

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

_____)
In the Matter of:)

GENERAL ELECTRIC COMPANY)
Modification of RCRA Corrective Action)
Permit No. MAD002084093)
_____)

RCRA Appeal No. 16-02

**REGION 1'S RESPONSE TO PETITION OF
HOUSATONIC RIVER INITIATIVE, INC. FOR
REVIEW OF FINAL MODIFICATION OF RCRA CORRECTIVE
ACTION PERMIT ISSUED BY REGION 1**

Respectfully Submitted,

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Attachment 1	AR593921	2016 RCRA Corrective Action Final Permit Modification (Permit)
Attachment 2	AR9420, 38256, 38258	Excerpts from Consent Decree in <i>United States et al. v. General Electric Company</i> Civil Action No. 99-30225-MAP <i>et seq.</i> (October 27, 2000) (Consent Decree, Decree, or CD), including excerpts from Appendix E to the Decree and Annex 1 to Appendix E
Attachment 3	AR586286	Excerpts from EPA's Statement of Position in Support of the Intended Final Decision on the Modification to the Reissued RCRA Permit and Selection of CERCLA Response Action (February 29, 2016) (Region SOP)
Attachment 4	AR593922	Excerpts from EPA's Response to Comments on Draft Permit Modification and Statement of Basis for EPA's Proposed Remedial Action for the Housatonic River "Rest of River" (RTC)
Attachment 5	AR558621	Statement of Basis for EPA's Proposed Remedial Action for the Housatonic River "Rest of River," released June 2014 (Statement of Basis or Stmt/Basis)
Attachment 6	AR38267	Excerpts from Reissued RCRA Permit, Appendix G to the CD (Note: permit was reissued in October 2000 and again effective December 7, 2007) (CD-Permit)
Attachment 7	AR586286	Timeline for Opportunities for GE and the Public to Comment during Rest of River Process (Attachment A to EPA's SOP)
Attachment 8	AR472605, 580275	Excerpts from General Electric's Revised Corrective Measures Study Report, Housatonic River, Rest of River (October 2010) (RCMS) (GE Response only)
Attachment 9	AR508662	EPA's "Housatonic River Status Report: Potential Remediation Approaches to the GE-Pittsfield-Housatonic River Site "Rest of River" PCB Contamination, released May 2012 (Status Report)
Attachment 10	AR557091	Excerpts from Comparative Analysis of Remedial Alternatives for the GE-Pittsfield/Housatonic River Project Rest of River (May 2014) (CA or Comparative Analysis)
Attachment 11	AR593967	Excerpts from EPA's Final Decision in Dispute of EPA's Notification of Intended Final Decision on Rest of River Remedy (October 13, 2016) (Regional Counsel Decision)
Attachment 12	SEMS593981	2016 EPA Fact Sheet "EPA Releases Final Permit Modification for Cleanup of Housatonic River 'Rest of River'"
Attachment 13	AR593972	Massachusetts Concurrence, GE – Housatonic Rest of River Site Final Permit Modification (October 19, 2016)
Attachment 14	SEMS 29935	<i>United States et al. v. General Electric.</i> , No. 99-30225, slip op. at 4 (D. Mass. Filed Oct. 27, 2000) (GE Response only)

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Attachment 15	SEMS596379	Response to EPA's Notice of Uncontested and Severable Permit Conditions, Letter from GE to EPA, December 21, 2016 (GE Response only)
Attachment 16	N/A	Complaint: <i>United States v. General Electric Company</i> (Municipalities Response only)
Attachment 17	AR518898	Excerpts from the Regional Response to the National Remedy Review Board Comments on the Site Information Package for the GE-Pittsfield/Housatonic River Project, Rest of River (August 3, 2012) (HRI Response only)

*Cross-references with AR numbers indicate the document numbers in EPA's Administrative Record for the October 2016 Final Modification of the Reissued RCRA Permit (October 2016). SEMS numbers are for documents in the GE-Pittsfield/Housatonic River Site file, but not in the Rest of River Administrative Record.

