UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA, STATE OF CONNECTICUT, and COMMONWEALTH OF MASSACHUSETTS, Plaintiffs, v. GENERAL ELECTRIC COMPANY, Defendant	Civil Action Nos. 99-30225-MAP, 99-30226-MAP, and 99-30227-MAP (consolidated) **Leave to file granted on February 21, 2013**

MEMORANDUM IN SUPPORT OF DEFENDANT'S MOTION FOR JUDICIAL REVIEW OF UNITED STATES ENVIRONMENTAL PROTECTION AGENCY'S DECISION IN DISPUTE REGARDING COST REIMBURSEMENT FOR THE GE-PITTSFIELD/HOUSATONIC RIVER SITE

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INTRODUCTION

Defendant General Electric Company ("GE") submits this memorandum in support of its motion for judicial review of a final decision of the United States Environmental Protection Agency ("EPA") under the Consent Decree for the GE-Pittsfield/Housatonic River Site (the "Site"), entered by this Court on October 27, 2000 ("CD" or "Decree").[1] EPA's decision, issued by the Deputy Director of the Superfund office in EPA Region 1, upheld the Region 1 staff's claim that GE should reimburse EPA for approximately $1.2 million in costs that EPA spent in connection with the Site during fiscal year ("FY") 2011.

The Consent Decree governs the environmental investigations and cleanup of the Site, located in Pittsfield, Massachusetts, and extending downstream on the Housatonic River through western Massachusetts and Connecticut. When it signed the Decree in 1999, GE fully understood that it was signing up to conduct the lion's share of the work at this Site, under EPA oversight. Indeed, over the past 12 years, GE has spent millions of dollars to fulfill its obligations under the Decree – not only to perform cleanup work, but also to reimburse costs incurred by EPA.

But GE did ***not*** give EPA a blank check. Containing the Government's oversight costs was a key element of the bargain for GE. That is evident on the face of the Decree, which divides the costs that EPA may recover from GE into specific categories, and then limits, ***with specific dollar caps***, the costs that EPA may recover under all but one of the categories. EPA agreed to limit the costs that it could recover from GE for overseeing and responding to GE's work and conducting its own studies of the Site. In particular, EPA agreed to cap the costs that it could recover from GE in connection with investigating, studying, and identifying and evaluating

[1] Relevant pages of the Decree are provided in Attachment A.

cleanup alternatives for the "Rest of River" portion of the Site – the Housatonic River and its floodplain beginning two miles downstream of GE's former facility – as that was GE's responsibility in the first instance under the Decree. EPA has already spent millions of dollars reviewing GE's studies and performing its own studies, and it long ago reached the caps relevant to these categories of EPA work. That is the heart of this dispute: EPA has taken costs that are properly allocated to capped categories and shoehorned them, instead, into the one uncapped cost category.

There is a second, alternative reason why EPA cannot recover these costs. In the Decree, EPA agreed to a sequential process under which GE, not EPA, would prepare a "Corrective Measures Study" report to identify and evaluate alternative cleanup measures for the Rest of River area. EPA would then review and approve or disapprove the report; GE could invoke dispute resolution to challenge EPA's action; and only then would EPA decide on a proposed cleanup remedy for that area. EPA has not followed that process. It has never approved or disapproved GE's Corrective Measures Study for the Rest of River – a study that GE first submitted to EPA in 2008 and revised and re-submitted in 2010. Instead, EPA has leapfrogged the Consent Decree process, developing its own cleanup proposal without ever acting on GE's study, and is now trying to force GE to pay for those extra-Decree activities. EPA should not be permitted to disregard the agreed-upon process.

GE bargained for and received a measure of certainty in its settlement agreement with the United States embodied in the Decree. It has fulfilled its obligation to reimburse EPA's costs up to the caps set in that Decree. EPA must be held to the terms of the parties' agreement.

STATEMENT OF FACTS

A. Relevant Provisions of the Consent Decree

1. Overview

The Decree addresses the investigation and cleanup of the Site. For most areas of the Site, including GE's former Pittsfield facility and nearby areas, cleanup activities either have been or soon will be completed. However, for the "Rest of River" portion of the Site, the remedy has not yet been selected. Instead, the Decree establishes a sequential process to evaluate remedial alternatives and select a remedy, as discussed next.

2. Rest of River Process

The process to be followed for the Rest of River is set forth in the Decree and in an accompanying permit issued by EPA under the Resource Conservation and Recovery Act ("RCRA Permit" or "Permit"), which is referenced in the Decree and is an essential part of the agreement.[2] Together, the Decree and Permit prescribe a defined linear process for selecting a Rest of River remedy. CD ¶ 22; RCRA Permit Part II. The initial steps were completed by 2006: (a) GE submitted and EPA approved a report presenting data on site conditions; (b) EPA performed risk assessments; (c) EPA developed a predictive model to evaluate remedial alternatives; and (d) EPA approved preliminary cleanup goals. *See id.*

That was all a prelude to the evaluation of remedial alternatives which, as is common for major cleanups, is the central part of the process leading to selection of the remedy. As required by the Decree and the Permit, GE submitted, and in 2007 EPA approved, a proposal for GE to conduct a Corrective Measures Study ("CMS") to evaluate cleanup alternatives. CD ¶ 22.j. After EPA approved that proposal, the next step in the sequential process was for GE to

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[2] A copy of that permit is provided in Attachment B.

implement the study (the CMS). CD ¶ 22.k. As prescribed by the parties' agreement, that evaluation was to be documented in a "CMS Report" prepared by GE. CD ¶ 22.k. EPA is then charged with approving, conditionally approving, or disapproving GE's report. RCRA Permit, Special Condition II.H.

Once the CMS Report is final, it is to serve as the basis for EPA's selection of the remedy for the Rest of River. Specifically, as described in the Decree, EPA will issue a proposed cleanup remedy by preparing a draft modification to the RCRA Permit, together with a "Statement of Basis" explaining that proposal. CD ¶ 22.n. The public will then be given an opportunity to comment on that proposal, after which EPA will issue its final remedy decision in the form of a final modification to the RCRA Permit. CD ¶ 22.p.[3]

At each step in this process where GE is responsible for submitting a study or report, the Decree and Permit describe a "red light, green light" sequence under which EPA will review and approve, conditionally approve, or disapprove the submission before the next step occurs. The Decree and Permit also allow GE to seek administrative dispute resolution within EPA Region 1 on EPA's decisions on those studies and reports. Permit Special Condition II.J; CD ¶ 141.a.

GE submitted its initial CMS Report to EPA on March 21, 2008. In response to comments from EPA (and others), GE performed additional analyses and submitted a Revised CMS Report to EPA on October 11, 2010. A four-volume document totaling thousands of pages, the Revised CMS Report provides a comprehensive identification and analysis of potential alternative remedies for the Rest of River. It has been more than two years since GE submitted the Revised CMS Report, but to date EPA has taken no action on the Report.

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[3] GE may appeal the final Permit modification to the EPA Environmental Appeals Board and then to the U.S. Court of Appeals for the First Circuit. CD ¶ 22.q; Permit Special Condition II.J.

3. Cost Reimbursement Provisions

The Consent Decree defines ***and limits*** GE's obligation to reimburse EPA's costs (CD Section XX). First, the Decree defines what costs may be recoverable. It does so by dividing EPA's costs into seven different categories, six of which are capped at specific dollar amounts. Three of those categories are relevant here:

- U.S. Oversight Costs include, in pertinent part, all costs incurred by EPA in "***reviewing proposals, reports, studies and other deliverables submitted by [GE]*** under the . . . RCRA Permit, ***conducting shadow or supplemental studies for the studies to be conducted by [GE]*** under that Permit, and otherwise overseeing [GE's] activities under that Permit, all prior to the modification of that Permit to select the Rest of River Remedial Action pursuant to Paragraph 22.p of this Consent Decree," including all "community relations" costs. CD ¶ 4 (emphases added). Costs in this category that GE is required to pay are capped at $11 million, which GE has paid to EPA in full satisfaction of its obligation to reimburse these costs.

- U.S. Future Rest of River Capped Response Costs include all costs incurred by EPA before it selects a final remedy "in connection with ***studying or otherwise investigating the Rest of River*** and/or all field work ***to support the preparation, development, and selection of the Rest of River Remedial Action***," including without limitation all costs of "peer input" and "peer review." *Id*. (emphases added). Costs in this category that GE is required to pay are capped at $14.5 million, which GE has paid to EPA in full satisfaction of its obligation to reimburse these costs.

- U.S. Future Response Costs are costs that EPA and DOJ incur "pursuant to the provisions of this Consent Decree," but that do not fall within another category, and specifically include "costs incurred for ***preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action***." *Id.* (emphasis added). "U.S. Future Response Costs" expressly excludes "U.S. Oversight Costs" and "U.S. Future Rest of River Capped Response Costs." Costs in this category are not capped.

In addition, when costs fall into multiple categories, the Decree allows EPA to allocate costs among categories using a "reasonable allocation method" (CD ¶100.f). These are referred to by the parties as "cross-cutting" costs.

The Decree sets out a process for EPA to document its costs and bill GE. CD ¶¶ 100-101. It is EPA's obligation to properly categorize its costs. GE then will pay or contest those costs. Among other reasons, GE may contest payment of costs if the amount was "not allocated

to the correct cost category" or "was not within the definition of any cost category" under the Decree. CD ¶ 101. GE may also "contest payment of costs on the basis that the amount billed exceeds" the capped amount. *Id*.

The procedures for resolving costs disputes are set out in Section XXIV of the Decree. CD ¶ 101. First, there is informal negotiations between the parties. CD ¶ 133. If those negotiations are unsuccessful, GE may invoke formal dispute resolution by elevating the matter to the Director of the Superfund office within EPA Region 1. CD ¶¶ 135-137. Following the Director's decision, GE may obtain review by this Court. CD ¶¶ 136, 137.

B. EPA's FY 2011 Cost Bill and Activities Covered by It

EPA's FY 2011 cost bill, submitted to GE on January 11, 2012, sought reimbursement of $1,625,790 as uncapped U.S. Future Response Costs. On February 29, 2012, GE sent EPA a letter objecting to that cost bill. After unsuccessful discussions with EPA, GE initiated dispute resolution under the Decree on April 5, 2012. The additional negotiations did not resolve the matter, and GE invoked formal administrative dispute resolution by submitting a Statement of Position to EPA on July 2, 2012. EPA submitted its Response on July 30, 2012 (in which it agreed that $393,192 of the billed costs should not have been allocated to U.S. Future Response Costs, thus reducing its claim to $1,239,108). GE submitted a Reply on August 10, 2012.[4]

On January 31, 2013, the Deputy Director of the Region 1 Superfund office sent to GE a one-page final decision for EPA. That decision contained no independent analysis; it simply

[4] Copies of GE's Statement of Position, EPA's Response, and GE's Reply are provided in Attachment C, D, and E, respectively. The first two of these have their own exhibits, which will be referred to herein by their original designations – e.g., "GE Statement (Att. C), Ex. A."

upheld EPA's claim for $1,239,108 "for the reasons described in EPA's July 30, 2012 Response."[5]

Of this amount, GE does not dispute $46,575.[6] Thus, the amount in dispute is $1,192,533. Most of these costs were incurred for activities relating to the Rest of River. As described by EPA in its Response (Att. D) at 8-13 & Table 1, these costs include the following:

- Workshops and "Charrette" ($418,960): This item consists of activities undertaken, as part of EPA's community relations efforts, to obtain input from the public regarding the remedial alternatives under consideration. These included a "Situation Assessment" to interview the public on their views of the cleanup process, information needs, and concerns; three workshops in April 2011 to present information to the public regarding a variety of Rest of River issues; and a full-day interactive community workshop, known as a "Charrette," in May 2011 to gain input from the public regarding the remedial alternatives.

- NRRB/CSTAG ($366,930): This item consists of activities associated with an internal peer review by two EPA groups, the National Remedy Review Board (NRRB) and the Contaminated Sites Technical Advisory Group (CSTAG), which are composed of representatives from EPA headquarters and other EPA regions, regarding the remedial alternatives, including the alternative preferred by EPA Region 1 staff. EPA's bill includes costs for members of the NRRB and CSTAG, and costs for EPA Region 1 staff in preparing for the NRRB/CSTAG review.

- Messrs. Tagliaferro, Conway, and Other Legal ($147,044): This item includes time spent by EPA's technical project manager (Dean Tagliaferro) and its lead attorney for Rest of River (Timothy Conway). According to EPA, this time included work on Rest of River "remedy preparation." EPA Response (Att. D) at 11, 12. This item also includes time for other EPA lawyers working on the Rest of River remedy. *Id*. at 11.

- Department of Justice ($87,000): This item consists of activities performed by DOJ, for which EPA paid DOJ under an interagency agreement. EPA has not explained what DOJ did during FY 2011. Given the focus of EPA's efforts during the year, it is reasonable to conclude that DOJ was, at least in part, supporting EPA's review of Rest of River alternatives.

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[5] A copy of that decision is provided as Attachment F.

[6] Of the costs listed by EPA in its Response (Att. D) at 13, Table 1, GE is not challenging the costs for: Fact Sheets, Repository Support, Air Monitoring, Finance, ERE/CD Kilborn, and ATSDR.

- CCC/SRA DO#3 ($22,080): This item consists of scheduling, facilitating, and summarizing meetings of the Citizens Coordinating Council (CCC), which was established by EPA to inform the public and obtain public input on cleanup efforts at the Site. As documented by the agenda and minutes of the meetings, a portion of these meetings concerned public outreach on Rest of River alternatives, as well as a range of other topics covered by specific cost categories under the Decree.

- ASRC ($43,680): This items consists of costs of an EPA contractor (ASRC Management Services, Inc.) for "records management."

- Cross-Cutting Costs ($106,839): This item consists of a portion of EPA's general project costs that EPA has allocated to U.S. Future Response Costs based on a formula.

STANDARD OF REVIEW

As both GE and EPA agree (see EPA's Decision [Att. F]), this dispute is governed by Paragraph 137 of the Decree, which provides that, for "disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law," judicial review "shall be governed by applicable principles of law." The issues presented in this dispute involve the proper interpretation and application of provisions of the Decree, a contract among GE, EPA, and others. Under "applicable principles of law," these issues should be reviewed by the Court *de novo*, with no deference to EPA.[7]

As the Supreme Court has long instructed, consent decrees are interpreted like contracts. *United States v. Armour & Co.*, 402 U.S. 673 (1971) ("the scope of a consent decree must be discerned within its four corners, and not by reference to what might satisfy the purposes of one of the parties to it"). Likewise, in this Circuit, interpretations of consent decrees, like all

[7] EPA has argued that a reviewing court should give "deference to EPA's expertise regarding the process for selecting a remedy," since that is a "technical question" that is within EPA's "technical expertise." EPA Response (Att. D) at 4. That assertion is a red herring, since the issue here is not the "proper process for selecting a remedy" in the abstract, but what the Consent Decree for this Site requires.

contracts, present questions of law that are reviewed *de novo*. *Ricci v. Patrick*, 544 F.3d 8, 17 (1st Cir. 2008); *Quinn v. City of Boston*, 325 F.3d 18, 30 (1st Cir. 2003).[8] An agency's interpretation of a contractual term included in a consent decree is not afforded any deference. *Quinn, supra*, 325 F.3d at 34 ("court owes no deference to an agency when endeavoring to discern the meaning and constitutional limits of such a [consent] decree").[9]

This well-established doctrine applies to the present dispute. The issues here are whether EPA has placed its costs in the right category as defined in the Decree and whether EPA has followed the process required by the Decree before incurring those costs. Those are questions involving the meaning of the parties' contract, on which a reviewing court would owe no deference to the interpretation offered by one party over another.[10]

In any event, EPA has given the Court nothing to which it can or should defer. The Deputy Director's "decision" does nothing more than embrace, in total and without any independent analysis, the advocacy brief of EPA staff. *See Bowen v. Georgetown University Hosp.*, 488 U.S. 204, 212 (1988) (refusing to apply *Chevron* deference to agency litigating positions that not supported by regulations, rulings, or administrative practice).

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[8] *See also United States v. Gila Valley Irrigation Dist.*, 961 F.2d 1432, 1434 (9th Cir. 1992) (quoting *Kern Oil & Refining Co. v. Tenneco Oil Co.*, 840 F.2d 730, 736 (9th Cir. 1988)); *Segar v. Mukasey*, 508 F.3d 16, 21-22 (D.C. Cir. 2007).

[9] *See also Meadow Green-Wildcat Corp. v. Hathaway*, 936 F.2d 601, 605 (1st Cir. 1991) (Breyer, J.) ("neither the language nor the reasoning of those [*Chevron* deference] cases suggests they require similar deference to the agency's interpretation of a contract that it makes with an outside party"); *Southern California Edison Co. v. United States*, 226 F.3d 1349, 1357 (Fed. Cir. 2000) (agency is not entitled to deference as it may offer "self-serving, post-hoc reinterpretations of contract" during breach of contract litigation).

[10] EPA has argued that it will not recover the costs in question unless its interpretation is upheld. EPA Response (Att. D) at 5. That further confirms that, given its direct pecuniary interest, its interpretation deserves no special deference.

ARGUMENT

I. Most of EPA's Billed Costs Are Either U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs, for Which GE Has Fully Satisfied Its Reimbursement Obligations, and Thus May Not Be Recovered Under the Decree.

A. EPA's Assignment of the Rest of River Costs in Dispute to U.S. Future Response Costs Conflicts with the Consent Decree.

The vast majority of the costs in dispute relate to the Rest of River. The basis for EPA's assignment of these costs to the uncapped U.S. Future Response Costs category is that those costs were related to EPA's "preparation, development, and review" of a proposed Rest of River remedy. EPA Response (Att. D) at 1, 3, 5, 6 and 15. But an evaluation of ***why*** (i.e., for what purpose) and ***when*** EPA incurred these costs, reinforced by EPA's contemporaneous statements, demonstrates that the central purpose of EPA's activities was to review GE's Revised CMS Report and the remedial alternatives described in it, as well as to conduct the Agency's own "shadow or supplemental studies" for GE's Revised CMS, and to conduct associated community relations activities. The Decree expressly assigns all of those costs to the capped category of U.S. Oversight Costs. Alternatively, these activities were part of EPA's studies of the Rest of River "to support the preparation, development, and selection" of a remedy, including the obtaining of "peer input" and "peer review," the costs of which are expressly assigned to the capped category of U.S. Future Rest of River Capped Response Costs.

These are clearly ***not*** costs for the limited class of Rest of River activities that the Decree left uncapped as U.S. Future Response Costs – namely, those costs incurred by EPA under the Decree in "preparing, reviewing, and approving the ***documents*** that propose and select the Rest of River Remedial Action" (i.e., preparing the Statement of Basis and the draft and final

modifications to the RCRA Permit, as provided in CD ¶¶ 22.n & 22.p) and the costs associated with "responding to public comments" on its proposed remedy. CD ¶ 4 (emphasis added).[11]

There is a clear temporal element to the three categories of costs at issue here. The first two categories, which have already reached their limits, involve EPA's review of GE's submittals (including its evaluation of remedial alternatives) and EPA's own studies and investigations prior to EPA's Rest of River remedy decision. The third category of costs relates to the last stage in the process when, having considered all the pertinent studies and evaluations, and conducted its community relations efforts, EPA documents its decision by preparing, reviewing, and approving a remedy proposal and responding to public comments on it. At the time that it incurred the costs that EPA claims fall into this third category, EPA – as confirmed by its own public pronouncements (discussed below) – was still engaged in evaluating GE's study of proposed remedial alternatives and developing and evaluating other remedial alternatives. It had clearly not reached the stage of deciding on a proposed remedial alternative (which EPA has still not issued to date), let alone documenting that proposal.

Under the sequential process described above, the parties agreed that GE would perform the study to evaluate the remedial alternatives; that EPA would then review and approve, conditionally approve, or disapprove the CMS Report; and that based on that evaluation, EPA

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[11] As the United States represented to this Court when it moved to enter the Decree, "the United States compromised certain costs in achieving this settlement. . . . This limited compromise is justified by the risks and uncertainties of litigation and the benefit of achieving a prompt settlement." U.S. Memo in Support of Motion to Enter Consent Decree (July 20, 2000) at 43-44. The United States' representations to this Court show its intent that U.S. Future Response Costs would be a limited category: The Government estimated that the total costs to be charged in that category would be $5 million. *Id.* at 42-43 n.30. In fact, since entry of the Decree, EPA has billed GE for ***more than $19 million*** in that category, including certain "interim" costs incurred prior to entry of the Decree but included in this category, and also including the bill in dispute here, as well as a new bill that GE received from EPA on January 24, 2013, for costs incurred in FY 2012.

would select a proposed remedy. EPA's review step is covered by U.S. Oversight Costs, and only after it has completed its review and evaluation and begun to document its decision would it incur U.S. Future Response Costs. There is no provision in the Decree allowing EPA to conduct its own studies in order to develop its own remedial alternatives, with two exceptions: First, in Paragraph 22.*1*, EPA reserved the right to conduct "shadow or supplemental studies" to GE's studies. However, EPA agreed that if it chose to do so, its costs would be capped as part of U.S. Oversight Costs. CD ¶ 4. Second, in the definition of U.S. Future Rest of River Capped Response Costs, the Decree recognizes that EPA may conduct other studies or investigations "to support the preparation, development, and selection" of the remedy. CD ¶ 4. Those costs, too, are capped.

In this case, the Rest of River costs that EPA claims are U.S. Future Response Costs go far beyond the costs of preparing, reviewing, and approving the documents that set forth the Rest of River remedy, but rather are costs of evaluating GE's remedial alternatives in the Revised CMS Report (which is ***still*** under EPA review) as well as others developed by EPA itself. This is demonstrated by EPA's own contemporaneous statements. For example, in a March 2, 2011 presentation to the Citizens Coordinating Council, EPA's project manager for the Rest of River, Susan Svirsky, included a slide informing the public that "EPA is evaluating the alternatives in the [Revised] CMS" based on the "input received from stakeholders" and the "evaluation criteria specified in the RCRA Permit." EPA Update on Corrective Measures Study Process (GE Statement [Att. C], Ex. E), slide 3. Similarly, at the April 7, 2011 workshop, EPA representatives stated:

- The "process that we're, that we have been under way with now [is] the Corrective Measures Study, the CMS…. That document will feed into, really the next major process that we are leading up to here, which is when EPA comes out and proposes a clean-up

plan for public comment. So ***we haven't made any determination on what we think the appropriate course of action is***. . . . [***The] clean-up alternatives [are] all still on the table, all still being evaluated***."[12]

- "[W]e are in our decision making process. ***No decision as to what alternative is the appropriate alternative … has yet been made***."[13]
- "***We're evaluating GE's… alternatives and their detailed analysis and we're performing our own*** and we may come up with something that's different or that's a permutation or maybe it would be one of them or maybe it would be none of them or maybe it would be no remediation but ***we are in that process and the door is not closed*** …."[14]

Obviously, by its own words, during the period of time covered by EPA's FY 2011 bill EPA was still engaged in the evaluative process, rather than documenting a remedy proposal. EPA was evaluating the alternatives in GE's Revised CMS Report, and it was developing and evaluating its "own" alternatives. To prepare its "own" alternatives, EPA had to rely on the same types of information and evaluations of alternatives that the Decree and Permit required GE to provide in the CMS Report; that cannot be anything other than a "shadow or supplemental" analysis to GE's study. Thus, as discussed further in Section I.B below, the Situation Assessment, workshops, and Charrette were part of the process of obtaining public input for EPA's evaluation of alternatives; and the review process before the NRRB and the CSTAG involved obtaining the advice of those internal EPA groups on EPA's evaluation of alternatives. Even to the extent that the NRRB/CSTAG process focused on a "preferred alternative" developed by EPA staff (as stated in EPA's Response [Att. D] at 7), it still constituted an internal

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[12] Transcript of Statements of EPA Personnel at April 7, 2011 Workshop (GE Statement [Att. C], Ex. C), transcribed from the videotape of that workshop on EPA's Housatonic River website, at 4, 5 (remarks of EPA Region 1 Section Chief Bob Cianciarulo; emphasis added).

[13] *Id*. at p. 11 (remarks of Susan Svirksy, EPA Rest of River project manager; emphasis added).

[14] *Id*. at p. 16 (remarks of Susan Svirksy, EPA Rest of River project manager; emphasis added).

EPA evaluation of a remedial alternative, and thus was a supplemental or shadow evaluation to GE's CMS evaluations, not the preparation and review of the remedy proposal documents.

Alternatively, these activities involved EPA's continued studies of the Rest of River to support its ***future*** selection of a remedy, which are covered by the U.S. Future Rest of River Capped Response Costs category. Indeed, as discussed further below, EPA has described the NRRB/CSTAG process as its internal "peer review"; and "peer review" is ***explicitly*** listed as one of the types of costs covered by U.S. Future Rest of River Capped Response Costs.

That EPA has continued to conduct studies and review of remedial alternatives is further confirmed by EPA's own subsequent statements. On May 18, 2012, EPA issued a Housatonic River Status Report, which indicates that EPA staff had developed a tentative remedial alternative.[15] That document states, however, that "no remedy decisions have yet been made" (Att. G at 1) and that the alternative outlined in the Status Report is "subject to further information that will be reviewed as part of the consideration of the CMS" (*id*. at 4).[16] Those activities are precisely the "shadow or supplemental" studies which the parties agreed in the Decree would be capped. CD ¶ 4. Had the parties contemplated that EPA could charge GE for millions of dollars for the Agency's analyses of its own alternatives with no limit, the parties

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[15] A copy of that Status Report is provided in Attachment G. It is also available on EPA's website at http://www.epa.gov/region1/ge/thesite/restofriver/reports/508662.pdf.

[16] Again, in August 2012, EPA issued a "Regional Response to the National Remedy Review Board Comments on the Site Information Package for the General Electric(GE)-Pittsfield/Housatonic River Project, Rest of River." *See* EPA's website at http://www.epa.gov/region1/ge/thesite/restofriver/reports/518898.pdf. Excerpts from that document are provided in Attachment H. That document provided more details about EPA staff's tentative alternative and presented a "comparative analysis" of that alternative along with all of the alternatives in GE's Revised CMS Report. EPA made clear that "no formal remedy proposal decisions have been made and this supplemental information is intended to provide a more detailed summary of EPA [Region 1's] considerations regarding the potential approaches to cleanup." *Id.* at Appendix A, p. 1.

could and would have provided for it. Since they did not do so, EPA cannot recover the costs that EPA incurred in conducting those analyses.

B. The Costs in Dispute Were U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs.

Against this background, it is clear that the specific costs included in EPA's FY 2011 cost bill that are in dispute here do not constitute U.S. Future Response Costs, but fall into U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs.

1. Situation Assessment, Workshops, and "Charrette" ($418,560)

This is the largest component of EPA's cost demand. As described above, it includes a Situation Assessment, three public workshops, and a "Charrette." *See* description *supra* at 7. It is clear from EPA's contemporaneous documents and statements to the public that the purpose of these activities was to describe for the public, and gather input from the public on, the alternatives that EPA was evaluating, not to support or obtain public input on an already-selected proposed remedy or even a "preferred alternative."

During the course of these activities, EPA did not present one preferred cleanup alternative to the public for its information and input. For example, as part of the "Situation Assessment" prior to the workshops, EPA's contractors conducted interviews with key stakeholders to understand their concerns and views about cleanup efforts for the Rest of River.[17] The workshops and Charrette were for similar purposes. Indeed, according to EPA, it conducted those activities in order "for the public to interact with EPA regarding their views on the remedial ***alternatives*** . . . during EPA's decision-making process.[18] EPA's own April 2011

[17] *See* EPA's description at http://www.housatonicworkshops.org/welcome.html, last visited 2/18/13.

[18] EPA March 2, 2011 Update on the Corrective Measures Study Process (GE Statement [Att. C], Ex. E), slide 4 (emphasis added).

Information Sheet on EPA's Cleanup Decision Process described the workshops and Charrette as an "important step ***leading up to*** EPA's identification of a preferred alternative."[19] Moreover, as noted above, EPA stated repeatedly during the workshops that it had not made any decision on a preferred alternative, that all options were still on the table, and that it was continuing to evaluate GE's alternatives as well as its "own." *See supra* at 12-13. Likewise, during the Charrette, EPA specifically presented four of the remedial alternatives described in GE's Revised CMS Report, and asked participants to evaluate those alternatives to assist EPA in its evaluation.[20]

In sum, by EPA's own contemporaneous description, the Situation Assessment, workshops, and Charrette were part of EPA's effort to advise the public and obtain the public's input during EPA's review of remedial alternatives. Those activities were not taken to support an already-selected preferred alternative, let alone to write the documents for its proposal or to respond to public comments on that proposal. These activities plainly fall within the definition of U.S. Oversight Costs as part of EPA's "review" of the Revised CMS Report and/or its "supplemental or shadow" studies of those and other cleanup alternatives. Indeed, as previously noted, U.S. Oversight Costs specifically include "community relations" work associated with such activities (CD ¶ 4), which is what this outreach entailed.[21]

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[19] April 2011 Information Sheet on EPA's Cleanup Decision Process, available at http://www.epa.gov/region1/ge/thesite/restofriver/reports/480399.pdf, copy attached as Attachment I (emphasis added)

[20] "Four Representative Options Spanning the Range of Those Evaluated in the Revised Corrective Measures Study"; Housatonic River Public Charrette, Workbook, available at http://www.housatonicworkshops.org/PDFs/handouts/CharretteWorkbook4MayFinal.pdf, copy attached as Attachment J.

[21] U.S. Oversight Costs is the only category of costs that specifically mentions "community relations." This indicates that the parties contemplated that community relations work would be part of this category. By contrast, the only public outreach activity mentioned in the U.S. Future Response Costs definition is EPA's response to public comments on the proposed remedy.

2. Review by EPA's NRRB and CSTAG ($366,930)

Another significant share of EPA's bill consists of costs associated with the NRRB/CSTAG review process in the summer of 2011. EPA billed GE for the costs of EPA Region 1 staff in preparing for that review, as well as the costs incurred by the NRRB and CSTAG members themselves. While EPA, during the administrative dispute resolution, dropped 10% of the NRRB/CSTAG costs as attributable to review of GE's Revised CMS Report, EPA claims that the remaining costs were incurred for review and evaluation of the Region's proposed preferred alternative, which it says are U.S. Future Response Costs. EPA Response (Att. D) at 8. That claim is without merit.

An EPA official explained at EPA's April 2011 workshop that NRRB review is EPA's "internal peer review process," which must precede EPA's selection of a remedy proposal.[22] EPA's descriptions of that process in its Response (Att. D at 7-8) bear out that characterization. Taking EPA at its own word, these costs consisted of obtaining of "peer input" or "peer review" on its preferred alternative as part of its studies to support its preparation and selection of a remedy. As such, they are U.S. Future Rest of River Capped Response Costs, which expressly include the costs of "peer input" and "peer review." CD ¶ 4.

Alternatively, the NRRB/CSTAG review was part of EPA's evaluation of the alternatives in the Revised CMS Report and/or its supplemental or shadow studies to evaluate those and other alternatives. For example, in March 2011, EPA encouraged stakeholders to "submit written comments … ***on the [Revised CMS] for [N]RRB consideration***."[23] Further, EPA's

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[22] Transcript of Statements of EPA Personnel at April 7, 2011 Workshop (GE Statement [Att. C], Ex. C) at 8 (remarks of EPA Regional Section Chief Bob Cianciarulo)

[23] Update on the Corrective Measures Study Process (GE Statement [Att. C], Ex. E), slide 6 (emphasis added).

arbitrary allocation of only 10% of the NRRB/CSTAG costs to reviewing the Revised CMS alternatives is, on its face, implausible. The Region's Site Information Package presented to the NRRB in June 2011 contained a lengthy description and "comparative analysis" of the alternatives presented in the Revised CMS Report (totaling over 100 pages) and devoted only 12 pages to the description and evaluation of the Region's "preferred alternative."[24] Thus, assuming *arguendo* that the NRRB/CSTAG review process is not considered to be "peer input" or "peer review" covered by U.S. Future Rest of River Capped Response Costs, the costs associated with that process would be U.S. Oversight Costs, either as part of EPA's review of GE's Revised CMS Report or as part of its own supplemental study.

Moreover, even accepting EPA's 90%-10% allocation, the NRRB/CSTAG costs to review and evaluate the Region's "preferred alternative" still are not costs for "preparing, reviewing, and approving the documents that propose and select" the remedy (i.e., the Statement of Basis and the draft Permit modification). Rather, these activities are part of EPA's internal review of a particular alternative and thus are a "shadow or supplemental" analysis under U.S. Oversight Costs.

3. Time of EPA Technical Project Manager, Lead EPA Attorney, and Other Regional Attorneys ($147,044)

As noted above, this item consists of activities undertaken by EPA's technical project manager for the Site (Dean Tagliaferro), EPA's lead attorney for the Rest of River (Timothy Conway), and other attorneys from EPA's Office of Regional Counsel. According to EPA, Mr.

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[24] National Remedy Review Board, Site Information Package for the Housatonic River, Rest of River (June 2011), available at http://www.epa.gov/region1/ge/thesite/restofriver/reports/487318.pdf, the Table of Contents of which is provided in Attachment K.

Tagliaferro's and Mr. Conway's time allocated to U.S. Future Response Costs was for time spent on various tasks, including Rest of River "remedy preparation." EPA Response [Att. D], at 11, 12). Likewise, for the other legal support, EPA described the work as "for review and preparation of EPA's proposed remedy." *Id.* at 11.

To begin with, "remedy preparation" is not "document preparation," and only the latter falls within "U.S. Future Response Costs." Moreover, as shown above, EPA repeatedly advised the public during FY 2011 that it had made no decision regarding a proposed remedy for the Rest of River. In fact, as also shown above, it appears that EPA spent considerable time developing, reviewing, and evaluating its own alternative(s) – which constitute shadow or supplemental studies. It is apparent, therefore, that much of the time that these individuals charged to U.S. Future Response Costs was spent conducting and supporting these efforts (including the Situation Assessment, Workshops, Charrette, and NRRB/CSTAG review). Hence, these costs should have been allocated to U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs.

4. DOJ Activities ($87,000)

EPA included Department of Justice ("DOJ") costs in its bill because EPA reimbursed DOJ under an "interagency agreement" between EPA and DOJ.[25] EPA has not disputed that the DOJ costs included costs incurred in connection with EPA's evaluation of GE's or EPA's own remedial alternatives, as EPA has not provided contrary evidence despite a request by GE that EPA explain what DOJ did.[26] Instead, EPA argues solely that the definition of U.S. Future Response Costs refers to DOJ costs, whereas the definitions of other cost categories do not; and

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[25] See excerpt from Itemized Cost Summary, GE Pittsfield, MA Site (Jan. 9, 2012), copy attached as Attachment L (describing DOJ costs as "Interagency Agreement" costs).

[26] Letter from S. Boxerman to T. Conway (Feb. 29, 2012) (GE Statement [Att. C] Ex. A) at 9.

therefore, EPA claims, the DOJ costs could not be "EPA" costs under any other cost category. EPA Response (Att. D) at 6.

That argument proves too much. If accepted, it would mean that if DOJ were performing an activity that falls squarely within one of the capped cost categories (such as reviewing a GE deliverable), its costs would nevertheless not be capped. That is not what the parties agreed. U.S. Oversight Costs (like the other capped cost categories) mean "all costs" incurred by EPA that fall within the category, including "interagency … agreement costs." CD ¶ 4. Further, EPA treats DOJ costs like any other costs that EPA incurs, including costs EPA pays under other interagency agreements. Specifically, EPA tacks onto the DOJ charges an additional 32% in ***EPA*** "indirect" (overhead) costs, as EPA does for all other costs.[27] As such, by its own actions, EPA is treating the DOJ costs as "EPA" costs. Thus, the DOJ costs that related to the Rest of River are U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs.

5. Activities Relating to Public Meetings of the Citizens' Coordinating Council (CCC) ($22,080)

EPA has allocated an arbitrary 20% of the $27,000 that was included in its initial bill for public CCC meeting costs to U.S. Oversight Costs, leaving the rest as U.S. Future Response Costs. EPA Response (Att. D) at 9-10. EPA claims that it need not allocate more to the former category because the remainder of the costs were either "costs related to remedy preparation" or were costs incurred to develop plans or reports pursuant to Decree provisions that do not fall within the capped cost categories. *Id*. at 10.

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[27] EPA incurs certain overhead and other costs that it asserts are related to cleanups generally, but not related directly to any one site. EPA charges these general costs as "indirect costs" by applying an additional percentage on top of every dollar of "direct costs" that EPA incurs at a site. By allocating a share of EPA's indirect costs on top of DOJ costs, EPA is treating DOJ costs the same way as every other cost that EPA incurs. Indeed, EPA adds its "indirect costs" onto DOJ costs, even though DOJ already applies a separate 200% indirect cost rate of its own.

EPA's assertion is unsubstantiated and without merit. Again, it is not reasonable to conclude that the public meetings during this time period were related to "remedy preparation" (let alone documentation of a proposed remedy) when EPA was repeatedly telling the public that it had not selected a remedy and was still evaluating all remedial alternatives. In addition, the minutes of these public meetings show that, while various topics were covered at those meetings, a significant amount of time was devoted to other categories of work covered by U.S. Oversight Costs (such as work in other areas of the Site), as well as EPA's progress in evaluating the Revised CMS alternatives. *See* Letter from S. Boxerman to T. Conway (Feb. 29, 2012) (GE Statement [Att. C] Ex. A) at 7-8 (compiling topics listed in minutes). For these reasons, the Rest of River costs in this category should be included as "community relations costs" within the U.S. Oversight Costs category; and the remaining costs should be assigned to the specific category of work that was discussed at the meeting or, if those costs are not easily divisible, should be allocated among cost categories via the cross-cutting methodology.

6. Cross-Cutting Costs ($106,830)

As noted above, this item consists of a portion of EPA's general project costs that EPA has allocated to U.S. Future Response Costs based on an established formula. The Court should direct EPA, based on the reductions discussed above, to re-calculate the cross-cutting costs (using its established formula) so that only the proper share of cross-cutting costs is billed to GE.

II. To the Extent That EPA's Costs Were Incurred for Preparing, Developing, and Reviewing Remedy Proposal Documents, They Were Not Incurred Pursuant to the Sequential Process Expressly Provided for in the Consent Decree.

As previously discussed, EPA's basic position is that its Rest of River costs included in the FY 2011 bill were incurred for preparation, development, and review of a Rest of River remedy proposal and thus are recoverable under the uncapped U.S. Future Response Costs

category. However, even assuming that its costs were incurred for such activities, these costs are still not recoverable because they were incurred outside the sequential process established in the Decree – namely, prior to EPA's decision on GE's Revised CMS Report. As such, these costs were not "incurred pursuant to the provisions of this Consent Decree," which is a prerequisite for U.S. Future Response Costs (CD ¶ 4).

Paragraph 22 of the Decree mandates that "selection of a Remedial Action for the Rest of the River ***shall be conducted*** in accordance with the Reissued RCRA Permit and the provisions of Paragraph 22" (emphasis added). As described above, the carefully negotiated, agreed-upon sequential approach embodied in those provisions requires completion of the CMS process ***before*** EPA develops and documents a remedy proposal. The Consent Decree is clear: It states that EPA will issue its proposed remedy ***only*** upon "***satisfactory completion*** of the CMS Report in accordance with the Reissued RCRA Permit" (CD ¶ 22.n; emphasis added). To interpret the Decree otherwise and allow EPA the unfettered authority to develop a remedy proposal whenever it wants to and to spend whatever it costs to do so would be flatly inconsistent with that agreed-upon approach.

In addition, the Decree and the Permit provide GE with the right to administrative dispute resolution to challenge any EPA decision on the CMS Report. CD ¶ 141.a; RCRA Permit Special Condition II.N. By leapfrogging the approval or disapproval of the CMS Report, EPA is effectively denying GE the right to dispute an EPA determination on that report. While GE could still seek dispute resolution on EPA's later determination on the Revised CMS Report, that right would be largely meaningless if EPA has already developed a remedy proposal. Rather, GE must have the opportunity to challenge EPA's decision on the Revised CMS Report ***before*** EPA

selects and begins work on a remedy proposal, so that EPA's remedy proposal can take into account the outcome of the dispute resolution.

EPA should be held to the process negotiated and agreed upon in the Decree, including making a determination on the CMS Report and completing any dispute resolution proceeding on that determination ***before*** selecting and documenting a proposed remedy. It is not enough for GE to have submitted a CMS Report; the CMS process must be satisfactorily completed before EPA embarks on developing a remedy proposal. EPA cannot dispute that the information and evaluations in the CMS Report were intended to serve a purpose – to be the basis for the remedy proposal.[28] For EPA to select and begin documenting a remedy proposal before the evaluation of remedial alternatives is completed and GE has an opportunity to dispute EPA's determination on that evaluation would undermine that purpose – and eviscerate the carefully negotiated process set forth in the Decree.

In fact, the United States made this sequence clear when it sought entry of the Consent Decree, stating: "Following completion of the peer review processes, and GE's RCRA Facility Investigation, ***GE must complete an evaluation of the alternative corrective measures*** to address risks posed by Rest of River contamination (a 'Corrective Measures Study'). . . . ***Upon conclusion of the Corrective Measures Study***, EPA will propose, through a draft modification to the RCRA Permit, a remedial action for the Rest of River . . . ." U.S. Memorandum in Support of Motion to Enter Consent Decree at 21 (emphases added). GE did not invest the huge time and cost of preparing the important CMS Report – including extensive revisions made at EPA's behest – to have it put in a bottom drawer.

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[28] That is why the Permit imposes detailed requirements for the CMS Report, including the information that must be provided and specific criteria that must be evaluated for each remedial alternative. Permit Special Condition II.G.

III. EPA's Records Management Costs Are Not U.S. Future Response Costs.

In addition to the items discussed above, EPA is demanding reimbursement of $43,680 for the records management costs of EPA contractor ASRC. Those costs were also improperly assigned to U.S. Future Response Costs, but on a different ground. As shown in GE's Statement of Position in the administrative dispute resolution proceeding (Att. C at 17-18 & Ex. A at 11-12, summarizing specific information in the invoices that EPA provided), the records management costs in EPA's initial demand included the following:

- Costs not incurred under the Decree. EPA has billed for paying the contractor to digitize GE's responses to an EPA request for information to which GE responded over a decade ago. These costs were thus not authorized under the Decree at all.
- Costs that EPA misallocated. EPA has billed for tasks that relate to specific capped cost categories, such as "Removal Actions Outside the River" or "GE Oversight site," which are covered by U.S. Oversight Costs and thus should be charged to that category.[29]
- Costs that lack sufficient information. EPA has also billed for records management work that is described vaguely and generally as support for the Site, without specific documentation as to the purpose of the work.

In its Response, EPA reduced its original charge by allocating, without explanation, 35% of these costs to cross-cutting, but it asserts that the remaining 65% are U.S. Future Response Costs because having complete site files may prove useful in some future enforcement action, if any were to occur. EPA Response (Att. D) at 10-11. However, there is no pending or anticipated enforcement action, and there is no evidence that any of the records for which charges were included in this item could relate to any theoretical future enforcement action.

[29] U.S. Oversight Costs specifically include "contractor costs," "data management costs," and similar charges. CD ¶ 4.

Accordingly, EPA should either assign those remaining records management costs that were incurred under the Decree to a specific cost category or re-allocate those costs using the cross-cutting methodology.

RELIEF REQUESTED

For the foregoing reasons, this Court should remand this dispute to EPA with instructions to: (a) eliminate from its cost bill for FY 2011 the costs relating to Rest of River; (b) re-assign the records management costs or re-allocate them to the cross-cutting category; and (c) recalculate the cross-cutting costs based on instructions (a) and (b).

Respectfully submitted,

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February 21, 2013

CERTIFICATE OF SERVICE

I hereby certify that on this 21st day of February 2013, the foregoing Memorandum in Support of Defendant's Motion for Judicial Review of United States Environmental Protection Agency's Decision in Dispute Regarding Cost Reimbursement for the GE-Pittsfield/Housatonic River Site, together with the attachments thereto, were filed through the Court's ECF system and were therefore sent electronically to the registered participants as identified on the Notice of Electronic Filing. In addition, copies of the foregoing documents were sent by electronic or first-class mail to the following counsel on this 21st day of February 2013:

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LIST OF ATTACHMENTS

Description	Attachment
Excerpts from Consent Decree – *United States of America et al. v. General Electric Company* (Civil Action Nos. 99-30225-MAP et seq., D. Mass.)	A
Permit Under the Resource Conservation and Recovery Act as Amended (42 U.S.C. Section 6901 *et seq.*) (dated and effective Dec. 5, 2007)	B
Statement of Position of General Electric Company in Support of Dispute of FY 2011 Cost Bill (July 2, 2012)	C
EPA's Statement of Position in Response to GE's July 2, 2012 Statement of Position Regarding Dispute of FY 2011 Cost Bill (July 30, 2012)	D
General Electric Company's Reply to EPA's July 30, 2012 Statement of Position Regarding Dispute of EPA's FY 2011 Cost Bill (Aug. 10, 2012)	E
Final Decision (Jan. 30, 2013, with cover letter dated Jan. 31, 2013) – *In re: Consent Decree for the GE Pittsfield/Housatonic River Site*, Dispute Resolution Proceeding Before the Deputy Director of the Office Site Remediation and Restoration	F
U.S. EPA, Housatonic River Status Report (May 2012)	G
Excerpts from U.S. EPA, *Regional Response to the National Remedy Review Board Comments on the Site Information Package for the General Electric (GE) – Pittsfield/Housatonic River Project, Rest of River* (Aug. 3, 2012)	H
U.S. EPA, Housatonic River Information Sheet (Apr. 2011)	I
Four Representative Options Spanning the Range of Those Evaluated in the Revised Corrective Measures Study, Housatonic River Public Charrette, Workbook (May 7, 2011) (excerpts)	J
Cover and Table of Contents from U.S. EPA, *National Remedy Review Board Site Information Package for the Housatonic River, Rest of River* (June 30, 2011) (excerpt)	K
Excerpts from Itemized Cost Summary, GE Pittsfield, MA Site (Jan. 9, 2012)	L

Attachment A

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS
WESTERN DIVISION

UNITED STATES OF AMERICA, STATE OF CONNECTICUT, COMMONWEALTH OF MASSACHUSETTS, Plaintiffs, v. GENERAL ELECTRIC COMPANY, Defendant.	CIVIL ACTION NO'S. _____

CONSENT DECREE

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work, or community relations activities conducted by the United States as part of the design and implementation of the 1½ Mile Reach Removal Action.

"U.S. Future Additional Sampling Costs" shall mean the costs Incurred for certain additional sampling to be performed by or on behalf of EPA at areas subject to the Removal Actions Outside the River as described in the SOW.

"U.S. Future Response Costs" or "Future Response Costs" shall mean all direct and indirect costs that EPA and DOJ Incur pursuant to the provisions of this Consent Decree, including but not limited to costs Incurred to enforce the Consent Decree (including dispute resolution), the costs incurred pursuant to Sections X (Review of Response Actions), XIII (Access and Land/Water Use Restrictions) (including the cost of attorney time and monies paid to secure access and/or to secure or implement land/water use restrictions, including the amount of just compensation), XIX (Emergency Response), and Paragraph 178 (Work Takeover), non-field work costs incurred for preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action (including responding to public comments thereto), and costs Incurred to develop plans or reports pursuant to the provisions of this Consent Decree that do not fall within the categories of costs excluded from U.S. Future Response Costs by the last sentence of this definition, together with any accrued Interest. U.S. Future Response Costs shall also include all U.S. Interim Response Costs and costs Incurred in connection with the Category 2 Designated Fill Properties after March 31, 1999. U.S. Future Response Costs shall not include U.S. Oversight Costs, U.S. Future Rest of River Capped Response Costs, U.S. Future

Additional Sampling Costs, U.S. Rest of River Oversight Costs, U.S. Post Removal/Groundwater Monitoring Costs, or the U.S. 1½ Mile Reach Removal Action Costs.

"U.S. Future Rest of River Capped Response Costs" shall mean all costs EPA Incurs after March 31, 1999, including but not limited to direct and indirect costs, in connection with studying or otherwise investigating the Rest of River and/or all field work to support the preparation, development, and selection of the Rest of River Remedial Action, all prior to the modification of the Reissued RCRA Permit to select the Rest of River Remedial Action pursuant to Paragraph 22.p of this Consent Decree. U.S. Future Rest of River Capped Response Costs shall include, but not be limited to, costs that EPA Incurs for sampling and analysis in the Rest of River, performance of human health risk assessment(s), performance of ecological risk assessment(s), modeling, data management, preparation of reports, peer input, peer review, general contractor costs (including, for example, administrative record development, project administration, project management, health and safety), interagency and intergovernmental agreement costs (including costs of ATSDR and Army Corps of Engineers), and costs of maintaining a Field Office, insofar as such costs are Incurred for the activities described in the first sentence of this definition. U.S. Future Rest of River Capped Response Costs shall not include U.S. Oversight Costs, U.S. Rest of River Oversight Costs, U.S. Post-Removal/Groundwater Monitoring Costs, U.S. Future Response Costs, U.S. Future Additional Sampling Costs, U.S. Interim Response Costs, or U.S. 1½ Mile Reach Removal Action Costs.

"U.S. Interim Response Costs" or "Interim Response Costs" shall mean all costs, including direct and indirect costs, (a) Incurred or paid by EPA and DOJ in connection with the Site between March 31, 1999, and the effective date of this Consent Decree, or (b) of work performed prior to the effective date of this Consent Decree but paid by EPA or DOJ after that date. U.S. Interim Response Costs shall not include U.S. Oversight Costs, U.S. Future Rest of River Capped Response Costs, U.S. Future Additional Sampling Costs, or U.S. 1 ½ Mile Reach Removal Action Costs.

"U.S. Oversight Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that EPA Incurs after March 31, 1999, and prior to either the date of the last Certification of Completion issued for the non-groundwater/NAPL-related Removal Actions Outside the River or the date of the Certification of Completion for the Upper ½ Mile Reach Removal Action, whichever is later (or, for costs of activities described in subclause (d) herein, prior to the date of the modification of the Reissued RCRA Permit to select the Rest of River Remedial Action pursuant to Paragraph 22.p), in conducting the following activities: (a) reviewing plans, studies, reports and other items related to any Removal Actions Outside the River (including those that do not relate to groundwater/NAPL and those that relate to groundwater/NAPL) and the Upper ½ Mile Reach Removal Action; (b) verifying the Work for such Removal Actions; (c) otherwise overseeing Settling Defendant's compliance with this Consent Decree relating to such Removal Actions; and (d) reviewing proposals, reports, studies and other deliverables submitted by Settling Defendant under the Reissued RCRA Permit, conducting shadow or supplemental studies for the studies to be conducted by Settling

Defendant under that Permit, and otherwise overseeing Settling Defendant's activities under that Permit, all prior to the modification of that Permit to select the Rest of the River Remedial Action pursuant to Paragraph 22.p of this Consent Decree. U.S. Oversight Costs shall include, but not be limited to, payroll costs, contractor costs, travel costs, laboratory costs, community relations costs, technical support costs, interagency and intergovernmental agreement costs (including ATSDR and U.S. Army Corps of Engineers costs), costs of maintaining a Field Office, data management costs, and modeling costs, insofar as such costs are Incurred for the activities described in the first sentence of this definition. U.S. Oversight Costs shall not include U.S. Rest of River Oversight Costs, U.S. Post-Removal/Groundwater Monitoring Costs, U.S. Future Response Costs, U.S. Future Rest of River Capped Response Costs, U.S. Future Additional Sampling Costs, U.S. Interim Response Costs, or U.S. 1½ Mile Reach Removal Action Costs.

"U.S. Past Response Costs" or "Past Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that EPA and DOJ paid at or in connection with the Site through March 31, 1999, plus all costs paid at or in connection with the Designated Fill Properties through March 31, 1999, plus Interest on all such costs which have accrued pursuant to 42 U.S.C. § 9607(a) through the lodging of this Consent Decree.

"U.S. Post-Removal/Groundwater Monitoring Costs" shall mean all costs Incurred by EPA after either the date of the last Certification of Completion issued for the non-groundwater/NAPL-related Removal Actions Outside the River or the date of

the Certification of Completion for the Upper ½ Mile Reach Removal Action, whichever is later, in overseeing: (a) Post-Removal Site Control activities for the non-groundwater/NAPL-related Removal Actions Outside the River and the Upper ½ Mile Reach Removal Action; and (b) any remaining activities that are part of the Removal Actions Outside the River that relate to groundwater/NAPL. U.S. Post-Removal/Groundwater Monitoring Costs shall include, but not be limited to, payroll costs, contractor costs, travel costs, laboratory costs, community relations costs, technical support costs, interagency and intergovernmental agreement costs (including ATSDR, and U.S. Army Corps of Engineers costs), costs of maintaining a Field Office, data management costs, and modeling costs, insofar as such costs are Incurred for the activities described in the first sentence of this definition. U.S. Post-Removal/Groundwater Monitoring Costs shall not include U.S. Oversight Costs, U.S. Rest of River Oversight Costs, U.S. Future Response Costs, U.S. Future Rest of River Capped Response Costs, U.S. Future Additional Sampling Costs, U.S. Interim Response Costs, or U.S. 1½ Mile Reach Removal Action Costs.

"U.S. Rest of River Oversight Costs" shall mean all costs related to the Rest of River Remedial Action Incurred by EPA after the modification of the Reissued RCRA Permit to select the Rest of River Remedial Action pursuant to Paragraph 22.p of this Consent Decree, including but not limited to, direct and indirect costs that EPA Incurs in connection with the following activities: reviewing plans, studies, reports, and other items related to the design, implementation, and Operation and Maintenance of the Rest of River Remedial Action pursuant to this Consent Decree, verifying the Work,

sampling and analysis or performing studies for such purposes, or otherwise overseeing the Rest of River Remedial Action under this Consent Decree. U.S. Rest of River Oversight Costs shall include, but not be limited to, payroll costs, contractor costs, travel costs, laboratory costs, community relations costs, technical support costs, interagency and intergovernmental agreement costs (including costs of ATSDR and Army Corps of Engineers), costs of maintaining a Field Office, data management costs, and modeling costs, insofar as such costs are Incurred for the activities described in the first sentence of this definition. U.S. Rest of River Oversight Costs shall not include U.S. Oversight Costs, U.S. Future Response Costs, U.S. Future Rest of River Capped Response Costs, U.S. Post-Removal/Groundwater Monitoring Costs, U.S. Future Additional Sampling Costs, U.S. Interim Response Costs, or U.S. 1 ½ Mile Reach Removal Action Costs.

"Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any "oil and/or hazardous material" under M.G.L. c. 21E, section 2.

"Work" shall mean all activities Settling Defendant is required to perform under this Consent Decree, except those required by Section XXXI (Retention of Records).

V. GENERAL PROVISIONS

5. Objectives of the Parties. The objectives of the Parties in entering into this Consent Decree are to protect public health, welfare and the environment at the

22. Rest of the River: Additional studies of the Rest of the River and the selection of a Remedial Action for the Rest of the River shall be conducted in accordance with the Reissued RCRA Permit and the following provisions.

a. Upon EPA's notification to Settling Defendant to move forward with completion of the RCRA Facility Investigation ("RFI") Report, as provided in the Reissued RCRA Permit, Settling Defendant shall complete and submit to EPA an RFI Report on the Rest of the River in accordance with, and on the schedule provided in, the Reissued RCRA Permit. Settling Defendant shall submit copies of that RFI Report to the Trustees, the State and Connecticut.

b. EPA will conduct the human health and ecological risk assessments of the Rest of the River. EPA has provided a scope of work for the risk assessments and supporting activities to Settling Defendant and other interested persons for review and discussion.

c. EPA's human health risk assessment will be subject to peer review by a panel of independent risk assessment experts, in accordance with the EPA Science Policy Council January 1998 Peer Review Handbook, EPA 100-B-98-001, and the Protocols set forth in Appendix J.

(i) The human health risk assessment peer review panel will be selected by a Selection Contractor in accordance with the following procedures. A neutral contractor ("the Selection Contractor") will be selected by agreement between EPA and Settling Defendant within 30 days of initiation of discussions relating to such peer review. If EPA and Settling Defendant do not reach agreement within 30 days of

initiation of discussions, EPA shall seek the decision of the Chair of EPA's Science Advisory Board or other agreed-upon scientific body or expert. EPA's decision to seek the decision of the Chair of EPA's Science Advisory Board or other agreed-upon scientific body or expert, and the selection of the Selection Contractor by the Chair or other agreed-upon scientific body or expert, shall not be subject to dispute resolution. The Selection Contractor shall accept nominations for participants in the peer review panel from any interested person for a period of 30 days. The Selection Contractor shall thereafter evaluate the nominations of all interested persons (including Settling Defendant) and other candidates it identifies for the peer review panel as it sees fit against the criteria identified in the charge for review, and select peer review panel members with the required technical expertise, free from direct and substantial conflict of interest. The affiliation of nominations will remain "blind" to the Selection Contractor.

(ii) The human health risk assessment peer review panel will review EPA's human health risk assessment to evaluate: (1) consistency with EPA policy and guidance; (2) the exposure scenarios and parameters used; (3) the toxicity assessment; (4) the risk calculations; and (5) the report conclusions. Settling Defendant and other interested persons will be provided an opportunity to submit written comments and make an oral presentation to the peer review panel in accordance with the Protocols set forth in Appendix J.

d. EPA's ecological risk assessment will be subject to peer review by a panel of independent risk assessment experts, in accordance with the EPA Science Policy Council January 1998 Peer Review Handbook, EPA 100-B-98-001, and the

Protocols set forth in Appendix J. The ecological risk assessment peer review panel will be selected by a Selection Contractor following the same selection procedures described in Paragraph 22.c.(i). The ecological risk assessment peer review panel will review EPA's ecological risk assessment to evaluate: (1) consistency with EPA policy and guidance; (2) the protocols applied in the studies used in the risk assessment; (3) interpretation of information generated from the studies included in the risk assessment, and (4) the report conclusions. Settling Defendant and other interested persons will be provided an opportunity to submit written comments and make an oral presentation to the peer review panel in accordance with the Protocols set forth in Appendix J.

e. Nothing herein shall prohibit Settling Defendant from conducting its own human health and/or ecological risk assessments and submitting reports thereon as a component of its comments to EPA on EPA's human health and ecological risk assessments.

f. Following EPA's approval of the RFI Report and EPA's determination that the peer review processes for both the human health and the ecological risk assessments have been completed, Settling Defendant shall develop and submit to EPA an Interim Media Protection Goals ("IMPG") Proposal, proposing IMPGs, in accordance with, and on the schedule provided in, the Reissued RCRA Permit. Settling Defendant shall submit copies of that IMPG Proposal to the Trustees, the State and Connecticut.

g. EPA will conduct modeling of the fate, transport, and bioaccumulation of PCBs in the Rest of the River. The models used will include a

hydrodynamics component, a sediment transport component, a PCB fate and transport component, and a bioaccumulation component. EPA and Settling Defendant will share with each other critical components of all working tools and data collected and/or used in modeling activities. A working group of technical staff and contractors from EPA and Settling Defendant has been assembled to have an ongoing dialogue on the technical aspects of model construction to simulate the Housatonic River, collection of information for input to the models, model calibration, model validation, and the types of questions and uncertainties that will be addressed by the model. EPA has provided draft sampling plans and will provide draft modeling frameworks to the working group members, the State, Connecticut and the Trustees for review and discussion.

h. EPA's modeling activities will be subject to peer review by a panel of independent modeling experts, in accordance with the EPA Science Policy Council January 1998 Peer Review Handbook, EPA 100-B-98-001, and the Protocols set forth in Appendix J. The modeling peer review panel will be selected by a Selection Contractor following the same procedures described in Paragraph 22.c.(i). The modeling peer review panel will review EPA's modeling activities at appropriate intervals during the modeling process, which will include review of at least the following EPA documents: (1) draft modeling frameworks and description of data needs; (2) model calibration report; and (3) model validation report. In this multi-staged review, the modeling peer review panel will address a number of questions, including but not limited to the following:

(i) Do the modeling frameworks include the significant processes affecting PCB fate, transport, and bioaccumulation in the Housatonic River,

and are the descriptions of those processes sufficiently accurate to represent the hydrodynamics, sediment transport, PCB fate and transport, and PCB bioaccumulation in the Housatonic River?

(ii) Are the available data sufficient for the development of acceptable models of hydrodynamics, sediment transport, PCB fate and transport, and PCB bioaccumulation in the Housatonic River?

(iii) Are the processes in the final models calibrated and validated to the extent necessary for accurately predicting future conditions?

(iv) How sensitive are the models to uncertainties in the descriptions of the relevant processes, and are the methodologies employed to evaluate the sensitivity of the model to descriptions of the relevant processes and to evaluate the uncertainties of model predictions sufficient?

