BEFORE THE ENVIRONMENTAL APPEALS BOARD UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C.

In re:

GENERAL ELECTRIC COMPANY

Modification of RCRA Corrective Action Permit No. MAD002084093 **RCRA** Appeal No. 16-01M

PETITION OF GENERAL ELECTRIC COMPANY FOR REVIEW OF FINAL MODIFICATION OF RCRA CORRECTIVE PERMIT ISSUED BY EPA REGION 1

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- Attachment 11: EPA's Final Decision in Dispute of EPA's Notification of Intended Final Decision on Rest of River Remedy (October 13, 2016) ("Region Decision"), A.R.593967

^{*} Cross-references are provided to the document numbers in EPA's Administrative Record (A.R.) for the October 2016 Final Modification of the Reissued RCRA Permit (October 2016).

Attachment 12: Excerpts from EPA's Response to Comments on Draft Permit Modification and Statement of Basis (October 2016) ("RTC"), A.R.593922

Attachment 13: Excerpts from Documents Showing EPA Approval of Certain TSCA Landfills:

- A. CWM Chemical Services Model City Landfill in New York
 - B. Clean Harbors Grassy Mountain Landfill in Utah
 - C. Wayne Disposal, Inc. Landfill in Michigan

GLOSSARY OF TERMS

ACEC	Area of Critical Environmental Concern
A.R.	Administrative Record
ARAR	Applicable or Relevant and Appropriate Requirement
CD	Consent Decree in United States et al. v. General Electric Company, Civil Action No. 99-30225-MAP et seq. (October 27, 2000)
CD-Permit	Reissued RCRA Permit (reissued by EPA in October 2001 and again effective December 7, 2007), incorporated into Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMS	Corrective Measures Study
Comp. Analysis	EPA's Comparative Analysis of Remedial Alternatives for the Rest of River
СҮ	Cubic yards
EA	Exposure Area
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
GE	General Electric Company
GE Comments	Comments of General Electric Company on Draft Permit Modification and Statement of Basis (October 27, 2014)
GHG	Greenhouse gas
HI	Hazard Index
IMPGs	Interim Media Protection Goals
MESA	Massachusetts Endangered Species Act
mg/kg	milligrams per kilogram (equivalent to parts per million)
NCP	National Contingency Plan
NRD	Natural resource damages

NIMBY	Not in my backyard
OM&M	Operation, maintenance, and monitoring
O&M	Operation and maintenance
PCBs	Polychlorinated biphenyls
PSA	Primary Study Area
RCMS	Revised Corrective Measures Study (submitted by GE)
RCRA	Resource Conservation and Recovery Act
RME	Reasonable maximum exposure
RTC	EPA's Response to Comments
SOP	Statement of Position
SOW	Rest of River Statement of Work
Stmt. Basis	EPA's Statement of Basis for Proposed Rest of River Remedial Action
TSCA	Toxic Substances Control Act

REVIEW REQUESTED

This petition seeks review of a final permit modification issued to General Electric Company ("GE") by the Environmental Protection Agency, Region 1 under the Resource Conservation and Recovery Act ("RCRA") on October 24, 2016 (the "Modified Permit"; Attachment 1) and pursuant to a Consent Decree ("CD") approved by a U.S. District Court in 2000 (Attachment 2), which selects a Remedial Action for the area of the Housatonic River and its floodplain known as the "Rest of River."¹

INTRODUCTION

GE is committed to undertaking a comprehensive cleanup of the Housatonic Rest of River that fully protects human health and the environment, and that complies with the terms of the 2000 CD that was entered into by GE, EPA, the Commonwealth of Massachusetts, and the State of Connecticut.

GE's actions over the past 20 years reflect that commitment. Among numerous other things, GE has worked cooperatively with EPA and the Commonwealth, spending hundreds of millions of dollars to remove contaminated soil and groundwater from its former Pittsfield plant and surrounding areas to substantially reduce the movement of PCBs from the former plant site to the Housatonic River; two miles of the River have been dredged; and other sites in the area, including Silver Lake and Unkamet Brook, have been cleaned up. As a result of these actions, the environment has been improved and the River continues to support a robust, dynamic ecosystem of wildlife.

¹ Relevant provisions of key documents referenced herein are provided in Attachments to this Petition, *see* List of Attachments above, with cross-references to the Administrative Record (A.R.) for the Final Permit Modification, dated October 2016. References herein to other documents are directly to the Administrative Record.

The Modified Permit should build upon this success, and GE has repeatedly affirmed that it is prepared to undertake a substantial dredging project in the Rest of River. However, as others, including the Massachusetts Executive Office of Energy and Environmental Affairs, have recognized, any dredging remedy must not destroy the unique and vibrant ecosystem that exists today on the Housatonic. Further, the remedy must meet the requirements of the CD, balancing benefits and impacts, and consistency with specific Rest-of-River remedy-selection criteria. Unfortunately, the EPA Rest-of-River Remedial Action fails both of these threshold requirements and fails to properly adhere to the science and the law.

GE's petition focuses on three fundamental flaws in EPA's decision, although we have raised other concerns. First, EPA cannot arbitrarily impose an additional \$250 million in costs for out-of-state disposal of sediment and soil from the Rest of River where there is no environmental benefit – and indeed there are adverse environmental impacts associated with the out-of-state transport of that material – and where safe, cost-effective local options exist. Second, EPA must clearly define the scope of the remedy; under the CD, the Agency cannot rely on vague, open-ended performance standards that leave the door open for future secondguessing. Finally, EPA cannot overreach, seeking to impose additional dredging that is not required to protect human health or the environment.

For the past six years, GE has attempted to resolve our outstanding differences with EPA and the Commonwealth so that the Rest-of-River project could begin. Unfortunately, the Agency has disregarded virtually every legal, scientific and technical concern raised by GE. For that reason, GE is compelled to file this petition requesting that the Environmental Appeals Board address the material errors in EPA's final Modified Permit for the Rest of River.

THRESHOLD PROCEDURAL REQUIREMENTS

Standing. GE has standing to petition for review because it timely submitted substantial comments on a draft of the Modified Permit (*see* Attachment 7).

Issues Raised. All issues raised herein either: (1) were raised during the public comments period, to the extent reasonably ascertainable at that time; or (2) concern changes from the draft to the final Permit modification decision.

BACKGROUND

I. Consent Decree

Beginning in the early 20th century, GE operated a facility in Pittsfield, Massachusetts. Until the mid-1970s GE manufactured equipment containing PCBs. To address PCB contamination at and from GE's former manufacturing facility, EPA executed the CD with GE, Massachusetts, and Connecticut. The CD is the cornerstone of a comprehensive settlement comprising the GE-Pittsfield/Housatonic River Site (the "Site"). The CD was entered by the federal district court in October 2000 pursuant to CERCLA and RCRA (A.R.9420, 38254-38261).

For most areas of the Site, the CD specified the remediation that GE would implement and the Performance Standards for those remediation activities. Those activities have largely been completed. The CD did not, however, specify the remediation for the Rest of River.² Instead, it established a process for the selection of the Rest-of-River Remedial Action in accordance with a RCRA permit incorporated in the CD ("CD-Permit"; Attachment 3).³ This

² The Rest of River and the various areas within it that are subject to the current remedy are shown on Figure 1 of GE Comments (Attachment 7).

³ The CD incorporated RCRA Corrective Action Permit No. MAD002084093, and specified a process whereby EPA would select a Rest-of-River Remedial Action, subject to dispute

process, which EPA was contractually bound to follow, altered what would be the typical CERCLA or RCRA processes. In particular, the CD significantly constrained EPA's discretion in selecting a remedy.

The bargain the parties struck promised tangible benefits to both GE and EPA. EPA gave GE a covenant not to sue, agreed to apply site-specific standards and criteria to its selection of a Rest-of-River remedy, and agreed to submit the remedy EPA selected to administrative and judicial review before it was implemented. In return, GE paid to settle a claim for natural resource damages ("NRD"), implemented the remediation specified in the CD, and provided substantial support to the surrounding community in the form of cash payments not otherwise recoverable under CERCLA and RCRA.

The CD has several defining features. First and foremost, GE agreed to evaluate remedial alternatives, and EPA agreed to select a remedy, on the basis of nine, and only nine, enumerated criteria: three General Standards – (1) Overall Protection of Human Health and the Environment, (2) Control of Sources of Releases, and (3) Compliance with Applicable or Relevant and Appropriate Requirements ("ARARs") – and six Selection Decision Factors – (4) Long-Term Reliability and Effectiveness, (5) Attainment of Interim Media Protection Goals ("IMPGs"), (6) Reduction of Toxicity, Mobility, or Volume of Waste, (7) Short-Term Effectiveness, (8) Implementability, and (9) Cost. CD-Permit Condition II.G.

Applying those criteria, EPA must propose both "Performance Standards, and the appropriate corrective measures necessary to meet the Performance Standards," in the form of a draft modification of the CD-Permit. CD-Permit Condition II.J; CD ¶22.n. After taking public

resolution specified in the CD, including pre-implementation review by this Board and by the United States Court of Appeals for the First Circuit.

comments, EPA must notify GE of its "intended final decision," and GE may invoke administrative dispute resolution. CD ¶¶22.o, 141.b(i). Thereafter, EPA must issue its final modification of the CD-Permit specifying the Rest-of-River Remedial Action. CD ¶22.p. The final decision is appealable to this Board under 40 C.F.R §124.19, and then to the First Circuit under RCRA §7006(b). CD ¶¶22.q, 141.b(ii)&(iii). Ultimately, GE will implement the Rest-of-River Remedial Action under CERCLA. CD ¶22.w.

With one potential – and specifically defined – exception, implementation of the specified Rest-of-River Remedial Action is the final step in the process. The United States has given GE a covenant not to sue, under which EPA may not seek to compel GE to conduct additional response actions unless: (1) there are new conditions or information; (2) EPA determines, based on those new conditions or information, that the Rest-of-River Remedial Action "is not protective of human health or the environment"; and (3) the additional response actions sought are related to that determination. CD \P [161, 162, 163.⁴

II. History of Rest-of-River Activities

2005: EPA completed human health and ecological risk assessments of the Rest of River (A.R.219190, 225585, 215498, 222490).

2006: EPA produced a model of the fate, transport, and bioaccumulation of PCBs for use in predicting future PCB concentrations in water, sediments, and fish under various remedial alternatives (A.R.258097). Additionally, at EPA's direction, GE submitted and EPA approved a revised IMPG Proposal (A.R.248201).

⁴ Massachusetts and Connecticut agreed to similar covenants, subject to the same kinds of reopeners. CD ¶¶166-173.

2007: GE submitted a Corrective Measures Study ("CMS") Proposal outlining its plans for the identification and evaluation of remedial alternatives (A.R.260320).

2008: GE submitted a CMS Report (A.R.283374, 580283-85) which evaluated – against the nine selection criteria specified in the CD-Permit – several remedial alternatives for the sediment and the floodplain, and for disposition or treatment of removed sediments/soils. After the Commonwealth and others criticized the ecological impacts of the alternatives, EPA directed GE to prepare a revised CMS (A.R.293437).

2009: While GE worked on the revised CMS, the Commonwealth designated a 13-mile stretch of the Upper Housatonic River, extending from the Confluence to slightly downstream of Woods Pond, as an Area of Critical Environmental Concern ("ACEC") under state law (A.R.558607).

2010: GE submitted a revised CMS Report ("RCMS") (A.R.472605, 580275, 580283). The RCMS contained a detailed evaluation of the original sediment/floodplain remedial alternatives plus two additional alternatives identified in 2009. GE's evaluation was again based on the nine selection criteria specified in the CD-Permit; and it used the assumptions, IMPGs, and other inputs that EPA had directed GE to use (even though GE disagreed with many of them). GE also evaluated alternatives for disposition of removed sediment/soil and recommended use of an engineered on-site disposal facility.

2011: The Commonwealth submitted comments on the RCMS ("MA 2011 Comments"; Attachment 4), which expressed "vigorous" opposition to on-site disposal, and advocated disposal at a facility outside of Massachusetts. *Id.* at 18-19. It also maintained that all of the active remedial alternatives under consideration were too intrusive, and proposed its own

remedial alternative avoiding dredging other than in certain impoundments of the River. *Id.* at 1-2.