GLOSSARY OF TERMS

ANPR	Advanced Notice of Proposed Rulemaking
AR or Record	Administrative Record
ARARs	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
Board or EAB	Environmental Appeals Board
CA or Comparative Analysis	EPA's Comparative Analysis of Remedial Alternatives for the Rest of River
CD or Decree	Consent Decree in <i>United States et al. v. General Electric Company</i> 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
C.F.R.	Code of Federal Regulations
CMS	Corrective Measures Study
DEP	Department of Environmental Protection
Draft Permit	2014 RCRA Corrective Action Draft Permit Modification
E.A.D.	Environmental Appeals Decision
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
FP	Floodplain
Fed. Reg.	Federal Register
GE	General Electric Company
HHRA	Human Health Risk Assessment
HRI	Housatonic River Initiative
IMPG	Interim Media Protection Goals
MDPH	Massachusetts Department of Public Health
mg/kg	milligram per kilogram (equivalent to parts per million)
MGL	Massachusetts General Laws
MNR	monitored natural recovery

GLOSSARY OF TERMS (CONTINUED)

MOD	modified
NCP	National Contingency Plan
NPDES	National Pollutant Discharge Elimination System
NRRB	National Remedy Review Board
OSWER	Office of Solid Waste and Emergency Response
Permit	2016 RCRA Corrective Action Final Permit Modification
Pet.	Petition
PCB	polychlorinated biphenyl
PTW	principal threat wastes
RCMS or revised CMS	Revised CMS Report
RCRA	Resource Conservation and Recovery Act
Region	U.S. Environmental Protection Agency, Region 1
RTC	EPA's Response to Comments on Draft Permit Modification and Statement of Basis for EPA's Proposed Remedial Action for the Housatonic River "Rest of River"
SED	sediment
SEMS	Superfund Enterprise Management System
SIP	Site Information Package
SOP	Statement of Position
States	Massachusetts and Connecticut
Status Report	"Potential Remediation Approaches to the GE-Pittsfield-Housatonic River Site 'Rest of River' PCB Contamination," released May 2012
Stmnt/Basis	Statement of Basis for EPA's Proposed Remedial Action for the Housatonic River "Rest of River," released June 2014
T/D	treatment and/or disposition
U.S.C.	United States Code

I. INTRODUCTION

This appeal arises from EPA Region 1's October 2016 issuance of a Permit Modification ("Permit") (Attachment (Att.) 1) to General Electric Company ("GE") concerning a portion of the Housatonic River ("Rest of River") pursuant to a 2000 consent decree ("Consent Decree", Decree" or "CD"). Att. 2. The Permit was issued pursuant to a process set forth in the Consent Decree that provides that the remedy for the Rest of River will be selected and reviewed as a RCRA permit and implemented as CERCLA cleanup.¹ CD ¶22.q (review of Permit Modification and remedy selection under RCRA), CD ¶22.z (remedy implementation under CERCLA). In selecting the remedy set forth in the Permit, EPA relied upon its scientific, technical and policy expertise, following a decade and a half of analysis, modeling, risk assessments, independent external peer review, and internal EPA reviews. To arrive at the appropriate level and method of cleanup for Rest of River, including different components of the remedy, EPA first evaluated a large and complex Administrative Record ("Record" or "AR")² comprised primarily of scientific and technical material. EPA then exercised its scientific and policy discretion to select among the range of possible outcomes. This lengthy scientific analysis was informed by an extraordinary degree of public participation. EPA repeatedly sought the input and involvement of the Housatonic River Initiative ("HRI"), the States of Massachusetts and Connecticut (collectively, "the States"), and the public.

¹ Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. §§6901 *et seq.*, and Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§9601 *et seq.*, respectively.

² The Record is comprised of information EPA considered or relied on for the Rest of River remedy evaluation, proposal and selection. These materials have been assigned AR numbers. The Record is a subset of the overall Site file for the GE-Pittsfield/Housatonic River Site, that also includes information related to the other response actions undertaken pursuant to the Decree, as well as compliance, enforcement, cost recovery and other Site-related information. These other materials have generally been assigned SEMS numbers.

