wide buffer strip in order to meet the applicable Performance Standards.

Based on the above considerations, GE proposes to modify the limits of the engineered barrier in the above-described areas to exclude from the barrier the areas shown in yellow and pink on Figure 1. The modified barrier limits are presented on the revised technical drawings provided in Attachment A.

Given these proposed modifications, GE has also evaluated the data on non-PCB Appendix IX+3 constituents from locations within the areas subject to the proposed barrier modifications. Two samples collected from these areas were analyzed for non-PCB Appendix IX+3 constituents – one from the 0- to 0.12-foot depth increment at location NS-24 and one from the 0- to 1-foot depth increment at location RAA13-F96. The results from these samples are summarized in Table 1. These data have been evaluated in accordance with the usual procedure for evaluating non-PCB data, as set forth in the SOW and described in Section 3.3 of the Conceptual Work Plan. The initial screening step involved comparison of the maximum concentrations of all detected non-PCB constituents (except for dioxins/furans) with the EPA Region 9 Preliminary Remediation Goals (PRGs) (or PRGs for surrogate compounds) for residential areas. The results of this step are summarized in Table 2. In the next step, the maximum dioxin/furan

toxicity equivalency quotient (TEQ) concentration was compared with the applicable PRG for such TEQs, which is 1 part per billion under the SOW; and the average concentrations of the other retained constituents were compared to the MDEP's Wave 2 Method 1 S-1 soil standards. The results of this step are summarized in Table 3 and show that none of the retained constituents have concentrations exceeding those applicable comparison criteria. Accordingly, the proposed modifications to the engineered barrier limits will not cause any exceedances of the Performance Standards for non-PCB constituents.

#### C. Summary

Based on the information provided above, GE proposes to modify the limits of the engineered barrier to be installed in portions of Newell Street Area II as shown on the revised technical drawings provided in Attachment A. As demonstrated herein, with these modifications, along with the proposed additional soil removal/replacement shown on Figure 2, the applicable Performance Standards for each of the subject areas will be achieved.

Please contact me if you have questions or comments concerning the activities described above.

Sincerely,

Richard W. Gates

Remediation Project Manager

Richard W. Garles/Acc

#### Attachments

V GE\_Pittsfield\_CD\_Newell\_St\_Area\_IT/Reports and Presentations/Barrier Mod/24762196Ltr doc

cc: Dean Tagliaferro, EPA

Tim Conway, EPA

Holly Inglis, EPA

Rose Howell, EPA\*

K.C. Mitkevicius, USACE

Linda Palmieri, Weston

Anna Symington, MDEP\*

Jane Rothchild, MDEP\*

Susan Steenstrup, MDEP (2 copies)

Thomas Angus, MDEP\*

Mayor James Ruberto, City of Pittsfield

Pittsfield Commissioner of Public Health

Nancy E. Harper, MA AG\*

Dale Young, MA EOEA\*

Paul Dowd, Western Mass. Electric Co.

Michael Carroll, GE\*

Andrew Silfer, GE

Rod McLaren, GE

James Nuss, BBL

James Bieke, Goodwin Procter

Public Information Repositories

GE Internal Repositories

(\* without attachments)

## **Tables**



Sample ID:	NS-24	RAA13-F96
Sample Depth(Feet):	0-0.12	0-1
Parameter Date Collected:	10/06/93	09/26/02
Volatile Organics		
1,1,1,2-Tetrachloroethane	ND(0.0060)	ND(0.0055)
1,1,1-trichloro-2,2,2-trifluoroethane	ND(0.0060)	NA
1,1,1-Trichloroethane	ND(0.0060)	ND(0.0055)
1,1,2,2-Tetrachloroethane	ND(0.012)	ND(0.0055)
1,1,2-trichloro-1,2,2-trifluoroethane	ND(0.0060)	NA NB (see 5.5)
1,1,2-Trichloroethane	ND(0.0060)	ND(0.0055)
1,1-Dichloroethane 1,1-Dichloroethene	ND(0.0060) ND(0.0060)	ND(0.0055) ND(0.0055)
1,2,3-Trichloropropane	ND(0.0000)	ND(0.0055)
1,2-Dibromo-3-chloropropane	ND(0.0060)	ND(0.0055)
1.2-Dibromoethane	ND(0.0060)	ND(0.0055)
1,2-Dichloroethane	ND(0.0060)	ND(0.0055)
1,2-Dichloroethene (total)	ND(0.0060)	NA
1,2-Dichloropropane	ND(0.0060)	ND(0.0055)
1,4-Dioxane	NA	ND(0.11)
2-Butanone	ND(0.012)	ND(0.011)
2-Chloro-1,3-butadiene	NA	ND(0.0055)
2-Chloroethylvinylether	ND(0.012)	ND(0.0055)
2-Hexanone	ND(0.019)	ND(0.011)
3-Chloropropene	ND(0.0060)	ND(0.0055)
4-Methyl-2-pentanone	ND(0.019)	ND(0.011)
Acetone Acetonitrile	ND(0.012) NA	ND(0.022)
Acrolein	ND(0.11)	ND(0.11) ND(0.11) J
Acrylonitrile	ND(0.11) ND(0.15)	ND(0.11) 3 ND(0.0055)
Benzene	ND(0.0060)	ND(0.0055)
Bromodichloromethane	ND(0.0060)	ND(0.0055)
Bromoform	ND(0.012)	ND(0.0055)
Bromomethane	ND(0.0060)	ND(0.0055)
Carbon Disulfide	ND(0.0060)	ND(0.0055)
Carbon Tetrachloride	ND(0.0060)	ND(0.0055)
Chlorobenzene	ND(0.0060)	ND(0.0055)
Chloroethane	ND(0.012)	ND(0.0055)
Chloroform	ND(0.0060)	ND(0.0055)
Chloromethane	ND(0.012)	ND(0.0055)
cis-1,3-Dichloropropene	ND(0.0060)	ND(0.0055)
cis-1,4-Dichloro-2-butene	ND(0.019)	NA NA
Crotonaldehyde Dibromochloromethane	ND(0.0060)	NA ND(0.0055)
Dibromomethane	ND(0.0060) ND(0.012)	ND(0.0055) ND(0.0055)
Dichlorodifluoromethane	NA	ND(0.0055)
Ethyl Methacrylate	ND(0.012)	ND(0.0055)
Ethylbenzene	ND(0.0060)	ND(0.0055)
Iodomethane	ND(0.012)	ND(0.0055)
Isobutanol	NA	ND(0.11)
Methacrylonitrile	NA	ND(0.0055)
Methyl Methacrylate	NA	ND(0.0055)
Methylene Chloride	0.022 B	ND(0.0055)
Propionitrile	NA	ND(0.011)
Styrene	ND(0.0060)	ND(0.0055)
Tetrachloroethene	ND(0.0060)	ND(0.0055)
Toluene	ND(0.0060)	ND(0.0055)
trans-1,2-Dichloroethene	NA ND(0,0060)	ND(0.0055)
trans-1,3-Dichloropropene trans-1,4-Dichloro-2-butene	ND(0.0060) ND(0.0060)	ND(0.0055) ND(0.0055)
Trichloroethene	ND(0.0060)	ND(0.0055)
Trichlorofluoromethane	ND(0.0060)	ND(0.0055)
Vinyl Acetate		1 /
	ND(U.U.V)	
Vinyl Chloride	ND(0.012) ND(0.012)	ND(0.0055) ND(0.0055)

	Sample ID:	NS-24	RAA13-F96
	Sample Depth(Feet):	0-0.12	0-1
Parameter	Date Collected:	10/06/93	09/26/02
Semivolatile Organ		NID (0.00)	
1,2,3,4-Tetrachlorob		ND(0.80)	NA NA
1,2,3,5-Tetrachlorok		ND(1.6)	NA NA
1,2,3-Trichlorobenz 1,2,4,5-Tetrachlorob		ND(0.75) ND(1.6)	ND(0.44)
1,2,4-Trichlorobenz		ND(1.6) ND(0.69)	ND(0.44)
1,2-Dichlorobenzen		ND(0.09) ND(0.74)	ND(0.44)
1,2-Diphenylhydrazi		ND(0.86)	ND(0.44)
1,3,5-Trichlorobenze		ND(0.76)	NA
1,3,5-Trinitrobenzer		ND(1.1)	ND(0.44)
1,3-Dichlorobenzen	e	ND(0.64)	ND(0.44)
1,3-Dinitrobenzene		ND(0.70)	ND(0.74)
1,4-Dichlorobenzen		ND(0.65)	ND(0.44)
1,4-Naphthoquinone		ND(2.0)	ND(0.74)
1-Chloronaphthalen		ND(1.5)	NA NA
1-Methylnaphthalen	e	ND(1.4)	NA NB(0.74)
1-Naphthylamine	phonol	ND(1.8)	ND(0.74)
2,3,4,6-Tetrachlorop 2,4,5-Trichlorophen		ND(1.8) ND(1.6)	ND(0.44) ND(0.44) J
2,4,6-Trichlorophen		ND(1.6)	ND(0.44) 3 ND(0.44)
2,4-Dichlorophenol	<u>.</u>	ND(0.69)	ND(0.44)
2,4-Dimethylphenol		ND(0.76)	ND(0.44)
2,4-Dinitrophenol		ND(2.1)	ND(2.2)
2,4-Dinitrotoluene		ND(0.82)	ND(0.44)
2,6-Dichlorophenol		ND(1.5)	ND(0.44)
2,6-Dinitrotoluene		ND(0.94)	ND(0.44)
2-Acetylaminofluore	I .	ND(0.89)	ND(0.74) J
2-Chloronaphthalen	e	ND(1.2)	ND(0.44)
2-Chlorophenol		ND(0.79)	ND(0.44)
2-Methylnaphthalen	e	ND(1.0)	ND(0.44)
2-Methylphenol		ND(0.81)	ND(0.44)
2-Naphthylamine 2-Nitroaniline		ND(1.1) ND(1.4)	ND(0.74) ND(2.2)
2-Nitrophenol		ND(0.78)	ND(0.74)
2-Nitrophenor 2-Picoline		ND(0.76)	ND(0.44)
3&4-Methylphenol		ND(1.6)	ND(0.74)
3,3'-Dichlorobenzidi	ne	ND(0.62)	ND(0.88) J
3,3'-Dimethoxybenz		ND(1.2)	NA
3,3'-Dimethylbenzid	ine	ND(1.2)	ND(0.44) J
3-Methylcholanthrer	ne	ND(0.76)	ND(0.74)
3-Nitroaniline		ND(0.86)	ND(2.2)
4,4'-Methylene-bis(2	, , , , , , , , , , , , , , , , , , ,	ND(0.56)	NA
4,6-Dinitro-2-methyl	phenol	ND(2.2)	ND(0.44)
4-Aminobiphenyl		ND(0.51)	ND(0.74)
4-Bromophenyl-phe		ND(0.94)	ND(0.44)
4-Chloro-3-Methylpl	nenoi	ND(0.94)	ND(0.44)
4-Chloroaniline 4-Chlorobenzilate		ND(0.86) ND(0.89)	ND(0.44) ND(0.74)
4-Chlorophenyl-phe	nylether	ND(0.09) ND(0.75)	ND(0.44)
4-Nitroaniline	Trylettici	ND(1.4)	ND(1.9)
4-Nitrophenol		ND(5.6)	ND(2.2)
4-Nitroquinoline-1-o	xide	ND(6.0)	ND(0.74) J
4-Phenylenediamine		NA	ND(0.74) J
5-Nitro-o-toluidine		ND(1.2)	ND(0.74)
7,12-Dimethylbenz(	a)anthracene	ND(0.51)	ND(0.74)
a,a'-Dimethylphenet	thylamine	NA	ND(0.74)
Acenaphthene		ND(0.82)	ND(0.44)
Acenaphthylene		0.14 J	0.19 J
Acetophenone		ND(0.82)	ND(0.44)
Aniline		ND(0.70)	0.31 J
Anthracene		0.093 J ND(0.82)	0.15 J ND(0.74) J
Aramite Benzal chloride		ND(0.82) ND(0.66)	ND(0.74) J NA
Benzidine		ND(2.0)	ND(0.88) J
JULIZIUILIE		140(2.0)	14D(0.00) J