In addition, the working group of technical staff and contractors from EPA and Settling Defendant, described in Paragraph 22.g above, may suggest additional questions to be posed to the modeling peer review panel, for consideration by EPA in developing any subsequent changes to the model. Settling Defendant and other interested persons will be provided an opportunity to submit written comments and to make an oral presentation to the modeling peer review panel, in accordance with the Protocols set forth in Appendix J at each stage of the peer review process.

i. Nothing herein shall prohibit Settling Defendant from conducting its own modeling or other studies of the Rest of the River and submitting reports thereon as a component of its comments to EPA on EPA's modeling activities.

j. Following EPA's approval of IMPGs, EPA's determination of the completion of the peer review processes on validation of EPA's model, and receipt by Settling Defendant of EPA's model (including its equations and results) from EPA, Settling Defendant shall develop and submit to EPA a Corrective Measures Study ("CMS") Proposal in accordance with, and on the schedule provided in, the Reissued RCRA Permit. Settling Defendant shall submit copies of that CMS Proposal to the Trustees, the State and Connecticut.

k. Following EPA's approval of the CMS Proposal, Settling Defendant shall carry out the CMS and shall develop and submit to EPA a CMS Report in accordance with, and on the schedule provided in, the Reissued RCRA Permit, or on an alternative schedule provided in the approved, conditionally approved or modified CMS Proposal. Settling Defendant shall submit a copy of that CMS Report to the State, the Trustees and Connecticut.

l. EPA expressly reserves the right to undertake any studies it deems necessary for the Rest of the River to shadow or supplement studies undertaken by Settling Defendant.

m. The RFI Report, IMPG Proposal, CMS Report, EPA's report(s) containing the human health and ecological risk assessments and EPA's modeling activities, the reports of the peer review panels on the human health and ecological risk assessments and on modeling, all comments submitted to EPA and those panels, and other documents considered or relied on by EPA will become part of the administrative record for the Rest of the River Remedial Action.

n. Upon satisfactory completion of the CMS Report in accordance with the Reissued RCRA Permit, EPA will issue a Statement of Basis and a draft modification to the Reissued RCRA Permit, which will set forth the proposed Remedial Action for the Rest of the River and O&M, to be implemented by Settling Defendant pursuant to CERCLA and this Consent Decree. EPA will propose this draft permit modification pursuant to the Reissued RCRA Permit and EPA's regulations on RCRA permit modifications (40 C.F.R. § 270.41 and Part 124), including the provisions requiring public notice and an opportunity for public comment on the draft permit modification.

o. Following the close of the public comment period, EPA will notify Settling Defendant of its intended final decision on the modification of the Reissued RCRA Permit. Settling Defendant shall have the right, within 30 days of such notification, to invoke administrative dispute resolution pursuant to Paragraph 435 of Section XXIV (Dispute Resolution) of this Consent Decree with respect to such notification.

p. Upon completion of such dispute resolution process (if invoked) or after the 30 day period from EPA's notification referred to in Paragraph 22.o (if Settling Defendant does not invoke dispute resolution), EPA will issue a modification of the Reissued RCRA Permit, obligating Settling Defendant to perform the selected Rest of the River Remedial Action and O&M, which performance shall be pursuant to CERCLA and this Consent Decree.

q. Settling Defendant shall perform the selected Rest of the River Remedial Action and O&M set forth in EPA's permit modification decision referred to in

Paragraph 22.p unless Settling Defendant files a petition for review of such permit modification decision in the EPA Environmental Appeals Board pursuant to 40 C.F.R. § 124.19 and Paragraph 141.b of Section XXIV (Dispute Resolution) of this Consent Decree, or unless EPA's permit modification decision is otherwise stayed pursuant to 40 C.F.R. Part 124. The decision of the EPA Environmental Appeals Board on such a petition for review shall be subject to appeal by Settling Defendant to the United States Court of Appeals for the First Circuit pursuant to Section 7006(b) of RCRA. Any proceedings in the EPA Environmental Appeals Board and the United States Court of Appeals for the First Circuit shall be governed by applicable law, the rules of such Board and Court, and the provisions of Paragraph 141.b of Section XXIV of this Consent Decree, except that, for work subject to such dispute, the United States stipulates to a stay of the effectiveness of the modified permit for those portions subject to the dispute through the conclusion of the initial appeal referenced in this subparagraph 22.q by Settling Defendant to the United States Court of Appeals for the First Circuit pursuant to Section 7006(b) of RCRA. The United States and Settling Defendant shall jointly move the Court of Appeals for an expedited briefing schedule and expedited consideration of the petition for review.

r. In the event that Settling Defendant invokes dispute resolution as provided in Paragraph 22.q, EPA may proceed with design work on the selected Rest of River Remedial Action during the pendency of such appeals. Prior to proceeding with design work under this subparagraph, EPA shall give written notice to Settling Defendant and give Settling Defendant the opportunity to implement such design work.

95. Future Response Costs.

a. U.S. Future Response Costs. Settling Defendant shall reimburse the EPA Hazardous Substance Superfund for all U.S. Future Response Costs and any costs Incurred or paid in connection with the Designated Fill Properties listed in Category 2 in Appendix T after March 31, 1999 not inconsistent with the National Contingency Plan. The Settling Defendant shall make all payments required by this Paragraph in accordance with the procedures set forth in Paragraph 94.a or in the form of a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund" and referencing the GE-Pittsfield/Housatonic River Special Account, EPA Region I and Site/Spill ID #01-67, the DOJ case number 90-11-3-1479, and the name and address of the party making payment. If check(s) are used, Settling Defendant shall send the check(s) to EPA Region I, Attn: Superfund Accounting, P.O. Box 360197M, Pittsburgh, PA 15251 and shall send copies of the check(s) to the United States as specified in Section XXXII (Notices and Submissions) and Michael Manlogon, Financial Management Officer, EPA Region I, One Congress Street, Suite 1100, Boston, MA 02114-2023.

b. DOI Future Costs. Settling Defendant shall reimburse DOI for all DOI Future Costs not inconsistent with the National Contingency Plan. DOI will send Settling Defendant a bill requiring payment. The bill shall include

(i) For any DOI employee labor, employee travel, and indirect costs:

(A) a cost summary which lists labor costs by employee and the number of hours charged for each relevant pay period;

(ii) Each bill shall only be required to include a detailed spreadsheet, or document with comparable information, listing each employee, the hours worked during each pay period charged, and indirect costs/benefits/overhead rate charged for the employees; and contractor reports or other documents which describe the work performed, hours billed, and other expenses charged by those contractors whose costs do not appear on the detailed spreadsheets. In addition, each billing package shall include a certification that the costs included represent only costs Incurred in connection with the Site, and that the costs detailed on the spreadsheet, or comparable document, were Incurred as Massachusetts Trustee Future Response Costs, and do not include costs previously or separately billed to Settling Defendant.

f. Connecticut Future Costs. In full settlement of all Connecticut Future Costs, Settling Defendant shall pay to the State of Connecticut $90,000. Such payment shall be made within 30 days of the effective date of this Consent Decree by electronic funds transfer to Fleet Bank as specified in Paragraph 94.e of this Consent Decree.

96. U.S. Future Rest of River Capped Response Costs. Settling Defendant shall reimburse the EPA Hazardous Substance Superfund for U.S. Future Rest of River Capped Response Costs as follows:

a. For all such costs not exceeding $11 million, Settling Defendant shall pay 100 percent of such costs.

b. For all such costs greater than $11 million and not exceeding $18 million, Settling Defendant shall pay 50 percent of such costs.

Settling Defendant shall have no obligation to pay any portion of U.S. Future Rest of River Capped Response Costs that exceed $18 million. Payment of U.S. Future Rest of River Capped Response Costs shall be made to the GE-Pittsfield/Housatonic River Special Account in accordance with the procedures in Paragraph 95.a (U.S. Future Response Costs) and Paragraph 100.

97. U.S. Future Additional Sampling Costs. Settling Defendant shall reimburse the EPA Hazardous Substance Superfund for all U.S. Future Additional Sampling Costs until Settling Defendant's payments equal $400,000. Thereafter, Settling Defendant shall have no further obligation to pay any portion of U.S. Future Additional Sampling Costs. Payment shall be made to the GE-Pittsfield/Housatonic River Special Account in accordance with the procedures in Paragraph 95.a (U.S. Future Response Costs) and Paragraph 100.

98. Oversight Costs. In addition to its obligation to pay the costs set forth in Paragraphs 94-97, Settling Defendant shall pay EPA, the Trustees, and the State's Oversight Costs in the amounts set forth herein. Settling Defendant's obligation to reimburse EPA, the Trustees, or the State's Oversight Costs shall be up to, and shall not exceed, the following:

a. U.S. Oversight Costs. Settling Defendant shall reimburse U.S. Oversight Costs as follows:

(i) For all such costs not exceeding $7 million, Settling Defendant shall pay 100 percent of such costs.

(ii) For all such costs greater than $7 million and not exceeding $9 million, Settling Defendant shall pay 75 percent of the costs greater than $7 million.

(iii) For all such costs greater than $9 million and not exceeding $12 million, Settling Defendant shall pay 50 percent of the costs greater than $9 million.

(iv) For all such costs greater than $12 million and not exceeding $15 million, Settling Defendant shall pay 33 1/3 percent of the costs greater than $12 million.

Settling Defendant shall have no obligation to pay any portion of U.S. Oversight Costs that exceed $15 million (which costs shall not be recoverable from Settling Defendant). Payment shall be made to the GE-Pittsfield/Housatonic River Special Account in accordance with the procedures in Paragraphs 95.a (U.S. Future Response Costs) and 100.

b. U.S. Rest of River Oversight Costs. Settling Defendant shall reimburse U.S. Rest of River Oversight Costs as follows:

(i) If the estimated cost of the Rest of River Remedial Action (as set forth in the final modification of the Reissued RCRA Permit following all appeals and remands as provided in Paragraph 22) is less than or equal to $100 million, Settling Defendant shall pay 100% of the U.S. Rest of River Oversight Costs as Incurred until its total payments equal 12.5% of the estimated Rest of River Remedial Action costs.

(ii) If the estimated cost of the Rest of River Remedial Action (as set forth in the final modification of the Reissued RCRA Permit following all appeals and remands as provided in Paragraph 22) is greater than $100 million, Settling Defendant shall pay: (A) 100% of the U.S. Rest of River Oversight Costs as Incurred until its total payments equal

$12.5 million; plus (B) 7.5% of the estimated costs of the U.S. Rest of River Remedial Action costs over $100 million, as such costs are Incurred. Settling Defendant shall have no further obligation to pay any portion of U.S. Rest of River Oversight Costs after it has made cumulative payments for such costs of up to $25 million.

(iii) Within 30 days after EPA issues the final modification of the Reissued RCRA Permit following all appeals and remands as provided in Paragraph 22, GE may invoke the provisions of Section XXIV (Dispute Resolution) to dispute the estimated cost of the Rest of River Remedial Action for purposes of this Paragraph. The provisions of Paragraph 136 of Section XXIV (Dispute Resolution) shall apply to any such dispute.

(iv) Payment shall be made to the GE-Pittsfield/Housatonic River Special Account in accordance with the procedures in Paragraphs 95.a (U.S. Future Response Costs) and 100.

c. DOI Oversight Costs. In addition to the payment made pursuant to Paragraph 94.b (DOI Past Assessment Costs/DOI Oversight Costs), Settling Defendant shall pay DOI for DOI Oversight Costs in two additional payments totaling $275,000.00. No later than one year from the date that this Consent Decree is entered, Settling Defendant shall remit $150,000.00 to DOI in the manner set forth in Paragraph 95.b (DOI Future Costs). No later than two years from the date that this Consent Decree is entered, Settling Defendant shall remit $125,000.00 to DOI in the manner set forth in Paragraph 95.b (DOI Future Costs).

d. NOAA Oversight Costs. In addition to the payment made pursuant to Paragraph 94.c (NOAA Past Assessment Costs/NOAA Oversight Costs), Settling

River or the date of the Certification of Completion for the Upper 1/2 Mile Reach Removal Action, whichever is later, but in no event more than $250,000 of such costs for any such twelve month period. Payment shall be made to the GE-Pittsfield/Housatonic River Special Account in accordance with the procedures in Paragraphs 95.a (U.S. Future Response Costs) and 100.

100. The United States will send Settling Defendant on a periodic basis a bill requiring payment of any amounts due to the United States under Paragraphs 95 through 99 for payment of U.S. Future Response Costs, U.S. Future Rest of River Capped Response Costs, U.S. Future Additional Sampling Costs, U.S. Oversight Costs, U.S. Rest of River Oversight Costs, and U.S. Post-Removal/Groundwater Monitoring Costs. The United States will use best efforts to send Settling Defendant a bill at least annually. Such bill shall list separately the amounts due for each category of costs identified in Paragraphs 95 through 99, and for each such category, shall include the following, provided that confidential business information protected by law shall be released only subject to an appropriate confidentiality agreement or order to the extent allowed by law:

a. For EPA extramural costs (e.g. contractor, state cooperative agreement, and miscellaneous/purchase order costs), except for interagency agreement costs:

(i) an itemized cost summary report, listing, for each contractor or other payee, the date and amount of each payment (including any allocated amount); the date and number (if any) of each invoice, voucher or comparable billing document; and

the number of the work assignment or comparable task order (if any) for which each payment was made; and

(ii) a copy of the technical component(s) of each relevant work assignment, technical directive document, technical instruction document, or comparable task order to each contractor or other payee, except that if such document has been provided with a previous bill, reference to such document by number shall be sufficient; and

(iii) a copy of each relevant progress report or comparable document received by EPA (if any) for the work billed that describes the work performed or, if EPA has no such documents, a description of the work performed.

b. For EPA extramural costs incurred pursuant to an interagency agreement with ACOE:

(i) an itemized cost summary report, listing the date and amount of each payment by EPA to ACOE; the date and number (if any) of each invoice, voucher or comparable billing document; and the number of the work assignment or comparable task order issued to ACOE (if any) for which each payment was made; and

(ii) a copy of the technical component(s) of each relevant work assignment, technical directive document, technical instruction

document, or comparable task order issued by EPA to ACOE or by ACOE to a contractor under direct contract to ACOE for work performed pursuant to an interagency agreement between EPA and ACOE, except that if such document has been provided with a previous bill, reference to such document by number shall be sufficient; and

(iii) a copy of each relevant progress report or comparable document prepared by ACOE (or by a contractor under direct contract to ACOE for work performed pursuant to an interagency agreement between EPA and ACOE) and received by EPA (if any) for the work billed, that describes the work performed, or if EPA and ACOE have no such documents, a description of the work performed.

c. For EPA extramural costs incurred pursuant to an interagency agreement between EPA and any other United States agency except for ACOE and DOJ:

(i) an itemized cost summary report, listing the date and amount of each payment by EPA to the relevant agency; the date and number (if any) of each invoice, voucher or comparable billing document; and the number of the work assignment or comparable task order issued to the relevant agency (if any) for which each payment was made; and

(ii) work assignments, technical instruction documents, technical directive documents, progress reports, or comparable documents describing the work performed by the relevant agency for which the costs were incurred, or if neither EPA nor the relevant agency can locate such documents after reasonable inquiry, a description of the work performed.

d. For EPA intramural costs (i.e. employee labor, employee travel, and indirect costs), cost summary reports, including:

(i) an itemized listing of labor costs by employee, including for each relevant pay period the number of hours charged and the hourly rate; and

(ii) a list of action codes included in labor charges for each cost category, or a brief explanation of any other method used to assign labor hours to each cost category; and

(iii) a statement of the indirect cost rate(s) applied and an itemized listing of indirect costs; and

(iv) an itemized listing of travel costs including for each travel voucher the amount, the name of the travelling employee, and the travel voucher number.

e. A summary listing direct labor, other direct costs, and indirect costs Incurred by the Department of Justice (if any).

f. If applicable, a brief explanation of any allocation methodology used to allocate costs Incurred in support of tasks included in more than one cost category. If the United States incurs such costs (for example, costs of renting a field office that is used for tasks included in more than one cost category), the United States may allocate such costs among cost categories using any reasonable allocation method consistent with general cost accounting standards.

g. A statement that the costs included on the bill are compiled from the EPA or DOJ accounting system and represent only costs incurred in connection with the Site, for the appropriate cost category, that have not been previously billed (except for any listing of an unpaid balance from a previous bill).

h. No additional documentation, beyond that specified in subparagraphs a. through g. above, shall be required to establish the amounts Incurred. Settling Defendant shall make all payments within 60 days (or such longer period specified by EPA in the bill) of Settling Defendant's receipt of each bill requiring payment, except as otherwise provided in Paragraph 101. If the United States sends Settling Defendant a bill that demands payment for costs (other than past due amounts from a previous bill) that the United States Incurred over a period of time greater than twelve months, and Settling Defendant, before the time in which payment must be made expires, requests an extension of the time to pay, the United States shall not unreasonably refuse consent to a reasonable extension of time.

101. Settling Defendant may contest payment of any costs under Paragraphs 95-99 (excluding Paragraph 98.c, d, and f) if Settling Defendant determines that the

United States, the Trustees, or the State has made an accounting error or if Settling Defendant alleges that a cost item that is included represents costs that are inconsistent with the NCP or MCP, as applicable. Settling Defendant may not contest payment of 1 ½ Mile Reach Removal Action Costs on the basis that a cost item that is included represents costs that are inconsistent with the NCP. Settling Defendant may contest payment of its share of 1 ½ Mile Reach Removal Action Costs as follows:

a. For response costs, Settling Defendant may contest payment of such costs if it determines that EPA has made an accounting error (including whether a cost item is not a 1 ½ Mile Reach Removal Action Cost).

b. For costs of Restoration Work in the 1 ½ Mile Reach, as described in Paragraph 118.b, Settling Defendant may contest payment of such costs if it determines that EPA has made an accounting error (including whether a cost item is not a 1 ½ Mile Reach Removal Action Cost) or if Settling Defendant alleges that a cost item is for work that goes beyond the scope (including both the nature and extent) of the Restoration Work described in Paragraph 118.b of this Consent Decree and any applicable Work Plans.

Settling Defendant also may contest payment of costs on the basis that the amount billed exceeds the amount to be paid by Settling Defendant pursuant to the relevant provision of Paragraphs 95-99. Settling Defendant also may contest payment on the basis that an amount billed was not allocated to the correct cost category under Paragraphs 95-99; provided, however, that if the United States, the State, or the court (as applicable) agrees that such a misallocation occurred, the cost may be re-billed

pursuant to the correct provision of Paragraphs 95-99, if any. Settling Defendant also may contest payment on the basis that an amount billed was not within the definition of any cost category for which payment is required under Paragraphs 95-99. Any objection to costs shall be made in writing no later than the date on which payment of the bill is required under this Section XX and must be sent to the United States (if the United States' costs are being disputed), the Trustee(s) (if the Trustee(s)' costs are being disputed), or the State (if the State's costs are being disputed) pursuant to Section XXXII (Notices and Submissions). Any such objection shall specifically identify the contested costs and the basis for objection. In the event of an objection, Settling Defendant shall, within the time specified in Paragraphs 100.h, 95.b(iv), 95.c(iv), or 95.d(v) (as applicable), pay all uncontested costs to the United States, the Trustees, or the State in the manner described in Paragraphs 95-100. Settling Defendant shall send to the United States, the Trustees, and Massachusetts (as applicable), as provided in Section XXXII (Notices and Submissions), a copy of the transmittal letter and check paying the uncontested costs. To contest payment of any costs, the Settling Defendant shall initiate the Dispute Resolution procedures in Section XXIV (Dispute Resolution). If the United States, the Trustees, or Massachusetts prevails in the dispute, within 15 days of the resolution of the dispute, the Settling Defendant shall pay the sums due (with accrued Interest) to the United States, the Trustees, or Massachusetts, in the manner described in Paragraphs 95-100. If Settling Defendant prevails concerning any aspect of the contested costs, Settling Defendant shall pay that portion of the costs (plus associated accrued Interest) for which it did not prevail to the United States, the Trustees, or

Massachusetts. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XXIV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Settling Defendant's obligation to reimburse the United States, the Trustees, and Massachusetts for the costs set forth in Paragraphs 95-99.

102. a. For payments required to be made by Settling Defendant pursuant to this Consent Decree, where Interest is not specified in the particular provision, no interest from the date of lodging or entry of this Consent Decree shall accrue or be owing on the amount specified.

b. In the event that the payments required by Paragraph 94 (other than 94.d(ii)) are not made within 30 days of the effective date of this Consent Decree, or the payment required by Paragraph 94.d(ii) (State Interim Costs) is not made within 60 days of receipt of a bill or 30 days of the effective date of this Consent Decree (whichever is later), or the payments required by Paragraphs 95-99 are not made within 60 days of Settling Defendant's receipt of the bill (or such longer time as is provided for pursuant to those Paragraphs), Settling Defendant shall pay Interest on the unpaid balance. Such Interest shall begin to accrue on the date of the bill. The Interest shall accrue through the date of Settling Defendant's payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to Plaintiffs by virtue of Settling Defendant's failure to make timely payments under this Section. Settling Defendant shall make all payments required by this Paragraph in the manner described in Paragraph 95.

performance of any other obligation. If EPA, after a reasonable opportunity for review and comment by the State, and Connecticut and the Federal Trustees as appropriate, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Settling Defendant in writing of its decision. If EPA, after a reasonable opportunity for review and comment by the State, and Connecticut and the Federal Trustees as appropriate, agrees that the delay is attributable to a force majeure event, EPA will notify Settling Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

131. If Settling Defendant elects to invoke the dispute resolution procedures set forth in Section XXIV (Dispute Resolution), it shall do so no later than 15 days after receipt of EPA's notice. In any such proceeding, Settling Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Settling Defendant complied with the requirements of Paragraphs 128 and 129 above. If Settling Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Settling Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

XXIV. DISPUTE RESOLUTION

132. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve

disputes between EPA and Settling Defendant, between the Trustees and Settling Defendant, between Connecticut and Settling Defendant, between the State and Settling Defendant, between the Trustees and PEDA, between EPA and PEDA, between EPA and the City, or between the State and PEDA and/or the City arising under or with respect to this Consent Decree. The procedure for resolution of disputes which involve EPA are governed by Paragraphs 133-139 and 141. The State may participate in such dispute resolution proceedings to the extent specified in those Paragraphs. Disputes exclusively between the State and Settling Defendant are governed by Paragraph 140. Disputes exclusively between the Trustees and Settling Defendant are governed by Paragraph 142. Disputes exclusively between Connecticut and Settling Defendant are governed by Paragraph 143. Disputes between the Trustees and PEDA are governed by Paragraph 144. Disputes between EPA and PEDA are governed by Paragraph 145.a. Disputes between EPA and the City are governed by Paragraph 145.b. Disputes between the State and PEDA and/or the City are governed by Paragraphs 145.c and 145.d. However, the procedures set forth in this Section shall not apply to actions by the United States, the Trustees, Connecticut or the State to enforce obligations of Settling Defendant that have not been disputed in accordance with this Section.

133. Any dispute which arises under or with respect to this Consent Decree shall in the first instance be the subject of informal negotiations between the parties to the dispute. The period for informal negotiations shall not exceed 20 days from the time the dispute arises, unless it is modified by written agreement of the parties to the dispute.

The dispute shall be considered to have arisen when one party sends the other parties a written Notice of Dispute.

134. Mediation

a. Initiation of ADR. At any time during the informal dispute resolution period, any party to the dispute may propose the use of a mediator to assist in resolving the dispute. Upon the written agreement of the parties to the dispute, the period for informal dispute resolution may be extended for the purpose of mediating the dispute. Formal dispute resolution, as governed by the procedures set forth in Paragraphs 135 to 137, shall commence immediately upon the termination of the informal dispute resolution period.

b. Decision to Continue ADR. The decision to continue mediation shall be in the sole discretion of each party.

c. Costs of ADR. The parties agree that they will share equitably the costs of mediation, subject to the availability of United States, Connecticut or State funds for this purpose. The ability of the United States, Connecticut and the State to share the costs of mediation will be determined by each agency in its sole discretion and shall not be subject to dispute resolution or judicial review. If an agency determines that no mediation funding is available, Settling Defendant shall have the option to cover all of the mediation costs or to request the services of a trained mediator from EPA's in-house ADR program or any other dispute resolution professional whose services may be available to the parties at no cost or to withdraw from or not pursue mediation.

d. Mediator List. The Parties agree that they shall, after this Consent Decree is lodged, prepare a list of mediators agreeable to the Parties from which a mediator may be selected. This list shall not preclude any Party from proposing to add a mediator or mediators to the list or from proposing a different mediator for a specific dispute.

e. Confidentiality. The Parties agree that participants in mediated discussions pursuant to this Section shall execute a confidentiality agreement in the form attached as Appendix S to this Consent Decree.

135. a. In the event that the Parties cannot resolve a dispute by informal negotiations or mediation under the preceding Paragraphs of this Section, then the position advanced by EPA, after reasonable opportunity for review and comment by the State, shall be considered binding unless, within 14 days after the conclusion of the informal negotiation period, Settling Defendant invokes the formal dispute resolution procedures of this Section by serving on the United States and the State a written Statement of Position on the matter in dispute, including, but not limited to, any factual data, analysis or opinion supporting that position and any supporting documentation relied upon by the Settling Defendant. Settling Defendant may request EPA to grant an extension of this 14-day period to serve its Statement of Position. If such request is for an additional seven days or less, EPA shall not unreasonably withhold approval of such request. The granting of any request for a longer extension of time to file the Statement of Position shall be within EPA's discretion. Settling Defendant's Statement of Position shall specify Settling Defendant's position as to whether formal dispute resolution should proceed under Paragraph 136 or Paragraph 137.

b. Following receipt of Settling Defendant's Statement of Position, within 14 days or such longer time period as Settling Defendant received for submittal of its Statement of Position under Paragraph 135.a on the same dispute, EPA, after reasonable opportunity for review and comment by the State, will serve on Settling Defendant its Statement of Position, including, but not limited to, any factual data, analysis, or opinion supporting that position and all supporting documentation relied upon by EPA. EPA's Statement of Position shall include a statement as to whether formal dispute resolution should proceed under Paragraph 136 or 137. Within 14 days after receipt of EPA's Statement of Position, Settling Defendant may submit a Reply.

c. If there is disagreement between EPA and Settling Defendant as to whether dispute resolution should proceed under Paragraph 136 or 137, the parties to the dispute shall follow the procedures set forth in the paragraph determined by EPA to be applicable. However, if Settling Defendant ultimately appeals to the Court to resolve the dispute, the Court shall determine which paragraph is applicable in accordance with the standards of applicability set forth in Paragraphs 136 and 137.

136. Except as otherwise provided in Paragraph 123.a, formal dispute resolution for disputes pertaining to the selection or adequacy of any response action and all other disputes that are accorded review on the administrative record under applicable principles of administrative law shall be conducted pursuant to the procedures set forth in this Paragraph. For purposes of this Paragraph, the adequacy of any response action includes, without limitation: (1) the adequacy or appropriateness of plans, procedures to implement plans, or any other items requiring approval by EPA under this Consent

Decree; and (2) the adequacy of the performance of response actions taken pursuant to this Consent Decree.

a. An administrative record of the dispute shall be maintained by EPA and shall contain all statements of position, including supporting documentation, submitted pursuant to this Section. Where appropriate, EPA may allow submission of supplemental statements of position by the parties to the dispute.

b. The Director of the Office of Site Remediation and Restoration, EPA Region I (or other appropriate official in Region I, at the level of Director or Deputy Director of an Office, as designated by the Regional Administrator), will issue, after reasonable opportunity for review and comment by the State, a final administrative decision resolving the dispute based on the administrative record described in Paragraph 136.a. This decision shall be binding upon the Settling Defendant, subject only to the right to seek judicial review pursuant to Paragraph 136.c. and d.

c. Any administrative decision made by EPA pursuant to Paragraph 136.b shall be reviewable by this Court, provided that a motion for judicial review of the decision is filed by Settling Defendant with the Court and served on all Parties within 21 days of receipt of EPA's decision. The motion shall include a description of the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of this Consent Decree. The United States may file a response to Settling Defendant's motion within thirty days after receipt of such motion. Settling Defendant may file a reply to the United States' response within 10 days of receipt of such response. All deadlines set

forth in this subparagraph for filings with the Court may be extended by stipulation of Settling Defendant and the United States or by the Court for good cause shown.

d. In proceedings on any dispute governed by this Paragraph, Settling Defendant shall have the burden of demonstrating that the decision of the Office of Site Remediation and Restoration Director (or other designated official in Region I, as specified in Paragraph 136.b) is arbitrary and capricious or otherwise not in accordance with law. Judicial review of EPA's decision shall be on the administrative record compiled pursuant to Paragraph 136.a.

137. Formal dispute resolution for disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law, shall be governed by this Paragraph.

a. Following receipt of Settling Defendant's Statement of Position submitted pursuant to Paragraph 135.a, the Director of the Office of Site Remediation and Restoration, EPA Region I (or other appropriate official in Region I, at the level of Director or Deputy Director of an office, as designated by the Regional Administrator), after reasonable opportunity for review and comment by the State, will issue a final decision resolving the dispute. This decision shall be binding on Settling Defendant unless, within 21 days of receipt of the decision, Settling Defendant files with the Court and serves on the parties a motion for judicial review of the decision setting forth the matter in dispute, the efforts made by the parties to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure orderly implementation of the

Consent Decree. The United States may file a response to Settling Defendant's motion within thirty days after receipt of such motion. Settling Defendant may file a reply to the United States' response within 10 days of receipt of such response. All deadlines set forth in this subparagraph for filings with the Court may be extended by stipulation of Settling Defendant and the United States or by the Court for good cause shown.

b. Notwithstanding Paragraph R of Section I (Background) of this Consent Decree, judicial review of any dispute governed by this Paragraph shall be governed by applicable principles of law.

138. Nothing in this Consent Decree shall be construed to allow Settling Defendant to seek dispute resolution under this Section XXIV regarding:

a. EPA's Action Memorandum regarding the Upper 2-Mile Reach or EPA's Action Memorandum for the Removal Actions Outside the River; provided, however, that nothing in this subparagraph shall preclude Settling Defendant from raising any issue with respect to the underlying assumptions or other bases set forth in those memoranda in connection with: (i) a challenge to EPA's selection of the Rest of the River Remedial Action pursuant to Paragraphs 22 and 141.b of this Consent Decree; (ii) dispute resolution regarding a determination by EPA, the State, or Connecticut that the criteria described in Paragraphs 162, 163, 167, 168, 171 and/or 172 (Pre- and Post-Certification Reservations) of this Consent Decree have been satisfied; or (iii) dispute resolution relating to the establishment of spatial averaging areas or the evaluation of non-PCB Appendix IX+3 constituents in accordance with the SOW;

United States shall be read as a reference to the State, and each reference to the State shall be read as a reference to EPA. Dispute resolution under this Paragraph concerning stipulated penalties that relate to Massachusetts Past Response Costs, Massachusetts Future Response Costs, Massachusetts Interim Response Costs, or Massachusetts Oversight Costs shall be limited to whether MADEP has properly assessed and/or calculated such stipulated penalties. The resolution of disputes between the Commonwealth and Settling Defendant that relate to the amount of those Massachusetts Future Response Costs which are subject to Paragraph 95.d(iv), Massachusetts Interim Response Costs or Massachusetts Oversight Costs owed to the Commonwealth shall proceed in accordance with the provisions of 310 C.M.R. 40.1220(3).

141. Dispute Resolution Relating to the Rest of the River: Disputes between Settling Defendant and EPA relating to the Rest of the River shall be subject to the following dispute resolution procedures:

a. For disputes relating to EPA's conditional approval, disapproval, or modification of deliverables submitted by Settling Defendant to EPA under the Reissued RCRA Permit, or regarding other issues arising under the Reissued RCRA Permit, prior to EPA's issuance of the permit modification selecting a Remedial Action for the Rest of the River, as referenced in Paragraph 22.p of this Consent Decree, such disputes shall be resolved in accordance with the Dispute Resolution provisions in Special Condition II.N of the Reissued RCRA Permit. Settling Defendant shall not contend that EPA's conditional approval, disapproval, or modification of any such submissions or other action taken by EPA under the Reissued RCRA Permit (except for a permit modification

pursuant to General Condition I.C. of the Reissued RCRA Permit) prior to EPA's issuance of the permit modification selecting a Remedial Action for the Rest of the River constitutes a modification of the Reissued RCRA Permit for purposes of invoking 40 C.F.R. Parts 124 and 270 or Section 7006(b) of RCRA.

b. For disputes relating to EPA's modification of the Reissued RCRA Permit to select the Rest of the River Remedial Action, as referenced in Paragraphs 22.o, 22.p, 22.t and/or 22.v of this Consent Decree, the dispute resolution procedures shall be as follows:

(i) Upon receipt of EPA's notification of its intended permit modification decision, as provided in Paragraph 22.o of this Consent Decree, Settling Defendant shall have the right, within 30 days of such notification, to seek administrative dispute resolution within EPA Region I. Such dispute resolution shall include both informal and formal administrative dispute resolution processes in accordance with the administrative dispute resolution provisions of Paragraphs 133-136 of this Consent Decree; provided, however, that Settling Defendant shall not have the right to seek judicial review of the administrative decision on EPA's notification of its intended permit modification pursuant to this subparagraph.

(ii) Upon receipt of EPA's permit modification decision, as provided in Paragraph 22.p of this Consent Decree, Settling Defendant shall have the right to seek review of that permit modification decision in the EPA Environmental Appeals Board within 30 days pursuant to 40 C.F.R. § 124.19.

XL. FINAL JUDGMENT

225. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment between and among the United States, the Commonwealth of Massachusetts, the State of Connecticut, the City, PEDA and Settling Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

SO ORDERED THIS 27 DAY OF Oct, 2000.

Michael A. Ponsor

United States District Judge

Attachment B

SDMS DocID 280170

GE-Housatonic
19.5
280170

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA NEW ENGLAND

PERMIT UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) AS AMENDED (42 U.S.C. SECTION 6901 ET SEQ.)

General Electric Company
159 Plastics Avenue
Pittsfield, Massachusetts 01201
EPA I.D. No. MAD002084093

The Permittee is required to conduct certain activities at areas affected by releases of hazardous waste and/or hazardous constituents from the General Electric Facility located in Pittsfield, Massachusetts, in accordance with Sections 3004(u), 3004(v), and 3005(c) of the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), as specified in the conditions set forth herein.

This Reissued Permit of 2007 ("2007 Permit") has been prepared for RCRA Corrective Action activities to be performed by General Electric pursuant to a final Consent Decree. The Consent Decree has been entered in U.S. District Court, United States, et al. v. General Electric Company (D. Mass.) ("Consent Decree"). The Consent Decree memorializes an agreement to address releases of hazardous waste and/or hazardous constituents from the General Electric Company's facility in Pittsfield, Massachusetts, including, but not limited to, the releases of hazardous waste and/or hazardous constituents addressed in this 2007 Permit. This 2007 Permit, upon the effective date set forth below, replaces the HSWA Permit previously issued to the Permittee, which became effective upon entry of the Consent Decree on October 27, 2000 ("2000 Permit"). Upon the effective date of the 2007 Permit, the 2000 Permit hereby is revoked.

Dated and Effective as of: 12-5-07

Signed: _____
Robert W. Varney
Regional Administrator
U.S. Environmental Protection Agency, EPA New England
One Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

EPA solicited public comments on the proposed reissued Permit from September 17, 2007 through November 16, 2007. In response to the public comment solicitation, EPA received no

comments which requested a change in the proposed reissued Permit. Also, EPA has made no changes from the proposed reissued Permit. Accordingly, pursuant to 40 C.F.R. Section 124.15(b), this reissued Permit is effective immediately upon signature of the EPA Regional Administrator.

This reissued Permit shall expire upon the earlier of the following: (a) ten years after the effective date of this Permit; or (b) when the Permit modification described in Special Condition II.J hereof becomes final, effective, and not subject to any further appeals (i.e., after the conclusion of all appeals of such Permit modification decision, including any remands and subsequent appeals, as described in Paragraphs 22 and 141.b of the Consent Decree); provided, however, that to the extent that the Permittee has remedial design and/or remedial action obligations under Paragraph 22 of the Consent Decree during the pendency of any such appeals and remands, the Permittee shall perform such obligations as required despite the fact that this Permit remains in effect.

GENERAL ELECTRIC CO. - PITTSFIELD, MA
RCRA CORRECTIVE ACTION PERMIT
-DRAFT -

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DEFINITIONS

All terms used in this Permit are as defined in 40 C.F.R. Part 260 and Section 264.141, unless defined below:

1. "Act" or "RCRA" means the Solid Waste Disposal Act, as amended (also known as the Resource Conservation and Recovery Act), 42 U.S.C. §§ 6901 et seq.

2. "Appendix IX+3 constituents" means, unless otherwise specified in a particular document submitted pursuant to this Permit and approved by EPA, all compounds listed in Appendix IX of 40 C.F.R. Part 264 plus the following three additional constituents: benzidene, chloroethylvinyl ether, and 1,2-diphenylhydrazene.

3. "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 et seq.

4. "Consent Decree" means the Consent Decree executed by the General Electric Company, the United States, and state governmental agencies, lodged in the United States District Court for the District of Massachusetts on _____ ___, 1999, in the case of United States et al. v. General Electric Company (Civil Action No. _____), and entered by the Court in that case on _____ ___, 1999.

5. "EPA" means the United States Environmental Protection Agency, Region I, and any successor department or agency.

6. "Floodplain" is the area located within the floodplain of the Housatonic River to which hazardous waste and/or hazardous constituents originating at the GE Facility are migrating, have migrated, or may have migrated.

7. "GE Facility" means, for the purposes of this Permit, the General Electric facility in Pittsfield, Massachusetts, as generally depicted on the map attached hereto as Attachment A.

8. "Groundwater" means water below the land surface.

9. "Hazardous Constituents" include those constituents listed in Appendix VIII to 40 C.F.R. Part 261 and Appendix IX to 40 C.F.R. Part 264.

10. "Hazardous Waste" means a solid waste or combination of solid wastes defined as a hazardous waste under 40 C.F.R. Part 261.

11. "HSWA" means the Hazardous and Solid Waste Amendments of 1984.

12. "Interim Media Protection Goals" means media-specific protection goals for the Rest of River area, as established pursuant to Special Condition II.D of this Permit. The Interim Media Protection Goals shall be used in the CMS, as provided in this Permit.

13. "Justify" or "Justification" means to support the recommendation or conclusion which is being put forth with scientific principles and/or supporting data, as appropriate.

14. "PCBs" means polychlorinated biphenyls.

15. "Performance Standards" mean cleanup standards, design standards and other measures and requirements necessary to protect human health and the environment.

16. "Permittee" means the General Electric Company.

17. "Previously Issued HSWA Permit" means the Permit issued to the GE Facility under HSWA, initially issued on February 8, 1991, and modified effective January 3, 1994.

18. "Release" includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, disposing or migrating into the environment.

19. "Rest of River" or "Rest of River area" shall mean, for the purposes of this Permit, all sediments, surface waters, and floodplain soils of the Housatonic River which are downstream of the confluence of the East and West Branches of the River, including backwaters in the floodplain, and to which releases of hazardous wastes and/or hazardous constituents are migrating or have migrated from the GE Facility, but excluding any Actual/Potential Lawns at current residential properties in the floodplain, as defined in the Consent Decree.

20. "Solid Waste" means a solid waste as defined in 40 C.F.R. § 261.2.

21. "Surface Water" means water occurring immediately adjacent to land as overland flow, open channel flow, closed conduit flow and waters in lakes, ponds, and reservoirs.

22. "Zone of Contamination" means the three-dimensional extent of contamination that was produced or is being produced from a release of hazardous waste and/or hazardous constituents originating at the GE Facility due to migration of such waste or constituents from the GE Facility.

I. PART I - GENERAL PERMIT CONDITIONS

The Permittee shall comply with the following general permit conditions pursuant to RCRA, and 40 C.F.R. Parts 124 and 270, to the extent such conditions relate to the Permittee's corrective action activities under this Permit. A number of the Permittee's obligations set forth in this Permit (i.e., those set forth in Special Conditions II.A, II.C, II.E, II.G, II.J, and II.N) are incorporated by reference in the Consent Decree, while other provisions of this Permit (i.e., General Conditions I.A, I.B, I.E.1, I.F, I.G.1&3, and I.K and Special Conditions II.J and II.L) incorporate or cross-reference to provisions of the Consent Decree.

A. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except that the Permittee need not comply with the conditions of this Permit to the extent and for the duration that such noncompliance is authorized by an emergency permit (see 40 C.F.R. § 270.61). For purposes of enforcement, compliance with this Permit during its term constitutes compliance with Sections 3004(u), 3004(v), and 3005(c) of the Act. Except as provided in the Consent Decree or approved by EPA pursuant to the Consent Decree, the Permittee is also required to comply with 40 C.F.R. Parts 260, 261, 262, and 263, to the extent the requirements of those Parts are applicable, and with all applicable self-implementing provisions imposed by RCRA or the Part 268 regulations. Any noncompliance with the Permit, except under the terms of an emergency permit, constitutes a violation of the Act and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application; provided, however, that in the event of such noncompliance, enforcement of those requirements of this Permit which are incorporated in the Consent Decree or which incorporate provisions of the Consent Decree shall be in accordance with and pursuant to the Consent Decree rather than RCRA and this Permit. In no event shall the Permittee be liable for penalties or subject to other enforcement action under both RCRA and the Consent Decree for the same instance of noncompliance.

B. Duty to Mitigate

In addition to the requirements of the Consent Decree, in the event of any noncompliance with the corrective action requirements of the Permit that results in a new release of hazardous waste and/or hazardous constituents to the environment, the Permittee shall take all reasonable steps to minimize releases of hazardous waste and/or hazardous constituents to the environment, and shall carry out such measures as are reasonable to prevent its noncompliance from having significant adverse impacts on human health and/or the environment.

C. Permit Actions

This Permit may be modified, revoked and reissued, or terminated for cause as specified in 40 C.F.R. §§ 270.41, 270.42, and 270.43; provided, however, that notwithstanding the foregoing clause, this Permit shall not be modified or revoked and reissued prior to its expiration date except: (1) by written agreement of the Permittee and EPA; or (2) in the event of the Permittee's noncompliance with this Permit as provided in General Condition I.A of this Permit; or (3) upon transfer of this Permit as provided in General Condition I.J of this Permit. The filing of a request by the Permittee for a Permit modification, revocation and reissuance, or termination under this General Condition, or a notification of anticipated noncompliance under General Condition I.I, shall not stay any condition of this Permit.

D. Property Rights

1. The issuance of this Permit does not convey any property rights of any sort, or any exclusive privilege to the Permittee.

2. The issuance of this Permit does not authorize any injury to persons or property or invasion of other private rights.

E. Duty to Provide Information

1. Within a reasonable time, the Permittee shall furnish to EPA any relevant non-privileged information which EPA may request to determine whether cause exists for modifying, revoking and reissuing or terminating this Permit in accordance with General Condition I.C, or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to EPA copies of records required to be kept or prepared by this Permit and copies of other documents and information within the Permittee's possession or control relating to the implementation of this Permit, in accordance with and subject to Section XXX of the Consent Decree.

2. All information which the Permittee furnishes to EPA, either in the form of a request or a report pursuant to this Permit, shall contain or reference the sources from which the information was obtained.

F. Inspection and Entry

The Permittee shall provide EPA or an authorized representative, upon presentation of credentials and other documents as may be required by law, with access at reasonable times to the GE Facility or other property owned by the Permittee where any regulated activity under this Permit is located or conducted, for the purpose of conducting, inspecting, or monitoring any activity pursuant to this Permit; inspecting or copying records required to be kept under this Permit; conducting sampling or other investigations related to implementation of this Permit; assessing the Permittee's compliance with this Permit; or conducting other activities described in Paragraph 53 (access obligations) of the Consent Decree insofar as they relate to activities under this Permit. The Permittee's provision of such access to EPA or an authorized representative shall be in accordance with and subject to Paragraph 53 of the Consent Decree.

G. Monitoring and Records

1. Samples and measurements taken for the purpose of waste analysis shall be representative of the waste to be analyzed. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 C.F.R. Part 261 or as provided in the approved and most recent edition of the Project Operations Plan described in Attachment C to the Statement of Work for Removal Actions Outside the River (which is Appendix E to the Consent Decree) and any amendments approved thereto.

2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. The Permittee shall retain the records described in Paragraph 206.a of the Consent Decree, insofar as they relate to implementation of this Permit, for the time period specified in the second sentence of Paragraph 206.b of the Consent Decree.

4. Records of data obtained through monitoring shall include:

   a. The date, exact place, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The raw data (e.g., chromatograms) collected and data reduction;

d. The date(s) analyses were performed;

e. The individuals(s) who performed the analyses;

f. The analytical techniques or methods used;

g. The result of analyses; and

h. The quality assurance/quality control data.

H. Signatory Requirements

All proposals, reports and other documents submitted by the Permittee under this Permit shall be signed by an authorized representative of the Permittee, which may include the Permittee's Project Coordinator, designated pursuant to Special Condition II.I.

I. Notice of Anticipated Noncompliance

The Permittee shall give advance notice to EPA of any planned changes in any corrective action activity under this Permit which may result in noncompliance with the requirements of this Permit.

J. Transfer of Permit

This Permit shall not be transferred to a new owner or operator except after notice to and approval of the planned transfer by EPA, which may require that the Permit be modified or revoked and reissued.

K. Twenty-Four-Hour Reporting and Follow-Up

The Permittee shall comply with the reporting requirements set forth in Paragraph 69 of Section XIV of the Consent Decree; provided, however, that the Permittee shall not be subject to multiple enforcement actions or liable for multiple penalties under the Consent Decree, CERCLA, the Emergency Planning and Right-to-Know Act, RCRA, and/or this Permit for the same instance of noncompliance with such requirements.

L. Other Notification and Reporting Requirements

1. The Permittee shall report to EPA all instances of noncompliance with the terms of this Permit in the monthly progress reports to be provided

pursuant to Paragraph 67 of the Consent Decree. For each instance of noncompliance, such report shall contain the following information:

a. A description of the noncompliance;

b. The name and quantity of materials released, if any, as a result of such noncompliance;

c. The extent of injuries, if any, resulting from such noncompliance;

d. An assessment of actual or potential hazards to human health and/or the environment, where applicable, resulting from such noncompliance;

e. Any steps taken to mitigate the impact of such noncompliance or otherwise to correct such noncompliance; and

f. A description of the impact of such noncompliance on the performance and timing of other activities required under this Permit.

2. When the Permittee becomes aware that it failed to submit any relevant facts in a required report, or submitted incorrect information in a required report to EPA, it shall promptly submit the correct facts or information.

M. Computation of Time

1. For the purpose of compliance with this Permit, computation of time periods shall be made by the methodology specified in 40 C.F.R. § 124.20.

2. Where this Permit requires the submission of written reports or notification to EPA, the report or notification shall be deemed submitted on the post-marked date.

N. Severability

The provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

O. Confidentiality of Information

In accordance with 40 C.F.R. Part 2, any information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "Confidential Business Information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 C.F.R. Part 2.

P. Interpretation of Migration from GE Facility

For purposes of this Permit, the Permittee agrees that, for hazardous waste and/or hazardous constituents in the Rest of River area which are also present both at the GE Facility and at the Former Oxbow Areas (as defined in the Consent Decree) and which could have migrated to the Rest of River area from either the GE Facility or the Former Oxbow Areas, the Permittee will not contend that such waste and/or constituents did not migrate from the GE Facility.

II. PART II - SPECIAL PERMIT CONDITIONS

A. Revised RCRA Facility Investigation (RFI) Report for Rest of River

In January 1996, the Permittee submitted an RFI Report for the Housatonic River and Silver Lake, including the Rest of River area, pursuant to the Previously Issued HSWA Permit. EPA has collected and is continuing to collect additional data on the Rest of River area for use in modeling of the fate, transport, and bioaccumulation of PCBs in that area and for human health and ecological risk assessments for that area. EPA will, at the Permittee's request, allow the Permittee to take split or duplicate samples of any samples collected by EPA or on EPA's behalf. EPA will promptly, on a periodic basis but at least monthly, in accordance with the Data Exchange Agreement attached to this Permit as Attachment C, provide the data from those investigations to the Permittee. To the extent that the Permittee conducts additional investigations in the Rest of River area, it shall notify EPA of those investigations in accordance with Special Condition II.I below, and shall conduct those investigations in accordance with the approved and most recent edition of the Project Operations Plan described in Attachment C of the Statement of Work for Removal Actions

Outside of the River (attached to the Consent Decree) and any amendments approved thereto, and shall provide the results of those investigations to EPA in accordance with the Data Exchange Agreement and in the monthly progress reports to be provided pursuant to Paragraph 67 of the Consent Decree.

Following EPA's notification to the Permittee that the Permittee should move forward with the preparation of the RFI Report, and in accordance with the compliance schedule set forth in Attachment B, the Permittee shall submit to EPA a revised RFI Report for the Rest of River area. Additional data gathered by EPA or the Permittee, after the date of EPA's notification to the Permittee to move forward with preparation of the RFI Report, will be incorporated, as appropriate, into subsequent reports or as supplements to the RFI Report. The revised RFI Report shall include the following, at a minimum, based on available data:

1. Environmental Setting

The revised RFI Report shall include a discussion of the environmental setting in the Rest of River area, as outlined below:

a. Hydrogeology- The revised RFI Report shall include a discussion of the impacts, if any, on groundwater in the Rest of River area from surface water, sediments, and/or floodplain soils to which releases of hazardous wastes and/or hazardous constituents are migrating or have migrated from the GE Facility.

b. Surface Water and Sediment- The revised RFI Report shall include a characterization of the intermittent and permanent surface water bodies and sediments likely to be affected by hazardous wastes and/or hazardous constituents that have migrated from the GE Facility. Such characterization shall include the following information, based on available data:

(1) For impoundments: location, elevation, surface area, depth, freeboard, and purpose of the impoundment;

(2) For river channel and backwaters: location, elevation, flow, velocity, depth, width, seasonal fluctuations and flooding tendencies (e.g., 100-year event);

(3) Drainage patterns; and

(4) Description of sediment depositional areas, and thickness profile of sediments.

c. Air/Climate- The revised RFI Report shall provide information characterizing the climate in the vicinity of the Rest of River. Such information shall include, at a minimum, the following, based on available data:

(1) Annual and monthly rainfall averages;

(2) Monthly temperature averages and extremes; and

(3) Wind speed and direction.

2. Contamination Characterization

The revised RFI Report shall include documentation of the nature, rate of migration, concentration, mass and extent of hazardous waste and/or hazardous constituents which have migrated from the GE Facility into the surface water, sediments, floodplain soils, and biota in the Rest of River area, and of the concentrations of PCBs in the ambient air of the Rest of River area. At a minimum, the Permittee shall provide the following information, based on available data:

a. Surface Water Contamination

In the revised RFI Report, the Permittee shall characterize the nature and extent of contamination in the surface water of the Housatonic River in the Rest of River area resulting from releases of hazardous wastes and/or hazardous constituents that have migrated from the GE Facility. At a minimum, the revised RFI Report shall include the following information with respect to surface water in the Rest of River area:

(1) A description of the sources, mass loading and extent of PCBs and other hazardous constituents in surface water;

(2) A discussion of the fate and transport of PCBs and other hazardous constituents in surface water;

(3) A discussion of the origin, fate, and transport of solids in surface water, and the impact, if any, of solids dynamics

on the fate and transport of PCBs and other hazardous constituents in surface water; and

(4) A description of the chemistry (e.g., pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, dissolved oxygen profile, nutrients, chemical oxygen demand) of the natural surface water to the extent relevant to aquatic life in this reach of the River.

b. Sediment Contamination

In the revised RFI Report, the Permittee shall characterize the nature and extent of contamination in the sediments in the Rest of River area resulting from releases of hazardous wastes and/or hazardous constituents that have migrated from the GE Facility. At a minimum, the revised RFI Report shall include the following with respect to sediments in the Rest of River area:

(1) A description of the physical characteristics of the sediments, including, at a minimum, grain size, specific gravity, bulk density, water content, organic carbon content, ion exchange capacity, pH, shear stress data (if collected), and settleability characteristics;

(2) A description regarding the sources and horizontal and vertical extent of PCBs and other hazardous constituents in sediments; and

(3) A description of the extent and rate of sedimentation in the Rest of River area.

c. Floodplain Soil Contamination

In the revised RFI Report, the Permittee shall characterize the nature and extent of contamination in the floodplain soils resulting from releases of hazardous wastes and/or hazardous constituents that have migrated from the GE Facility. At a minimum, the revised RFI Report shall include the following with respect to floodplain soils in the Rest of River area:

(1) A description regarding the sources and horizontal and vertical extent of PCBs and other hazardous constituents

in floodplain soils, taking into account floodplain soil data from the Rest of River and from Actual/Potential Lawns (as defined in the Consent Decree) at current residential properties downstream of the confluence of the East and West Branches of the River; and

(2) A description of the features and properties of the constituents in floodplain soils that might affect contaminant migration, transformation, or attenuation.

d. Biota Contamination

In the revised RFI Report, the Permittee shall characterize the nature and extent of contamination in biota resulting from releases of hazardous wastes and/or hazardous constituents that have migrated from the GE Facility. At a minimum, the revised RFI Report shall include the following with respect to biota in the Rest of River area:

(1) A description regarding the sources (to the extent known) and extent of PCBs and other hazardous constituents in fish, benthic invertebrates, and any other biota for which sampling data are available;

(2) A description of the temporal and spatial trends in concentrations of PCBs and other hazardous constituents in fish, benthic invertebrates, and any other biota for which sampling data are available.

e. Air Contamination

In the revised RFI Report, the Permittee shall characterize the nature and extent of PCB contamination in the ambient air in the Rest of River area.

B. Review and Approval of the Revised RFI Report

After the Permittee submits the revised RFI Report, EPA will either approve, conditionally approve or disapprove the Report.

If EPA disapproves the Report, EPA shall, within its discretion, either (1) specify the deficiencies and establish a time frame within which the Permittee

shall submit a modified Report; or (2) make such modifications as EPA deems necessary to satisfy the requirements of Special Condition II.A above. In the event that EPA makes such modifications, the modified Report shall become the approved RFI Report. If the approved, conditionally approved or modified Report concludes that further investigation is required, the Permittee shall implement the investigation in accordance with the implementation schedule contained therein.

C. Interim Media Protection Goals Proposal

As provided in the Consent Decree, EPA intends to conduct human health and ecological risk assessments for the Rest of River area and to issue a Human Health Risk Assessment Report and an Ecological Risk Assessment Report. These risk assessment reports will be subject to peer review in accordance with the Consent Decree.

Following EPA's determination that the peer review processes for EPA's human health and ecological risk assessments have been completed, and in accordance with the compliance schedule set out in Attachment B, the Permittee shall submit an Interim Media Protection Goals (IMPG) Proposal for the Rest of River area, taking into account the conclusions of the risk assessments conducted by EPA.

The IMPG Proposal shall present proposed media-specific IMPGs, in accordance with the following provisions, for PCBs and other hazardous waste and/or hazardous constituents that have migrated to the Rest of River area from the GE Facility.

1. The proposed IMPGs shall consist of preliminary goals that are shown to be protective of human health and the environment and that will serve as points of departure in evaluating potential corrective measures in the subsequent Corrective Measures Study (see Special Conditions II.E-II.G). Such IMPGs are not necessarily equivalent to cleanup standards or Performance Standards and may be modified or revised in the selection of Performance Standards and associated corrective measures.

2. IMPGs shall be proposed for the following media in the Rest of River area: sediments, surface water, floodplain soils, biota, and air (PCBs only).

3. The constituents to be addressed by the proposed IMPGs shall be limited to those which have migrated to the Rest of River area from the GE

Facility. Such constituents may be further limited to include only those constituents identified by EPA in its Human Health Risk Assessment Report and its Ecological Risk Assessment Report as contributing to the baseline risk.

4. The proposed IMPGs for sediments, surface water, and floodplain soils shall include numerical concentration-based goals for constituents in such media, based on the assessment of direct contact of humans (i.e., incidental ingestion and/or dermal contact) with such media. They may also include narrative descriptive goals for such media based on such direct contact pathways.

5. The proposed IMPGs for biota consumed by humans shall include numerical concentration-based goals for constituents in the edible tissue of such biota, based on the assessment of human consumption of such biota. They may also include narrative descriptive goals for such biota based on such human consumption pathways. The Permittee may also propose descriptive IMPGs for sediments, surface water, and/or floodplain soils based on an extrapolation from the human-consumption-based IMPGs for biota.

6. The proposed IMPGs for air shall include numerical concentration-based goals for PCBs in ambient air, based on the assessment of inhalation of such constituents by humans. They may also include narrative descriptive goals for PCBs in air.

7. The Permittee shall also propose IMPGs for relevant media based on the assessment of exposures and risks to ecological receptors. Such IMPGs shall consist of either numerical concentration-based goals or narrative descriptive goals, or a combination of these types of goals.

8. The IMPG Proposal shall include a justification demonstrating that the proposed IMPGs, if achieved, would ensure protection of human health and the environment, taking into account EPA's Human Health Risk Assessment Report and its Ecological Risk Assessment Report.

9. The IMPG Proposal shall take into account applicable or relevant and appropriate federal and state requirements.

D. Review of the Interim Media Protection Goals Proposal and Establishment of Interim Media Protection Goals

After the Permittee submits the IMPG Proposal, EPA will either approve, conditionally approve or disapprove the Proposal. If EPA approves or conditionally approves the Proposal, EPA shall establish the IMPGs in accordance with that Proposal as approved or conditionally approved, so that the Permittee can develop corrective measures as required under Special Condition II.E below.

If EPA disapproves the Proposal, EPA shall, within its discretion, either:

1. Specify the deficiencies in the Proposal and establish a time frame within which the Permittee shall submit a modified Proposal; or

2. Make modifications to the Proposal to establish IMPGs so that the Permittee can develop corrective measures as required under Special Condition II.E below.

E. Corrective Measures Study Proposal

As provided in the Consent Decree, EPA is currently developing, calibrating and validating a quantitative model of the fate, transport, and bioaccumulation of PCBs in the Housatonic River system, including the Rest of River area. This modeling work will be subject to peer review in accordance with the Consent Decree. Once developed, this model will be applied to baseline (i.e., natural attenuation) conditions, as well as to various corrective measure alternatives.

Following EPA's determination that the peer review process on validation of EPA's model has been completed and the Permittee's receipt of the results of the modeling effort, including equations and outputs, from EPA, the Permittee shall submit to EPA a Corrective Measures Study (CMS) Proposal in accordance with the compliance schedule set out in Attachment B. In the CMS Proposal, the Permittee shall identify the corrective measures it proposes to study and provide a justification for the selection of the corrective measures proposed for study, including a description of the methodology proposed to be used in evaluating the corrective measures. The justification shall consider the ability of such corrective measures to achieve the IMPGs.

F. Corrective Measures Study Proposal Approval

After the Permittee submits the CMS Proposal, EPA will either approve, conditionally approve or disapprove the Proposal. If EPA approves or conditionally approves the Proposal, the Permittee shall carry out the evaluation of corrective measures and develop the CMS Report (see Special Condition II.G below) in accordance with the approved or conditionally approved CMS Proposal. In addition to requiring additional CMS work, a conditional approval or disapproval may include a requirement to conduct additional RFI work if such work is necessary to implement the CMS.

If EPA disapproves the Proposal, EPA shall, within its discretion, either: (1) specify the deficiencies and establish a time frame within which the Permittee shall submit a modified Proposal; or (2) make such modifications as EPA deems necessary to satisfy the requirements in Special Condition II.E above. If EPA modifies the proposal, the Permittee shall carry out the evaluation of corrective measures and develop the CMS Report (see Special Condition II.G below) in accordance with the modified Proposal.

G. Corrective Measures Study Report

In accordance with the compliance schedule set out in Attachment B, the Permittee shall submit a CMS Report. At a minimum, the Permittee shall provide the following information for each corrective measure approved for evaluation in the CMS Proposal (taking into consideration that the corrective measures ultimately selected will be implemented as a remedial action pursuant to CERCLA and the Consent Decree, as provided in Special Condition II.J):

1. General Standards for Corrective Measures

a. Overall Protection of Human Health and the Environment -- How each alternative or combination of alternatives would provide human health and environmental protection, taking into account EPA's Human Health and Ecological Risk Assessments.

b. Control of Sources of Releases -- How each alternative or combination of alternatives would reduce or minimize possible further releases, including (but not limited to) the extent to which each alternative would mitigate the effects of a flood that could cause contaminated sediments to become available for human or ecological exposure.

c. Compliance with Applicable or Relevant and Appropriate Federal and State Requirements -- How each alternative or combination of alternatives would meet such requirements or, when such a requirement would not be met, the basis for a waiver under CERCLA and the National Contingency Plan ("NCP").

2. Selection Decision Factors

a. Long-Term Reliability and Effectiveness;

(1) Magnitude of residual risk, including (but not limited to) the extent to which each alternative would mitigate long-term potential exposure to residual contamination, and the extent to which and time over which each alternative would reduce the level of exposure to contaminants;

(2) Adequacy and reliability of each alternative or combination of alternatives, including (i) operation, monitoring, and maintenance requirements; (ii) availability of labor and materials needed for operation, monitoring, and maintenance; (iii) whether the technologies have been used under analogous conditions; and (iv) whether the combination of technologies (if any) have been used together effectively; and

(3) Any potential long-term adverse impacts of each alternative or combination of alternatives on human health or the environment, including (but not limited to) potential exposure routes and potentially affected populations, any impacts of dewatering and disposal facilities on human health or the environment, any impacts on wetlands or other environmentally sensitive areas, and any measures that may be employed to mitigate such impacts.

b. Attainment of Interim Media Protection Goals -- The ability of each alternative or combination of alternatives to achieve the Interim Media Protection Goals approved by EPA in accordance with Special Condition II.D, including (if applicable) the time period in which each alternative would result in the attainment of the IMPGs and an evaluation of whether and the extent to which each alternative would accelerate such attainment compared to natural processes.

c. Reduction of Toxicity, Mobility, or Volume of Wastes.

(1) If applicable, treatment process used and materials treated;

(2) If applicable, amount of hazardous materials destroyed or treated;

(3) If applicable, degree of expected reductions in toxicity, mobility, or volume;

(4) If applicable, degree to which treatment is irreversible; and

(5) If applicable, type and quantity of residuals remaining after treatment.

d. Short-Term Effectiveness -- Impacts to nearby communities, workers, or the environment during implementation of each alternative, including (but not limited to) risks associated with excavation, transportation, dewatering, disposal, or containment of sediments, soils, or other materials containing hazardous constituents.

e. Implementability

(1) Ability to construct and operate the technology, taking into account any relevant site characteristics;

(2) Reliability of the technology;

(3) Regulatory and zoning restrictions;

(4) Ease of undertaking additional corrective measures if necessary;

(5) Ability to monitor effectiveness of remedy;

(6) Coordination with other agencies;

(7) Availability of suitable on-site or off-site treatment, storage and disposal facilities and specialists; and

(8) Availability of prospective technologies.

f. Cost

(1) Capital costs;

(2) Operating and maintenance costs; and

(3) Present worth costs.

3. Recommendation

The Permittee shall conclude the CMS Report with a recommendation as to which corrective measure or combination of corrective measures, in the Permittee's opinion, is best suited to meet the general standards outlined in Special Condition II.G.1 above in consideration of the decision factors in Special Condition II.G.2 above, including a balancing of those factors against one another.

H. Corrective Measures Study Report Approval

After the Permittee submits the CMS Report, EPA will either approve, conditionally approve or disapprove the Report. In addition to requiring additional CMS work, a conditional approval or disapproval may include a requirement to conduct additional RFI work if such work is necessary to complete the CMS.

If EPA disapproves the Report, EPA shall, within its discretion, either (1) specify the deficiencies and establish a time frame within which the Permittee shall submit a modified Report; or (2) make such modifications as EPA deems necessary to meet the requirements in Special Condition II.G above.

I. Project Coordinators

1. Pursuant to the Consent Decree, EPA and the Permittee have each designated a Project Coordinator and an Alternate Project Coordinator.

2. EPA and the Permittee shall provide at least five (5) working days' written notice prior to changing Project Coordinators or Alternate Project Coordinators, unless impracticable but in no event later than the actual day the change is made.

3. The absence of EPA's Project Coordinator shall not be cause for stoppage of work by the Permittee.

4. Unless otherwise specified, reports, notices or other submissions required under the Permit shall be in writing and shall be sent to:

EPA's Project Coordinator

Susan Svirsky
U.S. Environmental Protection Agency
Region I
1 Congress St. Suite 1100
Boston, MA 02114-2023

EPA's Alternate Project Coordinator

Bryan Olson
U.S. Environmental Protection Agency
Region I
1 Congress St. Suite 1100
Boston, MA 02114-2023

Permittee's Project Coordinator

Andrew T. Silfer
General Electric Company
Corporate Environmental Programs
100 Woodlawn Avenue
Pittsfield, MA 01201

Permittee's Alternate Project Coordinator

Michael T. Carroll
General Electric Company
Corporate Environmental Programs
100 Woodlawn Avenue
Pittsfield, MA 01201

State Project Coordinator

J. Lyn Cutler
Massachusetts Department of Environmental Protection
436 Dwight Street - Fifth Floor
Springfield, Mass. 01103

J. Permit Modification To Select Corrective Measures and Right to Appeal

Based on the information that the Permittee submits pursuant to this Permit and any other relevant information in the Administrative Record for the modification of this Permit, EPA will propose Performance Standards, and the appropriate corrective measures necessary to meet the Performance Standards, to address PCBs and any other hazardous waste and/or hazardous constituents that have migrated from the GE Facility to the surface waters, sediments, and floodplain soils in the Rest of River area. This proposal will also include a proposed identification of the applicable or relevant and appropriate requirements ("ARARs") under federal and state law that must be met by such corrective measures, and where EPA proposes to waive any such ARARs, the basis for such waiver under CERCLA and the NCP. EPA will propose these Performance Standards, corrective measures, and ARARs as a draft modification to this Permit in accordance with 40 C.F.R. §§ 124.5-124.12 and 270.41 and Paragraph 22.n of the Consent Decree.