HRI has petitioned the Board for review of the Permit. EPA responds herein to HRI's petition. HRI's petition is flawed for three reasons.

First, although HRI's Petition turns on interpretations of record materials that are largely technical, HRI in significant measure simply expresses differences of opinion on inherently technical matters within EPA's expertise. While HRI may agree with alternative technical theories on various issues, simply articulating these preferences does not demonstrate error. Rather, determinations made on the record by EPA's experts, even in the face of other plausible options, deserve deference from the Board.

In almost every case, more data can be collected, models further calibrated to match real world conditions; the hope or anticipation that better science will materialize is always present, to some degree, in the context of science-based agency decisionmaking. . . . As in many science-based policymaking contexts [...] the EPA is required to exercise its judgment even in the face of some scientific uncertainty.

Upper Blackstone Water Pollution Abatement Dist. V. United States EPA, 690 F.3d 9, 23 (1st Cir. 2012), *cert. denied*, 133 S. Ct. 2382 (May 13, 2013).

HRI never justifies why EPA's exercise of discretion in selecting a cleanup based on the CD-Permit criteria was flawed. While HRI may have opted for a different approach, this difference of opinion does not constitute reviewable error or abuse of discretion.

Second, HRI has not responded to EPA's Response to Comments regarding several arguments, and has not explained why EPA's response was clearly erroneous or otherwise warrants review. 40 C.F.R. §124.19(a)(4). Without substantively confronting EPA's considered responses to comments, a petitioner cannot hope to garner review, particularly where, as here, the matters in dispute are inherently technical in nature and accordingly warrant deference by the Board to determinations made on the record by EPA's experts.

Third, HRI in some cases simply did not raise some of its arguments in its comments on the Draft Permit Modification (“Draft Permit”). AR558619, counter to 40 C.F.R. 124.13, 124.19(a)(4)(ii).

The Board should deny the Petition.

II. STATEMENT OF THE CASE

II.A Statutory and Regulatory Background

This case involves an unusual combination of EPA’s authority under CERCLA and RCRA. In 1980, Congress enacted CERCLA in response to the serious environmental and health risks posed by industrial pollution. CERCLA was designed to promote the “timely cleanup of hazardous waste sites” and to ensure that the costs of such cleanup efforts were borne by those responsible for the contamination. *Burlington Northern and Santa Fe Ry. v. United States*, 556 U.S. 599 (2009). CERCLA is essentially a remedial statute designed by Congress to protect and preserve public health and the environment. “We are therefore obligated to construe its provisions liberally to avoid frustration of beneficial legislative purposes.” *Dedham Water Co. v. Cumberland Farms Dairy*, 805 F.2d 1074, 1081 (1st Cir. 1986).

Enacted in 1976, RCRA empowers EPA “to regulate hazardous wastes from cradle to grave....” *Chicago v. EDF*, 511 U.S. 328, 331 (1994). As part of RCRA, Congress established a permitting program for facilities that treat, store or dispose of hazardous waste and directed EPA to implement the program. 42 U.S.C. §6925. In 1984, Congress amended RCRA, providing that any person seeking a RCRA permit must perform any “corrective action” necessary to clean up releases of hazardous wastes or hazardous constituents from any solid waste management unit at the facility. 42 U.S.C. §6924(u), (v).

The Board has jurisdiction to review the Permit as a RCRA permit modification. 40 C.F.R. §124.19, Section 7006 of RCRA, 42 U.S.C. §6976.