	Sample ID:	NS-24	RAA13-F96
	ample Depth(Feet):	0-0.12	0-1
Parameter	Date Collected:	10/06/93	09/26/02
Semivolatile Organics (co	ntinued)	0.50.1	1 0.47
Benzo(a)anthracene		0.52 J	0.47
Benzo(a)pyrene		0.50 J 0.91 JX	0.42 J 0.42 J
Benzo(b)fluoranthene Benzo(g,h,i)perylene		0.91 JA 0.12 J	0.42 J 0.28 J
Benzo(k)fluoranthene		0.12 J 0.91 JX	0.28 J
Benzoic Acid		ND(2.4)	NA
Benzotrichloride		ND(0.78)	NA NA
Benzyl Alcohol		ND(0.69)	ND(0.88)
Benzyl Chloride		ND(0.72)	NA
bis(2-Chloroethoxy)methan	e	ND(0.84)	ND(0.44)
bis(2-Chloroethyl)ether		ND(0.74)	ND(0.44)
bis(2-Chloroisopropyl)ether		ND(0.81)	ND(0.44)
bis(2-Ethylhexyl)phthalate		ND(0.94)	ND(0.36)
Butylbenzylphthalate		ND(0.85)	ND(0.44)
Chrysene Cyclophosphamide		0.61 J ND(0.79)	0.56 NA
Diallate		ND(0.79) ND(0.82)	ND(0.74)
Dibenz(a,j)acridine		ND(0.52)	NA
Dibenzo(a,h)anthracene		ND(0.54)	ND(0.44)
Dibenzofuran		ND(0.86)	ND(0.44)
Diethylphthalate		ND(0.90)	ND(0.44)
Dimethylphthalate		ND(1.2)	ND(0.44)
Di-n-Butylphthalate		0.097 J	ND(0.44)
Di-n-Octylphthalate		ND(0.60)	ND(0.44)
Diphenylamine		ND(1.8)	ND(0.44)
Ethyl Methanesulfonate		ND(0.75)	ND(0.44)
Fluoranthene		0.76 J	0.97
Fluorene		0.062 J	ND(0.44)
Hexachlorobenzene		ND(0.96)	ND(0.44) ND(0.44)
Hexachlorobutadiene Hexachlorocyclopentadiene	`	ND(0.70) ND(0.82)	ND(0.44) ND(0.44)
Hexachloroethane	,	ND(0.75)	ND(0.44)
Hexachlorophene		NA NA	ND(0.88) J
Hexachloropropene		ND(0.71)	ND(0.44)
Indeno(1,2,3-cd)pyrene		0.20 J	0.19 J
Isodrin		ND(1.2)	ND(0.44)
Isophorone		ND(0.85)	ND(0.44)
Isosafrole		ND(1.6)	ND(0.74)
Methapyrilene		ND(1.6)	ND(0.74)
Methyl Methanesulfonate		ND(0.88)	ND(0.44)
Naphthalene		0.057 J	ND(0.44)
Nitrobenzene		ND(0.85)	ND(0.44)
N-Nitrosodiethylamine N-Nitrosodimethylamine		ND(0.75) ND(0.82)	ND(0.44) ND(0.44)
N-Nitrosodinetnylamine		ND(0.82) ND(1.8)	ND(0.44)
N-Nitroso-di-n-propylamine		ND(0.76)	ND(0.44)
N-Nitrosodiphenylamine		ND(1.8)	ND(0.44)
N-Nitrosomethylethylamine		ND(0.68)	ND(0.74)
N-Nitrosomorpholine		ND(0.94)	ND(0.44)
N-Nitrosopiperidine		ND(0.92)	ND(0.44)
N-Nitrosopyrrolidine		ND(0.66)	ND(0.74)
o,o,o-Triethylphosphorothio	ate	ND(6.6)	ND(0.44)
o-Toluidine		ND(2.5)	ND(0.44)
Paraldehyde		ND(0.45)	NA NB(0.74)
p-Dimethylaminoazobenzer	ne	ND(0.84)	ND(0.74)
Pentachlorobenzene		ND(0.82)	ND(0.44)
Pentachloroethane Pentachloronitrobenzene		ND(1.0)	ND(0.44)
Pentachioronitrobenzene Pentachlorophenol		ND(0.80) ND(1.8)	ND(0.74) ND(2.2)
Pentacniorophenoi Phenacetin		ND(1.8) ND(0.76)	ND(2.2) ND(0.74)
Phenanthrene		0.65 J	0.70
Phenol		0.16 J	ND(0.44)
Pronamide		ND(0.81)	ND(0.44)

	Sample ID:	NS-24	RAA13-F96
	Sample Depth(Feet):	0-0.12	0-1
Parameter	Date Collected:	10/06/93	09/26/02
Semivolatile Orga	nics (continued)		
Pyrene	, i	0.89 J	1.4
Pyridine		ND(0.69)	ND(0.44)
Safrole		ND(0.72)	ND(0.44)
Thionazin		ND(0.84)	ND(0.44)
Organophosphate	e Pesticides	,	, ,
Dimethoate		ND(0.0042)	NA
Disulfoton		ND(0.0042)	NA
Ethyl Parathion		ND(0.0042)	NA
Famphur		ND(2.5)	NA
Methyl Parathion		ND(0.0042)	NA
Phorate		ND(0.0042)	NA
Sulfotep		ND(0.0042)	NA
Herbicides		, ,	
2,4,5-T		ND(0.16)	NA
2,4,5-TP		ND(0.16)	NA
2,4-D		ND(0.62)	NA
Furans	<u> </u>		
2,3,7,8-TCDF		ND(0.000099)	0.00097 YEJ
TCDFs (total)		ND(0.00010)	0.0078
1,2,3,7,8-PeCDF		ND(0.00015)	0.00049
2,3,4,7,8-PeCDF		ND(0.00016)	0.00080
PeCDFs (total)		ND(0.00016)	0.0074 Q
1,2,3,4,7,8-HxCDF		ND(0.00018)	0.0010
1,2,3,6,7,8-HxCDF		ND(0.00014)	0.00058
1,2,3,7,8,9-HxCDF	•	ND(0.00034)	0.00016
2,3,4,6,7,8-HxCDF	•	ND(0.00026)	0.00053
HxCDFs (total)		ND(0.00034)	0.0058
1,2,3,4,6,7,8-HpCE		ND(0.00027)	0.0017
1,2,3,4,7,8,9-HpCE	OF .	ND(0.00029)	0.00022
HpCDFs (total)		ND(0.00029)	0.0025
OCDF		ND(0.00054)	0.0010
Dioxins			
2,3,7,8-TCDD		ND(0.00011)	0.000079
TCDDs (total)		ND(0.00011)	0.00026
1,2,3,7,8-PeCDD		ND(0.00020)	0.000037
PeCDDs (total)		ND(0.00020)	0.00050 Q
1,2,3,4,7,8-HxCDD		ND(0.00032)	0.000045
1,2,3,6,7,8-HxCDD		ND(0.00016)	0.000073
1,2,3,7,8,9-HxCDD	)	ND(0.00027)	0.000057
HxCDDs (total)		ND(0.00032)	0.00097
1,2,3,4,6,7,8-HpCE	DD	ND(0.00033)	0.00042
HpCDDs (total)		ND(0.00033)	0.00086
OCDD		ND(0.00043)	0.00068
Total TEQs (WHO	TEFs)	0.00029	0.00083

# NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

	Sample ID:	NS-24	RAA13-F96
	Sample Depth(Feet):	0-0.12	0-1
Parameter	Date Collected:	10/06/93	09/26/02
Inorganics			
Aluminum		12100 E	NA
Antimony		ND(8.70)	1.10 B
Arsenic		14.2	5.60
Barium		118	25.0 J
Beryllium		ND(1.10)	0.150 B
Cadmium		ND(1.20)	ND(0.500)
Calcium		12500 E	NA
Chromium		17.0	6.80
Cobalt		7.80 B	8.40
Copper		75.8	42.0
Cyanide		NA	ND(0.220)
Iron		24900	NA
Lead		200	27.0 J
Magnesium		6250 E	NA
Manganese		354 E	NA
Mercury		0.680	0.310
Nickel		25.9	14.0
Potassium		583 B	NA
Selenium		4.70 A	ND(1.00)
Silver		ND(1.30)	ND(1.00)
Sodium		105 B	NA
Sulfide		NA	30.0
Thallium		ND(1.20) W	ND(1.60) J
Tin		32.1	3.80 B
Vanadium		31.0	6.20
Zinc		289	76.0

#### Notes:

- 1. Samples were collected by GE subcontractors and were submitted for analysis of Appendix IX + 3 constituents.
- 2. ND Analyte was not detected. The number in parentheses is the associated detection limit.
- NA Not Analyzed Results were not reported for this analyte.
- 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.

#### Data Qualifiers:

#### Organics (volatiles, semivolatiles, pesticides, herbicides, dioxin/furans)

- B Analyte was also detected in the associated method blank.
- E Analyte exceeded calibration range.
- J Indicates that the associated numerical value is an estimated concentration.
- Q Indicates the presence of quantitative interferences.
- X Estimated maximum possible concentration.
- Y 2,3,7,8-TCDF results have been confirmed on a DB-225 column.

#### Inorganics

- A Analyte determination by the method of standard additions (MSA).
- B Indicates an estimated value between the instrument detection limit (IDL) and practical quantitation limit (PQL).
- E Serial dilution results not within 10%. Applicable only if analyte concentration is at least 50X the IDL in original sample.
- J Indicates that the associated numerical value is an estimated concentration.
- W GFAA Analytical spike recovery outside of range of 85% to 115% in a sample which exhibits a low concentration of analyte.

  Unspiked response must be < 50% of spiked sample response.

# TABLE 2 COMPARISON OF DETECTED APPENDIX IX+3 CONSTITUENTS TO RESIDENTIAL SCREENING PRGS AREA SUBJECT TO PROPOSED BARRIER MODIFICATION

# NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

	Maximum	USEPA Region 9	Constituent Retained for Further Evaluation?		
Analytical Parameter	Detect	Residential PRGs (See Note 3)	(See Note 5)		
Volatile Organics					
Methylene Chloride	0.022	8.5	No		
Semivolatile Organics					
Acenaphthylene	0.19	55*	No		
Aniline	0.31	78	No		
Anthracene	0.15	14,000	No		
Benzo(a)anthracene	0.52	0.56	No		
Benzo(a)pyrene	0.5	0.056	Yes		
Benzo(b)fluoranthene	0.91	0.56	Yes		
Benzo(g,h,i)perylene	0.28	55	No		
Benzo(k)fluoranthene	0.91	5.6	No		
Chrysene	0.61	56	No		
Di-n-Butylphthalate	0.097	5,500	No		
Fluoranthene	0.97	2,000	No		
Fluorene	0.062	1,800	No		
Indeno(1,2,3-cd)pyrene	0.2	0.56	No		
Naphthalene	0.057	55	No		
Phenanthrene	0.7	55*	No		
Phenol	0.16	33,000	No		
Pyrene	1.4	1,500	No		
Inorganics		•			
Antimony	1.1	30	No		
Arsenic	14.2	0.38	Yes		
Barium	118	5,200	No		
Beryllium	0.15	150	No		
Chromium	17	210	No		
Cobalt	8.4	3,300	No		
Copper	75.8	2,800	No		
Lead	200	400	No		
Mercury	0.68	22	No		
Nickel	25.9	1,500	No		
Selenium	4.7	370	No		
Sulfide	30	350*	No		
Tin	32.1	45,000	No		
Vanadium	31	520	No		
Zinc	289	22,000	No		

- 1. PRG = Preliminary Remediation Goal.
- 2. Per Attachment F to Statement of Work for Removal Actions Outside the River (SOW), comparison to PRGs is required for all detected Appendix IX+3 constituents except PCBs, dioxins and furans.
- 3. The PRGs listed in this column consist of EPA Region 9 residential soil PRGs for the constituents listed or, for certain constituents, surrogate Region 9 PRGs previously approved by EPA. The PRGs listed are those set forth in Exhibit F-1 to Attachment F to the SOW.
- 4. \* = No EPA Region 9 PRG exists for certain noncarcinogenic PAHs (i.e., acenaphthylene and phenanthrene) or sulfide. The PRGs for naphthalene and carbon disulfide, respectively, were used as surrogates.
- 5. Constituent is retained for further evaluation if its maximum detected concentration exceeds its corresponding PRG.