In considering public comment, EPA may require the Permittee to conduct additional RFI, CMS or other work that is necessary for EPA to make a final decision. Such work shall be conducted in accordance with an implementation schedule established by EPA.

EPA will notify the Permittee of its intended final decision on the proposed Permit modification in accordance with Paragraph 22.o of the Consent Decree, and the Permittee shall have the right to seek administrative dispute resolution with respect to that notification in accordance with Paragraphs 22.o and 141.b(i) of the Consent Decree. Upon completion of that dispute resolution process (if invoked), or after the expiration of 30 days following EPA's notification (if the Permittee does not invoke such dispute resolution), EPA will issue a modification of this Permit, which will set forth the selected Performance Standards and corrective measures for the Rest of River area, along with the associated ARARs and the basis for waiver of any ARARs under CERCLA and the NCP.

That Permit modification will be subject to review by the EPA Environmental Appeals Board and the United States Court of Appeals in accordance with Paragraphs 22.q through 22.v, 22.bb, 22.cc, and 141.b of the Consent Decree and subject to the stays described in those paragraphs. In accordance with and as provided in Paragraphs 22.q through 22.cc of the Consent Decree, the Permittee shall implement the selected corrective measures as a remedial action pursuant to CERCLA and the Consent Decree. As further provided in Paragraph 22.z of the Consent Decree, the modification of this Permit to select

such corrective measures shall be considered to be the remedy selection decision pursuant to Section 121 of CERCLA and Section 300.430 of the NCP (40 C.F.R. § 300.430).

K. Sampling Requirements

The Permittee shall provide the results of all sampling and/or tests or other data generated by the Permittee or on the Permittee's behalf with respect to the implementation of the Permit, to EPA and shall submit these results to EPA in accordance with the Data Exchange Agreement (Attachment C hereto) and in monthly progress reports.

At the request of EPA, the Permittee shall allow split or duplicate samples to be taken by EPA and/or its authorized representative, of any samples collected by the Permittee or on the Permittee's behalf pursuant to the implementation of this Permit. The Permittee shall notify EPA not less than seven (7) days in advance of any sample collection activity.

EPA will notify the Permittee not less than seven (7) days in advance of any sample collection activity by EPA in connection with the implementation of this Permit. At the request of the Permittee, EPA shall provide to the Permittee, or allow the Permittee to take, split or duplicate samples of any samples collected by EPA or on EPA's behalf in conducting work in the Rest of River area.

L. Reservation of Rights

1. EPA and the Permittee reserve all rights and defenses that they may have, subject to the provisions of the Consent Decree.

2. Apart from the provisions of this Permit that are incorporated by reference in the Consent Decree, nothing in this Permit shall in any way affect the rights, obligations, and reservations of rights of either the Permittee or EPA as set forth in the Consent Decree.

M. Access to or Use of Property

1. To the extent that the work required of the Permittee under this Permit requires access to or use of property presently owned or under the control of persons other than the Permittee, the Permittee shall use its best efforts to obtain access in accordance with the provisions of Paragraph 59.a of the Consent Decree relating to access.

2. Except as otherwise provided in the Consent Decree or this Permit, nothing in this Permit shall be construed to limit EPA's authority to exercise its rights pursuant to Section 3007 of RCRA, 42 U.S.C. § 6927, or to affect any rights of entry possessed by EPA pursuant to any applicable laws, regulations, or permits.

N. Dispute Resolution on Interim Submittals

1. Except as otherwise provided in this Permit, in the event the Permittee disagrees, in whole or in part, with EPA's disapproval or modification of any submission prior to the Permit modification described in Special Condition II.J., the Permittee shall notify EPA of its objections by providing EPA with a written statement of position within fourteen (14) days of receipt of EPA's disapproval or modification. The Permittee's statement of position shall set forth the specific matters in dispute, the position that the Permittee asserts should be adopted as consistent with the requirements of this Permit, and the basis for the Permittee's position, and shall include any supporting documentation.

2. EPA and the Permittee shall have an additional fourteen (14) days from EPA's receipt of the Permittee's statement of position to meet or confer to attempt to resolve the dispute. This 14-day period may be extended by EPA upon the Permittee's request. If agreement is reached, the Permittee shall submit a revised submission and implement the same in accordance with such agreement, or take such other action as is provided for by the agreement.

3. If EPA and the Permittee are not able to reach agreement within the fourteen (14) day (or extended) period, the Permittee may, within ten (10) days thereafter, submit a written statement of its position to the Director of the Office of Site Remediation and Restoration, EPA Region I, or another appropriate official in Region I at the level of Director or Deputy Director of an Office, as designated by the EPA Regional Administrator (either of which is referred to herein as the "Director"), and/or may request a meeting, to be conducted within the ten (10) day period, with the Director in order to make an oral presentation of its position. This 10-day period may be extended by the Director upon the Permittee's request or upon his/her own initiative. Either after the expiration of this 10-day (or extended) period (if the Permittee takes neither action) or, if requested by the Permittee, after the Permittee's written or oral presentation, the Director will issue a written decision, based on the record, that responds to the Permittee's arguments. The

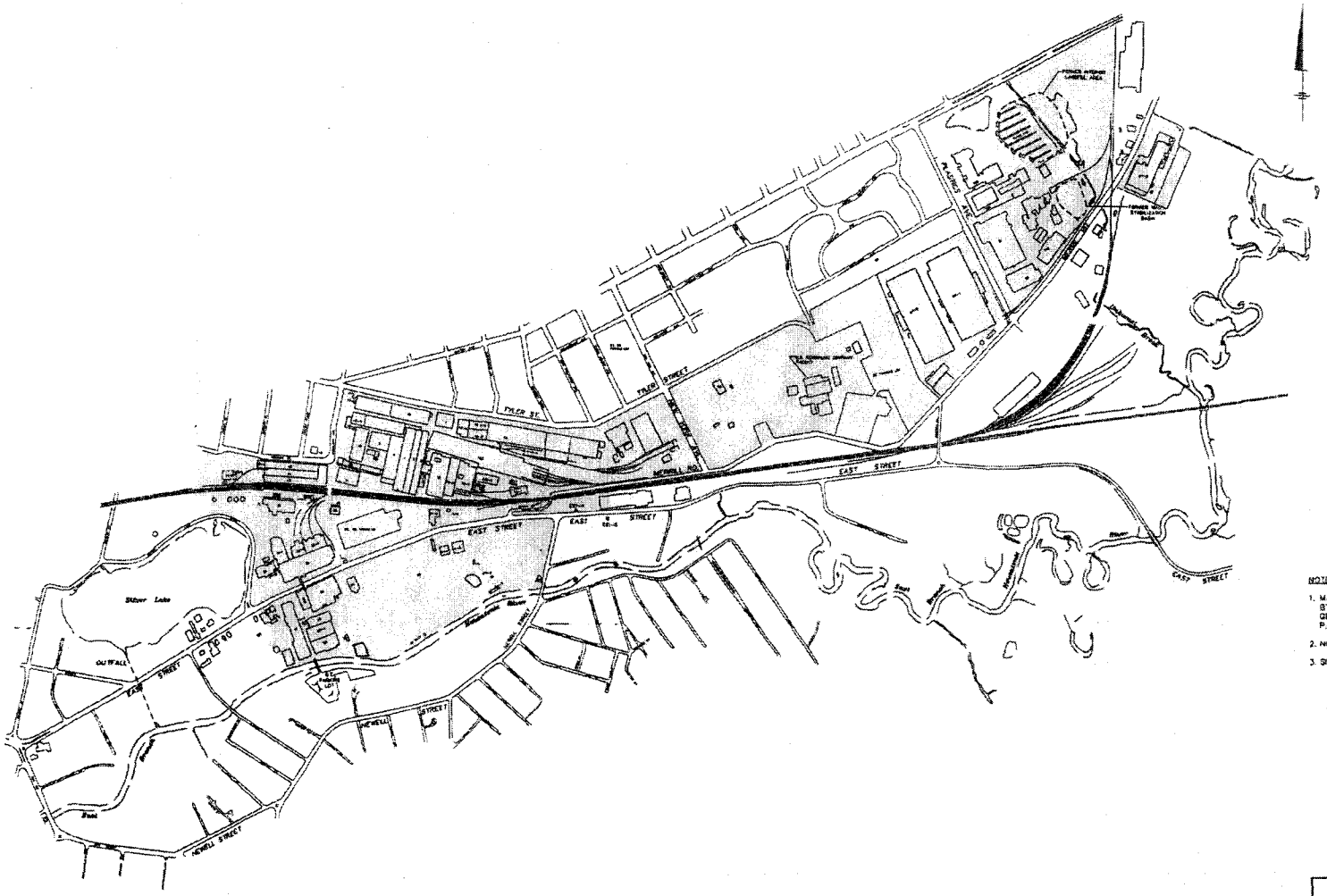
Permittee shall comply with the terms and conditions of this decision on the dispute pending and subject to the final outcome of any appeals of the Permit modification described in Special Condition II.J of this Permit pursuant to Paragraphs 22 and 141.b of the Consent Decree.

4. Notwithstanding the invocation of this dispute resolution procedure, the Permittee shall proceed, at the direction of EPA, to take any action required by those portions of the submission and of the Permit that EPA determines are not substantially affected by the dispute.

5. The Permittee shall not contend that EPA's disapproval or modification of any submission under this Permit prior to the Permit modification described in Special Condition II.J constitutes a modification of this Permit for purposes of invoking 40 C.F.R. Parts 124 and 270 and RCRA § 7006(b), 42 U.S.C. § 6976(b). Once this Permit is modified pursuant to Special Condition II.J above, the Permittee may challenge, in any proceeding seeking review of that Permit modification, EPA's disapproval or modification of any prior submission on substantive grounds. In making such a challenge, the Permittee shall not contend that EPA's disapproval or modification of a prior submission constituted a modification of the Permit.

O. Biota Consumption Advisories

Within 60 days of the effective date of this Permit, the Permitee shall submit to EPA for review and approval a proposal for (1) maintenance and/or updating of signs in the Rest of River area which notify the public of biota consumption advisories due to PCB contamination, and (2) provision to hunting and fishing license distributors of an appropriate written notice regarding such advisories to be included with the licenses. This proposal shall include the specific wording of the signs and notices, the locations for posting signs, and the frequency for inspections and maintenance of the signs and for provision of notices to hunting and fishing license distributors. Upon EPA's approval or conditional approval of such proposal, the Permittee shall carry out these activities in accordance with EPA's approval or conditional approval until such time as this Permit is modified pursuant to Special Condition II.J above, or earlier if approved by EPA.



LEGEND

GE FACILITY

NOTES:

1. MAPPING IS BASED ON AERIAL PHOTOGRAPHS AND PHOTOGRAMMETRIC MAPPING BY LOCKWOOD MAPPING, INC. - FLOWN IN APRIL 1990; DATA PROVIDED BY GENERAL ELECTRIC COMPANY; AND BLASLAND AND BOUCK ENGINEERS, P.C. P.C. CONSTRUCTION PLANS.
2. NOT ALL PHYSICAL FEATURES SHOWN.
3. SITE BOUNDARIES/LIMITS ARE APPROXIMATE.

GENERAL ELECTRIC COMPANY
PITTSFIELD, MASSACHUSETTS

GE FACILITY

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

ATTACHMENT A

U: Dim=, OFFsURF, DRBOWS, DEFAULTV2
P: STD-PCP/BL
8/10/99 STR-34-GWS DBM
201-10288/201-10284.DWG

ATTACHMENT B

COMPLIANCE SCHEDULE	
Permit Requirement	**Schedule**
Revised RFI Report	Within 90 days of receipt of notification from EPA that EPA has provided to the Permittee all data which EPA seeks to have included in the RFI Report and that the Permittee should proceed to prepare that Report (which notification will be given no earlier than October 1, 1999), or within such other period after such notification as is proposed by the Permittee and approved by EPA.
IMPG Proposal	Within 90 days of EPA's approval, conditional approval, or modification of the revised RFI Report, or EPA's determination of the completion of the peer review processes for EPA's human health and ecological risk assessments, whichever is latest
CMS Proposal	Within 90 days of EPA's approval, conditional approval, or modification of the proposed IMPGs, or EPA's determination of the completion of the peer review processes on validation of EPA's model and GE's receipt of the model (equations and results) from EPA, whichever is latest
CMS Report	Within 180 days of EPA's approval, conditional approval, or modification of the CMS Proposal, or pursuant to an alternative schedule in the approved, conditionally approved or modified CMS Proposal

ATTACHMENT C

DATA EXCHANGE AGREEMENT FOR HOUSATONIC RIVER WATERSHED

This Data Exchange Agreement is entered into by and between the General Electric Company ("GE") and the United States Environmental Protection Agency, Region I ("EPA") with respect to the exchange of data collected by these parties relating to the Housatonic River and its floodplain and tributaries ("Housatonic River watershed").

WHEREAS GE has collected a large amount of sampling and other data on the Housatonic River watershed, including data on sediments, surface waters, floodplain soils, biota, and other media, over the past 20 years;

WHEREAS EPA has also collected sampling and other data on the Housatonic River watershed, including data on the same media described above, since 1998;

WHEREAS GE, EPA, and other governmental entities have executed and intend to lodge in the United States District Court for the District of Massachusetts in United States et al. v. General Electric Company a Consent Decree ("Consent Decree") that embodies an agreement among the parties to address releases of polychlorinated biphenyls ("PCBs") and other hazardous substances from GE's facility in Pittsfield, Massachusetts, including, but not limited to, releases to the Housatonic River watershed;

WHEREAS the Consent Decree provides that, prior its entry by the Court, EPA will issue a permit to GE under the corrective action provisions of the Resource Conservation and Recovery Act ("RCRA"), which permit (referred to the Consent Decree as the "Reissued RCRA Permit") will become effective upon entry of the Consent Decree and will govern the conduct of

certain studies relating to, and the selection of a remedial action for, the Rest of the River (as defined in the Consent Decree);

WHEREAS, pursuant to the Consent Decree and the Reissued RCRA Permit, GE will develop and submit to EPA a RCRA Facility Investigation ("RFI") Report on the Rest of the River (as defined in the Consent Decree) to compile all relevant data on that area;

WHEREAS, in accordance with the Consent Decree, EPA is developing a quantitative model of the river hydrodynamics, sediment transport, PCB fate and transport, and PCB bioaccumulation in the Rest of the River (as defined in the Consent Decree) as a tool for evaluating potential remedial actions for that area;

WHEREAS this model will require calibration and validation using Housatonic River watershed data;

WHEREAS, in accordance with the Consent Decree, EPA will also conduct human health and ecological risk assessments for the Rest of the River;

WHEREAS these risk assessments will require use of data collected by GE and EPA in the Housatonic River watershed;

WHEREAS GE and EPA have determined that the preparation of the RFI Report, the modeling, and the risk assessment efforts, as well as the dialogue in the technical working groups, would be aided greatly by a timely and efficient exchange between GE and EPA of data from the Housatonic River watershed;

NOW, THEREFORE, GE and EPA hereby agree as follows:

CONTENTS OF DATABASES

1. GE, through its contractor Blasland, Bouck & Lee, Inc. ("BB&L"), shall maintain a database referred to as the "GE Database." That database shall include all data collected from the Housatonic River watershed from 1980-97, including (but not limited to) all PCB sampling data, that are in the possession or control of GE or its contractors, except as otherwise agreed between GE and EPA pursuant to Paragraph 4 below. This database shall also include all data collected from the Housatonic River watershed by GE and its contractors, or from split samples obtained by GE or its contractors from EPA and its contractors, from 1998 through the termination of this Agreement, except as otherwise agreed between GE and EPA pursuant to Paragraph 4 below.

2. EPA, through its contractor Roy F. Weston, Inc. ("Weston"), shall maintain a database referred to as the "EPA Database." That database shall include all data collected by EPA and its contractors from the Housatonic River watershed, including (but not limited to) all PCB sampling data, from 1998 through the termination of this Agreement, except as otherwise agreed between GE and EPA pursuant to Paragraph 4 below.

RESPONSIBILITIES FOR DATABASES

3. GE and BB&L will be responsible for the development and maintenance of the GE Database. EPA and Weston will be responsible for the development and maintenance of the EPA Database. The responsibilities for each database shall include (a) entering the existing data into each database with a structure, content, and procedures to be agreed upon between the parties hereto, as specified in Paragraph 4 below; (b) adding data

collected after the date of this Agreement to each database; (c) making and documenting corrections to each database, as specified in Paragraph 8 below; and (d) routinely delivering the updated data files to the other party, as specified in Paragraphs 5-6 below.

EXCHANGE OF DATA FILES

4. Within 30 days after the effective date of this Agreement, representatives of GE and EPA shall meet and agree upon the structure, content, procedures, and schedule for the exchange of the data files from the GE Database and the EPA Database.

5. GE and EPA will exchange the data files for which they are responsible as follows. Both GE and EPA will deliver the data files for which they are responsible to the representatives of the other party, as listed in Paragraph 9 below. The delivery shall be made electronically as a CD-ROM deliverable to each of the representatives of the other party listed in Paragraph 9 below. The electronic transmittal will include the date of the transmittal. For example, transmittals of both databases on July 1, 1999, would be labeled 070199.ge.hr.dbase and 070199.usepa.hr.dbase

6. After the first electronic exchange of data files (as specified in Paragraph 5 above), the parties shall exchange new or corrected data on a monthly basis or other schedule agreed to pursuant to Paragraph 4 above. Specifically, during the first week of every month (or other period agreed to by the parties) in which new data have been entered, or corrections to a database have been made, the party responsible for that database shall transmit the data files to the representatives of the other party listed in Paragraph 9 below. The letter transmitting the data files shall document all corrections and additions to the database since the last time it was transmitted to the other party. The electronic transmittal shall

include the date of the transmittal (e.g., 070199.ge.hr.dbase and 070199.usepa.hr.dbase) in order to identify the timing of the updated information and to avoid confusion regarding which version of each database is the most current.

MISCELLANEOUS PROVISIONS

7. During the time period of this Agreement, preliminary data may be included in the databases prior to being subjected to full quality assurance/quality control protocols. Such preliminary data that are included in the electronic exchange of data files shall be appropriately annotated in the data files in accordance with the agreement reached pursuant to Paragraph 4 above.

8. The parties acknowledge that databases of the size of the GE Database and the EPA Database will invariably contain errors and omissions resulting from the data transcription process. When either party identifies any error or omission in the database, that party shall communicate the error or omission by e-mail to the database managers at BB&L and at Weston, as specified in Paragraph 10 below. Such party shall also communicate the error or omission by e-mail to the representatives of both parties, as listed in Paragraph 9 below. Corrective action shall be implemented in accordance with the procedures agreed to pursuant to Paragraph 4 above.

9. The representative of GE to whom database information shall be sent electronically by EPA shall be as follows:

Name	E-Mail Address
Mark Hattersly (BB&L)	MDH@BBL-Inc.com

The representative of EPA to whom database information shall be sent electronically by GE shall be as follows:

Name	E-Mail Address
Richard McGrath (Weston)	McGrathr@mail.rfweston.com

The parties may add or delete names from these lists upon reasonable notice to each other pursuant to Paragraph 12 below.

10. The manager of the GE Database shall be Mark Hattersly, BB&L. The manager of the EPA Database shall be Richard McGrath, Weston. The parties shall give reasonable notice to each other, pursuant to Paragraph 12, of any change in the identity of these database managers.

11. This Agreement shall be effective on the date that the Consent Decree is lodged in the United States District Court. The Agreement shall terminate upon the date that EPA issues a final modification of the Reissued RCRA Permit (as defined in the Consent Decree) to select the Rest of the River Remedial Action (as defined in the Consent Decree). The parties may, however, agree to extend this Agreement beyond that termination date through a written extension of this Agreement.

12. Notices to GE under this Agreement shall be delivered by first-class mail to:

Andrew T. Silfer, P.E.
Remediation Project Manager
General Electric Company
Corporate Environmental Programs
100 Woodlawn Avenue
Pittsfield, Massachusetts 01201

Notices to EPA under this Agreement shall be delivered by first-class mail to:

Susan C. Svirsky
United States Environmental Protection Agency
Region I
One Congress Street
Boston, Massachusetts 02114

Executed this 15 day of September, 1999.

THE GENERAL ELECTRIC COMPANY

By: Michael T. Carroll
Michael T. Carroll
Manager, Pittsfield Remediation Programs
Corporate Environmental Programs

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION I

By: Patricia L. Meaney
Patricia L. Meaney
Director, Office of Site Remediation and Restoration
Region I

Attachment C

July 2, 2012

STATEMENT OF POSITION OF GENERAL ELECTRIC COMPANY IN SUPPORT OF DISPUTE OF FY 2011 COST BILL

INTRODUCTION

By letter dated January 11, 2012, the U.S. Environmental Protection Agency (EPA) submitted a bill to the General Electric Company (GE) seeking payment of more than $1.6 million for U.S. Future Response Costs under Paragraph 95 of the Consent Decree (CD) for the GE-Pittsfield/Housatonic River Site (Site), which EPA asserts were incurred in fiscal year 2011 (FY 2011 Cost Bill). On February 29, 2012, GE sent EPA a letter objecting to the FY 2011 Cost Bill because the bill incorrectly allocated costs incurred by EPA to U.S. Future Response Costs under the CD. See Letter from S. Boxerman to T. Conway (Feb. 29, 2012) (copy attached as Exhibit A and incorporated by reference). On March 20, 2012, GE and EPA conferred and thereafter tried to reach a resolution, but the parties did not reach agreement.

On April 5, 2012, GE invoked dispute resolution pursuant to Paragraphs 101 and 133 of the CD by submitting a Notice of Dispute to EPA. See Letter from A. Silfer and R. McLaren to D. Tagliaferro and T. Conway (April 5, 2012) (copy attached as Exhibit B). As provided in the CD, the parties then sought to resolve the dispute through informal negotiations, and they agreed to extend the period for such negotiations until June 8, 2012. However, the parties were unable to reach an agreement by that date. Accordingly, GE invokes formal dispute resolution by submitting this Statement of Position in accordance with Paragraph 135.a of the CD. As discussed further below, because this is not a dispute that "pertain[s] to the selection or adequacy of any response action" or is "otherwise accorded review on the administrative record under applicable principles of administrative law," this dispute is governed by Paragraph 137 of the CD.

The great majority of the costs included in the FY 2011 Cost Bill are for activities related to the Rest of River portion of the Site. The agreed-upon process for studying and making decisions regarding the Rest of River is set out in the CD (¶ 22) and the RCRA corrective action permit issued to GE for the Rest of River (RCRA Permit or Permit). That process is ongoing. In October 2010, in accordance with that process, GE submitted to EPA a revised Corrective Measures Study Report (Revised CMS Report) that evaluates numerous remedial alternatives for the Rest of River. EPA is still evaluating the Revised CMS Report, and has not yet approved, conditionally approved, or disapproved that report, as EPA must do under the CD (¶ 22.n) and the Permit (Special Condition [SC] II.H). Further, once EPA takes action on that report, GE has dispute resolution rights, including the right to seek administrative review of EPA's decision under the CD (¶ 141) and the Permit (SC II.N).

While the Revised CMS Report has been pending before EPA, the Agency has incurred numerous costs for Rest of River activities, including evaluating the Revised CMS Report, conducting its own reviews and studies of remedial alternatives, obtaining the advice of its National Remedy Review Board (NRRB), and gathering information from stakeholders

regarding the alternatives under evaluation. EPA has included these costs in the bill for "U.S. Future Response Costs" under Paragraph 95 of the CD.

We disagree with that allocation. EPA's assignment of these costs to U.S. Future Response Costs was improper and contrary to the CD for the following reasons:

- Based on the sequential nature of the Rest of River process specified in the CD and the Permit and on EPA's own statements, it is clear that many of the EPA activities included in the FY 2011 Cost Bill were part of EPA's evaluation of the Revised CMS Report and the alternatives described therein or of other remedial alternatives or constitute pre-decisional studies or investigations of the Rest of River, since they occurred before any EPA action on the Revised CMS Report and before any EPA decision on a proposed remedy. As such, the costs of these activities constitute U.S. Oversight Costs subject to Paragraph 98 of the CD or, alternatively, U.S. Future Rest of River Capped Response Costs subject to Paragraph 96 of the CD (both of which are capped cost categories) – not U.S. Future Response Costs.

- To the extent that the costs charged by EPA were incurred for developing a Rest of River remedy proposal, they are not recoverable because they were not incurred pursuant to the CD, as required for U.S. Future Response Costs. Any such costs incurred before EPA completes its evaluation and issues an approval, conditional approval, or disapproval of the Revised CMS Report would be outside of and inconsistent with the process prescribed by the CD and Permit. Further, EPA's incurrence of and charging GE for such costs before issuing a decision on the Revised CMS Report and giving GE an opportunity to dispute it would conflict with GE's right to dispute resolution on that decision under the CD and as a matter of due process.

- Other EPA contractor costs – for handling Citizens' Coordinating Council (CCC) meetings and for document management – are also not properly part of U.S. Future Response Costs, but should have been allocated to other cost categories.

BACKGROUND

A. The Cost Reimbursement Provisions of the Decree

The CD establishes the framework for EPA to be reimbursed for certain costs incurred under the Decree (CD Section XX). First, the CD defines what costs may be recoverable. It does so by dividing EPA's costs into several different categories, six of which are capped at a specific dollar amount. Relevant here are: U.S. Oversight Costs (¶ 98, capped), U.S. Future Rest of River Capped Response Costs (¶ 96, capped), and U.S. Future Response Costs (¶ 95, not capped).

U.S. Oversight Costs include costs that EPA incurs in overseeing GE's activities under the Permit, including the costs of reviewing GE's submittals under the Permit and the costs of conducting the Agency's own studies to shadow or supplement GE's work under the Permit (CD ¶ 4). U.S. Future Rest of River Capped Response Costs are costs that EPA incurs in connection

with "studying or otherwise investigating the Rest of River" to support the development of the remedy (*id*). U.S. Future Response Costs are costs that EPA incurs pursuant to the CD, but that do not fall within another category (*id*).[1]

Once costs are incurred, there is a process set out for EPA to document its costs and bill GE, and for GE to pay and/or contest EPA's costs (CD ¶¶ 100-101). Among other reasons, GE may contest payment of costs if the amount was "not allocated to the correct cost category" or "was not within the definition of any cost category" under the Decree (CD ¶101). GE may also "contest payment of costs on the basis that the amount billed exceeds" the capped amount, as is the case here, when EPA has already exceeded the caps on both U.S. Oversight Costs and U.S. Future Rest of River Capped Response Costs, and thus any costs allocated to those categories cannot be recovered.

B. EPA's FY 2011 Activities and Cost Bill

EPA's FY 2011 Cost Bill seeks $1,625,790.43 that EPA allocated to U.S. Future Response Costs, the only uncapped category of costs. Based on the information provided, the breakdown is as follows:

EPA Regional payroll	$291,761.35
EPA Regional travel	$ 29,551.42
EPA Headquarters payroll	$ 29,689.27
EPA Headquarters travel	$ 8,264.77
Department of Justice (DOJ)	$ 60,557.96 [2]
ATSDR (adjustment to prior costs)	$ 928.50
Army Corps of Engineers (ACOE)	
Contract 169	$426,445.55
Contract 246	$ 19,764.16
EPA contractors	
SRA Corp.	$166,264.34
ASRC Management	$ 50,569.88
Indirect costs	$355,614.22
Cross-cutting costs	$186,379.01

Based on GE's review of the Cost Bill and the parties' discussions to date, GE is not challenging (1) the costs incurred by EPA finance/accounting staff, (2) the costs associated with

[1] When EPA incurs costs "in support of tasks included in more than one cost category," EPA allocates those costs among the cost categories "using any reasonable allocation method" (CD ¶100.f) (referred to by the parties as "cross-cutting costs").

[2] We understand, based on EPA's representations during discussions, that EPA is claiming an additional amount for DOJ costs beyond the amount specified in the Itemized Cost Summary included with the FY 2011 Cost Bill. As we have not received a revised bill with the specific revised demand, we have not included that additional amount here. However, GE would have the same objections to those costs as it does to the remainder of the DOJ costs in the FY 2011 Cost Bill.

Allendale Schoolyard monitoring under ACOE Contract 246, (3) the payroll time incurred by EPA employees John Kilborn and Rose Howell, and (4) the indirect costs that EPA charges on top of these costs, and (5) the adjustment to previous ATSDR costs. These total $37,210.37, including indirect costs. Paragraph 101 of the CD provides that if GE disputes a cost bill, GE will pay all uncontested costs. However, GE is owed an overall credit of $60,732 under the cost-sharing agreement for the 1½ Mile Reach Removal Action.[3] Thus, the amount of undisputed costs is exceeded by, and can simply be subtracted from, that credit, and no payment is required at this juncture.

The total amount currently in dispute from the FY 2011 Cost Bill is $1,588,580. Based on GE's review of the documentation and discussions with EPA, the vast majority of those costs appear to have been incurred for activities related to the Rest of River. The CD and the RCRA Permit prescribe a linear process for Rest of River decision-making, involving the following steps:

- GE's submission of the RCRA Facility Investigation (RFI) Report, followed by EPA review and approval;[4]
- EPA's performance of human health and ecological risk assessments;
- GE's proposal of Interim Media Protection Goals (IMPGs), followed by EPA review and approval;
- GE's submission of a Corrective Measures Study (CMS) Proposal, followed by EPA review and approval;
- GE's submission of a CMS Report, followed by EPA review and approval;
- EPA's issuance of a Statement of Basis and a draft modification to the Permit with a proposed remedy for the Rest of River;
- Public comment period on the proposed remedy; and
- EPA's issuance of a final Permit modification to select the Rest of River remedy.

Thus, at each step in the process where GE is responsible for developing the submission, GE submits the deliverable and then EPA conducts its review, followed by EPA's approval, conditional approval, or disapproval. The Permit and CD provide opportunities for GE to dispute issues that arise during this process, including the right to seek administrative dispute resolution on EPA's decisions on the deliverables submitted by GE (Permit SC II.J; CD ¶ 141).

Here, in accordance with the Permit and the CD, GE submitted an initial CMS Report on March 21, 2008. EPA reviewed that report and directed GE to undertake additional work and to submit a revised report. GE implemented the additional work, performed additional analyses,

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[3] The CD establishes a specific cost-sharing agreement between GE and EPA for work relating to the 1½ Mile Reach of the Housatonic River (CD ¶¶ 103-111). The current activities being undertaken for that reach consist of Post-Removal Site Control activities, which are undertaken and funded in the first instance by GE, subject to later adjustment to conform to the cost-sharing agreement.

[4] For this description, EPA "approval" also contemplates that EPA may conditionally approve a GE submittal or disapprove such a submittal and require a revision of it (or else modify the submittal itself).

made a number of interim CMS submittals required by EPA,[5] and finally submitted a Revised CMS Report to EPA on October 11, 2010. As noted above, EPA has not to date approved, conditionally approved, or disapproved the Revised CMS Report.

Accordingly, EPA's Rest of River-related activities covered by the FY 2011 Cost Bill consist of work undertaken ***after*** GE's submission of the Revised CMS Report and ***before*** any EPA decision to approve, conditionally approve, or disapprove that report. These activities included, among other tasks: (a) review and internal discussion of GE's Revised CMS Report; (b) evaluation of alternatives in Revised CMS Report, including supplemental modeling and technical analysis; (c) evaluation of other remedial alternatives; (d) preparation of public outreach materials and discussion with the public about potential alternatives for the Rest of River remedy (including the April 2011 workshops and May 2011 Charrette); and (e) review of the Revised CMS Report and other remedial options by EPA's NRRB.

EPA stated frequently during FY 2011 that it was continuing to evaluate the Revised CMS Report, study all alternatives, and consider public input, and that it had made no decision regarding the revised CMS Report or any remedial alternatives. See, e.g., Transcript of Statements of EPA Personnel at April 7, 2011 Workshop (Transcript) (attached hereto as Exhibit C)[6] at pp. 4, 5 (Bob Cianciarulo – the "process that we're, that we have been under way with now [is] the Corrective Measures Study, the CMS…. That document will feed into, really the next major process that we are leading up to here, which is when EPA comes out and proposes a clean-up plan for public comment. So we haven't made any determination on what we think the appropriate course of action is. . . . [The] clean-up alternatives [are] all still on the table, all still being evaluated."); p. 11 (Susan Svirsky – "we are in our decision making process. No decision as to what alternative is the appropriate alternative … has yet been made"); p. 16 (Susan Svirsky – "We're evaluating GE's… alternatives and their detailed analysis and we're performing our own and we may come up with something that's different or that's a permutation or maybe it would be one of them or maybe it would be none of them or maybe it would be no remediation but we are in that process and the door is not closed ….").

C. Standard of Review

This dispute is governed by Paragraph 137 of the CD, which provides that, for "disputes that neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record under applicable principles of administrative law," judicial review "shall be governed by applicable principles of law." Further, the standard of review should this matter be presented to the Court is *de novo* review. As outlined in this Notice, the dispute centers on the meaning of the Consent Decree entered by the Court, which is interpreted as a contract. The "analysis of [a consent decree's] language and an application of the

[5] Those interim CMS submittals included a Response to EPA's Interim Comments on CMS Report (March 2009) and a Supplement to Response to EPA's Interim Comments on CMS Report: Evaluation of Example Areas (February 2010). EPA provided no approval, conditional approval, or disapproval of those submittals.

[6] The attached Transcript consists of a transcription of the remarks of EPA Regional Administrator Curtis Spalding, Section Chief Bob Cianciarulo, and Rest of River Project Manager Susan Svirsky at the April 7, 2011 EPA Workshop, from the videotape of that workshop on EPA's Housatonic River website.

principles of contract interpretation ... is a matter of law and reviewable de novo." *United States v. Gila Valley Irrigation Dist.*, 961 F.2d 1432, 1434 (9th Cir. 1992) (quoting *Kern Oil & Refining Co. v. Tenneco Oil Co.*, 840 F.2d 730, 736 (9th Cir. 1988)).[7] Accordingly, in resolving a dispute over the meaning of a consent decree, the Court will likewise need to engage in *de novo* review, without deference to either party to the contract.

ARGUMENT

I. Activities in FY 2011 That EPA Included in U.S. Future Response Costs in Fact Fall Within U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs.

A. EPA's Costs of Reviewing, Evaluating, and Studying GE's Revised CMS Report and Various Remedial Alternatives Fall Under U.S. Oversight Costs (Paragraph 98).

The CD defines U.S. Oversight Costs (for Rest of River) to include the costs of

> "***reviewing proposals, reports, studies and other deliverables submitted by [GE]*** under the Reissued RCRA Permit, ***conducting shadow or supplemental studies for the studies to be conducted by [GE] under that Permit***, and otherwise overseeing [GE's] activities under that Permit, all prior to the modification of that Permit to select the Rest of the River Remedial Action pursuant to Paragraph 22 of this Consent Decree." (CD ¶ 4) (emphases added)

Thus, for the Rest of River, U.S. Oversight Costs include costs incurred prior to the Permit modification in (i) reviewing GE's deliverables under the RCRA Permit and (ii) conducting studies that shadow or supplement GE's studies under the Permit. This includes "all costs" that meet this definition, "including, but not limited to, direct and indirect costs, that EPA Incurs" (*id*.). Further, to illustrate the broad range of costs contemplated, the CD specifies that this category of costs "shall include, but not be limited to, payroll costs, contractor costs, travel costs, laboratory costs, community relations costs, technical support costs, interagency and intergovernmental agreement costs (including ATSDR and U.S. Army Corps of Engineers costs), costs of maintaining a Field Office, data management costs, and modeling costs" (*id*.).

Applying this definition to the work covered by EPA's FY 2011 Cost Bill, it is plain that almost all of EPA's work that generated the costs that GE is challenging is covered by this category.[8] Since the Revised CMS Report is a deliverable under the RCRA Permit, EPA's

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[7] *Accord*: *Quinn v. City of Boston*, 325 F.3d 18, 30 (1st Cir. 2003) (citing *Navarro-Avala v. Hernandez-Colon*, 951 F.2d 1235, 1339 (1st Cir. 1991); *Segar v. Mukasey*, 508 F.3d 16, 21-22 (D.C. Cir. 2007); *Nehmer v. U.S. Dep't of Veterans Affairs*, 494 F.3d 846, 855 (9th Cir. 2007); *Holland v. New Jersey Dep't of Corrections*, 246 F.3d 267, 277-78 (3d Cir. 2001); *Sault Ste. Marie Tribe of Chippewa Indians v. Engler*, 146 F.3d 367, 371 (6th Cir. 1998); *EEOC v. New York Times Co.*, 196 F.3d 72, 78 (2d Cir. 1999); *Alliance to End Repression v. City of Chicago*, 119 F.3d 472, 474 (7th Cir. 1997).

[8] The only exceptions are the CCC and recordkeeping costs that encompass multiple categories and thus should be allocated to cross cutting, if EPA cannot account for them in a single category. See Section III below.

activities in reviewing it fall squarely within U.S. Oversight Costs. Further, since the CMS (which evaluates remedial alternatives) is one of GE's required studies under the Permit, any evaluation of remedial alternatives by EPA (even of alternatives other than those discussed in the Revised CMS Report) constitutes a shadow or supplemental study for the evaluation that GE was required to conduct in the CMS. In fact, EPA cannot seriously dispute that it has been conducting its own "shadow or supplemental" CMS analyses. EPA has explicitly stated as such in describing its work to the public. See Transcript at p. 16 (Susan Svirsky – "We're evaluating GE's… alternatives and their detailed analysis and *we're performing our own*"; emphasis added). The costs of such supplemental or shadow evaluations are explicitly covered by the definition of U.S. Oversight Costs. Indeed, the FY 2011 Cost Bill and the documents provided to date all support the conclusion that EPA has charged costs that were in one way or another part of EPA's "own" shadow CMS process.

The fact that EPA's FY 2011 activities fell under the step of evaluating the CMS and other remedial alternatives prior issuing a decision on the Revised CMS Report and then developing a preferred alternative is further supported by other EPA statements. EPA's Project Manager, Susan Svirsky, detailed EPA's interpretation of the Rest of River process under the CD and Permit in a 2008 presentation entitled "GE/Housatonic River Site Rest of River Corrective Measures Study" ("Svirsky 2008 CMS Presentation"), a copy of which is attached as Exhibit D. According to Ms. Svirsky, the sequencing of the "Process Following GE Submittal of the CMS" is as follows:

- EPA evaluates CMS and GE's recommended alternative, considering:
  - Evaluation criteria
  - Input received from public
- EPA may approve, conditionally approve, or disapprove the CMS.
- EPA develops preferred alternative for public comment.

Other statements by EPA confirm this straightforward understanding. As EPA explained last spring, the process that EPA has "been under way with now [is] the Corrective Measures Study, the CMS," and EPA is continuing to evaluate all alternatives and to consider public input on them and has not "made any determination on what we think the appropriate course of action." Transcript at p. 4 (Cianciarulo). See also other EPA statements at April 2011 workshop, quoted above.

EPA has recently confirmed this again in the "Housatonic River Status Report" that EPA issued on May 18, 2012. The Status Report makes clear that EPA has been developing a new remedial alternative with different components and support from those identified and described in the Revised CMS Report, and that it may propose such an alternative, and provide its own evaluation of and support for it, as part of the draft Permit modification. In developing and supporting its own proposed alternative, EPA would have to rely on the same types of information and evaluations of alternatives that the CD and Permit require GE to provide in the CMS Report (including application of the Permit's remedy selection criteria). That cannot be

anything other than "shadow or supplemental studies for the [CMS] studies to be conducted by" GE, which the parties explicitly agreed would be covered by Paragraph 98.

Thus, under the above-described sequential process specified by the CD and Permit, it is clear that EPA's Rest of River activities in FY 2011 fell between the steps of submission of the CMS Report and EPA's approval, conditional approval, or disapproval of that report. They consisted of reviewing the Revised CMS Report submitted by GE, gathering information from the public regarding the alternatives described in that report, and conducting shadow or supplemental studies for GE's CMS – all prior to EPA's approval, conditional approval, or disapproval of the Revised CMS Report (and any subsequent dispute resolution on that decision) and EPA's proposal of a modification to the Permit to select a remedy. As such, those activities fall within the definition of U.S. Oversight Costs. See also Section I.C below.[9]

In short, based on the CD, the RCRA Permit, and EPA's own statements, until EPA completes its review and acts on the Revised CMS Report submitted by GE, EPA's efforts are necessarily for the purpose of finalizing EPA's review and evaluation of the remedial alternatives. The costs of those efforts are U.S. Oversight Costs under the CD.

B. In the Alternative, EPA's Costs of Studying or Otherwise Continuing Its Investigations of the Rest of River Fall under U.S. Future Rest of River Capped Response Costs (Paragraph 96).

In the alternative, if EPA's costs included in the FY 2011 Cost Bill are not U.S. Oversight Costs, some or all of the costs of these ongoing analyses should be allocated to Paragraph 96 – U.S. Future Rest of River Capped Response Costs. U.S. Future Rest of River Capped Response Costs are broadly defined to include all costs incurred by EPA prior to the Permit modification "in connection with studying or otherwise investigating the Rest of River and/or field work to support the preparation, development, and selection of the Rest of River Remedial Action" (CD ¶ 4). This category specifically includes a number of non-field work activities, including "modeling," "preparation of reports," "peer input," "peer review," "general contractor costs (including, for example, administrative record development, project administration, project management," and other desktop activities. As discussed further in Section I.C, to the extent that EPA's activities in FY 2011 do not constitute U.S. Oversight Costs, they include studies and investigations of the Rest of River and thus fall within the definition of U.S. Future Capped Rest of River Response Costs.

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[9] This is not to suggest an unduly rigid process. As part of EPA's review of the CMS, EPA of course has the flexibility to conduct "shadow or supplemental studies," gather additional information, and engage with stakeholders to consider their views while it evaluates the proposed alternatives analysis in the CMS using the criteria specified by the RCRA Permit. However, if EPA chooses to conduct this kind of supplemental fact-finding, the CD clearly provides that the costs associated with such efforts must be allocated to U.S. Oversight Costs. Moreover, EPA must likewise follow the CD and Permit procedures for finalizing a CMS Report. See Section II below.

C. The Specific EPA Costs That EPA Allocated to U.S. Future Response Costs Should Be Allocated to U.S. Oversight Costs or U.S. Future Rest of River Capped Response Costs.

Review of the specific types of costs included in EPA's FY 2011 Cost Bill shows that EPA has improperly charged costs to U.S. Future Response Costs that should be allocated to one or the other of the categories discussed above – i.e., U.S. Oversight Costs (CD ¶ 98) or U.S. Future Rest of River Capped Response Costs (CD ¶ 96).

1. Regional Payroll and Travel

GE is disputing the allocation of Regional payroll and travel charges in the FY 2011 Cost Bill. Although those charges are not segregated by description, review of the public record, the contractor documents, and the explanation that EPA has provided in informal discussions about the FY 2011 Cost Bill reveals that much of the work of the EPA employees that EPA has placed in U.S. Future Response Costs is more properly allocated to another category. Specifically:

a. Review by the NRRB. EPA's costs in the FY 2011 Cost Bill include costs associated with the NRRB review held in the summer of 2011.[10] Those costs relate to EPA's review of the Revised CMS Report and/or EPA's shadow or supplemental evaluation of other alternatives, both of which are U.S. Oversight Costs. Ms. Svirsky's March 2, 2011 presentation to the CCC encouraged stakeholders to "submit written comments … ***on the RCMS [Revised CMS] for [N]RRB consideration***." Update on the Corrective Measures Study Process (Svirsky 2011 CMS Update) (copy attached as Exhibit E) at p. 6 (emphasis added). Moreover, it appears that EPA also used the NRRB to review EPA's own "shadow or supplemental studies" including, apparently, EPA's own emerging alternative. Indeed, EPA official Cianciarulo stated at EPA's April 2011 workshop that NRRB review is EPA's "internal peer review process," which must precede EPA's selection of a preferred alternative (Transcript at p. 8).[11] Thus, the work relating to the NRRB review process should not be charged to U.S. Future Response Costs.

b. Other time and travel by EPA Regional staff. It appears that the bulk of EPA Region I personnel time and travel that EPA has chosen to assign to U.S. Future Response Costs was related to reviewing the Revised CMS Report, gathering public input on the alternatives described in that report, conducting EPA's shadow or supplemental studies to the CMS conducted by GE, and providing support for the NRRB review. As discussed above, these costs should be allocated to U.S. Oversight Costs or, in the alternative, U.S. Future Rest of River Capped Response Costs.

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[10] As shown in Exhibit A, the costs of this work include the costs for EPA employees whose sole involvement with the Site was in connection with the NRRB process, as well as costs for other EPA Region I staff who spent at least some of their time in FY 2011 in preparing for the NRRB review. It also includes the costs of EPA employees who are members of the Contaminated Sediments Technical Advisory Group (CSTAG) and who, according to EPA, participated in the NRRB review.

[11] Thus, in the event that these costs are not considered part of U.S. Oversight Costs, they would constitute U.S. Future Rest of River Capped Response Costs, which include "peer review" activities.

2. Headquarters Payroll and Travel

The time and travel costs associated with EPA headquarters officials all appear to have been incurred in connection with the NRRB reviews done by EPA. As discussed above, those costs are U.S. Oversight Costs, not U.S. Future Response Costs.

3. EPA Contractor Costs for Public Outreach Efforts

The FY 2011 Cost Bill includes a charge for work done by Systems Research and Applications Corp. (SRAC). This charge is divided into two "delivery orders." One (SRAC Delivery Order #92) is discussed here. The other (SRAC Delivery Order # 3) is discussed in Section III below.

As discussed in Exhibit A, Delivery Order #92 costs (approximately $145,000) were incurred to "conduct outreach interviews and Situation Assessment" and to "assist in planning for workshops and Charrette." These activities were clearly part of EPA's ongoing evaluation of the remedial alternatives in the Revised CMS Report and/or "supplemental or shadow" studies involving EPA's evaluation of those and other remedial alternatives. EPA specifically understood that its evaluation of the CMS would include consideration of public input, as shown by the Svirsky 2008 CMS Presentation (quoted above). Hiring consultants to seek out and obtain input from members of the public before EPA issues a decision on the Revised CMS Report – and before EPA proposes a remedy and asks for public comment – is inherently part of the process of evaluating alternatives and the Revised CMS Report. The Svirsky 2011 CMS Update states specifically (on p. 3) that "EPA is evaluating the alternatives in the R[evised] CMS considering: Input received from stakeholders." EPA further acknowledged that the workshops and the Charrette were conducted, in part, to provide "an opportunity for the public to interact with EPA regarding their views on the remedial alternatives … during EPA's decision-making process" (Svirsky 2011 CMS Update to the CCC, at p. 4). Thus, the costs of these activities clearly constitute "community relations costs" related to EPA's CMS evaluation activities, which are explicitly included in U.S. Oversight Costs.

4. Army Corps of Engineers Costs

Under ACOE Contract 169, EPA has billed GE more than $426,400 in direct costs plus $140,000 in indirect costs. As discussed in Exhibit A and summarized below, these are not U.S. Future Response Costs.

a. <u>Public outreach, the workshops, and the Charrette</u>. This category includes contractor charges to support interviews of stakeholders, the "Situation Assessment," the April 2011 workshops, and the May 2011 Charrette. As discussed above, these outreach efforts were part of EPA's ongoing evaluation of the remedial alternatives in the Revised CMS Report and/or "supplemental or shadow" studies involving EPA's evaluation of those and other remedial alternatives. Indeed, the workshops and Charrette were a central part of EPA's public outreach program as it evaluated the remedial alternatives. As such, for the same reasons given in Section I.C.3, these costs of EPA's public outreach process fall squarely within the gathering of public input and "community relations" covered by U.S. Oversight Costs.

b. NRRB review support. The contractors developed materials provided to the NRRB. As discussed in Section I.C.1.a , the costs associated with the NRRB process constitute U.S. Oversight Costs.

c. Fact Sheets. The contractors helped EPA provide information to the public through the development of "Fact Sheets." Based on discussions with EPA, it appears that there were two such Fact Sheets – one describing the different remedial alternatives evaluated in the Revised CMS Report and the other describing EPA's views about PCBs generally. The costs of these Fact Sheets are not U.S. Future Response Costs. Preparation of the CMS Fact Sheet was clearly part of EPA's efforts to educate the public and obtain the public's input about the CMS alternatives. As such, for the reasons outlined above, the costs of that Fact Sheet are part of EPA's review of the Revised CMS Report and thus constitute "community relations" costs within U.S. Oversight Costs. With respect to the PCB Fact Sheet, while EPA may choose to educate the public generally about PCBs, such general education is not included within the scope of EPA's Rest of River study and remedy selection work in the CD. As such, these costs were not incurred "pursuant to provisions of this Consent Decree" (as required for U.S. Future Response Costs) and hence are not recoverable.

d. Supplemental modeling and technical analysis. The FY 2011 Cost Bill documents that, through the Army Corps, EPA paid contractors to conduct additional modeling and analysis as part of its evaluation of remedial alternatives. One contractor provided support for developing revised modeling boundary conditions, and several contractors provided support for estimating floodplain removal volumes and areal extent of removal for floodplain alternatives. These analyses either are "shadow or supplemental" studies covered by U.S. Oversight Costs (¶ 98) or constitute "studying or investigating the Rest of River … to support the preparation, development, and selection of the Rest of River Remedial Action" under ¶ 96 (U.S. Future Response Costs), which specifically contemplates covering EPA "modeling" work.[12]

e. General technical support. The technical support charges included in this contract (described in Exhibit A) were to support the activities listed above. As such, these are the kinds of costs covered by U.S. Oversight Costs, which expressly include all "contractor costs" and "technical support costs" (CD ¶ 4).[13]

II. To the Extent That EPA's Costs Were Incurred for Developing a Remedy Proposal, They Are Not Recoverable Because They Were Outside the Prescribed Process and Thus Not Incurred Pursuant to the Consent Decree.

We have shown in Section I that nearly all of the Rest of River activities whose costs were included in the FY 2011 Cost Bill were part of EPA's evaluation of the Revised CMS

[12] Alternatively, to the extent that this modeling was done to support a preferred or proposed alternative, it is not recoverable for the reasons given in Section II below.

[13] In addition, the Army Corps incurred costs for its own labor, travel, and project management in the course of performing work under the interagency agreement on EPA's behalf. The costs of work that the Army Corps has done in managing and overseeing contractors retained to do work that is otherwise covered by U.S. Oversight Costs are also covered by U.S. Oversight Costs. See CD ¶ 4 ("U.S. Oversight Costs shall include… interagency and intergovernmental agreement costs (including … U.S. Army Corps of Engineers costs").

Report and/or "shadow or supplemental studies" to the CMS (which fall within U.S. Oversight Costs) – or, alternatively, were pre-decisional studies or investigations of the Rest of River (which fall within U.S. Future Rest of River Capped Response Costs). However, to the extent that EPA's costs in that bill were not for those purposes but, instead, were incurred for developing a Rest of River remedy proposal or preparing documents that set out that proposal, they are not recoverable because they are outside the definition of U.S. Future Response Costs.

U.S. Future Response Costs include EPA and DOJ costs that do not fall within any capped category and specifically include "costs incurred for preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action" (CD ¶ 4). However, that definition provides explicitly that U.S. Future Response Costs are costs incurred by EPA or DOJ "pursuant to the provisions of this Consent Decree" (CD ¶ 4). Any costs that EPA incurs for developing or documenting a remedy proposal (rather than for evaluating alternatives) before it issues a decision on the Revised CMS Report and before that report is finalized would be outside the process prescribed by the CD and would violate GE's procedural rights under the CD, as well as the Due Process Clause, and thus would not be incurred pursuant to the CD. The same is true of any DOJ costs included in the FY 2011 Cost Bill that were incurred for the same purposes.

A. The CD, Permit, and EPA Guidance Demonstrate That Costs Incurred for Developing a Remedy Proposal Prior to Approval and Finalization of the CMS Report Are Inconsistent with the Required CD and Permit Process.

To the extent that EPA and DOJ incurred costs in FY 2011 in developing a preferred alternative or a remedy proposal or preparing documents that describe and support that proposal, the costs are not recoverable because they were incurred too early in the process – i.e., before EPA has completed its evaluation of the CMS and GE has had an opportunity to dispute EPA's decision on the Revised CMS Report. As discussed above, the Permit and the CD set out a sequential process. Under that process, GE is required to develop the CMS Report to present and evaluate remedial alternatives, and EPA is responsible for ensuring the final CMS Report includes alternatives from which it can prepare the draft Statement of Basis for its preferred remedy. This process thus directs EPA to complete its review of the CMS Report and issue an approval or conditional approval of that document – or, if disapproved, obtain and approve (or issue) a modified, final CMS Report – before developing a proposed remedy. The CD specifically provides that EPA will propose a remedy only "upon ***satisfactory completion*** of the CMS Report" (CD ¶ 22.n; emphasis added). That is the process that the parties bargained for in the CD, that is set out in the Permit, and that squares with EPA guidance.

A review of the record makes this abundantly clear. For one thing, this sequential approach is consistent with EPA's statements at the time of the entry of the CD, which explained that the CMS would be concluded before any remedy is proposed. As the United States advised the court in its Memorandum in Support of its Motion to Enter the Consent Decree: "Following completion of the peer review processes, and GE's RCRA Facility Investigation, ***GE must complete an evaluation of the alternative corrective measures*** to address risks posed by Rest of River contamination (a 'Corrective Measures Study'). . . . ***Upon conclusion of the Corrective***

Measures Study, EPA will propose, through a draft modification to the RCRA Permit, a remedial action for the Rest of River . . . ." (p. 21; emphases added).

This sequential process is also contemplated by the Permit. The Permit (in SC II.H) specifies the "Corrective Measures Study Report Approval" as follows:

> "After the Permittee submits the CMS Report, EPA will either approve, conditionally approve or disapprove the Report. . . . If EPA disapproves the Report, EPA shall, within its discretion, either (1) specify the deficiencies and establish a time frame within which the Permittee shall submit a modified Report; or (2) make such modifications as EPA deems necessary . . . ."

Plainly, the Permit provides that if EPA concludes that changes to the CMS Report are necessary, they would be done by GE – or potentially by EPA if it disapproves the CMS Report. Jumping ahead to work on the selection of a remedy without taking action on the Revised CMS Report ignores this carefully structured and agreed-upon process. Indeed, under EPA's theory that it can work on a remedy proposal prior to completion of the CMS process, there would be no time constraint on when EPA could begin working on the remedy proposal; EPA could begin such work prior to submission of the CMS Report or even the CMS Proposal. That would constitute a pre-judgment that clearly conflicts with the sequential Permit process.

This sequential approach is likewise consistent with EPA's statements describing the process it was actually following. See Svirsky 2008 CMS Presentation (first EPA would review and approve CMS Report, then "EPA develops preferred alternative for public comment"); Transcript at p. 4 (Cianciarulo – "[The CMS] document will feed into, really the next major process that we are leading up to here, which is when EPA comes out and proposes a clean-up plan for public comment").

Sequencing the deliverables and EPA's review matches the scope of the different cost categories in the CD. U.S. Oversight Costs address costs incurred in overseeing the development of the CMS and conducting EPA's own CMS-like evaluations, costs that necessarily would be incurred "prior to the modification of the Reissued RCRA Permit" (CD ¶ 4). In contrast, "U.S. Rest of River Oversight Costs" are designed to address the EPA costs that will be incurred "after the modification" of the Permit "to select the Rest of River Remedial Action (*id.*). Only a narrow window was left open for the process of developing a proposed remedy, drafting the Statement of Basis, and responding to public comment.

Most significantly, following this sequential process is essential to ensure that the CMS Report is finalized, and that EPA has a final, approved (or conditionally approved) CMS Report in front of it, before it proceeds with the next step – remedy selection. It is not enough for GE to have submitted a CMS Report. The CMS process must be satisfactorily completed before EPA embarks on developing a remedy proposal. The Permit contains detailed requirements for the CMS Report, including the specification of information that must be provided and specific criteria that must be evaluated for each remedial alternative (Permit SC II.G). These detailed requirements demonstrate that that the information and evaluations provided in the CMS Report

were intended to serve a purpose – to be the basis for the remedy proposal. This does not mean that EPA must agree with GE's conclusions and recommendations in the CMS Report, but it does mean that the information and evaluations in a final, approved CMS Report are to provide the necessary foundation for the remedy proposal.

To conclude otherwise would subvert the whole purpose of requiring the CMS Report to provide detailed information on and evaluations of remedial alternatives. It would allow EPA to put an incomplete CMS Report on the shelf, side-stepping the alternatives evaluated and the information and evaluations provided in the CMS Report, and come up with its own alternatives and evaluations. In guidance on the RCRA corrective action program, EPA has made clear that "it does not want [the CMS] to be undertaken simply for the purpose of completing a perceived step in a perceived process." Advance Notice of Proposed Rulemaking (ANPR) on Corrective Action, 61 Fed. Reg. 19432, 19447 (May 1, 1996) (to be used as guidance per 64 Fed. Reg. 54604, 54607 (Oct. 7, 1999)). The CMS Report is not just a box for EPA to check as it marches off on a separate track to choose its own alternative without real consideration of the Report or its analyses. Rather, the CMS Report must be completed in order to provide a foundation for EPA's decision making.[14]

Moreover, since GE has the right under the CD and Permit to dispute EPA's action on the CMS Report, there can be no "satisfactory completion" of the CMS Report until any disputes that GE has regarding EPA's determination on the CMS Report have been resolved and EPA has in front of it a final CMS Report. This point is amplified further in Section II.B below.

These conclusions are further supported by EPA's guidance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA's guidance on conducting a Remedial Investigation (RI) and Feasibility Study (FS) under CERCLA makes clear that the FS – which EPA has stated (ANPR at 19447) is the CERCLA equivalent of the CMS – is to constitute the basis for the remedy decision. That guidance provides that "[t]he results of the detailed analysis [of alternatives in the FS] supports the final selection of a remedial action and the foundation for the Record of Decision." *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, EPA/540/G-89/004 (Oct. 1988), p. 6-4. Additionally, EPA guidance makes clear that, "[i]f a PRP prepares the RI/FS, then the Proposed Plan should be drafted by the lead agency ***after the lead agency approves the RI/FS***." *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Documents* (1999) at p. 2-1 (emphasis added). By analogy, where the RCRA permittee prepares the CMS Report, that Report is to serve as the foundation for the permit modification to select a remedy, and the proposed permit modification decision to do so should be drafted by EPA only ***after*** EPA approves the CMS Report.

In this case, EPA has not completed its review of the Revised CMS Report or issued any approval, conditional approval, or disapproval of that report. Thus, EPA does not have a

[14] Furthermore, allowing EPA to circumvent this sequential process with a parallel EPA process would waste the years of work and millions of dollars invested by GE in the CMS Report and Revised CMS Report. If EPA wanted to conduct the CMS and develop the CMS Report itself, it should have negotiated that outcome in the CD. It did not.

completed CMS Report from which it can fully weigh the alternative remedial approaches. To the contrary, as discussed above, EPA stated repeatedly during FY 2011 that it had not completed its review of the CMS Report. In these circumstances, developing a proposed remedy before EPA completes its review of the Revised CMS Report and before the CMS Report is finalized would represent a pre-judgment that conflicts with the sequencing of deliverables and review in the CD and the Permit and a subversion of the CMS process.

B. Developing a Remedy Proposal Before Acting on the CMS Report and Charging GE with Those Costs Would Conflict with GE's Right to Review of EPA's Decision on the CMS Report Under the CD and as a Matter of Due Process.

The sequential process described above is also necessary to protect GE's right to dispute resolution under the CD and the Due Process Clause ***before*** EPA spends money (and charges GE) for developing its own preferred alternative or a proposed remedy. If EPA were to develop its own remedial alternatives before the prescribed CMS process is completed, that would represent an improper end run around the procedural protections that GE bargained for in the CD and the Permit and that are also required by Due Process. As such, any costs that EPA incurred in doing so are not properly incurred under the CD and cannot be recovered.

The sequential process embodied in the CD and Permit is essential to protect GE's rights to meaningful dispute resolution on EPA's decision on the CMS Report. The CD and Permit require GE to prepare the CMS Report and EPA to approve, conditionally approve or disapprove it. If EPA conditionally approves, disapproves, or modifies the CMS Report, GE has the right to pursue dispute resolution in accordance with the terms in the CD and Permit. Paragraph 141.a of the CD and Special Condition II.N of the Permit expressly grant GE the right to seek dispute resolution on any disputes relating to EPA's conditional approval, disapproval, or modification of deliverables submitted by GE to EPA under the Permit ***before*** EPA develops and issues a proposed permit modification selecting a Remedial Action for the Rest of River. If such dispute resolution were invoked on EPA's decision regarding the CMS Report, it would ultimately result in a final CMS Report, which EPA would then have in front of it in developing a remedy proposal.

Indeed, as noted above, there can be no "satisfactory completion of the CMS Report" until any disputes that GE has regarding EPA's determination on the CMS Report have been resolved. To conclude otherwise would eviscerate GE's right to dispute resolution on the CMS Report. GE must be allowed a meaningful opportunity to challenge EPA's decision on the CMS Report and to obtain a determination on those issues ***before*** EPA goes forward with a proposed remedy. That right would be rendered meaningless if EPA could side-step the CMS process by developing and supporting an alternative wholly outside that process.

As discussed above, EPA stated publicly during FY 2011 that it had not yet made a decision on the Rest of River remedy. But if it had, it would have jumped the gun by developing a proposed remedy before issuing a decision on the Revised CMS Report and giving GE the opportunity to seek dispute resolution. That would be contrary to the agreed-upon terms of the CD and the Permit, because, before EPA could move on to the next step – and spend money and

charge GE for those costs – GE had the right to be heard to defend its alternatives evaluation in the Revised CMS Report. By not waiting, EPA would deprive GE of its rights under the CD and the Permit and would be acting outside the framework of the CD. Hence, any costs that EPA incurred in conducting such activities would not be incurred under the CD and are not recoverable from GE.