II.B Factual and Procedural Background

II.B.1 The Housatonic River and the “Rest of River” Contamination

The Housatonic River begins immediately north of Pittsfield, Massachusetts, and continues through Massachusetts and Connecticut to Long Island Sound. Att. 1, Permit, Figure 1. In Pittsfield, the Housatonic River flows adjacent to the former GE facility, where GE used PCBs extensively from 1932-1977. EPA Statement of Position (“SOP”) at 5 (Att. 3). PCBs are classified as a known human and animal carcinogen, and have been linked to a number of other adverse health effects in humans and animals. EPA Response to Comment (“RTC”) 42 *et al.* at 39-42, Response 85 *et al.* at 43; Statement of Basis for EPA’s Proposed Remedial Action for the Housatonic River, “Rest of River” (“Statement of Basis” or “Stmnt/Basis”) at 14-18. (Att. 4 and Att. 5 respectively). During this time, the Transformer Division manufactured and repaired transformers containing PCBs. Att. 3, SOP at 5. Significant amounts of PCBs and other hazardous substances were released to soil, groundwater, Silver Lake, the Housatonic River and were disposed of within and around the facility in landfills, former river oxbows, residential yards, and other locations, including migrating downstream. A former GE manager estimated that 1.5 million pounds of PCBs entered the river system. AR512751. GE itself estimated that between 111,000 and 576,000 pounds of PCBs remain in sediment and floodplain. AR260320, Tables 2-7, 2-8. In light of the foregoing, as well as characterization of the nature and extent of contamination and the assessments of risks, EPA concluded that PCBs have contaminated the riverbed, riverbanks, floodplain, fish, ducks, other biota, and their habitats, and have created unacceptable risks to human health and the environment. Stmnt/Basis at 14-18.

II.B.2 Consent Decree and CD-Permit

In 2000, Plaintiffs the United States, the States, and Defendant GE, entered into a Decree to address PCB contamination from the former GE facility in Pittsfield. The Decree provides for investigation and cleanup of PCBs and other hazardous substances released from GE's former Pittsfield facility, which migrated to numerous areas in Pittsfield and the Housatonic River. The Permit is one component of the Decree.

The "Rest of River" is defined under the Decree to include approximately 125 miles of riverbed and banks, and the associated Floodplain and Backwaters. Att. 1, Permit, Figure 1 and 2. Many of the areas requiring investigation and/or cleanup under the Decree incorporate Performance Standards and corrective measures for addressing PCBs and other hazardous substances. Att. 1, Permit II. However, at the time of Decree entry, the Rest of River investigation was not complete. Therefore, the Decree included a RCRA permit to govern the Rest of River investigation, corrective measures alternatives analysis and remedy selection process. Att. 2, CD ¶22; Att. 6 CD Appendix G (the "CD-Permit"). The Decree also provides that, as part of this process, EPA would modify the CD-Permit to address the risks posed by GE's PCBs in the "Rest of River" through the Permit. Att. 2, CD ¶22.p. Following issuance of the Permit and resolution of any challenges to the Permit, GE was required to perform the Permit's selected Rest of River Remedial Action and operation and maintenance, pursuant to CERCLA and the Decree. Att. 2, CD ¶¶22.p.,z.

II.B.3 Rest of River Remedy Selection Process

The Decree established a process for selecting a cleanup for the Rest of River. This process, which spanned more than a decade, included efforts by EPA beyond those called for by

the Decree to solicit and respond to the views of the public, including HRI.³ Technical/scientific milestones included EPA's river modeling (AR258097), Human Health Risk Assessment ("HHRA") (AR219190) and Ecological Risk Assessment ("ERA") (AR215498), and five independent peer reviews of the modeling and risk assessments. After each peer review, EPA issued a Responsiveness Summary and revised document.⁴ This body of scientific evidence demonstrated unacceptable threats to human health and the environment in the Rest of River system. Att. 4, RTC 42, *et al.* at 39-42. Also, GE submitted its analysis of the nature and extent of Rest of River contamination (RCRA Facility Investigation, AR49294), its identification of preliminary cleanup standards (Interim Media Protection Goals, AR248143), and, in 2008 and 2010, two versions of a Corrective Measures Study to analyze different remediation alternatives. AR283374, AR472605, AR580275. GE's recommendation from its 2010 Revised Corrective Measures Study (RCMS) landed on the second-least amount of PCB removal from Rest of River of proposed options, with on-site disposal of the PCB-contaminated material. Att. 8, RCMS at 11-2 to 11-2.