# TABLE 3 EXISTING CONDITIONS - COMPARISON TO METHOD 1 WAVE 2 SOIL STANDARDS AREA SUBJECT TO PROPOSED BARRIER MODIFICATION

# NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS (Results are presented in dry weight parts per million, ppm)

S Parameter	Sample ID: Sample Depth(Feet): Date Collected:	NS-24 0-0.12 10/06/93	RAA13-F96 0-1 09/26/02	Maximum Sample Result	Arithmetic Average Concentration	MCP Wave 2 Method 1 S-1 GW-2/GW-3 Soil Standard (See Note 3)	Constituent Exceeds Initial Comparison Criteria? (See Note 4)
Semivolatile Organi	cs						
Benzo(a)pyrene		0.50	0.42	N/A (See Note 5)	0.5	2	No
Benzo(b)fluoranthene	Э	0.91	0.42	N/A (See Note 5)	0.7	7	No
Dioxins/Furans							
Total TEQs (WHO TE	EFs)	2.90E-04	8.30E-04	8.30E-04	N/A (See Note 5)	1.00E-03	No
Inorganics	·	•	•	·			
Arsenic		14.2	5.60	N/A (See Note 5)	9.9	20	No

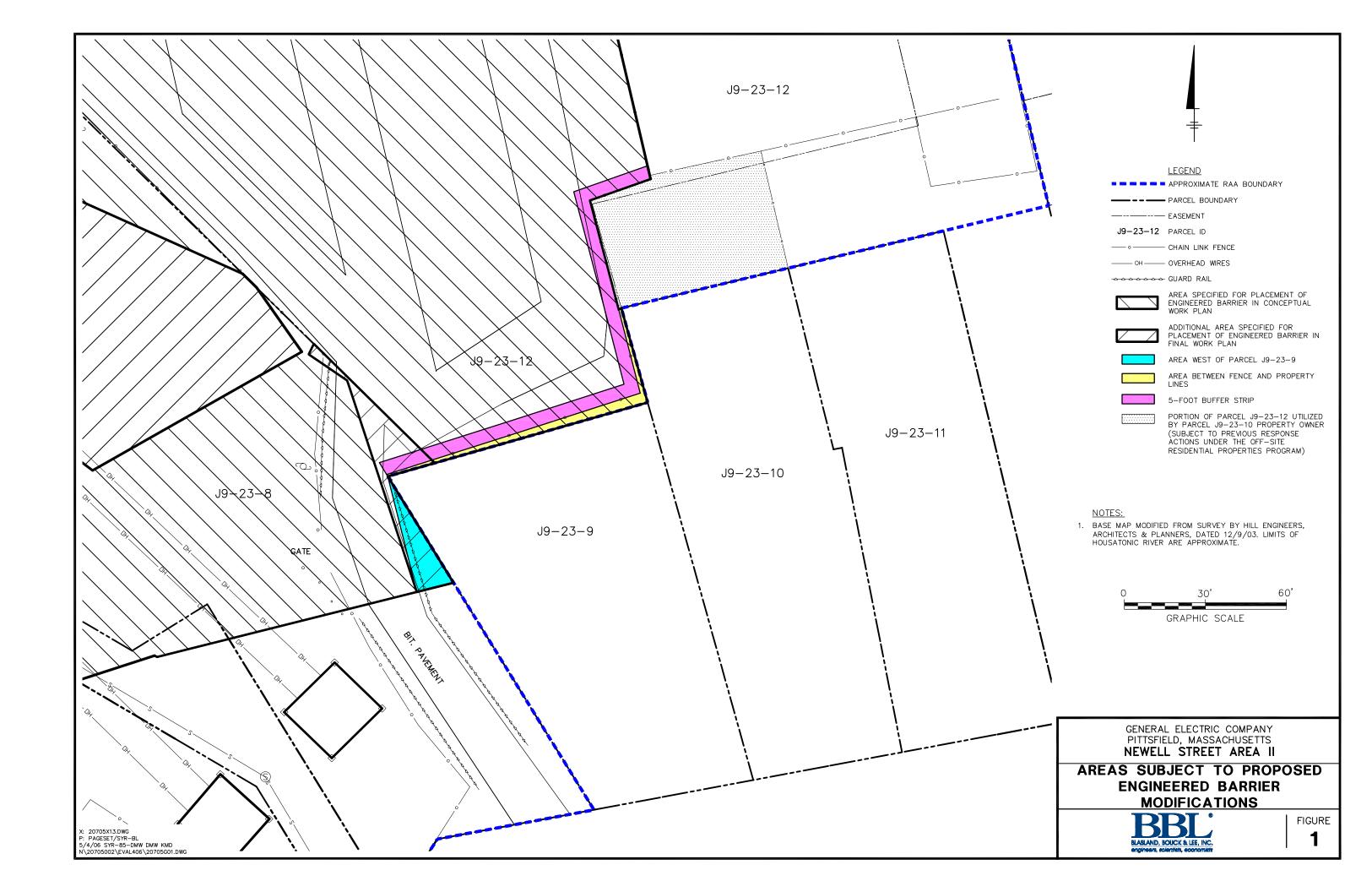
#### Notes:

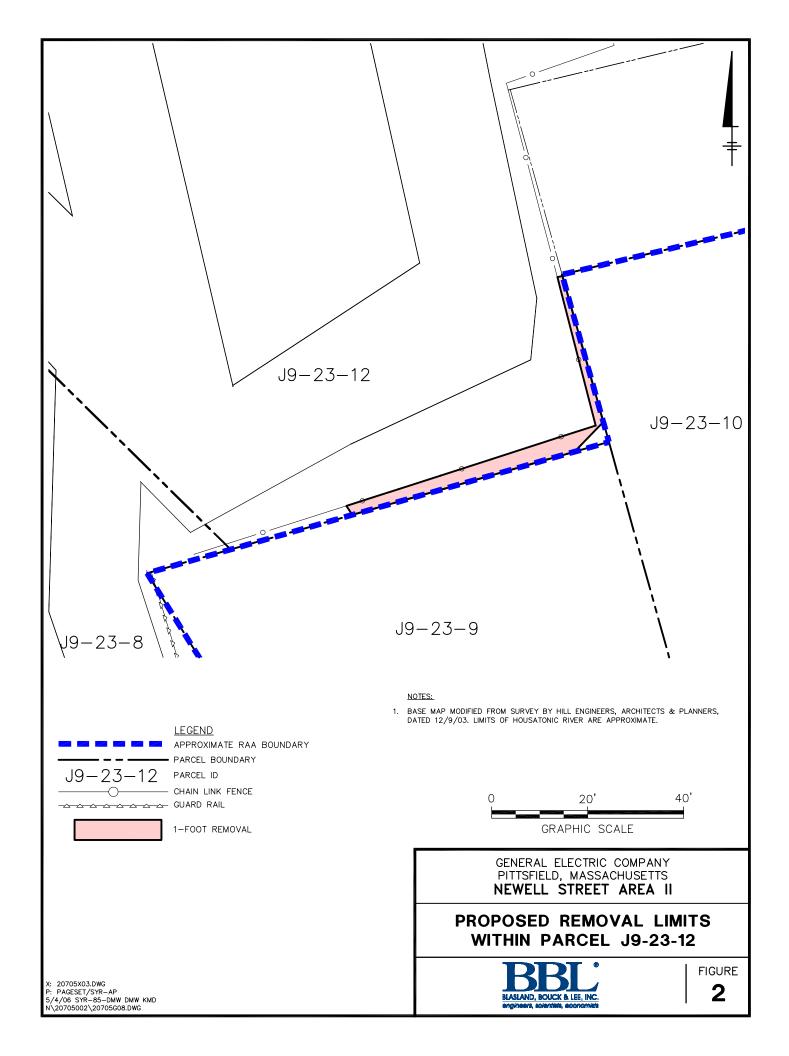
- 1. Total 2,3,7,8-TCDD toxicity equivalency quotients (TEQs) were calculated using World Health Organization (WHO) Toxicity Equivalency Factors (TEFs) for all PCDD/PCDF compounds. Where individual compounds were not detected, a value of one-half the analytical detection limit was used to calculate the TEQ concentrations.
- 2. With the exception of Total TEQs, each constituent evaluated above has a maximum sample result that exceeds its respective EPA Region 9 Residential PRG or surrogate PRG.
- 3. The Method 1 Wave 2 S-1 soil standards listed are those associated with GW-2/GW-3 groundwater (whichever is more stringent), except for Dioxin/Furan Total TEQs. Total TEQs are compared to the EPA PRGs for such TEQs set out in Attachment F of the Statement of Work for Removal Actions Outside the River (SOW) or other TEQ comparison criteria utilized during previous evaluations.
- 4. Arithmetic average concentrations of all constituents, except Total TEQs, are compared to Method 1 Wave 2 Soil Standards. For TEQs, the maximum concentration is compared to the appropriate EPA PRG (or other comparison criterion).

Page 1 of 1

# **Figures**







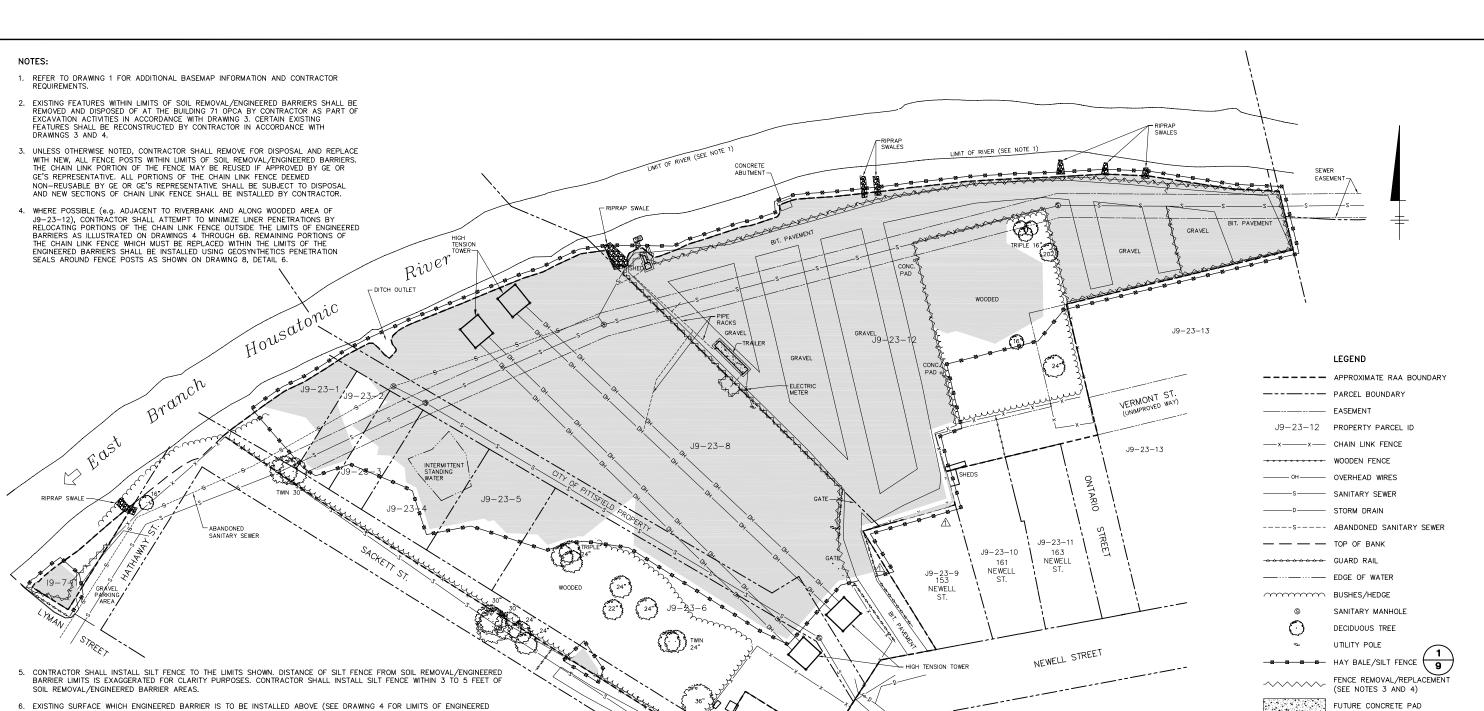
## **Attachments**



## Attachment A

# **Revised Technical Drawings**





6. EXISTING SURFACE WHICH ENGINEERED BARRIER IS TO BE INSTALLED ABOVE (SEE DRAWING 4 FOR LIMITS OF ENGINEERED BARRIER) SHALL BE CLEARED OF ALL DEBRIS.

7. GUARD RAIL WITHIN SOIL REMOVAL/ENGINEERED BARRIER LIMITS TO BE REMOVED AND DISPOSED OF AT THE BUILDING 71 OPCA. GUARD RAIL SHALL BE DISPOSED OF IN 6' LONG SECTIONS OR LESS.