2014: EPA issued a draft modification of the CD-Permit, which identified its proposed Rest-of-River Remedial Action (A.R.558619). Ignoring the Commonwealth's plea for a less intrusive remedy, the draft included the removal and disposal of approximately one million cubic yards of sediment and soil, impacting over 400 acres of habitat. EPA also proposed that all removed sediment and soil be transported to, and disposed of at, an out-of-state facility. At the same time, EPA issued a Statement of Basis for its proposed Rest-of-River Remedial Action ("Stmt. Basis"; Attachment 5), and a Comparative Analysis of Remedial Alternatives for the Rest of River ("Comp. Analysis"; Attachment 6). In October 2014, GE submitted detailed comments. ("GE Comments"; Attachment 7).

2015: EPA notified GE of its intended final decision (A.R.582991). GE invoked its rights under the CD to administrative dispute resolution in October 2015 (A.R.583778).

2016: The parties proceeded with formal dispute resolution pursuant to CD ¶135, submitting Statements of Position (and a Reply by GE) ("GE SOP"; Attachment 8; "Region SOP"; Attachment 9; "GE Reply"; Attachment 10). The Regional Administrator designated the Regional Counsel to issue a final administrative decision on the dispute; and the Regional Counsel issued his decision on October 13, 2016 ("Region Decision"; Attachment 11). On October 24, 2016, the EPA Region issued and served on GE the final Permit Modification to select a Rest-of-River Remedial Action (the "Modified Permit"; Attachment 1), accompanied by a Response to Comments ("RTC"; Attachment 12).

STANDARD OF REVIEW

This Petition must demonstrate that the challenged aspects of the Modified Permit are based on (1) findings of fact or conclusions of law that are clearly erroneous and/or (2) an exercise of discretion or an important policy consideration that this Board should, in its discretion, review. 40 C.F.R §124.19(a)(4).

With respect to those issues raised in this Petition requiring the interpretation of the CD, including the CD-Permit, EPA is entitled to no deference because the CD-Permit constitutes a contract and must be interpreted using standard contract principles. *See, e.g., United States v. Armour & Co.*, 402 U.S. 673, 682 (1971); *United States v. ITT Continental Baking Co.*, 420 U.S. 223, 236-37 (1975); *Quinn v. City of Boston*, 325 F.3d 18, 30, 34 (1st Cir. 2003). EPA has admitted that such questions of contract interpretation are subject to "plenary review" under "governing principles of contract law." Region SOP at 9 n.18, 10.

CONTESTED CONDITIONS OF MODIFIED PERMIT

GE challenges the following Modified Permit conditions:

- The requirement that all removed sediments and soils be sent to an off-site disposal facility even though on-site disposal is equally effective and much more cost-effective (Condition II.B.5);
- (2) and (3) The remedies for the Woods Pond and Rising Pond impoundments, which require unnecessary, disruptive, and materially more expensive removal contrary to the CD's remedy-selection criteria (Conditions II.B.2.e and 2.g);
- (4) and (5) The overall Rest-of-River Remedial Action because EPA has notadequately considered the ecological harm that its remedy will cause, and

because much less invasive and disruptive remedies would protect human health (Conditions II.B.2.a-II.B.2.g and II.B.3);

The Downstream Transport and Biota Performance Standards, which exceed EPA's authority by deferring the specification of remedial actions contrary to the CD (Conditions II.B.1.a and II.B.1.b);

(6)

(7)

The requirements for GE to conduct unspecified response actions if a third party undertakes projects on or along the river or in the floodplain, which also exceed EPA's authority by deferring the specification of remedial actions contrary to the CD (Conditions II.B.2.j.(1)(c) and (2)(e), II.B.2.k, II.B.6.b.(1) and (2)(b) and (c), and II.B.6.c);

- (8) The requirement to "ensure" proper inspection and maintenance of certain dams owned by third parties, which EPA has failed to evaluate under the remedy-selection criteria, and which would interfere with federal and state dam regulatory schemes (Conditions II.B.2.j.(1)(a) and (2)(b)); and
 (9) The "MESA/Conservation Net Benefit Plan" requirement, which
 - The "MESA/Conservation Net Benefit Plan" requirement, which constitutes an impermissible effort to extract additional NRD (Modified Permit, Attachment C at C-16).

ARGUMENT

I. The Out-of-State Disposal Requirement Conflicts with the Consent Decree and Is Clearly Erroneous.

In the Modified Permit, EPA insists that all disposal – of about a million cubic yards of sediments and soil – take place at out-of-state facilities. Modified Permit Condition

II.B.5.⁵ This requirement conflicts with the Rest-of-River remedy-selection criteria because it (1) would cost approximately a quarter-billion dollars more than on-site disposal, but (2) would be no more protective than on-site disposal, and (3) would not better satisfy the other CD-imposed remedy selection criteria. The requirement is invalid, moreover, because it is improperly motivated by parochial concerns that the CD does not allow EPA to consider. EPA admittedly seeks to placate opponents of on-site disposal. However, state and local opposition is not a Rest-of-River remedy-selection criterion. Therefore, this aspect of the Modified Permit is arbitrary and capricious because EPA has "relied on factors which [the CD] has not intended it to consider." *Motor Vehicle Mfrs. Ass 'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).⁶

A. In selecting a disposal alternative, EPA is limited to the nine selection criteria enumerated in the CD-Permit.

The nine criteria specified in the CD-Permit (Condition II.G) to govern EPA's selection of a remedy for the Rest of River are familiar benchmarks drawn from familiar sources: (1) the remedy-selection criteria for CERCLA sites in the National Contingency Plan ("NCP"), 40 C.F.R. §300.430, and (2) the remedy-selection criteria for RCRA corrective-action sites in guidance issued by EPA. *E.g.*, 61 Fed. Reg. 19432, 19449 (May 1, 1996). Because the RCRA guidance and the NCP criteria overlap, most of the nine CD-Permit criteria are identical or similar to criteria found in both sources. However, the parties to the CD made important sitespecific choices. Like the NCP, but unlike the RCRA guidance, the Permit criteria include

⁵ EPA now, for the first time, insists that it has only required off-site disposal, and that "[t]he Final Permit Modification does not specify that the disposal facility be out-of-state." RTC at 236. But EPA knows that there are currently no off-site disposal facilities in Massachusetts that can take the Rest-of-River sediment and soil, and it has not explained how it would be feasible to establish an off-site, in-state disposal facility.

⁶ GE commented on this requirement (GE Comments at 9-26); and the matter was briefed in the formal dispute resolution process (GE SOP at 6-11, Region SOP at 42-56, GE Reply at 5-15). It was addressed in EPA's RTC at 237-270.

compliance with ARARs. Like the RCRA guidance, but unlike the NCP, the Permit criteria (1) include control of sources of releases and attainment of IMPGs, and (2) exclude "state acceptance" and "community acceptance."

The purpose of this enumeration is plain. In the CD, the parties agreed that GE is entitled to administrative and judicial review of the selected remedy *before* its implementation. To perform their functions, the reviewing bodies must know both the nature and scope of the remedy being reviewed and the criteria by which EPA's selection is to be judged.

There is, moreover, "no surer way to find out what parties meant, than to see what they have done." *TLT Construction Corp. v. RI, Inc.*, 484 F.3d 130, 136 (1st Cir. 2007). EPA has repeatedly admitted that its selection of the Rest of River remedy was governed by the CD, explaining that it "used nine criteria that were established in the Permit to compare alternatives and to propose and select a final cleanup plan." Stmt. Basis at 25; *see also* Comp. Analysis at 11 ("The criteria for evaluation of remedial alternatives for the Rest of River are specified in Part II, Section G, of the Reissued RCRA Permit"); RTC at 8 (EPA's selection of the remedy "was undertaken in accordance with the Permit criteria"); *id.* at 33, 34 (same).

B. Out-of-state disposal conflicts with the CD-Permit criteria.

1. There is no benefit justifying the monumental cost disparity between on-site and off-site disposal.

Cost is one of the nine Rest-of-River remedy-selection criteria and, with respect to outof-state disposal, it is critical. There is no question that out-of-state disposal would be vastly more expensive than on-site disposal: EPA admits that it would add at least \$160 to \$245 million in cost, RTC at 267, while GE estimates an additional cost of \$250 to \$305 million, GE Comments at 25.

EPA has failed to account for this disparity in its decision-making. This was error. "Agencies have long treated cost as a centrally relevant factor when deciding whether to regulate" because consideration of cost reflects both (1) "the understanding that reasonable regulation ordinarily requires paying attention to the advantages *and* disadvantages of agency decisions," and (2) the "reality that 'too much wasteful expenditure devoted to one problem may well mean considerably fewer resources available to deal effectively with other (perhaps more serious) problems." *Michigan v. Environmental Protection Agency*, 135 S.Ct. 2699, 2707 (2015). According to EPA's own RCRA guidance, where multiple remedies will otherwise satisfy the selection criteria, "cost becomes an important consideration in choosing the remedy which most appropriately addresses the circumstances at the facility and provides the most efficient use of Agency and facility owner/operator resources." 61 Fed. Reg. at 19449.

In light of the enormous cost discrepancy here, it is not enough for EPA to determine that out-of-state disposal might be as effective as on-site disposal. Because the difference in cost is so large, EPA's selection is not cost-effective, within the meaning of the case law and administrative guidance, absent a defensible conclusion that the difference in effectiveness (as measured by the non-cost Permit criteria) is very large too. Although EPA has belatedly *asserted* that out-of-state disposal will be more effective, there is no basis for this claim in the administrative record.

2. On-site disposal is at least as protective and effective as out-of-state disposal.

EPA has admitted that disposal of PCB-containing sediment and soil in a properly designed and maintained on-site upland disposal facility "would provide high levels of protection to human health and the environment...." Stmt. Basis at 35. The Agency has long recognized

that on-site disposal facilities are protective, particularly for waste containing PCBs. That is why EPA has selected on-site (or other local) disposal at numerous PCB sites throughout the country, including in Massachusetts. *See* GE Comments at Table 1, EPA RTC at Table 1; *see also* GE Reply at 11-12.⁷ Indeed, it is why EPA approved the use of on-site disposal facilities for sediment and soil from generally more contaminated portions of *this Site*. CD Appendix D at 38, 41 (noting that "PCBs are relatively immobile due to their low solubility in water," and determining that on-site disposal "will not pose an unreasonable risk of injury to health or the environment"). Since "patently inconsistent applications of *agency* standards to similar situations are by definition arbitrary," *South Shore Hospital, Inc. v. Thompson*, 308 F.3d 91, 103 (1st Cir. 2002), EPA's insistence on out-of-state disposal for the Rest of River is presumptively arbitrary.⁸

EPA cannot escape the implications of this inconsistency. Contradicting its own prior statements and past practices, the Agency has now conjured a number of make-weight justifications for its selection of out-of-state disposal, culminating in the categorical – and categorically incorrect – claim that analyses of the Permit criteria "demonstrate clear distinctions

⁷ For example, at the New Bedford Harbor Site, EPA elected to dispose of a large portion of PCB-containing sediments in an on-site, confined aquatic disposal cell within the harbor itself, after determining that such disposal would "not result in an unreasonable risk of injury to health or the environment." EPA, *Fourth Explanation of Significant Differences for use of a Lower Harbor CAD Cell (LHCC), New Bedford Harbor Superfund Site, Operable Unit #1* (March 2011) at Att. B.

⁸ EPA's preference for out-of-state disposal also flies in the face of the rationale behind Section 104(c)(9) of CERCLA. That provision requires a state in which a remedial action will occur to assure that it has "adequate capacity" for the treatment and disposal of hazardous wastes that are generated. The Senate Report underlying Section 104(c)(9) states: "While everyone wants hazardous waste managed safely, hardly anyone wishes it managed near them. This is the NIMBY syndrome (not in my backyard). Yet if the RCRA and Superfund programs are to work – if public health and the environment are to be protected – the necessary sites must be made available." S. Rep. No. 11, 99th Cong., 1st Sess. (1985) at 23.

between GE's favored approach and the selected remedy with respect to each of the Permit's threshold General Standards." RTC at 269.