Based on that work and public input, EPA in 2011 presented a potential remedy for review by two national EPA advisory review boards. AR487308. Following that review, EPA entered into technical discussions with the States. In May 2012, the EPA/States' discussions yielded a jointly-prepared Status Report of potential remediation approaches. Att. 9, Housatonic River Status Report.⁵ Following the Status Report's issuance, at GE's request, EPA and GE

³ For more details on the specific public involvement steps afforded by EPA, see Att. 7, Timeline for Public Comments.

⁴ HHRA (AR204922, 219190), ERA (AR204922, 215498, 580279, 580280, 580281), Modeling (AR65093, 204991, 65093, 229322, 237323, 252993, 258098).

⁵ "Potential Remediation Approaches to the GE-Pittsfield-Housatonic River Site 'Rest of River' PCB Contamination" ("Status Report"), released May 2012.

entered into seventeen months of remedy discussions above and beyond the process opportunities afforded in the Decree. AR558617.

In May 2014, EPA proposed a Rest of River remedy for public comment. Draft Permit Modification (“Draft Permit”), AR558619. The rationale for the proposed remedy is documented in the CA EPA’s Comparative Analysis of Remedial Alternatives (“Comparative Analysis” or “CA”) Att. 10, and the Statement of Basis, Att. 5.

EPA’s remedy proposal followed its evaluation of a wide range of alternatives to address the unacceptable risks posed by GE’s PCB contamination. Att. 5, Stmt/Basis; Att. 10, CA. The CD-Permit describes nine criteria for consideration. There are three threshold “General Standards” to be met including: (1) Overall Protection of Human Health and the Environment (“Protectiveness”); (2) Control of Sources of Releases; and (3) Compliance with ARARs.⁶ In addition, there are six “Selection Decision Factors” to be balanced against one another including: (1) Long-Term Reliability and Effectiveness; (2) Attainment of Interim Media Protection Goals;⁷ (3) Reduction of Toxicity, Mobility, or Volume of Wastes; (4) Short-Term Effectiveness; (5) Implementability; and (6) Cost. Att. 6, CD-Permit II.G. EPA evaluated all the alternatives against these criteria (referred to herein as “CD-Permit criteria” or “nine criteria”) and any other relevant information in the Record.

EPA conducted a multi-layered analysis of the remediation and disposal alternatives against the CD-Permit criteria. For remediation of PCB contamination in sediment and

⁶ ARARs are Applicable or Relevant and Appropriate state and federal Requirements.

⁷ Interim Media Protection Goals, or “IMPGs”, are media-specific protection goals to be used in the Corrective Measures Study as part of the evaluation of remedial alternatives.

floodplain, EPA reviewed nine separate remediation alternatives (denoted as “SED/FP” alternatives). Att. 10, Table 1, Combination Alternatives Matrix, CA at 10. Similarly, in evaluating alternatives for treatment/disposition of the excavated PCB-contaminated material, EPA evaluated five alternatives (denoted as “T/D” alternatives). Att. 10, CA at 59-78. Based on that comprehensive review, EPA proposed a remedy referenced in EPA’s Comparative Analysis as “SED 9/FP 4 MOD” and “TD 1/TD1 RR” that was in its judgment best suited to meet the CD-Permit’s General Standards in consideration of the CD-Permit’s Selection Decision Factors, including a balancing of those factors against one another. Att. 10, CA at 59, 77.