8. GE WILL COORDINATE DISCONNECTING THE ELECTRICAL SERVICE AND PIPING (AS NECESSARY) PRIOR TO THE TEMPORARY REMOVAL OF THE NAPL COLLECTION SYSTEM. CONTRACTOR SHALL COORDINATE WITH GE OR GE'S REPRESENTATIVE PRIOR TO REMOVAL OF NAPL COLLECTION SYSTEM TO ALLOW FOR ARRANGEMENT OF INTERIM NAPL MONITORING PROCEDURES. CONTRACTOR SHALL THEN DISMANTLE AND REMOVE REMAINING MATERIALS (AS NECESSARY) ASSOCIATED WITH THE NAPL COLLECTION SYSTEM (INCLUDING THE TRAILER AND SHED). CONTRACTOR SHALL TAKE CARE IN DISMANTLING AND REMOVING MATERIALS. EQUIPMENT AND MATERIALS ASSOCIATED WITH THE NAPL COLLECTION SYSTEM SHALL BE TEMPORARILY STORED IN A LOCATION TO BE DETERMINED BY GE OR GE'S REPRESENTATIVE. CONTRACTOR SHALL INSTALL CONCRETE COLLARS AND PADS (SEE DRAWING 8, DETAILS 7 AND 8) PRIOR TO INSTALLATION OF THE ENGINEERED BARRIER. ALL NAPL COLLECTION MATERIALS AND EQUIPMENT SHALL BE RESTORED TO THEIR ORIGINAL LOCATION AND CONDITION. ANY DAMAGE TO THE NAPL COLLECTION SYSTEM SHALL BE REVIEWED WITH GE OR GE'S REPRESENTATIVE TO DETERMINE RESPONSIBILITY FOR REPAIR.

9. CONTRACTOR SHALL PERFORM CLEARING AND, IF NECESSARY, GRUBBING ACTIVITIES IN ALL AREAS SUBJECT TO RESPONSE ACTIONS (i.e., EXCAVATION AREAS AND AREAS SUBJECT TO INSTALLATION OF ENGINEERED BARRIERS).

: 20705X00, X01, X02.DWG : ON=\*, OFF= \*REF, |CONT\*, |VEGETATION : PAGESET/SYR-CDL

USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

5/4/06 SYR-85-LAF DMW KMD N/20705002/20705G05.DWG

essional Engineer's No. 1/21/06 REVISED LIMIT OF ENGINEERED BARRIER INSTALLATION

HIS DRAWING IS THE PROPERTY OF BLASLAND, BOUCK & LEE, INC. AND MAY NO BE REPRODUCED OR ALTERED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF BLASLAND ROLLCK & LEE INC.

BLASLAND, BOUCK & LEE, INC

Date Sianed

145

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
NEWELL STREET AREA II RAA REMEDIAL ACTION

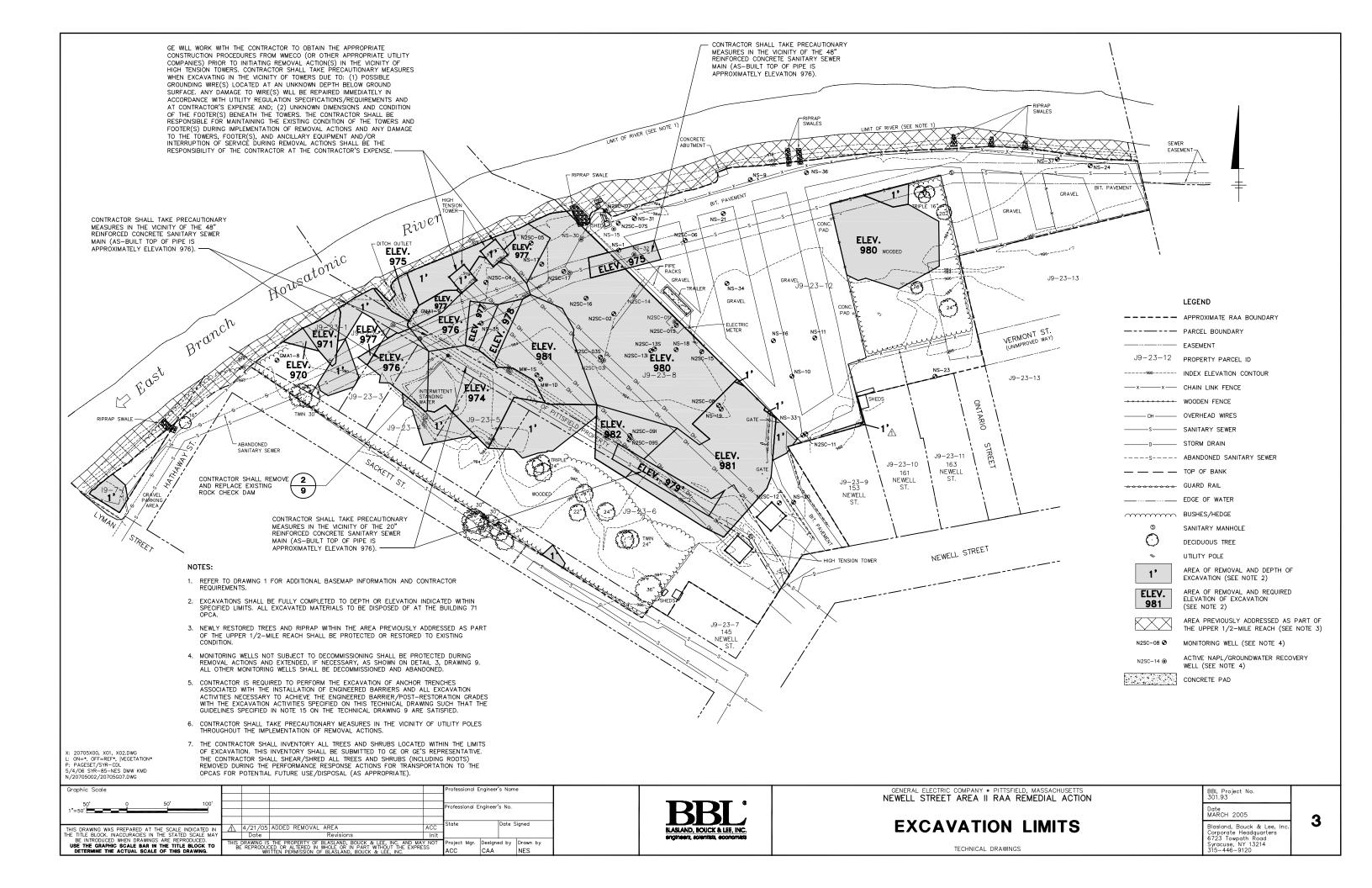
## SITE PREPARATION PLAN

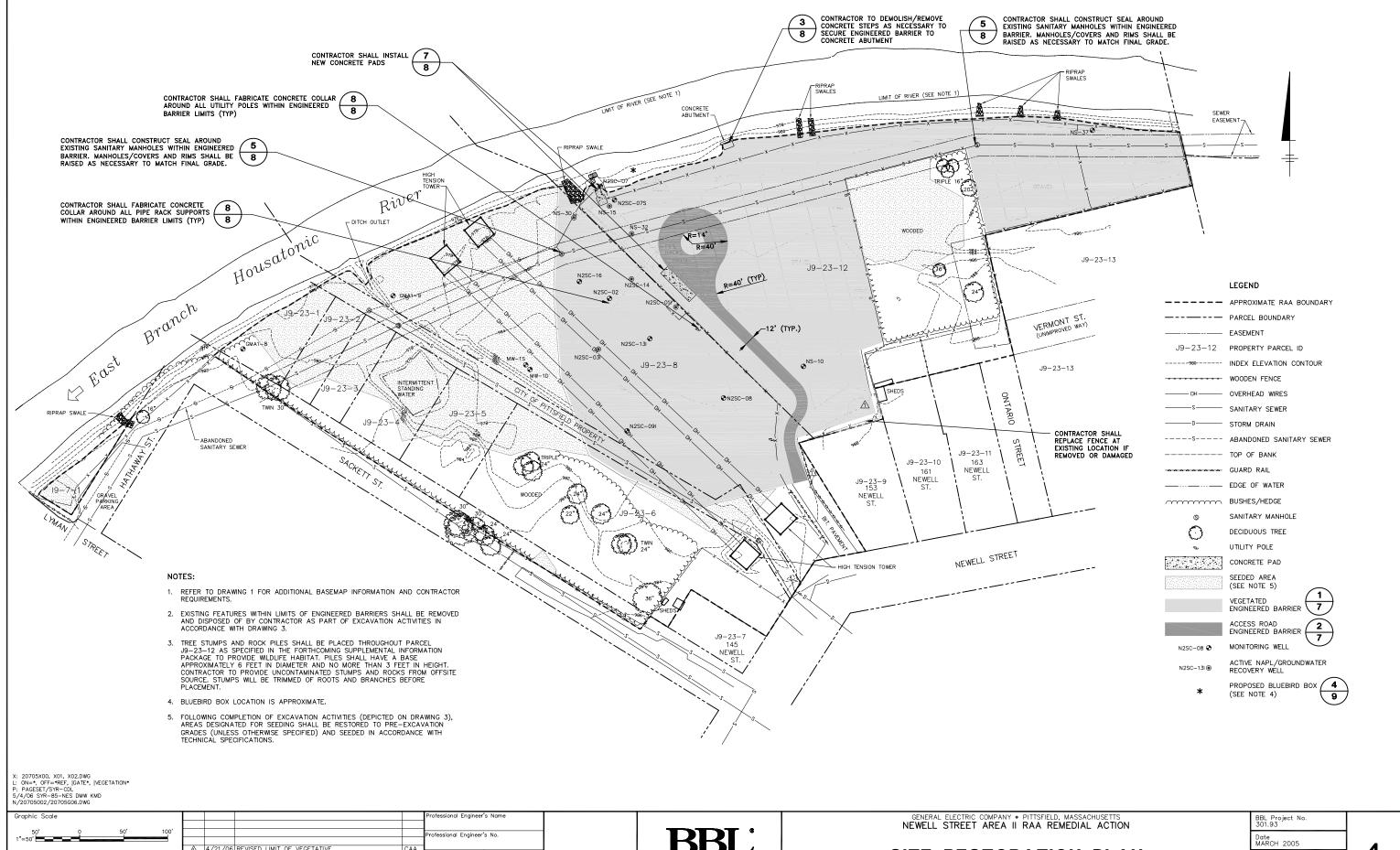
BBL Project No. 301.93

LIMITS OF SOIL REMOVAL/

ENGINEERED BARRIER INSTALLATION

Date MARCH 2005 Blasland, Bouck & Lee, In Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120