In addition, EPA's actions would deprive GE of its due process rights. In the early 1990s, several cases were brought challenging EPA's ability to make decisions on interim submittals under RCRA corrective action permits (i.e., submittals prior to the permit modification to select corrective measures) without giving the permittee the right to challenge those decisions, which the petitioners argued was required by due process. See, e.g., *W.R. Grace & Co. –Conn. v. U.S. EPA*, 959 F.2d 360 (1st Cir. 1992) (recognizing those arguments, but holding that they were not yet ripe for review). Ultimately, in such a challenge by GE, EPA's Environmental Appeals Board held that decisions on such interim submittals did not constitute permit modifications subject to the full administrative and judicial review rights applicable to such modifications. *In The Matter of General Electric Company*, RCRA Appeal No. 91-7, 4 E.A.D 615 (April 13, 1993). At the same time, however, the Board held that, as a matter of due process, under established decisions such as *Mathews v. Eldridge*, 424 U.S. 319 (1976), EPA must provide the permittee with a hearing – "it must give GE the opportunity for a hearing" (4 E.A.D at 641). The Board further held that dispute resolution provisions such as those included in GE's current RCRA Permit (allowing an administrative appeal to Regional management but not judicial review) met the minimum standards of due process (*id*.) Again, in *In re Allied-Signal Inc.*, RCRA Appeal No. 92-20, 5 E.A.D. 291, 300 (May 16, 1994), the Board reiterated that while "immediate recourse to the courts is not required as a matter of due process in these circumstances," due process does require at least "an opportunity for an administrative hearing."

In the present case, under those decisions, GE has a due process right to have an administrative hearing on EPA's decision on the Revised CMS Report before EPA spends money and charges GE for developing a remedy proposal. By conducting such actions prior to issuing a decision on the Revised CMS Report and then charging GE for the costs of doing so, EPA would deprive GE of its due process rights. This is no different from requiring GE to revise the CMS Report again to support EPA's preferred alternative without first allowing GE the required hearing. Any such costs incurred by EPA without following the required process would not be incurred pursuant to the CD and thus are not recoverable.[15]

III. Other EPA Contractor Costs Should Have Been Allocated Among Various Cost Categories, Not All Charged to U.S. Future Response Costs.

EPA's FY 2011 Cost Bill also includes certain other EPA contractor costs that are not properly allocated to U.S. Future Response Costs for somewhat different reasons from those discussed above.

[15] For the same reasons, this conclusion also applies to any DOJ costs incurred in developing, reviewing, or discussing documents that support EPA's preferred alternative.

A. EPA Contractor Costs for Handling CCC Meetings

The FY 2011 Cost Bill includes a charge (approximately $20,000) for work done by SRAC under Delivery Order # 3. As discussed in Exhibit A, those costs were for CCC-related work. A review of the minutes prepared by EPA of the CCC meetings indicates that a wide variety of topics were covered at those meetings during the past fiscal year. A significant amount of CCC time was devoted to categories of work covered by U.S. Oversight Costs, including EPA's progress "evaluating the alternatives in the [Revised] CMS" (Summary of March 2, 2011 Meeting at 3), as well as the Removal Actions Outside the River (also covered by U.S. Oversight Costs). Accordingly, EPA should have divided up the time at the CCC meetings and allocated the efforts among the relevant cost categories. If that was not feasible, EPA should allocate the costs via a cross-cutting methodology (see CD ¶ 100.f), a process EPA followed in previous cost bills.

B. EPA Contractor Costs for Document Management

The FY 2011 Cost Bill also includes costs under an EPA contract with ASRC Management Services, Inc. (EPW05052) ($50,500 in direct costs plus $16,600 in indirect costs) for "records management." Those costs are likewise not properly allocated to U.S. Future Response Costs.

For one thing, the progress reports describe record management tasks that were not incurred under the CD. The progress reports include charges for ASRC to "convert GE 104E Zybase images to SDMS." GE received and submitted its responses to EPA's CERCLA 104(e) request over a decade ago. Nothing in the CD directs or authorizes EPA to incur these costs and hence it should not be charged as a U.S. Future Response Cost which is limited to costs that EPA incurs pursuant to the CD.

Other document management work specifically arises under defined cost categories. The progress reports state: "Convert 1999 Admin. Record for Removal Actions Outside the River from tiff to PDF CD-ROM" (e.g., Invoice Numbers 42, 44). Some invoices also indicate that the contractor performed "index QA review" for documents that had been indexed in the past "for the *GE Oversight* site" (Invoice Numbers 34-38, 40-41, 44; emphasis added). The management of documents associated with these oversight activities should be charged to U.S. Oversight Costs as that is the category associated with EPA's oversight of the Removal Actions Outside the River.

The remaining entries in the progress reports do not state for which aspect of the Site work the documents were being indexed or maintained. For example, the reports generally state that the work included "records, information, and project management support for the GE-Housatonic River site," as well as the time to "process, organize, and file records and collections," to "provide reference on collections…" Moreover, even where there are specific entries, they do not document which aspect of the Site work the contractor is supporting, as shown by the examples listed in Section II.F of the letter attached as Exhibit A.

EPA should be requiring its contractor to allocate its costs to the appropriate category that the document management is supporting. If, given the nature of the work, EPA's contractor cannot reasonably assign a cost to a specific category of work, then that is precisely the type of work "incurred in support of tasks included in more than one cost category" (CD ¶ 100f) and should be allocated to the Site as a whole by way of the "cross-cutting" methodology that EPA already has in place.

CONCLUSION

For the reasons given above, the amount of EPA's FY 2011 Cost Bill for U.S. Future Response Costs should be reduced by $1,588,580.

EXHIBIT A

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February 29, 2012

By E-Mail

Timothy M. Conway, Esq.
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U.S. Environmental Protection Agency
New England Region
One Congress Street
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Re: Pittsfield/Housatonic Decree – EPA FY 2011 Cost Bill

Dear Tim:

I write for General Electric Company ("GE") in response to the documentation we have received to date in support of EPA's bill for reimbursement of costs incurred in FY 2011 that EPA claims fall under Paragraph 95 ("U.S. Future Response Costs") of the Pittsfield/Housatonic Consent Decree ("Decree) regarding the Pittsfield Housatonic River Site ("Site").[1] Based on our initial review, we note the following concerns regarding the costs EPA has allocated to Paragraph 95 of the Decree:

I. Substantial charges are improperly allocated to Paragraph 95

As general matter, we question whether substantial charges in the FY 2011 Bill have been improperly allocated to paragraph 95 and should have been allocated to "U.S. Oversight Costs" (paragraph 98) or "U.S. Future Rest of River Capped Response Costs" (paragraph 96).

A. The costs associated with evaluating the revised GE CMS report, including additional EPA studies and investigations, should be re-allocated to U.S. Oversight Costs (Paragraph 98)

Foremost, the FY 2011 Bill would appear to include significant EPA costs that are part of EPA's oversight responsibilities, including EPA's review of GE's proposed CMS report prepared as directed under the Decree and the Reissued RCRA Corrective Action Permit. ("RCRA Permit"). Such costs would fall squarely under the category of "US Oversight Costs," as those include the costs of

[1] GE received the remainder of EPA's documentation on January 25, 2012. As noted by my email of February 3, we believe that documentation was incomplete.

> reviewing proposals, reports, studies and other deliverables submitted by Settling Defendant under the Reissued RCRA Permit, conducting shadow or supplemental studies for the studies to be conducted by Settling Defendant under that Permit, and otherwise overseeing Settling Defendant's activities under that Permit, all prior to the modification of that Permit to select the Rest of the River Remedial Action pursuant to Paragraph 22 of this Consent Decree.

Decree ¶4 (definition of "US Oversight Costs").

The RCRA Permit lays out a sequential framework for the RFI/CMS process. At each step in the process listed here, including the CMS report, GE submits the deliverables that are then followed by EPA review and approval, conditional approval or disapproval. Specifically:

- RCRA Facility Investigation (RFI): GE conducts the RFI and prepares the RFI Report, and EPA reviews and approves the RFI Report. RCRA Permit at Part II.B.
- Interim Media Protection Goals (IMPG): Likewise, GE proposes the IMPG for EPA review and approval. RCRA Permit at Part II.D.
- Corrective Measures Study proposal: Similarly GE submits a CMS proposal, and EPA's role is to "approve, conditionally approve or disapprove." RCRA Permit at Part II. F.
- Corrective Measures Study: Under the Permit, GE implements the CMS and then prepares the CMS report – which "EPA will either approve, conditionally approve or disapprove . . . ." Permit at Part II. H.

After the CMS report is finalized, EPA may propose the modification of the permit to select corrective measures. Permit at Part II. J. This sequencing of deliverables followed by EPA review and approval "in accordance with the Reissued RCRA Permit," *see* Decree ¶22, must be followed before EPA may proceed to prepare the Statement of Basis and modify the RCRA Permit to include a final remedy.

The Decree is equally clear on this overall framework. Paragraph 22 of the Decree states that EPA will approve the RFI Report (¶ 22(f)), Interim Media Protection Goals (¶ 22(j)) and the CMS Proposal (¶ 22(k)) prepared by GE. Then, the Decree directs GE to submit the CMS report and only "upon satisfactory completion of the CMS Report in accordance with the Reissued RCRA Permit," may EPA propose a remedy that will eventually be formalized by modifying the RCRA Permit. Decree ¶22(n). In fact, the Decree mandates that these procedures "shall" be followed: "Additional studies of the Rest of River and the selection for a Remedial Action for the Rest of River *shall be conducted in accordance with the Reissued RCRA Permit*" and the procedures in paragraph 22. *See* Decree ¶22 (emphasis added).

This is not to suggest an unduly formal process. To the contrary, as part of EPA's review of the CMS, EPA of course has the flexibility to gather additional information and engage with stakeholders to consider their views while it evaluates the alternatives in the proposed CMS

using the criteria specified by the RCRA Permit. However, if EPA chooses to conduct this kind of supplemental fact-finding, the Decree clearly provides that the costs associated with such efforts must be allocated to U.S. Oversight Costs.

EPA's Project Manager, Susan Svirsky, has confirmed this sequential approach in her presentation "GE/Housatonic River Site Rest of River Corrective Measures Study."[2] According to Ms. Svirsky, the "Process Following GE Submittal of the CMS," is as follows:

- EPA evaluates CMS and GE's recommended alternative, considering:
  - Evaluation criteria
  - Input received from public
- EPA may approve, conditionally approve, or disapprove the CMS.
- EPA develops preferred alternative for public comment.

Id. This process makes sense. GE is charged with evaluating alternatives in the CMS report, while EPA is responsible for ensuring the final CMS report includes alternatives from which EPA can prepare the draft Statement of Basis for its preferred remedy. This framework also squares with EPA direction and statements in guidance implementing the RCRA corrective action program. *E.g., EPA RCRA Training Module #20, RCRA Corrective Action: Corrective Measures Study/Corrective Measures Implementation* (outlining process whereby EPA evaluates CMS report, outlines deficiencies, "approve[s] revised CMS" and then issues "draft permit modification language incorporating proposed remedy").

Moreover, sequencing the deliverables and EPA's review matches the scope of the different cost categories in the Decree. U.S. Oversight Costs addresses costs incurred overseeing the development of the CMS, costs that necessarily would be incurred "prior to the modification of the Reissued RCRA Permit..." Decree ¶4. In contrast, "U.S. Rest of River Oversight Costs" are designed to address the EPA costs that will be incurred "after the modification" of the Permit "to select the Rest of River Remedial Action. *Id.* Only a narrow window was left open for the process of drafting the Statement of Basis and responding to public comment, as EPA reasonably asserted that it could not estimate in advance the nature and extent of the comments it would receive.

Accordingly, as required by the RCRA Permit (and the Decree), GE provided a Corrective Measures Study to EPA on March 21, 2008 (ARCADIS and QEA, 2008. EPA reviewed the draft CMS report and returned it with comments directing GE to make changes to the report and undertake additional work. *See* EPA Comments on GE's March 2008 Corrective Measures Study Report, Letter from James T. Owens, III, EPA, to Andrew Silfer, GE, (September 9, 2008). GE implemented the additional work, performed additional analyses, provided various interim deliverables, and prepared and submitted a draft revised CMS report to

[2] Available at http://www.epa.gov/region1/ge/publiceventsandmeetings/283320.pdf

EPA. ARCADIS, Anchor QEA, and AECOM, Housatonic River Rest of River Revised Corrective Measures Study Report, Prepared for General Electric Company, Pittsfield, MA, (October 2010).

However, EPA has not yet "approved, conditionally approved, or disapproved" the Corrective Measures Study report. Instead, consistent with Ms. Svirsky's explanation of the "process following GE submittal of the CMS," EPA has been reviewing the CMS report, gathering additional information from the public, and conducting its own investigations and field work that can fairly be described as "supplemental studies for the studies to be conducted by [GE] under [the Reissued RCRA Permit..." Decree ¶4. As such, based on the Decree, the RCRA Permit, EPA's own statements and EPA guidance, until EPA completes its review and acts on the draft CMS Study proposed by GE, EPA's efforts are necessarily for the purpose of finalizing EPA's review of the alternatives in the CMS report.

Accordingly, all of the costs associated with the ongoing review – which we believe are the bulk of the costs demanded in the FY2011 Bill – should be allocated to U.S. Oversight Costs.

B. Alternatively, substantial portions of the FY 2011 Cost Bill should be allocated to U.S. Future Rest of River Capped Response Costs (Decree ¶96)

In the alternative, if not U.S. Oversight Costs, some or all of these ongoing analyses are more properly allocated to paragraph 96 - U.S. Future Rest of River Capped Response Costs. Paragraph 96 covers all costs incurred "in connection with" EPA's "studying or investigating the Rest of River ... to support the preparation, development, and selection of the Rest of River Remedial Action..." This includes any "peer input" and "peer review" to support that process. Decree ¶4 (U.S. Future Rest of River Capped Response Costs). As detailed more fully below, a number of the studies, investigations, and internal peer review that EPA has been conducting all would also appear to fall within this capped cost category.

II. Review of specific costs

A. Regional Payroll and Travel Costs

EPA has billed more than $290,000 in direct costs for regional payroll during FY 2011. There also was $29,500 in regional travel costs. These are substantially more than has been charged by regional staff in any previous bill. While we can make some assumptions, without further description, we cannot ascertain why 31 different employees charged 3759 hours and 19 different employees traveled for work chargeable to paragraph 95. Accordingly, we ask that EPA explain what type of employee time it allocated to paragraph 95, as opposed to U.S. Oversight Costs or one of the other capped categories. We note:

1. National Remedy Review Board related costs. Richard Campbell, Stanley Christensen, John Frisco, Carmella Grandinetti, Michael Jasinski, Peter Ludzia, Wayne Praskins, Timothy Prendiville, and Michael Sivak all charged time to the site during FY 2011. However,

to our knowledge, their involvement with the site was in connection with the National Remedy Review Board ("RRB" or "Board") process. Region 1 sought the peer input of the Board, whose purpose is to provide a further EPA review of certain more costly remedies under consideration. In this instance, we presume the Board was asked, in whole or in part, to review the remedial alternatives evaluated in the GE revised draft CMS report.[3] Indeed, Ms. Svirsky's March 2, 2011 presentation to the Citizens' Coordinating Council encouraged stakeholders to "submit written comments ... *on the [Revised] CMS* for RRB consideration..." EPA, Update On the Corrective Measures Study Process at 6 (March 2, 2011) (emphasis added). Moreover, the documents provided with the cost bill suggest that EPA contractors prepared materials for the Board's review that we would expect included references to stakeholder submissions, as well as summaries of aspects of GE's draft study to facilitate the Board's review. We reasonably presume those efforts to distill the record for the RRB were supported by EPA staff at headquarters and the region. That EPA review and evaluation of the GE draft CMS report should not be charged to paragraph 95. *See* discussion in I.A, *supra.*[4]

2. CSTAG related costs. Larry Brill, Allison Hiltner, Kimberly Keckler, Craig Smith, John Sturgeon, and Douglas Tomchuk (supported by others) also charged time to the site in FY 2011. To our knowledge, their involvement with the site was limited to the Contaminated Sediments Technical Advisory Group ("CSTAG") process. However, based on information on EPA's website, it was clear that at least as of 2009, the CSTAG process was evaluating aspects of the earlier GE draft CMS report. *See* EPA Memorandum, S. Ells to S. Svirsky, CSTAG Updated Recommendations on the Housatonic Rest of River Contaminated Sediment Superfund Site (June 15, 2009) (referring to and making recommendations regarding the CMS, including suggesting that additional studies be undertaken).[5] Moreover, the documents suggest that there was coordination between the RRB review process and the CSTAG review. If these costs are going to be charged under the Decree,[6] then all of the costs associated with reviewing the CMS report are more properly allocated either to U.S. Oversight Costs, or, in the alternative, to U.S. Future Rest of River Capped Response Costs.

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[3] If there was some other purpose to the National RRB process, we ask EPA to provide some explanation of the work conducted by the Board.

[4] The purpose of this review was, in whole or in part, to obtain peer input and peer review of the remedial alternatives being evaluated by GE in the draft CMS report. Thus, the RRB work would also fall within the definition of paragraph 96 costs, as it is work is associated with "studying or otherwise investigating ... the Rest of River ... to support the preparation, development, and selection of the Rest of River Remedial Action," which expressly includes "peer input" and "peer review" of that process. Decree ¶4 (U.S. Future Rest of River Capped Response Costs).

[5] Available at http://www.epa.gov/superfund/health/conmedia/sediment/cstag_sites.htm

[6] As outlined in previous correspondence, CSTAG costs should also not be charged to paragraph 95 because the costs are not incurred "pursuant to" a provision of the Decree. CSTAG is not mentioned in the Decree, was not formed until two years *after* the Court entered the Decree, and no provision of the Decree requires this additional review process. The Decree details the process for investigating, selecting and reviewing the Rest of River remedy, including a peer review process and other procedures. This additional process was not agreed upon by the parties.

3. EPA has allocated charges to paragraph 95 for your time ($68.7 K, 758 hours), Dean Tagliaferro ($53.8 K, 639.5 hours), Ms. Svirksy ($69.7 K, 1,056 hours), and Robert Cianciarulo ($32.4 K, 407 hours). We request that EPA provide some further understanding of the nature of the work done that EPA believes should be allocated to paragraph 95, as opposed to one of the capped categories. We presume, for example, that time charged includes support for the RRB and CSTAG reviews, as well as other time incurred reviewing GE's CMS report, conducting the public information gathering and community relations efforts, and working with contractors performing supplemental studies. *See* discussion *infra.*

4. EPA has charged $16,416 for Mr. James Murphy (227 hours of time), who is a "public affairs specialist." In addition to the actual time that EPA evaluates GE's CMS report, all community relations work associated with that still ongoing review process should be charged to U.S. Oversight Costs. Decree ¶4 ("U.S. Oversight Costs shall include ... community relations costs..."). Further, as discussed below, Mr. Murphy's time related to the CCC process should be allocated to cross-cutting or among the relevant categories of work.

5. While most of Ms. Howell's time is not being charged to this category any longer, we still question why any of this administrative time should be charged to paragraph 95, as opposed to one of the capped categories or to cross cutting costs. Likewise, David Dickerson is the project manager for Silver Lake and Unkamet Brook. Please explain why any of those charges would be covered by paragraph 95.

6. Regarding the travel charges, it is generally not clear why this travel is chargeable to paragraph 95 – *e.g.,* why and for what purpose did Susan Svirsky have 14 different trips costing more than $10,000. Also, the bill lists $3,800 under travel as charged to "Bank One." Please explain the nature of those charges. Further, James Owens, Danny Rodriguez, Daniel Wainberg, and Ernest Parfenu Waterman did not charge any time, only travel expenses. As such, please explain the work done by these regional employees and why EPA has allocated these costs to paragraph 95.

B. Headquarters' Payroll and Travel Costs

EPA has billed more than $29,600 in direct costs for headquarters payroll and $8200 in headquarters travel during FY 2011. We can make some assumptions, but would ask that EPA explain the nature of the headquarters time and expenses it has chosen to allocate to paragraph 95. We note:

1. We believe that Amy Lagare, Christina Skaar, Mark Sprenger, and Andre Zownir were involved in the RRB process and that Stephen Ells and Marc Greenberg were part of the CSTAG process. As noted, we submit that this work by EPA to review the alternatives evaluated in the CMS report should not be allocated to paragraph 95.

2. Regarding the travel charges, it is generally not clear why this travel is chargeable to paragraph 95 – *e.g.,* why and for what purpose did 8 employees made 11 different

trips costing more than $8,000. We request that EPA explain the purpose of their travel so GE may evaluate EPA's demand for reimbursement of those costs. Also, there are charges to "Bank One" here as well. Please explain those charges, as well as the nature of the work done by Ms. Lois Haas Gartner who charged travel expenses, but not any hours.

C. Systems Research and Applications Corp. – EPW09011

The bill includes a charge of approximately $166,000 for work done by Systems Research and Applications Corp. ("SRAC"). Approximately $20,800 is associated with the CCC meetings. The remaining $145,400 is related to outreach interviews, the "Situation Assessment," public workshops and charrette.

1. Delivery Order #3

Delivery Order #3 costs were for CCC-related work that are not appropriately allocated to paragraph 95. Rather, a review of the minutes prepared by EPA of the CCC meetings indicates that a wide variety of topics were covered at those meetings during the past fiscal year. *See* Draft Meeting Summary, EPA Housatonic River Citizens Coordinating Council (CCC) (March 2, 2011); Draft Meeting Summary, EPA Housatonic River Citizens Coordinating Council (CCC) (June 22, 2011); Draft Meeting Summary, EPA Housatonic River Citizens Coordinating Council (CCC) (Sept., 14, 2011). Specifically, the March 2011 meeting topics included:

- Additional Requests for Membership to the CCC
- Update on Dam Removal
- Update on Remediation Projects in Pittsfield
- Rest of River Status and Process Going Forward
- Proposed Consent Decree Modification for Silver Lake Bank Plantings
- Update on Documents in the Berkshire Athenaeum Public Repository
- Brattlebrook Park

Similarly, the June 2011 meeting topics included:

- Update on Membership
- Update on Remediation Projects in Pittsfield
- Update on Round 2 Restoration Plan: Sackett Brook Restoration Project
- General Updates and Issues from CCC Members
- Similarly, the June 2011 meeting topics included:

Likewise, the September 2011 meeting topics included:

- Update on Hurricane (Tropical Storm) Irene Impacts and the Project
- Dam Updates
- Update on Remediation Projects in Pittsfield

- Rest of River Process Going Forward
- Commonwealth's Housatonic 9/21 Public Forum
- General Updates and Issues from CCC Members
- Action Item Followup

Indeed, a review of the minutes indicates that a significant amount of CCC community relations time was devoted to categories of work covered by U.S. Oversight Costs, including work related to the Removal Actions, as well as EPA's progress "evaluating the alternatives in the [Revised] CMS ..." Summary of March 2, 2011 Meeting at 3. At the very least, this time was plainly incurred in support of more than one cost category and should therefore be allocated via the cross-cutting allocation. *See* Decree, ¶100(f). We observe that in previous bills EPA has assigned a portion of the SRAC contract costs to other cost categories. GE requests that EPA advise if it made any such allocation on this bill, but if none was made, why EPA believes none was appropriate in the FY 2011 Bill.

2. Delivery Order #92

According to the cost summary, the $145,000 in Delivery Order #92 costs were incurred to "conduct outreach interviews and Situation Assessment" and to "assist in planning for workshops and Charrette." Based on the backup documents that were provided, it appears that the bulk of the charges were associated with the outreach process:

- The ADR contractor interviewed and retained subcontractors (Shapiro, Poole, and Dozier) to conduct the interviews (Voucher 1 - $3200).
- The subcontractor then developed the interview plan (Voucher 2 - $40,000)
- The subcontractors then conducted interviews of "key stakeholders." (Voucher 3R - $26,400, Voucher 4R - $36,700, and Voucher 5 - $3500).
- The subcontractors prepared a report on the interviews. (Voucher 6 - $29,800).

Without a complete set of the documentation showing the work completed by these contractors, we question why EPA would assign these charges to paragraph 95. Accordingly, we request that EPA provide to GE the contractors' work plan and reports on the interviews.[7]

Nonetheless, based on the documentation that has been provided, we submit that these are "supplemental studies" being done during EPA's review of the revised CMS while it evaluates the remedial alternatives in the draft CMS report. As such, it necessarily falls under U.S. Oversight Costs. *See* discussion, *supra.* Moreover, as outlined, EPA contemplated that its evaluation of the CMS would include consideration of public input. Hiring consultants to seek out and obtain that input from members of the public before EPA issues a decision on the CMS report – or before EPA proposes a remedy and asks for public comment – is inherently part of

[7] Further, we observe that EPA's contractors have claimed that documents associated with Delivery Order #92 contain Confidential Business Information (CBI). As the documents do not contain rate information, GE questions the basis for asserting that these vouchers are CBI.

that process of evaluating the CMS report. As outlined in EPA's presentation at the March 2, 2011 CCC meeting, the interviews were part of EPA's ongoing review process. Svirsky March 2011 Presentation at 3 ("EPA is evaluating the alternatives in the RCMS considering: Input received from stakeholders...")

Even assuming, *arguendo,* that this investigation was not part of EPA's review of GE's proposed CMS, it is still an EPA directed study or investigation. Seeking out and obtaining the views of the public to support EPA's remedy decision by hiring a consultant to gather that information is surely "studying or investigating the Rest of River ... to support the preparation, development, and selection of the Rest of River Remedial Action ..." Decree ¶4.

We are mindful that in previous discussions over costs EPA has claimed that U.S. Future Rest of River Capped Response Costs (paragraph 96) are limited to "field work." While we do not agree with that interpretation, regardless, in all respects this work was undoubtedly "field work." EPA contractors were in the field, gathering information related to one of the remedy selection criteria, the views of the community. This work cannot be considered the type of "non-field work" effort that EPA will undertake once public comments are submitted and EPA is back in the regional office responding to those comments and preparing its final remedy decision.

D. DOJ

EPA has charged $60,500 for DOJ costs. We ask EPA to explain what aspects of work DOJ has undertaken that EPA submits should be allocated to paragraph 95.[8]

E. Army Corps of Engineers – 169

Under this contract, EPA has billed GE more than $426,400 in direct costs plus $140,000 in indirect costs. This equates to $566,400 or close to 1/3 of the total paragraph 95 bill. The work is for support by a number of contractors retained through the Army Corps, including Isosceles, Weston, Hydroqual, Stantec and Geodesy, as well as the contractor management and other related costs incurred by the Corps.

GE questions why these charges are allocated to paragraph 95. In general, as described in the documentation, the costs fall into several categories:

1. Public outreach and the "Charrette" – These include contractor charges (totaling approximately $145,000 + indirect costs), for workshops, outreach interviews, and the "situation assessment." This work supported the study framed for EPA by the ADR contractors to interview stakeholders (discussed above), as well as to support and participate in the "charrette" process, in which EPA held workshops on the remedial alternatives, including those evaluated in the revised CMS report. Indeed, the charrette was a central part of EPA's "public outreach" program as it reviewed the remedial alternatives outlined in the draft CMS report.

[8] GE is not seeking privileged information, but does seek some explanation for the DOJ charges.

Svirsky March 2011 Presentation at 4. In fact, as EPA has acknowledged, it conducted the charrette, in part, in order "for the public to interact with EPA regarding their views on the remedial alternatives ... during EPA's decision-making process." *Id.* As such, the costs of EPA's public outreach process fall squarely within the gathering of public input and "community relations" covered by U.S. Oversight Costs. Decree ¶4.[9]

2. Remedy Review Board – The contractors developed materials provided to the RRB (at a cost of approximately $104,000 + indirect costs). This included support for updating and creating, tracking and editing report sections for the Board package. As outlined, the costs associated with EPA review of the alternatives evaluated in the GE draft CMS report are U.S. Oversight Costs and should not be allocated to the FY 2011 Bill.

3. Fact sheet – The contractors have helped EPA provide information to the public about the different remedial alternatives evaluated in the proposed CMS report. The cost of the "fact sheets" (approximately $10,000 + indirect costs), however, are also not recoverable under Decree ¶95. Rather, for the reasons outlined above, the costs of public outreach and education while EPA is evaluating the CMS are "community relations" costs, which are covered by paragraph 98.[10]

4. Meetings with academics – According to the documentation, EPA and its contractors met with representatives from the Yale Forestry School but EPA states in its cost summary that those costs of "outreach to educational institutions are not billable pursuant to the consent decree." Please confirm that all related charges were excluded, including any other charges (such as related Army Corps time/travel, as well as EPA employee time/travel).

5. Supplemental modeling and technical analysis – According to Voucher 61028734, EPA tasked its contractors to conduct additional modeling and analysis as part of its evaluation of remedial alternatives. Specifically, HDR HydroQual provided support for developing revised modeling boundary conditions; and Weston, HDR HydroQual, Stantec Consulting, and Geodesy provided support for estimating floodplain removal volumes and areal extent of removal for floodplain alternatives. We estimate that the cost of this work was approximately $71,000 (plus indirect costs). These analyses either are "supplemental studies" covered by U.S. Oversight Costs (paragraph 98) or constitute "studying or investigating the Rest of River ... to support the preparation, development, and selection of the Rest of River Remedial Action" (paragraph 96) which specifically contemplates covering EPA "modeling" work. Decree ¶4.

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[9] As outlined above, gathering this kind of public input also falls within EPA "studying or otherwise investigating" the Site (paragraph 96). In either case, the effort should not be charged under paragraph 95 of the Decree.

[10] Alternatively, while EPA may, of course, choose to use its resources to educate the public generally about PCBs, such general education are not included within the scope of EPA's Rest of River study and remedy selection work in the Decree. Decree ¶22. As such, these costs are not incurred "pursuant to provisions of this Consent Decree" and hence are not recoverable.

6. General technical support by contractors and Army Corps costs managing, overseeing these contractors – There are also close to $69,500 (plus indirect costs) in contractor and Army Corps charges to support the activities listed above. The contractor charges include "Isosceles Group technical support" (approximately $4,200), "Randall contract management and procurement" (approximately $1,700), and "Weston project management support (approximately $21,600). These are precisely the kind of costs covered by U.S. Oversight Costs, which include all "contractor costs" and "technical support costs." Decree ¶4. In addition to the contractor charges, the Army Corps has itself incurred costs (close to $42,000) for labor, travel, and project management in the course of overseeing the contractors managing the work under the interagency agreement. Those costs are likewise part of the costs capped under paragraph 98. Decree at ¶4 ("U.S. Oversight Costs shall include... interagency and intergovernmental agreement costs (including ... U.S. Army Corps of Engineers costs")).

F. ASRC Management Services, Inc. - EPW05052

The paragraph 95 bill also again includes charges under an ASRC contract (EPW 05052) of approximately $50,500 in direct costs for a variety of "records management" tasks. When the $16,600 in indirect costs is factored in, this totals about $67,100 in document management costs. As outlined in previous correspondence regarding EPA cost bills, we submit that these costs are also not properly assigned to paragraph 95.

According to EPA's contractor's progress reports, this work is described generally to include, among other things, "records, information, and project management support for the GE-Housatonic River site," the work to "process, organize, and file records and collections," to "provide reference on collections," and to perform "index QA review" for documents that had been indexed at various times in the past (including during 2008-2010) "for the GE Oversight site." This very general processing of documentation for the Site as a whole should not be charged to paragraph 95. Indeed, if the cost of this work is at all chargeable under the Decree and cannot be reasonably apportioned to a specific category of work, then it is precisely the type of work "incurred in support of tasks included in more than one cost category" (Decree ¶100f) that should be allocated to the Site as a whole by way of a cross cutting methodology.

Without exhaustively listing each example, a few representative selections from the progress reports include:

- Invoice Number 33: "Repository Audit & Visit (RTS 14886) - Pulled 16.5 linear feet of files from field repository and reorganized remaining holdings."

- Invoice Number 34: "EI Data Entry for GE Housatonic (RTS 15195): Received the final POLREP from the CERCLIS SA. Entered the media, volumetric amounts, response actions, and contaminants of concern into CERCLIS. Notified the CERCLIS SA that data entry was complete and that the ReportLink reports could be run. Performed index QA corrections for April 2008, May 2008, July 2008, August 2008, November 2008, January 2009, June 2010 - August 2010."

"Perform Corrections on General Electric Indexing (RTS 14785): Received confirmation that the General Electric Interagency Agreement documents can be changed. Noted that the 528 documents would be changed via a script so that they all have the Interagency Agreement phrase in the title and that they are indexed to the Cost documentation document type and associated to the Confidential Business In formation (CBI) and FE4 Trade Secret/CBI access types."

- Invoice Number 42: "Review process for posting of GE - Housatonic documents to Web (RTS 15428). Received confirmation from COR that the GE-Housatonic FaceBook page is being managed by Office of Public Affairs and outside scope for OSRR RIC."

It is not at all clear what these and other entries on these vouchers mean or why they are recoverable under the Consent Decree. However, to the extent this work is for the management of data and documents for the development of the administrative record related to the Rest of River remedy, those are costs the parties expressly contemplated would be covered by paragraph 96. Decree ¶4 (costs "in connection with studying or otherwise investigating the Rest of River ... to support the preparation, development and selection of the Rest of River Remedial Action" which "*shall include*, but not be limited to, costs that EPA Incurs for ... data management, ... *general contractor costs (including, for example, administrative record development...*") (emphasis added).

In addition, these costs in fact relate directly to other capped categories. For example, the documents include a reference to "Convert 1999 Admin. Record for Removal Actions Outside the River from tiff to PDF CD-ROM." *E.g.,* Invoice Number 42, 44. The management of documents associated with these activities should not be charged to the uncapped category, but to the category associated with EPA's oversight of the Removal Actions Outside the River (paragraph 98).

Further, these documents again include charges for ASRC to "convert GE 104E Zybase images to SDMS." (*See* various Invoices). It is not clear what portion of the costs were incurred in connection with this task, and GE would ask EPA to provide (or estimate) that amount. In addition, GE submitted the 104(e) over a decade ago, and, as such, GE asks EPA to explain why this conversion project still continues and why these additional document conversions are costs being incurred "pursuant to the provisions of this Consent Decree."

* * *

Thank you for your consideration of this letter. Should you have any questions on these issues, please contact Rod McLaren or me at your convenience.

Sincerely,

/s/ Samuel Boxerman

Samuel B. Boxerman

cc: Michael Carroll
Rod McLaren
Andy Silfer
Mark Gravelding
Dean Tagliaferro

EXHIBIT B

GE
159 Plastics Avenue
Pittsfield, MA 01201
USA

April 5, 2012

Via Electronic Mail and Overnight Delivery

Dean Tagliaferro
EPA Project Coordinator
U.S. Environmental Protection Agency
c/o Weston Solutions
10 Lyman Street
Pittsfield, MA 01201

Timothy Conway
Senior Enforcement Counsel
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EPA New England
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Boston, MA 02109

Re: GE-Pittsfield/Housatonic River Site
Notice of Dispute of Cost Bill Under Consent Decree (GER400)

Dear Messrs. Tagliaferro and Conway:

Pursuant to Paragraphs 101 and 133 of the Consent Decree (CD) for the GE-Pittsfield/ Housatonic River Site, General Electric Company ("GE") submits this Notice of Dispute to the U.S. Environmental Protection Agency (EPA) with respect to EPA's Fiscal Year 2011 Bill for "U.S. Future Response Costs" under Paragraph 95 of the CD. The costs to which GE's objects and the bases for GE's objections are set forth in the attached Statement of General Electric Company.

As provided in Paragraph 133 of the CD, dispute resolution begins with informal negotiations between the parties for a two-week period (unless extended by agreement of the parties). We are hopeful that this matter can be resolved during those discussions.

Please contact either of us so that we can set a schedule for discussing these matters.

Sincerely yours,

Andrew T. Silfer /KGM

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

Roderic J. McLaren
Counsel – Pittsfield/Housatonic River Remediation

Attachment

cc: James T. Owens, Director, OSSR, EPA New England
Bob Cianciarulo, EPA New England
Holly Inglis, EPA New England
Chief, Environmental Enforcement Section, Environment and Natural Resources Div., USDOJ
Michael Carroll, GE
Samuel Gutter, Sidley Austin
James Bieke, Sidley Austin
Samuel Boxerman, Sidley Austin

EXHIBIT C

Transcript of Statements of EPA Personnel at April 7, 2011 Workshop

Curt Spalding

What a great facility. I'm Curt Spalding. I'm the regional administrator of EPA, appointed a little over a year and a half ago. I'm very pleased to be here with all of you today. I'm especially pleased to be in this wonderful facility. Before I do anything else, I want to thank the folks who've been putting this together. I know that some of you have been here for the other workshops but the team that's put this together, I want to acknowledge the staff at EPA and the facilitation and all involved. It's probably one of the best things I've ever seen in all the work I've done nearly 20 years of environmental work, this kind of engagement process. I think this is some of the best that's ever been done in the country and I'm very proud of it. I also want to thank all of you for coming. I know some of you have been to a couple of these, this may be a first night. I'm going to go over some slides, presuming that you haven't been here, but if you have, if you have been, I apologize for the repetition. But this is only as good as the work and the education you all put into it. We feel very strongly and my boss especially feels strongly. My boss is Lisa Jackson, the administrator of EPA. She says a couple things to us as regional administrators, is that we are obliged to reach out to community and engage community in constructive conversation around tough issues that we have to deal with, so I'm very pleased you could come. You know the only way that works, is community comes out. So, again, thank you.

I'm going to say a few things before I get into the slides, that really speak to my responsibilities as administrator, regional administrator of EPA. You know, I came to work and the great staff at EPA, my deputy Ira Leighton, organized a book for me to look at. And in the very front of the book was this issue. The scale of this issue is something that was explained to me very early on. The scope of the concern, the kinds of challenging issues that are at play here. So I want you to know that right out of the gate, my coming to the office of EPA and taking on the leadership of Region 1, this has always been a primary issue for all the staff at EPA, not just the staff who are working at it here, but a lot of people. In thinking about this, and I don't think about this in its own little box, I think about this across the region. We have a big challenge in Region 1, it's a challenge that we've been carrying on for years and I call it the challenge of restoring green capital. One thinks the Berkshires is perhaps different than other parts of the region, but it's not so different in an important way. We all know that with industrialization in this region, we lost a lot. We lost our rivers to a large degree. Not just this river, we lost a lot of rivers. The quality was greatly degraded. We also lost a lot of land. A lot of land was contaminated. Programs were built to address that. But fundamentally what we're about in New England is restoring this green capital upon which we can build the prosperity that's going to carry through the 21st century and the generations beyond. And I always like to put this kind of work in that context, because a lot of people like to project this conversation as, "It's economic versus environment." It's not that at all in my mind, because the economy in fact is built on the environment in New England. We don't have prosperity in New England if our land is contaminated and our water is unhealthy, and we know that upfront.

The other point, again, I bring to this, you know I've only worked for EPA for a year and a half. I did work for EPA many years ago, but that was a short stint also. What you learn as a newbie at EPA is just the enormous talent that goes into the idea of cleaning up sites. Cleaning up contaminated land. If you think about it, there probably isn't an organization in the world that has, knows more about cleaning up land than EPA. We do it all over the country. We have talent like the talent you've met here all over the country. There's a cadre of superfund practitioners and remedial professionals who have done sites and other sites and others. We have people here in the back who you may have met who have over 30 years of experience dealing with sites and what you can do and the kinds of opportunities there are to clean it up. And their work is always measured against the work in other regions. In the end, what we will produce here, we hope, we expect, let's not hope about it, we expect, is to produce what we call a one EPA Remediation Plan. By that, I mean anything that we do here will need to be measured against work elsewhere around the country. There will be peer review. Bob will talk about that later, but I want you to know that this, this, you're not alone in this. Not alone at all. The talent, the best talent from EPA is being brought to this, to this problem. Talent that you have met, I think, but talent that's around the country.

The third thing that my boss says very clearly is we have to be a listening organization. I've said this to the region and we're doing a lot of work to help us with listening skills. Most people know that high performing organizations are real good listeners. They can hear, they can understand, they pause, they listen, they try to get in the minds of the people who are speaking to them. What are they really saying to us? This, peel back that onion and really understand what they're talking about, and indeed, that's what we're trying to do here. And I guess when we get to the charrette a month from now, you'll be listening even more. These are about laying this, this process is about laying the groundwork for that listening process. But listening is something we value very much in the leadership of EPA. And of course, I wouldn't be doing my job if I didn't repeat what is repeated to me over and over and over. We make decisions based on sound science and the law. And I guess I wouldn't be out of school to say what you're hearing in Washington right now is a conversation, perhaps at a very high level, that that message isn't really taking hold. Nobody at EPA is pursuing things cause we like to do it, or we're arbitrary about it. We do it because there's a need to do it and there's science that supports what we do and there's a law that gives us the authority to do what we do. And I want you all to remember that as we go forward.

Nobody, I wish we were all home being able to play softball on this nice night, or out to dinner with our friends and family. We're all here because something pretty tragic happened in the Berkshires in the Housatonic River a couple decades ago. I mean if it happened today in real time, it would be a horrible thing and the headlines would be terrible and you know, what you saw around the Gulf spill would probably happen. But, this happened a long time ago, over a longer period of time so the dynamics are different. But that said, we're here because we have a responsible party that needs to do something about the clean-up of this river. And we all know that we need to keep that in mind. EPA's not bringing you here. The need to be here is to create a vision and a future for a healthy river that we can all use and enjoy going forward.

So those are the things I want to bring to people. I'm going to go through these slides really quickly. I will be back for the charrette. Today I spent time meeting with people, we'll do some more meetings with them. There's a process I'm going to have to manage and that's getting the

process for a remedy through a larger conversation all the way around to the end of the year. Hopefully we'll have something that is something we can all work from. But right now, there is no remedy until we go through that, through that whole process. Looking at what we're doing today, I don't need to talk a lot about these things. You can read as much as I can recite. But the bottom line is, we have steps we're going through. Corrective measures studied.

This is an RCRA project, not a superfund project. You all know this by now. Our workshops, again, this is as good as anything anyone's tried to do anywhere in the country. We're going to write about this when we're done. I can guarantee you the national program is going to hear about how successful this is, but that success depends on you, ultimately. We're going through our workshop phases tonight. We're exploring alternatives, as you know. Perhaps tonight will be as interesting as any of it, but I've heard from people I've met today that the conversations about the river were really enlightening and I'm glad you've enjoyed them. Here decision criteria, that, I want you to know right up front, I couldn't go into specifics about this right now if I wanted to. I'm the political head of the agency. You have talent here that's going to work with these standards and bring them to me and explain how they all go together and then there's going to be some key decisions. But know that these are the criteria we work with. Any remedial action or any RCRA corrective action around the country has to deal with the same thing. This isn't made up just for here. This is a national, a national standard that we have to address.

Tonight's agenda, we're going to go through the different alternatives and how we're thinking about this, but I don't want anybody to go away from here going, "Oh, we know what they're going to do." Because that would be wrong to conclude that. Tonight we hope you get your heads around the same kinds of things that we're trying to get our heads around and trying to create a future for the Housatonic that we all can be proud of and that our kids can be proud of and their kids can be proud of. As I think about this, and I think about this a lot, believe me. On matters of such gravity as this, I think about this a few minutes every day and when we come to these kinds of events, I'm thinking about this all the time.

I, you know, what I keep thinking about is that this is our opportunity. That we're not going to get two bites at this apple. We're going to get one. And we have to do it well. And I think the folks at GE would say the same thing, that this has to be done, we have to do our very best here, to come up with something that creates that future for the river we all want.

And so I want to emphasize and close with this point. We do this with utmost seriousness, utmost commitment, and really hard work will be put towards this. And I can tell you the team you're meeting here is the best there is in the country for taking this on. And I'm very proud to lead them and I hope you all feel the same thing as you've gotten to know them through this workshop process. As we go forward, it's always appropriate, Jim Murphy's here, questions are welcome, open dialogue is welcome. We need that input moving forward. And so I'm so glad you're here to learn more about this and participate in the process. So it is now my, who am I turning it over, to you Steve? All right. So again thank you all and I will be back. And I'm again, I'm watching this as closely as I can.

* * * *

Bob Cianciarulo

Thank you, Steve. I'm Bob Cianciarulo. I'm chief of the section that basically oversees the federal clean-up projects in the state of Massachusetts and that includes the GE Housatonic Project. I'm going to try to put together a lot of what you've heard over the last two and a half days and how they'll sort of fit into the alternatives and technologies and the decision making that we are embarking on here for the "Rest of River" project.

So this is a diagram that some of you maybe have seen in the past that basically goes through a lot of what you heard about over the last couple of days. The investigation that we have conducted on the river, the various risk assessments; ecological and human health risk assessments. You heard yesterday about the efforts on modeling the behavior of the river and the contamination. Those, all of those studies, basically, fed into one of the worst acronyms we have, probably, IMPGs, Interim Media Protection Goals. Basically a set of clean-up goals that would address any unacceptable risks that we've found to human health or the environment as sort of a benchmark of what we should be shooting for in any type of clean-up activity. All of those fed into the process that we're, that we have been under way with now as the Corrective Measures Study, the CMS, you may hear me refer to it as a feasibility study. At other sites we might call it a feasibility study evaluation of various clean-up options to deal with any, basically to deal with risks at the site. That document will feed into, really, the next major process that we are leading up to here, which is when EPA comes out and proposes a clean-up plan for public comment. So we haven't made any determination on what we think the appropriate course of action is. You have seen GE's studies, GE's reports on that and we really want to hear from you through this process and through the upcoming charrette process on sort of, you know, how you feel about where things ought to hit. And then that proposal would lead then to a final clean-up decision after a public comment period. I will get into all of that in a little while.

So the corrective measure study went through a couple major iterations. The last major revision was in October 2010, and that was basically put out for public comment at that time; we got a large number of comments on it. There is a wide range of alternatives and I'm gonna run through some of this as best we can.

Ten alternatives for sediment clean-up, nine alternatives for flood plain clean-up and there are five alternatives that deal with treatment or disposal of any material that might be excavated as part of any clean-up. We thought about how we were going to portray this giant table. We probably would have needed the whole wall to display it so you can see it. So it's on page 9 of your workshop booklet, I'm going to refer to some of this (and its really sort of a take-home message) but this is really the array of the ten sediment clean-up options. Across the top if you look in your book it is basically broken down by river reach, and you've heard that over the last few days. Breaking the study area into smaller areas and the potential clean-up options could vary from reach to reach and even within those reaches and then here we have ten sediment clean-up options down the left hand side.

Similarly, for flood plain alternatives, and I'm gonna get into these in a little more detail, there were nine flood plain alternatives and those aren't necessarily reach specific. Although, they'd be applied basically by what type of contamination was where, and that's on page 10 of your book. So there are those two big tables, so I've realized that that leaves all these questions.

"How many clean-up options are there?" We've heard some discussion of, "Well, there are three plausible options." Well, it's far more than that and we have what I just said: ten sediment alternatives, nine flood plain alternatives, and five treatment storage and disposal alternatives. We've tried to put together a little math, if you think about those two matrices overlaid with the potential combination between the two and then add in the different options for treatment or disposal, we're up to about forty-two hundred different combinations of clean-up alternatives all still on the table, all still being evaluated. Now if you try to simplify forty-two hundred options, a lot of them fit as far as sediment goes, most of them fit into these general categories, and I'm gonna try to run through examples of each of these to try to give you a better flavor for it.

"No action," which we are basically required to look at as well, what would happen if you didn't do anything at all. The next one, and Mike Palermo talked about this, Monitored Natural Recovery—he talked about, actually, most of these. The next two, Removal with Capping, Removal with Backfill. In the CMS they use the terminology Removal, a lot of Mike's discussion centered on the term Dredging. Really, there's not necessarily any judgment on how it would be removed but there is many removal alternatives as far as getting sediment out of the river. Thin Layer Capping, which I'll show you an example of is, really, (sometimes, they'll refer to it as Enhanced Monitored Natural Recovery,) to basically speed the process of natural recovery by adding sort-of additional sediments, really, as a dilution method to sort-of speed what might happen naturally and I will get into that in a second. Engineered Capping is what it says again with sort of a more sort-of stable layer, one that's not really expected to mix with the underlying sediment. And many of the alternatives, if you look at that table have sort-of a line item down, down one whole column: Bank Stabilization. We heard a lot about the banks and their potential instability in some areas, and so these alternatives look at ways to sort-of, you know, ways to deal with that. So we're going to look at an example here we took the middle of the table here, this is SED 5, the fifth sediment alternative, and as I said it is basically broken down: reach 5A, 5B, 5C, that's basically from the, all of reach 5 is from Fred Garner Park from the confluence down to Woods Pond, but that's broken up into 5A, 5B, 5C and the banks and then we have further downstream. Woods Pond. Reach 7—is basically the river between Woods Pond and Rising Pond. Reach 8 is Rising Pond. Reach 9-16 is basically from Rising Pond down through Connecticut. So here is an example of where you saw a lot of those terms and how they might they already apply to this alternative. So for reach 5A and 5B the alternative looks at removal of two feet of sediment and then basically replacement of material as a cap over any residual contamination that might be there. As I mentioned the banks. We looked at stabilization and potentially some removal of soil from the banks. This is where we get into these forty-two hundred alternatives. As you reach 5C, combination of two feet removal with capping just like A and B, I'm having trouble aiming here, that's in the shallow areas and then maybe just capping in deeper areas. Similarly in the backwater areas of reach 5, Thin Layer Capping and Monitored Natural Recovery, so kind of a Monitored Natural Recovery here with an enhancement of Thin Layer Capping, Removal with Capping, Capping, Monitored Natural Recovery, you've seen that term before MNR. So that's one alternative that obviously involves a number of different approaches within that same alternative and even within smaller areas of the river.

So let's talk about Monitored Natural Recovery just to, sort of, I guess, reiterate what Dr. Palermo said. Basically, you know the heart of it is a monitoring program of various

environmental media sediments, surface water, you know, organisms etc., coupled with institutional controls so in this case it might be the continued fish advisories or other sort of advisories; we would use that term Institutional Controls. When you talk about Thin Layer Capping, you remember that other term I think you saw it in one of those other slides, EMNR, Enhanced Monitored Natural Recovery, really, this graphic is trying to contemplate basically an addition of a thin (probably sand) layer that's not really meant to be a barrier but is allowed to mix with the underlying sediment and sort of speed the process of what might be sort of natural sedimentation, natural capping. Typically not suitable for sort of the more you know, rapid running reaches of the river; more for sort of impounded areas. That's where we have seen that remedy selected at other sites. So many of the alternatives involve sediment removal from the river bed and banks and a lot of those alternatives, you saw them, how they were written, don't necessarily talk about, again, the sort-of dredging method.

Susan's going to get into some of, you know, sort-of, how some some remediation might be approached but let's talk about river banks because that really follows on some of what Keith was talking about earlier tonight as far as various ways to stabilize the river banks. This is really, if any remedy was selected that involved river bank stabilization, I think it is sort of a highly tailored approach to a particular spot in the river and is really specific to the morphology in the river in those areas as far as what are we trying to sort of protect here on the banks. This is just sort of a typical kind of armored stone or riprap bank stabilization, sort-of an enhancement to that, that could have been looked at as sort-of an additional sort-of vegetative kind of habitat layer on top of that so that if you still needed sort-of a stone armoring, you'd still minimize any adverse effect that you might have by trying to add another layer on top. All of these alternatives, the way you've seen them here as we are showing—the excavation and backfill of the sediment underneath—it's just as an illustration. And then I guess the next evolution of that, that we are looking into more seriously, is the concept of bio-engineering. Again, this involves the sediment material here but using other natural materials, especially below the waterline. This is a little illustration of a sort-of a log, tree using other natural materials and really creating a stable bank that's working with the river processes. So again, it's, sort-of, I guess, looking at the morphology you've heard about the last few days, "Where is the river?", "Where is the river sort-of wanting to go?", and, you know, "How can we work with it and not against it?".

So when we get to flood plains which, for us, when we do you know, the eastern part of the state, a lot of just sort of soil remediation jobs, the flood plains soil is a little more sort-of standard, somewhat easier to comprehend for me anyway, perhaps not for you, but is numerical standards set up for the protection of human health and the environment and we heard from Donna Vorhees yesterday about sort-of EPA's risk range of one in 10,000 to one in 1,000,000 risk. So clean-up levels would be established that basically represent those risks, represent sort-of being protected so you get to appoint where its an acceptable risk. Also looking at non-cancer hazards—same thing. So picking a clean-up level that is sort-of protective of human health or, similarly, clean-up levels that are protective of ecological risks or other PCB concentration-based limits, so in the Corrective Measure Study in that table that you have in your book you will just see some places where it says, you know, "basic excavation of everything over 25 parts per million PCB," and that was one of the alternatives that was evaluated. So this is just, I guess, a simple schematic of what flood plain remediation might be, so in that table it might say "removal of top foot of sediment that exceeds a particular clean-up level" so you know this is basically

excavation of flood plain soil and then restoration of the area. So those were really looked at separately, the sediment alternatives and the flood plain alternatives in those tables. In this revised CMS, GE also looked at a series of combined alternatives to sort-of look at kind of how particular alternatives of sediment and soil might be cleaned up in conjunction with each other. So that's really the combined infrastructure if there is required sort of a road and a staging area to excavate a flood plain area and you also need to work in the sediment, looking at how those sort of work together that you can sort of minimize those impacts and obviously you are not building two roads to the, to the same place. So this is not an exhaustive list and I'm not gonna sort-of go through them, I think the volumes and cost are also in your book for these various combination alternatives, but again just because these combinations were looked at doesn't mean any of the alternatives that weren't in those combinations aren't still on the table again, they are still on there, and they are still part of the evaluation.

So here is an example of a combination alternative. In any sort of particular stretch of the river you might have an area where you have a area flood plain soil that you believe that requires remediation in that same area you may be removing the two feet of sediment, say from the base of the river and doing some type of a river bank stabilization. Then the next layer is really the treatment and disposal option and that looks at if one were to select any type of active remedy that involved the excavation of soil or sediment, what would you do with the resultant material. So there were five options looked at in the CMS. They were, two of them were disposed in a landfill, one of those was an on-site facility, excuse me, one of those was an off-site facility and another one was what we consider an on-site local disposal facility and as many of you know GE's study identified three potential locations for those, for that facility.

Another disposal option that hasn't been talked about a lot but was evaluated in the CMS was disposal in what's called a Confined Disposal Facility, a CDF and that would typically involve sort of an area essentially within the river, for sake of illustration maybe say one of the back water areas that could be cordoned off, basically cut-off from the river. Contaminated sediment would be placed in there and then covered over so sort of a kind of a landfill within the river. So that was part of the one of the options evaluated and then there's two treatment alternatives evaluated. Chemical Extraction, which basically uses a chemical to try to remove the PCBs from the sediment, basically reducing the concentration of the sediment, and Thermal Disorption, which basically uses heat to sort-of remove the contamination from the sediment. Both of those resulted in some type of concentrated liquid waste that has to be typically shipped off-site for incineration and then, that treatment is typically then followed by disposal of that clean sediment unless some type of reuse option was found. So these technologies would be successful in reducing the PCB concentration in a material but it might not reduce it to a level that it could be sort-of put back in the river or used elsewhere, so then that also may have to be disposed. So, that was also evaluated in the study. It is important to note all of those technologies, now, those two technologies are what we call ex-situ technologies, and we talked about that. I'm losing track of my days now, I don't know if that was yesterday or if it was Tuesday. Ex-situ technologies, that is, both those technologies would involve building a treatment plant and bringing, transporting those materials to that treatment plant for this ex-situ treatment. Innovative technologies that deal with materials in-situ, sort of the whole concept that we've talked about in the past, of "Is there something that could be added to the sediment that would basically reduce the contamination?" in varying stages of development. So at this point, I think

we heard from Dr. Palermo, nothing that we're aware of right now that's sort-of implementable at a large scale at this point, but you know we will be looking for future opportunities to test any emerging technologies in the near-term and in the long-term and Susan is going to talk about Adaptive Management (there's that term again), but we would like to, in any clean-up plan we might come up with, I think we'd like to work in some type of process for exploring, you know, new and better ways of doing whatever it is we feel needs to be done out there.

So let me talk about making the clean-up decision. This may be the third or fourth time now you've seen these permit standards. These are basically in GE's permit that is governing this clean-up. That permit is part of the consent decree that really governs the entire site. These are really the metrics we're using to evaluate those alternatives individually against how they meet these criteria and comparing alternatives, sort-of, you know, preparing which ones do certain things better. So, but, it really starts with these general standards which I sometimes refer to as, like, threshold criteria and number one is overall protection of human health and the environment, number two is control sources of releases so, you know we need to look at them, we use the model for this a lot, is looking at whatever you might do in an upstream reach, how that impacts downstream areas. Obviously the goal of anything is to make sure that you're controlling any further contamination downstream. And compliance with applicable or relevant and appropriate requirements and laws (ARARs), basically environmental, and laws and regulations that might govern the clean-up. So, the Clean Water Act, TSCA the Toxic Substances Control Act, which is the PCB rules.

Then you get into the selection decision factors which, I would refer to as kind of balancing criteria in sort-of looking at how each alternative meets each of these criteria. Long-term reliability and effectiveness, attainment of those IMPGs (the clean-up goals), reduction, how an alternative reduces toxicity, mobility or volume of contamination, its short-term effectiveness, its implementability, "Can it be done?", and its cost.

So let's talk about how EPA selects a remedy. This is really a big step in that process as we, sort-of, really try to gauge your thoughts on the clean-up. We do have to go through a series of internal reviews before we're able to get to a point where we can come back here and talk to you about what we think our preferred clean-up approach is and so a big step in that is this natural remedy review board which really is sort-of an EPA internal peer review process. A group of, basically, our counterparts from across the country and in our Washington office making sure that we're making sound remedy decisions and that we're being consistent across the nation on how we address clean-ups. Once we get through that, we'll basically be proposing what we think is the best approach for clean-up to the public for your input, and as part of this process we'll actually include a draft revision to this permit that GE has that would govern the clean-up. The comment period would be a minimum of forty-five days, we'll have additional public meetings and they'll actually be formal hearings where people can make formal, sort-of read testimony; and we'll have to collect all those comments, address those comments as we move towards trying to make a final clean-up decision. So, this week of mini-workshops was really to help everybody kind of get up to speed and remember all of the work that's really been done over the past decade as far as the past investigations and risk assessment studies and really hopefully give everyone a good basis for moving towards the May 7th charrette where we can help, you know, get your views about the clean-up we'll talk about at the end of the night maybe some of the thoughts on what we might talk about there, but, you know, help you think about our

criteria that we've laid out there as far as what we have to judge the clean-up against, but also talk about other factors that you find important and, again, material for those workshops, for all of these events are on that Housatonic web, excuse me housatonicworkshops.org site. Thank you.

Steve Shapiro

Thank you Bob. A few questions. In the stretch of Housatonic River already restored, riprap was used to stabilize banks. Do you anticipate any stretches of the "Rest of River" using riprap for stabilization purposes?

Bob Cianciarulo

Okay, yeah a lot of the challenge is in the first two miles of the river, or really what we've talked about in the past (Keith and other speakers) of a highly developed area with often steep banks and in many cases sort of buildings and homes sort-of right up against the river, so that certainly influenced the reconstruction methods. The river, as you know, gets very different as you move further down stream, so I really think it kind of depends; it depends on where you are, we talked about, you know, considering the morphology, considering about the behavior of the river in that particular area, but, as you saw, I had three examples up there. In one of them we had that stone armoring which is, you know, basically a riprap material, so it certainly may be in the mix in any type of bank restoration, but I think it's, if and when we get to that point, it's really going to have to be, sort of a location by location consideration. Susan is going to get into a little more of that in the next session as well.

Steve Shapiro

Okay. Even though the question was asked before, is it EPA who does post-restoration monitoring, with GE funding this monitoring?

Bob Cianciarulo

Well, the consent decree does require GE to implement the selected remedy, whatever we end up here as the selected remedy and we would consider the monitoring to be part of that, part of that process, but I can use examples from other sites, you know, in other parts of the state in many cases, you know, when the PRP is, we'll call it the responsible party, is doing some of that long-term monitoring. EPA is still on the job overseeing it and we certainly have the opportunity if we found it necessary to do additional monitoring ourselves as well.

Steve Shapiro

Is GE going to monitor?

Bob Cianciarulo

GE would be required to, if they're required to implement the remedy then they would be required to maintain the remedy. Which will involve taking samples under our direction.

Steve Shapiro

How does EPA view newer innovative bio-remediation techniques for PCBs: skepticism, enthusiasm, curiosity? Particularly, is EPA willing to include this technique and see two methods, at least on a trial basis? In such a large, a costly project it would seem that cutting-edge technology seriously should be welcomed even it would mean more time is needed to evaluate its results.

Bob Cianciarulo

Yeah, I think we've touched on this a few times and we can talk about it further again, we don't know of a technology right now that will be ready to be implemented at a scale we'd be talking about here as far as in-situ method but we definitely don't want to close the books on, you know, new good ideas that come up over time. Any clean-up here if, it is a lengthy process, you know, would be a, we would have an opportunity to adapt as we went down and no one's going to ignore a great idea that comes up if a new technology comes on the scene in five years, ten years, whatever. Yeah, we'd be crazy not to consider it.

Steve Shapiro

In the flood plain area the excavation slide presented earlier, were the trees present excavated around or were they removed? In cases where the trees are removed in the flood plain area, what have been restoration practices on river sites?

Bob Cianciarulo

Well, I think people were asking about the example there where we showed sort of an area there was a tree in the middle of that hole, that tree would have to go. There will be, we can't say that if there was a flood plain remediation that was in an area that had trees in it that, you know, there would be some clearing of trees. I think what we tried to explain over the last few days is a, you know, it doesn't mean forever, you know, there will be any kind of clean-up would require reconstruction and restoration and you can't replace a fifty-year old tree right away but there would have to be a replanting program, and, again, we've tried to show over the last few days how systems like this can recover.

Steve Shapiro

Okay. One last question for now. Bob, you mentioned parts per million, but the tables in page 9 and 10 are in milligrams and kilograms please help us convert milligrams, kilograms to parts per million.

Bob Cianciarulo

One to one. I apologize for that yes. Milligrams per kilogram is a weight-based method, parts per million is really one grain out of a million grains if you will sort of in a, if you had a million marbles and one part per million PCB, that's one marble in a bucket of a million marbles.

Steve Shapiro

Thank you Bob.

Bob Cianciarulo

Thank you.

Steve Shapiro

We will try to get to the rest of the questions for the panel.

Our next speaker is Susan Svirsky. Susan is the EPA project manager for the "Rest of River". Many of you know Susan, you have worked with her for years. Ms. Svirsky has worked for the EPA over thirty years in many different capacities, she graduated with a degree in wildlife ecology from the University of Maine and subsequently worked for Maine Inland Fisheries and Wildlife. She began her career at the EPA and Water Quality Monitoring program in Washington D.C.. Susan has taught sessions on ecological risk assessment and restoration of contaminated sediment sites and has authored numerous technical papers on these issues, as well as those associated with the "Rest of River". Susan Svirsky.

Susan Svirsky

Thank you Steve. Thank you all so much for being here tonight and for those of you who have stuck with us for the whole three nights, it's just wonderful to see you all here and to be able to share information that we've gathered over all the years, so I really want to give you my heartfelt appreciation for being here. So, I'm going to switch gears a little bit here. We talked about what potential alternatives might be out there and in reading all the public input that I received on the corrective measures study that was submitted in October and also in talking with the Certus folks about the interviews that they conducted with many of you all over the last few months, it was obvious that there's lots and lots of questions that go beyond the selection of the alternative to how an alternative might be implemented. So rather than leave you all hanging with regard to so many of those questions I'm going to talk in just a very general sense about the types of principles or concepts that EPA would envision would be applied to any active alternative. So it's a little bit of a switching of gears.