The distinction between the threshold General Standards and the balancing Selection Decision Factors is an important consideration. The CD-Permit describes the process as determining which corrective measure or combination of corrective measures “is best suited to meet the *general standards* ... in consideration of the *decision factors*..., including a balancing of *those factors* against one another.” Att. 6, CD-Permit II.G.3 (emphasis added). Accordingly, EPA’s evaluation of the three threshold criteria – Protectiveness, Control of Sources of Releases, and Compliance with ARARs – requires that those standards be met.⁸ In contrast, EPA’s consideration of the latter six Selection Decision Factors includes the balancing of those factors against one another. EPA’s RCRA Corrective Action guidance includes a very similar structure, establishing a two-phase evaluation for remedy selection. “During the first phase, potential remedies are screened to see if they meet “threshold criteria”; remedies which meet the threshold criteria are then evaluated using various “balancing criteria” to identify the remedy that provides

⁸ See also, 1990 Proposed Subpart S (proposed 40 C.F.R. 264.525(a) cited at Corrective Action for Solid Waste Management Units (SWMUs) at Hazardous Waste Management Facilities, 55 Fed. Reg. 30798, 30823 (Jul. 27, 1990), which specified that remedies must meet the threshold criteria); “Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste Management Facilities, Advanced Notice of Public Rulemaking (“ANPR”), 61 Fed. Reg. 19431 (May 1, 1996) (AR593978).

the best relative combination of attributes.” “Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste Management Facilities, Advanced Notice of Public Rulemaking (“ANPR”), 61 Fed. Reg. 19431 (May 1, 1996) (AR593978). With respect to the Selection Decision Factors, or balancing factors, no one factor is preeminent among them. EPA has stated, any one of the balancing criteria might prove to be the most important at a particular site. ANPR at 19449.

CERCLA’s National Contingency Plan (NCP) structure, while not identical, is similar.⁹ It has two threshold criteria (Protectiveness, and Compliance with ARARs) that relate to statutory requirements that each alternative must satisfy in order to be eligible for selection, and another set of “balancing criteria.” “The Feasibility Study: Detailed Analysis of Remedial Action Alternatives,” OSWER # 9355.3-011FS4 (March 1990).

During the more-than-four-month public comment period, EPA received over 2,000 pages of comments from over 140 commenters, including from the States.¹⁰ Following EPA’s review of the comments, but prior to issuance of the Permit and the Response to Comments, the CD required EPA to identify to GE EPA’s Intended Final Decision, and allow GE the opportunity to contest the Intended Final Decision in informal and formal administrative dispute

⁹ While the Comparative Analysis was performed in accordance with RCRA, reference to general guidance under CERCLA can be instructive in light of the Agency’s desire for parity between the programs. ANPR at 19439 (AR593978): As a general philosophy, EPA believes that the RCRA and CERCLA remedial programs should operate consistently and result in similar environmental solutions when faced with similar circumstances. ANPR 19439 (AR593978). Referencing a 1990 RCRA proposal, EPA stated that one of the Agency’s primary objectives was “to achieve substantial consistency with the policies and procedures of the Superfund remedial program. The logic behind that concept is that since both programs address cleanup of potential and actual releases, both programs should arrive at similar remedial solutions. EPA’s position is that any procedural differences between RCRA and CERCLA should not substantively affect the outcome of remediation.” ANPR 19441 (AR593978).

¹⁰ Public comments are at AR565679, 567442, 568076, 568088, 568410, 568471, 568474, 568476 to 568479, and 579608 to 579621.

resolution. Att. 2, CD ¶22.o. For purposes of the Intended Final Decision (AR582991), and to address GE's and other comments on the remedy proposal, EPA made several modifications to the remedy. The Decree's dispute resolution process included an informal period administered by a neutral third-party mediator, followed by a formal dispute, including written SOPs by GE (AR586218, 587218) and EPA (AR586286).

That process concluded on October 13, 2016 with the decision by the Regional Counsel of EPA Region 1 that supported the EPA's decision-making process. The Regional Counsel provided that "[g]iven the scope and variability associated with a site of this size and complexity, EPA's development of a cleanup approach overall is entirely reasonable and is supported by the data and information in the administrative record." Att. 11, EPA Final Decision at 10. The Regional Counsel concluded, "...I find that overall EPA's reasoning, rationale and analysis are sound and adequately supported by the data and information it has carefully considered." *Id.* Later that month, EPA finalized its Permit to include EPA's selected remedy, and issued its Response to Comments. That remedy relies on a combination of cleanup approaches to address PCB contamination, reduce downstream transport of PCBs, reduce PCBs in fish tissue and allow for greater consumption of fish, and avoid, minimize or mitigate impacts to sensitive areas, species and habitats. Att. 12, 2016 EPA Fact Sheet.