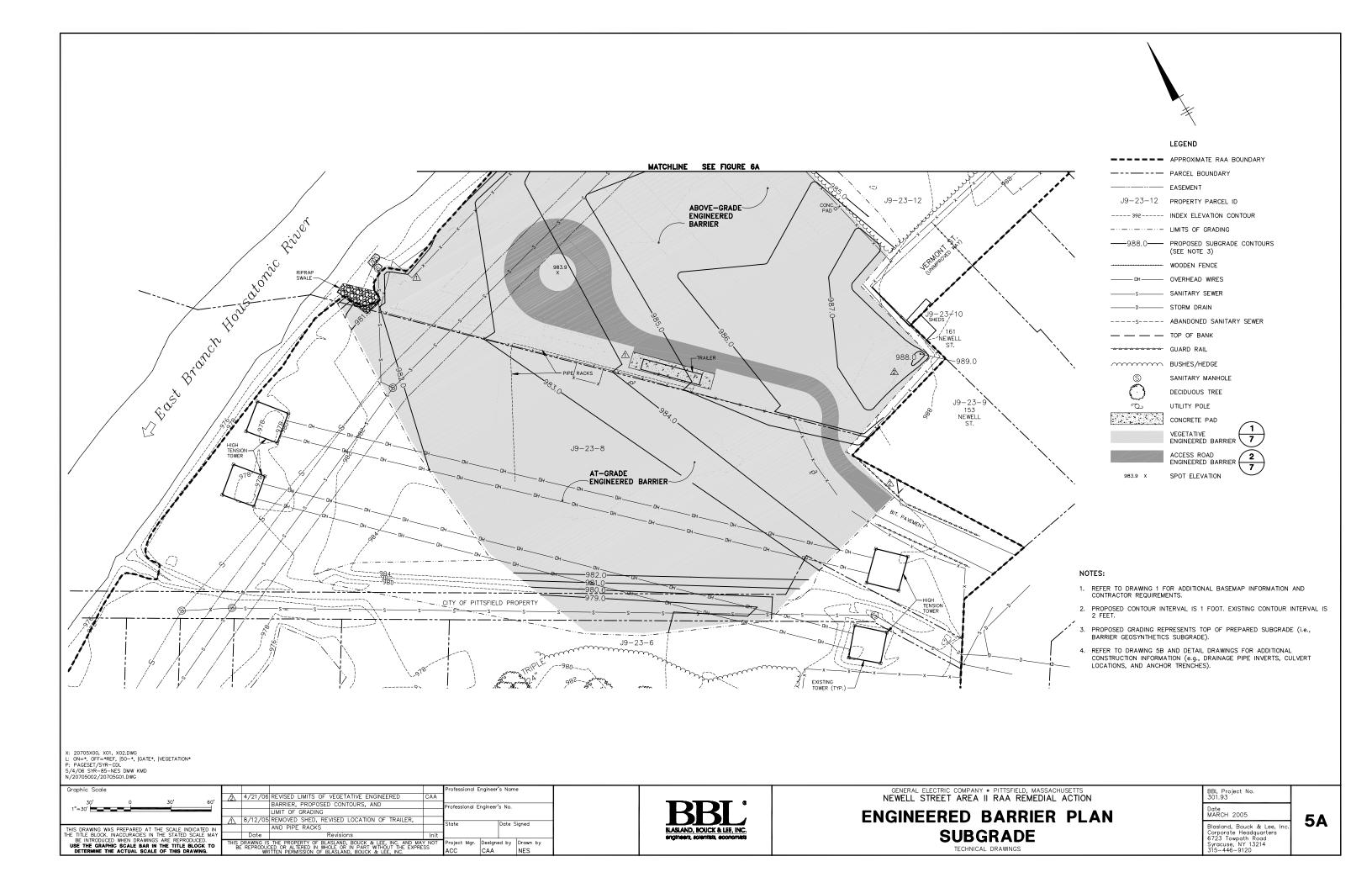


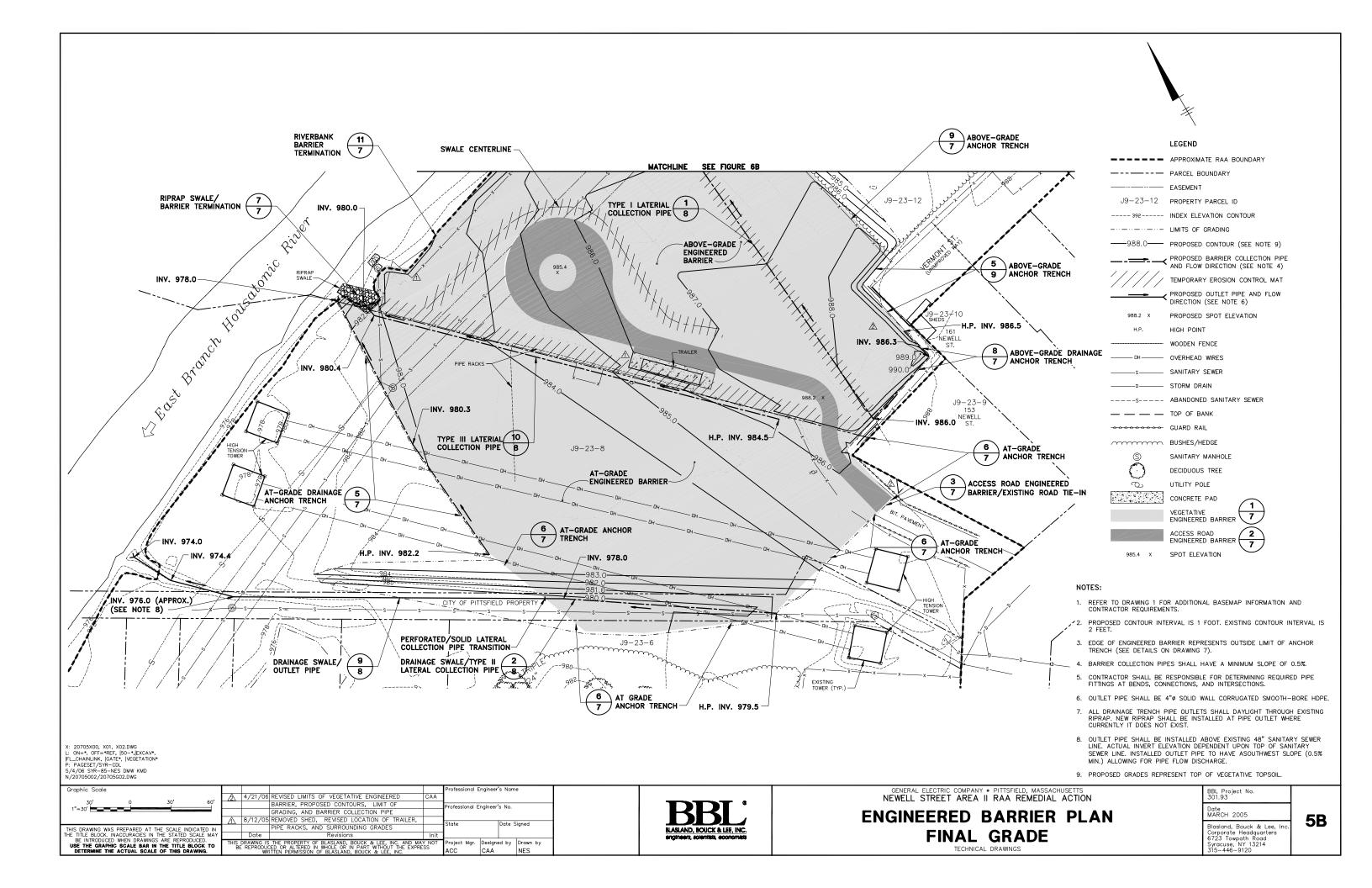
1/21/06 REVISED LIMIT OF VEGETATIVE Date Sianed ENGINEERED BARRIER INSTALLATION BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED.
USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO
DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

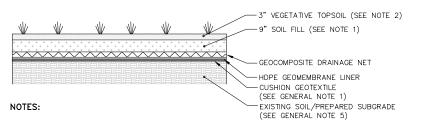
BLASLAND, BOUCK & LEE, INC.

## SITE RESTORATION PLAN

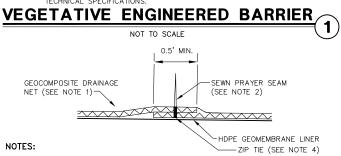
Blasland, Bouck & Lee, In Corporate Headquarters 6723 Towpoth Road Syracuse, NY 13214 315-446-9120





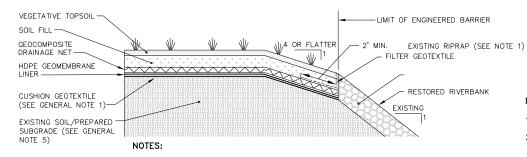


- 1. AT CONTRACTOR'S DISCRETION AND EXPENSE, SOIL FILL MAY BE REPLACED WITH TOPSOIL. ADDITIONAL SOIL FILL THICKNESS REQUIRED ADJACENT TO ACCESS ROAD ENGINEERED BARRIER.
- 2. TOPSOIL SHALL BE VEGETATED IN ACCORDANCE WITH THE



- 1. ALL GEOCOMPOSITE SHALL SHINGLE DOWNSLOPE.
- 2. THE TOP GEOTEXTILE COMPONENTS OF THE TWO GEOCOMPOSITE LAYERS SHALL BE PEELED BACK SO THAT A PRAYER SEAM MAY BE SEWN ABOVE THE GEOCOMPOSITE OVERLAP.
- GEOTEXTILE IS UNABLE TO BE PEELED BACK WITHOUT CAUSING DAMAGE, A PATCH OF GEOTEXTILE SHALL BE HEAT BONDED TO THE TOP GEOTEXTILE LAYER OVER THE SEAM.
- 4. ZIP TIES SHALL BE PLACED EVERY 5' ALONG ADJACENT PANELS AND EVERY 6" ALONG BUTT





1. CONTRACTOR SHALL MINIMIZE DISTURBANCE OF EXISTING RIPRAP DURING INSTALLATION OF ENGINEERED BARRIER. DISTURBED RIPRAP TO BE REPLACED TO

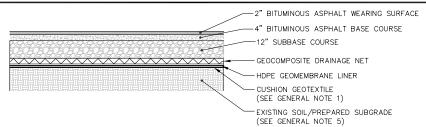
#### RIPRAP/SWALE BARRIER TERMINATION NOT TO SCALE -LIMIT OF ENGINEERED ANCHOR BARRIER VEGETATIVE TOPSOIL EXISTING SOIL GEOCOMPOSIT DRAINAGE NET GRADING HDPE GEOMEMBRANE LINER CUSHION GEOTEXTILE (SEE GENERAL NOTE 1) EXISTING SOIL /PREPARED 24" MIN SUBGRADE (SÉE GENERAL NOTE 5)

ABOVE-GRADE ANCHOR TRENCH : PAGESET/SYR-CD 5/4/06 SYR-85-KMD LAF KMD N/20705002/20705G04.DWG

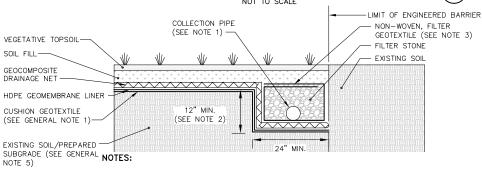
NOT TO SCALE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK, INACCURACIES IN THE STATED SCALE MAY BE REPORTED WHEN DRAWING ARE REPORTED.

USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

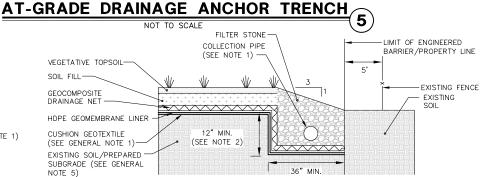


## ACCESS ROAD ENGINEERED BARRIER



- 1. COLLECTION PIPE SHALL BE 4" PERFORATED SMOOTH-BORE CORRUGATED HDPE
- 2. ANCHOR TRENCH DEPTH MAY EXCEED 12-INCH MINIMUM AS NECESSARY TO ACHIEVE COLLECTION PIPE INVERT ELEVATIONS SHOWN ON DRAWINGS 5B AND 6B

GEOTEXTILE TO BE OVERLAPPED FULL WIDTH OF TRENCH



#### NOTES:

(SEE GENERAL NOTE

essional Engineer's No.

Date Sianed

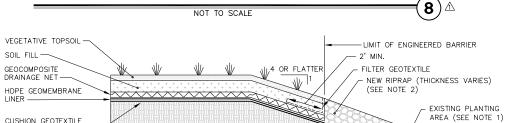
EXISTING SOIL/PREPARED

SUBGRADE (SEE GENERAL

NOTES:

- 1. COLLECTION PIPE SHALL BE 4"0 PERFORATED SMOOTH-BORE CORRUGATED HDPE.
- 2. ANCHOR TRENCH DEPTH MAY EXCEED 12-INCH MINIMUM AS NECESSARY TO ACHIEVE COLLECTION PIPE INVERTS SHOWN ON DRAWINGS 5 AND 6

ABOVE-GRADE DRAINAGE ANCHOR TRENCH

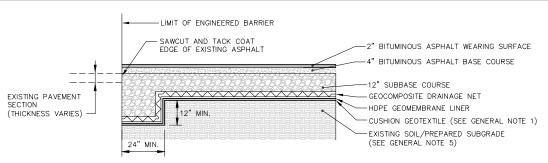


- 1. CONTRACTOR SHALL MINIMIZE DISTURBANCE OF EXISTING PLANTING AREA DURING INSTALLATION OF ENGINEERED BARRIER. DISTURBED PLANTING AREA TO BE REPLACED TO ORIGINAL LOCATION.
- 2. NEW RIPRAP TO BE PROVIDED ALONG ENTIRE ABOVE-GRADE TERMINATION AT THE RIVERBANK

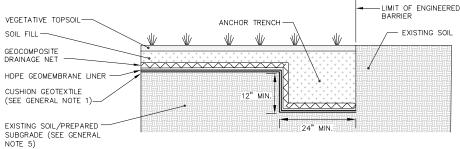
BLASLAND, BOUCK & LEE, INC

## RIVERBANK BARRIER TERMINATION (11

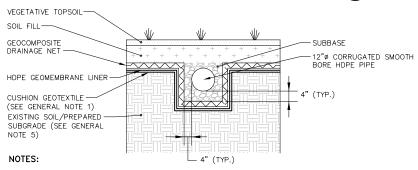
DRAIN



## **ACCESS ROAD ENGINEERED BARRIER/EXISTING ROAD TIE-IN**



# AT-GRADE ANCHOR TRENCH



- 1. PIPE SHALL HAVE A MINIMUM SLOPE OF 1%.
- 2 INLET/OUTLET INVERT ELEVATIONS TO BE DETERMINED BASED ON FIELD CONDITIONS AT TIME OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH GE OR GE'S REPRESENTATIVE TO DETERMINE INVERT ELEVATIONS.
- 3. RIPRAP TO BE PLACED AROUND INLET OF CULVERT.
- 4. CULVERT OUTLET SHALL EXTEND THROUGH EXISTING RIPRAP SWALE. ADDITIONAL NEW RIPRAP TO BE PLACED AROUND CULVERT OUTLET AS REQUIRED TO CREATE A UNIFORM PIPE FLOW TRANSITION INTO THE SWALE.