Okay, we've pretty much covered this all, we are in our decision making process. No decision as to what alternative is the appropriate alternative to meet those nine criteria has yet been made. We obviously are still looking to you all for your input through this process and your questions and the charrette and going forward. We, if we as I just said, if we did select an active remedy, what type of principles would we want applied to the implementation of that remedy going forward.

Well what does this mean? Any clean-up of the river sediments, banks, flood plains, soils should first be done in a carefully planned and thoughtful manner considering: first off, the PCB contamination and risk production issues. Secondly, the river processes that we have heard about over the last couple of days; the species and habitats of great concern to us all; as well as

cultural resources which while they were touched upon on Tuesday morning by, or Tuesday evening. I probably saw the presentations three times Tuesday so I'm confused, by Rich DiNitto. We have cultural resources in this area that we might have to be concerned about during any act of remediation. Downstream impacts of a remediation and quality of life issues for those in the area of a remediation. Any active remedy in EPA's opinion would have to be implemented with a surgical mindset. I will explain what that is in a few slides. We would ensure that restoration is an integral component that goes hand in hand with the design of any remedy. They can't be done in a vacuum, they can't be done separately they have to be done in concert with one another so it is an integrated process. Provide the ability to improve and adapt as we go on. Bob alluded to that and I will speak a little bit more to that and lastly continue to take stakeholder input through the process. We can't do it alone we have to do it with you if we were to do anything at all.

Okay, just basically recapping from primarily yesterday, PCBs in the Housatonic River are posing a real risk to human health and harm to animals in the flood plain and the river system. We have demonstrated that through our peer reviewed risk assessments. I welcome you to, if you weren't here last night look to that web site that Bob just posted; all the presentations are going to be there and you can get a quick crash course in what's contained in the feet of document with regard to the risk assessments. And according to the analysis that GE had preformed and included in the Corrective Measures Study, in many cases they projected out model results and were able to demonstrate that the PCBs are not going anywhere or being buried to any extent for the foreseeable future in most cases and in their cases, in the case of the Corrective Measures Study they only went out to say greater than two hundred and fifty years.

Okay, river processes, the river channel as we heard on Tuesday has been altered by numerous activities on the part of man over the last couple of centuries and it has not recovered. We have a lot of evidence for that which we discussed on Tuesday, of channel straightening, relocation, loss of some connection to the flood plain in certain locations, the clearing of the flood plain, that all of that in the watershed alterations, altering the sediment load in the system which then creates a response by the river to than altered sediment load. So that means, as Keith has eloquently said, we have to work with the river if we are to do any active remedy, we can't work against it and Mark Velleux yesterday had a really cute cartoon of the river coming up to bite an arrogant engineer until he decided that he needed to befriend the river and the river then befriended him.

Okay species of concern to all of us, we know there are species out in the flood plain and a couple in the river that are of special concern at the state or federal level. Any clean-up has to, has to, look at opportunities to avoid first, next minimize, and lastly, if necessary, mitigate for the impacts to these species and Keith spoke a little bit on two methods that can be used to do those things. Again, lets not forget our cultural resources. We have a need to research if there is an active remedy. Research and implement a program to take place during that remedy. To document and or preserve cultural resources such as Native American artifacts or whatever might be encountered during that active remedy. Over on the Hudson, for example, actually right here, in the mile and a half they ran into one of the oldest, I think it is the oldest dam that was on the river system and they were able to document that.

Downstream impacts: While we were able to show you the majority of the PCB contamination occurs in the thirty miles downstream from the confluence. The PCBs are still moving

downstream they don't just exist in those thirty miles and they continue, and will continue to have adverse impacts downstream, including for example the fish consumption advisories and water fowl consumption advisories in Massachusetts and the fish advisory that continues down into Connecticut. Concerns that folks have regarding sediment management issues for activities such as dam maintenance or removal, maintenance of bridge integrity etc. and the additional cost and burdens that are associated with that because of the presence of PCBs and another example is the degraded water quality in Connecticut for example the river is on their Clean Water Act formal "impaired waters list" due to the PCBs from upstream in Pittsfield and there are also numerous excedences of ambient water quality criteria in Massachusetts as well for PCBs. Lastly, referring back to what Dr. Palermo was saying about resuspension, resuspension happens if you do an active remedy using most of the techniques that both he and Bob discussed. However, it can be managed and it should be managed in a way that only short-term and or trangent impacts should occur downstream from that resuspension.

Quality of life: Quality of life is important to us. It's not all about the animals it's about us too, about you guys, and we believe that any active alternative would have to address and minimize the impact to the quality of life such as the hours of operation that activities might occur during (these are just examples), any lighting that is used during the activities, sound control, dust controls, etc. It also means that clean-up, any active clean-up also has to have an infrastructure associated with it: roads, staging areas etc., traffic. So there would have to be efforts to optimize the impacts from that infrastructure and that traffic to residents, public road systems, traffic patterns, etc. Next, we would have to provide during any active remedy a easy mechanism for stakeholders to interact with us about concerns that they have about the remedy's implementation and any adverse effects that they might be experiencing that we could mitigate. And lastly, providing for ways to allow continue recreational opportunities during the remediation. The remediation will go from up, if it was to take place, would occur from upstream to downstream in small segments at any given time; and with some creative thinking and working with stakeholders we should be able to come up with ways to allow for continued recreational opportunities during a multi-year clean-up.

A surgical mindset: Well, any river clean-up is like a surgery. I've been involved in a number of them. It's necessary to perhaps address the disease, it's painful when it occurs, yet, things heal with time. My example is I've had two knee replacements, and my preference is that that surgeon not go in with a saw if he can use a laser. Luckily he did the latter. Cleaning, clean-up infrastructure and equipment should be designed in any active remedy to have the smallest possible footprint using the best available technology and thoughtful layout of access roads, staging areas, etc. That can be done with a lot of good thought and consideration of areas for remediation and overlap and minimization of areas that don't have to be impacted. There's the thought that perhaps in the implementation of any active alternative, some consideration should be given to perhaps leaving an area of contamination that, if you were just to sort of blindly look at it and say "oh that's a very contaminated area compared to over here," but it takes you acres of infrastructure to get there, that maybe we could let that be and maybe do a little more remediation to reach whatever that clean-up goal is and have a lesser footprint and have the same resultant risk reduction results. And lastly, minimize the amount of time that any given area is affected. Confining work to small areas at a given time moving from upstream to downstream. For example, in Keith's presentation providing the opportunity then for adjacent habitat and

animals in that habitat to co-exist while a remediation is going on perhaps next door and then recolonize as an example.

Restoration: Again I'm going to reiterate this because it is near and dear to my heart almost as much as Keith's. It has to be done hand and glove with any remedial design if we were to do an active remedy. It has to be, the goals of that restoration as Keith alluded to, need to be developed with stakeholder input. We all have to come up with a common vision or as close as we can to a common vision of what we want to see the river look like at the end. The activities need to be overseen by professionals. You can't just go out there and have you know your normal person who might do a great job at operating a backhoe operating in a vacuum without some restoration specialist working with him to make sure that they are doing the best job possible to make that restoration work well. Take advantage of opportunities that this might present during the clean-up. Opportunities perhaps to provide access where there is no access if that's a desired outcome by the public, as an example. Restoration itself is not one size fits all. We have a lot of different habitat types out there. John Lortie, I think did a great job showing some of the mapping that's been done in the ecological characterization over the years of the many different habitat types that exist in "Rest of River". Different restoration techniques need to be applied for the appropriate habitat types and on a micro scale, not on a macro scale.

Restoration goals and time frames are very important and they have to not only be developed but they also have to be clearly presented and communicated and most importantly understood. Particularly the time frames issue. As Bob said, "you can't replace a fifty year old tree," but we can all understand where on the trajectory we're are setting a habitat if we do an active restoration and what that will result in and when, and we need to have that conversation. And lastly monitoring that restoration is an essential component of the entire process.

Adaptive Management. Everybody's talking about Adaptive Management. I was in New Orleans and there was a presentation on Adaptive Management, not one presentation an entire platform, I don't know how many speakers were in it. I think everybody had a different definition. To me what it means is it's common sense, it's how you do a project right and there is not a lot more magic to it than that. And what I mean by doing it right, common sense, any active clean-up will take some number of years. That provides a lot of opportunities to learn and grow and change. As we should. So any design could be staged in a manner such that allows for critical review by the project team. In this case, perhaps GE and EPA and the stakeholders to review the work that was performed while work is still on going to be able to inform the design of the next stretch. That's just common sense. That's good project management. Lastly, in this case it will also allow for opportunities if we get new equipment you know, Dr. Palermo showed us some nifty machines. I've actually seen some bid on some there pretty cool. I got to, a quick sidebar. They got really neat GPS capabilities so you know you could program them ahead of time and you could say I want to get to here, in the sediment bed and they are gonna get to there plus or minus like that. It's very, very cool. But those technologies are going to continue to improve so we should be able to take advantage of that, and also maybe some new innovative technologies in-situ technologies or ex-situ technologies may come along and if they have viable and if they got promise, we need to be able to have the opportunity to take a serious look at them and if they work, work them into our program. So to me Adaptive Management, common sense, good project management, learn and have a continual feedback loop to your program.

Okay, in summary, we recognize that any active remedy is selected or proposed by us and ultimately selected, with the proper planning, management and stakeholder involvement, we can be successful in our implementation such that there will be permanent reductions to risks to humans and the environment, permanent reductions to downstream transport, continued downstream transport of PCBs, a river and a flood plain that over time will regain its beauty, its ecosystem functions and values, its uses for us, you all, for recreation opportunities, as long as an active restoration program is put in place that puts it on the right trajectory and that no long-term loss of species. And perhaps improvement in the habitat quality and numbers and occurrences of rare species, for example, could be a component of a successful, successfully implemented active remediation strategy along with restoration. And with that I will take any questions.

Steve Shapiro

Thank you Susan.

The HHRA shows that consumption of fish is such a high risk that consumption advisory signs posted in Massachusetts show a fish on a plate with a big X, meaning do not eat. Why are the fish consumption signs in Connecticut small in size and convoluted in wording?

Susan Svirsky

Yes. Well unfortunately Susan Peterson, one of her colleagues Traci Iott from the State of Connecticut isn't here tonight. It's because the state regulated the design of those signs and I think it even, this is before my time, I think it might have even gone up to the Governor and I'm not quite sure. But those signs were an explicit design by the State of Connecticut.

Steve Shapiro

Okay.

The section of the river from Woods Pond South has historically been an integral part of the economies of Lenox and Lee. Is the remediation of the economic assets part of overall strategic thinking that will go into the final plan?

Susan Svirsky

It certainly of concern, and I should have added in quality of life, economics. Both positive economics and negative economics; there is benefits from the addition of jobs potentially from remediation restoration to the economy, as well as potential down sides if there is a perception that it's a negative in its implementation. But definitely the concerns downstream; I know Lee and Lenox are trying to have areas that have some mills that have been abandoned etc. rebound and it's a concern that we have and we will be trying to factor into our thought process.

Steve Shapiro

Okay, thank you.

Please explain the consent decree, initiation process and ruling requirements including but not limited to the CMS in thirty seconds.

Susan Svirsky

Good, thank you, it's impossible in thirty seconds. Certainly, I think one of us would be more than willing to talk with whoever gave us that comment afterwards. I particularly suggest that Tim Conway, our attorney, our counsel, be the person they talk to.

Steve Shapiro

Why are we looking at GE's summary of alternatives, doesn't the EPA have its own summary, for instance, how deep some removal has to be. For instance, how deep does some removal has to be?

Susan Svirsky

We're evaluating GE's summary of alternatives, actually not just their summary all of their alternatives and their detailed analysis and we're performing our own and we may come up with something that's different or that's a permutation or maybe it would be one of them or maybe it would be none of them or maybe it would be no remediation, but we are in that process the door is not closed and solely to exactly to what is written in the CMS.

Steve Shapiro

Okay, in Wednesday's risk assessment presentation it was declared that the reaches of the river at the Mass/Connecticut border displayed negligible human risks. How is it then that Connecticut lists the river as an impaired waterway?

Susan Svirsky

Okay, that's a very good question, actually they are all good questions. Because it doesn't meet water quality standards and the impaired waters designation is part of the Clean Water Act and it's with regard to water quality designated uses and the attainment of those as well as water quality standards, that it does not equate one to one with the risk assessment and its construct. So there are two different programs and that's a regulatory designation under the clean water act.

Steve Shapiro

Okay, one last question for now. When in reaches 9-16, example for the "Rest of River" the active remedy suggests that is monitored natural recovery how can that be called a clean-up considering the persistence of PCBs?

Susan Svirsky

Good question. One thing I, we, were remiss in its sticking in Bob's presentation was the map of the concentration gradient going downstream and what happens is after you get by Rising Pond the concentrations drop very dramatically to virtually almost all non-detect and you can't go

clean up what you can't find, so that's why Monitored Natural Recovery is down there. The fish are still contaminated because, if you remember Dick McGrath's presentation about bio-accumulation, bio-magnification, you are what you eat as the, as a fish or as a little fish eats a macro-invertebrate and then a big fish eats a little fish, all the PCBs end up in that big fish, so it only takes a tiny bit of PCBs that perhaps we can't even measure to have the concentrations in the fish be measurable and unacceptable so it's, that might be a little hard to understand. I will, I'm willing to talk to anybody about that concept but in fact, most of the concentrations down in those reaches are extremely low or non-detect.

Steve Shapiro

Okay, thank you.

Susan Svirsky

Could I just say one more thing?

Steve Shapiro

Yeah.

Susan Svirsky

It's my only chance to say this. In the past, myself or other members of the team have been available to meet with folks one on one, with your organizations, or whatever, to talk to you about any questions you have, concerns you may have, etc. So I just wanna say today's work, or the workshops this week and the charrette are not the end. Give Jim a call, give me a call, shoot us an e-mail and we can set something up as we have done in the past to come and sit down with you all and talk about whatever issues are on your mind. So it doesn't just end on May 7th. Thanks.

EXHIBIT D

GE/Housatonic River Site
Rest of River
Corrective Measures Study Process

Susan C. Svirsky

EPA Project Manager, Rest of River

Evaluation of Cleanup Alternatives Underway

- GE is currently evaluating cleanup alternatives for PCBs in the Rest of River
- GE will submit Corrective Measures Study (CMS) to EPA for review and approval (3/21/08)
- CMS will include GE's preferred cleanup plan
- EPA will propose EPA's "preferred alternative" for public comment, and make final remedy decision
- Today's presentation provides an overview of the CMS process

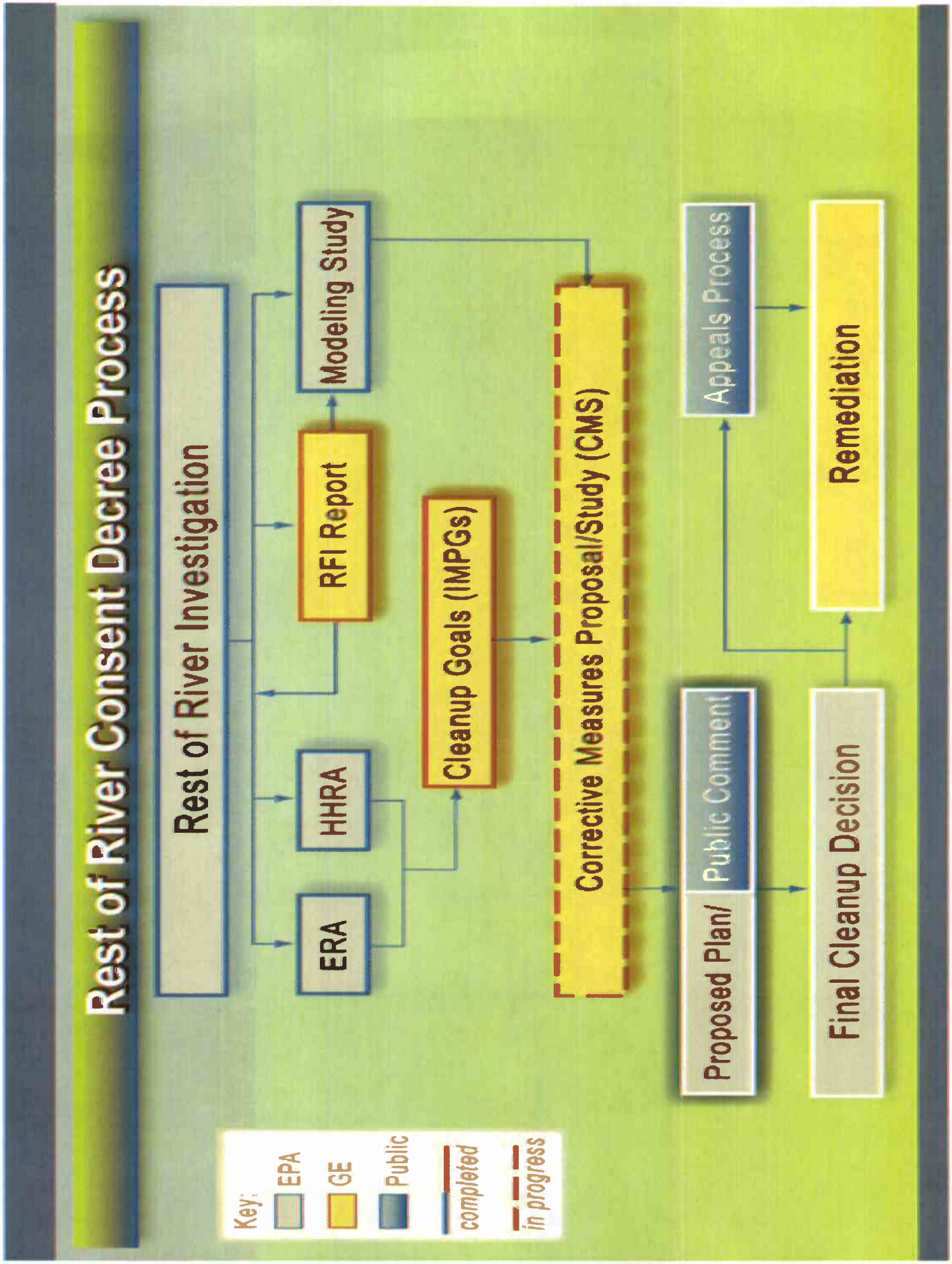
Housatonic River "Rest of River"

- Begins at Confluence of East & West Branches in Pittsfield, MA
- Divided into Reaches 5-9 in MA, Reaches 10-16 in CT
- Majority of PCBs located in Reaches 5 and 6 (10½ miles)
- Includes:
  - Main stem of river
  - Adjacent floodplain
  - Backwaters and tributaries

Reach 10
Reach 11
Cornwall Bridge
Reach 12
Bulls Bridge
Reach 13
Reach 14 (Lake Lillinonah)
Reach 15 (Lake Zoar)
Reach 16 (Lake Housatonic)
Reach 17
Litchfield
Hartford
CONNECTICUT
New Haven
Fairfield
Long Island Sound
Pittsfield
Confluence
Reach 5
Reach 6 (Woods Pond)
Reach 7
Reach 8 (Rising Pond)
Great Barrington
Reach 9
Reach 10
Hampshire
Hampden
Berkshire
MASSACHUSETTS
Rest of River Reach Designations

GE/Housatonic River Site Background

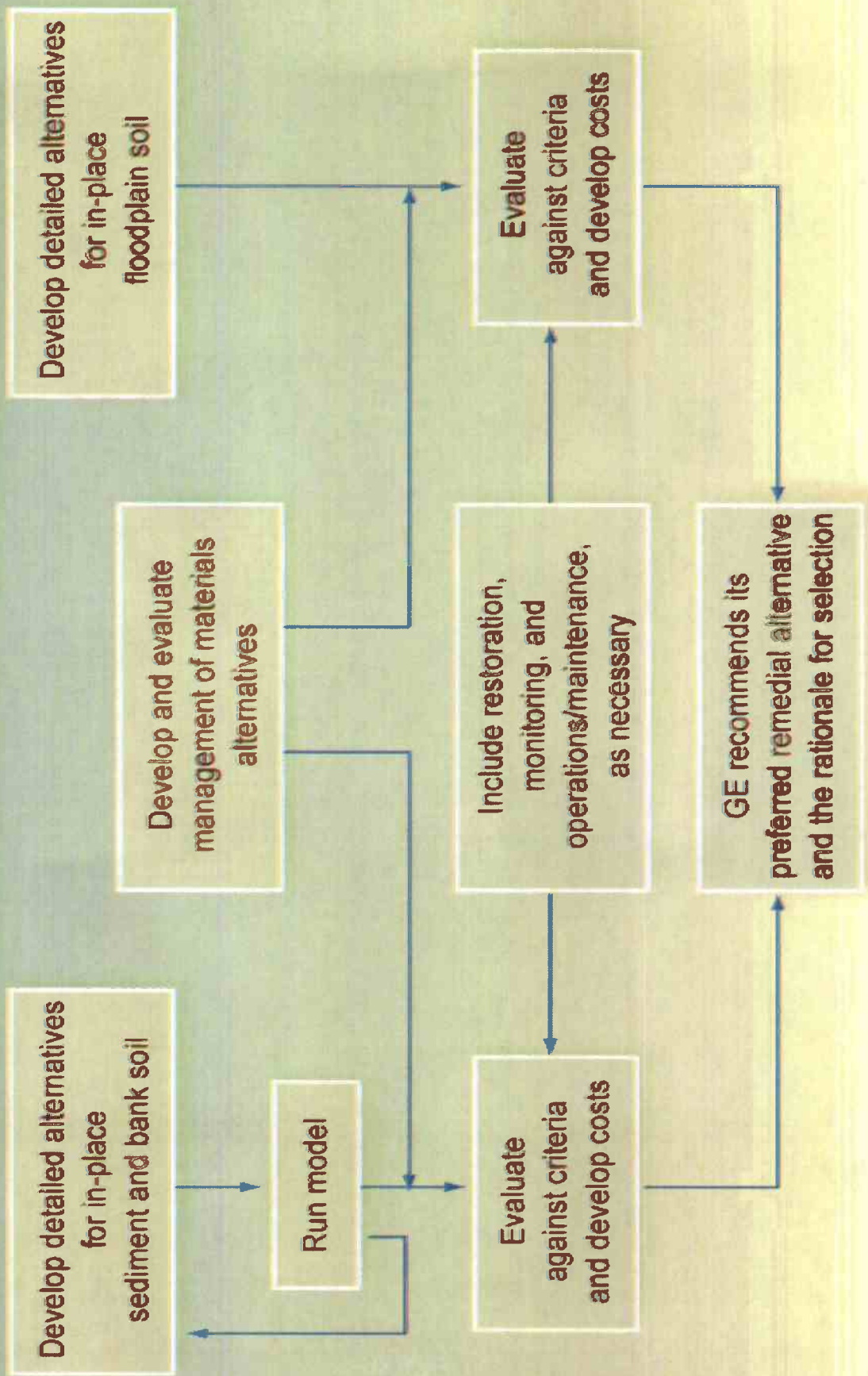
- PCBs used at GE facility in Pittsfield (1932-1977)
  - Released to soil, groundwater, river and other media
  - Only known major source of PCBs to Housatonic River
- Consent Decree approved by court in 2000
  - Calls for river to be addressed in 3 stages:
    - Upper ½-Mile Reach (cleaned up by GE 1999-2002)
    - 1½-Mile Reach (cleaned up by EPA in 2002-2007)
    - Rest of River
  - CD specified that EPA and GE conduct various studies to address contamination in Rest of River


Rest of River Consent Decree Process
Rest of River Investigation
ERA
HHRA
RFI Report
Modeling Study
Cleanup Goals (IMPGs)
Corrective Measures Proposal/Study (CMS)
Proposed Plan/
Public Comment
Appeals Process
Final Cleanup Decision
Remediation
Key:
EPA
GE
Public
completed
in progress

What is a Corrective Measures Study?

- Evaluates potentially applicable technologies and cleanup alternatives
- CMS for Rest of River follows process approved in CMS-P and specified in RCRA permit
- Three categories of remedial actions:
  - In-place sediment and bank soil
  - In-place floodplain soil
  - Management of materials removed
- Evaluation criteria applied separately to each category, then combined into alternatives
- Sediment/bank alternatives evaluated using model framework
- CMS will include GE's recommended alternative

Process for GE Conducting the CMS



Use of the Model in the CMS

- EPA developed a model framework to simulate Rest of River from Confluence to Rising Pond (Reaches 5 to 8)
- Includes three linked mathematical models:
  - Watershed model (HSPF)
  - Water, sediment, PCB fate & transport model (EFDC)
  - Food chain model (FCM)
- Simulates each sediment/bank remediation alternative for minimum 52-yr period, including (as needed):
  - Time for cleanup
  - Residual concentrations
  - Resuspension rates
  - Atmospheric and other PCB and solids loadings
- Ranges of parameter values will be used to evaluate uncertainty
- Model outputs will include water, sediment, fish tissue PCB concentrations over time for each alternative
- Information will be used to evaluate effectiveness and timeframe for each alternative

In-Place Sediment Alternatives

MNR = Monitored Natural Recovery
TLC = Thin-layer Capping

Alt.	Reach 5A	Reach 5B	Reach 5 Erodible Banks	Reach 5C	Reach 5 Backwaters	Reach 6 Woods Pond	Reach 7 Impoundments	Reach 7 Channel	Reach 8 Rising Pond	Reaches 9-16
SED 1	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
SED 2	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MNR
SED 3	2 ft removal with capping	MNR	Removal/ stabilization	Combination of TLC and MNR	MNR	TLC	MNR	MNR	MNR	MNR
SED 4	2 ft removal with capping	Combination of 2 ft removal with capping and TLC (per depth and velocity)	Removal/ stabilization	Combination of TLC (in shallow and depositional areas) and capping (in deeper areas)	Combination of TLC and MNR	Combination of 1.5 ft removal with capping in shallow areas and TLC in deep area	MNR	MNR	MNR	MNR
SED 5	2 ft removal with capping	2 ft removal with capping	Removal/ stabilization	Combination of 2 ft removal with capping (in shallow areas) and capping (in deeper areas)	Combination of TLC and MNR	Combination of 1.5 ft removal with capping in shallow areas and capping in deep area	MNR	MNR	TLC	MNR
SED 6	2 ft removal with capping	2 ft removal with capping	Removal/ stabilization	2 ft removal with capping	Removal of sediments >50 mg/kg in top 1 ft (with capping/backfill); TLC for remainder >1 mg/kg	Combination of 1.5 ft removal with capping in shallow areas and capping in deep area	TLC	MNR	Combination of TLC in shallow areas and capping in deep areas	MNR
SED 7	3-3.5 ft removal with backfill	2.5 ft removal with backfill	Removal/ stabilization	2 ft removal with capping	Removal of sediments >10 mg/kg in top 1 ft (with capping/backfill); TLC for remainder >1 mg/kg	Combination of 2.5 ft removal with capping in shallow areas and capping in deep area	Removal of higher PCB levels (e.g.,>3 mg/kg) in top 1.5 ft (with capping/ backfill); TLC for remainder >1 mg/kg	MNR	Combination of removal of higher PCB levels (e.g.,>3 mg/kg) in top 1.5 ft (with capping/ backfill); TLC in shallow areas and capping in deep areas	MNR
SED 8	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with backfill	Removal/ Stabilization	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with backfill	MNR	Removal to 1 mg/kg depth horizon with backfill	MNR

In-Place Floodplain Soil Alternatives

Alt.	Human Health IMPG	Ecological IMPG
FP-1	No Action	No Action
FP-2	Remove/replace top 12 inches to 10^{-4} ICR or HI = 1	As determined to be needed in addition to human health action
FP-3	Remove/replace top 12 inches to 10^{-4} ICR or HI = 1, except high-use areas to 10^{-5}	As determined to be needed in addition to human health action
FP-4	Remove/replace top 12 inches to 10^{-5} ICR or HI = 1	As determined to be needed in addition to human health action
FP-5	Remove/replace top 12 inches ≥50 ppm	As determined to be needed in addition to human health action
FP-6	Remove/replace top 12 inches ≥25 ppm	As determined to be needed in addition to human health action
FP-7	Remove/replace top 12 inches to 10^{-6} ICR but not <2 ppm	As determined to be needed in addition to human health action

ICR – Incidental Cancer Risk
HI – Hazard Index

Technologies Being Evaluated
(Sediment, Bank, and Floodplain Soil)

- No Action
- Engineering/Institutional Controls
- Monitored Natural Recovery (MNR)
- Removal
- Capping
- Bank Stabilization

Management of Materials Alternatives
(after removal)

- Dewatering/water treatment
- *Ex situ* stabilization
- Chemical extraction
- Thermal desorption
- Confined disposal facility (CDF)
- Upland disposal facility
- Off-site permitted landfill

Evaluation Criteria

- Remedial Action Objectives (broad goals)
  - Reduction of risks to human health
  - Reduction of risks to the environment
  - Minimization of downstream transport and control of sources
- General Standards (1st tier of criteria)
  - Overall protection of HH and the environment
  - Control of sources
  - Compliance with ARARS
- Selection Decision Factors (2nd tier of criteria)
  - Long-term reliability and effectiveness
  - Attainment of IMPGs
  - Reduction of TMV
  - Short-term effectiveness
  - Implementability
  - Cost

Interim Media Protection Goals (IMPGs)

- Media-specific cleanup goal(s) for human health or ecological receptors
- Determined by EPA to be protective
- IMPGs for ROR derived by GE, taking into account information in risk assessments
  - HH IMPGs = ICR of 10^{-4} (1 in 10,000) to 10^{-6} (1 in 1,000,000), or Hazard Index (HI) of <1
  - Eco IMPGs = no significant risk to receptors
- IMPG Proposal prepared by GE and approved by EPA in 2006

Process Following GE Submittal of CMS

- EPA evaluates CMS and GE's recommended alternative, considering:
  - Evaluation criteria
  - Input received from public
- EPA may approve, conditionally approve, or disapprove the CMS
- EPA develops preferred alternative for public comment
  - Formal Public Comment Period
- EPA notifies GE of intended cleanup decision and issues Responsiveness Summary
  - GE has opportunity to invoke dispute resolution
- EPA issues final permit modification following resolution of dispute
- Public/GE have right of appeal (EAB and US Appeals Court)
- Following completion of all appeals, GE is required to implement and pay for the remedial action per the Consent Decree

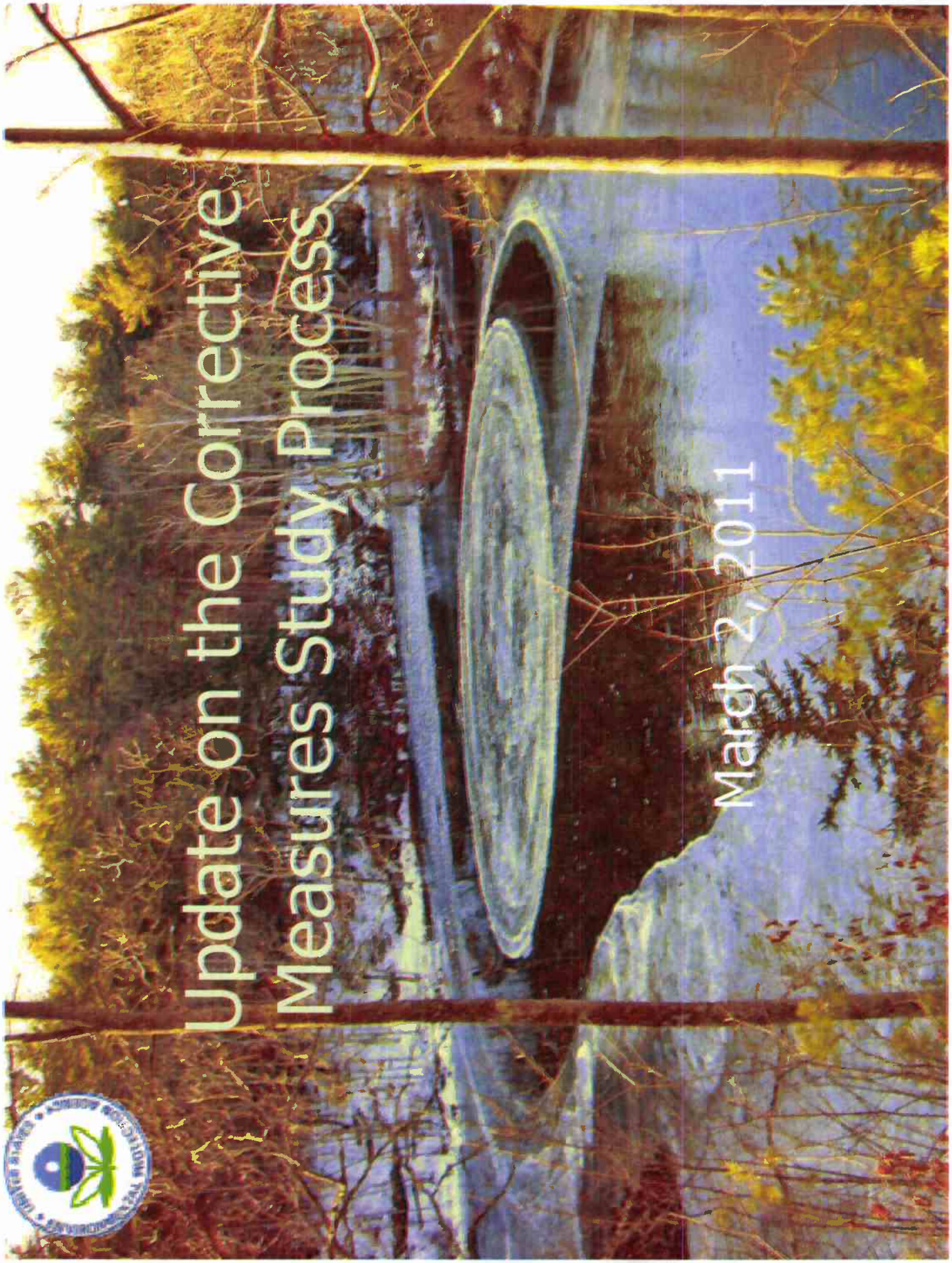
Schedule for CMS Process

- EPA Outreach
  - November 2007 through March 2008:
    - Ongoing meetings with members of public
    - Connecticut CCC Meeting – November 28, 2007
    - Massachusetts CCC Meeting – December 5, 2007
- GE Submits CMS
  - March 21, 2008
- EPA Begins Informal Public Input Period
  - March 22, 2008
- Presentation of CMS
  - Connecticut CCC Meeting – March 26, 2008
  - Massachusetts CCC Meeting – March 27, 2008

Opportunities for Public Involvement

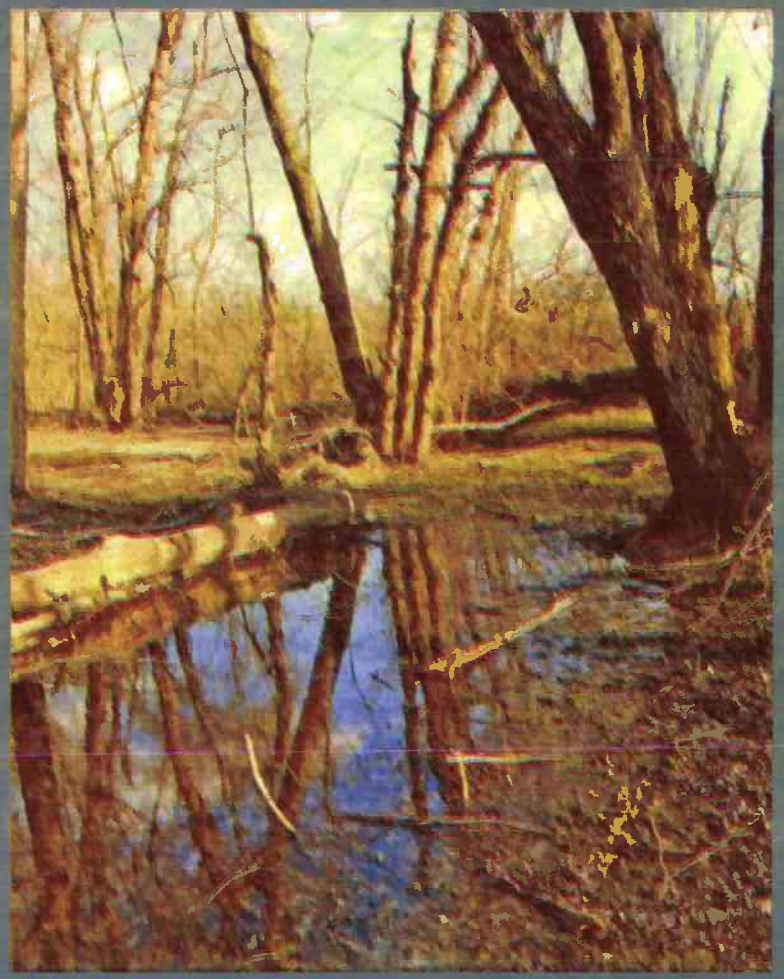
- To obtain more information:
  - All reports available on EPA's GE/Housatonic River website: www.epa.gov/ne/ge under Rest of River
  - EPA Contaminated Sediment Guidance: www.epa.gov/superfund/health
  - Visit an Information Repository
  - Attend a Citizens Coordinating Council (CCC) Meeting
  - Schedule a session with EPA
- To provide input:
  - Informal input period following completion of CMS
  - Organized groups may submit input to NRRB during their review
  - Formal comment period on EPA's Preferred Alternative

EXHIBIT E


Update on the Corrective
Measures Study Process
March 2, 2011

Status

- GE submitted its Revised Corrective Measures Study (RCMS) October 10, 2010
- The RCMS provides GE's analysis of 10 sediment, 9 floodplain, and 5 disposal alternatives and its recommended cleanup plan
- Public Input Period originally scheduled to close December 15th, extended to January 31st



EPA's Evaluation of Alternatives

- EPA is evaluating the alternatives in the RCMS considering:
  - Input received from stakeholders
  - The 9 evaluation criteria specified in the RCRA Permit (listed below)
- General Standards
  - Overall protection of human health and the environment
  - Control of sources of releases
  - Compliance with ARARS
- Selection Decision Factors
  - Long-term reliability and effectiveness
  - Attainment of IMPGs (interim cleanup goals)
  - Reduction of toxicity, mobility, volume
  - Short-term effectiveness
  - Implementability
  - Cost

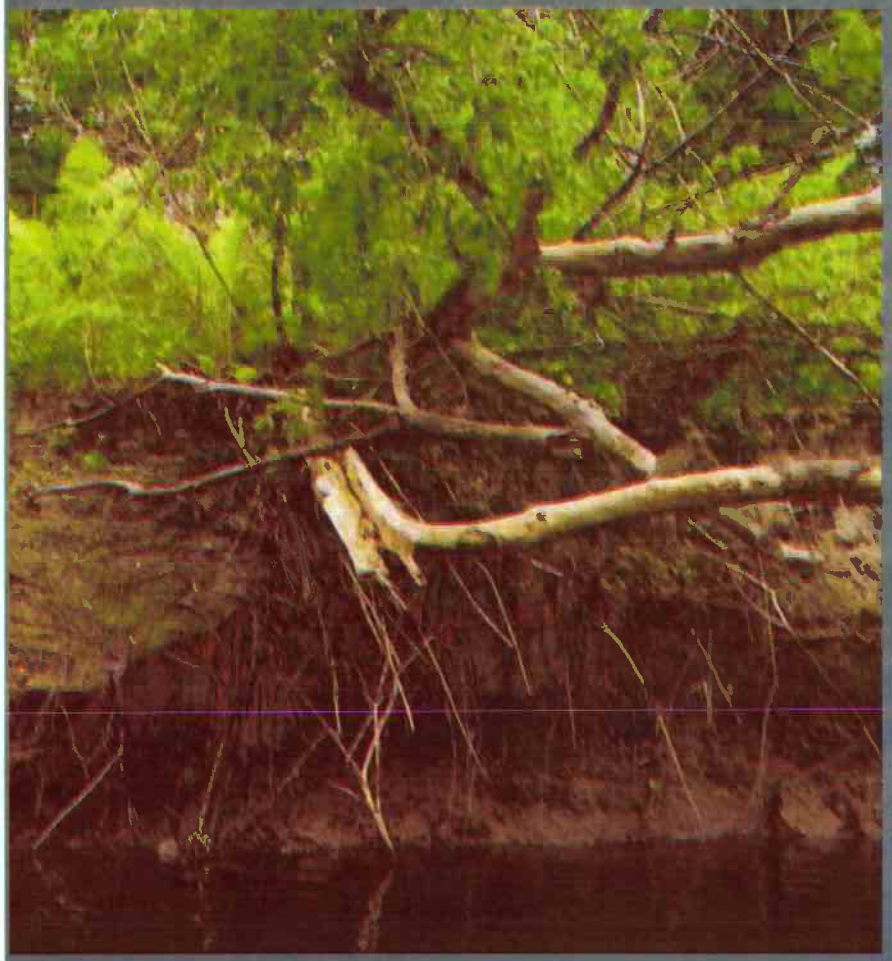
Public Outreach

- EPA has a third-party consultant (Certus) conducting interviews with stakeholders
- These interviews lay the groundwork for a series of mini-workshops and a "charrette"
- A charrette provides an opportunity –
  - for the public to interact with EPA regarding their views on the remedial alternatives
  - to develop an understanding of how EPA must make its decision
- The charrette will be held during EPA's decision-making process
- In addition to the charrette, as in the past, EPA will be available upon request to discuss issues of concern with stakeholders

Schedule for Charrette Activities

- 3 Consecutive Mini Workshops
  - April 5th, 6th, and 7th
- Culminating Charrette
  - May 7th
- Location – Shakespeare & Company, Lenox

Remedy Selection Process



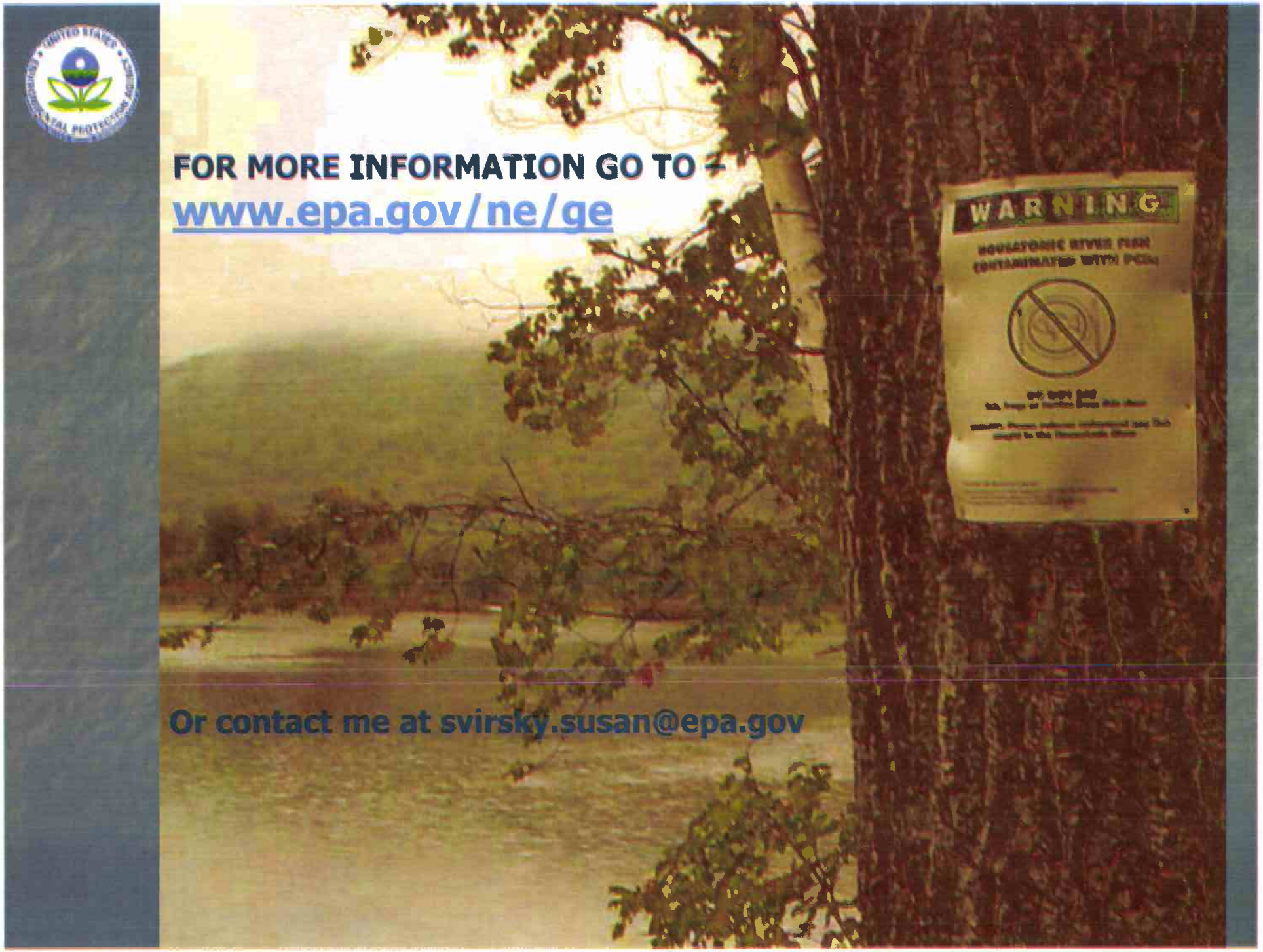
- EPA Internal Review/Decision-making – Spring/Summer 2011
  - EPA Region I "Management Review" of Proposed Remedy
  - EPA National Remedy Review Board (RRB)
    - Stakeholder groups can submit written comments (up to 10 pages) on the RCMS for RRB consideration
    - Includes coordination by RRB with EPA national Contaminated Sediments Technical Advisory Group (CSTAG)

Remedy Selection Process (continued)

- EPA issues its Proposed Remedy for public comment – target - fall 2011
- Formal Public Comment Period and EPA outreach
- EPA Notifies GE of Intended Final Decision
  - Potential dispute resolution
- EPA issues RCRA Permit Modification ("Remedy Selection"), including response to Public Comments

Remedy Selection Process (continued)

- Public/GE have right of appeal (EAB and US Court of Appeals)
- GE must proceed w/ design of components of the remedy that are not subject to appeal
- EPA may proceed w/ design of components that are appealed (must offer opportunity to GE)
  - If appeal is denied, GE must pay EPA costs
- Once appeals are resolved, GE must design, construct, and pay for the remedy that is upheld
- Implemented as a Superfund remedy


FOR MORE INFORMATION GO TO –
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Or contact me at svirsky.susan@epa.gov

Attachment D

EPA'S STATEMENT OF POSTION IN RESPONSE TO GE'S JULY 2, 2012 STATEMENT OF POSTION REGARDING DISPUTE OF FY 2011 COST BILL

JULY 30, 2012

I. INTRODUCTION AND BACKGROUND

I.A Background Regarding the Current Dispute and the Decree's Dispute Resolution Procedures

In accordance with the Consent Decree ("CD" or "Decree") for the GE-Pittsfield/Housatonic River Site (the "Site"), on January 11, 2012 EPA sent the General Electric Company ("GE") a bill for approximately $1.6 million in costs allocated to U.S. Future Response Costs pursuant to Paragraph 95 of the Decree (the "FY 2011 Cost Bill"). EPA incurred[1] these costs on or before September 30, 2011 and such costs were not previously billed to GE. This was EPA's 13th annual cost billing of GE as provided for in the Decree. CD ¶ 100. On February 29, 2012, GE sent EPA a letter objecting to the FY 2011 Cost Bill. See Exhibit A of GE's Statement of Position. After unsuccessful attempts to resolve GE's dispute, on April 5, 2012 GE sent EPA a written Notice of Dispute. See Exhibit B of GE's Statement of Position. From that date through June 8, 2012, EPA and GE sought to resolve the dispute during an informal negotiation period pursuant to Paragraph 133 of the CD. The parties were unable to resolve the dispute informally; accordingly, based upon an agreement between EPA and GE regarding document submittal dates, GE served upon EPA a Statement of Position dated July 2, 2012. By serving its Statement, GE invoked the CD's formal dispute resolution process.

According to Decree Paragraph 135.b, after GE serves its Statement of Position, EPA must serve upon GE a Statement of Position. GE may submit a reply to EPA's Statement within 14 days after receiving EPA's Statement of Position. GE asserted, and EPA concurs, that this dispute should proceed pursuant to CD Paragraph 137. Pursuant to Paragraph 137.a, the Director of the Office of Site Remediation and Restoration ("OSRR"), EPA Region I, issues a final decision resolving the dispute, after reasonable opportunity for review and comment by the Commonwealth of Massachusetts. GE may appeal the decision of the OSRR Director to federal District Court. For reference, a copy of the Section of the CD governing dispute resolution is attached as Exhibit 1.

I.B Summary of EPA's Response to GE's Statement and Recommendation of EPA

The FY 2011 costs that EPA billed to GE primarily related to EPA's preparation, development, and review of a proposed remedy for the Rest of the River. As such, according to the terms of the Decree, they are recoverable from GE. Contrary to GE's claims, there is no language in the Decree or the RCRA Permit[2] that requires EPA to

[1] The Consent Decree includes a defined term, "Incur," which means "to incur and to pay costs." CD ¶ 4. For purposes of this Statement of Position, the term "incur" is used consistent with the Decree definition.
[2] The RCRA Permit is an Appendix to the Consent Decree and includes additional detail on the process for selecting and implementing a clean-up for the Rest of River. Documents related to the current RCRA

formally act on GE's Revised Corrective Measures Study ("RCMS") prior to recovering remedy preparation costs from GE. The costs that EPA incurred were entirely within the remedy selection process established by the Decree and RCRA Permit. In fact, the most logical and efficient course was for EPA to review the RCMS and begin preparing a proposed remedy prior to formally responding to GE on the RCMS. Accordingly, GE's arguments regarding a due process violation are meritless.

To resolve this dispute, however, EPA recommends reducing GE's FY 2011 Cost Bill by $393,192 by reallocating certain costs to other cost categories. This recommended reallocation is based upon the recognition, discussed below, that a small portion of time was spent on tasks that fall into the categories of Oversight or cross-cutting costs.[3] Accordingly, the recommended total amount that GE owes for Future Response Costs is $1,239,108.[4]

I.C Summary of Relevant Decree Provisions

1. Decree Cost Definitions

The CD provides that EPA may recover certain costs from GE. These costs are divided into nine cost categories. Three cost categories are relevant to this dispute: U.S. Future Response Costs, U.S. Oversight Costs, and U.S. Future Rest of River Capped Response Costs.[5] EPA's FY 2011 Cost Bill is for costs that EPA and the U.S. Department of Justice ("DOJ") incurred under the U.S. Future Response Costs category ("Future Response Costs").

In its Statement GE alleges that almost all of EPA's costs should be allocated to Oversight Costs and/or U.S. Rest of River Capped Response Costs ("Rest of River Response Costs"). These two categories have limitations on EPA cost recovery, and EPA has exceeded such limitations, or "caps," for each of those two categories. Thus, GE argues for reallocation of EPA costs that would render almost all of the $1.6 million in EPA costs unrecoverable.

The CD defines Future Response Costs (CD ¶ 4) as follows:

> all direct and indirect costs that EPA and DOJ Incur pursuant to the provisions of this Consent Decree, including but not limited to costs Incurred to enforce the Consent Decree (including dispute resolution), the costs incurred pursuant to Sections X (Review of Response Actions), XIII (Access and Land/Water Use Restrictions) (including the cost of attorney

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Permit are on the EPA website for the Site, including at http://www.epa.gov/region1/ge/cleanup/275773.pdf, and http://www.epa.gov/region1/ge/cleanup/275746.pdf

[3] As explained below, cross-cutting costs consist of a pool of costs allocated among several cost categories as they support tasks included in more than one cost category.

[4] This amount excludes interest and a credit for GE's 1 ½ Mile Reach costs.

[5] The Decree provides for limitations on EPA recovery of Oversight Costs and Rest of River Response Costs, but does not limit recovery of Future Response Costs.

> time and monies paid to secure access and/or to secure or implement land/water use restrictions, including the amount of just compensation)... non-field work costs incurred for preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action (including responding to public comments thereto), and costs Incurred to develop plans or reports pursuant to the provisions of this Consent Decree that do not fall within the categories of costs excluded from U.S. Future Response Costs by the last sentence of this definition, together with any accrued Interest...U.S. Future Response Costs shall not include U.S. Oversight Costs, U.S. Future Rest of River Capped Response Costs, U.S. Future Additional Sampling Costs, U.S. Rest of River Oversight Costs, U.S. Post Removal/Groundwater Monitoring Costs, or the U.S. 1½ Mile Reach Removal Action Costs. CD ¶ 4.[6]

U.S. Oversight Costs, recovery of which is specified in Decree Paragraph 98.a, include, in relevant part, costs that EPA incurs for "reviewing proposals, reports, studies, and other deliverables submitted by [GE] under the [RCRA Permit], conducting shadow or supplemental studies to be conducted by [GE] under that Permit, and otherwise overseeing [GE's] activities under that Permit." CD ¶ 4.

U.S. Future Rest of River Capped Response Costs, recovery of which is specified in Decree Paragraph 96, include, in relevant part, costs that EPA incurs "in connection with studying or otherwise investigating the Rest of River and/or all field work to support the preparation, development, and selection of the Rest of River Remedial Action." CD ¶ 4.

2. Decree and RCRA Permit Provisions Related to Remedy Selection Timing and Process

As will be discussed below, the relevant Consent Decree and RCRA Permit provisions that address EPA's remedy selection process do not prohibit EPA from preparing a proposed remedy before EPA acts on the RCMS. For example, Decree Paragraph 22.n provides "[u]pon satisfactory completion of the [RCMS] Report in accordance with the [RCRA Permit], EPA will issue a Statement of Basis and a draft modification to the [RCRA Permit], which will set forth the proposed Remedial Action for the Rest of the River..." Note that this Paragraph refers to EPA's issuance of a proposed remedy, that is, the Statement of Basis, but says nothing about the preparation of EPA's proposed remedial action for the Rest of River.

The provisions of the RCRA Permit that address EPA's action on the RCMS (Permit Section II.H) merely govern EPA's approval or disapproval of the RCMS and do not limit EPA's preparation of a proposed remedy.

> After [GE] submits the [RCMS] Report, EPA will either approve,

[6] These costs are recovered pursuant to Paragraph 95 of the CD, so they are sometimes referred to as Paragraph 95 costs.

> conditionally approve or disapprove the Report. In addition to requiring additional [RCMS] work, a conditional approval or disapproval may include a requirement to conduct additional RFI work if such work is necessary to complete the [RCMS].
>
> If EPA disapproves the Report, EPA shall, within its discretion, either (1) specify the deficiencies and establish a time frame within which the Permittee shall submit a modified Report; or (2) make such modifications as EPA deems necessary to meet the requirements in Special Condition II.G above. RCRA Permit, § II.H.

I.D Standard of Review

As stated above, EPA concurs with GE that this dispute should proceed pursuant to Paragraph 137 of the CD. This paragraph is for disputes that "neither pertain to the selection or adequacy of any response action nor are otherwise accorded review on the administrative record." Paragraph 137.b provides that judicial review of any dispute governed by Paragraph 137 "shall be governed by applicable principles of law." The "applicable principles of law," however, do not support GE's argument that the parties are on a precisely equal footing and that EPA is entitled to no deference regarding any portion of the dispute. See GE's Statement, pgs. 5 and 6.

GE asserts that a reviewing court for this dispute should not give deference to either party. The court, however, should give deference to EPA's expertise regarding the process for selecting a remedy. Technical questions, such as the proper process for selecting a remedy, are within EPA's technical expertise to which courts typically defer. See Environmental Defense Fund v. EPA, 210 F.3d 396, 400 (D.C. Cir. 2000) (courts should defer to agency expertise on technical questions); Chemical Waste Management, Inc. v. EPA, 869 F.2d 1526, 1538 (D.C. Cir. 1989)(fundamental principle that on "a highly technical question...courts necessarily must show considerable deference to an agency's expertise.")(quotes and citations omitted). Thus, the court should give deference to EPA's technical decision, discussed below, that it should begin to prepare a proposed remedy prior to formally acting on GE's RCMS.

II. EPA'S RESPONSE TO GE'S ARGUMENTS REGARDING THE IMPROPER ALLOCATION OF COSTS

II.A Summary of GE's Argument Regarding the Improper Allocation of Costs

GE asserts that almost all of EPA's FY 2011 work that EPA billed to U.S. Future Response Costs is properly allocated to U.S. Oversight Costs or to U.S. Future Rest of River Capped Response Costs. GE argues that such work consisted of reviewing the RCMS, gathering information from the public regarding RCMS alternatives, and conducting shadow or supplemental studies for GE's RCMS. GE claims that until EPA acts on the RCMS, EPA's efforts are necessarily a review and evaluation of the RCMS

remedial alternatives. Accordingly, GE argues, such costs are U.S. Oversight Costs. In the alternative, GE asserts that some or all of EPA's costs should be allocated to U.S. Future Rest of River Capped Response Costs.

II.B EPA Response to GE's Argument

The FY 2011 costs that EPA billed to GE primarily related to EPA's preparation, development, and review of a proposed remedial action for the Rest of River. As such, they are properly allocated to the U.S. Future Response Costs category. The CD defines this category as "all direct and indirect costs that EPA and DOJ Incur pursuant to the provisions of this Consent Decree" including "non-field work costs incurred for preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action (including responding to public comments thereto)." CD ¶ 4 (emphasis added). Thus, this cost definition expressly allows EPA to recover its direct and indirect costs from GE in preparing the Rest of River remedy. Further, the definition does not contain any language suggesting that EPA must first act on the RCMS before EPA can incur and recover remedy preparation costs. In fact, as discussed below, the efficient course of action was for EPA to begin preparing its preferred cleanup alternative prior to formal action on the RCMS.

As will be shown below, the vast majority of EPA's billed costs relate to EPA's initial preparations to select its preferred proposed remedy and not review of the RCMS or "shadow or supplemental" RCMS studies. GE has seriously mischaracterized the primary purpose of EPA's activities by selectively quoting from EPA's statements and presentations, when a fuller context demonstrates the true focus of the work and resultant incurrence of costs. Further, GE has no support for its argument that until EPA acts on the RCMS, EPA's FY 2011 work is "necessarily" related to a review of the RCMS remedial alternatives. As will be discussed in detail below, the CD contains no prohibition against EPA incurring costs to prepare a proposed remedy prior to acting on the RCMS, and EPA cleanup program regulations and guidance clearly provide the flexibility to do such remedy proposal preparation. The mere fact that EPA's legitimate remedy preparation costs were incurred prior to formal action on the RCMS does not prevent EPA from recovering such costs from GE or convert the nature of such costs into remedy evaluation costs. Also, as will be discussed below, the costs that EPA billed to GE are not U.S. Future Rest of River Capped Response Costs. Importantly, the impact of GE's argument, if accepted, would be to take nearly the entire $1.6 million bill from the Future Response Cost category, for which recovery remains authorized, and move it into other cost categories for which the recovery limitations have been exceeded.

It is significant to note that, as shown by its cost summaries, EPA incurred more costs in FY 2011 in the capped Oversight Cost category than it did in the uncapped Future Response Cost category. Specifically, for FY 2011, EPA did not bill GE for $2,073,143 in costs that EPA incurred. Of this amount, $2,054,863 were costs that EPA allocated to

U.S. Oversight Costs, a cost category with a cap that has been exceeded.[7] Thus, in the original cost bill, EPA only billed GE for 44% of the costs that it had incurred in FY 2011. Moreover, over the life of the Decree, EPA has incurred approximately $55 million in Oversight Costs and Rest of River Capped Response Costs that EPA has not billed GE.[8] (This $55 million amount includes approximately $13.3 million in indirect costs and does not include 1 ½ Mile Reach costs that EPA incurred but did not bill GE.)

In connection with GE's dispute, EPA reviewed and divided the $1.6 million in costs that EPA billed GE into categories of costs by specific activities and by employees that performed work related to the Site. A table showing these categories and the costs that EPA has allocated to each category is attached as Exhibit 2. EPA then further analyzed the work performed for each category to determine whether, based upon the work performed, it should recommend that any portion of the work in a category be allocated to a cost category other than Future Response Costs. Although EPA has recommended a reallocation of costs in some categories, the vast majority of EPA's FY 2011 activities were related to the preparation and review of the proposed Rest of River Remedial Action and are properly Future Response Costs. Below is a discussion of each cost line item and the rationale regarding the allocation of each cost line item. A summary chart showing this allocation is inserted below.

U.S. Department of Justice ("DOJ") Costs: $87,000

As noted above, recoverable Future Response Costs include "all direct and indirect costs that EPA and DOJ Incur pursuant to the provisions of this Consent Decree, including but not limited to costs Incurred to enforce the Consent Decree." CD ¶ 4. DOJ incurred such costs in FY11 for enforcing, and in anticipation of enforcing, the Consent Decree. DOJ costs are not capped by the Decree. For example, DOJ costs do not belong in Future Rest of River Costs or Oversight Costs because these costs in these two categories relate to costs that EPA has incurred. DOJ is not included in such cost definitions. Accordingly, the exclusions and provisions of such cost definitions do not apply to DOJ. DOJ has properly incurred these costs pursuant to the Consent Decree. As will be discussed below, GE's argument that DOJ's costs were incurred "outside the prescribed process" of

[7] Such oversight costs were incurred for EPA's review of GE's RCMS and review of the informal public comments on the RCMS, as well as oversight of GE's removal actions outside the Housatonic River (including GE's groundwater actions).

[8] For Oversight Costs, GE was required to pay EPA 100 percent of such costs not exceeding $7 million, 75 percent of such costs exceeding $7 million and not exceeding $9 million, 50 percent of such costs exceeding $9 million and not exceeding $12 million, and 33 1/3 percent of such costs exceeding $12 million but not exceeding $15 million. CD ¶ 98.a. EPA's incurrence of Oversight Costs has exceeded $15 million since FY 2008. Therefore, EPA has not attempted to recover from GE the $2,054,863 incurred by EPA as Oversight Costs in Fiscal Year 2011. For Rest of River Response Costs, the limitation is as follows: GE was to pay EPA 100 percent of such costs not exceeding $11 million, and 50 percent of such costs exceeding $11 million and not exceeding $18 million, with no GE obligation to pay such costs that exceeded $18 million. CD ¶ 96. EPA's incurrence of Rest of River Response Costs has exceeded the $18 million threshold since entry of the Decree. Therefore, EPA has not attempted to recover from GE the approximately $18,280 incurred by EPA as Rest of River Response Costs in FY 2011

the CD is meritless. Accordingly, EPA is seeking to recover $87,000 for this cost category.