For example, with respect to Overall Protection of Human Health and the Environment (one of the CD-Permit's three overriding "General Standards"), EPA relies on the assertion that "on-site disposal facilities may be less effective than an off-site disposal facility because the locations identified in the [RCMS] do not meet TSCA's siting requirements for PCB landfills." RTC at 239. Here EPA is referring to the default siting criteria in EPA's Toxic Substances Control Act ("TSCA") regulations, 40 C.F.R. §761.75(b), relating to soil permeability and hydrologic conditions. In the very next sentence, EPA acknowledges that it has the power to waive these criteria upon a demonstration of equivalent effectiveness, but insists – without any justification whatsoever – that it "believes that it is not appropriate to do so here." RTC at 239.

The Agency's position on the TSCA regulations is arbitrary and capricious because it relies on a false comparison. In the RCMS, GE identified three potential on-site disposal locations: the Woods Pond, Rising Pond, and Forest Street Sites.⁹ EPA's assessment of on-site disposal versus out-of-state disposal is premised on a comparison between (1) the real-world characteristics of these three specific locations, and (2) the hypothetical characteristics of as-yet-unidentified off-site disposal location(s). Thus, when EPA claims that the "on-site disposal facilities [identified by GE] may be less effective at containing waste than an [unidentified] off-site disposal facility," *id.*, it is comparing real apples to a conjectural orange: EPA's preferred side of the putative balance reflects assumptions that this Board cannot test or review.

⁹ The Woods Pond and Rising Pond Sites are potential on-site disposal facility locations which are different from the Woods Pond and Rising Pond impoundments discussed in Sections II and III below.

This is a consequential incongruence. It means that when EPA claims it would be "inappropriate" to waive the TSCA regulations for an on-site disposal facility, there is no way to determine whether this refusal constitutes anything more than a patently inconsistent application of agency standards to similar situations. Since no off-site disposal facility has been identified, there is no administrative record of the "effectiveness" of "off-site" locations.

Moreover, EPA cannot deny that there are only a few existing candidates for off-site disposal, and that at some of them EPA has already waived some of the very same TSCA criteria it refuses to waive here. For example, GE has identified at least three licensed commercial disposal facilities where EPA has waived at least one of the TSCA siting criteria – namely, the specification of 40 C.F.R. §761.75(b)(3) that the bottom of the landfill liner system be at least 50 feet above the historical high groundwater table. See Attachment 13. The Agency has failed to explain why those waivers were called for when even considering corresponding waivers for an on-site facility at the Rest of River is inappropriate.

At the same time, it is clear that EPA has overstated the supposed inability of the on-site locations identified by GE to meet the default TSCA siting criteria. With respect to soil permeability, the claim that a waiver would be "inappropriate" is a *non sequitur* because no waiver would even be needed. The regulations explicitly allow for alternatives to locating disposal sites in "thick, relatively impermeable formations" (namely, the use of soil with a high clay content in a "compacted soil liner" or the use of a synthetic membrane liner), §761.75(b)(1)&(2); and GE could use these alternatives in an on-site disposal facility. As for hydrological conditions, EPA may either: (1) give risk-based approval to an alternate disposal method if such method will not pose an unreasonable risk of injury to health or the environment, §761.61(c); or (2) waive any criteria that are not necessary to protect against such an

unreasonable risk, §761.75(c)(4); and it frequently makes such determinations when engineered safeguards are incorporated into the facility to ensure comparable protection, as would be the case here. *See* GE Reply at Table 1. Indeed, as noted, EPA has waived hydrological default criteria at some of the out-of-state facilities that would be candidates for off-site disposal.

Apart from the TSCA siting criteria, EPA offers nothing but conjecture in its calculation of the on-site half of the effectiveness equation. For example, EPA insists "that there is the *potential* for spills of leachate" during the potential transport of such leachate to GE's water treatment plant in Pittsfield, and that if GE were to build a water treatment facility at the disposal site, "there is the *possibility*, despite best efforts to properly operate the treatment facility, to have releases of PCBs to the River." RTC at 243 (emphasis added). Likewise, in its discussion of Control of Sources of Releases (the second General Standard enumerated in the Permit), EPA supports its decision with the statement that "[e]ven with close EPA oversight of GE's design, construction and operation of a landfill, there remains a *non-zero potential* for issues in the ability long-term for a landfill next to the River to control the sources of PCBs." RTC at 244-45 (emphasis added).

Once again, EPA's speculation about the possible consequences of on-site disposal is entirely one-sided. If the risk of releases from an on-site facility is "non-zero" even with close Agency oversight, so is the risk of releases occurring during rail transportation of over a million yards of contaminated soil and sediment to an out-of-state facility, or once that sediment and soil are deposited at that out-of-state facility. It is arbitrary and capricious for EPA to take into

account highly improbable "non-zero" risks associated with on-site disposal while ignoring the corresponding risks of off-site disposal.¹⁰

Nor is it appropriate for EPA to wave aside the potential adverse consequences of out-ofstate disposal by reasoning, as it repeatedly does, that those consequences will not be felt on the Housatonic. *See* RTC at 239 ("an off-site disposal facility would pose no risk of release to the Housatonic watershed"); 244 ("fair to distinguish ... the disposal of PCBs at a landfill in close proximity to the Housatonic River and its watershed from the disposal off-site far from the Housatonic River watershed"); 251 ("if such issues arise with off-site disposal, the Housatonic River watershed is unaffected"). If the *risk* of adverse consequences is no greater (and, for the reasons stated, EPA has no basis for concluding that it is), then the *location* of those consequences is not a legitimate reason to distinguish between on-site and out-of-state disposal.¹¹

3. Compliance with ARARs does not justify rejecting on-site disposal.

Compliance with ARARs is one of the Rest-of-River remedy-selection criteria. CD-

Permit Condition II.G.1.c. EPA does not contend that the TSCA siting criteria discussed above

are ARARs; however, it argues that certain other regulatory requirements constitute ARARs that

¹⁰ EPA has also claimed that PCB releases to the Housatonic watershed might occur if an on-site facility is not operated or maintained properly over its life, ostensibly making on-site disposal less protective, less effective at preventing future releases, and less reliable over the long term because it would have to rely on proper long-term operation, maintenance, and monitoring ("OM&M") activities. Region SOP at 51. But any disposal facility, wherever it is located, will have a similar potential for releases, and thus will require long-term OM&M. Given that the design, construction, operation, and OM&M of an on-site disposal facility would be subject to EPA approval and under close EPA oversight, such a facility would provide the same protection, control of releases, and long-term reliability as an out-of-state facility.

¹¹ EPA also argues that on-site disposal would affect an area "with no known contamination," adversely affecting the habitat in that area. RTC at 261, 241. This ignores that a disposal facility at the Woods Pond Site would occupy an industrial area used as a sand and gravel quarry, and that the other two sites identified do not include any sensitive or otherwise significant floodplain, wetland, or rare species habitats. *See* GE Comments at 12.

would not be met for an on-site disposal facility. RTC at 246-250. This position, too, is clearly erroneous as a matter of both fact and law. The putative ARARs are at best a pretext for rejecting an equally effective (and much less expensive) disposal option.

First, EPA claims that on-site disposal would require a waiver of the provisions in the Massachusetts solid and hazardous waste regulations that prohibit a disposal facility in an ACEC. RTC at 247, 249. However, as EPA recognizes, *id.* at 247, the Massachusetts solid waste regulations do not cover wastes that contain PCB concentrations at or above 50 mg/kg or are commingled with such wastes because (1) they are considered hazardous waste, 310 CMR 30.131, and (2) the solid waste regulations do not apply to facilities that manage hazardous waste. 310 CMR 16.01(4)(a). Since those are the kinds of wastes that would be subject to on-site disposal here, the solid waste regulations do not constitute an ARAR.

To be sure, the Massachusetts hazardous waste regulations also prohibit a disposal facility in an ACEC, 310 CMR 30.708, and that prohibition is theoretically applicable to the waste at issue here.¹² But that prohibition clearly would not apply to the Forest Street or Rising Pond disposal sites, or other on-site locations that may be identified, that are outside the ACEC, as EPA admits, RTC at 249. The prohibition could potentially apply to the Woods Pond Site, which is located within the boundaries of the ACEC, but its application there would be pretextual because the Woods Pond Site would occupy the grounds of a sand/gravel quarry where on-site disposal would not affect any of the resources of the ACEC. Even if a waiver were needed, it

¹² Apart from this single prohibition, the Massachusetts hazardous waste regulations are not applicable here. As EPA has recognized, *see* Attachment C to Modified Permit at C-12, although wastes containing more than 50 mg/kg of PCBs are listed as hazardous waste in state regulations, those regulations exempt facilities that manage waste with such PCB concentrations in compliance with TSCA regulations. 310 CMR 30.501(3)(a). That exemption, however, does not apply to the ACEC prohibition.

would be appropriate to grant one (and arbitrary not to grant one) since EPA has already decided to waive other ACEC prohibitions that would interfere with its selected remedy – e.g., a prohibition on dredging in an ACEC and on temporary waste management in an ACEC. *See* Attachment C to Modified Permit at C-8, C-13, C-15.

Second, although EPA cites "'possible' wetlands ARARs, RTC at 250, the federal and state wetlands regulations are not applicable to the Woods Pond and Rising Pond Sites (as EPA appears to recognize, *id.*) because the operational footprints of the disposal facilities at those sites would not be located in, and would not affect, any regulated wetlands. *See* GE Comments, Figures 2 and 4. Even at the Forest Street Site, the impact on wetlands would be negligible: the footprint of the disposal facility would merely require construction of an access road across a small stream in the southern portion of the site, and a part of the facility would be located within the areas adjoining that stream. *Id.*, Figure 3. Given the extremely limited extent of these impacts, EPA could readily find – as it did in discussing the Massachusetts Wetlands Protection Act regulations, *see* Modified Permit, Attachment C at C-11 – that the work would be conducted in accordance with the substantive regulatory requirements, avoiding the need to waive these putative ARARs.

Finally, EPA contends that the Rising Pond Site abuts an area of Priority Habitat for the state-listed wood turtle, and claims that "further confirmation would be needed to conclude if there are any effects on priority habitat of rare species in the operational area of the landfill." RTC at 242. This rationale is patently speculative. The Rising Pond facility was designed to ensure that its operational area will be located outside of, and will avoid any impacts on, the Priority Habitat of the wood turtle. *See* GE Comments, Figure 4. This is in stark contrast to EPA's own sediment and floodplain remedy, which would impact over 200 acres of state-listed

wood turtle habitat. *See* RCMS at Appendix L (A.R.580282), Part A. This justification, then, exposes yet another unexplained – and therefore arbitrary – inconsistency between EPA's selection of a disposal remedy and its application of "agency standards" to similar circumstances elsewhere at the Site.

4. EPA improperly relies on state and community opposition to on-site disposal.

EPA has admitted that it selected out-of-state disposal in deference to state and community opposition to on-site disposal. Region SOP at 44-50. Indeed, some Berkshire County residents have vocally opposed siting a disposal facility in their figurative back yard, and the Commonwealth of Massachusetts has also "vigorously" opposed on-site disposal. However, public opinion is *not* a Rest-of-River remedy-selection criterion.

a. State and community opposition are not Rest of River remedy selection criteria.

State and community opposition are not among the nine Rest-of-River remedy-selection criteria. This distinguishes the CD from the NCP, which contains selection criteria that (in EPA's words) "are similar, but not identical to," the Rest-of-River remedy-selection criteria. Comp. Analysis at 11. As noted, a key difference between the NCP and the CD is that the NCP enumerates state and community "acceptance" as remedy-selection criteria (albeit only as tertiary, "modifying" factors), 40 C.F.R. §300.430(e)(9)(iii)(H)&(I) and (f)(1)(i)(C), while the CD-Permit does not mention state or community acceptance at all.