#### **CULVERT** NOT TO SCALE

#### **GENERAL NOTES:**

- 1. NON-WOVEN CUSHION GEOTEXTILE IS REQUIRED WHERE COVER IS INSTALLED ABOVE EXISTING SOIL/PAVEMENT.
- 2. GEOSYNTHETICS ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY.
- .3. "AT-GRADE" REFERS TO ENGINEERED BARRIERS THAT ARE RECESSED INTO EXISTING GRADE.
- 4. "ABOVE-GRADE" REFERS TO ENGINEERED BARRIERS THAT ARE CONSTRUCTED ON TOP OF EXISTING GRADE.
- 5. PREPARED SUBGRADE INCLUDES FILLED AND COMPACTED SUBGRADE OR EXCAVATED SUBGRADE.
- 6. RIPRAP SHALL BE COMPOSED OF CRUSHED ROCK AND HAVE DMIN = 3", D50 = 4", DMAX = 6".

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
NEWELL STREET AREA II RAA REMEDIAL ACTION

**EXISTING** 

## **DETAILS**

Date MARCH 2005 Blasland, Bouck & Lee, I

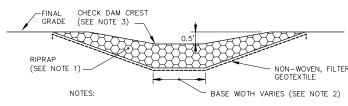
## TECHNICAL DRAWINGS

#### 2"X2" WOODEN STAKE DRIVEN 18" TO 24" INTO GROUND HAY BALF AND FLUSH WITH TOP OF BALE TWO STAKES PER BALE SILT FENCE BINDING WIRE OR TWINE DIRECTION OF SURFACE RUN-OFF FLOW EMBED BALE A MINIMUM OF 4" BENEATH GROUND SURFACE-- HAY BALES - GEOTEXTILE BURIED 6" BELOW GRADE STEEL POST (U, T, L, OR C SHAPE W/MIN. WEIGHT OF 1.3 LB. PER LF.) GRADE-8'-0" MAX BURIAL DEPTH

#### NOTES:

- . UNTIL SUCH TIME THAT ALL EXCAVATION ACTIVITIES HAVE BEEN COMPLETED AND BACKFILL MATERIAL HAS BEEN PLACED IN ALL AREAS. SILT ACCUMULATIONS ADJACENT TO EROSION CONTROL MEASURES SHALL BE IMMEDIATELY REMOVED AND DISPOSED WITH SOILS SUBJECT TO OFF-SITE TRANSPORT AND DISPOSAL.
- 2. ONCE BACKFILL HAS BEEN PLACED, THE CONTRACTOR SHALL REMOVE SILT ACCUMULATIONS WHEN DEPOSITS REACH APPROXIMATELY ONE—HALF OF THE HEIGHT OF SILT FENCE.
- 3. HAY BALES/SILT FENCE WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE, CONTRACTOR SHALL BACKFILL EXCAVATIONS AS NECESSARY AND RESTORE SURFACE COVER.
- 4 THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE HAY BALES/SILT FENCING AS LONG AS THEY ARE NECESSARY.





- RIPRAP SHALL BE COMPOSED OF CRUSHED ROCK AND HAVE DMIN=3", D50=4", DMAX=6".
- 2. CHECK DAM BASE WIDTH DIMENSIONS TO MATCH EXISTING DITCH
- 3. CHECK DAM CREST (IN DIRECTION OF FLOW) TO HAVE A MINIMUM TOP LENGTH OF 12" AND A MINIMUM BASE LENGTH OF 3'.

#### ROCK CHECK DAM CROSS-SECTION NOT TO SCALE

PAGESET/SYR-CD 5/4/06 SYR-85-KMD LAF KMD N/20705002/20705G03.DW0

# SIDE (2)

INSTALL NEW

INSTALL NEW CONCRETE

REMOVE EXISTING

LOCKING COVER -

INSTALL

CEMENT/

BENTONITE

NOTE:

5/8"ø HOLE

NOTES:

WELL CAP

-MAX 0.3'

-RISER PIPE EXTENSION

FNGINFERED

BARRIER

NEW PROTECTIVE STEEL

CASING (WELDED TO TOP

STAINLESS STEEL CLAMPS)

EXISTING GRADE

CONNECT NEW RISER PIPE TO EXISTING RISER PIPE WITH A COMPRESSION

COUPLING (NEOPRENE SLEEVE WITH 2

OF EXISTING CASING)

CONCRETE SURFACE SEAL

PROTECTIVE STEEL CASING

CEMENT/BENTONITE GROUT

EXISTING RISER PIPE

(SEE NOTE 1)

GEOSYNTHETICS PENETRATION SEAL 8

(SEE NOTE 2)

-GEOSYNTHETICS

FINAL GRADE

(SEE NOTE 1)

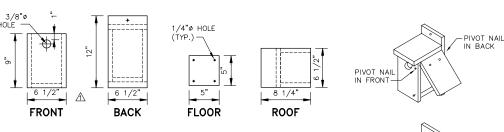
- 2. TWO "PIVOT" NAILS ALLOW SIDE TO SWING OUT FOR CLEANING
- 3. BLUEBIRD HOUSE POSTS ARE TO BE INSTALLED OUTSIDE THE LIMITS OF ENGINEERED BARRIER.





- 1. THE SOILS SUBJECT TO EXCAVATION AND HANDLING AS PART OF THIS CONTRACT POTENTIALLY CONTAIN PCBs AND OTHER HAZARDOUS CONSTITUENTS AND SHOULD BE HANDLED IN ACCORDANCE WITH APPLICABLE REGULATIONS. THE CONTRACTOR SHALL B RESPONSIBLE FOR DEVELOPING AND IMPLEMENTING APPROPRIATE HEALTH AND SAFETY MEASURES FOR ITS EMPLOYEES AND SUBCONTRACTORS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING SURVEY CONTROL TO VERIFY EXISTING GRADES AND POST-EXCAVATION ELEVATIONS. GE WILL IDENTIFY LOCATION(S) AND ELEVATION(S) OF SUITABLE BENCHMARKS TO BE USED FOR SURVEY CONTROL
- 3. THE DRAWINGS MAY NOT INDICATE ALL SURFACE FEATURES SUBJECT TO REPLACEMENT AS PART OF SITE RESTORATION ACTIVITIES. THIS WILL NOT RELIEVE THE CONTRACTOR FROM REMOVING AND REPLACING (IF NECESSARY) ANY AND ALL SUCH ITEMS AT NO ADDITIONAL
- 4. LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL (SHOWN OR NOT SHOWN) ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES THAT MAY EXIST WITHIN THE PROJECT LIMITS PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES FOR THE TEMPORARY PROTECTION OF (AND/OR REMOVAL AND REPLACEMENT, AS NECESSARY, AS DETERMINED BY THE APPROPRIATE UTILITY COMPANY) ANY UTILITY POLES, GUY WIRES, UNDERGROUND UTILITIES, AND/OR OVERHEAD WIRES THAT FALL WITHIN THE LIMITS OF
- 6. EXCAVATION LIMITS SHOWN ON THE TECHNICAL DRAWINGS REPRESENT SOILS THAT REQUIRE REMOVAL TO ACHIEVE THE NECESSARY REMOVAL ACTION OUTCOME. ADDITIONAL REMOVAL BEYOND THAT SHOWN MAY BE REQUIRED, AT NO EXPENSE TO GE, TO FACILITATE CONSTRUCTION ACCESS, RESTORATION, ETC.
- 7. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE MEASURES TO AVOID DAMAGE TO STRUCTURES THAT ARE NOT SUBJECT TO REMOVAL AND REPLACEMENT AS PART OF THIS CONTRACT. THE CONTRACTOR SHALL REPAIR ANY STRUCTURAL OR EXTERNAL DAMAGES TO SUCH STRUCTURES AT NO ADDITIONAL COST TO GE
- THE CONTRACTOR SHALL COORDINATE SITE ACTIVITIES TO AVOID INFRINGEMENT UPON NORMAL TRAFFIC FLOW ON ADJACENT ROADWAYS.
- ABOVEGROUND PORTIONS OF ITEMS SUBJECT TO REMOVAL AND REPLACEMENT TO ACCOMMODATE EXCAVATION ACTIVITIES (E.G., FENCING, ETC.) MAY BE SALVAGED FOR REUSE UPON APPROVAL BY GE OR GE'S REPRESENTATIVE. APPROVED SALVAGED MATERIALS MAY BE USED WHEN RECONSTRUCTING THESE ITEMS. BELOW-GRADE COMPONENTS AND/OR MAY BE USED WHEN RECONSTRUCTING THESE TIEMS, BELLOW-GRADE COMPONENTS AND/OR COMPONENTS THAT HAVE CONTACTED SOILS SUBJECT TO EXCAVATION SHALL BE HANDLED AND DISPOSED OF WITH THE ASSOCIATED SOILS. ALL SUCH ITEMS SHALL BE BROKEN INTO SUFFICIENTLY SMALL PIECES (IF NECESSARY) TO BE ACCEPTABLE FOR OFF—SITE TRANSPORT AND DISPOSAL WITH THE SOILS. BELOW-GRADE COMPONENTS SHALL BE REPLACED AS PART OF SITE RESTORATION ACTIVITIES.
- 10. THE CONTRACTOR SHALL SHEAR/SHRED ALL TREES AND SHRUBS (INCLUDING ROOTS)
  REMOVED DURING THE PERFORMANCE OF RESPONSE ACTIONS FOR TRANSPORTATION TO THE OPCA FOR POTENTIAL FUTURE USE/DISPOSAL (AS APPROPRIATE).
- 11. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK AND APPROPRIATE EQUIPMENT FOR DUST SUPPRESSION WITHIN SOIL EXCAVATION, STAGING, AND LOADING AREAS. THESE AREAS SHALL BE WATERED BASED ON VISUAL OBSERVATIONS, THE RESULTS OF AIR MONITORING ACTIVITIES, AND/OR DIRECTION BY GE OR GE'S REPRESENTATIVE.
- 12. THE CONTRACTOR SHALL ENSURE PERIMETER AIR MONITORING (TO BE PERFORMED BY OTHERS) IS BEING PERFORMED DURING EXCAVATION OR OTHER EXISTING SOIL HANDLING
- 13. THE HORIZONTAL LIMITS OF EXCAVATION ACTIVITIES WILL BE PHYSICALLY DELINEATED IN THE FIELD BY THE CONTRACTOR. WITHIN THESE LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXECUTING AND VERIFYING THE SPECIFIED DEPTH OR ELEVATION OF EXCAVATION IN ACCORDANCE WITH OSHA REQUIREMENTS.