EPA National Remedy Review Board and Contaminated Sediments Technical Advisory Group ("CSTAG") Costs: $407,700

These costs relate to EPA's National Remedy Review Board's (RRB) review of EPA's proposed remedy, which occurred in the summer of 2011. This Board was established by EPA in 1995 to promote consistent and cost effective cleanup decisions and to ensure that proposed remedy approaches are consistent with law, regulations, policy and guidance. The RRB evaluates the proposed cleanup approach for any site where the potential remedy costs exceed $25 million, which is the case with the Rest of River project. For proposed cleanups at complex contaminated sediment sites, EPA policy is for representatives of EPA's Contaminated Sediments Technical Advisory Group ("CSTAG") to coordinate with and participate in the RRB review, including the review for this Site. The costs incurred with respect to the RRB/CSTAG review include EPA Region 1's preparation for the RRB review, Region 1's presentation to the RRB, and the costs incurred by the members of the RRB and CSTAG who participated in the review.

GE completely mischaracterizes the purpose of the RRB review. As its very name implies, the purpose of the RRB's evaluation was to review EPA's proposed remedy. After the Region's review of the RCMS, public comments on the RCMS, and the community involvement sessions, the Region presented its cleanup proposal to the RRB and the CSTAG. The primary purpose of the RRB process was to evaluate the Region's proposed preferred alternative and not to evaluate the RCMS alternatives. The RRB review was one step in the Region's remedy preparation. EPA, consistent with EPA policy and guidance, presented a developed proposed remedy to the Board and not, as GE argues, "shadow or supplemental" studies of RCMS cleanup alternatives.

EPA guidance related to the RRB clearly indicates that the primary purpose of the Board is to review remedies. The purpose of the RRB is to help control remedy costs and to promote both consistent and cost-effective decisions at Superfund sites. See, Elliott P. Laws, *Formation of National Superfund Remedy Review Board,* November 28, 1995, page 1 (http://www.epa.gov/superfund/programs/nrrb/11-28-95.htm). The goal of the Board is to ensure sound decision-making consistent with current law, regulations, and guidance. Id. at page 2. Achieving these goals entails review of proposed remedies before they are released for public comment. Id; also see RRB website, http://www.epa.gov/superfund/programs/nrrb/index.htm ("[RRB] reviews proposed Superfund cleanup decisions"); *National Remedy Review Board Criteria Revision*, March 21, 2005, OSWER 9220.0-27, page 1 (RRB "will review proposed cleanup plans"). The RRB guidance clearly indicates that the purpose of the Board is to review a proposed remedy and not merely the alternatives in a feasibility study.

EPA created the CSTAG to "monitor the progress of and provide advice regarding a small number of large, complex, or controversial contaminated sediment Superfund sites." Page 10, *Principles for Managing Contaminated Sediment Risks at Hazardous*

Waste Sites, February 12, 2002, OSWER 9285.6-08. The group, comprised of EPA regional and headquarters experts, encourages national consistency and the appropriate investigation and management of sediment sites. See *Operating Procedures for EPA's Contaminated Sediments Technical Advisory Group,* updated March 19, 2008 (http://www.epa.gov/superfund/health/conmedia/sediment/procedures.htm). Although the CSTAG can be involved in many stages of a site, in FY 2011, the primary reason for EPA CSTAG members to bill costs to the Site was for their review and comment on EPA's proposed remedy. The CSTAG review was coordinated with the RRB's review of proposed remedies, and the CSTAG members attended the RRB meeting. See *OSRTI Sediment Team and NRRB Coordination at Large Sediment Sites,* March 5, 2004, OSWER Directive 9285.6-11 and *Changes to the Roles and Responsibilities of the Contaminated Sediments Technical Advisory Group (CSTAG),* September 9, 2009, OSWER Directive 9285.6-20.

Clearly, as described above, the majority of RRB/CSTAG costs are recoverable as they were incurred for "preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action." CD ¶ 4 (Future Response Costs definition). In recognition that a small portion of this RRB/CSTAG time was spent reviewing or discussing the RCMS, however, EPA recommends that 10% ($40,770) of the total costs in this category be allocated to Oversight Costs. Accordingly, EPA is seeking to recover $366,930 for this cost category.

Situation Assessments, Workshops, and the Charrette Costs: $523,700

In FY 2011, EPA conducted community outreach to help prepare a proposal for remedial action for the Rest of River. EPA first hired a contractor to conduct a Situation Assessment to interview the public regarding their views of the cleanup process, information needs, and concerns. Based in part on the findings from the interviews, EPA then held three mini-workshops to provide information to the public. The workshops focused on the nature of the Housatonic River; PCBs, risks, and modeling; and remediation and restoration technologies. Finally, EPA held a full-day, interactive community workshop, known as a "Charrette," to gain public input and discuss the Rest of River cleanup. The costs in this category consist of EPA employee and contractor labor and travel.

Contrary to what GE argues, the primary purpose of these activities was to support EPA's preparation of a remedy. The community outreach materials make clear that at the time of the outreach EPA had moved into decision-making related to EPA's proposed remedy and not a mere review of RCMS alternatives. The events before and after the community outreach also show this to be the case. GE submitted its RCMS in October 2010. EPA then solicited informal public comments on the RCMS from November 2010 to January 31, 2011. EPA received a significant number of public comments on the RCMS. See http://www.epa.gov/region1/ge/thesite/restofriver/reports/cms/477441.pdf. After conducting its own review and receiving public comments on the RCMS, EPA began to develop a proposed preferred cleanup alternative. EPA's presentation to the CCC in March of 2011 indicates that EPA was beginning decision-making. See pg, 4, Exhibit 3.

("The Charrette will be held during EPA's decision-making process.") The goal was a proposed remedy for public comment in the fall of 2011. Id. at page 7. The outreach materials also show that EPA had initiated decision-making for selection of a proposed remedy. For example, the Workshop Website states that "EPA is beginning its decision-making process for the cleanup of the Housatonic Rest of River." Exhibit 4, (http://housatonicworkshops.org/background.html). Two fact sheets that EPA issued in April 2011 evidence a similar intent: "EPA is beginning its decision-making..." and "...EPA is developing its preferred remedial alternative or set of alternatives." Exhibit 5, also see letters from the Regional Administrator attached as Exhibit 6. After these community outreach efforts, EPA presented its proposed preferred cleanup alternative to the RRB in July 2011.

These events and statements make clear that the primary purpose of the outreach was to provide information to the public and obtain its input regarding a preferred cleanup option. The purpose was not to evaluate RCMS alternatives or to conduct a "shadow or supplemental" study to the studies that GE was required to perform under the RCRA Permit. This outreach was inherently part of EPA's remedy preparation and not, as GE claims, part of the process of evaluating the RCMS. EPA had already obtained public comment on the RCMS prior to the community outreach. After receiving such comments, EPA would not need to conduct a significant and time-intensive public outreach effort solely to obtain comments on RCMS alternatives. In fact, as was clearly stated, EPA was meeting with the community to inform its proposed remedy selection -- not to review RCMS alternatives.

These costs are recoverable as they are "non-field work costs incurred for preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action." CD ¶ 4 (Future Response Costs definition).[9] In recognition that a small portion of this time was spent reviewing or discussing the RCMS, however, EPA recommends allocating 20% ($104,740) of the total outreach costs in this category to Oversight Costs. Accordingly, EPA is seeking to recover $418,960 for this cost category.

CCC/Systems Research Applications Corporation ("SRAC") Costs: $27,600

These costs relate to scheduling, facilitating, and summarizing meetings of the Citizens' Coordinating Committee ("CCC"). In 1998, EPA established the CCC at this Site to inform and obtain public input on the Site's cleanup efforts. Community outreach to the CCC is expressly contemplated by CD Paragraphs 213 and 214, and GE is required to cooperate and participate in such community relations efforts. CD ¶¶ 213 and 214. Thus, these costs were incurred "pursuant to the Consent Decree" and are not otherwise included in any of the capped cost categories. CD ¶ 4 (definition of Future Response Cost). The CCC meetings covered a variety of topics and, among other things, issues related to the RCMS or oversight of removal actions outside of the River. Therefore, EPA recommends allocating 20% ($5,520) of the CCC costs to the Oversight Cost

[9]Also, it is clear that these outreach costs are not Future Rest of River Capped Response Costs. The costs did not involve studying or investigating the River or "field work" to support the preparation of the Rest of River Remedial Action.

category. The remainder of the CCC costs are Future Response Costs in that they were community relations costs incurred pursuant to the CD (see CD ¶¶ 213 and 214) and were either costs related to remedy preparation or were "costs Incurred to develop plans or reports pursuant to the provisions of this Consent Decree that do not fall within the categories of costs excluded from U.S. Future Response Costs by the last sentence of this definition." CD ¶ 4. Accordingly, EPA is seeking to recover $22,080 for this cost category.

Fact Sheet Costs: $17,100

These costs relate to two fact sheets: One regarding the RCMS and the other regarding PCBs. As the bulk of these costs related to a fact sheet regarding the RCMS, EPA recommends allocating 75% ($12,825) of these costs to Oversight Costs. As for the PCB Fact Sheet, EPA prepared the document in connection with its community relations efforts to prepare the remedy. To prepare a remedy and obtain public input, EPA must educate the public. These costs were incurred pursuant to the CD, as Paragraph 213 of the CD and the definition of Future Response Costs contemplate community relations efforts. The cost of the PCB Fact Sheet is not a Future Rest of River Capped Response Cost. Accordingly, EPA is seeking to recover $4,275 for this cost category.

Supplemental Modeling Costs: $120,000

The Supplemental Modeling costs relate to EPA's development of a Geographical Information System ("GIS") that EPA used to evaluate various floodplain remedial options. These costs also relate to an update of data regarding boundary conditions for modeling of Housatonic River cleanup scenarios. Such costs could be considered Oversight Costs as they relate to "shadow or supplemental studies for the studies to be conducted by [GE]" under the RCRA Permit. CD ¶ 4 (definition of U.S. Oversight Costs). Therefore, EPA recommends moving 100% of these costs from the U.S. Future Response Costs category and into the Oversight Cost category. Accordingly, EPA is seeking to recover $0 for this cost category.

ASRC (Records Management) Costs: $67,200[10]

EPA Region 1 has contracted with ASRC Management Services, Inc. ("ASRC") to perform records management activities at EPA's hazardous waste cleanup sites regionally, including the GE-Pittsfield/Housatonic River Site. ASRC's work involves tasks such as placing documents in the official site file, assigning identification numbers to documents, indexing documents, scanning paper documents or entering electronic documents into a database, and retrieving documents upon request. ASRC incurred costs for filing and records information management related to the Site. The definition of Future Response Costs includes costs "Incurred to enforce the Consent Decree" that are not included in other enumerated cost categories. Proper records management is essential

[10] Note that this $67,200 amount does not include any costs associated with the administrative record for the Rest of River. Such costs were billed pursuant to a separate task order, and these costs were properly allocated to Decree Paragraph 96.

for EPA to enforce the Consent Decree. Because some of these ASRC costs could be related to other cost categories, EPA recommends allocating 35% ($23,520) of the ASRC costs to the cross-cutting cost pool. Accordingly, EPA is seeking to recover $43,680 for this cost category.

Repository Support/Air Monitoring/Finance/Attorney Kilborn/Agency for Toxic Substances and Disease Registry Costs: $42,300

GE appears not to have disputed these costs. See GE Statement, pgs. 3 and 4. Note that GE's total for these costs is only $37,210.37. EPA's total is $42,300. The discrepancy between these two amounts is not clear. EPA's recommendation below assumes that GE is not disputing $42,300 related to these cost categories. Accordingly, EPA is seeking to recover $42,300 for these cost categories.

Legal – Excluding Attorneys Conway and Kilborn: $9,500

These costs were incurred by EPA lawyers other than Tim Conway and John Kilborn for review and preparation of EPA's proposed remedy. As such they clearly fall into the Future Response Cost category. Accordingly, EPA is seeking to recover $9,500 for this cost category.

Legal – RCMS: $1,600

As these costs related to the review of the RCMS, EPA recommends moving 100% of these costs into the U.S. Oversight Cost category. Accordingly, EPA is seeking to recover $0 for this cost category.

Attorney Conway – Legal Labor and Travel: $84,000

Mr. Conway is an EPA Region 1 attorney who works primarily on the Site. The costs in this cost category relate to time spent and travel costs incurred by Mr. Conway that he allocated to the Future Response Costs category. Among the activities performed by Mr. Conway in FY 2011 were legal work related to land use restrictions, Decree enforcement discussions, and remedy preparation.

EPA undertook a fair and considered allocation of Mr. Conway's time. When EPA billed GE, EPA did not bill GE for $23,266 of Mr. Conway's time, which was allocated to Oversight Costs, and $321, which was billed to 1.5 Mile Reach Removal Action Costs. (That is, the $84,000 amount does not include these two amounts of $23,266 and $321.)

The Future Response Costs definition includes costs EPA incurs to enforce the CD, to obtain land use restrictions, and for preparing a remedy. That being the case, the $84,000 in costs fits squarely in that category. Accordingly, EPA is seeking to recover $84,000 for this cost category.

Mr. Tagliaferro – Technical Labor: $58,200

Mr. Tagliaferro is an engineer and EPA's overall technical project manager for the Site, working exclusively on the Site. The costs in this cost category relate to time that Mr. Tagliaferro spent on land use restrictions, a CD modification, cost bill discussions, CCC meetings, and remedy preparation.

EPA undertook a fair and considered allocation of Mr. Tagliaferro's time. When EPA billed GE, EPA did not bill GE for $91,004 of Mr. Tagliaferro's time, which was allocated to Oversight Costs, and $29,837, which was billed to 1 ½ Mile Reach Removal Action Costs.[11] (That is, the $58,200 amount does not include these two amounts of $91,004 and $29,837.)

The Future Response Cost definition includes costs EPA incurs to enforce the CD, to obtain land use restrictions, and for preparing a remedy. In addition to Mr. Tagliaferro's time that EPA has not already allocated to other cost categories, Mr. Tagliaferro spent a small amount of time reviewing the RCMS, in addition to the time he already charged to the Oversight Cost category for his review of the RCMS. Therefore, EPA recommends moving 8% ($4,656) of the $58,200 into the Oversight Cost category, in addition to the time Mr. Tagliaferro has already charged to the Oversight Cost category. Accordingly, EPA is seeking to recover $53,544 for this cost category.

Cross-Cutting Costs: $186,400

Based upon the reallocations discussed above, EPA has recalculated the amount of "cross-cutting" costs allocated to Paragraph 95. Cross-cutting costs consist of a pool of costs allocated among several cost categories as they support tasks included in more than one cost category. An example of a cross-cutting cost is the cost of EPA's field office in Pittsfield. See CD ¶ 100.f. This recalculation of the cross-cutting costs reduces GE's bill by $79,561, in addition to the reallocations recommended above. Accordingly, EPA is seeking to recover $106,839 in cross-cutting costs for this cost category.

Summary of Recommended Cost Reallocations

The following is a table showing the recommended adjustments to EPA's cost bill discussed above. To resolve this dispute, EPA recommends reducing GE's FY 2011 cost bill by $393,192. This recommended reallocation is based on the recognition that a small portion of time was spent on tasks that fall into the categories of Oversight or cross-

[11] The 1 ½ Mile Reach Removal Action was another cleanup action undertaken under the Consent Decree, which has a cost category associated with it, namely the U.S. 1 ½ Mile Reach Removal Action Costs. The physical PCB excavation in this action took place between 2002 and 2006, and activities in FY 2011 included Post-Removal Site Control activities, and oversight of periodic monitoring of the action's effectiveness.

cutting costs. Accordingly, the recommended total amount that GE owes for Future Response Costs, excluding interest, is $1,239,108.

Table 1 – Summary of Recommended Recovery Amounts From GE

Item	Current Amount in Future Costs	Percent of Recommended Reallocation to Capped Cost Categories	Recommended Reallocated Amount	Total Recommended Amount to be Recovered from GE
DOJ	$87,000	0%	$0	$87,000
NRRB/CSTAG	$407,700	10%	$40,770 to P98	$366,930
Workshops and Charrette	$523,700	20%	$104,740 to 98	$418,960
CCC/SRA DO#3	$27,600	20%	$5,520 to P98	$22,080
Fact Sheets	$17,100	75%	$12,825 to P98	$4,275
Supplemental Modeling	$120,000	100%	$120,000 to P98	$0
ASRC	$67,200	35%	$23,520 to Cross-Cutting	$43,680
Repository Support	$2,800	0%	$0	$2,800
Air Monitoring	$26,300	0%	$0	$26,300
Finance	$8,100	0%	$0	$8,100
ERE/CD Kilborn	$4,200	0%	$0	$4,200
ATSDR	$900	0%	$0	$900
Legal-excluding Conway & Kilborn	$9,500	0%	$0	$9,500
Legal--CMS	$1,600	100%	$1,600 to P98	$0
Conway	$84,000	0%	$0	$84,000
Tagliaferro	$58,200	8%	$4,656 to P98	$53,544
Cross-cutting	$186,400	n/a	$79,561	$106,839
Total	**$1,632,300**		**($393,192)**	**$ 1,239,108**

III. EPA'S RESPONSE TO GE'S ARGUMENT THAT EPA'S COSTS WERE INCURRED OUTSIDE THE PRESCRIBED PROCESS

III.A Summary of GE's Arguments Related to Costs Being Incurred Outside the Prescribed Process

In addition to the arguments above, GE asserts that to the extent that EPA actually incurred costs to develop a remedy, such costs were incurred outside the prescribed process set forth in the CD and RCRA Permit because they were incurred prior to EPA's action on the RCMS. As such, GE argues, they were not incurred "pursuant to the provisions" of the CD, as is required by the Future Response Cost definition. Further, GE asserts that charging GE for remedy development costs prior to acting on the RCMS conflicts with GE's right to administrative review of EPA's decision on the RCMS and violates GE's rights as a matter of due process.

III.B EPA Response to GE's Argument

1. The Consent Decree and RCRA Permit do not require that EPA complete the RCMS review process prior to commencing EPA's preparation of a preferred remedy.

GE is impermissibly reading into the Decree an after-the-fact, unbargained-for limitation. Neither the terms of the CD nor the Permit prohibit EPA from initiating or preparing a proposed remedy prior to acting on the RCMS and billing GE for such costs. Decree Paragraph 22.n only says EPA will propose a remedy to the public upon satisfactory completion of the RCMS. Nowhere does Paragraph 22.n prohibit EPA from initiating its preparations or preparing for proposing and selecting a remedy until EPA acts on the RCMS. The same applies to the RCRA Permit. Indeed, GE points to no specific violation of any process required by the Decree during FY11 because there was none.

Further, the CD's definition of Future Response Costs contains no restriction, either express or implied, that such costs are only recoverable if they are incurred after EPA formally acts on the RCMS. In stark contrast, some of the other cost definitions contain detailed language that limits costs by citing dates and deadlines. For example, the definition of Future Rest of River Capped Response Costs provides that such costs must be incurred after March 31, 1999 but before selection of the Rest of River Remedial Action, and the definition of Oversight Costs contains similar explicit limitations. The definition of Future Response Costs does not provide that EPA must act on the RCMS before it can incur costs under the Paragraph. GE cannot now insert favorable *post hoc* limitations into the definition of Future Response Costs.

2. Preparing a proposed remedy prior to a final decision on the RCMS is consistent with RCRA and Superfund guidance and is the logical and efficient method for EPA to select a remedy.

Contrary to what GE asserts, RCRA Corrective Action ("CA") guidance, CERCLA guidance, and the Superfund's National Contingency Plan ("NCP") give EPA flexibility

to begin preparation of a proposed remedy prior to completion of a corrective measures study, under RCRA, or a feasibility study, under Superfund. RCRA guidance on CA expressly emphasizes that RCRA remedy selection is results-oriented, flexible, and not a lock-step process. Corrective action should "not be viewed as isolated steps in a linear process." 61 F.R. 19447 (May 1, 1996). In some situations, the EPA may not even require submission or approval of a corrective measures study. Id. and at 19455. The elements of RCRA CA are not "ends in themselves" and are "not prescribed steps along a path." Id. at 19443. Further, RCRA guidance states that the earlier that potential remedies can be identified "the more effectively information gathering can be focused." Id. at 19447. This guidance gives ample support for the Region's decision to begin remedy preparation prior to acting on the RCMS.

CERCLA guidance provides similar flexibility. In describing proposed plans, the NCP expressly states: "The selection of remedy process for an operable unit may be initiated at any time during the remedial action process." 40 CFR § 300.430(f)(2). The NCP preamble also states that "flexibility is needed in the remedy selection process" because each site "presents a different set of circumstances." 55 FR 8724 (March 8, 1990). EPA guidance on proposed plans emphasizes flexibility and early identification of the preferred remedy. See Page 2-1, *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents* (July 1999). For example, this Guidance expressly states "in some circumstances, a draft [proposed plan] "can be developed as the RI/FS is being finalized." Id. This guidance shows clearly that remedy selection can begin before remedy evaluation is absolutely final.

Given the flexibility that the above-cited guidance encourages, it is logical and efficient for EPA to review the RCMS and begin preparing a proposed remedy prior to formally responding to GE on the RCMS. Preparing a proposed remedy, including obtaining input from the RRB, the CSTAG, and the public, has informed EPA's analysis of the RCMS, especially given the complexity of the river, the numerous cleanup alternatives, and the multitude of interests at stake. Obtaining public input early in the remedy selection process will help ensure that EPA's formal response to the RCMS will reflect that input and be consistent with EPA's preliminary position on a proposed remedy.

EPA will also save time by a concurrent, instead of a sequential, remedy selection process. By contrast, if EPA had responded to the RCMS prior to initiating work on the remedy proposal, any comments received from the public, from the RRB or CSTAG reviewers, or from discussions between EPA and the States of Massachusetts and Connecticut, would likely have necessitated additional responses to the RCMS, which would be an inefficient mechanism for EPA and for GE. Clearly, such a process was not intended. In short, EPA's remedy selection process is logical, efficient, and will save time and resources.

It is well within EPA's administrative expertise to determine what is the best and most efficient process for selecting the remedy.[12] The Consent Decree anticipates that EPA

[12] EPA's administrative expertise is afforded judicial deference under an arbitrary and capricious standard. See standard of judicial review above at I.D.

will select a remedy based upon the law, regulations, and its policies and practice, related to RCRA and Superfund remedy selection.[13] Given the complexities of this Site and remedy selection, the Decree contemplates that there could be overlap between EPA's RCMS decision and EPA's remedy selection prior to the final modification of the Permit. For example, the RCRA Permit contemplates that the RCMS may need to be revised based upon public comment on EPA's proposed remedy. RCRA Permit, § II.J. In sum, EPA's remedy selection is authorized by guidance, efficient and cost effective, and well within the bounds of the Consent Decree.

3. GE has no due process right to an administrative hearing prior to EPA incurring costs related to remedy selection, and if it did have a due process right, that right is satisfied by the current dispute resolution proceedings over the FY 2011 costs.

GE argues that EPA's commencement of work on a proposed remedy "renders meaningless" GE's right to dispute resolution on the RCMS. But EPA's actions have in no way foreclosed GE's right to dispute resolution after EPA releases its decision on the RCMS. If GE invokes dispute resolution at that time, GE will have the dispute resolution process provided pursuant to the Decree and RCRA Permit, and EPA will consider GE's arguments and act on them, if warranted. Further, contrary to GE's allegations that EPA is developing its remedy outside of the RCMS process, EPA has considered the RCMS in detail in preparing to propose its remedy. As discussed above, EPA began its decision-making process to prepare a proposed remedy after EPA reviewed the RCMS and after receiving public comment on the RCMS.

In short, EPA has been following and will continue to follow the prescribed process set forth in the CD and RCRA Permit. GE cannot claim a due process violation because EPA is billing GE properly according to the agreed-upon provisions of the Decree. A due process violation requires a property interest that is violated. GE has no such property interest when EPA is billing GE according to the CD definitions that GE agreed to. See *Board of Regents v. Roth*, 408 U.S. 564, 578 (1972) (non-tenured professor had no property interest and no process due where the terms of his appointment did not require re-employment); *Unger v. National Residents Matching Program*, 928 F.2d 1392, 1402 (3rd. Cir. 1991) (concurring opinion, there is no due process deprivation unless there is a breach of contract); *Spalt v. United States*, 2002 U.S. Dist. LEXIS 12381, *8 (D. Mass. 2002) (fisherman had no protected property interest in renewal of fishing permits pursuant to the terms of a settlement agreement). Also, the RCRA and Superfund remedy selection guidance cited above gave GE pre-Decree notice of the flexibility inherent in RCRA and Superfund remedy selection. Thus, GE cannot claim a due process violation where the Decree requires GE to reimburse EPA for Future Response Costs, including for EPA's remedy selection and preparation costs regardless of whether such costs are incurred before EPA's decision on the RCMS, and where EPA guidance allows and gave GE notice of such flexibility.

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[13] For example, the RCRA permit requires that an evaluation of remedial alternatives occur according to RCRA's general standards for corrective measures. RCRA Permit, § II.G. Such evaluation must also consider whether the alternatives can comply with applicable or relevant and appropriate environmental requirements, which is a Superfund requirement. Id.

Accordingly, the Decree's procedures do not give rise to a constitutional requirement for due process. Even if they did, that requirement is satisfied by the "hearings" afforded to GE in form of these current dispute resolution proceedings concerning the FY 2011 costs. *See In re General Electric*, RCRA Appeal No. 91-7, 4. E.A.D. 615 (E.P.A.), 1993 WL 130294 (April 13, 1994) at 17. GE will have an opportunity for dispute resolution again in FY 2012, and every year thereafter that EPA seeks reimbursement of its costs. GE will also have an additional opportunity for dispute resolution when EPA formally acts on the RCMS. GE will also have several opportunities for additional process, including judicial review, regarding EPA's proposed permit modification.

Conclusion

For the reasons stated above, EPA disagrees with GE's July 2, 2012 Statement of Position. To resolve this dispute, however, EPA recommends reducing GE's FY 2011 Cost Bill by $393,192. The recommended reallocation is based on the recognition that a small portion of time was spent on tasks that fall into the categories of Oversight or cross-cutting costs. Accordingly, the recommended total amount GE owes for Future Response Costs, excluding interest, is $1,239,108.

List of Exhibits:

1. Section XXIV of the CD titled "Dispute Resolution."
2. Table Showing Cost Categories.
3. March 2011 Presentation to the CCC.
4. Excerpt from the EPA Mini-Workshop Website.
5. Fact Sheets issued in April 2011.
6. Letters from the Regional Administrator for the Mini-Workshops and the Charrette.

EXHIBIT 1

[Dispute Resolution Provisions of Consent Decree – Omitted]

EXHIBIT 2

Subject to FRE 408 – Settlement Confidential
5/17/12

Cost, Task, and Billing Summary For EPA's Cost Bill to GE for 10/1/10 – 9/30/11

Costs[1]	Task	GE Not Billed	EPA Billed GE
$18,280	Rest of River Capped Costs (P96). See attached summary.	$18,280	$0
$2,054,863	Oversight Costs (P98a). See attached summary.	$2,054,863	$0
DOJ $87,000	Work incurred by DOJ pursuant to Consent Decree (P95).		$87,000 (includes an additional $6,500 originally excluded from the January cost bill)
NRRB, including IA69; EPA HQ labor/travel; Regional labor/travel; and internal remedy management review: $407,700	Preparing, reviewing and approving the documents that will propose and select the Rest of River remedial action (P95).		$407,700
CSTAG $0	There are no separate CSTAG costs. The CSTAG members referenced in GE's letter attended the NRRB Meeting.	$0	$0
Situation Assessments, mini-workshops, and	As part of EPA's decision-making process for the cleanup of the Rest of River, EPA is considering		$523,700

[1] The cost figures include indirect costs.

Costs[1]	Task	GE Not Billed	EPA Billed GE
the Charrette, including IA 169; SRAC D.O. 92; and EPA labor and travel $523,700	public input on the proposal of a ROR remedial action. The purpose of the meetings was for stakeholders to learn and interact regarding the Rest of River cleanup (P95).		
SRAC D.O. 3; $27,600	Scheduling, facilitating and summarizing CCC meetings. Required by Paragraphs 213 and 214 of the Decree (P95).		$27,600
Fact Sheets, IA169 $17,100	Development of FAQs, CMS Fact Sheet and PCB Fact Sheet (P95 and 213).		$17,100
Supplemental modeling, including IA169: $120,000	Development of GIS system used to evaluate various floodplain remediation options in proposing a Rest of River remedial option (P95).		$120,000
ASRC: $67,200	Records management including for the purposes of community relations (P213) and enforcing the Decree (P95), excluding $17,182 for the ROR Admin Record.	$17,182 *(these costs are included in the $18,280 amount provided above for P95 costs not billed)*	$67,200
Repository support EPA labor -- Howell $2,800	Maintaining local repositories of all public documents provided to EPA by GE, including for the purposes of community relations (P213) and enforcing the Decree (P95).		$2,800
Air Monitoring at Allendale, IA 246: $26,300	Recoverable work based upon prior understanding with GE.		$26,300 Costs not disputed by GE

Costs[1]	Task	GE Not Billed	EPA Billed GE
Finance/accounting, EPA labor $8,100	Work pursuant to Consent Decree including preparation of cost recovery billing (P95).		$8,100 Costs not disputed by GE
EREs/CD modifications EPA labor (Kilborn) $4,200	Work related to land use restrictions and CD modifications (P95).		$4,200
ATSDR: $900		$715 *(these costs are included in the $18,280 amount provided above for P95 costs not billed)*	$900 Costs not disputed by GE
Legal EPA labor excluding Conway and Kilborn $9,500	Legal Support –Remedy Selection (P95)		$9,500
Legal EPA Labor $1,600	Legal Support-CMS review		$1,600 (Note: Needs to be moved to P98a)
Conway – Legal EPA labor & travel $84,000	Legal-land use restrictions, CD modifications, CCC meetings, cost bill discussions, and remedy selection (P95)	$23,266 (*these costs are included in the $2,054,863 amount provided above for P98 costs not billed)* *In addition, $321 was allocated to P103 costs*	$84,000
Tagliaferro -- Technical EPA labor $58,200	Land use restrictions, CD modifications, CCC meetings, and remedy selection (P95)	$91,004 (*these costs are included in the $2,054,863 amount provided above for P98 costs not billed)* *In addition, $29,837*	$58,200

Costs[1]	Task	GE Not Billed	EPA Billed GE
		was allocated to P103 costs	
Cross-cutting $186,400			$186,400
Total Billed GE			$1,632,300 (Excludes $60,700 credit due for 1.5 Mile Cost share.)
Total NOT Billed GE		$2,073,143	

Total costs incurred = $1,632,300 + $2,073,143 = $3,705,443

EPA has already offered to reallocate $115,500 of this bill into Oversight (P98a) or Future Rest of River Capped Costs (P96)

Thus total amount due including EPA's proposed reallocation would be: $1,516,800 (less the $60,700 credit)

And total costs not billed would be: $2,188,643

Report Date: 01/09/2012

IFMS Reconciliation Pending

Itemized Cost Summary

GENERAL ELECTRIC CO., PITTSFIELD, MA SITE ID = 01 67

Paragraph 96
10/1/10 - 9/30/11

ALLOCATION TRANSFER IAG COSTS	
DEPARTMENT OF HEALTH & HUMAN SERVICES (ATSDR)	$714.84
INTERAGENCY AGREEMENT (IAG) COSTS	
ARMY CORPS OF ENGINEERS (DW96940169)	$219.79
OTHER CONTRACT COSTS	
ASRC MANAGEMENT SERVICES, INC. (EPW05052)	$12,933.72
EPA INDIRECT COSTS	$4,319.62
cross-cutting allocation 0.014%	$91.80
Total Site Costs:	$18,279.77

IFMS Reconciliation Pending

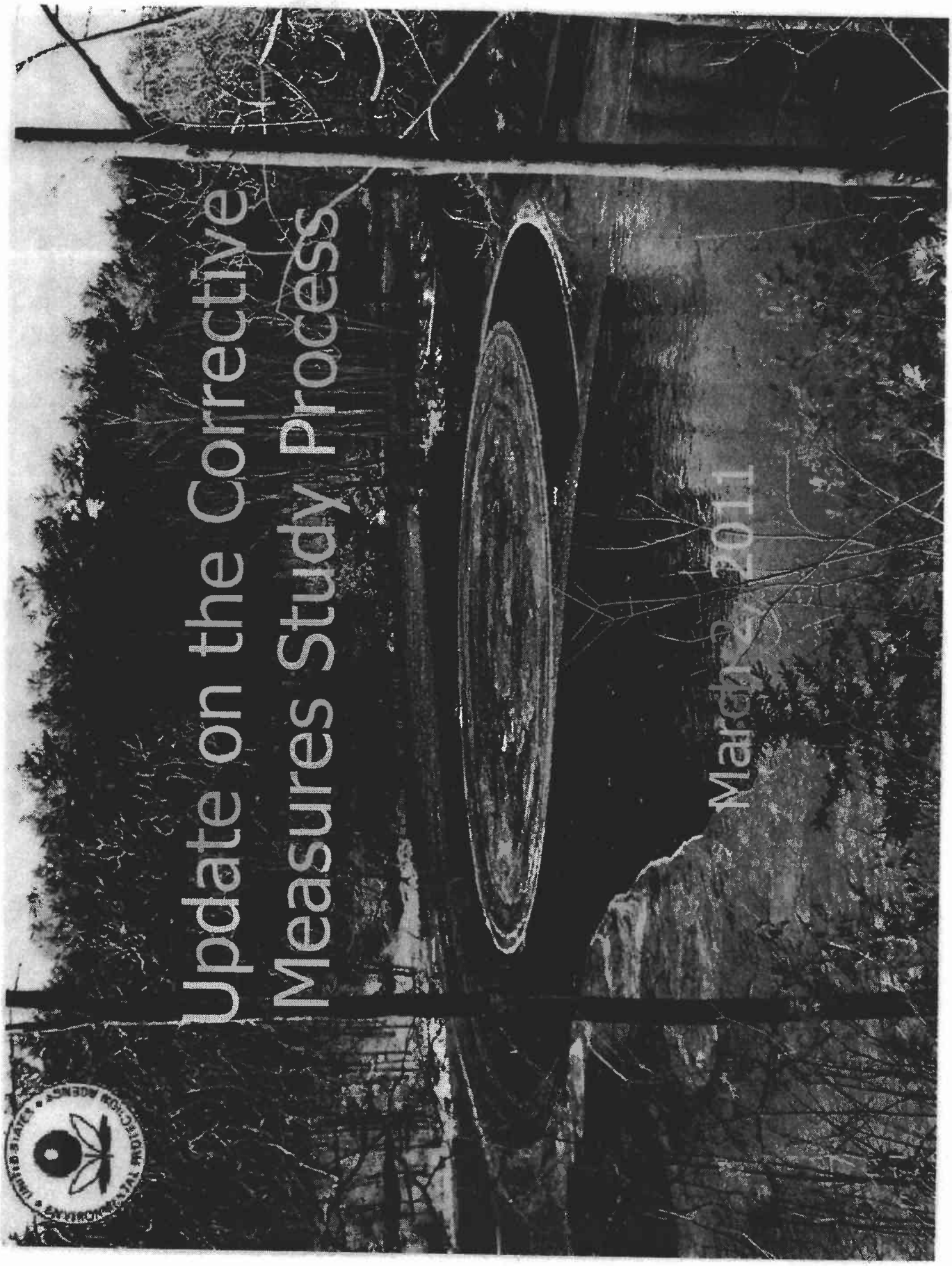
Itemized Cost Summary

GENERAL ELECTRIC CO., PITTSFIELD, MA SITE ID = 01 67

Paragraph 98a Costs
10/1/10 - 9/30/11

REGIONAL PAYROLL COSTS	$248,048.47
HEADQUARTERS PAYROLL COSTS	$2,078.98
REGIONAL TRAVEL COSTS	$10,372.30
INTERAGENCY AGREEMENT (IAG) COSTS	
ARMY CORPS OF ENGINEERS (DW96940169)	$630,199.28
ARMY CORPS OF ENGINEERS (DW96940246)	$348,451.18
EPA INDIRECT COSTS	$406,936.90
Cross-cutting allocation 62.851%	$408,776.18
Total Site Costs:	$2,054,863.29

EXHIBIT 3


Update on the Corrective
Measures Study Process
March 2011

Status

- GE submitted its Revised Corrective Measures Study (RCMS) October 10, 2010
- The RCMS provides GE's analysis of 10 sediment, 9 floodplain, and 5 disposal alternatives and its recommended cleanup plan
- Public Input Period originally scheduled to close December 15th, extended to January 31st

EPA's Evaluation of Alternatives

- EPA is evaluating the alternatives in the RCMS considering:
  - Input received from stakeholders
  - The 9 evaluation criteria specified in the RCRA Permit (listed below)
- General Standards
  - Overall protection of human health and the environment
  - Control of sources of releases
  - Compliance with ARARS
- Selection Decision Factors
  - Long-term reliability and effectiveness
  - Attainment of IMPGs (interim cleanup goals)
  - Reduction of toxicity, mobility, volume
  - Short-term effectiveness
  - Implementability
  - Cost

Public Outreach

- EPA has a third-party consultant (Certus) conducting interviews with stakeholders
- These interviews lay the groundwork for a series of mini-workshops and a "charrette"
- A charrette provides an opportunity –
  - for the public to interact with EPA regarding their views on the remedial alternatives
  - to develop an understanding of how EPA must make its decision
- The charrette will be held during EPA's decision-making process
- In addition to the charrette, as in the past, EPA will be available upon request to discuss issues of concern with stakeholders

Schedule for Charrette Activities

- 3 Consecutive Mini Workshops
  - April 5th, 6th, and 7th
- Culminating Charrette
  - May 7th
- Location – Shakespeare & Company, Lenox

Remedy Selection Process

EPA Internal Review/Decision-making – Spring/Summer 2011

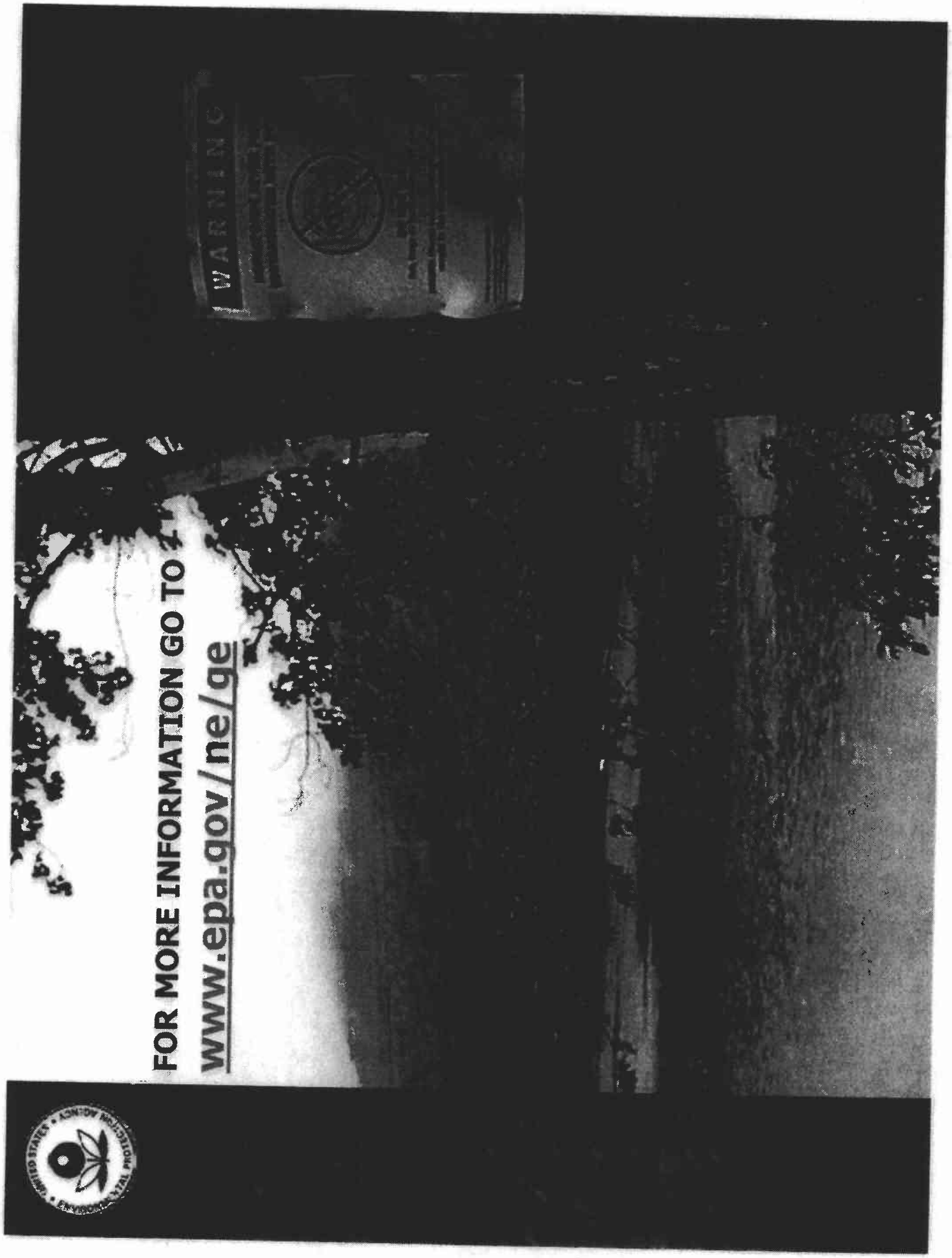
- EPA Region I "Management Review" of Proposed Remedy
- EPA National Remedy Review Board (RRB)
  - Stakeholder groups can submit written comments (up to 10 pages) on the RCMS for RRB consideration
  - Includes coordination by RRB with EPA national Contaminated Sediments Technical Advisory Group (CSTAG)

Remedy Selection Process (continued)

- EPA issues its Proposed Remedy for public comment – target - fall 2011
- Formal Public Comment Period and EPA outreach
- EPA Notifies GE of Intended Final Decision
  - Potential dispute resolution
- EPA issues RCRA Permit Modification ("Remedy Selection"), including response to Public Comments

Remedy Selection Process (continued)

- Public/GE have right of appeal (EAB and US Court of Appeals)
- GE must proceed w/ design of components of the remedy that are not subject to appeal
- EPA may proceed w/ design of components that are appealed (must offer opportunity to GE)
  - If appeal is denied, GE must pay EPA costs
- Once appeals are resolved, GE must design, construct, and pay for the remedy that is upheld
- Implemented as a Superfund remedy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FOR MORE INFORMATION GO TO
www.epa.gov/ne/ge

EXHIBIT 4

Outreach Program Purpose

Housatonic Rest of River is the term used in the Consent Decree to describe the investigation and decision making process for the Housatonic River from the confluence of the East and West Branch downstream into Connecticut. Under the terms of the Consent Decree, EPA conducted studies and investigations to support the Agency in developing Human Health and Ecological Risk Assessments and in performing a Modeling Study of the hydrodynamics, sediment transport, and PCB fate and bioaccumulation in the river. The reports from these activities underwent formal external Peer Review. Following the RCRA process outlined in the Reissued RCRA Permit (Appendix G to the Consent Decree) GE prepared a Supplemental RCRA Facility Investigation Report, and proposed interim cleanup goals for the Rest of River upon completion of the risk assessment Peer Reviews. GE submitted a proposal for evaluating cleanup alternatives and, after EPA conditional approval of this proposal, GE evaluated cleanup alternatives (corrective measures) for the Rest of River, including a no action scenario. EPA will then propose a selected alternative for public comment.

EPA is beginning its decision-making process for the cleanup of the Housatonic Rest of River. In doing so, EPA is considering the information presented in the Revised Corrective Measures Study (RCMS) submitted by GE in October of 2010, as well as public input and other information as necessary. The purpose of the RCMS was to evaluate potentially applicable technologies and cleanup alternatives for the Rest of River to reduce risk to human health and the environment from PCBs, and to prevent further downstream transport of PCBs.

There are three categories of actions being evaluated:

- Management of in-place sediment and riverbank soil (the SED alternatives),
- Management of in-place floodplain soil (the FP alternatives), and
- Treatment and disposition (TD alternatives).

These actions are evaluated against nine criteria specified in the Revised RCRA Permit. In addition, the RCMS contains GE's recommendation as to which alternative it believes best meets the criteria and objectives. GE concluded that either Monitored Natural Recovery (SED 2 and FP1) or the combination of SED 10/FP9, and onsite disposal of contaminated sediment and soil in a local landfill best met the criteria.

Now EPA is evaluating the alternatives and combinations of alternatives against the criteria to determine which cleanup plan EPA believes best meets the criteria.

EPA's consultants held a series of interviews with stakeholders over the past few months regarding their view of the process and information needs.

One of the outcomes of these interviews is this series of mini workshops and the all-day hands-on session scheduled for May 7 for stakeholders to learn and interact regarding the Rest of River cleanup. The purpose if these meetings are to

- Provide the community with -
    - an understanding of the work that EPA (and others) have done on the Rest of River
    - an understanding of how the river works and it is affected by the PCB contamination
    - an opportunity to get their questions answered
    - Result - Stakeholders have a better understanding of the issues associated with any cleanup of the Housatonic River

After public comment, EPA will finalize the corrective measure(s) to be implemented for the Rest of River. GE and/or the public may then appeal EPA's decision to the EPA Environmental Appeals Board, and then to the Federal Court of Appeals. As specified in the Consent Decree, upon completion of all appeals, the remedy that was upheld will be implemented by GE as a CERCLA action.

EXHIBIT 5

LEARN MORE AT: www.epa.gov/region1/ge

Cleanup Alternatives in the Revised CMS

THE RIVER *The Housatonic River is contaminated with polychlorinated biphenyls (PCBs) and other hazardous substances released from the General Electric Company (GE) facility in Pittsfield, MA. The entire site consists of the 254-acre GE facility; the Housatonic River and its banks and floodplains from Pittsfield, downstream through Massachusetts and Connecticut; and other contaminated areas. Under a federal Consent Decree, GE is required to address contamination throughout the site, including in the River.*

SUMMARY:

EPA is beginning its decision-making process for the cleanup of the Housatonic Rest of River. In doing so, EPA is considering the information presented in the Revised Corrective Measures Study (CMS) submitted by GE in October of 2010. The purpose of the Revised CMS was to evaluate potentially applicable cleanup alternatives for the Rest of River to reduce risk to human health and the environment from PCBs, and to prevent further downstream transport of PCBs.

There are three categories of actions being evaluated:

- Management of in-place sediment and riverbank soil (the SED alternatives),
- Management of in-place floodplain soil (the FP alternatives), and
- Treatment and disposition (TD alternatives).

These actions are evaluated against nine criteria specified in the RCRA Permit. Now EPA is evaluating the alternatives and combinations of alternatives against the criteria to determine which cleanup plan EPA believes best meets the criteria. For information regarding the evaluation criteria, see the fact sheet "EPA's Cleanup Decision Process".

This fact sheet summarizes the alternatives that were outlined and evaluated in the Revised CMS.

WHERE IS THE REST OF RIVER?

For the purposes of evaluation and discussion in the EPA studies and the Revised CMS, the River has been divided into 17 reaches. The area known as the "Rest of River" begins at Reach 5 and includes the main stem of the Housatonic River and its floodplain from the Confluence of the East and West Branches in Pittsfield, MA, downstream to the Derby-Shelton Dam in CT, which is the downstream end of Reach 16 (see map), a distance of approximately 135 miles.

WHAT IS THE REVISED CMS?

The purpose of the Revised Corrective Measures Study (CMS) performed by GE, as required under the Consent Decree (CD), was to evaluate potentially applicable technologies and cleanup alternatives for the Rest of River to reduce risk to human health and the environment from exposure to PCBs. The Revised CMS for Rest of River describes the technologies to be considered, the range of alternatives to be evaluated, and the process and criteria used for evaluation.

The various technologies that were retained after screening in the CMS Proposal are applicable to one or more of three categories of remedial actions:

- In-place sediment and riverbank soil
- In-place floodplain soil
- Treatment and disposition (materials that have been removed)

Estimates of the costs, volumes of sediment/soil, and PCB mass associated with the various alternatives were provided by GE in the Revised CMS, and are summarized in this Fact Sheet.

continued >

KEY CONTACTS:

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GENERAL ELECTRIC'S SUMMARY OF SEDIMENT ALTERNATIVES

Alt.	Reach 5A	Reach 5B	Reach 5A/5B Banks	Reach 5C	Reach 5 Backwaters	Reach 6 (Woods Pond)	Reach 7 Impoundments	Reach 7 Channel	Reach 8 (Rising Pond)	Reaches 9 - 16
SED 1	No action	No action	No action	No action	No action	No action	No action	No action	No action	No action
SED 2	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MNR	MNR
SED 3	2-foot removal with capping	MNR	Stabilization/ bank soil removal	Combination of thin-layer capping and MNR	MNR	Thin-layer capping	MNR	MNR	MNR	MNR
SED 4	2-foot removal with capping	Combination of 2-foot removal with capping and thin-layer capping (dep. on depth & velocity)	Stabilization/ bank soil removal	Combination of thin-layer capping (in shallow and depositional areas) and capping (in deeper areas)	Combination of thin-layer capping and MNR	Combination of 1.5-foot removal with capping in shallow areas and thin-layer capping in deep area	MNR	MNR	MNR	MNR
SED 5	2-foot removal with capping	2-foot removal with capping	Stabilization/ bank soil removal	Combination of 2-foot removal with capping (in shallow areas) and capping (in deeper areas)	Combination of thin-layer capping and MNR	Combination of 1.5-foot removal with capping in shallow areas and capping in deep area	MNR	MNR	Thin-layer capping	MNR
SED 6	2-foot removal with capping	2-foot removal with capping	Stabilization/ bank soil removal	2-foot removal with capping	Removal of sediments >50 mg/kg in top 1 foot (with capping[2]); thin-layer capping for remainder >1 mg/kg	Combination of 1.5-foot removal with capping in shallow areas and capping in deep area	Thin-layer capping	MNR	Combination of thin-layer capping in shallow areas and capping in deep areas	MNR
SED 7	3- to 3.5-foot removal with backfill	2.5-foot removal with backfill	Stabilization/ bank soil removal	2-foot removal with capping	Removal of sediments >10 mg/kg in top 1 foot (with capping[2]); thin-layer capping for remainder >1 mg/kg	Combination of 2.5-foot removal with capping in shallow areas and capping in deep area	Removal of higher PCB levels (e.g., >3 mg/kg) in top 1.5 feet (with capping[2]); thin-layer capping for remainder >1 mg/kg	MNR	Comb. of removal of higher PCB levels (e.g., >3 mg/kg) in top 1.5 feet (with capping[2]) & thin-layer capping in shallow areas and capping in deep areas	MNR
SED 8	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with backfill	Stabilization/ bank soil removal	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with backfill	Removal to 1 mg/kg depth horizon with Backfill	Removal to 1 mg/kg depth horizon with backfill	MNR	Removal to 1 mg/kg depth horizon with backfill	MNR
SED 9	2-foot removal with capping	2-foot removal with capping	Stabilization/ bank soil removal	Combination of 2-foot removal with capping (in shallow areas) and 1.5-foot removal with capping (in deeper areas)	In areas with sediments >1 mg/kg, combination of 1-foot removal with capping (areas with water < 4 feet) and capping w/o removal (areas with water > 4 feet)	Combination of 3.5-foot removal with 1-foot cap in shallow areas and 1-foot removal with capping to grade in deep area	Combination of 1.5-foot removal with capping (in areas of high bottom shear stress) and 1-foot removal with capping (in areas of low bottom shear stress)	MNR	Combination of 1.5-foot removal with capping (in areas of high bottom shear stress) and 1-foot removal with capping (in areas of low bottom shear stress	MNR
SED 10	2-foot removal with capping in select areas; MNR in remaining areas	MNR	Stabilization/ bank soil removal in select areas	MNR	MNR	2.5-foot removal where sediments generally >13 mg/kg in top 6 inches; MNR in remainder	MNR	MNR	MNR	MNR

MNR Monitored Natural Recovery, mg/kg milligram per kilogram.

GENERAL ELECTRIC'S SUMMARY OF SEDIMENT ALTERNATIVE VOLUMES, AREAS, AND DURATIONS

	SED 1/2	SED 3	SED 4	SED 5	SED 6	SED 7	SED 8	SED 9	SED 10
Sediment removal volume (cubic yards [cy])	0	134,000	262,000	377,000	521,000	770,000	2,252,000	886,000	235,000
Bank soil removal volume (cy)	0	35,000	35,000	35,000	35,000	35,000	35,000	35,000	6,700
Capping after removal (acres)	0	42	91	126	178	150	0	333	20
Backfill after removal (acres)	0	0	0	0	0	69	351	0	0
Capping without removal (acres)	0	0	37	60	45	45	0	3	0
Thin-layer capping (acres)	0	97	119	102	112	72	0	0	0
Time to implement (years)	0	10	15	18	21	26	52	14	5

Note: MNR would be a component of all alternatives except SED 1.

GENERAL ELECTRIC'S SUMMARY OF FLOODPLAIN ALTERNATIVES

Alternative	Description
FP 1	No action.
FP 2	Soil removal/backfilling to achieve the health-based IMPGs based on 10-4 cancer risk or on non-cancer (whichever is lower).
FP 3	Same as FP 2 except: (a) in certain frequently used areas, soil removal/backfilling to achieve the health-based IMPGs based on 10-5 cancer risk or on non-cancer (whichever is lower); and (b) supplemental remediation to achieve upper-bound IMPGs for ecological receptors.
FP 4	Soil removal/backfilling to achieve the health-based IMPGs based on 10-5 cancer risk or on non-cancer (whichever is lower). Supplemental remediation to achieve upper-bound IMPGs for ecological receptors.
FP 5	Removal of soils that contain PCB concentrations of 50 mg/kg or greater, with backfilling.
FP 6	Removal of soils that contain PCB concentrations of 25 mg/kg or greater, with backfilling.
FP 7	Soil removal/backfilling to achieve the health-based IMPGs based on 10-6 cancer risk , but no lower than 2mg/kg for direct human contact (level specified in Consent Decree as the standard for residential use). Supplemental remediation to achieve lower-bound IMPGs for ecological receptors.
FP 8	Soil removal/backfilling to achieve the health-based IMPGs based on 10-5 cancer risk or on non-cancer (whichever is lower). Supplemental remediation in vernal pools to achieve lower-bound IMPG for amphibians. Additional removal of all remaining soils that contain PCB concentrations of 50 mg/kg or greater, with backfilling.
FP 9	Same as FP2 with additional soil removal/backfilling to achieve the health-based RME IMPGs based on 10-4 cancer risk or on non-cancer (whichever is lower) in top 3 feet in certain heavily used subareas.

Notes: 1. The health-based IMPGs refer to the IMPGs that were based on EPA's "Reasonable Maximum Exposure" assumptions in its Human Health Risk Assessment. 2. For all alternatives, the remediation described applies to the top foot of soil, except that FP3 through FP 9 also involve additional remediation in certain heavily used subareas as necessary to achieve criteria in the top 3 feet of soil.

GENERAL ELECTRIC'S SUMMARY OF FLOODPLAIN ALTERNATIVE VOLUMES AND AREAS

	FP1	FP2	FP3	FP4	FP5	FP6	FP7	FP8	FP9
Removal volume (cy)	0	22,000	74,000	121,000	104,000	320,000	631,000	177,000	26,000
Removal area (acres)	0	13	44	72	63	197	387	108	14

GENERAL ELECTRIC'S COST ESTIMATES FOR SED/FP/TD COMBINATIONS

Alternative	TD1	TD2[2]	TD3[3]	TD4	TD5[4]
	Off-Site Disposal	Confined Disposal Facility	Upland Disposal Facility	Chemical Extraction	Thermal Desorption
SED 2/FP 1	$5 M	NA	$5 M	$5 M	$5 M
SED 3/FP 3	$251 M	NA	$204 - 228 M	$274 M	$337 - 366 M
SED 5/FP 4	$483 M	NA	$362 - 402 M	$509 M	$679 - 709 M
SED 6/FP4	$612 M	$487 M	$444 - 493 M	$619 M	$860 - 891 M
SED 8/FP7	$1,740 M	$1,337 M	$1,160 M	$1,826 M	$2,866 - 3,026 M
SED 9/FP8	$729 M	$558 M	$435 - 512 M	$662 M	$1,132 - 1,175 M
SED 10/FP 9	$183 M	NA	$121 - 146 M	$181 M	$283 - 290 M

1. Cost are give in 2010 dollars; $M = million dollars 2. Where applicable, estimated costs assume placement in CDFs of certain hydraulically dredged sediments and off-site disposal for remaining excavated materials. 3. Range depends on location of Upland Disposal Facility. For sediment-floodplain alternatives in which the removal volume exceeds the capacity of the Upland Disposal Facility at a given location, cost estimates were made only for the location(s) where that entire volume of material could be disposed of. 4. Low end of range assumes reuse in floodplain of half of treated floodplain soils and off-site disposal of remaining treated materials; high end of range assumes off-site disposal of all treated material.

TECHNOLOGIES EVALUATED IN THE REVISED CMS

Technologies retained in the initial screening that were considered in the Revised CMS are described below. Many of these technologies can be applied to in-place sediment, riverbanks, and floodplain soil. The treatment and disposition technologies apply to material after it has been removed from the river, banks, or floodplain. All alternatives (except No Action) possibly will require engineering and/or institutional controls. All alternatives include a restoration (except NA and MNR), operation, maintenance and monitoring component (except NA).

No Action

The No Action (NA) response does not include any active or passive remediation or long-term monitoring. EPA requires that a No Action response be considered at every site.

Engineering/Institutional Controls

There are four general types of institutional controls to reduce exposure to humans: 1. governmental (e.g., fish advisories); 2. proprietary (e.g., deed restriction); 3. enforcement (e.g., provisions in the CD); and 4. informational (e.g., public education).

Monitored Natural Recovery (MNR)

MNR is a response action that relies on ongoing, naturally occurring processes (including physical, biological, and/or chemical mechanisms) to contain, destroy, or otherwise reduce the bioavailability or toxicity of contaminants in sediment, with monitoring to assess the rate of recovery. MNR may also include enhancements, such as thin-layer capping, to accelerate the rate of recovery.

Removal

Removal techniques include mechanical excavation in the "dry" as was performed for the 2 miles of the East Branch that have already been cleaned up, or removal in the "wet," commonly referred to as dredging. Excavation in the dry is typically performed using conventional excavation equipment. Dredging may be conducted using either mechanical or hydraulic equipment. Removal of sediment or bank/floodplain soil often is coupled with backfilling using clean material to meet original elevations and contain any residual PCBs, and also requires one or more treatment and disposition alternatives for implementation.

Capping

This technology requires the placement of a layer of clean material over the in-place contaminated sediment/soil, at a thickness suitable to create a clean bioavailable zone and to isolate the contaminated material. Depending on site-specific objectives, the cap design may include materials to enhance the isolation (e.g., geotextile, organoclay) or sorption of contaminants (e.g., organic carbon), and a protective layer (e.g., armor stone) to prevent erosion.

Bank Stabilization

Stabilization of the banks protects in-place contaminated bank soil from erosion. Stabilization techniques range from bioengineering to hard engineering (e.g., armor stone), and the use of a particular technique is dependent on bank slope/stability and water velocities.

Dewatering/Water Treatment

Dewatering and/or water treatment is often a necessary step in the handling of materials that are removed, particularly sediment, to facilitate treatment and/or disposal of the material.

Chemical Extraction

Mechanical separation methods combined with an extraction fluid can potentially be used to desorb PCBs from sediment/soil after removal, resulting in a large reduction in the volume of contaminated material. At EPA's request, GE performed a study of the effectiveness and implementability of this technology on site-specific sediment and soil samples. The potential for reuse of the material after treatment is a significant consideration with this technology.

Thermal Desorption

Thermal desorption separates the PCBs from the sediment/soil by adding heat to the material. The heat then volatilizes the PCBs, which are then condensed as a liquid, captured, and/or destroyed in an afterburner, resulting in a large reduction in the volume of contaminated material. The potential for reuse of the material after treatment is a significant consideration with this technology.

Confined Disposal Facility (CDF)

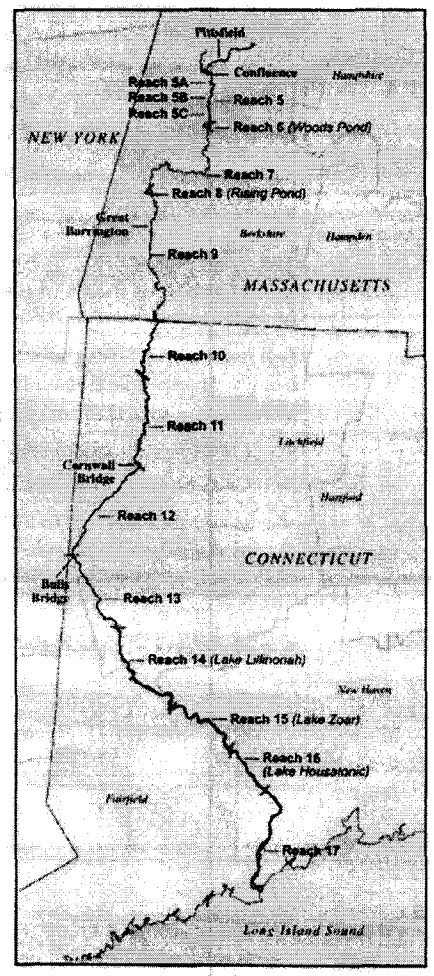
CDFs involve the placement of contaminated sediment/soil in an engineered structure constructed in a nearshore environment in such a way as to permanently isolate the PCBs from the environment.

Upland Disposal Facility

After dewatering, sediment/soil would be placed in an engineered upland landfill typically constructed in close proximity to the river but outside the floodplain. The facility is engineered appropriately to permanently isolate the PCBs.

Off-Site Disposal Facility

After dewatering and pretreatment to achieve other requirements of the disposal facility, sediment/soil would be transported to an existing, licensed off-site approved landfill by truck or rail.



STATE AND LOCAL RESOURCES

Berkshire Athenaeum Public Library
(413) 499-9480

Cornwall Public Library
(860) 672-6874

Kent Memorial Library
(860) 927-3761

Housatonic Valley Association
(860) 672-6678

Massachusetts DEP
(413) 784-1100

Connecticut DEP
(860) 424-3854

SUPERFUND

Cleaning Up New England **SITE UPDATE**

GE/Housatonic River Site MA/CT

U.S. EPA | HAZARDOUS WASTE PROGRAM AT EPA NEW ENGLAND

THE SUPERFUND PROGRAM *protects human health and the environment by investigating and cleaning up often-abandoned hazardous waste sites and engaging communities throughout the process. Many of these sites are complex and need long-term cleanup actions. Those responsible for contamination are held liable for cleanup costs. EPA strives to return previously contaminated land and groundwater to productive use.*

SITE DESCRIPTION:

PCBs (polychlorinated biphenyls) released from the General Electric facility in Pittsfield, Massachusetts since the 1930's are widespread throughout the Housatonic River and its floodplain, and are found in water, sediment, river banks, floodplain soil, and in both aquatic and terrestrial animals.