This is a dispositive distinction. Because the CD, including the CD-Permit, is a contract, it must be construed according to principles of contract interpretation. One such maxim provides that "when certain matters are mentioned in a contract, other similar matters not mentioned were intended to be excluded." *See, e.g., Institut Pasteur v. Cambridge Biotech Corp.*, 104 F.3d 489,

495 (1st Cir. 1997). Thus, by adopting some of the NCP selection criteria, but not mentioning state and community acceptance, the CD and Permit expressed the parties' intention to exclude state and local opposition from the remedy-selection calculus for the Rest of River. EPA cannot plausibly contend that this omission was unintentional: all parties to the CD (and especially EPA) negotiated with full knowledge of the existing remedy selection regulations in the NCP, and knew what they were including and excluding.

b. State and local opposition do not affect "implementability."

EPA acknowledges that state and community acceptance is not among the Rest-of-River remedy-selection criteria. RTC at 264. It argues, however, that it could consider state and community opposition as aspects of "implementability," which is a Rest-of-River remedy-selection criterion. *Id.* at 262, 265-266. This claim is untenable because it conflicts with the text, of the parties' agreement. The CD parties knew that, under the NCP, state and community acceptance are modifying criteria for selection of CERCLA remedies, while "implementability" is a separate, balancing criterion. 40 C.F.R. §300.430(f)(1)(i). If implementability and state/community acceptance are distinct criteria under the NCP, then the omission of the latter from the Rest-of-River remedy-selection criteria is dispositive of the parties' intent to exclude it. Settled principles of contract interpretation do not allow EPA to conflate two criteria that the Agency itself has stated and applied separately in the regulatory background.

Nor is there any merit to EPA's claim that on-site disposal would be precluded by three enumerated sub-factors of the implementability criterion: "coordination with other agencies," "regulatory and zoning restrictions," and "availability of suitable on-site or off-site ... disposal facilities." RTC at 260-262; Region SOP at 45; *see* Pre-Existing Permit Conditions II.G.2.e(3), (6), and (7). "Suitability" is a technical consideration that cannot be affected by public opinion.

Although local opposition could, in some cases, have an indirect impact on "coordination with other agencies," the risk here is ephemeral because both the CD and CERCLA exempt on-site remedial actions from the need to obtain state and local permits and approvals. CD, ¶9.a; CERCLA §121(e)(1). As to zoning restrictions, the courts have similarly made clear that, with respect to on-site remedies, local zoning ordinances are preempted by CERCLA.¹³ Thus, EPA's position is not just wrong but an inversion of the contractual status quo: When the parties included regulatory and zoning restrictions as aspects of "implementability," they expected such restrictions to be taken into account in the evaluation of potential *off-site* elements of a remedy, even though under the CD, the statute, and the case law they will have no bearing on the implementability of an *on-site* remedial alternative.¹⁴

EPA also argues that, even though state and community opposition are not among the enumerated remedy-selection criteria, it is free to consider such opposition because the CD-Permit authorizes it to select a remedy based on both GE's submissions and "any other relevant information in the Administrative Record," CD-Permit Condition II.J., and the Administrative Record here includes public and governmental comments about the disposal remedy. RTC at 263. But Condition II.J. of the CD-Permit explicitly limits EPA to "any other *relevant*

¹³ See United States v. City & County of Denver, 100 F.3d 1509 (10th Cir. 1996) (municipal zoning ordinance that prohibited maintenance of hazardous waste in areas zoned for industrial use was preempted by CERCLA and could not bar remedy involving on-site solidification of contaminated soils); *Town of Acton v. W.R. Grace & Co.-Conn.*, Civil Action No. 13-12376-DPW, D. Mass., September 22, 2014 (Town Bylaw that conflicted with an EPA on-site remedy was preempted by CERCLA).

¹⁴ EPA cites RCRA guidance stating, with respect to implementability, that "[s]ome technologies may require state or local approvals," and that "[i]n some cases, state or local restrictions or concerns may necessitate eliminating or deferring certain technologies or remedial approaches from consideration in remedy selection." RTC at 259 (citing a 1994 RCRA guidance document). That guidance relates to regular RCRA remedies, which are not subject to an on-site permit exemption or CERCLA preemption law. Since the remedy here will be implemented under CERCLA, *see* CD ¶22.w, this aspect of the RCRA guidance is inapposite.

information in the Administrative Record" (emphasis added). What defines the universe of "relevant" information? The CD-Permit criteria, which could have included, but do not include, state or community acceptance. Even if the CD were ambiguous in this regard, EPA's position would be refuted by the fact that it has never interpreted the CD to give it free rein in its evaluation of potential remedies. Rather, as noted, EPA has consistently agreed that it evaluated and selected the remedy under the nine enumerated CD-Permit criteria. See Section I.A, *supra*.

Finally, even if the Board were free to disregard the explicitly-limited text of the CD-Permit, there is no factual merit to the notion that the document *implicitly* incorporates public opinion as an element of implementability because state and community opponents might thwart or undermine implementation by appealing the remedy or enacting legislation or regulations to hinder on-site disposal. RTC at 262, 265-266. The CD allows for appeals by Massachusetts and others and thus contemplates the possibility that opponents of the selected remedy may "delay or block" its performance through judicial action. In fact, the "delay" rationale proves too much because GE also has a right to appeal. CD ¶141.b. Thus, the schedule will be the same whether EPA properly selects on-site disposal under the CD-Permit criteria (possibly generating an appeal by Massachusetts or other opponents), or bows to public pressure and selects out-of-state disposal (provoking an appeal by GE). EPA's purported concern over the prospect of adverse legislative or regulatory action is spurious because any such action would be preempted by CERCLA's on-site permit exemption. See, e.g., Rhode Island Resource Recovery Corp. v. *Rhode Island Dep't of Envtl. Mgmt.*, 2006 WL 2128904 at *5 (D.R.I., July 26, 2005) (application of state law requiring state approval for use of out-of-state waste as fill in on-site CERCLA capping remedy violated §121(e)(1) of CERCLA).

5. The exclusion of state and local opposition from the relevant criteria would not "nullify" the CD's provisions for public participation in the remedy-selection process or frustrate the goal of "cooperative federalism."

EPA also argues that, even though state and community acceptance are not Rest-of-River remedy-selection criteria, it *must* be able to consider state and local opposition because it has an obligation to consider public comments on the proposed remedy. RTC at 263-264. Noting that the CD "envisions active public participation in the remedy selection process," EPA says that "[t]his public participation would be empty" if EPA cannot use it to override the remedy-selection calculus dictated by application of the Permit criteria. *Id.* at 263.

This is wrong for two reasons. First, the CD, is a contract, and an unstated term can be read into a contract only when "it is absolutely necessary to introduce the term to effectuate the intentions of the parties." 23 Williston on Contracts §63:21 (4th ed. May 2016 Update). Limiting EPA to the Rest-of-River remedy-selection criteria does not make public participation an "empty" exercise. EPA certainly may consider public comments insofar as they address the application of those criteria, and its voluminous Response to Comments indicates that it did just that. Thus, public participation serves a valid and valuable purpose: it can (and apparently did) inform EPA's consideration of the relevant criteria by adding the public's insights about those criteria to those offered by the CD parties.

Conversely, if EPA selects a remedy on the basis of considerations that the parties excluded from their agreement – giving commenters an effective veto over a decision that is supposed to be governed by the agreed-upon, court-approved criteria – its actions *would* nullify the remedy-selection provisions of the CD and deprive GE of the benefit of an explicit contractual bargain. This is impermissible under the "basic principle of contract law that
constructions that render contract terms meaningless should be avoided." *Summit Packaging Sys. v. Kenyon & Kenyon*, 273 F.3d 9, 12 (1st Cir. 2001).

Finally, EPA cannot – as the Regional Counsel has suggested – consider state and local opposition (which is a criterion excluded from the CD) in the ostensible service of an "overarching principle of 'cooperative federalism.'" Region Decision at 4. That principle certainly pre-dated the execution of the CD, and the parties expressly included it in the CD by requiring EPA to provide the State a "reasonable opportunity for review and comment" on its positions in any dispute with GE. CD ¶135. Whether or not it is "highly unusual" for a remedy to be selected "in the face of strong state opposition," as the Regional Counsel asserted, Region Decision at 4, the terms of the CD control here and EPA, like any other party, is bound by its contractual commitments no matter how unusual or even unique they might be.

II. The Remedy Selected for Woods Pond Conflicts with the CD and Is Clearly Erroneous.

The Modified Permit requires GE to conduct deep dredging and placement of an engineered cap throughout Woods Pond so as to achieve a minimum post-capping water depth of 6 feet. Modified Permit Condition II.B.2.e. Like the selection of out-of-state disposal, this element of EPA's Rest-of-River Remedial Action is disproportionately expensive and disruptive when compared to a smaller alternative that would be equally effective. To justify its decision, EPA improperly minimizes the real costs that will be incurred, while emphasizing a handful of dubious and speculative benefits that *might* be generated.¹⁵

¹⁵ GE commented on this requirement (GE Comments at 41-44); and the issue was briefed in the administrative dispute resolution process (GE SOP at 16-19, Region SOP at 27-31, GE Reply at 19-21). EPA addressed it in its RTC at 159-164.

EPA admits that its remedy would require GE to remove at least 285,000 cubic yards of sediment from Woods Pond, RTC at 161; and GE estimates that the work would actually involve the removal of approximately 340,000 cubic yards of sediment. GE Comments at 41. This is in contrast to smaller alternatives involving (1) the removal of sediment in the shallower portions of the Pond as necessary to place a cap, and (2) as with EPA's remedy, placement of a cap over the entire Pond. During discussions with EPA and the States in 2012, GE presented one such alternative, involving removal to a depth of nine inches in the shallower portions of the Pond, for a total removal of 44,000 cubic yards of sediment, and capping of the Pond. GE Presentation Slides from December 7, 2012.¹⁶

EPA's remedy would be far more costly than this alternative, and others that are similar, in two significant ways. First, it would be much more expensive. The selected remedy will cost about \$165 million. EPA admits that this is at least \$80 million more than the alternative described above, and acknowledges that, by GE's estimate, the disparity may be as big as \$130 million. RTC at 163.¹⁷

Second, EPA's remedy for Woods Pond will have much greater community and environmental impacts. For example, because of the greater removal volume, GE estimates that the selected remedy would require 39,000-46,000 truck trips to import and export materials, and would produce 51,000 tonnes of greenhouse gas ("GHG") emissions. The smaller alternative

¹⁶ This alternative is similar in concept to the Woods Pond component of alternative "SED-5," which GE evaluated under the Permit criteria in the RCMS.

¹⁷ These estimates assume out-of-state disposal of the removed sediments. If an on-site disposal facility were used, EPA's Woods Pond remedy would cost \$73-95 million (depending on the location of the on-site facility), while GE's alternative would cost \$21-24 million – still a difference of over \$50 million. GE Comments at Table 15.

described above would require about 75% fewer truck trips, and reduce GHG emissions by almost 90%. GE Comments at 43 and Tables 13-14.

EPA cannot deny that these impacts will occur. Instead, it argues that any negative impacts of its selected remedy will be outweighed by its benefits. RTC at 162-163. These asserted benefits, however, are either irrelevant under the CD or inherently speculative or both.

In large part, EPA rationalizes its decision by assuming that bigger is better, *i.e.*, that deeper dredging should take place simply because the remediation of Woods Pond "represents the opportunity to remove a significant mass of PCBs from the river system...." RTC at 162. EPA has repeatedly given "mass removal" as the reason for its selection. *See id.* ("At issue here is the opportunity to permanently remove the risks posed by approximately 285,000-340,000 CY ... of PCB-contaminated sediment"); *id.* at 163 (remedy "will remove a significant mass of PCBs"); Region SOP at 28 ("There is no other point on the River where it is possible to remove over 285,000 CY of PCB contaminated material from a single location").

In other words, EPA asserts that a remedy which requires more removal is necessary *because* it will require more removal. That isn't an application of the mandated remedy-selection criteria. The Rest-of-River remedy-selection criteria do not include "mass removal." As far as the CD is concerned, size does not matter (except insofar as a bigger remedy may be more costly). The selected remedy, requiring the expenditure of tens of millions of extra dollars and the emission of thousands of tonnes of extra GHGs, would be contractually permissible only if the additional impacts could be justified on the basis on one or more of the remedy-selection criteria – *e.g.*, in terms of additional protectiveness, long-term effectiveness, etc.