- 14. THE CONTRACTOR MAY CONSTRUCT TEMPORARY SOIL STOCKPILES FOR EXCAVATED MATERIALS AT AREAS APPROVED BY GE OR GE'S REPRESENTATIVE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING PERIMETER EROSION AND SEDIMENTATION CONTROLS (IN THE FORM OF SILT FENCING, HAY BALES, AND/OR SHEET PILING, AS INDICATED), RUN-OFF WATER COLLECTION, AND DUST SUPPRESSION IN THIS AREA. THE CONTRACTOR SHALL COVER THE STOCKPILED MATERIALS WITH POLYETHYLENE LINERS WHEN NO ACTIVITIES ARE BEING PERFORMED IN THE STOCKPILE AREA.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSPORTING EXCAVATED/REMOVED MATERIALS TO THE BUILDING 71 OPCA. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THREE DAYS NOTICE TO GE OR GE'S REPRESENTATIVE PRIOR TO TRANSPORTATION OF EXCAVATED/STOCKPILED MATERIALS TO THE OPCA. THE CONTRACTOR IS REQUIRED TO PROVIDE NO LESS THAN 32 TRUCK LOADS OF MATERIAL, CONSISTING OF NO LESS THAN 10 CUBIC YARDS PER LOAD, PER DAY WHEN TRANSPORTING MATERIALS TO THE OPCAS FOR CONSOLIDATION
- 16. CONTRACTOR SHALL INSTALL AN INTERIM COVER (E.G., POLYETHYLENE SHEETING) OVER WORK AREAS WHERE EXCAVATION ACTIVITIES ARE YET TO BE COMPLETED. THE INTERIM COVER SHALL BE PROPERLY ANCHORED TO RESIST WIND FORCES AND PREVENT STORMWATER FROM ENTERING SUCH WORK AREAS.
- PAVEMENT SUBJECT TO PARTIAL REMOVAL SHALL BE REMOVED VIA SAW-CUT. RESTORATION SHALL MEET ALL LOCAL AND/OR STATE BUILDING CODES, CONTRACTOR SHALL OBTAIN ALL APPROPRIATE BUILDING PERMITS ASSOCIATED WITH RESTORATION
- 18. WITHIN THE LIMITS OF EXCAVATION, THE CONTRACTOR SHALL RESTORE ALL PREVIOUSLY VEGETATED AREAS BY PLACING AND COMPACTING FILL MATERIALS (TO ACHIEVE A GRADE OF APPROXIMATELY 3 INCHES BELOW PRE-REMOVAL GRADE WHERE APPROPRIATE) TOPSOIL, AND SEED. OTHER SURFACE FEATURES SHALL BE REPLACED OR RESTORED AS
- 19. UPON BACKFILLING OF EXCAVATED AREAS, THE CONTRACTOR SHALL MAINTAIN IN PLACE OR INSTALL ADDITIONAL EROSION CONTROLS IN THE LOCATIONS INDICATED ON EACH WORK SITE DRAWING. THE EROSION CONTROLS WILL BE REMOVED BY THE CONTRACTOR WHEN REQUESTED BY GE OR GE'S REPRESENTATIVE.
- 20 BACKFILLED AND RESTORED AREAS WILL BE SUBJECT TO FINAL SURVEY VERIFICATION (BY THE CONTRACTOR). THE CONTRACTOR SHALL REPAIR ANY ITEMS THAT ARE NOT RESTORED TO THE LOCATIONS AND/OR ELEVATIONS REQUIRED BY THIS CONTRACT.
- THE CONTRACTOR SHALL RESTORE TO PRE-REMEDIATION CONDITIONS ALL SUPPORT AREAS THAT ARE IMPACTED BY REMEDIATION ACTIVITIES, INCLUDING EQUIPMENT AND MATERIALS STORAGE AREAS, SOIL LOADING AND STAGING AREAS, AND PARKING AREAS.
- 22. ALL EQUIPMENT OPERATED WITHIN THE LIMITS OF EXCAVATION SHALL BE CLEANED PRIOR TO USE OR STORAGE ELSEWHERE ON THE SITE OR TRANSPORTED OFF-SITE. A CONTAINED/LINED WHEEL WASH AREA SHALL BE PROVIDED BY THE CONTRACTOR TO BE USED AS NECESSARY FOR CLEANING EXCAVATION EQUIPMENT AND/OR TRANSPORTATION VEHICLES PRIOR TO THEIR REMOVAL FROM THE WORK SITE. WATER USED TO CLEAN EQUIPMENT SHALL BE RESTRICTED TO AND COLLECTED WITHIN A DESIGNATE DEUIPMENT CLEANING AREA. ALL SUCH WATERS SHALL BE CONTAINERIZED AND TRANSPORTED FOR APPROPRIATE OFF-SITE DISPOSAL/TREATMENT BY THE CONTRACTOR.
- 23. SELECT SITE FEATURES MAY OR MAY NOT BE SHOWN ON DRAWINGS (E.G., ADDITIONAL CONCRETE PADS, MANHOLES, ETC.). CONTRACTOR SHALL PROTECT THESE FEATURES AS REQUIRED (REFER TO DRAWINGS 7 THROUGH 9).



໌3`

1. USE ONE NAIL OR SCREW AT BOTTOM TO CLOSE SIDE, NAIL OR SCREW SIDE CLOSED.

1. RISER PIPE AND STEEL CASING SIZES AND TYPES MAY DIFFER FOR EACH WELL NEW WELL EXTENSION MATERIALS.

TO BE OF THE SAME SIZE AND TYPE AS EXISTING. 2 COVER MATERIALS NOT SHOWN FOR CLARITY

MONITORING WELL EXTENSION

NOT TO SCALE

4. BLUEBIRD HOUSES TO BE MOUNTED ON POSTS A MINIMUM OF 6' (NOT TO EXCEED 15') ABOVE THE GROUND.

ANCHOR TRENCH-VEGETATIVE TOPSOIL SOIL FILL -GEOCOMPOSIT DRAINAGE NET HDPE GEOMEMBRANE LINER CLISHION GEOTEXTILE (SEE GENERAL NOTE EXISTING SOIL /PREPARED SUBGRADE (SEE GENERAL

ABOVE-GRADE ANCHOR TRENCH 5

Graphic Scale essional Engineer's Nam NOT TO SCALE essional Engineer's No. ADD DETAIL A 7/6/05 FRONT OF BIRDHOUSE WIDTH CHANGED TO 6 1/2" ACC
Date Revisions ate Sianed THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK, INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPORTED WHEN DRAWINGS ARE REPORTED WHEN DRAWINGS ARE REPORTED WHEN DRAWINGS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

BLASLAND, BOUCK & LEE, INC

GENERAL ELECTRIC COMPANY • PITTSFIELD, MASSACHUSETTS
NEWELL STREET AREA II RAA REMEDIAL ACTION

GENERAL NOTES AND DETAILS

Date MARCH 2005 Blasland, Bouck & Lee, I

BBL Project No. 301.93

LIMIT OF ENGINEERED

BARRIER/LIMIT OF GRADING

-FXISTING

**EXISTING** 

SOIL

FENCE

TECHNICAL DRAWINGS

9

## Attachment B

# PCB Spatial Averaging Evaluation Tables and Polygon Maps



## NEWELL STREET AREA II - EXISTING CONDITIONS (RESIDENTIAL) J9-23-12 (AREA BETWEEN FENCE AND PROPERTY LINES) - 0- TO 1-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 0- TO 0.5-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
161-C5	43	1	0	-	0.5	7.1	0.02	7.10	0.17				
J9-23-10-SS-1	45	13	0	-	0.5	5.2	0.24	5.20	1.25				
J9-23-9-SB-2	36	32	0	-	0.5	10.4	0.59	10.40	6.10				
NS-153-C2	46, 46A	37	0	-	0.5	5.2	0.69	5.20	3.58				
NS-21	51	25	0	-	0.5	0.47	0.47	0.47	0.22				
NS-22	50	15	0	-	0.5	3.6	0.28	3.60	1.01				
NS-22 (B)	49	17	0	-	0.5	6.7	0.32	6.70	2.12				
NS-23	48	19	0	-	0.5	8.1	0.35	8.10	2.85				
NS-24	47	64	0	-	0.5	6.3	1.18	6.30	7.44				
NS-25	37	4	0	-	0.5	0.021	0.07	0.02	0.00				
NS-25	31	1	0	-	0.5	5.3	0.02	5.30	0.09				
RAA13-F94	27	2	0	-	0.5	0.021	0.04	0.02	0.00				
RAA13-F96	44	54	0	-	0.5	22	1.00	22.00	21.96				
Totals:		285					5.27		46.78				
							Volume Weig	hted Average:	8.88				

#### 0.5- TO 1-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)	,	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-10-SS-1	34	16	0.5	-	1	6.3	0.30	6.30	1.89																														
J9-23-9-SB-2	23	86	0.5	-	1	1.86	1.59	1.86	2.97																														
NS-153-C3	25	21	0.5	-	1	5.6	0.38	5.60	2.14																														
NS-22 (B)	27	38	0.5	-	1	6.11	0.70	6.11	4.30																														
RAA13-F94	21	6	0.5	-	1	0.021	0.12	0.02	0.00																														
RAA13-F96	29	117	0.5	-	1	22	2.17	22.00	47.80																														
Totals:		285					5.27		59.10																														
							Volume Weig	hted Average:	11.21																														

#### SUMMARY - 0- TO 1-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		285			10.54		105.88
					Volume Weig	hted Average:	10.04

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4. Concentrations shown in bold and italics represent soil removal already completed during remedial actions at Newell Street Area II.

## NEWELL STREET AREA II - EXISTING CONDITIONS (RESIDENTIAL) J9-23-12 (AREA BETWEEN FENCE AND PROPERTY LINES) - 1- TO X-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 1- TO 2-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Samp	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	23	101	1	-	2	1.86	3.75	1.86	6.97						
NS-22 (B)	27	38	1	-	2	6.11	1.41	6.11	8.61						
NS-153-C3	25	27	1	-	2	0.74	1.00	0.74	0.74						
J9-23-10-SB-3	32	29	1	-	2	2	1.09	2.00	2.18						
J9-23-10-SB-7	30	86	1	-	2	0.81	3.19	0.81	2.58						
J9-23-12-SB-1	34	3	1	-	2	1.44	0.11	1.44	0.16						
Totals:	-	285					10.55		21.24						
							Volume Weig	hted Average:	2.01						

#### 2- TO 3-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)	,	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	23	101	2	-	3	0.11	3.75	0.11	0.41				
NS-22 (B)	27	38	2	-	3	0.125	1.41	0.13	0.18				
NS-153-C3	25	27	2	-	3	0.0215	1.00	0.02	0.02				
J9-23-10-SB-3	32	29	2	-	3	0.035	1.09	0.04	0.04				
J9-23-10-SB-7	30	86	2	-	3	0.009	3.19	0.01	0.03				
J9-23-12-SB-1	34	3	2	-	3	5.7	0.11	5.70	0.63				
Totals:		285					10.55		1.31				
,							Volume Weig	hted Average:	0.12				

#### 3- TO 4-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	20	101	3	-	4	0.11	3.75	0.11	0.41																										
NS-22 (B)	24	38	3	-	4	0.125	1.41	0.13	0.18																										
J9-23-12-SB-1	33	3	3	-	4	5.7	0.11	5.70	0.63																										
NS-153-C3	22	27	3	-	4	0.0215	1.00	0.02	0.02																										
J9-23-10-SB-3	29	29	3	-	4	0.035	1.09	0.04	0.04																										
J9-23-10-SB-7	27	86	3	-	4	0.009	3.19	0.01	0.03																										
Totals:	-	285					10.55		1.31																										
							Volume Weig	hted Average:	0.12																										

#### 4- TO 6-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	17	101	4	-	6	0.0195	7.49	0.02	0.15		
NS-22 (B)	19	65	4	-	6	0.125	4.82	0.13	0.60		
J9-23-12-SB-1	28	3	4	-	6	0.46	0.22	0.46	0.10		
J9-23-10-SB-3	24	29	4	-	6	0.04	2.18	0.04	0.09		
J9-23-10-SB-7	22	86	4	-	6	0.009	6.37	0.01	0.06		
Totals:		285					21.09		1.00		
							Volume Weig	hted Average:	0.05		

## NEWELL STREET AREA II - EXISTING CONDITIONS (RESIDENTIAL) J9-23-12 (AREA BETWEEN FENCE AND PROPERTY LINES) - 1- TO X-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 6- TO 8-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	14	124	6	-	8	0.019	9.15	0.02	0.17				
NS-22 (B)	16	65	6	-	8	0.125	4.82	0.13	0.60				
J9-23-12-SB-1	23	3	6	-	8	0.0205	0.22	0.02	0.00				
J9-23-10-SB-3	19	93	6	-	8	0.043	6.90	0.04	0.30				
Totals:		285					21.09		1.08				
							Volume Weig	hted Average:	0.05				

#### 8- TO 10-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	14	174	8	-	10	0.0205	12.87	0.02	0.26		
J9-23-12-SB-1	19	46	8	-	10	0.0205	3.40	0.02	0.07		
NS-22 (B)	16	65	8	-	10	0.125	4.82	0.13	0.60		
Totals:		285					21.09		0.94		
•							Volume Weig	hted Average:	0.04		

#### 10- TO 12-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-12-SB-1	10	66	10	-	12	0.019	4.92	0.02	0.09				
RAA13-F95	8	218	10	-	12	0.082	16.17	0.08	1.33				
Totals:		285					21.09		1.42				
							Volume Weig	hted Average:	0.07				

#### 12- TO 14-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-12-SB-1	10	66	12	-	14	0.013	4.92	0.01	0.06		
RAA13-F95	8	218	12	-	14	0.082	16.17	0.08	1.33		
Totals:	-	285					21.09		1.39		
							Volume Weig	hted Average:	0.07		

#### 14- TO 15-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-12-SB-1	10	66	14	-	15	0.037	2.46	0.04	0.09
RAA13-F95	8	218	14	-	15	0.082	8.09	0.08	0.66
Totals:		285					10.55		0.75
							Volume Weig	hted Average:	0.07

## NEWELL STREET AREA II - EXISTING CONDITIONS (RESIDENTIAL) J9-23-12 (AREA BETWEEN FENCE AND PROPERTY LINES) - 1- TO X-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### SUMMARY - 1- TO X-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		285			147.64		29.12
					Volume Weig	hted Average:	0.20

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.