INTRODUCTION:

This Fact Sheet summarizes some of the important properties of PCBs as they relate to fate and transport in the Rest of River and shows how the Housatonic River Model Framework is being used to evaluate remedial alternatives. It also provides a concise summary of the effects of PCBs on human health and ecological receptors as demonstrated by the peer-reviewed Human Health and Ecological Risk Assessments. General Electric recently submitted their Revised Corrective Measures Study (RCMS) Report for the Housatonic River Rest of River site. EPA will use the information provided in the CMS, along with other information, including citizen and other stakeholder comments, to develop EPA's preferred approach to addressing PCB contamination in the river and floodplain. EPA welcomes and encourages input from stakeholders and believes that providing this information in a concise fact sheet format will be of use in their review of GE's Revised CMS and EPA's subsequent proposal.

- PCBs are classified as probable human carcinogens.
- PCBs are associated with numerous non-cancer health effects, including neurological, immune, endocrine and reproductive issues.
- PCBs are known to cause adverse effects on numerous Housatonic River ecological receptors, including fish-eating mammals, some birds, fish, amphibians, and benthic invertebrates.
- PCBs are present in large quantities in river sediment and floodplain soil; estimates range from between 100,000 to nearly 600,000 pounds of PCBs.
- The rate of natural degradation of the type of PCBs in the Housatonic River is very slow – on the scale of hundreds of years.
- Currently, more than 50% of the PCBs that enter Woods Pond go over the dam and continue downstream, even into Connecticut.

EPA will be proposing an approach to clean up the PCBs in the Rest of River to protect human health and the environment after the public provides their comments to EPA on GE's Revised Corrective Measures Study. This Fact Sheet reviews what PCBs are and how they move through the environment, and summarizes what EPA knows about the PCBs in the Housatonic River system and their effects.

WHAT ARE PCBs?

PCBs are a group of man-made organic chemicals consisting of carbon, hydrogen, and chlorine atoms. The

continued >

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number of chlorine atoms and their location in a PCB molecule determine many of its physical and chemical properties. PCBs have no known taste or smell, and range in consistency from an oil to a waxy solid.

PCBs were manufactured in the US from 1929 until their manufacture was banned in 1979. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and many other industrial applications.

PCBs are a mixture of molecules that contain 12 carbon atoms and a varying number of hydrogen and chlorine atoms. The different combinations of these atoms result in 209 possible PCB molecules, which are called congeners. Some of these congeners have toxicological properties that are similar to those of dioxin.

Aroclor is the trade name used by the Monsanto Company for most of the commercial PCB mixtures created in the United States. Aroclors are mixtures of PCB congeners that were created to have different physical properties, which in turn are largely determined by the amount of chlorine in the overall mixture. These were sold in the US under the name Aroclor followed by a 4-digit number. The first two digits represent the number of carbon atoms (12); the second two digits indicate the percentage of chlorine by mass in the mixture. For example, Aroclor 1260 contains 60% chlorine by mass. Aroclors with lower numbers are "light" oily liquids, while at the higher end they have a "heavier," more waxy form.

The differences between Aroclors can be pronounced; for example, the lighter Aroclor 1242 is made up of 60% of the lighter and less harmful congeners, while the heavier Aroclors 1254 and 1260 (the types of PCBs found in the Housatonic River) have only traces (2% or less) of these more soluble and volatile congeners.

HOW DO PCBs ENTER AND MOVE IN THE ENVIRONMENT?

PCBs entered the air, water, and soil during their manufacture, use, and disposal; from spills and leaks during their transport; and from leaks in products containing PCBs.

WHAT HAPPENS TO PCBs IN THE RIVER DURING STORMS?

Periodic storms, or floods, are a major factor controlling the fate and transport of sediment and bank soil and the associated PCBs in the Housatonic River.

The river rises very quickly in response to storms in the watershed, and river flow can increase dramatically in a matter of a few hours. These events mobilize contaminated sediment from the bottom of the river, erode PCB-contaminated river banks, and transport the sediment, soil, and associated PCBs downstream.

In addition, "out of bank" events, where the amount of water exceeds the amount that can be contained in the river channel, force water and associated sediment/soil and PCBs to flow out onto the floodplain. This is how the PCBs have been, and continue to be distributed throughout the river's 10-year floodplain (i.e., the extent of flooding that is anticipated to occur, on average, once in ten years). Once the water (with the suspended solids and associated PCBs) gets out on the floodplain, the solids and associated PCBs are trapped by the vegetation and settle out as the floodwaters recede, resulting in significant accumulation of PCBs in floodplain soil.

These out-of-bank events have occurred often enough to result in PCB concentrations in floodplain soil that pose risks to humans and to ecological receptors in the floodplain.

Once in the environment, most PCBs do not readily break down and may remain for very long periods of time. PCBs can travel long distances in the air and via suspended solids in water and be deposited in areas far from where they were originally released.

In water, a small amount of PCBs may be dissolved, but most stick to organic particles and soil/sediment. That is because soil and sediment consist not just of mineral particles, but also include organic carbon.

Each congener/PCB mixture has a different potential for degradation. In general, "lighter" PCBs have a higher degradation potential. The heavier PCBs, such as the ones in the Housatonic watershed (Aroclors 1254 and 1260), are more persistent in the environment because they are more resistant to volatilization, weathering, biodegradation and other mechanisms of degradation.

Many different types of natural degradation have been documented in PCB-contaminated sediment and soil; however, although some PCB congeners eventually degrade, the rate of degradation of the type of PCBs found in the Housatonic watershed is very slow, on the scale of hundreds of years.

UPTAKE OF PCBs BY BIOTA

PCBs in the environment are taken up by many animals and a few plants in a process known as bioaccumulation. Bioaccumulation can occur in wild populations and animals that are raised for food in both commercial and backyard operations. The rate of bioaccumulation and the concentration of PCBs in an organism depend on many factors, one of the most important being the amount of fat (lipid) in body. In general, organisms with high amounts of body fat will accumulate higher concentrations of PCBs than those with less fat. The vast majority of PCBs in any living organism will be found in the fat cells. Other factors controlling organism-specific bioaccumulation include life history and diet.

Studies show that while PCBs accumulate rapidly in most animals, they are slow to leave the body. Once they have entered the body, PCBs are moved to fat reservoirs where they tend to remain for long periods of time, typically for the life of the animal, reaching concentrations that may be many thousands of times higher than in water, sediment, or soil, a process known as biomagnification.

PCBs have been measured at very high concentrations in biota in the Housatonic River watershed, leading to consumption advisories for fish, frogs, turtles and waterfowl in MA, and fish in CT.

In contrast, most plants do not bioaccumulate PCBs from contaminated soil due to the presence of a waxy layer, or cuticle, which binds the PCBs

and prevents them from being absorbed into the plant. Some plants in the squash family appear to be able to accumulate PCBs from soil via their roots. Studies of tomatoes grown downwind from a PCB-contaminated sediment site demonstrated that lighter, more volatile, congeners released into the atmosphere can be taken up by the leaves and transported into edible portions of the plant. Generally, however, most of the PCBs remain on the surface of fruits and vegetables, often as part of the soil deposited by wind or rainwater splash clinging to the plant.

HOUSATONIC RIVER FATE & TRANSPORT MODEL

Mathematical models, run on computers using equations that simulate the important processes in the system being evaluated, are often used by scientists and engineers to evaluate the behavior of natural and engineered systems.

In the Housatonic River, EPA developed a model of sediment/PCB fate, transport, and bioaccumulation in the river that allows for relatively rapid and cost-effective evaluation of how the PCBs in the river behave in response to no action or various remedial alternatives for the river. EPA's model underwent rigorous testing through calibration and validation to ensure an independent check on model performance. The model also was subject to three Peer Reviews at various stages of development by independent scientific and engineering experts.

MODEL APPLICATION

The Housatonic River model is being used by GE and EPA to gain important insights into current and future conditions in the river and floodplain and in biota. By varying the model setup, any number of remedial scenarios can be simulated.

For example, Figure 1 shows the predicted concentration of PCBs in fish in Woods Pond over more than 50 years in the case of no action (SED1). In contrast, Figure 2 shows the reduction of PCB concentrations in fish with the cleanup of river sediment under SED 4. Figure 3 shows the reduction of PCB concentrations in fish with the cleanup of river sediment under SED 10. The model allows creation of similar output for the

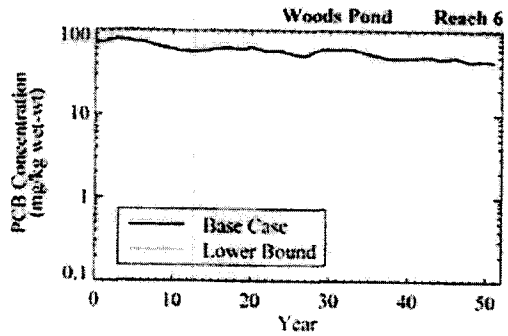

Figure 1: Average PCB concentration in largemouth bass (whole body) in Woods Pond under SED 1/SED 2.
Note: excerpted from Figure K-1.3-1 in GE's Revised Corrective Measures Study Report, October 2010.

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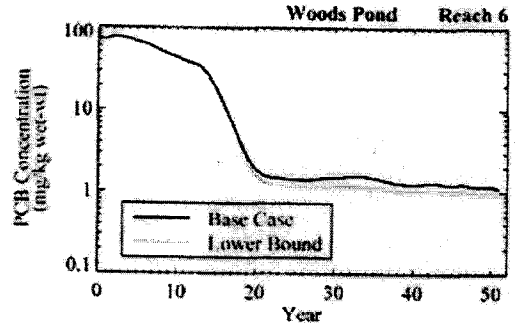


Figure 2: Average PCB concentration in largemouth bass (whole body) in Woods Pond under SED 4.
Note: excerpted from Figure K-1.3-3 in GE's Revised Corrective Measures Study Report, October 2010.

10P-1115-2

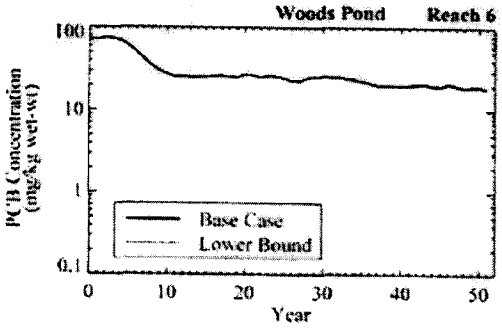


Figure 3: Average PCB concentration in largemouth bass (whole body) in Woods Pond under SED 10.
Note: excerpted from Figure K-1.3-9 in GE's Revised Corrective Measures Study Report, October 2010.

10P-1115-3

Please see GE's revised CMS Report for detailed descriptions and evaluations of the ten sediment alternatives. Three example alternatives are described below.

SED 1 No action in all reaches. SED 2 is monitored natural recovery (MNR) with institutional controls (i.e., consumption advisories), periodic fish sampling, water column monitoring, and sediment sampling.

SED 4 Sediment removal in Reach 5A; combination of sediment removal, engineered capping, and/or thin-layer capping in Reaches 5B and 5C and Woods Pond; thin-layer capping in portions of the Reach 5 backwaters. SED 4 includes stabilization of all riverbanks in Reaches 5A and 5B, with removal of bank soil as appropriate. In Reach 6 (Woods Pond) removal areas, an average of 1.5 feet of sediment would be removed, followed by placement of an engineered cap. The remainder of Reach 6 would have a thin-layer cap installed. Monitored natural recovery would be selected for remaining areas in the Reach 5 backwaters and in Reaches 7 through 16.

SED 10 would involve on average a 2-foot sediment removal followed by engineered capping in selected portions of Reach 5A. For Reaches 5A and 5B, selected riverbanks would be stabilized. In Woods Pond, selected areas of sediment with elevated PCB concentrations will be removed to an average depth of 2.5 feet. No caps or backfill material will be placed after sediment removal in Woods Pond. Monitored natural recovery would be selected for the remainder of the Rest of River.

THE ROLE OF IMPOUNDMENTS

The role of impoundments in a river system is important in the fate and transport of PCBs. Because the more highly chlorinated PCBs are not easily dissolved in water, they are primarily transported while attached to particles of suspended solids rather than dissolved in the water itself. These suspended particles fall out of the water at a constant rate whether the water is moving or relatively still in an impoundment behind a dam.

However, because the water remains in an impoundment longer than in the fast-running reaches, relatively more suspended sediment can settle to the bottom, resulting in some accumulation of PCBs in impoundments.

The Housatonic River fate and transport model clearly shows this trapping behavior of the impoundments on the river, but also shows that the trapping is far less than 100% effective. For example, less than one-half of the PCBs entering Woods Pond are trapped in the Pond, leaving the remaining PCBs to pass over Woods Pond Dam and be carried downstream.

various remedial options currently under consideration, showing the relative effectiveness of the various options in reducing PCBs in the system.

HEALTH EFFECTS FROM PCBs

PCBs have been demonstrated to cause a wide variety of adverse health effects. PCBs have been shown to cause cancer in animals. PCBs have also been shown to cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, endocrine system and other organs. Studies in humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other systems of the body. Some PCB congeners exhibit dioxin-like effects.

Cancer

Studies definitively show that PCBs cause cancer in animals. The data strongly suggest that PCBs are probable human carcinogens, and EPA and the International Agency for Research on Cancer have classified them as such.

Immune Effects

Studies in animals have revealed serious effects on the immune system following exposures to PCBs, including a significant decrease in size of the thymus gland, reductions in the response of the immune system following a challenge with sheep red blood cells (a test of the antibody response and protective immunity), and decreased resistance to Epstein-Barr virus and other infections. Immune effects were also noted in humans who experienced exposure to rice oil contaminated with PCBs, dibenzofurans and dioxins.

Reproductive Effects

Reproductive effects of PCBs have been studied in animal species. Potentially serious effects on the reproductive system were seen following exposures to PCB mixtures. Most significantly, PCB exposures were found to reduce the birth weight, conception rates, and live birth rates of monkeys and other species, and PCB exposure reduced sperm counts in rats. Effects in monkeys were long-lasting and were observed long after the dosing with PCBs occurred. Studies of reproductive effects have also been carried out in human populations exposed to PCBs. Children born to women who worked with PCBs in factories, and studies in fishing populations, showed decreased birth weight and a significant decrease in gestational age with increasing exposures to PCBs.

Neurological Effects

Effects of PCBs on nervous system development have been studied in animal species. Newborn monkeys exposed to PCBs showed persistent and significant deficits in neurological development, including visual recognition, short-term memory and learning. Studies in humans have suggested effects similar to those observed in monkeys exposed to PCBs, including learning deficits and changes in activity associated with exposures to PCBs.

Endocrine Effects

PCBs have been demonstrated to exert effects on thyroid hormone levels in animals and humans.

Other Non-cancer Effects

A variety of other non-cancer effects of PCBs have been reported in animals and humans, including skin and eye effects and liver toxicity. Elevations in blood pressure, serum triglyceride, and serum cholesterol have also been reported with increasing serum levels of PCBs in humans.

IN-PLACE (IN SITU) DEGRADATION

Considerable research, some of it conducted in and/or with sediment from Woods Pond, and soil from the watershed, has been done in an attempt to find ways to enhance natural degradation of PCBs, but to date no effective in situ methodology has been developed. In addition, many degradation pathways produce chemicals that are more toxic than the original PCB congeners. While enhanced natural degradation of PCBs remains an attractive potential treatment for PCBs in the environment, it is a potential that has yet to be realized for PCBs like those in the Housatonic River.

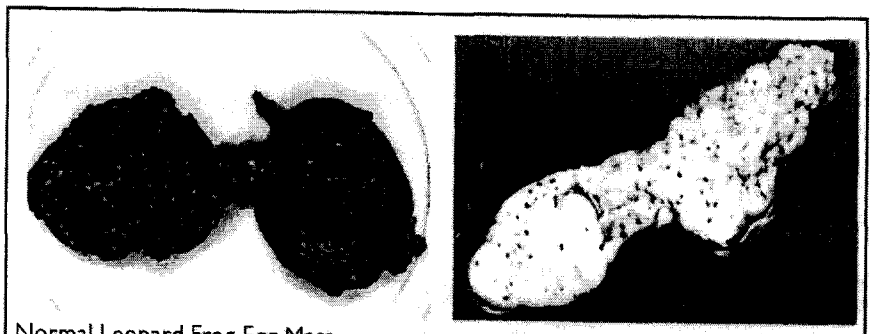
Effects to Ecological Receptors

PCBs in the environment affect ecological receptors to varying degrees and in a variety of ways; these differences in the nature and extent of PCB effects depend in part on the specific PCB congeners present, as well as natural differences in basic physiological processes, diet, and life history among animal species. With the type of PCBs and concentrations measured in the Housatonic River and its floodplain, effects are considered likely. In a number of cases, significant adverse effects were documented in site-specific field and/or laboratory studies for the representative animal species evaluated in the Housatonic River Ecological Risk Assessment.

The known toxic effects of PCBs on aquatic species and wildlife include mortality, compromises in immune system function, and various adverse effects on reproduction, development, and endocrine function, in addition to a number of equally serious effects on other body systems. PCB exposure leads to a loss of liver function and death of liver tissue, and similar effects to the tissues and organs of the digestive system. The nervous systems of animals are also affected, with resultant depression of motor activity and decreased perception. Other effects include behavioral abnormalities, impaired reproduction, and developmental toxicity. PCBs have been demonstrated in laboratory studies to promote cancer in a number of animal species. In sufficient doses, PCB exposure can lead to acute mortality in aquatic and wildlife species, and chronic exposure to lower doses can also result in mortality, leading to changes in community and ecosystem structure and function.

Benthic Invertebrates

PCBs in sufficient concentrations, which are exceeded in sediment in some areas of Housatonic River, are acutely toxic to aquatic organisms, particularly benthic invertebrates at the base of the aquatic food chain. These effects are commonly expressed by the absence of species of known sensitivity to PCBs, and as alterations in the structure of the benthic community when the more-sensitive species are replaced by more pollution-tolerant organisms. Non-lethal effects of PCBs on benthic organisms include reduction in growth and number of offspring. All of these types of effects were clearly demonstrated in the site-specific studies conducted using Housatonic River sediment and well-established sediment toxicity testing organisms. In addition, benthic community impairment also corresponded to PCB sediment concentration.



Normal Leopard Frog Egg Mass

Egg Mass From Contaminated Vernal Pool

WHAT'S NEXT?

GE submitted its Revised Corrective Measures Study (RCMS) on October 12, 2010. The report includes GE's recommendations on which alternatives the company believes best meet the objectives and criteria specified for the Rest of River project. These recommendations do not necessarily reflect EPA's views on the alternative that best meets the criteria in the permit. The alternatives are to be evaluated using the nine criteria specified in the Revised RCRA Permit. The public currently has an opportunity to provide input to EPA on GE's RCMS. EPA is currently reviewing GE's RCMS, as well as GE's previous CMS submitted in March of 2008, and input from the public. After conducting its review and analyses, EPA will propose a cleanup plan for the Rest of River for public comment.

Fish

Fish from the Housatonic River that were captured and bred in captivity were shown to produce larvae with increased incidence of a wide variety of deformities, many of which are reported in the scientific literature to be related to PCB exposure. However, because of the large number of eggs fish produce and high natural mortality of the young, the effects of PCBs on the local fish populations do not appear to be significant.

Amphibians

Harmful effects can include damage to the reproductive organs of adults as well as decreased viability of offspring and life-threatening deformities in larvae. A number of reproductive effects such as deformed gonads (see pictures on page 5), impaired development, altered sex ratio, and larval deformities were observed in frogs and frog larvae exposed to PCBs from the Housatonic River floodplain vernal pools and backwaters.

Birds

PCB exposure has been demonstrated in species such as chickens and pheasants to cause decreased egg production and fertility with relatively low PCB exposure, and mortality with higher exposures. In contrast to the animal groups discussed above, however, some bird species such as hawks and finches appear to be less sensitive to the harmful effects of PCBs. Site-specific studies conducted on tree swallows, kingfishers, and robins in the Housatonic River study area did not identify severe effects as a result of PCB exposure. However, although no field study was conducted on wood ducks, measured exposures suggest that harm is likely for that species from dioxin-like PCBs. In addition, very high concentrations of PCBs were present in the migratory waterfowl sampled by EPA. Estimated exposure derived from their fish diet indicates the high probability of risk to fish eating birds such as osprey and bald eagles.

Piscivorous Mammals

Piscivorous (fish-eating) mammals such as mink and otter receive elevated exposure to PCBs with their diet of contaminated fish, due to bioaccumulation. In addition, certain piscivorous mammals, particularly mink, have been shown in the scientific literature to have unusually high sensitivity to the effects of PCBs.

In a carefully controlled dietary study conducted at the University of Michigan, the young (kits) of female mink fed a diet containing fish

Estimated Amount of PCBs in the Housatonic River and Floodplain

Housatonic River Sediment

	PCB Mass (lbs)
Channel - Confluence to Woods Pond	13,000 – 51,000
Backwaters	2,000 – 18,000
Woods Pond	3,000 – 29,000
Woods Pond Dam to Rising Pond Dam	3,900 – 14,000
Rising Pond Dam to CT Border	60 – 110
CT Border to Long Island Sound	120 – 5,000
Total	22,000 – 118,000

Housatonic River Floodplain Soil

	PCB Mass (lbs)
Confluence to Woods Pond	80,000 – 436,000
Woods Pond	350 – 4,800
Woods Pond Dam to Rising Pond	5,300 – 15,000
Rising Pond	30 - 90
Rising Pond Dam to CT Border	2,400 – 2,800
Total	89,000 – 460,000

collected from the Housatonic River were shown to suffer from increased significant increased mortality and developed jaw lesions that would lead to death in the wild due to inability to consume a normal diet.

This study was corroborated by the result of field investigations indicating the absence of resident reproducing mink and otter, despite the highly suitable habitat present in the river and floodplain.

FOR MORE INFORMATION

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EPA Records Center
Boston, MA 02114
(617) 918-1440
www.epa.gov/region1/ge

STATE AND LOCAL RESOURCES

Berkshire Athenaeum Public Library
Reference Department
Pittsfield, MA 01201
(413) 499-9480

Cornwall Public Library
Cornwall, CT 06796
(860) 672-6874

Kent Memorial Library
(Kent Library Association)
Kent, CT 06757
(860) 927-3761

Housatonic Valley Association
Cornwall Bridge, CT 06754
(860) 672-6678

Massachusetts Department
of Environmental Protection
Springfield, MA 01103
(413) 784-1100

Connecticut Department
of Environmental Protection
Hartford, CT 06106
(860) 424-3854

EPA United States Environmental Protection Agency

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Important update

EXHIBIT 6

United States Environmental Protection Agency
5 Post Office Sq.,
Suite 100
Boston, MA 02109-3912

Dear Friends,

It is my pleasure to welcome you to this important series of workshops regarding the Housatonic River. First, I would like to thank you for taking the time to participate in these important public engagement and education programs. I am keenly aware of the high level of interest in EPA's upcoming decision about the scope and type of work that will be required of GE in the "Rest of River" portion of the Housatonic, as the river winds south from Pittsfield through Berkshire County and Connecticut. I have been very impressed with everyone's commitment to the River and its connection to the people in the communities through which it flows. There is a lot at stake – including protecting the character of the Housatonic and making the right decisions for current and future generations to safely enjoy the river environment.

EPA has designed this series of workshops and subsequent charrette not only to help you better understand what we've learned about the River and the PCB contamination but to also help us better understand your views as we move forward in our decision-making process. I am committed to making decisions based on sound science, and based on the best available information. I am also committed to an open, inclusive and transparent process that allows the communities of the Berkshires and Connecticut to weigh in with their concerns and priorities. These workshops are important steps towards that goal.

EPA hopes to use what we learn from you and others at these workshops to aid in our ongoing evaluation of cleanup options. We also hope that, through this process, you gain a broader understanding of the numerous technical and policy issues at hand. After EPA issues our formal cleanup proposal, all members of the public will, once again, have an opportunity to comment on the proposal. EPA will then review those comments and make our final cleanup decision. I will ensure that whatever plan EPA ultimately decides is best, it will be implemented by GE in a manner that is sensitive to the unique character of the river and to the community.

Thank you again for attending and I hope you find these workshops informative and worthwhile.

Curt Spalding
Regional Administrator

LEARN MORE AT: www.epa.gov/region1/ge

United States Environmental Protection Agency
5 Post Office Sq.,
Suite 100
Boston, MA 02109-3912

Dear Friends,

Once again, it is my pleasure to welcome you to this important event regarding the Housatonic River. First, I would like to thank you for taking the time to participate in these important public engagement and education programs. I am keenly aware of the high level of interest in EPA's upcoming decision about the scope and type of work that will be required of GE in the "Rest of River" portion of the Housatonic, as the river winds south from Pittsfield through Berkshire County and Connecticut. I have been very impressed with everyone's commitment to the River and its connection to the people in the communities through which it flows. There is a lot at stake – including protecting the character of the Housatonic and making the right decisions for current and future generations to safely enjoy the river environment.

EPA designed the series of workshops held in April and today's charrette not only to help you better understand what we've learned about the River and the PCB contamination but to also help us better understand your views as we move forward in our decision-making process. I am committed to making decisions based on sound science, and based on the best available information. I am also committed to an open, inclusive and transparent process that allows the communities of the Berkshires and Connecticut to weigh in with their concerns and priorities. Today's charrette is another important step towards that goal.

EPA hopes to use what we learn from you and others to aid in our ongoing evaluation of cleanup options. We also hope that, through this process, you gain a broader understanding of the numerous technical and policy issues at hand. After EPA issues our formal cleanup proposal, all members of the public will, once again, have an opportunity to comment on the proposal. EPA will then review those comments and make our final cleanup decision. I will ensure that whatever plan EPA ultimately decides is best, it will be implemented by GE in a manner that is sensitive to the unique character of the river and to the community.

Thank you again for attending and I hope you find the hands-on workshops that are part of today's agenda informative and worthwhile.

Curt Spalding
Regional Administrator

LEARN MORE AT: www.epa.gov/region1/ge

Attachment E

August 10, 2012

GENERAL ELECTRIC COMPANY'S REPLY TO EPA'S JULY 30, 2012 STATEMENT OF POSITION REGARDING DISPUTE OF EPA'S FY 2011 COST BILL

General Electric Company (GE) submits this Reply to EPA's July 30, 2012 Statement of Position in Response to GE's July 2, 2012 Statement of Position Regarding Dispute of EPA's FY 2011 Cost Bill (EPA Response). This Reply contains three parts.

Part I shows that EPA's assertion that its position on the issues involved in this dispute is entitled to deference is without merit. Rather, this dispute presents issues of interpretation of the parties' contract embodied in the Consent Decree (CD) and issues of constitutional law – on both of which EPA has no special expertise.

Part II replies to EPA's claim that the vast majority of the billed costs were incurred in preparing documents setting forth its proposed remedy and thus are uncapped "U.S. Future Response Costs." As shown in Part II, and as demonstrated by EPA's own contemporaneous statements, most of the costs for which EPA is seeking recovery were incurred in reviewing GE's Revised Corrective Measures Study (RCMS) Report and the alternatives described in it or in evaluating EPA's own alternatives, which constitutes a "shadow or supplemental study" for the RCMS. These costs are expressly covered by the capped "U.S. Oversight Costs" category.

Part III demonstrates that, to the extent that the billed costs were in fact incurred to prepare remedy proposal documents, they are not recoverable because they were incurred outside the agreed-upon process prescribed in the CD and because charging GE for those costs would conflict with GE's right to meaningful dispute resolution on the RCMS under the CD and the Due Process Clause.

I. EPA's Interpretation Is Not Entitled to Deference.

EPA agrees with GE that this dispute should proceed under Paragraph 137 of the CD, and thus is governed by "applicable principles of law" (CD ¶137.b). However, EPA asserts that a reviewing court should give "deference to EPA's expertise regarding the process for selecting a remedy." EPA Response at 4. According to EPA, the "proper process for selecting a remedy" is a "technical question" that is within EPA's "technical expertise to which courts typically defer." *Id.*

EPA's assertion is a red herring, as the "proper process for selecting a remedy" is not at issue here. Rather, the issues presented in this dispute involve: (1) the proper interpretation and application of provisions of the Consent Decree, a contract among GE, EPA, and others (specifically, the provisions defining the cost categories and those establishing the agreed-upon process for the Corrective Measures Study [CMS] and EPA's remedy selection at this Site); and (2) whether EPA's actions have deprived GE of due process, a constitutional issue. EPA has no special expertise in either of these areas and is therefore not entitled to any deference.

The case law in this regard is well settled. As the Supreme Court has long instructed, consent decrees should be interpreted as contracts. *United States v. Armour & Co.*, 402 U.S. 673 (1971) ("the scope of a consent decree must be discerned within its four corners, and not by reference to what might satisfy the purposes of one of the parties to it"). Like all contracts, interpretations of consent decrees present questions of law that are reviewed *de novo, Ricci v. Patrick*, 544 F.3d 8, 17 (1st Cir. 2008), and an agency's interpretation of a contractual term included in a consent decree is not afforded any special deference. *Quinn v. City of Boston*, 325 F.3d 18, 34 (1st Cir. 2003) ("A federal appellate court owes no deference to an agency when endeavoring to discern the meaning and constitutional limits of such a [consent] decree"); *Meadow Green-Wildcat Corp. v. Hathaway*, 936 F.2d 601, 605 (1st Cir. 1991) (Breyer, J.) ("neither the language nor the reasoning of those [*Chevron* deference] cases suggests that they require similar deference to the agency's interpretation of a contract that it makes with an outside party"); *see also Southern California Edison Co. v. U.S.*, 226 F.3d 1349, 1537 (Fed. Cir. 2000) (agency is not entitled to deference as it may offer "self-serving, post-hoc reinterpretations of contract" during breach of contract litigation).[1]

There is no reason to vary from this well-established doctrine. EPA tries to reframe the issues by asserting that this dispute is about what the "proper process" should be for choosing a remedy, and urges that it has special expertise in that regard. That is groundless misdirection, since the question whether the process that EPA has followed was proper in the abstract is not at issue. This dispute concerns what the CD for this Site requires – whether EPA has placed its costs in the right categories as defined in the CD and whether EPA has followed the process required by the CD before incurring those costs. Those are questions involving the meaning of the parties' contract, on which a reviewing court would owe no deference to the interpretation offered by one party over another.

This dispute also raises the issue of whether EPA has deprived GE of its rights under the Due Process Clause by developing a proposed remedy and charging GE for the costs of that action before GE has an opportunity for a hearing on the necessary prior step (EPA's decision on the RCMS Report).[2] At a minimum, EPA's interpretation of the CD to allow such a result should be rejected to avoid that constitutional problem. This issue is to be decided *de novo* by a court without deference to the Agency, as EPA certainly has no "technical expertise" in interpreting the Constitution or determining if its reading of the CD violates due process. See *National Mining Ass'n v. Kempthorne*, 512 F.3d 702, 711 (D.C. Cir. 2008) (the "canon of constitutional avoidance trumps *Chevron* deference").

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[1] The two cases cited by EPA are not to the contrary. EPA Response at 4. First, each case involves interpretation of EPA's own regulations, not consent decrees negotiated between two parties. *Environmental Defense Fund v. EPA*, 210 F.3d 396, 399 (interpreting 40 C.F.R. § 261.11); *Chemical Waste Management, Inc. v. EPA*, 869 F.3d 1526, 1539 (D.C. Cir. 1989) (interpreting 40 C.F.R. §§ 261.3(c)(1), 261.3(d)(2)). Further, the regulations addressed actual technical issues for which EPA could claim scientific expertise – the criteria for determining whether specific materials qualified as a hazardous waste. *Environmental Defense Fund*, 210 F.3d at 400; *Chemical Waste Management*, 869 F.3d at 1539-1540. In contrast, EPA has no special expertise in contract interpretation.

[2] *See W.R. Grace & Co. –Conn. v. U.S. EPA*, 959 F.2d 360 (1st Cir. 1992); *In The Matter of General Electric Company,* RCRA Appeal No. 91-7, 4 E.A.D 615, 641 (April 13, 1993); *In re Allied-Signal Inc.*, RCRA Appeal No. 92-20, 5 E.A.D. 291, 300 (May 16, 1994).

II. Most of EPA's Billed Costs Were U.S. Oversight Costs, Not U.S. Future Response Costs.

EPA's substantive response to GE's position boils down to one argument – that the approximately $1.24 million in costs that were included in the FY 2011 Cost Bill and that EPA continues to seek from GE were related to EPA's "preparation, development, and review" of a proposed Rest of River remedy and, as such, were properly allocated to the uncapped "U.S. Future Response Costs" category under the CD. EPA Response at 5.[3] EPA appears to agree that costs incurred in reviewing GE's RCMS Report and the remedial alternatives described therein, as well as its costs of conducting "shadow or supplemental studies" to the CMS, would not be recoverable as U.S. Future Response Costs. Indeed, the CD is clear that such costs constitute capped U.S. Oversight Costs, which are defined to include all costs incurred in "reviewing proposals, reports, studies and other deliverables submitted by [GE] under the Reissued RCRA Permit" and in "conducting shadow or supplemental studies for the studies to be conducted by [GE] under that Permit" (CD ¶ 4). However, EPA claims that the costs that it seeks were not incurred for such activities. Rather, it asserts that those costs were incurred for preparing a remedy proposal, which it contends are part of U.S. Future Response Costs.

EPA's argument misreads the CD and would erroneously allow EPA to end run around the bargain struck by the parties.[4]

To begin with, EPA's reading of the definition of U.S. Future Response Costs is overly expansive and contrary to the CD with respect to activities relating to the Rest of River. The CD placed Rest of River costs prior to the selection of a remedy into three categories. As noted above, U.S. Oversight Costs cover the costs of reviewing deliverables submitted by GE under the RCRA Permit and conducting "shadow or supplemental studies" for GE's studies under the Permit, as well as costs of "otherwise overseeing [GE's] activities" under the Permit (CD ¶ 4). U.S. Future Rest of River Capped Response Costs cover all costs incurred by EPA "in connection with studying or otherwise investigating the Rest of River and/or all field work to support the preparation, development, and selection of the Rest of River Remedial Action" (*id.*) The CD left uncapped as U.S. Future Response Costs only a limited category of Rest of River costs – namely, those costs incurred by EPA under the CD in "preparing, reviewing, and approving the documents that propose and select the Rest of River Remedial Action" (i.e., the time to prepare the Statement of Basis and the draft and final modifications to the RCRA Permit as provided in CD ¶¶ 22.n & 22.p), and the costs associated with "responding to public comments" on its proposed remedy (CD ¶ 4).

There is a temporal logic to these categories. The first two categories involve EPA's review of GE's submittals (which include evaluation of the remedial alternatives) and EPA's

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[3] In its Response, EPA has agreed that $393,192 of the costs included in its original bill should not be allocated to the U.S. Future Response Costs category.

[4] On August 6, 2012, as GE was preparing this Reply, EPA placed on its website extensive documents, including its submission to the National Remedy Review Board (NRRB), the NRRB's recommendations, and the Region's response to the NRRB. While GE has included a reference to EPA's NRRB submission in this Reply, GE is currently reviewing those documents and reserves the right, in future stages of this dispute resolution proceeding, to make additional arguments (beyond those set forth herein), based on its review of those documents.

own studies and investigations. The third category is the last stage in the process when, having considered all the pertinent studies and evaluations, EPA documents its decision – i.e., preparing, reviewing, and approving the decision documents and the response to comments.

This result is also dictated by the decision-making process set forth in the CD. EPA could have negotiated an agreement under which it would perform the CMS. It did not. Instead, the parties agreed that GE would perform the CMS to evaluate the remedial alternatives, and that EPA's role would be as reviewer – i.e., it would review and approve, conditionally approve, or disapprove the CMS Report – and that based on that evaluation, EPA would select a proposed remedy. There is no provision in the CD for EPA to develop its own remedial alternatives, with one exception: In Paragraph 22.1, EPA reserved the right to conduct studies "to shadow or supplement" GE's studies. However, the parties further agreed that if EPA chose to do so, its costs would be capped as part of U.S. Oversight Costs. The uncapped category was limited to the costs of preparing the decision documents – i.e., writing up a remedy proposal and responding to public comments on it.

In this case, the costs that EPA is claiming as U.S. Future Response Costs go far beyond the costs of preparing, reviewing, and approving the Statement of Basis and the draft Permit modification to select a remedy. In a March 2, 2011 presentation to the Citizens Coordinating Council (CCC) (EPA 2011 Update; Exhibit E to GE's July 2, 2012 Statement of Position), EPA could not have been more clear. In a slide captioned "EPA's Evaluation of Alternatives" (p. 3 of presentation), EPA informed the public that "EPA is evaluating the alternatives in the RCMS" based on the "input received from stakeholders" and the "evaluation criteria specified in the RCRA Permit." EPA also contemporaneously acknowledged its intent during the workshop/Charrette process: "We're evaluating GE's ... alternatives and their detailed analysis and we're performing our own" analysis, and from that EPA would "come up with" its own remedial approach. Transcript of Statements of EPA Personnel at April 7, 2011 Workshop (Transcript; Exhibit C to GE's July 2, 2012 Statement of Position) at 16.

Obviously, by its own words, during this period of time, EPA was still engaged in the evaluative process, rather than documenting a remedy proposal. EPA was evaluating the RCMS alternatives, and it was conducting its own analysis of alternatives (which constitutes a "shadow or supplemental" analysis to GE's RCMS). These activities included not only the situation assessments, workshops, and Charrette, but also the internal peer review process before the National Remedy Review Board (NRRB) and the Contaminated Sediments Technical Advisory Group (CSTAG). EPA's Site Information Package submitted to the NRRB in June 2011[5] contained a lengthy review and analysis of the RCMS alternatives, which falls squarely within U.S. Oversight Costs. Further, even to the extent that that process focused on a preferred alternative developed by EPA (as EPA asserts), it still constituted an internal evaluation by those EPA groups of a remedial alternative, not the preparation and review of the remedy proposal documents, and thus was a supplemental or shadow evaluation to GE's RCMS evaluations. Indeed, EPA appears to have spent substantial time developing, reviewing, and evaluating its own alternative(s). Under the CD language, such activities could only fall within the performance of shadow or supplemental studies. The parties agreed that the cost of those

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[5] Available at http://www.epa.gov/region1/ge/thesite/restofriver/reports/487318.pdf.

activities would be considered U.S. Oversight Costs, which would be capped at a level agreed upon by the parties. Had the parties contemplated that EPA could charge GE for millions of dollars for the Agency's analyses of its own alternatives with no limit, the parties could have and would have provided for it.

In any event, even under EPA's improperly expansive reading of U.S. Future Response Costs as covering anything related to development and review of a preferred alternative, many of the activities for which costs are included in the FY 2011 bill still fall within U.S. Oversight Costs.

For example, we show below, for several key cost categories included in EPA's bill, that those costs do not constitute U.S. Future Response Costs, but fall into U.S. Oversight Costs (or another capped cost category).[6]

Situation Assessments, Workshops, and Charrette. The largest component of costs included in the FY 2011 Cost Bill ($523,700) was for the "Situation Assessments, Workshops, and the Charrette." Even under EPA's reading of the CD, these are not properly U.S. Future Response Costs. EPA asserts that the primary purpose of the Charrette was "to support EPA's preparation of a remedy" (EPA Response at 8), and "to provide information to the public and obtain its input regarding ***a preferred cleanup option***" (id. at 9; emphasis added). To force those costs into U.S. Future Response Costs, EPA now apparently asserts that it had already developed a preferred option and was seeking public input on it, and that thus these activities constituted part of "preparing, reviewing, and approving the documents that propose" the remedy. That characterization is inconsistent with EPA's contemporaneous documents and statements to the public at the time of the workshops and Charrette.

EPA did ***not*** present "a preferred cleanup option" to the public for its information and input. On the contrary, EPA unquestionably was still gathering information from the public to inform EPA's analysis of the numerous cleanup alternatives. For example, prior to the workshops, EPA's contractors conducted interviews with key stakeholders to understand their views on different alternatives. The workshops and Charrette were for similar purposes. According to EPA, a purpose of the Charrette process was "for the public to interact with EPA regarding their views on the remedial ***alternatives***" (EPA 2011 Update at 4; emphasis added) and "to Explore the Pros and Cons of the Proposed ***Alternatives***, and for the EPA to Hear the Community's Ideas" (EPA website;[7] emphasis added). EPA's own April 2011 Information Sheet on EPA's Cleanup Decision Process[8] described the workshops and Charrette as an "important step ***leading up to*** EPA's identification of a preferred alternative" (emphasis added). Moreover,

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[6] EPA points out that it already allocated other FY 2011 costs to U.S. Oversight Costs. EPA Response at 5. That is irrelevant to determining whether the costs included in the bill have or have not been assigned to the right category. Similarly, EPA points out that if GE's view is adopted, EPA will not recover these costs, because EPA has already exceeded the cap for U.S. Oversight Costs. *Id.* That too is irrelevant, since whether or not EPA has properly managed its funds and can recover these costs does not determine the correct category under the CD. Indeed, these arguments only further highlight why EPA is not entitled to any deference in this dispute, given its direct economic/budgetary interest in the outcome.

[7] Available at http://www.housatonicworkshops.org/workshops.html.

[8] Available at http://www.epa.gov/region1/ge/thesite/restofriver/reports/480399.pdf.

EPA stated repeatedly during the workshops that it had not made any decision on a preferred alternative, that all options were still on the table, and that it was continuing to evaluate GE's alternatives as well as its own. For example, during the April 7, 2011 workshop, EPA presented a "wide range of cleanup alternatives" equating to "4,194 Available Options" in the RCMS, and noted that all options "are still on the table" EPA presentation on Alternatives and Technologies.[9] See also the statements made at the workshop by EPA representatives quoted on page 5 of GE's July 2, 2012 Statement of Position, which state repeatedly that EPA had not made any decision as to the appropriate alternative and was still evaluating all options (Transcript at 4, 5, 11, 16).

Likewise, during the May 2011 Charrette, EPA specifically presented to the participants four of the remedial alternatives described in the RCMS Report, which it described as "Representative Options Spanning the Range of Those Evaluated in the Revised Corrective Measures Study" (Housatonic River Public Charrette, Workbook[10]); and it asked the participants to evaluate those four alternatives based on the remedy selection criteria in the Permit to assist EPA in its evaluation. This exercise is not consistent with EPA's assertion that it had already selected a preferred alternative and was seeking public input on it.

EPA points to statements from March-April 2011 as indicating that it was "beginning its decision-making process" at the time of the workshops and Charrette. EPA Response at 9.[11] However, EPA's argument proves too much, because the "decision-making process" necessarily includes EPA's evaluation of GE's alternatives and the development and evaluation of other alternatives (i.e., shadow or supplemental analyses), which are covered by U.S. Oversight Costs. The fact that those activities are part of the overall decision-making process does not make them part of the preparation, review, and approval of the remedy proposal documents, which is the narrow category that falls within U.S. Future Response Costs.

In sum, by EPA's own contemporaneous description (not its current *post hoc* description), the situation assessments, workshops, and Charrette were part of the evaluative process, namely, EPA's efforts to advise the public and obtain the public's input during EPA's review and development of remedial alternatives. Those activities were not taken to support an already-selected preferred alternative, let alone to write the documents for its proposal. These activities plainly fall within the overall process of evaluating remedial alternatives, as it relates to both EPA's evaluation of the RCMS alternatives and its development and evaluation of its own alternatives. As such, they are U.S. Oversight Costs.[12]

NRRB/CSTAG Process. EPA is currently seeking $366,930 for the costs of the NRRB/CSTAG process, which include the costs of the Region's preparation for the NRRB review and its presentation to the NRRB, as well as the costs incurred by the NRRB and CSTAG

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[9] Available at http://www.housatonicworkshops.org/PDFs/handouts/Alternatives%20and%20Technologies.pdf.

[10] Available at http://www.housatonicworkshops.org/PDFs/handouts/CharretteWorkbook4MayFinal.pdf0.

[11] If that is now EPA's position, then EPA should remove from the FY 2011 Cost Bill costs incurred before that period.

[12] Alternatively, the costs are part of EPA's ongoing study of the Rest of River and therefore properly allocated to U.S. Future Rest of River Capped Response Costs.

members. EPA has now dropped 10% of the originally billed costs of this work from U.S. Future Response Costs on the asserted ground that a "small portion" of the NRRB/CSTAG time was spent reviewing or discussing the RCMS Report. EPA Response at 8. However, EPA claims that it incurred all of the remaining costs for review and evaluation of the Region's proposed preferred alternative, which it says are U.S. Future Response Costs. *Id.* These claims are plainly without merit.

First, EPA's allocation of only 10% of the NRRB/CSTAG-related costs to review of the RCMS alternatives is, on its face, inconsistent with the fact that the Region's Site Information Package presented to the NRRB in June 2011 (cited above) contained a lengthy description and comparative analysis of the alternatives presented in the RCMS Report (totaling over 100 pages), but devoted only 12 pages to the description and evaluation of EPA's preferred alternative. Further, to develop a preferred alternative from the RCMS alternatives, EPA, the Corps, and their contractors necessarily had to review and analyze the thousands of pages of text, figures, tables, data, model results, and other analyses in the RCMS Report. This work expressly falls within the plain language of U.S. Oversight Costs, either as part of EPA's review of the RCMS Report or as part of its own supplemental study. In any event, even accepting EPA's allocation, the NRRB/CSTAG-related costs to review and evaluate EPA's preferred remedy still do not constitute costs for "preparing, reviewing, and approving the documents that propose and select" the remedy (i.e., the Statement of Basis and the draft Permit modification). Rather, as discussed above, these activities are part of EPA's internal review of a particular alternative and as such constitute a shadow or supplemental analysis covered by U.S. Oversight Costs.

U.S. Department of Justice (DOJ) Costs. EPA does not dispute that the DOJ costs included in the bill ($87,000) were incurred in connection with EPA's review of alternatives, as EPA has not stated to the contrary despite requests by GE that EPA define what DOJ did with greater particularity. E.g., Letter from S. Boxerman to T. Conway (Feb. 29, 2012) at 9 (Feb. 29 Letter; Exhibit A to GE's July 2, 2012 Statement of Position). Instead, EPA relies solely on the fact that the definition of "U.S. Future Response Costs" refers to DOJ costs, whereas the other cost categories cover only EPA costs; and therefore EPA claims the DOJ costs could not be "EPA" costs under any other cost category. EPA Response at 6. This argument would mean that if DOJ were performing an activity that falls squarely within one of the capped cost categories (such a reviewing a GE deliverable), its costs would nevertheless not be capped. That is not what the parties agreed upon. The definition of U.S. Oversight Costs (like the other capped cost categories) refers to "all costs" that EPA incurs that fall within the category. In all respects, EPA treats DOJ costs like the costs of any other EPA contractor that EPA pays, and on that basis EPA tacks onto the DOJ charges an additional 32% in ***EPA*** indirect costs. As such, by its own actions, EPA is treating the DOJ costs as "EPA" costs, and thus those costs can and should be considered U.S. Oversight Costs.[13]

CCC-Related Costs. Of the total of $27,000 for CCC/Systems Research Applications Corporation (SRAC) costs, EPA is now recommending allocation of 20% of those costs to U.S. Oversight Costs. While this is a welcome step in the right direction, it still does not comply with

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[13] In any event, to the extent that the DOJ costs were incurred for the preparation, review, and approval of remedy proposal documents, they are not recoverable for the reasons given in Part III of this Reply.

the CD.[14] EPA apparently claims that it need not allocate more to that category because these community relations costs are "not included in any of the capped cost categories." EPA Response at 9. Specifically, EPA asserts that the remaining 80% of these costs "were either costs related to remedy preparation or were 'costs Incurred to develop plans or reports pursuant to [CD provisions] that do not fall within the [other] categories of costs . . . '" *Id.* at 10.

It cannot be accepted that CCC time during this period related to remedy preparation when EPA was repeatedly telling the public, including the CCC, that it had not selected a remedy and was still evaluating all remedial alternatives. In any event, "remedy preparation" is not "document preparation," which is what falls within "U.S. Future Response Costs." In addition, as noted in GE's July 2, 2012 Statement of Position and its GE Feb. 29 Letter, a review of the minutes of the CCC meetings indicates that while various topics were covered at those meetings, a significant amount of time was devoted to categories of work covered by U.S. Oversight Costs, such as the Removal Actions outside the River, as well as EPA's progress in evaluating the RCMS alternatives. For these reasons, most of the costs in this category should be included as "community relations costs" within the U.S. Oversight Costs category (CD ¶ 4). Alternatively, consistent with Paragraph 110.f of the CD, EPA should allocate these costs via its cross-cutting methodology.

ASRC (Records Management) Costs. Of the total of $67,200 for these EPA contractor costs, EPA is now recommending allocation of 35% to cross-cutting. While this is likewise welcome, it is deficient on a different ground from those discussed above. EPA asserts that the remaining 65% of these records management costs are properly in U.S. Future Response Costs because having complete site files may be useful in some future enforcement action, if one occurs. EPA Response at 10-11. Given that there is no pending or anticipated enforcement action,[15] it is illogical for EPA to assert that EPA has incurred all of these costs "to enforce the Consent Decree." Further, each of the capped cost categories contemplated that the charges associated with the work conducted in that category, such as "contractor costs," "data management costs" and similar charges, would be assigned to that category of costs. Again, as articulated in GE's Feb. 29 Letter, given the diverse range of activities described in EPA's invoices, the logical place for these kinds of charges is cross cutting, as these are clearly costs that are "incurred in support of tasks included in more than one cost category" (CD ¶100.f).

III. To the Extent EPA's Costs Were Incurred for Preparing, Developing, and Reviewing the Remedy Proposal Documents, They Were Not Incurred Pursuant to the Consent Decree.

To the extent that the costs in the FY 2011 Bill were in fact incurred for preparation, development, and review of the remedy proposal documents as EPA contends, they are not recoverable because they were incurred outside the sequential process established in the CD. As such, these costs were not "incurred pursuant to the provisions of this Consent Decree" and thus

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[14] EPA has offered no explanation for its proposed allocation of these costs – or any of the other allocations made for the first time in EPA's Response.

[15] This future action would not concern the Rest of River remedy, as EPA asserts that none of these costs concerns the development of the administrative record for that remedy.

are not U.S. Future Response Costs (CD ¶ 4). In addition, charging GE for these costs would violate GE's procedural rights under the CD and as a matter of due process.

A. Costs for Preparing Remedy Proposal Documents Are Not Recoverable Because They Were Incurred Outside the Prescribed CD Process.

EPA argues that there is no specific language in the CD or the RCRA Permit explicitly prohibiting EPA from developing a remedy proposal and preparing the documents setting forth that proposal before acting on the CMS Report. EPA Response at 14. However, Paragraph 22 of the CD provides that "selection of a Remedial Action for the Rest of the River ***shall be conducted*** in accordance with the Reissued RCRA Permit and the provisions of Paragraph 22 (emphasis added); and the carefully negotiated, agreed-upon approach embodied in those provisions is a sequential approach that requires completion of the CMS process before EPA develops and documents a remedy proposal. To interpret the absence of an explicit prohibition as providing EPA with the unfettered authority to develop a remedy proposal whenever it wants to and to spend whatever it costs to do so would be flatly inconsistent with that agreed-upon approach. It would also allow an end run around the capped cost categories, provisions that were likewise carefully negotiated by the parties.

Paragraph 22 clearly establishes a sequential process in which each step is to be completed before proceeding to the next step, as shown in GE's July 2, 2012 Statement of Position at 4 (listing steps). This expressly extends to the CMS process as well – requiring GE to submit a CMS Proposal to EPA (CD ¶ 22.j), to carry out the CMS in accordance with that Proposal as approved by EPA (CD ¶ 22.k), and to submit a CMS Report to EPA (*id.*), and then providing that EPA will issue a Statement of Basis and draft permit modification only upon "satisfactory completion of the CMS Report in accordance with the Reissued RCRA Permit" (CD ¶ 22.n). In addition, the CD and the RCRA Permit provide GE with the right to invoke dispute resolution to challenge any EPA decision on the CMS (CD ¶ 141.a; RCRA Permit Special Condition II.H).

Thus, under the CD and Permit, the CMS step must be completed, including EPA's action on the CMS Report and any dispute resolution proceeding on that report, before EPA decides upon a proposed remedy and begins to draft the documents setting forth that proposal. For EPA to select and begin documenting a remedy proposal before the evaluation of remedial alternatives is completed would represent a pre-judgment that would undermine the purpose of the CMS – to provide a basis for the proposed remedy selection. The evaluation of remedial alternatives cannot be completed until EPA issues its decision on the CMS Report and GE has an opportunity to dispute it, because the outcome of that dispute resolution proceeding could affect the evaluation and thus the remedy proposal. Indeed, under EPA's theory, EPA could begin working on a remedy proposal at any time during the CMS process, even prior to submission of the CMS Report. That would thwart the objective of the CMS to provide a basis for the remedy proposal and would read out of the CD the specified sequential framework for choosing the remedy.

In its Response, EPA cites to various RCRA and CERCLA guidance documents recommending different approaches and even noting that a CMS may not be required in some

cases. EPA Response at 14-15. However, those references are irrelevant, as they do not change the fact that the parties agreed ***in the CD*** to the specified sequential process for this Site.[16] Indeed, this sequential approach is consistent with EPA's statements describing the process that it understood it was actually following. See Svirsky 2008 CMS Presentation (Exhibit D to GE's July 2, 2012 Statement of Position) (indicating that EPA will *first* "approve, conditionally approve, or disapprove the CMS) and *then* "develop[] preferred alternative for public comment"); Transcript at p. 4 (Cianciarulo – "[The CMS] document will feed into, really the next major process that we are leading up to here, which is when EPA comes out and proposes a clean-up plan for public comment").

B. Charging GE for Remedy Proposal Documentation Costs Before the CMS Process Is Completed Would Violate GE's Dispute Resolution Rights Under the CD and Due Process Clause.

In addition to the above points, EPA may not recover its costs of developing and documenting a remedy proposal before the CMS process is completed because doing so would conflict with GE's right to review of EPA's decision on the CMS under the CD and the Due Process Clause. The CD and that RCRA Permit are plain that GE must have the ability to dispute EPA's determination either to disapprove or conditionally approve the RCMS Report. As shown in GE's July 2, 2012 Statement of Position, this is a matter of due process of law. *In The Matter of General Electric Company,* RCRA Appeal No. 91-7, 4 E.A.D 615 (April 13, 1993), *citing Mathews v. Eldridge*, 424 U.S. 319 (1976).

EPA does not dispute GE's right to dispute resolution. Instead, it posits that, even if it had already begun work on a remedy proposal, GE will still have the right to dispute resolution on EPA's determination on the RCMS Report once EPA acts on that Report. EPA Response at 16. According to EPA, that ought to be sufficient. In that case, however, the right to a hearing would be undermined by the fact that EPA would have already developed a remedy proposal. GE's right to dispute resolution under the CD and as required by due process is a right to have a ***meaningful*** opportunity challenge EPA's decision on the CMS. "The fundamental requirement of due process is the opportunity to be heard 'at a ***meaningful time and in a meaningful manner***.'" *Mathews v. Eldridge*, 424 US 319, 333 (1976) (quoting *Armstrong v. Manzo*, 380 U.S. 545, 552 (1965)) (emphasis added). In this case, that means that GE must have the opportunity to challenge EPA's decision on the RCMS Report ***before*** EPA selects and begins work on a remedy proposal, so that that proposal can take into account the outcome of the dispute resolution. A dispute resolution process that does not include that opportunity would not be meaningful.

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[16] In any event, EPA's reference to its CERCLA guidance is misleading. It quotes a sentence from *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Documents* (1999) at p. 2-1, to the effect that "in some circumstances, a draft [proposed plan] can be developed as the RI/FS is being finalized." EPA Response at 15. That quotation relates to the situation in which the lead agency is doing the RI/FS. The guidance states specifically that ***"[i]f a PRP prepares the RI/FS***, then the Proposed Plan should be drafted by the lead agency ***after the lead agency approves the RI/FS***" (p. 2-1; emphases added). The latter sentence is more relevant here, where GE prepared the CMS Report (analogous to the RI/FS).

EPA also asserts that GE has no property interest that would be violated, so long as "EPA is billing GE properly according to the agreed-upon definitions in the Decree." EPA Response at 16. That curious argument misses the mark. GE has a clear property interest in the money that EPA is demanding that GE pay now based on EPA's costs. EPA has deprived GE of its property without due process by charging GE for EPA's development of a remedy proposal ***before*** GE has had the opportunity for a hearing that is supposed to precede (and potentially influence) the development of such a remedy proposal. The cost definitions in the CD have nothing to do with this issue.

At a minimum, EPA's interpretation of the CD to allow the Agency to charge GE for the costs of developing a remedy before GE has had the opportunity to dispute EPA's action on the RCMS Report would raise a serious due process issue. As a result, EPA's interpretation should be rejected in order to avoid that constitutional problem. *Cf. Edward J. DeBartolo Corp. v. Florida Gulf Coast Building & Constr. Trades Council*, 485 U.S. 568, 575 (1988) ("where an otherwise acceptable construction of a statute would raise serious constitutional problems, the Court will construe the statute to avoid such problems unless such construction is plainly contrary to the intent of Congress").

Attachment F

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
BOSTON, MA 02109-3912

Via E-Mail and First Class Mail

January 31, 2013

Roderic J. McLaren
Counsel, Pittsfield/Housatonic River Remediation
General Electric Company
159 Plastics Avenue
Pittsfield, MA 01201

Re: GE-Pittsfield/Housatonic River Site
Dispute Resolution on EPA Cost Bill

Dear Mr. McLaren:

By letter dated July 2, 2012, the General Electric Company invoked formal dispute resolution under the Consent Decree for the GE-Pittsfield/Housatonic River Site by serving a Statement of Position upon the United States Environmental Protection Agency, Region 1. Both GE and EPA agree that this formal dispute resolution should proceed under Paragraph 137 of the CD.

Pursuant to Paragraph 137(a) of the CD and by memorandum from the EPA Region 1 Regional Administrator dated October 24, 2012, I have been designated as the dispute official for this matter. In accordance with this designation, I have reviewed and considered the parties' submissions concerning this dispute. Enclosed please find my final decision resolving this dispute.

Sincerely,

Nancy Barmakian
Deputy Director
Office of Site Remediation and Restoration

Enclosure

cc (via e-mail):
James Owens, EPA R1 Office of Site Remediation and Restoration
Bob Cianciarulo, EPA R1 Office of Site Remediation and Restoration
Dean Tagliaferro, EPA R1 Office of Site Remediation and Restoration

Holly Inglis, EPA R1 Office of Site Remediation and Restoration
Tim Conway, EPA R1 Office of Environmental Stewardship
John Kilborn, EPA R1 Office of Environmental Stewardship
Catherine Adams Fiske, Department of Justice
Samuel Boxerman, Sidley and Austin
Samuel Gutter, Sidley and Austin
Betsy Harper, Commonwealth of Massachusetts
Jane Rothchild, Massachusetts Department of Environmental Protection

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

IN RE: **CONSENT DECREE FOR THE GE PITTSFIELD/HOUSATONIC RIVER SITE** **DISPUTE RESOLUTION PROCEEDING BEFORE THE DEPUTY DIRECTOR OF THE OFFICE OF SITE REMEDIATION AND RESTORATION**	**FINAL DECISION**

On April 5, 2012, pursuant to Paragraphs 101 and 133 of the Consent Decree (CD) for the GE Pittsfield/Housatonic River Site, the General Electric Company (GE) submitted a Notice of Dispute to the United States Environmental Protection Agency, Region 1 (EPA) with respect to EPA's Fiscal Year 2011 $1,632,300 cost bill for U.S. Future Response Costs. Because the parties were unable to reach agreement, by letter dated July 2, 2012, GE invoked formal dispute resolution by submitting a Statement of Position to EPA. On July 30, 2012, EPA served its Statement of Position in Response to GE's Statement of Position Regarding Dispute of FY 2011 Cost Bill. On August 10, 2012, GE submitted its Reply to EPA's Statement of Position. Both GE and EPA agree that this dispute should proceed under Paragraph 137 of the CD.

Pursuant to Paragraph 137(a) of the CD and by memorandum dated October 24, 2012, the EPA Regional Administrator designated the Deputy Director of the EPA Region 1 Office of Site Remediation and Restoration to make the final decision resolving this dispute. Accordingly, to make this decision, I reviewed GE's July 2, 2012 Statement of Position, EPA's July 30, 2012 Response, and GE's August 10, 2012 Reply. Based on my review of the foregoing submissions and for the reasons described in EPA's July 30, 2012 Response (attached), my final decision for the resolution of this dispute is:

Consistent with EPA's July 30, 2012 response, reduce GE's FY 2011 $1,632,300 cost bill by $393,192.

Accordingly, the total amount GE owes for Fiscal Year 2011 U.S. Future Response Costs, excluding interest, is $1,239,108.

Nancy Barmakian
Deputy Director
Office of Site Remediation and Restoration
United States Environmental Protection Agency, Region 1

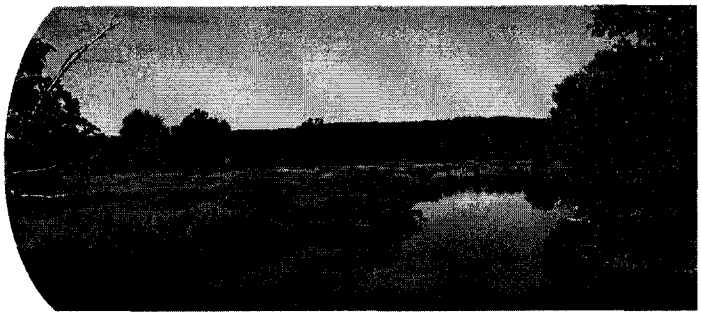
01/30/13
Date

Attachment G

LEARN MORE AT: www.epa.gov/region1/ge

Potential Remediation Approaches to the GE-Pittsfield-Housatonic River Site "Rest of River" PCB Contamination

THE RIVER *The Housatonic River is contaminated with polychlorinated biphenyls (PCBs) and other hazardous substances released from the General Electric Company (GE) facility in Pittsfield, MA. The entire site consists of the 254-acre GE facility; the Housatonic River and its banks and floodplains from Pittsfield, MA, to Long Island Sound; and other contaminated areas. Under a federal Consent Decree, GE is required to address contamination throughout the site, including in the River.*



INTRODUCTION:

EPA and the states of Massachusetts and Connecticut (collectively, the "Parties") have been working cooperatively for the last several months to discuss potential approaches to clean up the Rest of River portion of the GE Housatonic site. These discussions have focused, in part, on the need to address the risks from polychlorinated biphenyls (PCBs) to humans, fish, wildlife and other organisms while avoiding, mitigating or minimizing the impacts of the cleanup on the unique ecological character of the Housatonic River. This summary document reflects the current status of the Parties' preliminary, good faith efforts to discuss and identify potential remedial approaches for the Rest of River in light of the Parties' shared goals and interests. The Parties recognize that no remedy decisions have yet been made, EPA will consider all relevant information, and any remedy proposal and all other information in the administrative record, including this status report, will be subject to public comment at the time that EPA issues a proposed cleanup plan.