This aspect of EPA's rationale, however, depends on both the inconsistent application of Agency standards and a speculative conclusion derived from dubious assumptions, and is

therefore an impermissible basis for administrative action. *See, e.g., Del. Dep't of Nat. Resources* & *Envtl. Control v. EPA*, 785 F.3d 1, 11 (D.C. Cir. 2015) ("We will reverse when agency action is 'based on speculation'") (citation omitted).

First, projections using EPA's own model show that, compared to EPA's remedy, a smaller sediment removal alternative, such as the alternative described above, would result in: (1) the same reduction in PCB concentrations in fish in Woods Pond and in all of the downstream impoundments in the River, and (2) comparable reductions in direct contact and ecological risks (reaching surface sediment levels far below any threshold for such risks). *See* GE Comments at 41-42 and Figures 8-a through 8-j. Indeed, EPA concedes "that sediment removal sufficient to place a properly designed, constructed, operated and maintained Engineered Cap in perpetuity might achieve the same reductions as this greater PCB removal for certain risks, such as fish consumption, direct contact, and ecological risk in Woods Pond itself." Region SOP at 28; RTC at 162.

EPA nevertheless justifies its vastly more expensive and intrusive remedy on the theory that greater "mass removal" *might* be more effective in the long term because an engineered cap *might* not be "properly maintained and operated in perpetuity to resist floods and ice-scour " and that there *might* someday be a "breach or failure of Woods Pond Dam." RTC at 162. "After all," EPA says, "even with the best intentions and significant resources, it is impossible to guarantee that there will never be a dam breach or a failure in perpetuity, even if GE remains the dam owner in perpetuity, including unknowns or uncertainties associated with potential climate change." *Id.*

These concerns are once again arbitrary by virtue of their inconsistency with EPA's actions elsewhere at the Site: the same concerns could be expressed about any engineered cap,

including those that EPA has instructed GE to install as part of the selected remedy for Reaches 5A and 5C. EPA has no reason to be more concerned about an engineered cap in Woods Pond than in those locations, which actually have a higher velocity than Woods Pond.¹⁸

EPA's rationale here, moreover, is so speculative as to be self-defeating. If the time horizon is expanded to "perpetuity," then the list of "unknowns or uncertainties" isn't limited to maintenance lapses or climate change. If EPA can compel GE to provide a "guarantee" against any unknowns and uncertainties that could arise in perpetuity, then there is no practical limit to what it could require of GE despite the very specific limits on its discretion imposed by the CD.

Indeed, EPA's claim of vulnerability to unstated effects "associated with potential climate change" is completely conjectural, and its claimed risk of cap or dam failure due to poor maintenance is contradicted by the record, which establishes there is a negligible risk of dam failure in any non-speculative time frame because GE itself owns the Woods Pond Dam and conducts the necessary monitoring, maintenance, and repair of the dam to prevent failure.¹⁹ Doing so is critically important to GE because, in the CD, the federal and state governments have promised not to sue for additional NRD, but these covenants do not apply in the case of a failure of Woods Pond Dam (CD ¶176), and thus such a failure would open GE to additional claims for NRD.

¹⁸ At numerous other sites as well, EPA has selected engineered capping, either by itself or following just enough sediment removal to place the cap, as an appropriate remedy for contaminated sediments, including at river and impoundment sites, as EPA concedes. RTC at 198-199.

¹⁹ EPA cites an example of a 1992 release at Rising Pond Dam, RTC at 162, which occurred before GE became the owner of that dam, when the then-owner drew down the water in the Pond to perform repairs. GE would ensure that this type of release does not occur at Woods Pond Dam (or at Rising Pond Dam either, which GE now owns).

Finally, EPA argues that its deep dredging remedy will increase the trapping efficiency of Woods Pond and thereby reduce downstream transport of PCBs. RTC at 162-163. However, while the selected remedy may increase solids trapping efficiency in Woods Pond compared to smaller alternatives, *solids* trapping efficiency does not equate to *PCB* trapping efficiency. EPA's own model indicates very little difference between that remedy and the smaller removal alternative in terms of the annual average PCB loads passing Woods Pond and Rising Pond Dams. *See* GE Comments at 42. While EPA claims that these small differences (0.1 to 0.2 kg/year) "are significant relative to the Downstream Transport Performance Standards," *id.* at 29, current model projections indicate that they would not make a difference in whether the standard is attained, and thus do not justify the selection of a more expensive and intrusive remedy. *See* GE Reply at 21. Moreover, as EPA has admitted, these differences would not translate to *any* reduction in risks due to fish consumption, direct contact, or ecological impacts compared to the smaller alternative, and thus would not increase the protectiveness of the remedy.

III. The Remedy Selected for Rising Pond Conflicts with the CD and the Rest-of-River Remedy-Selection Criteria.

For Rising Pond, the Modified Permit requires removal and capping of sediments to achieve a spatially-weighted average PCB concentration of 1 mg/kg in various averaging areas. Modified Permit Condition II.B.2.g. As with the remedy for Woods Pond, this requirement conflicts with the Rest-of-River remedy-selection criteria and is arbitrary, capricious, and clearly erroneous because it would not have greater risk-based benefits than smaller, less disruptive, and less costly alternatives.²⁰

²⁰ GE commented on this requirement (GE Comments at 50-52); and the issue was briefed in the administrative dispute resolution process (GE SOP at 20-21, Region SOP at 35-36, GE Reply at 21-23). EPA addressed the issue in its RTC at 182-188.

The selected remedy would require GE to remove and dispose of 50,000 cubic yards of sediment from Rising Pond. GE Comments at 50. GE has analyzed a much smaller alternative, involving removal of about 15,300 cubic yards of sediment from the shallower portions of the Pond – as necessary to construct a 6-inch cap – and then capping the entire Pond. *Id.* at 51. Projections using EPA's own model show that, compared to EPA's selected remedy, the smaller alternative would have: (1) the same or greater reduction in PCB concentrations in fish in Rising Pond and the downstream impoundments in Connecticut; (2) the same reductions in ecological exposure; and (3) a comparable reduction in downstream PCB transport past Rising Pond Dam. *Id.* at 51-52.

EPA admits that the smaller remedy described above would achieve similar reductions in fish PCB concentrations, ecological exposures, and downstream PCB transport. RTC at 185. However, it claims that specifying cap thickness now is premature, and it theorizes that placing a cap on top of existing sediments in the deeper portions of the Pond "could change the hydrodynamics of the system and would decrease flood storage capacity." *Id*.

The fact that the precise thickness of the cap has not yet been designed does not undercut the basic point that a smaller removal remedy (even with a somewhat thicker cap) would achieve comparable benefits. EPA's assertion regarding hydrodynamics is unsupported and incorrect. Capping without removal in deeper portions of the Pond would not impact flood storage capacity or cause an increase in flood stage on the River because (1) the backwater effects in Rising Pond are controlled by the dam, and (2) the extra caps would be placed only in areas that are already over 3 feet deep. Letter from GE to EPA, May 24, 2013 (A.R.558617 at pdf 32-34); GE Reply at 22. Using EPA's hydrodynamic model, GE has shown that placing a 6-inch cap in the deeper

portions of the Pond with *no* sediment removal would result in *no* appreciable change in water surface elevations in the Pond and thus not increase flooding. *See id.* at Figure 1.

EPA also claims to be concerned about the potential for a breach or failure of Rising Pond Dam. RTC at 186-187. Again, that concern is unrealistic because – as at Woods Pond – GE owns the dam and conducts the necessary monitoring, maintenance, and repairs to prevent dam breach or failure.²¹ As with the Woods Pond Dam, doing so is critical to GE since the CD's NRD covenants do not apply in the case of a failure of Rising Pond Dam. CD ¶176.

Even as it would create no incremental benefits in terms of risk reduction, the Rising Pond remedy will require greater expense and inflict greater adverse impacts, as EPA concedes, RTC at 188. Assuming off-site disposal by rail, the selected remedy would cost approximately \$31 million, compared to \$17 million for the smaller alternative described above. GE Comments at Table 15.²² Moreover, because of the greater removal volume, the selected remedy would require twice as many truck trips and produce greater GHG emissions than the partial removal/full cap remedy. GE Comments at 52 and Tables 13, 14. Given the equivalent protectiveness and effectiveness of the smaller remedy, the additional cost and impact of EPA's selection cannot be justified.

²¹ With regard to the 1992 release cited by EPA (RTC at 186-187), see note 19 above. The subsequent issues cited by EPA (*id.* at 187) were all addressed and do not indicate a realistic potential for dam failure or breach.

²² With on-site disposal, the selected remedy would cost \$22-26 million (depending on the location of the disposal facility) versus \$14-15 million for the smaller alternative.

IV. EPA Improperly Relied on Unsubstantiated Assumptions that Unspecified "Restoration" Measures Will Mitigate the Remedy's Adverse Impacts on the Restof-River Ecosystem.

EPA's selected remedy is untenable as a whole because the Agency did not properly perform the critical balancing analysis required by the CD. EPA agrees that a potential remedy's asserted environmental benefits must be weighed against its adverse environmental impacts. RTC at 9, 85. The Rest-of-River remedy-selection criteria include both (1) as a General Standard, "overall protection of ... the environment," CD-Permit Condition II.G.1.a, and (2) as part of the Selection Decision Factor of "Long-Term Reliability and Effectiveness," an evaluation of "[a]ny potential long-term adverse impacts" of a remedy on the environment. *Id.* Condition II.G.2.a(3). Consistent with EPA guidance, application of these criteria requires a "balancing" of the selected remedy's benefits against its adverse environmental impacts. Comp. Analysis at 16.²³ Indeed, at other sites, EPA has decided against more extensive remedies due to their adverse ecological impacts.²⁴

There is also no dispute that the EPA's Rest-of-River Remedial Action will have significant negative impacts. The stretch between the Confluence and Woods Pond Dam (the

²⁴ For example, in EPA's Record of Decision for the New Bedford Harbor Site, EPA decided not to require remediation to meet a target sediment PCB cleanup level of 1 mg/kg, which it had found to be a protective threshold for both human fish consumption and marine organisms, on the ground that doing so would "cause more harm than good due to the radical alterations of the harbor and adverse environmental impacts that would result from such an effort." EPA, *Superfund Record of Decision, New Bedford, EPA ID: MAD980731335, OU 01* (September 1998) at 27. Although EPA subsequently issued several Explanations of Significance Differences relating to disposition of the removed sediments at this site, none of them changed that basic determination.

²³ See also EPA, Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, OSWER (December 2005) at 6-6; EPA, Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, OSWER Directive 9285.7-25 (June 1997) at 8-3; EPA, Issuance of Final Guidance: Ecological Risk Assessment and Risk Management Principles for Superfund, OSWER Directive 9285.7-28P (October 1999) at 6.

Primary Study Area or "PSA") is biologically unique, with substantial biodiversity and wildlife habitat and an exceptional number of state-listed rare species, owing in part to its rare, largely unfragmented forested riparian corridor and network of vernal pools. *See* A.R.558607 (designation of Upper Housatonic River as ACEC); MA 2011 Comments at 3-6. Performance of the selected remedy will unavoidably disturb that ecosystem. Affecting more than 400 acres, the remedial work will include, among other things: the removal and capping of sediments in the entire river channel in Reaches 5A and 5C, and portions of the river channel in Reach 5B; bank soil removal and stabilization in at least 3.5 miles of riverbanks in Reach 5; removal and capping of sediments in Woods Pond and Rising Pond and in the impoundments between them in Reach 7; and removal and replacement of approximately 80,000 cubic yards of soil from the floodplain alone, affecting the floodplain forests, wetlands, and vernal pools. Thus, the selected remedy will cause severe and enduring harm to many components of a unique and interconnected ecosystem. *See, e.g.*, RCMS (A.R.472605) Section 5.3; GE Comments at 32-37 and Attachments C, D, and E; MA 2011 Comments at 7-10.²⁵

EPA asserts repeatedly that the putative benefits of the selected remedy would nevertheless outweigh its undeniably significant negative impacts. This conclusion is based on EPA's assumption that the negative impacts will be only "short-term," RTC at 86, 94, 97, because they will be mitigated by "restoration" measures that EPA will eventually identify and instruct GE to take. *See, e.g.*, RTC at 86, 102, 107, 119-121, 129; Region SOP at 23-26. However, in contrast to the detailed record about the destructive impact of the selected remedy,

²⁵ Commenting on the RCMS, the Commonwealth took the position that "in virtually all instances the actual inevitable damage to this existing unique ecological resource" "in the name of meeting purported ecological goals" "will far exceed the theoretical benefit of lower PCB concentrations." MA 2011 Comments at 1.