## NEWELL STREET AREA II - POST-REMEDIATION CONDITIONS (RESIDENTIAL) J9-23-12 (AREA BETWEEN FENCE AND PROPERTY LINES) - 0- TO 1-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 0- TO 0.5-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample	e Depti	h (ft.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
161-C5	43	1	0	-	0.5	0.021	0.02	0.02	0.00
J9-23-10-SS-1	45	13	0	-	0.5	5.2	0.24	5.20	1.25
J9-23-9-SB-2	36	32	0	-	0.5	0.021	0.59	0.02	0.01
NS-153-C2	46	34	0	-	0.5	0.021	0.63	0.02	0.01
NS-153-C2	46A	3	0	-	0.5	5.2	0.06	5.20	0.31
NS-21	51	25	0	-	0.5	0.47	0.47	0.47	0.22
NS-22	50	15	0	-	0.5	3.6	0.28	3.60	1.01
NS-22 (B)	49	17	0	-	0.5	6.7	0.32	6.70	2.12
NS-23	48	19	0	-	0.5	0.021	0.35	0.02	0.01
NS-24	47	64	0	-	0.5	0.021	1.18	0.02	0.02
NS-25	31	1	0	-	0.5	5.3	0.02	5.30	0.09
NS-25	37	4	0	-	0.5	0.021	0.07	0.02	0.00
RAA13-F94	27	2	0	-	0.5	0.021	0.04	0.02	0.00
RAA13-F96	44	54	0	-	0.5	0.021	1.00	0.02	0.02
Totals:	-	285					5.27		5.09
_		•					Volume Weig	hted Average:	0.97

#### 0.5- TO 1-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampi	Sample Depth (ft.)		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-10-SS-1	34	16	0.5	-	1	6.3	0.30	6.30	1.89
J9-23-9-SB-2	23	86	0.5	-	1	0.021	1.59	0.02	0.03
NS-153-C3	25	21	0.5	-	1	5.6	0.38	5.60	2.14
NS-22 (B)	27	38	0.5	-	1	6.11	0.70	6.11	4.30
RAA13-F94	21	6	0.5	-	1	0.021	0.12	0.02	0.00
RAA13-F96	29	117	0.5	-	1	0.021	2.17	0.02	0.05
Totals:	-	285					5.27		8.42
								hted Average:	1.60

#### SUMMARY - 0- TO 1-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		285			10.54		13.51
					Volume Weig	hted Average:	1.28

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4. Concentrations shown in bold and italics represent soil removal already completed during remedial actions at Newell Street Area II.
- 5. Shaded numbers in bold and italics represent the placement of clean backfill material following the performance of the proposed remediation.
  The backfill concentration corresponds to the average PCB concentration as presented in the CD Sites Backfill Data Set.

## NEWELL STREET AREA II - EXISTING CONDITIONS (RECREATIONAL) 5-FOOT BUFFER STRIP - 0- TO 1-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 0- TO 0.5-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Samp	Sample Depth (ft.)		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
161-C1	32A	1	0	-	0.5	7.3	0.01	7.30	0.09
161-C3	32	212	0	-	0.5	8.1	3.92	8.10	31.74
161-C5	42	143	0	-	0.5	7.1	2.64	7.10	18.74
J9-23-9-SB-2	40	33	0	-	0.5	10.4	0.62	10.40	6.45
NS-153-C2	53	1	0	-	0.5	5.2	0.02	5.20	0.10
NS-21	38	29	0	-	0.5	0.021	0.54	0.02	0.01
NS-21	39	80	0	-	0.5	0.47	1.49	0.47	0.70
NS-22	34	83	0	-	0.5	3.6	1.54	3.60	5.55
NS-22 (B)	52	2	0	-	0.5	6.7	0.03	6.70	0.21
NS-23	33	66	0	-	0.5	8.1	1.23	8.10	9.96
NS-24	41	116	0	-	0.5	6.3	2.15	6.30	13.52
NS-25	29	1	0	-	0.5	0.021	0.02	0.02	0.00
RAA13-F94	28	30	0	-	0.5	0.021	0.56	0.02	0.01
RAA13-F96	35	186	0	-	0.5	22	3.45	22.00	75.96
Totals:	-	984					18.22		163.03
	•	•	•		•		Volume Weig	hted Average:	8.95

#### 0.5- TO 1-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)	,	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
GE-9	31A	139	0.5	-	1	3.3	2.57	3.30	8.48				
J9-23-9-SB-2	28	157	0.5	-	1	1.86	2.91	1.86	5.42				
J9-23-10-SB-3	31	133	0.5	-	1	2	2.46	2.00	4.91				
NS-153-C3	24	54	0.5	-	1	5.6	0.99	5.60	5.55				
NS-22 (B)	26	105	0.5	-	1	6.11	1.95	6.11	11.91				
RAA13-F94	20	61	0.5	-	1	0.021	1.13	0.02	0.02				
RAA13-F96	22	336	0.5	-	1	22	6.21	22.00	136.72				
Totals:		984					18.22		173.02				
							Volume Weig	hted Average:	9.50				

#### SUMMARY - 0- TO 1-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:	-	984			36.44	-	336.05
			Volume Weig	hted Average:	9.22		

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.
- 4. Concentrations shown in bold and italics represent soil removal already completed during remedial actions at Newell Street Area II.

# TABLE B-5 NEWELL STREET AREA II - EXISTING CONDITIONS (RECREATIONAL) 5-FOOT BUFFER STRIP - 1- TO 3-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 1- TO 2-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	28	190	1	-	2	1.86	7.03	1.86	13.08				
J9-23-10-SB-3	31	97	1	-	2	2	3.60	2.00	7.21				
J9-23-10-SB-7	29	104	1	-	2	0.81	3.86	0.81	3.13				
J9-23-12-SB-1	33	160	1	-	2	1.44	5.93	1.44	8.54				
J9-23-12-SB-2	36	213	1	-	2	5.2	7.88	5.20	40.95				
NS-153-C3	24	114	1	-	2	0.74	4.23	0.74	3.13				
NS-22 (B)	26	105	1	-	2	6.11	3.90	6.11	23.82				
Totals:		984					36.43	-	99.86				
							Volume Weig	hted Average:	2.74				

#### 2- TO 3-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Samp	Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	28	190	2	-	3	0.11	7.03	0.11	0.77		
J9-23-10-SB-3	31	97	2	-	3	0.035	3.60	0.04	0.13		
J9-23-10-SB-7	29	104	2	-	3	0.009	3.86	0.01	0.03		
J9-23-12-SB-1	33	160	2	-	3	5.7	5.93	5.70	33.80		
J9-23-12-SB-2	36	213	2	-	3	14.2	7.88	14.20	111.83		
NS-153-C3	24	114	2	-	3	0.0215	4.23	0.02	0.09		
NS-22 (B)	26	105	2	-	3	0.125	3.90	0.13	0.49		
Totals:	-	984					36.43		147.15		
	•						Volume Weig	hted Average:	4.04		

#### SUMMARY - 1- TO 3-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:	-	984			72.87		247.01
			Volume Weig	hted Average:	3.39		

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.

# TABLE B-6 NEWELL STREET AREA II - EXISTING CONDITIONS (RECREATIONAL) 5-FOOT BUFFER STRIP - 0- TO 15-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### SUMMARY - 0- TO 1-FOOT DEPTH INCREMENT (Table B-4)

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		984			36.44		336.05
					Volume Weig	hted Average:	9.22

#### 1- TO 3-FOOT DEPTH INCREMENT (Table B-5)

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
Totals:		984			72.87		247.01
					Volume Weig	hted Average:	3.39

#### 3- TO 4-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	25	190	3	-	4	0.11	7.03	0.11	0.77		
J9-23-10-SB-3	28	97	3	-	4	0.035	3.61	0.04	0.13		
J9-23-10-SB-7	26	104	3	-	4	0.009	3.86	0.01	0.03		
J9-23-12-SB-1	32	160	3	-	4	5.7	5.93	5.70	33.80		
J9-23-12-SB-2	31	213	3	-	4	14.2	7.88	14.20	111.83		
NS-153-C3	21	114	3	-	4	0.0215	4.23	0.02	0.09		
NS-22 (B)	23	105	3	-	4	0.125	3.90	0.13	0.49		
Totals:		984					36.44	-	147.15		
							Volume Weig	hted Average:	4.04		

#### 4- TO 6-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Samp	Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	20	190	4	-	6	0.0195	14.06	0.02	0.27
J9-23-10-SB-3	23	97	4	-	6	0.04	7.21	0.04	0.29
J9-23-10-SB-7	21	104	4	-	6	0.009	7.72	0.01	0.07
J9-23-12-SB-1	27	160	4	-	6	0.46	11.86	0.46	5.46
J9-23-12-SB-2	26	213	4	-	6	76	15.75	76.00	1,197.08
NS-22 (B)	18	220	4	-	6	0.125	16.26	0.13	2.03
Totals:	-	984					72.87		1,205.21
•		•	•			•	Volume Weig	hted Average:	16.54

# TABLE B-6 NEWELL STREET AREA II - EXISTING CONDITIONS (RECREATIONAL) 5-FOOT BUFFER STRIP - 0- TO 15-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### 6- TO 8-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		Sample Depth (ft.)		Sample Depth (ft.)		PCB Conc. (ppm)	,	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	17	212	6	-	8	0.019	15.68	0.02	0.30				
J9-23-10-SB-3	18	180	6	-	8	0.043	13.33	0.04	0.57				
J9-23-12-SB-1	22	160	6	-	8	0.0205	11.86	0.02	0.24				
J9-23-12-SB-2	21	213	6	-	8	350	15.75	350.00	5,512.89				
NS-22 (B)	15	220	6	-	8	0.125	16.26	0.13	2.03				
Totals:	-	984					72.89		5,516.04				
							Volume Weig	hted Average:	75.68				

#### 8- TO 10-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-9-SB-2	17	267	8	-	10	0.0205	19.79	0.02	0.41
J9-23-12-SB-1	21	285	8	-	10	0.0205	21.08	0.02	0.43
J9-23-12-SB-2	18	213	8	-	10	6.7	15.75	6.70	105.53
NS-22 (B)	15	220	8	-	10	0.125	16.27	0.13	2.03
Totals:		984					72.89		108.40
							Volume Weig	hted Average:	1.49

#### 10- TO 12-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		PCB Conc. (ppm)	,	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-12-SB-2	9	213	10	-	12	31	15.75	31.00	488.28
J9-23-12-SB-1	6	306	10	-	12	0.019	22.69	0.02	0.43
RAA13-F95	7	465	10	-	12	0.082	34.45	0.08	2.82
Totals:		984					72.89		491.54
			•		•	·	Volume Weig	hted Average:	6.74

#### 12- TO 14-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	e Dep	oth (ft.)	PCB Conc. (ppm)	Volume (cumulative) (cy)	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-12-SB-2	9	213	12	-	14	40	15.75	40.00	630.04
J9-23-12-SB-1	6	306	12	-	14	0.013	22.69	0.01	0.30
RAA13-F95	7	465	12	-	14	0.082	34.45	0.08	2.82
Totals:		984					72.89		633.16
							Volume Weig	hted Average:	8.69

#### 14- TO 15-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sampl	Sample Depth (ft.)		PCB Conc. (ppm)	,	Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume
J9-23-12-SB-2	9	213	14	-	15	1.3	7.88	1.30	10.24
J9-23-12-SB-1	6	306	14	-	15	0.037	11.35	0.04	0.42
RAA13-F95	7	465	14	-	15	0.082	17.22	0.08	1.41
Totals:		984					36.45		12.07
							Volume Weig	hted Average:	0.33

# TABLE B-6 NEWELL STREET AREA II - EXISTING CONDITIONS (RECREATIONAL) 5-FOOT BUFFER STRIP - 0- TO 15-FOOT DEPTH INCREMENT

## NEWELL STREET AREA II GENERAL ELECTRIC COMPANY - PITTSFIELD, MASSACHUSETTS

#### SUMMARY - 1- TO X-FOOT DEPTH INCREMENT

Sample ID(s)	Polygon ID	Polygon Area (sq. ft.)	Sample Depth (ft.)	PCB Conc. (ppm)		Average PCB Concentration Per Foot	Average PCB Conc. TIMES Total Volume	
Totals:		984			546.63		8,696.63	
					Volume Weig	hted Average:	15.91	

- 1. Non-detectable PCBs included as one-half the detection limit in calculations and shown in bold.
- 2. For instances where a duplicate sample was available, the average of the samples was included in table.
- 3. All calculations and rounding are performed by the computer software. Therefore, certain quantities in above table are displayed as rounded numbers for table clarity.