In areas of the Housatonic River and its floodplain, PCBs in the sediment, soil and surface water pose an unacceptable risk to human health and/or the environment. The governmental agencies are considering a cleanup plan consisting of a combination of targeted soil and sediment removal, riverbed capping, and monitored natural recovery as a potential means of addressing the PCBs posing the greatest threat and achieving goals such as the following:

- reduce risks to children and adults from direct contact with soil and sediment;
- reduce soil contamination in the floodplain to levels which allow continued recreational use without unacceptable risk;
- reduce PCB concentrations in fish to levels that allow increased consumption of fish caught from the River in Massachusetts and Connecticut and reduce impact to affected communities relying on the fish for economic considerations or cultural practices;
- reduce the potential movement of PCBs from the river onto the floodplain, from the banks into the River, and from upstream to downstream locations, including the downstream transport into Connecticut;
- reduce contamination to acceptable risk for ecological receptors (fish, wildlife, and other organisms) in the river, floodplain, and vernal pools;
- reduce PCB surface water and sediment concentrations by addressing PCB sources in sediment and soil to advance future compliance with water quality standards in Massachusetts and Connecticut and attainment of the highest possible use of the River consistent with the Clean Water Act; and,
- protect and preserve the unique ecological characteristics of the Upper Housatonic Watershed in conducting remedial efforts.

Based upon those discussions, and EPA's ongoing analysis of the nine criteria in the RCRA permit (subject to further information and analysis as EPA continues to review

continued >

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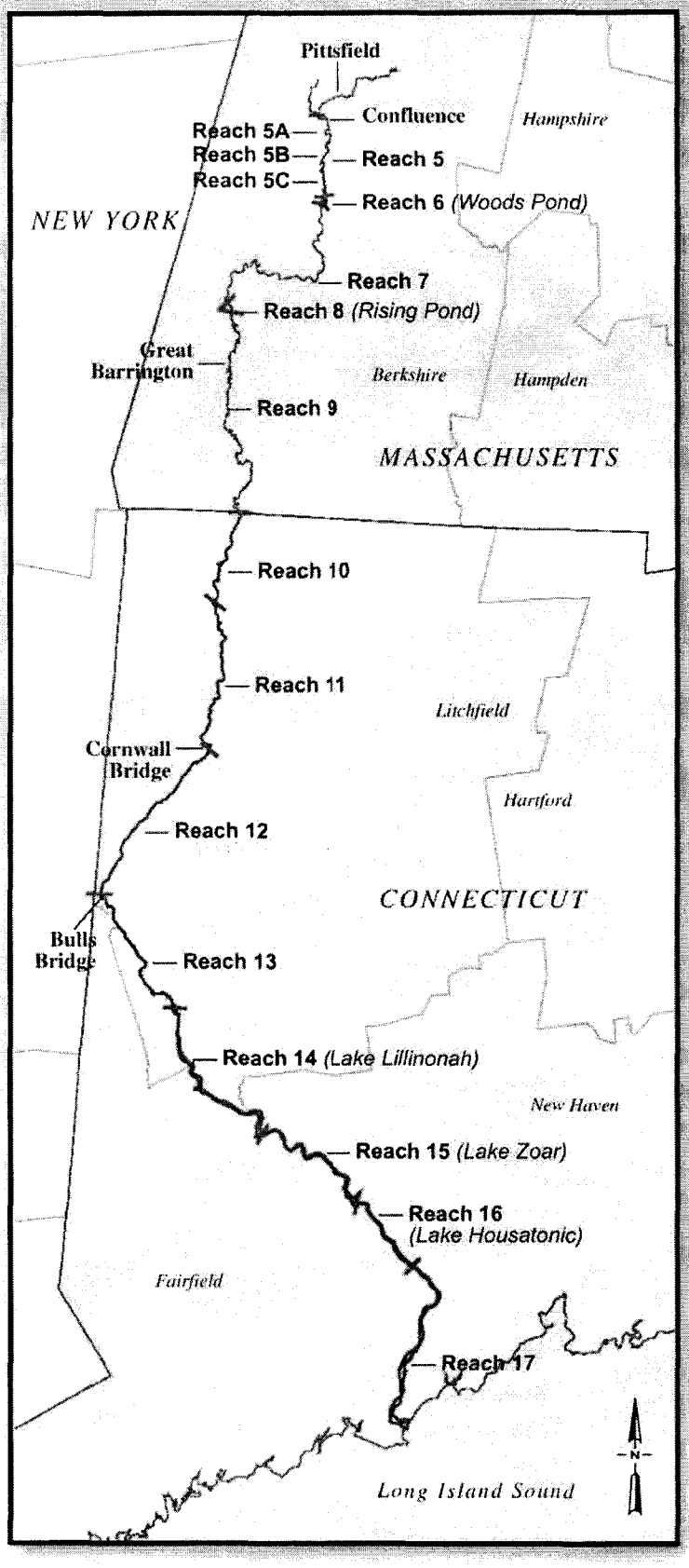
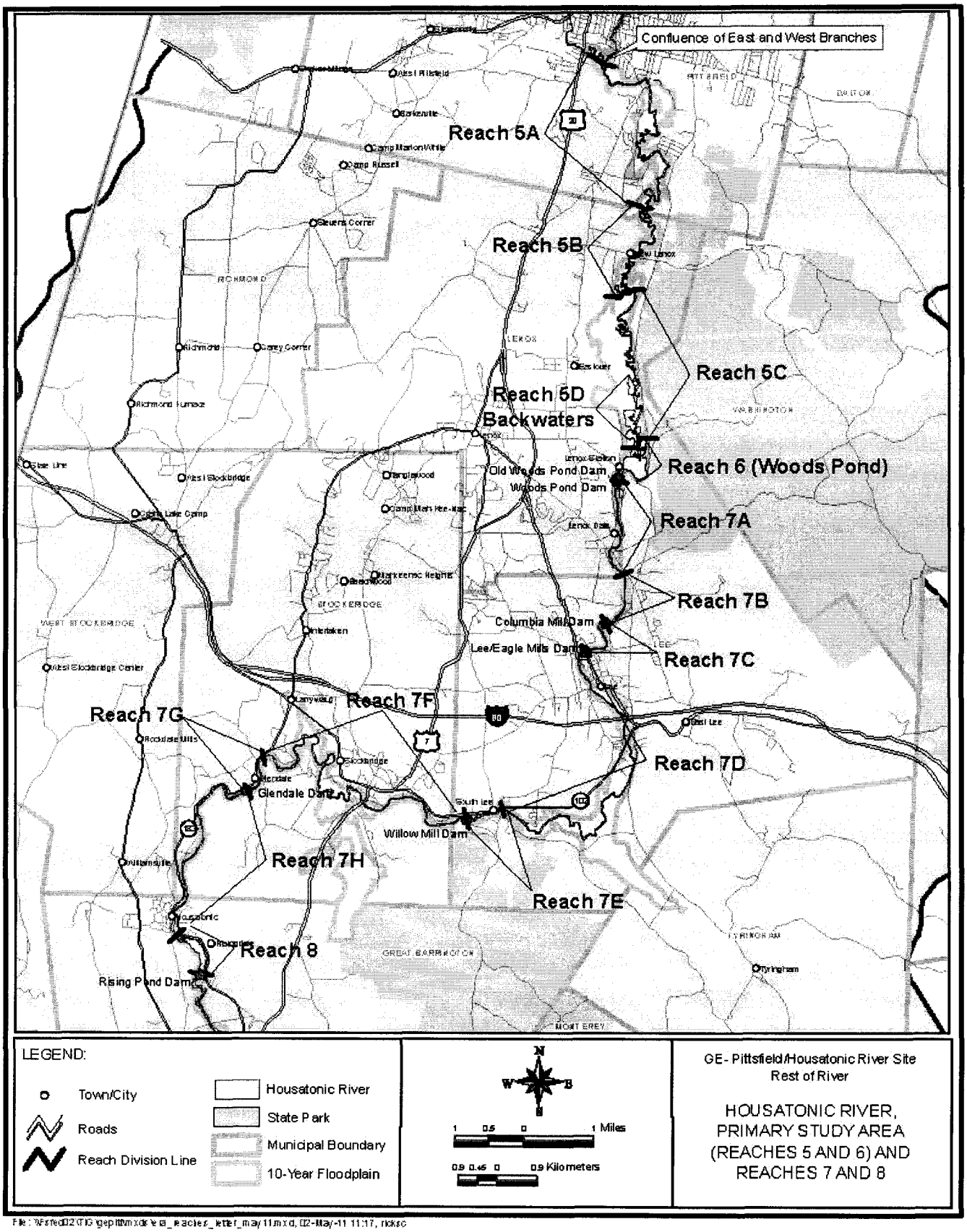


GE-Pittsfield/Housatonic River Site

HOUSATONIC RIVER, REACHES 5 THROUGH 17

11D-0379


Confluence of East and West Branches
Reach 5A
Reach 5B
Reach 5C
Reach 5D
Backwaters
Reach 6 (Woods Pond)
Old Woods Pond Dam
Woods Pond Dam
Reach 7A
Reach 7B
Columbia Mill Dam
Lee/Eagle Mills Dam
Reach 7C
Reach 7D
Reach 7E
Reach 7F
Reach 7G
Reach 7H
Glendale Dam
Willow Mill Dam
Reach 8
Rising Pond Dam
LEGEND:
Town/City
Roads
Reach Division Line
Housatonic River
State Park
Municipal Boundary
10-Year Floodplain
Miles
Kilometers
GE- Pittsfield/Housatonic River Site
Rest of River
HOUSATONIC RIVER,
PRIMARY STUDY AREA
(REACHES 5 AND 6) AND
REACHES 7 AND 8

the CMS and other information), a potential framework for a remedy tentatively would include the following elements:

- Removing PCB-contaminated bed sediment and containing residual PCB contamination in some reaches in the Housatonic River using a combination of excavation/dredging and capping.
- Removing PCB-contaminated soil from some areas in the 10-year floodplain adjacent to the river.
- Minimizing bank erosion and PCB transport downstream through the use of natural channel design, sediment trapping measures, and/or other engineering controls, while preserving the dynamic River habitat.
- Avoiding, minimizing or mitigating impacts to state-listed species of concern, including targeting of floodplain remediation to avoid certain critical core state-listed species habitat.
- Employing an adaptive management approach to ensure that the cleanup is performed using the best available technologies and methods.
- Taking advantage of existing rail infrastructure, transporting of contaminated soils and sediment to existing licensed off-site disposal facilities.
- Providing for long-term monitoring, maintenance, and institutional controls as well as reviewing the remedy every five years to evaluate the effectiveness and adequacy of the cleanup.

Rough volumetric estimates for a cleanup plan meeting these goals could range from 750,000 cubic yards to 1 million cubic yards (yd3) of removal, in addition to containment of residual PCBs and monitored natural recovery. Actual volumes would certainly vary based on the performance criteria and design, which are yet to be decided, and the removal volumes could be reduced below this range. To put this in perspective, some estimates show that there are over 4 million cubic yards of contaminated soil and sediment exceeding 1 part per million PCBs in the River and floodplain.

STATE INVOLVEMENT MOVING FORWARD

We expect these discussions to continue as EPA develops the proposed permit modification in consultation with the states. EPA will propose a remedial approach for the Rest of River for public comment, and the Parties reserve judgment on the appropriate remedy until after the comment period closes. The approach set forth in this document is only preliminary and tentative, subject to further information that will be reviewed as part of the consideration of the CMS, and intended to provide the public with information about these joint governmental discussions. The Parties reserve all rights available under the Consent Decree, CERCLA, RCRA, CWA or other applicable law.

EPA, Massachusetts and Connecticut commit to a long-term effort to work cooperatively in reviewing comments on the to-be-proposed cleanup plan, finalizing the cleanup plan, reviewing the details of the Remedial Design, and overseeing the remedy's implementation and long-term monitoring. EPA expects to work closely with the States on the development of the performance standards, corrective measures and on identification of ARARs for the draft permit before it is issued for public comment. EPA sees an organized, on-going and inclusive partnership with the states as essential to successful implementation of the final remedy.

There will be an opportunity for review and comment by Massachusetts and Connecticut on key GE deliverables, including the draft Statement of Work, work plans, design submittals, and other documents submitted during design, construction, and long-term monitoring. We look forward to a cooperative approach to moving this project forward and ensuring that issues of importance to the states are addressed at each step of the process.

EPA will work with the states to develop a structured process for interagency engagement prior to finalization of the Permit as well as during design and implementation of the remedy. In addition, the states and EPA will develop an interagency process as a means to address issues that may arise.

PRELIMINARY THOUGHTS ON POTENTIAL REMEDY COMPONENTS

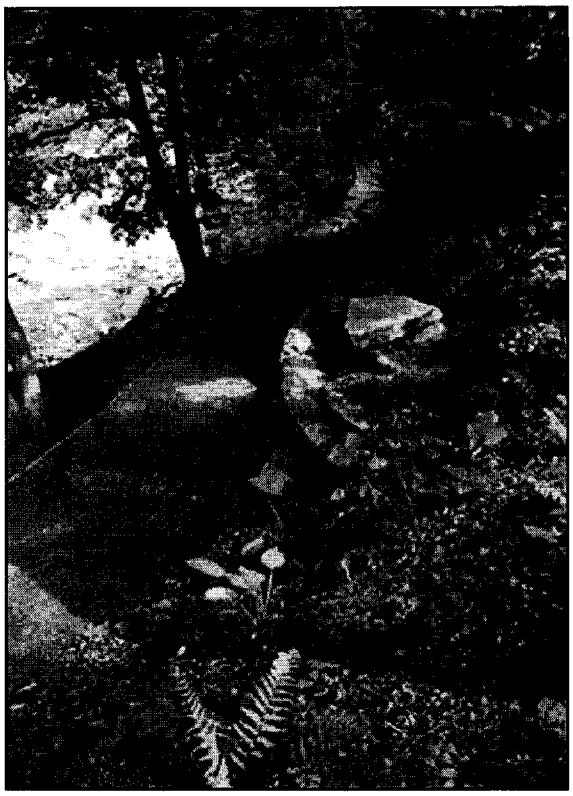
The following pages provide a brief analysis of various elements of a potential proposed cleanup plan. This plan represents the preliminary thinking at this stage of the technical discussions among the States and EPA

NOTE: The assumptions contained in this document are based on current data and modeling; current data and monitoring are very useful to compare various alternatives and actions to assess relative effects of different choices. However, more deliberations will occur prior to the proposal or selection of corrective measures for Rest of River. In addition, following selection of the corrective measures for Rest of River, remedial design activities will include additional investigations and sampling of the river, floodplains and vernal pools. The data and refined information gathered during that investigation and sampling will include data on concentrations of PCBs, the presence of MESA species, and other parameters. The refined information on appropriate parameters will be used to determine the final scope, location, and volumes of the final corrective measures.

ACRONYMS

ARARs ..... **Applicable or Relevant and Appropriate Requirements**
CERCLA ..... **Comprehensive Environmental Response, Compensation, and Liability Act**
CMS..... **Corrective Measures Study**
CWA..... **Clean Water Act**
IMPGs..... **Interim Media Protection Goals**
MassDFG/DFW ..... **Massachusetts Department of Fish and Game / Division of Fishieries & Wildlife**
PCBs..... **polychlorinated biphenyls**
RCRA..... **Resource Conservation and Recovery Act**

I. REACH 5 RIVER BED AND BANKS



Area of the river

For the purpose of current deliberations, the government agencies have examined a 10-mile long section of the river which includes Reaches 5A, 5B, and 5C from the confluence of the East and West Branches of the Housatonic River to the headwaters of Woods Pond.

A potential approach to cleanup

At this stage of deliberations, the government agencies are discussing remediation of River Bed in Reaches 5A and 5C. There have been tentative discussions of removing contaminated sediment from the river bed to a depth sufficient to place a multi-layered engineered cap to sequester remaining contamination. Current thinking is that the cap would be expected to consist of, at a minimum, an isolation layer with organic carbon, a protective layer, and a habitat layer. This may, of course, change as further information is developed, such as during design.

Remediation of erodible river banks in Reach 5A. At present, the preliminary thinking is that any bank remediation/restoration approach would follow a hierarchy of most preferred to least preferred:

1. Leave banks intact (no disturbance/excavation)
2. Reconstruct disturbed banks with bio-engineering "soft" restoration techniques
3. Reconstruct disturbed banks with a cap layer extending into the river bank placed under a bio-engineering/"soft" layer
4. Place rip-rap cap or hard armoring on surface of banks (only for protection of adjacent infrastructure)

This potential approach being considered by the government agencies would, based on current data, entail the disturbance of one third of the Reach 5A riverbanks (or 3.5 miles), recognizing that minimizing the length of affected bank could require capping into the riverbanks throughout that area in order to achieve sufficient bank stabilization. This potential remediation approach would follow the hierarchy of bank stabilization options outlined above, and following this hierarchy may result in the disturbance of less than one-third. This potential approach would minimize impacts to species listed under MESA and help preserve the dynamic character of the river. The government agencies will continue to evaluate these and the other goals on page 1 above throughout the design of any response action.

Hot spot remediation of River Bed and Banks in Reach 5B. The government agencies are currently looking at an approach under which a limited amount of work in Reach 5B would be conducted in order to address surface sediment or riverbank soil exceeding 50 ppm PCBs. Under such a potential approach, any excavated Reach 5B riverbanks could be restored using bioengineering "soft" restoration techniques. EPA could also explore the potential addition of activated carbon to surface sediment in the Reach 5B riverbed to further sequester residual contamination in that sub-reach. If such an option were to be pursued, EPA estimates this hot spot remediation would be limited to less than 5% of the river banks and 5% of the river bed, likely less than 1,000 cubic yards.

Cleanup goals associated with this potential approach

As part of the agencies' deliberations, EPA modeled the potential approach above, and believe that it would be expected to result in reductions in fish tissue concentrations to allow increased consumption of fish caught from the river a short time after remediation is completed in these Reaches. That is, the approach would achieve acceptable cancer and non-cancer residual risks for EPA's "Central Tendency" exposure scenario, representing the average person's fish consumption rates. Remediation of sediment in Reaches 5A and 5C, erodible river banks in Reach 5A, and hot spots in Reach 5B would also reduce the transport of contamination into downstream reaches (thus improving overall water quality). This cleanup approach would achieve human health benchmarks for children and adults for direct contact with sediment and reduces contamination to acceptable levels for ecological receptors (fish, wildlife, and other organisms) over the long term in much of this stretch of the river.

Preliminary estimates of this approach indicate that it is expected to greatly reduce the contribution to downstream transport of contamination. The potential approach could also include long-term monitoring, to evaluate if downstream transport is being minimized. Early analyses indicate that reducing downstream transport would help continue the reduction of PCB levels in fish tissue in Massachusetts and throughout Connecticut, which, over time, should allow the consumption of additional fish meals and revision or potential elimination of fish consumption advisories in parts of the river in the future.as determined by each state through application of its state-specific fish consumption goals.

Estimated volumes

If cap thickness were assumed to have an average excavation depth of 2 ½ feet in Reach 5A and 2 feet in Reach 5C, the agencies estimate that this component of the above potential remedial approach could entail the excavation of approximately 380,000 yd^3 of contaminated bank soil and

sediment or approximately one third of the total remediation volume estimated for this potential remedial approach. Of this amount, approximately 25,000 yd^3 would be expected to be riverbank soil, a small percentage (2 to 3%) of the remediation volume under this potential approach.

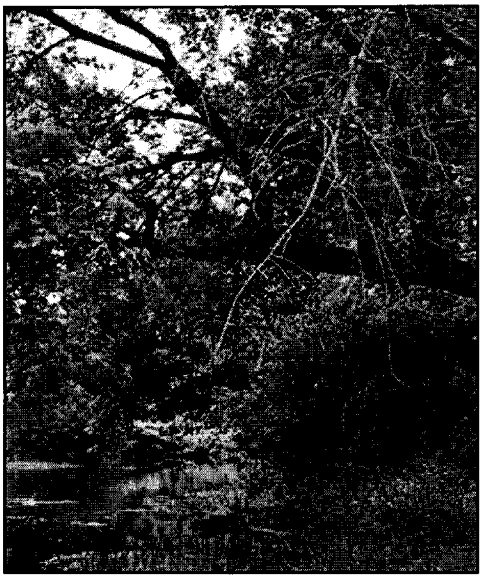
Cap thickness could be a major driver of excavation volumes. In any proposed remedial approach, EPA would tend to specify certain cap design principles and performance standards, but not a particular material thickness. Thus, during Remedial Design, GE would likely look to optimize cap designs in order to lower the amount of sediment requiring excavation. For instance, if the designed cap thickness was reduced by one foot in Reaches 5A and 5C, this could result in more than a 40% reduction in volume to approximately 220,000 yd^3.

This potential approach would provide specificity on the options for removal so as to minimize impacts to the many species covered under the Massachusetts Endangered Species Act (MESA) which would also help preserve the dynamic nature of the river.

II. WOODS POND

Area of the River at issue

Woods Pond is Reach 6 of the Rest of River study area and covers approximately 54 acres from the end of Reach 5 to the Woods Pond Dam.



A potential approach to cleanup

Excavation and Capping. At this stage of deliberations, the government agencies are discussing a proposed approach for the removal of contaminated sediment from the pond prior to placement of an engineered cap to sequester the remaining contamination. The proposed approach under consideration would involve the removal of sediment that would result in a final average water depth of at least six feet in the pond after placement of a one-foot thick cap. Current thinking is that the cap would be expected to consist of, at a minimum, an isolation layer with organic carbon coupled with a protective layer and a habitat layer.

EPA, in consultation with the states, is also considering additional deepening and/or placement of structures within the pond to further promote sedimentation as well as the use of activated carbon before and/or after final cap placement to sequester residual PCBs and minimize the potential for downstream migration of PCBs. The agencies are looking at possible designs for the final contours of the pond bathymetry that would support a functioning littoral zone. Final removal depths, structures, and engineered cap configurations would, of course, be determined during remedial design.

Cleanup goals associated with this potential approach

As part of their deliberations, the government agencies have modeled a variety of potential approaches, and based on that, believe that this approach would be expected to result in reductions in fish tissue concentrations to allow increased consumption of fish caught from the river shortly after remediation is completed. The agencies are further considering removal of additional mass of contamination from Woods Pond which, combined with capping, might also help to reduce the transport of contamination into downstream reaches and further control a potential source of downstream release in the unlikely event of dam failure. If downstream transport can be reduced, it should help continue the reduction of PCB levels in fish tissue in Massachusetts and throughout Connecticut, which, over time, should allow the consumption of additional fish meals and revision or potential elimination of fish consumption advisories in parts of the river in the future, as determined by each State through application of its state-specific fish consumption goals. Preliminary estimates of this potential cleanup approach indicate that it is expected to achieve human health benchmarks for children and adults for direct contact with sediment and reduce contamination to acceptable levels for ecological receptors (fish, wildlife, and other organisms) over the long term in Woods Pond. Any remedy component that is ultimately proposed and selected by EPA would, of course, be implemented to be consistent with ARARs, including by avoiding, minimizing and mitigating impacts to state-listed species.

This option would potentially increase the sediment retention of Woods Pond and the retention of residual PCB contamination. This retention of sediment from the river and floodplains may be expected to have the benefit of further decreasing the movement of PCBs downstream. Under any remedial option, Woods Pond would be monitored over the long term and if substantial PCBs accumulate in the pond, removal of the residual PCBs would be evaluated. As noted above, EPA would also explore the use of activated carbon before and/or after final cap placement to sequester residual PCBs and minimize potential for downstream migration of PCBs.

Estimated volumes

The agencies estimate that if the excavation and capping of Woods Pond were carried out as described in the potential approach outlined above, it would entail the excavation of approximately 285,000 yd3 or 29% of the total remediation volume. Under that scenario, the major factor behind the excavation volumes would be the deepening of the pond. Pond deepening may be advantageous in some ways, as it can result in (a) removing mass of PCBs from the Pond and (b) potentially enhancing the Pond's ability to trap solids and PCBs, thus reducing downstream transport.

III. DOWNSTREAM IMPOUNDMENTS (REACHES 7 AND 8)

Area of the River at issue

For the purpose of current deliberations, the government agencies have examined a potential remedy that would address the impounded areas behind several dams located in the River south of Woods Pond. These include four dams in Reach 7 (Columbia Mill Dam, Eagle Mill Dam, Willow Mill Dam and Glendale Dam (subreaches 7B, 7C, 7E, and 7G, respectively) and Rising Pond (Reach 8). Each of the four Reach 7 Impoundments ranges from 8 to 12 acres each, while Rising Pond comprises approximately 45 acres.

A potential approach to cleanup

Excavation and Capping. At this stage of deliberations, the government agencies are discussing a proposed approach for the removal of contaminated sediment from the river bed prior to placement of a multi-layered cap to sequester remaining contamination. Conceptually, this approach would include excavation of an estimated 1 to 1 ½ foot (at least) of contaminated sediment, followed by placement of a 1 to 1 ½ foot cap. Also under active consideration by EPA is the possibility of establishing a secondary or "contingency" remedy allowing for the excavation of the impoundment behind Columbia Mill Dam or other Reach 7 or Reach 8 impoundments to a level of 1 ppm PCBs to better dovetail the remedy with any potential dam removal projects by others.

Cleanup goals associated with this potential approach

As part of their deliberations, the government agencies have modeled the potential approach above, and believe that it would be expected to result in reductions in fish tissue concentrations to allow increased consumption of fish caught from the river after remediation is completed. The agencies are further considering removal of additional mass of contamination from these impoundments which, combined with capping, might also help to reduce the transport of contamination into downstream reaches and further control a potential source of downstream release in the event of dam failure. If downstream transport can be reduced, it should help continue the reduction of PCB levels in fish tissue in Massachusetts and throughout Connecticut, which, over time, should allow the consumption of additional fish meals and revision or potential elimination of fish consumption advisories in parts of the river in the future as determined by each State through application of its state-specific fish consumption goals. Preliminary estimates of this potential cleanup approach indicate that it is expected to also achieve human health benchmarks for children and adults for direct contact with sediment and reduce contamination to acceptable levels for ecological receptors (fish, wildlife, and other organisms) over the long term in this stretch of the river.

Estimated volumes

The agencies estimate that if excavation and capping of the Reach 7 impoundments and Rising Pond were carried out as described in the potential approach outlined above, it would entail the excavation of approximately 155,000 yd^3 or 15% of the total remediation volume.

Under this type of remedial approach, GE could, as part of the design phase, evaluate whether volume can be reduced in Reach 7 Impoundments by excavating sufficient sediment to meet a level of 1 ppm PCBs as opposed to excavating and capping the entire area behind each impoundment. Such an approach may also be considered as an alternative approach in conjunction with a dam removal project. For example, such an approach at Columbia Mill Dam would likely entail the excavation of approximately 2 feet of sediment to meet the 1 ppm standard, potentially increasing the volume excavated by approximately 10,000 cubic yards. Institutional controls may need to be part of the remedy for these and other downstream areas, including those in Connecticut, to ensure that GE remains responsible for any PCB contaminated sediment generated as part of dam maintenance or any other permitted activities along the River.

IV. FLOODPLAINS, VERNAL POOLS, AND RIVER BACKWATERS

Area of the River at issue

The floodplain study area in the vicinity of Reaches 5 and 6 (roughly equivalent to the 10-year flood elevation) consists of approximately 1,000 acres. Within that area there are 66 vernal pools identified by EPA comprising 18 acres. There are 85 acres of river backwaters.

A potential approach to cleanup

Excavation and backfill. At this stage of deliberations, the government agencies are discussing a proposed approach for the excavation of 1 foot of floodplain soil to generally meet Human Health risk target of 10-5 or Hazard Index =1. In certain "frequently used subareas", the agencies are discussing the option of excavating to

a depth of 3 feet rather than 1 foot. The agencies' current thinking, would be to avoid the highest priority habitat areas (Core Area I) except as needed to meet to meet 10-4 and HI=1. Such an approach would be expected to avoid, minimize, or mitigate impact to other priority habitat areas, as long as residual risk is at or below 10-4 and HI=1, and also address other factors such as downstream transport of PCBs. The option currently under consideration would attempt to remediate vernal pools but avoid those that are within the highest priority habitat areas (Core Area I), and employ a phased, adaptive management approach to vernal pool remediation. An example of how this approach might work in the field is provided in the attached Appendix.

As part of the River sediment cleanup, the potential approach under consideration would also (a) call for removal of 1 foot of bed sediment followed by capping in backwater areas (River Reach 5D), and (b) generally avoid backwaters, or portions thereof, located in highest priority endangered species habitat areas ("Core Area I"), except in discrete areas with PCB concentrations greater than 50ppm.

Cleanup goals associated with this potential approach

The government agencies believe that the potential approach discussed above could be designed to achieve human health benchmarks for children and adults for direct contact under a variety of area-specific exposure scenarios. It is further estimated that removal of contaminated soil from the floodplain, especially in areas near the river banks, could prevent these materials from becoming a potential future source of contamination to the River, and might also benefit ecological receptors (fish, wildlife, and other organisms) in the primary study area. The agencies believe that remediation in the backwater areas is an important component of the overall River sediment remediation, as it would likely contribute to allowing increased consumption of fish caught from the river after remediation is completed.

Preliminary estimates of the potential remedial approach currently under consideration indicate that over the long term this option would meet the long term ecological goals in a reasonable time frame, while providing protection for state-listed species.

Estimated volumes

The agencies estimate that if excavation and backfill in the floodplain and vernal pools were carried out as described in the potential remedial approach outlined above, then it would involve the removal of approximately 75,000 yd3 of contaminated material in approximately 45 acres of the floodplain (which represents only 5% of the entire floodplain area), and backwater remediation involving an additional 95,000 yd^3 and 61.5 acres while excluding approximately 8.5 acres in Core Area I (it is estimated that less than 0.5 acres of Core Area I would be remediated due to concentrations greater than 50 ppm). Together, these two aspects of the potential remedial approach would account for about 17% of the remedy's total volume.

CONCLUSION

This status report is intended to provide the public with a summary of the status of the governmental discussions prior to a decision on a remedy proposal. This status report represents a conceptual approach, and is not intended to provide a detailed written analysis of elements considered in the discussions. Nor does this status report affect or waive any privilege of the governments. Further discussion and analysis will be done prior to EPA issuing a proposed set of corrective measures. EPA's discussions with the states will be considered in responding to GE's draft corrective measures study, in any dispute resolution process under the Consent Decree concerning the corrective measures study, and in the issuance of the proposed set of corrective measures.

APPENDIX

[Caveat: The approach to remediation set out in this appendix reflects an option that is currently under review by EPA and the State agencies, and which is believed to exhibit a number of promising attributes. No decision has been made, and EPA will continue to deliberate until it has made a decision on the CMS and remedy proposal.]

FLOODPLAIN/VERNAL POOL - POTENTIAL REMEDIATION APPROACH UNDER REVIEW WITH EXAMPLES OF FIELD WORK PROTOCOLS

FLOODPLAINS

Set the Cleanup Levels: Primary: based on Human Health Benchmarks 10-5/H1=1
Secondary: based on Human Health Benchmarks 10-4/H1=1

Note 1: Any areas exceeding 2 ppm (unrestricted use standard) after remediation may require Institutional Controls to restrict certain future uses.

Note 2: Primary Cleanup levels presumed to be protective of Ecological Receptors in Floodplain.

Approach during Pre-Design/Remedial Design:

1. GE conducts additional sampling of floodplain soil (as needed).
2. GE designs excavation plan based on meeting Primary Cleanup Levels.
3. GE conducts additional field reconnaissance as needed to quantify potential state-listed species impacts of proposed excavation.
4. Evaluate impacts on state-listed species and their habitats, formulate approach to avoid, minimize, or mitigate any such adverse impacts in accordance with the substantive requirements of a "Conservation and Management Plan" under MESA, including providing a long-term Net Benefit for the conservation of the affected state-listed species. All evaluations to be conducted in consultation with MassDFG/DFW, following the above referenced MESA regulatory standards. In conducting this evaluation, the following approach would be used:
   a. remediation in Frequently Used Sub-Areas to maintain Primary cleanup goals in these sub-areas
   b. "avoidance" of "Core I" habitat areas, except limited areas to meet Secondary Cleanup Level
   c. "minimization or mitigation" for "Core Area II"
   d. Case-by-case determination for "Core Area III"
5. Based on #4 above, identify any areas to be avoided, and recalculate exposure point concentration (EPC) to ensure that resultant excavation plan meets, at a minimum, Secondary Cleanup Levels.
6. To the extent that Secondary Cleanup Levels are not met, propose additional areas to be excavated in order to meet this threshold (repeating Steps 4 and 5 as needed).
7. In conjunction with the evaluation of the scope of river bed and bank remediation, evaluate presence of any areas of remaining PCB concentrations in floodplain soils for erosion potential and the likelihood of future downstream transport at levels that could result in unacceptable downstream contamination. Reevaluate, as needed, any area of proposed floodplain soil remediation, considering the erosion potential and steps 3 through 6 above, proposing further action as necessary to reduce downstream transport of PCBs.

[1] For example, MassDFG/DFW has identified a portion of Exposure Area (EA) 10 as a Core I area that should be avoided, while portions of Core I areas in EAs 19, 37a, and 62 could be excavated to meet Secondary Cleanup Goals.

VERNAL POOLS

Approach during Pre-Design/Remedial Design:

1. GE conducts site visit with MassDFG/DFW personnel to confirm presence of vernal pool (as opposed to backwater or wetland)
2. GE conducts additional sampling and characterization of vernal pools, as needed, to generate baseline data on the concentrations of PCBs and health/abundance of animal species, including but not limited to state-listed species. GE also conducts additional field reconnaissance as needed to quantify the likely effects of potential remediation of the vernal pools on any state-listed species.
3. GE determines vernal pools requiring cleanup to meet Vernal Pool-specific Cleanup Level.
4. Consistent with the adaptive management approach described below, for vernal pools identified as requiring cleanup solely to meet ecological remediation goals, EPA will consult with MassDFG/DFW to make case-specific remedial decisions (including traditional excavation/restoration, alternative remedial strategies, deferment of remediation, and preservation of existing conditions) weighing field evidence of species health/abundance with applicable ecological IMPGs.
5. For those vernal pools selected for remediation, evaluate impacts on state-listed species and their vernal pool habitat, formulate approach to avoid,

minimize, or mitigate any such adverse impacts in accordance with the substantive requirements of a "Conservation and Management Plan" under MESA, including providing a long-term Net Benefit for the conservation of the affected state-listed species. All evaluations to be conducted in consultation with MassDFG/DFW, following the above referenced MESA regulatory standards. In conducting this evaluation, the following approach would be used:

a "avoidance" of Core I Areas",
b. "minimization or mitigation" for "Core Area II"
c. Case-by-case determination in "Core Area III"

6. Develop strategy for vernal pool remediation based upon evaluations conducted above plus considerations of contamination levels and accessibility and the adaptive management approach outlined below.
7. In consultation with MassDFG/DFW and MassDEP, EPA identifies performance metrics and evaluation criteria for evaluation of success and potential adaptive management measures (see below).
8. Pilot the use of activated carbon in a downstream, easily accessible pool and monitor the performance and any potential negative impacts.

An Adaptive Management Approach for Vernal Pools outside of Core Area I:

1. Identify first phase of vernal pools to be addressed, in consultation with MassDEP and MassDFG/DFW:
   a. Select initial number (8 to 10) of pools for remediation by traditional means (excavation and reconstruction)
   b. Select additional pools for pilot testing of activated carbon addition in lieu of excavation
   c. Select additional pools for pilot testing by a third remediation method to be proposed by GE for EPA approval in consultation with MassDEP and MassDFG/DFW and/or additional pools to be monitored concurrently with remediated pools as a "control" group for comparison purposes.
2. In consultation with MassDFG/DFW and MassDEP, EPA identifies performance metrics and evaluation criteria for comparison of the various remediation approaches
3. Complete first round of vernal pool remediation and conduct evaluation of each method
4. Determine preferred method/approach to remediation of subsequent vernal pools

Acreage Assumptions for potential approach (based on GE's CMS Alternative FP4):

Initial Acreage (pre MESA evaluation) for Floodplains ..... 57 acres
Area of Overlap with Core Areas I, III, IV..... 35 acres
Assume net 50% avoidance of Core Areas
from "step 4" processes above..... 17.5 acres
Net Potential Acreage of Floodplain Remediation ..... 40 acres (approx)
Assuming Vernal Pool approach outlined above..... 5 acres (approx)
Total assumed potential Floodplain/Vernal Pool acreage..... **45 acres (+-10%)**

STATE AND LOCAL RESOURCES

Berkshire Athenaeum Public Library
Reference Department
Pittsfield, MA 01201
(413) 499-9480

Cornwall Public Library
Cornwall, CT 06796
(860) 672-6874

Kent Memorial Library
(Kent Library Association)
Kent, CT 06757
(860) 927-3761

Housatonic Valley Association
Cornwall Bridge, CT 06754
(860) 672-6678

Massachusetts Department
of Environmental Protection
Springfield, MA 01103
(413) 784-1100

Connecticut Department of
Energy & Environmental Protection
Hartford, CT 06106
(860) 424-3854

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Attachment H

Regional Response to the National Remedy Review Board Comments on the Site Information Package for the General Electric (GE)-Pittsfield/ Housatonic River Project, Rest of River

DCN HR-080212-AARX

SDMS 518898

August 3, 2012

Prepared by

U.S. Environmental Protection Agency

New England Region
Boston, Massachusetts

APPENDIX A

PRELIMINARY DRAFT OF DRAFT OUTLINE OF POTENTIAL PERFORMANCE STANDARDS FOR ALTERNATIVE SED 9/FP 4 MOD

PRELIMINARY DRAFT OF DRAFT OUTLINE OF POTENTIAL PERFORMANCE STANDARDS FOR ALTERNATIVE SED 9/FP 4 MOD

I. INTRODUCTION

In July 2011, the United States Environmental Protection Agency (EPA)'s New England regional office presented site information and potential cleanup strategies to the National Remedy Review Board. Representatives of EPA's Contaminated Sediments Technical Advisory Group (CSTAG) also coordinated with and participated in the Board review for this site. In preparation for that July 2011 meeting, the regional office prepared and submitted a comprehensive Site Information Package (SIP) summarizing the site history, the nature and extent of contamination, risks to human health and the environment posed by that contamination, potential cleanup options under consideration, and stakeholder views on the project.

After the review meeting, the Board issued a set of recommendations to EPA New England, dated October 20, 2011. Many of the Board's questions and comments concerned how EPA New England might draft various performance standards and establish cleanup goals. In order to address many of the recommendations put forth by the Board and to further develop a potential cleanup strategy for the Rest of River, EPA conducted additional technical evaluations and worked closely with co-regulators from the Commonwealth of Massachusetts and the State of Connecticut in a series of facilitated technical discussions, which began in October 2011. In May 2012, EPA published a status report entitled "Potential Remediation Approaches to the GE-Pittsfield/Housatonic River Site 'Rest of River' PCB Contamination." This status report provided an update to the public on the discussions among the agencies and outlined potential remediation approaches for the Rest of River. EPA New England has also prepared a supplement to the SIP which, among other things, provides a more detailed description of the potential approach outlined in the May 2012 Status Report, an approach identified as Alternative SED 9/FP 4 MOD in the supplement to the SIP.

In an effort to answer many of the Board's questions regarding potential performance standards and cleanup goals, this preliminary draft document has been prepared. This document outlines potential performance standards and corrective measures for a potential cleanup similar to the remedy outlined in the May 2012 Status Report. It is important to note that no formal remedy proposal decisions have been made and this supplemental information is intended to provide a more detailed summary of EPA New England's considerations regarding the potential approaches to cleanup.

II. POTENTIAL PERFORMANCE STANDARDS

A. Introduction

1. General

This document describes a draft set of potential Performance Standards, and the corrective measures necessary to attain such Performance Standards, that the Permittee the General Electric Company [GE]) would perform and submit, pursuant to the Consent Decree (CD), for the Housatonic River Rest of River if these conditions were included in a Reissued Resource Conservation and Recovery Act (RCRA) Permit for Rest of River. The Rest of River area is generally depicted in Figures 1

and 2. The potential Performance Standards described in this draft outline address polychlorinated biphenyls (PCBs) that are present in river water, sediment, floodplain and bank soil, and biota in Rest of River.

As described in the CD and this draft outline, all response activities associated with Rest of River would be performed by the Permittee under the oversight and with the approval of the EPA, after reasonable opportunity for review and comment by the Commonwealth of Massachusetts (MA) and the Connecticut Department of Energy and Environmental Protection (CT DEEP). All Permittee activities would be conducted pursuant to such Permit and the CD. All EPA approvals of plans and other submittals under such Permit would be pursuant to Section XV of the CD.

In order to provide a better understanding to reviewers of the approach EPA might use to establish various Permit criteria for a potential remedy, this document has been drafted to closely approximate what might ultimately be included in a draft modification to the Reissued RCRA Permit if Alternative SED 9/FP 4 MOD were proposed as EPA's preferred cleanup plan. Thus, language such as "Permittee shall ...", as well as use of the term "shall" in general, has been included in the draft outline. Notwithstanding, this document represents only one potential approach and no formal decisions have been made regarding the appropriate scope of cleanup, specific performance standards, or any specific Permit requirements.

B. Description of Potential Performance Standards and Corrective Measures

The Permittee shall conduct all necessary corrective measures to meet the Performance Standards outlined below:

1. River Sediment and Banks

a. General Performance Standards

(1) The Permittee shall implement corrective measures to achieve and maintain a PCB flux rate over Woods Pond Dam and Rising Pond Dam, respectively, of 2.0 kg/year or less, which shall be achieved within 5 years of completion of construction-related activities outlined herein. Compliance will be determined based upon the measured PCB flux over each dam over a range of flow conditions on an annual basis.

(2) The Permittee shall implement corrective measures such that the Near-Term Biota Performance Standards are met in each reach of the river and backwaters within 15 years of

Attachment I

U.S. EPA | HOUSATONIC RIVER INFORMATION SHEET

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EPA's Cleanup Decision Process

THE RIVER *The Housatonic River is contaminated with polychlorinated biphenyls (PCBs) and other hazardous substances released from the General Electric Company (GE) facility in Pittsfield, MA. The entire site consists of the 254-acre GE facility; the Housatonic River and its banks and floodplains from Pittsfield, downstream through Massachusetts and Connecticut, and other contaminated areas. Under a federal Consent Decree, GE is required to address contamination throughout the site, including in the River.*

SUMMARY:

EPA is beginning its decision-making process for the cleanup of the Housatonic Rest of River. In doing so, EPA is considering the information presented in the Revised Corrective Measures Study (CMS) submitted by General Electric (GE) in October of 2010. The purpose of the Revised CMS was to evaluate potentially applicable cleanup alternatives for the Rest of River to reduce risk to human health and the environment from PCBs, and to prevent further downstream transport of PCBs.

Potential cleanup actions are evaluated against nine criteria specified in the RCRA Permit and outlined in this Fact Sheet. EPA is evaluating the alternatives and combinations of alternatives against the criteria to determine which cleanup plan EPA believes best meets the criteria.

This fact sheet summarizes EPA's decision-making process. For information on the various cleanup alternatives outlined in the Revised CMS, please see the fact sheet "Cleanup Alternatives in the Revised CMS".

EVALUATION CRITERIA

Remedial Action Objectives (RAOs) are specified in the Revised CMS. RAOs are broad statements of the objectives of the remedial action. There are three RAOs for the Revised CMS that can be summarized as:

- Reduction of risks to human health
- Reduction of risks to the environment
- Elimination/minimization of long-term downstream transport of PCBs and control of sources of release to the river

There are nine criteria that are specified in the Permit that must be used to evaluate the alternatives.

Three General Standards:

1. Overall Protection of Human Health and the Environment
2. Control of Sources of Releases (how each alternative would reduce/minimize possible further releases)
3. Compliance with Applicable or Relevant and Appropriate Federal and State Requirements (ARARs)

Six Selection Decision Factors:

1. Long-Term Reliability and Effectiveness
   - Magnitude of residual risk
   - Adequacy and reliability
   - Potential long-term adverse impacts on human health and the environment
2. Attainment of IMPGs
3. Reduction of Toxicity, Mobility, and Volume
   - Treatment process used and materials treated
   - Amount of hazardous materials destroyed or treated
   - Degree of expected reduction in toxicity, mobility, or volume
   - Degree to which treatment is irreversible
   - Type and quantity of contamination remaining after treatment

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Boston, MA 02109-3912

TOLL-FREE
CUSTOMER SERVICE
1-888-EPA-7341

continued >

4.Short-Term Effectiveness

5.Implementability
- Ability to construct and operate the technology
- Reliability of the technology
- Regulatory and zoning restrictions
- Ease of undertaking additional corrective measures, if necessary
- Ability to monitor the effectiveness of the remedy
- Coordination with other agencies
- Availability of suitable on-site or off-site treatment, storage, and disposal facilities and specialists
- Availability of technologies (are they readily available for use)

6.Cost
- Capital costs
- Operating and maintenance costs
- Present worth costs

The evaluation criteria are first applied separately to ten in-place sediment and riverbank soil alternatives and then to nine in-place floodplain soil alternatives and to eight representative combinations of sediment and floodplain alternatives. Then, the criteria are applied to treatment and disposition alternatives (including materials handling specific to removal alternatives).

An important component of the evaluation is the application of the mathematical model framework developed by EPA. The model framework is used to evaluate the effectiveness of each sediment alternative, and the time frame necessary to achieve the Interim Media Protection Goals (IMPGs).

WHAT ARE IMPGS?

An Interim Media Protection Goal (IMPG) is a media-specific cleanup goal for human health or ecological receptors that is determined by EPA to be protective. The IMPGs for the Rest of River were derived by GE, taking into account information in the Peer-Reviewed Human Health and Ecological Risk Assessments performed by EPA. The IMPGs for human health are expressed as the concentration of PCBs in soil, sediment, fish, etc. that results in an incremental cancer risk (ICR) from exposure ranging from 10-4 (1 in 10,000) to 10-6 (1 in 1,000,000), or as a non-cancer risk exceeding a Hazard Index (HI) of 1 (an HI below 1 is not expected to result in adverse effects.) The ecological IMPGs are typically expressed as a Maximum Acceptable Threshold Concentration (MATC) below which no significant risk to ecological receptors is expected. The IMPG Proposal prepared by GE and approved by EPA in 2006 provides a more detailed description of the derivation and meaning of the IMPGs.

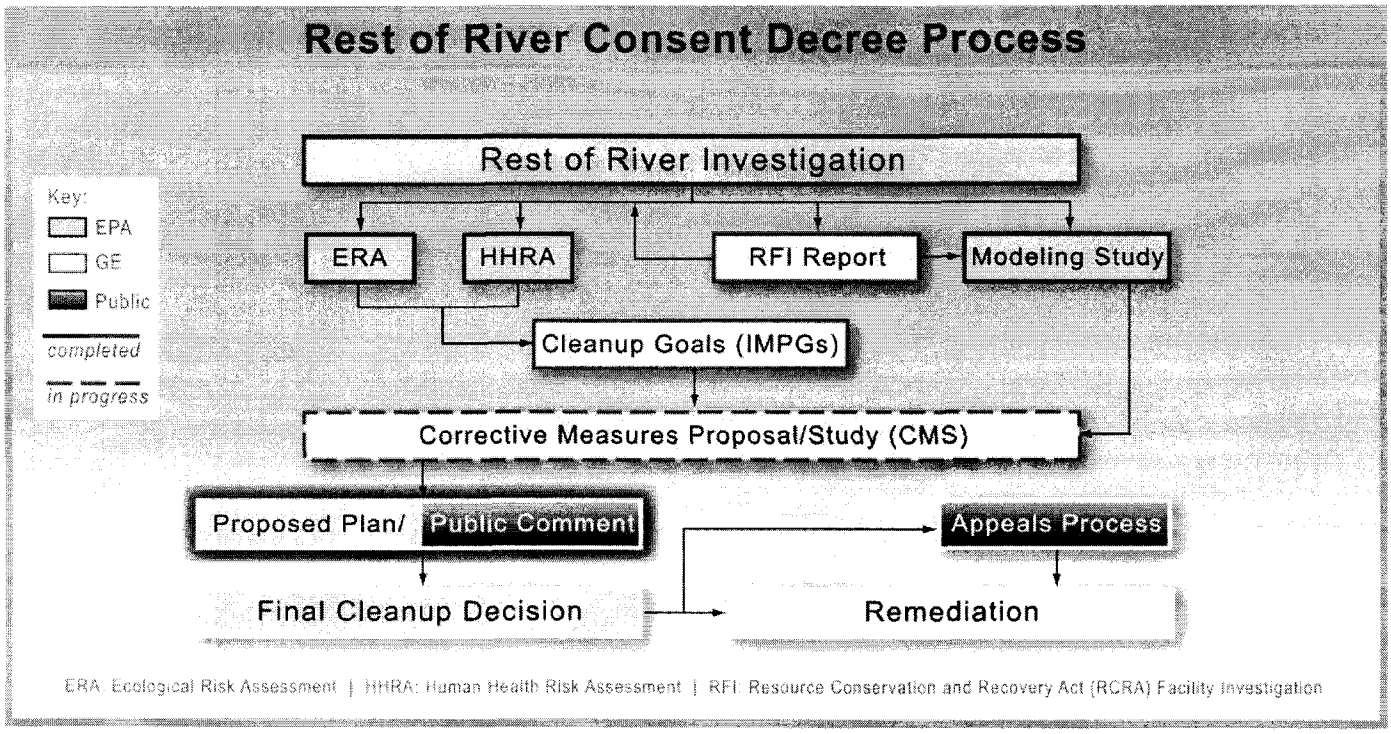
PROCESS GOING FORWARD

Based upon the information provided by GE in the Revised CMS (supplemented with other information as necessary) and input from the public, EPA is developing its preferred remedial alternative or set of alternatives. This involves both regional and national internal reviews for consistency with remedies implemented or proposed for other hazardous waste sites and the degree of achievement of the criteria. An important step leading up to EPA's identification of a preferred alternative is the series of public mini-workshops and charette taking place in spring 2011.

After these reviews, EPA will propose its preferred alternative or set of alternatives for formal public comment as a draft modification to the RCRA Permit. Following closure of the public comment period, EPA will consider the comments received and issue a final decision and a Responsiveness Summary addressing the comments received.

Prior to issuing the final remedy decision, as required by the Permit, EPA will notify GE of EPA's intended final decision, and GE has the right to invoke administrative dispute resolution. Upon resolution of GE's dispute (if invoked), EPA will issue a modification to the Permit. This final cleanup decision is then subject to appeal by GE and the public for review by EPA's Environmental Appeals Board (EAB) and subsequently the U.S. Court of Appeals. During appeals, there are provisions for design of the remedy to take place as the appeals progress.

Upon completion of all appeals, GE is required to implement and pay for the cleanup.



Attachment J

Four Representative Options Spanning the Range of Those Evaluated in the Revised Corrective Measures Study

GLOSSARY

MNR	Monitored Natural Recovery
HI	Hazard Index
EAs	Exposure Areas
RME	Reasonable Maximum Exposure
IMPGs	Interim Media Protection Goals
Upper-Bound	Those IMPGs based on a 10^{-4} cancer risk or a noncancer HI of 1, whichever is lower for humans, or the higher IMPG for animals
Mid-Range	Those IMPGs based on a 10^{-5} cancer risk or a noncancer HI of 1, whichever is lower
Lower-Bound	Those IMPGs based on a 10^{-6} cancer risk or a noncancer HI of 1, whichever is lower for humans, or the lower IMPG for animals
2 mg/kg	The residential cleanup standard specified in the Consent Decree

OPTION A

Option A consists of a combination of Monitored Natural Recovery (MNR) with institutional controls for all reaches of the River downstream of the Confluence and no action for the floodplain. This combination would rely on upstream source control and remediation measures, natural recovery processes in the River and floodplain, and institutional controls. The River monitoring program would include biota, water column, and sediment monitoring for a period of 100 years.

OPTION B

The sediment component of Option B would involve sediment removal followed by capping in portions of Reach 5A and Woods Pond (Reach 6). Some soil removal and bank stabilization would be conducted in Reaches 5A and 5B. Specifically, the components of Option B include the following:

- Reach 5A: Sediment removal (66,000 yd^3 over 20 acres), followed by capping, in areas determined based on ecological criteria.
- Riverbanks in Reaches 5A and 5B: Bank stabilization adjacent to certain of the sediment removal areas in Reach 5A and areas in Reach 5B determined based on ecological criteria (total of 1.6 linear miles), with removal of bank soils where necessary as part of the stabilization (6,700 yd^3).
- Reach 6 (Woods Pond): Sediment removal (169,000 yd^3 over 42 acres) in areas with PCB concentrations generally greater than 13 mg/kg in the top 6 inches.

- Remainder of Rest of River: MNR.

The floodplain component of Option B would involve the removal and backfill of floodplain soils to achieve average PCB concentrations that would meet upper-bound RME IMPGs for human health. Specifically, this option has been developed to achieve the following IMPGs:

- The upper-bound RME IMPGs for human health (i.e., those based on a 10^{-4} cancer risk or a noncancer HI of 1, whichever is lower) based on direct contact with floodplain soils.
- The upper-bound RME IMPGs for human health (i.e., those based on a 10^{-4} cancer risk or a noncancer HI of 1, whichever is lower) based on consumption of agricultural products from the floodplain.
- Not designed to achieve any of the ecological IMPGs, although some may be met in some areas.

Option B would involve removing and replacing floodplain soils as necessary to achieve average PCB concentrations in the top foot of the relevant averaging areas that are equal to or less than the above-mentioned IMPGs. In addition, this option would involve the removal and backfill of soils in the top 3 feet in the Heavily Used Subareas of Frequent-Use EAs as necessary to achieve average PCB concentrations in the 0- to 3-foot depth increment that are equal to or less than the upper-bound IMPGs based on human direct contact. This option would involve the removal of approximately 26,000 yd^3 of soil from approximately 14 acres of the floodplain.

OPTION C

The sediment component of Option C would involve sediment removal followed by capping in Reaches 5A through 5C, portions of the backwaters (Reach 5D), Woods Pond (Reach 6), the Reach 7 impoundments, and Rising Pond (Reach 8). Riverbank soil would be removed as necessary, and the eroding banks stabilized in Reaches 5A and 5B. Specifically, the elements of this option include the following:

- Reach 5A: Sediment removal in the entire reach (134,000 yd^3 over 42 acres), followed by capping.
- Reach 5B: Sediment removal in the entire reach (88,000 yd^3 over 27 acres), followed by capping.
- Reach 5C: Sediment removal in the entire reach (156,000 yd^3 over 57 acres), followed by capping.
- Riverbanks in Reaches 5A and 5B: Bank stabilization of eroding banks (14 linear miles, comprising both banks along 7 miles of river) and removal of bank soils where necessary as part of the stabilization (35,000 yd^3).
- Reach 5 backwaters: Combination of sediment removal with capping (109,000 yd^3 over 68 acres) and capping without removal (3 acres).
- Reach 6 (Woods Pond): Sediment removal (244,000 yd^3 over 60 acres), followed by capping.

- Reach 7 impoundments (Reaches 7B, 7C, 7E, 7G): Sediment removal (84,000 yd^3 over 38 acres), followed by capping.
- Reach 8 (Rising Pond): Sediment removal (71,000 yd^3 over 41 acres), followed by capping.
- Reach 7 (channel) and Reaches 9 through 16: MNR.

Option C differs from the other sediment removal alternatives in that: (1) All sediment removal and capping work, including in Reaches 5A and 5B, would be performed in the "wet" by equipment operating in the river (either on the river bottom or on barges); and (2) Removal of the sediment in the Reach 5 backwaters and Reaches 6, 7, and 8 would be performed concurrently with removal activities in the Reach 5 channel. However, capping in those reaches would be delayed, where necessary, until after all the removal/capping activities in Reach 5 have been completed.

The floodplain component of Option C would involve the removal and backfill of floodplain soils to achieve average PCB concentrations that would meet the mid-range (10^{-5}) RME IMPGs for human health and lower-bound IMPGs for amphibians in vernal pools, as well as removal of any additional soils within the top foot that contain PCB concentrations at or above 50 mg/kg. Specifically, this alternative would achieve the following IMPGs:

- The mid-range RME IMPGs for human health (i.e., those based on a 10^{-5} cancer risk or a noncancer HI of 1, whichever is lower) based on direct contact with floodplain soils.
- The mid-range RME IMPGs for human health (i.e., those based on a 10^{-5} cancer risk or a noncancer HI of 1, whichever is lower) based on consumption of agricultural products from the floodplain.
- The lower-bound IMPG for amphibians in vernal pools.

Option C would involve removing and replacing floodplain and vernal pool soils as necessary to achieve average PCB concentrations in the top foot of the relevant averaging areas that are equal to or less than the above-mentioned IMPGs. In addition, this alternative would involve the removal and backfill of any additional soils within the top foot that contain PCB concentrations at or above 50 mg/kg. Lastly, this option would involve the removal and backfill of soils in the top 3 feet in the Heavily Used Subareas of Frequent-Use EAs as necessary to achieve average PCB concentrations in the 0- to 3-foot depth increment in those areas that are equal to or less than the mid-range IMPGs based on human direct contact. This option would involve the removal and backfill of approximately 177,000 yd^3 of soil across approximately 108 acres of the floodplain.

Option D

The sediment component of Option D would include the removal of a total of 2,287,000 cy of sediment and riverbank soil, including 2,252,000 cy of sediment over 351 acres plus 35,000 cy of bank soil as part of bank stabilization over 14 linear miles of riverbank. Sediment removal would be performed in Reaches 5A, 5B, and 5C, the Reach 5 backwaters, Woods Pond, the Reach 7 impoundments, and Rising Pond to the 1 mg/kg depth horizon, and would be followed by backfilling to grade. MNR would be included for the remaining portions of the River (Reach 7 channel and Reaches 9 through 16). Additionally, the eroding riverbanks along 7 miles on both sides of the River in Reaches 5A and 5B,

comprising 14 linear miles, would be stabilized. Remediation would proceed from upstream to downstream to minimize the potential for recontamination of remediated areas.

The floodplain component of Option D would involve the removal and backfill of floodplain soils to achieve average PCB concentrations that would meet lower-bound RME IMPGs for human health and the lower-bound IMPGs for ecological receptors. Specifically, this alternative would achieve the following IMPGs:

- The lower-bound RME IMPGs for human health (i.e., those based on a 10^{-6} cancer risk or a noncancer HI of 1, whichever is lower) based on direct contact with floodplain soils, but not lower than 2 mg/kg (the residential standard specified in the Consent Decree).
- The lower-bound RME IMPGs for human health (i.e., those based on a 10^{-6} cancer risk or a noncancer HI of 1, whichever is lower) based on consumption of agricultural products from the floodplain.
- The lower-bound floodplain IMPGs for ecological receptors, i.e., amphibians (represented by wood frogs), omnivorous/carnivorous mammals (represented by shrews), insectivorous birds (represented by wood ducks), and piscivorous mammals (represented by mink), assuming, for the latter two receptors, the floodplain soil IMPGs associated with a sediment target level of 1 mg/kg.

Option D would involve removing and replacing floodplain soils as necessary to achieve average PCB concentrations in the top foot of the relevant averaging areas that are equal to or less than the above-mentioned IMPGs. In addition, this alternative would involve the removal and backfill of soils in the top 3 feet in the Heavily Used Subareas of the Frequent-Use EAs as necessary to achieve average PCB concentrations in the 0- to 3-foot depth increment that meet the lower-bound IMPGs based on human direct contact, but not lower than 2 mg/kg.

Option D would involve the removal and backfill of approximately 615,000 yd^3 of soil across approximately 377 acres. Approximately 287 acres of this removal (464,000 yd^3) would occur within the Reaches 5 and 6 floodplain; the remaining 90 acres of removal (151,000 yd^3) would occur in the Reach 7 floodplain.

Attachment K

U.S. Army
Corps of Engineers

New England District
Concord, Massachusetts

U.S. Environmental
Protection Agency

New England Region
Boston, Massachusetts

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National Remedy Review Board Site Information Package for the Housatonic River, Rest of River

DCN HR-062811-AANL

SDMS 487318

June 2011

Environmental Remediation Contract
General Electric (GE)-Pittsfield/Housatonic River Project
Pittsfield, Massachusetts

Contract No. W912WJ-08-D-0008

Task Order No. 0002

11P-0432-1

SDMS DocID 487318

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NATIONAL REMEDY REVIEW BOARD
SITE INFORMATION PACKAGE
FOR THE HOUSATONIC RIVER, REST OF RIVER

ENVIRONMENTAL REMEDIATION CONTRACT
GENERAL ELECTRIC (GE)-PITTSFIELD/HOUSATONIC RIVER PROJECT
PITTSFIELD, MASSACHUSETTS

Contract No. W912WJ-08-D-0008
Task Order No. 0002

DCN: HR-062811-AANL

SDMS: 487318

Prepared for

U.S. ARMY CORPS OF ENGINEERS
New England District
Concord, Massachusetts

and

U.S. ENVIRONMENTAL PROTECTION AGENCY
New England Region
Boston, Massachusetts

Prepared by

WESTON SOLUTIONS, INC.
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June 2011

Work Order No. 20502.169.095.0233.00

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Attachment L

Report Date: 01/09/2012

Itemized Cost Summary

GENERAL ELECTRIC CO., PITTSFIELD, MA SITE ID = 01 67
GENERAL ELECTRIC, PITTSFIELD, MA SITE ID = A1 67

U.S. Response Costs, Paragraph 95
October 1, 2010 - September 30, 2011

REGIONAL PAYROLL COSTS	$291,761.35
HEADQUARTERS PAYROLL COSTS	$29,689.27
REGIONAL TRAVEL COSTS	$29,551.42
HEADQUARTERS TRAVEL COSTS	$8,264.77
ALLOCATION TRANSFER IAG COSTS	
DEPARTMENT OF HEALTH & HUMAN SERVICES (ATSDR)	$928.50
ALTERNATE DISPUTE RESOLUTION (ADR) CONTRACT COSTS	
SRAC (EPW09011)	$166,264.34
INTERAGENCY AGREEMENT (IAG) COSTS	
DEPARTMENT OF JUSTICE (DOJ)	$60,557.96
ARMY CORPS OF ENGINEERS (DW96940169)	$426,445.55
ARMY CORPS OF ENGINEERS (DW96940246)	$19,764.16
OTHER CONTRACT COSTS	
ASRC MANAGEMENT SERVICES, INC. (EPW05052)	$50,569.88
EPA INDIRECT COSTS	$355,614.22
Cross-cutting allocation, 28.656%	$186,379.01
Total Site Costs:	$1,625,790.43

Report Date: 01/09/2012

Contract Costs

GENERAL ELECTRIC CO., PITTSFIELD, MA SITE ID = 01 67
GENERAL ELECTRIC, PITTSFIELD, MA SITE ID = A1 67

U.S. Response Costs, Paragraph 95
October 1, 2010 - September 30, 2011

INTERAGENCY AGREEMENT (IAG) COSTS

Federal Agency: DEPARTMENT OF JUSTICE

IAG Number: DOJ

Project Officer(s):

Dates of Service: From: 07/04/2010 To: 08/27/2011

Summary of Service: U.S. v. General Electric Company
90-11-3-1479

Total Costs: $60,557.96

Voucher Number	Voucher Date	Voucher Amount	Treasury Schedule Number	and Date	Site Amount
FY 2010	12/14/2011	60,557.96	N/A	09/30/2010	2,153.85
FY 2011	12/14/2011	60,557.96	N/A	08/27/2011	58,404.11
				Total:	$60,557.96