EPA has never identified these measures, or assessed the likelihood of their success in a way that would enable it (or this Board) to factor "restoration" into the balance; rather, it has simply assumed that sufficient restoration is feasible.

By making that ungrounded assumption, EPA acted without substantial evidence and effectively failed to consider "an important aspect of the problem," and its decision was therefore arbitrary and capricious. *Michigan*, 135 S.Ct. at 2707, quoting *Motor Vehicle Mfrs. Ass 'n*, 463 U.S. at 43.²⁶

The CD-Permit does say that "long-term effectiveness" can be improved by "any measures that may be employed to mitigate [adverse] impacts." CD-Permit Condition II.G.2.a(3). Thus, the CD indisputably requires EPA to select a remedy in which benefits outweigh impacts, and the Agency *might* comply by including restoration measures that sufficiently mitigate the impacts. However, the terms of the CD, which provide for pre-implementation review of the selected remedy, require EPA to present this Board with a decision and a record that will enable it to make a reasoned assessment of EPA's impact-benefit calculations. EPA's restoration-modified balancing analysis cannot justify its remedy selection in the absence of a substantive basis for determining and measuring the *real* mitigating effects of some *real* "restoration" measures.

EPA hasn't provided this basis. It has repeatedly relied on what it calls "restoration" as the panacea for all impacts, but it has never defined those measures. For example, while EPA admitted in its evaluation of alternatives that remedial construction activities will have long-term impacts on both habitats and biota, it insisted that – no matter how it chose among the

²⁶ GE raised this issue in its comments (GE Comments at 32-40); and the issue was briefed in the administrative dispute resolution process (GE SOP at 14-16, Region SOP at 21-26, GE Reply at 16-19). It was addressed in EPA's RTC at 83-134.

alternatives then being studied – those "impacts would be mitigated through proper restoration measures." Comp. Analysis at 28; *see also id.* at 26. But EPA has never specified the nature and extent of those measures; it has never given any content to the meaning of the word "proper"; and it has never analyzed – or given this Board a foundation for analyzing – the availability, feasibility, implementability, and likely success of the restoration measures themselves.

Such details were uniformly missing from EPA's invocations of "restoration" during the remedy-selection process. *See, e.g., id.* at 27 (return of relocated species "would be encouraged through proper restoration that reestablishes the functions of the ecosystem"); 32 (changes to hydrology of vernal pools "would be mitigated by proper restoration techniques"); 35 ("a variety of restoration measures are available to mitigate long-term impacts"). They are likewise absent from EPA's more recent attempts to justify the selected remedy. While its Response to Comments contains numerous pages supposedly discussing restoration, RTC at 101-130, it does not actually describe or analyze the restoration measures to be employed in the Rest of River. For example, with respect to the critical buffer zones around vernal pools in the floodplain, EPA says only that it "believes that these short-term impacts will be mitigated by an active restoration program...." *Id.* at 129.

The Modified Permit does not fill this gap. Paragraph II.B.1.c.(2) requires GE to follow a four-step restoration process. Step one is to "[p]erform a baseline assessment of pre-remediation conditions...." Modified Permit Condition II.B.1.c.(2)(a). At step two, GE must "[d]evelop Restoration Performance Objectives and Evaluation Criteria (RPOEC) to guide the design, remediation, restoration, construction, implementation of Corrective Measures, and evaluation of restoration success." *Id.* Condition (2)(b). In step three, GE will "[d]evelop a Restoration Corrective Measures Coordination Plan." *Id.* Condition (2)(c). Only after completing these

preparations will GE be able to take step four and "[d]esign a Restoration Plan (RP) to return all areas disturbed by the remediation activities to pre-remediation conditions ... to the extent feasible and consistent with the remediation requirements." *Id.* Condition (2)(d).

The process specified in the Modified Permit reveals that EPA still has not developed the concept of "restoration" to a point at which it (or this Board) can meaningfully assess how restoration might actually mitigate impacts, or how "proper restoration measures" could actually affect the balancing analysis. Far from being in a position to substantiate its assurances that the impacts of its selected remedy will be "mitigated through proper restoration measures," EPA still does not know what those measures will be; indeed, it does not even know what criteria might be used to guide their design. Since all of the essential groundwork has yet to be performed, this Board has no basis, aside from assumption or conjecture, for accepting EPA's assurances of an adequate benefit/impact balance. Cf. Appalachian Power Co. v. Train, 545 F.2d 1351, 1361-65 (4th Cir. 1976) (remanding EPA regulatory requirements where the Agency was required to balance "social benefits against social costs," but the report on which EPA relied for supposed quantification of benefits "fail[ed] to explain and document the basis for the numerous assumptions made and relied upon in its analysis," because "it is only after EPA has fully explicated its course of conduct ... that a reviewing court can determine whether the agency has, in light of the goal to be achieved, acted arbitrarily or capriciously").

It is especially inappropriate to assume the eventual success of unspecified "proper restoration measures" here, where the record contains substantial evidence indicating that a restoration program cannot and will not prevent the long-term impacts of the selected remedy. For example, the Modified Permit remedy requires soil removal and stabilization of portions of eroding riverbanks in Reach 5A. Modified Permit Condition II.B.2.a. Regardless of the

technique used, such stabilization will necessarily be designed to prevent the natural processes of bank erosion and lateral channel movement, which result in vertical and/or undercut banks that also provide critical habitat for birds and animals. *See* Attachment C to GE Comments at 13-14; MA 2011 Comments at 8-9. These effects would not be temporary: they would unavoidably result in a long-term negative change in the character of the banks.

As another example, remedial construction will require the removal of as many as 36 acres of mature trees in floodplain wetland forested habitats. *See* GE Comments at Table 11. This is a significant impact, given the importance of mature trees to the wildlife that inhabit these areas. EPA, as is its wont, has made the broad (and in this instance, completely circular) claim that "[r]estoration requirements will result in a mature forest becoming reestablished following restoration....." RTC at 119. However, EPA does not say how long that will take, and the record contains evidence – an opinion rendered by three renowned ecological experts (Professors Brooks, Calhoun, and Hunter) – that reestablishment of a mature forest will take at least 50 to 100 years after planting, *i.e.*, that effective mitigation will not occur for many generations in the life cycles of the affected fauna. Attachment C to GE Comments at 17. More generally, the same experts have opined that "restoration" efforts are not likely to be successful in returning the affected habitats to their pre-remediation conditions. Attachment D to GE Comments.

In the absence of anything more than a notional concept of "restoration," EPA cannot rescue its flawed balancing analysis by arguing that "[e]cosystem restoration is an emerging science that has been practiced successfully at many large riverine sites." RTC at 87. The "successful" restoration efforts it cites are not, in fact, comparable. EPA admits that "rivers are unique and restorations vary depending on the setting," *id.*, and that is especially true here. Unlike the sites at which restoration has been accomplished – for example, the upper two miles

of the Housatonic, which are located in a largely urban area, are bordered by commercial and residential properties, are relatively straight, and have a generally narrow floodplain with steep banks – the PSA consists of a largely undeveloped and unfragmented forested riverine corridor that winds in a sinuous fashion for more than 10 miles through a diverse ecosystem. This area includes an extensive complex of riverbed, riverbank, wetland, floodplain, and backwater habitats and a network of vernal pools, and thus provides exceptional and unique habitats for many wildlife and plant species, including numerous state-listed rare species. The challenges in restoration are far more extreme in that ecosystem than in the more limited habitats present at the supposed "comparables." *See* Attachment D to GE Comments at 19-20; GE Reply at 17 n.18.

Even now, EPA cannot paint a coherent picture of "restoration." In the past, EPA has described restoration as something that will "return ... the functions, values, characteristics, species use, and other ecological attributes existing prior to remediation." Stmt. Basis at 10. In other words, EPA has promised that, no matter what form "restoration" eventually takes, it will "be fully effective and reliable in returning these habitats ... to their pre-remediation state." Comp. Analysis at 26. Now, in the face of overwhelming evidence that this promise cannot be fulfilled, EPA has changed its tune. Cautioning that restoration to pre-remediation conditions will be accomplished only to an undisclosed "extent feasible," RTC at 117, and claiming that "it is understood that the Rest of River will not mirror what is observed today," *id.* at 91, EPA now concedes the emergence of a "novel ecosystem," not a return to the pre-remediation state. *Id.*

This rationale is untenable for two reasons. First, it continues to beg the unanswered question of what is the "extent feasible," while adding a new mystery in the form of an undescribed "novel ecosystem" with an unidentified set of attributes that contain an unknown and unreviewable mix of benefits and detriments. Second, whatever EPA may now be touting, it

is not "restoration." The creation of a "novel ecosystem" is not what EPA purported to analyze in the Comparative Analysis, not what the Agency advertised in the Statement of Basis, and not what it defended in its Statement of Position. It is, rather, an entirely new justification that – given its late arrival and inconsistency with the justifications that preceded it – serves only to emphasize the arbitrary nature of the Modified Permit.

Since EPA has not seriously assessed the prospects for restoration of the Rest of River, it cannot have adequately evaluated the long-term adverse impacts of its remedy as required by the CD. Thus, its comparative assessment of impacts and benefits is, at best, fatally incomplete, and consequently its remedial decision is arbitrary, capricious, and clearly erroneous.

V. The Selected Remedy Is Overbroad Because Much Less Extensive Remedies Would Protect Human Health.

EPA's assertion that the selected remedy is necessary to protect human health (RTC at 39) is not supported by the record. In fact, EPA's remedy is larger, more damaging, and more costly than necessary to satisfy the remedy-selection criterion of human health protection.²⁷

The Modified Permit rests on the premise that PCBs cause adverse health effects in humans at the levels found in the Rest of River, and that those effects are represented by the PCB toxicity values that EPA has adopted. GE has disputed both that general premise and those specific values, and continues to do so. *See* GE Comments at 27. However, even if the Agency's toxicity values were correct, less extensive, disruptive, and costly remedies would fully protect human health. The selected remedy is therefore clearly erroneous because it conflicts with the Rest-of-River remedy-selection criteria.

²⁷ GE raised this issue in its comments (GE Comments at 27-32); and the issue was briefed in the administrative dispute resolution process (GE SOP at 12-14, Region SOP at 15-21, GE Reply at 15-16). EPA addressed the issue in its RTC at 39-42, 49-52, and 79-80.

The Modified Permit would require GE to remove 890,000 cubic yards of river sediment. --Stmt. Basis at 21. EPA purports to justify the removal of so much sediment on the primary ground that it will reduce PCB concentrations in fish and thus protect people who consume fish from the River. *Id.* at 4, 11; RTC at 77. EPA admits that, under its "reasonable maximum exposure" ("RME") assumptions, *no* remedial alternative, including its selected remedy, will reduce PCB concentrations in fish to a level that would allow unrestricted consumption of fish from the Massachusetts portion of the Rest of River over the next 50+ years. Comp. Analysis at 13-15, RTC at 77-79. Thus, no matter what alternative is adopted, fish consumption advisories will need to remain in place indefinitely in Massachusetts. Comp. Analysis at 13. But, EPA says, according to its model, the selected remedy would achieve a *lesser* fish consumption goal in all Massachusetts reaches except one: a PCB concentration of 1.5 mg/kg in fish, based on EPA's assumptions for "average" exposure and a cancer risk of 10⁻⁴ (1 in 10,000) and a non-cancer hazard index ("HI") of 1 for adults. *See id*, at 13, 15.

The record shows, however, that substantially smaller remedies for Woods Pond and Rising Pond would achieve the same reduction in fish PCB levels, both in those impoundments and downstream. *See* Sections II and III, *supra*. For other components of the remedy, less extensive measures would also meet the fish consumption goal of 1.5 mg/kg. For example, EPA's own model shows that alternative SED-5, involving the removal of 377,000 cubic yards of sediment, Stmt. Basis at 21, would likewise achieve a fish concentration of 1.5 mg/kg in all Massachusetts reaches except one, and in fact would achieve lower fish concentration goals in more reaches than the bigger, more intrusive, and more expensive remedy that EPA has selected. Comp. Analysis at 15.

For the floodplain, where the Modified Permit would require GE to remove 80,000 cubic yards of soil, EPA's remedy directs GE to achieve, in various exposure areas ("EAs"), specified PCB standards derived using RME assumptions regarding direct human contact with floodplain soil. Specifically, the remedy requires GE to meet "Primary Standards" based on a cancer risk level of 10⁻⁵ and a non-cancer HI of 1, except in Core Area 1 and possibly Core Areas 2 and 3, where "Secondary Standards" based on a cancer risk of 10⁻⁴ and a non-cancer HI of 1 would have to be met. Modified Permit Condition II.B.3.a.²⁸

The RME exposure assumptions underlying these standards, however, are unrealistic and unsupported. For 62 EAs, designated as "high use" recreational areas, EPA assumes that an individual would use those areas 90 days per year – *i.e.*, three days per week, every week, from April through October – for 47 years. *See* Modified Permit, Table 1. For other EAs, designated as "medium-use" or "low-use" recreational areas, EPA assumes an exposure frequency of 60 or 30 days per year, respectively, for the same duration. *Id.* These exposure frequencies are unrealistic. Many of the EAs consist of wetlands, dense vegetation, and steep slopes; and the empirical data on actual frequency of use – notably, a Floodplain User Survey conducted in 2002 – show much lower usage of the floodplain. *See* GE Comments at Table 9. More realistic exposure frequency assumptions would generate PCB standards that can be achieved by a far smaller and less ecologically damaging floodplain remedy.

In any event, even if the Board were to accept EPA's inflated exposure assumptions, a less disruptive floodplain remedy would protect human health. For example, using EPA's assumptions, alternative FP-9, involving removal of only 26,000 cubic yards of soil, would achieve PCB levels based on a 10^{-4} cancer risk and a non-cancer HI of 1 in *all* of the floodplain

²⁸ Core Areas are areas designated by the Commonwealth as having special habitat value.

EAs, and would achieve levels based on a 10^{-5} cancer risk and a non-cancer HI of 1 in about twothirds of the direct-contact floodplain EAs. *See id.* at 31-32, citing RCMS (A.R.472605), Tables 8-7a and 8-8. Since EPA already accepts a 10^{-4} cancer risk as protective both for fish consumption and for direct contact exposure in a portion of the floodplain (*i.e.*, Core Areas), such an alternative would be fully protective under EPA's own benchmarks.

VI. The Downstream Transport and Biota Performance Standards Violate the Consent Decree and Exceed EPA's Authority.

The Modified Permit contains two numerical Performance Standards that must be achieved by EPA's remedy. The Downstream Transport Performance Standard specifies that certain annual average values for PCB transport (as measured in water flowing over the Woods Pond and Rising Pond Dams) are to be achieved within any five-year period after remediation. Modified Permit Condition II.B.1.a(1). The Biota Performance Standard specifies that an average total PCB concentration of 1.5 mg/kg, measured in fish fillets taken from each reach of the River and backwaters, is to be achieved within 15 years after completion of remediation in that reach. *Id.* Condition II.B.1.b(1).

The Modified Permit provides that, to achieve both Performance Standards, GE "shall conduct all of the Corrective Measures set forth in this Section II.B" – that is, all of the corrective measures identified in the operative provisions of the Modified Permit. Modified Permit Conditions II.B.1.a(2) and II.B.1.b(2). But the Modified Permit also provides that, if the numerical standards are "exceeded" in a specified period following completion of the currently-identified corrective measures, then: (1) GE "shall evaluate and identify the potential cause(s) of the exceedance and propose, to EPA for review and approval, additional actions necessary to achieve and maintain the Performance Standard"; and (2) "EPA, upon reasonable opportunity for

review and comment by the States, will determine any additional actions necessary to achieve and maintain the Performance Standard in accordance with the CD." *Id.* Under this provision, EPA would be able to demand "additional actions" based on a numerical exceedance alone, without determining whether such an exceedance poses any actual threat to human health or the environment. There is, moreover, no chronological limit on EPA's ability to require additional actions once construction-related activities have been completed and the five-year or 15-year grace periods have passed.

These provisions are clearly erroneous because they impermissibly defer the identification of the corrective measures "necessary to meet" the Performance Standards (or, put another way, they purport to give EPA an ability to require new corrective measures that exceeds its authority under the CD).²⁹ It bears repeating that the CD is a contract, "negotiated by the Parties in good faith" in order to, among other things, "avoid prolonged and complicated litigation." CD ¶I.S. EPA can, therefore, demand from GE only what the CD empowers it to demand.

But the CD does not give EPA anything like the open-ended authority it has attempted to commandeer in these provisions. The CD says that the Modified Permit "will set forth the proposed Remedial Action for the Rest of River...." CD ¶22.n. Similarly, the CD-Permit requires that, when EPA modifies that instrument to reflect its selection of a remedy, it must propose both Performance Standards "and the appropriate corrective measures necessary to meet the Performance Standards...." CD-Permit Condition II.J. The CD does not authorize EPA to

²⁹ GE commented on these provisions (GE Comments at 59-64); and the issues were briefed in the administrative dispute resolution process (GE SOP at 24-27, Region SOP at 56-64, GE Reply at 23-26). EPA addressed the issues in its RTC at 62-83.

reserve the ability to require additional remedial actions in the future except when it has determined, on the basis of new information or conditions, that the Rest-of-River Remedial Action is no longer protective of human health or the environment. CD ¶¶162, 163.

EPA claims that it can nevertheless order the "additional work" contemplated by these open-ended provisions under Paragraph 39 of the CD. RTC at 68-70, 72-73. That provision is inapplicable for two reasons. First, Paragraph 39 says that, under certain circumstances (including when it is necessary to achieve and maintain the Performance Standards), EPA can modify the work specified in the Rest-of-River Statement of Work ("SOW") and in the work plans developed thereunder. CD ¶39.a. However, EPA can demand modifications only of work already "specified in the ... Rest of River SOW" and work plans, and it can demand only those modifications that are "consistent with the scope of the response action for which the modification is required....." *Id.* The Modified Permit exceeds this very limited authority because it is not restricted to modifications of existing corrective measures, but purports to give EPA the ability to require *any* "additional actions" it deems necessary to achieve and maintain the Performance Standards. That is not "consistent with the scope" of the Rest-of-River Response Action specified in the Modified Permit.

Second, the CD provides only for modifications of work specified in the Rest-of-River SOW and associated work plans, and expressly requires that the modifications be "incorporated in" those documents. CD ¶39.a. Whether modified or not, work done under the SOW and work plans is necessarily work that *precedes* the completion of remedial activities. *See* CD ¶¶22.x-22.z. But in the Modified Permit EPA attempts to reserve the right to demand "additional activities" that will not take place until at least five years (Downstream Transport) or 15 years (Biota) *after* "completion of construction-related activities." Modified Permit Conditions

II.B.1.a(1) and II.B.1.b(1). Paragraph 39 of the CD does not authorize EPA to modify the selected remedy so far into the future.

EPA also claims that it has authority to require additional future response actions under the CD provisions requiring Operation and Maintenance ("O&M") of the remedy. RTC at 70, 71, 72. O&M activities will be conducted to maintain the effectiveness of response actions that have already evaluated, selected, and implemented, and they will be specified in an O&M Plan. They are not the same as new response actions that would require additional remediation of the Rest of River.³⁰

These provisions are not the relevant source of contractual rights and obligations here. EPA's authority to require new or additional response actions after completion of the specified Remedial Action is expressly defined, and strictly limited, by Paragraphs 162 and 163 of the CD. They provide that, both before and after EPA issues a certification of completion for a Remedial Action, EPA can seek to compel GE "to perform further response actions relating to the Site" only in very specifically defined circumstances. The Modified Permit exceeds that authority.

First, the Modified Permit would allow EPA to demand "additional actions" whenever the selected remedy has not achieved the Performance Standards in question. But EPA doesn't have that right under Paragraphs 162 and 163. Rather, EPA can seek to compel GE to perform further response actions at the Site *only* when (1) either previously-unknown conditions are discovered or previously-unknown information is obtained, and (2) EPA thereby determines that

³⁰ Further grasping at straws, EPA asserts that it has the authority to require additional remediation under Section XV and Paragraph 91 of the CD. RTC at 68, 71. Section XV simply provides for EPA's review and approval or disapproval of GE's submittals and does not authorize EPA to require entirely new response actions. Paragraph 91 gives GE authority to take appropriate release-abatement action in the event of an emergency. EPA has not claimed that an exceedance of a Performance Standard is an emergency.

a previously-selected Remedial Action "is not protective of human health or the environment." CD ¶¶162, 163.

Second, the Modified Permit provides that, if the Performance Standards at issue are exceeded, EPA – after giving the States a "reasonable opportunity to review and comment" – "will determine any additional actions necessary to achieve and maintain the Performance Standard in accordance with the CD." Modified Permit Conditions II.B.1.a(1) and II.B.1.b(1). The CD, on the other hand, does not authorize EPA to unilaterally require additional remedial action. Paragraphs 162 and 163 are "reopeners." They allow EPA to "seek[] to compel" GE to perform further response actions by either (1) instituting proceedings in this action, (2) filing a new action, or (3) issuing an administrative order. CD ¶¶162, 163. In other words, when it proceeds under these provisions, EPA cannot simply determine what GE must do, as it would under the Modified Permit. Instead, the Agency must give GE all the process that is due under the CD by following the specified reopener process. The Modified Permit thus exceeds EPA's authority under both the CD-Permit and the CD, and the offending provisions cannot be enforced.³¹

³¹ In his dispute resolution decision, the EPA Regional Counsel noted that Paragraphs 162 and 163 give EPA authority to require "additional response actions *under certain conditions*." Region Decision at 8 (emphasis added). That is precisely GE's point: to require additional response actions in the future, EPA must satisfy the conditions set out in Paragraphs 162 or 163. The Regional Counsel also asserted, citing CD Paragraphs 44 and 8.d, that "the CD expressly provides that EPA may require additional work in order to ensure protectiveness of human health and the environment." *Id.* at 8 and n.8. Counsel appears to have misread the CD here. Paragraph 44 allows EPA to *select* further response actions if it determines that a response action required by the CD is not protective; but Paragraph 46 makes clear that GE has to perform or fund those additional response actions only if EPA has satisfied the reopener conditions in Paragraphs 162 and 163. Paragraph 8.d simply recites that, if EPA determines that a remedial action is no longer protective, the CD "provides a procedure by which EPA … can seek additional relief." That procedure, of course, is defined in the reopener provisions of Paragraph 162 and 163, which give EPA far less authority and latitude than it has arrogated to itself in the Modified Permit.

VII. The Requirements to Conduct Response Actions for Future River and Floodplain Projects Exceed EPA's Authority under the CD.

The Modified Permit contemplates that third parties (e.g., property owners) may someday perform work on or along the River or in its floodplain. It includes provisions to address any "Legally Permissible Future Project or Work," which EPA has broadly defined to include "construction and repair of structures; utility work; flood management activities; road and infrastructure projects; dam removal, maintenance, repair, upgrades, and enhancement activities; and activities such as the installation of boat/canoe launches and docks." Modified Permit at 2. The Modified Permit requires that, for any such future project or work in Massachusetts, or for any such project or work in Connecticut that would require handling of sediment containing more than 1 mg/kg of PCBs, GE must conduct "response actions to be protective" of the work. Modified Permit Conditions II.B.2.j(1)(c)&(2)(e), II.B.2.k. Similarly, the Modified Permit would require GE to conduct "response actions to be protective" of such projects or work implemented by the owners of certain properties in the floodplain. Id. Conditions II.B.6.b(1)&(2)(b)&(c), II.B.6.c. However, except to say that GE's actions must "be protective" of the third-party work and should allow that work "to be conducted in a manner that maintains Performance Standards and/or maintains the effectiveness of the Rest of River Remedial Action," the Modified Permit does not specify the "response actions" that GE may someday have to perform.

These provisions exceed EPA's contractual authority for similar reasons to those discussed in Section VI.³² They violate the CD's mandate that the Modified Permit "will set forth

³² GE did not comment on these specific requirements because they were not included in the draft permit modification. The draft permit modification would have required GE to pay the incremental PCB-related costs of such projects, and GE commented on those requirements (GE

the proposed Remedial Action for the Rest of River," CD ¶22.n, and the CD-Permit's requirement that, when it selects a remedy, EPA will articulate "the appropriate corrective measures necessary to meet the Performance Standards...." CD-Permit Condition II.J. Moreover, they would give EPA unfettered discretion to impose whatever response actions it eventually decides to require from GE – years, or even decades, in the future – without requiring the Agency ever to evaluate its selection under the Permit criteria, and without giving this Board or the First Circuit any present basis on which to review the Agency's decision.

Therefore, EPA is effectively rewriting the CD to seize a broad measure of authority that it did not receive when the parties "negotiated ... in good faith" over the terms of the decree. CD ¶I.S. It argues that although such broad, contingent authority may not be "specifically endorsed" in the CD, Region SOP at 66, it can nevertheless do what the CD does not empower it to do for two reasons. Neither is a valid justification.

First, EPA has argued that the future-work provisions are justified because they are "analogous" to the provisions of Paragraph 34 of the CD, in which GE agreed to implement "Conditional Solutions" at a very specifically defined category of properties. Region SOP at 65, 67-68; *cf.* RTC at 71. GE agreed to implement Conditional Solutions, as defined in the CD, at specific non-residential properties located in areas upstream of the Rest of River.³³ It also agreed

Comments at 69-70, 73-74). The current requirements were included in the Region's intended final decision, and GE's challenge to them was briefed in the administrative dispute resolution process (GE SOP at 28-29, 32-33; Region SOP at 64-71; GE Reply at 28-30). The issue is briefly addressed in EPA's RTC at 284.

³³ A Conditional Solution under CD ¶34.d requires that, in specific upstream areas, at certain non-residential properties that would not meet the residential cleanup standards and do not have deed restrictions, if the property owner meets certain conditions regarding a new use, GE must conduct response actions, if necessary, to meet the Performance Standards for the new use and/or to ensure the proper excavation, management, and disposition of excavated soils. *See* CD

to the possibility of Conditional Solutions, as defined in the CD, in the Rest of River. However, GE did not broadly agree to conduct unspecified future response actions in connection with any "Legally Permissible Future Project or Work" anywhere in the Rest of River. Indeed, the CD's Conditional Solution provisions do not apply to river projects at all.

Thus, EPA's argument cannot stand. A contract term that requires Act X cannot automatically be expanded to cover any other act that might arguably be "analogous" to Act X. To the contrary, the fact that the agreement expressly required *only* Act X [in this case, a Conditional Solution as defined in the CD] is ordinarily taken as proof that the parties did *not* intend to require Acts Y or Z [in this case, unspecified future response actions in connection with any Legally Permissible Future Project or Work], under the now-familiar principle that "when certain matters are mentioned in a contract, other similar matters not mentioned were intended to be excluded." *Institut Pasteur*, 104 F.3d at 495.

Second, EPA has argued that authority for the future-work requirements in the Modified Permit should be inferred from the CD because they are "essential to maintaining the effectiveness of the cleanup as conditions or uses change," Region SOP at 65, and "are tied to and support the remedy." RTC at 284. Aside from these perfunctory statements, however, EPA has not presented any basis for concluding that the provisions at issue are "absolutely necessary ... to effectuate the intentions of the parties." *In re Hannaford Bros. Co.*, 660 F.Supp.2d 94, 99 (D.Me. 2009) (articulating standard for implying unstated contract terms). *See also Anderson v. Hannaford Bros. Co.*, 659 F.3d 151, 159 (1st Cir. 2011) (existence of implied contract term depends on whether it "is indispensable to effectuate the intentions of the parties").

^{¶¶25.}d(vi)&(vii), 26.h, 29.b, and 30.a(ii), which identify the areas where Conditional Solutions are required.

A contract term can be implied, moreover, only "if it 'is not inconsistent with some express term of the contract." *In re Hannaford Bros. Co.*, 660 F.Supp.2d at 99 (citation omitted). Here, the authority that EPA seeks to derive by implication is inconsistent with the "reopeners" discussed above. CD ¶162, 163. Those provisions make clear that EPA can require GE to perform "additional actions" only in limited circumstances (*i.e.*, when previously unknown information or conditions indicate that the Remedial Action is no longer protective), and then only in limited ways (by instituting new judicial or administrative proceedings, not by simply instructing GE to "conduct response actions").³⁴ The future-work provisions of the Modified Permit would effectively nullify those express terms of the CD, and are therefore clearly erroneous.

VIII. The Requirement to Ensure Proper Inspection and Maintenance of Non-GE Dams in Massachusetts Conflicts with the CD and Exceeds EPA's Authority.

The Modified Permit requires GE to "ensure" the inspection and maintenance of all dams on the River in Massachusetts that it does not own. This obligation encompasses maintaining the dams' integrity and conducting materials handling, disposal, and engineering control activities associated with dam maintenance and repair. Modified Permit Conditions II.B.2.j(1)(a)&(2)(b).³⁵

³⁴ EPA has argued that the future-work provisions do not conflict with the reopeners in that the currently-unspecified future work "is not 'additional' within the meaning of the reopener provisions, because the [Modified Permit itself] provides that GE shall undertake such work." Region SOP at 67. This reasoning is entirely circular. If that were the case, then EPA could include a "corrective measure" in the Modified Permit that simply said, "GE shall undertake any future response actions that EPA later deems protective of human health and the environment," and such a permit condition would not conflict with the covenants.

³⁵ This requirement was not included in the draft Permit modification, and thus GE's comments did not address it. However, GE disputed a prior version of this requirement – which required GE itself to inspect and maintain the dams – in EPA's intended final decision; and the issue was briefed in the administrative dispute resolution process (GE SOP at 27-28, Region SOP at 71-74, GE Reply at 27-28).

This is an improper requirement for two reasons. First, EPA has not satisfied its obligation to evaluate its selection under the Rest-of-River remedy-selection criteria. EPA has admitted that it did not perform such an evaluation. In fact, since this requirement was never proposed or even mentioned before the intended final decision, there is no evidence that it was subjected to any evaluation at all. While EPA claims that it need not evaluate "each element within an alternative," Region SOP at 74, there is no authority for this position. The CD requires an evaluation under the Permit criteria for all components of the selected remedy, including this one.

Second, the dam-maintenance requirement is invalid because it imposes on GE obligations that belong to the dam owners under federal and state law. The non-GE-owned dams in Massachusetts are regulated either by the Federal Energy Regulatory Commission ("FERC") under 18 C.F.R. Subchapter B, or by the Massachusetts Department of Conservation and Recreation under 302 CMR 10.00. Those regulations require the dam owners to inspect, monitor, maintain, and repair their dams as necessary. 18 C.F.R. Part 12; 302 CMR 10.07-10.14. EPA's requirement could interfere with these programs by requiring GE to take any steps needed to "ensure" the inspection and maintenance of those dams, which could even include taking over those responsibilities or taking actions that conflict with those of the dam owners. However, EPA has no authority under the CD to interfere with these existing regulatory programs. In fact, the courts have invalidated actions that would conflict or interfere with FERC's regulatory authority over such dams. *First Iowa Hydro-Electric Cooperative v. Federal Power Comm'n*, 328 U.S. 152 (1946); *California v. Federal Energy Regulatory Comm'n*, 495 U.S. 490 (1990); *Simmons v. Sabine River Authority*, 732 F.3d 469 (5th Cir. 2013).

IX. The MESA Conservation/Net Benefit Plan Requirement Is Overbroad and Violates the CD.

The table of ARARs attached to the Modified Permit says that, where the selected remedy would cause a "take" of any species listed as threatened, endangered, or of special concern under the Massachusetts Endangered Species Act ("MESA"), "EPA would follow the [Massachusetts] regulatory requirements" and require GE to submit and implement a Conservation and Management Plan providing for a "long-term net benefit" to the affected species. Modified Permit Attachment C at C-16. *See also id.* at C-9, C-10, C-11 and RTC at 312. This requirement is clearly erroneous in two respects: (1) it would *not* "follow the regulatory requirements," and (2) it would violate the CD.³⁶

First, the specified process would not follow the Commonwealth's regulatory requirements because the regulations promulgated under MESA allow the Director of the Massachusetts Division of Fisheries and Wildlife to permit a take only if, among other things: (1) "[a]n insignificant portion of the local population would be impacted by the Project or Activity," and (2) the applicant "agrees to carry out a conservation and management plan that provides a long-term Net Benefit to the conservation of the State-listed Species...." 321 CMR 10.23(2). Thus, requiring GE to carry out a Conservation and Management Plan would "follow the regulatory requirements" only when the take would impact an insignificant portion of the local population; if the take would impact a significant portion, it is prohibited altogether and there is no statutory or regulatory authority to require a Conservation and Management Plan.

³⁶ GE commented on this requirement (GE Comments at 67); and the issue was briefed in the administrative dispute resolution process (GE SOP at 33-34, Region SOP at 80-83, GE Reply at 31-32). EPA addressed the issue in its RTC at 141-143.

The record shows that, for at least nine state-listed species, the takes resulting from the selected remedy would impact a significant portion of the local populations. GE Comments at 37, Table 12, and Attachment E. EPA has neither refuted that showing nor limited its Conservation and Management Plan requirement to exclude such takes. Instead, EPA argues that the Commonwealth "has affirmed for EPA" an interpretation of the MESA regulations that would require GE to submit a Conservation and Management Plan even when the take would impact a significant portion of the local population. RTC at 142. If so, then that interpretation is itself arbitrary and capricious, because it cannot be squared with the plain language of the regulation.

Second, this aspect of the selected remedy violates the CD because, by requiring GE to conduct unspecified conservation measures in order to provide a "Net Benefit" to the conservation of the affected species, it effectively extracts compensation for a take and thus constitutes a form of NRD. The CD, however, resolved GE's NRD liability through a combination of monetary payments and specified restoration work. CD Section XXI. In return, the United States and the Commonwealth agreed not to seek additional NRD, except in the case of a failure or breach of Woods Pond or Rising Pond Dam. CD ¶¶161, 166, 176. Any attempt to recover additional NRD in the guise of conservation measures would violate those covenants.

CONCLUSION AND RELIEF REQUESTED

For the foregoing reasons, GE requests the Board to review and set aside the Modified Permit conditions identified above and remand them to EPA for reconsideration and revision consistent with the positions set forth in this Petition.

STATEMENT OF COMPLIANCE WITH WORD LIMITATION

In accordance with 40 C.F.R § 124.19(d)(1)(iv), undersigned counsel certifies that the foregoing Petition for Review contains 16,981 words, as counted by a word processing system, including headings, footnotes, quotations, and citations in the count, but not including the cover, Table of Contents, Table of Authorities, Table of Attachments, Table of Attachments, Statement of Compliance with Word Limitation, signatories, or Attachments; and thus this Petition meets the 17,000-word limitation approved by this Board's order dated November 8, 2016.

Respectfully submitted,

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Dated: November 23, 2016

CERTIFICATE OF SERVICE

I hereby certify that on this 23rd day of November, 2016, I served one copy of the

foregoing Petition for Review of General Electric Company, with the Attachments (separately

bound in two volumes), on each of the following:

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