II.B.4 Position of the States

The selected remedy reflects EPA's coordination with, and support from, both States. Both States worked with EPA in developing the remedial approach outlined in the 2012 Status Report, and those key principles remain integral components of the selected remedy. Connecticut's 2014 supportive comments on the remedy note that "when fully implemented [the

remedy] will reduce the downstream migration of PCBs to Connecticut to an acceptable level.”

AR568089. In 2014, Massachusetts provided its written support of the proposed remedy.

AR568093. In 2016, Massachusetts formally concurred with the remedy. Att. 13,

Commonwealth Concurrence. Neither State challenges the Permit before the Board.

II.C Standard of Review

The Board's review of the Permit is governed by 40 C.F.R. Section 124.19. Therefore, it will deny review and not remand unless the Permit decision either is based on a clearly erroneous finding of fact or conclusion of law, or involves a matter of policy or exercise of discretion that warrants review. 40 C.F.R. 124.19(a)(4)(1)(A)-(B); *In re City of Taunton Dept. of Public Works*, NPDES Appeal No. 15-08 slip op. at 8 (EAB May 3, 2016), 17 E.A.D. ____, citing *inter alia*, *Sierra Club v. United States EPA*, 499 F.3d 653 (7th Cir 2007), Revisions to Procedural Rules Applicable in Permit Appeals, 78 Fed. Reg. 5281, 5282, 5284 (Jan. 25, 2013).

EPA's intent in promulgating these regulations was that this review should be only sparingly exercised. *In re West Bay Exploration Co.*, UIC Appeal No. 15-03, slip op. at 5 (EAB Jul. 26, 2016), 17 E.A.D. ____, citing Consolidated Permit Regulations, RCRA Hazardous Waste; SDWA Underground Injection Control; CWA National Pollutant Discharge Elimination System; CWA Section 404 Dredge or Fill Programs; and CAA Prevention of Significant Deterioration, 45 Fed. Reg. 33290, 33412 (May 19, 1980), and *In re Beeland Group, LLC*, 14 E.A.D. 189, 195-96 (EAB 2008). Threshold procedural requirements such as timeliness, standing, issue preservation, and specificity must be met. *In re City of Taunton*, slip op. at 8, citing *In re Indeck-Elwood, LLC* 13 E.A.D. 126, 143 (EAB 2006). A petitioner must demonstrate that any issues and arguments it raises on appeal have been preserved for Board review unless the issues or

arguments were not reasonably ascertainable at the time. 40 C.F.R. 124.13, 19(a)(4)(ii); *In re City of Taunton*, slip op. at 6, citing, *In re City of Attleboro*, 14 E.A.D. 398, 405-06, 444 (EAB 2009); *In re City of Moscow*, 10 E.A.D. 135, 141, 149-50 (EAB 2001).

Additionally, the Board consistently has denied review of petitions that merely cite, attach, incorporate or reiterate comments submitted on the draft permit. *In re City of Pittsfield*, NPDES Appeal No. 08-19, 11-13 (EAB Mar 4, 2009), *aff'd*, *City of Pittsfield v. United States EPA*, 614 F.3d 7 (1st Cir. 2010). "To the extent a petitioner challenges an issue the permit issuer addressed in its Response to Comments, the petitioner must provide a record citation to the comment and response and also much explain why the permit issuer's previous response to that comment is clearly erroneous or otherwise warrants review." *In re City of Taunton*, slip op. at 6-7.

Petitioner bears the burden of demonstrating review is warranted, even when petitioner is self-represented. *In re West Bay Exploration Co.*, slip op. at 5, citing, *In re New Eng. Plating Co.*, 9 E.A.D. 726, 730, n9 (EAB 2001), *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 249-250, n10 (EAB 1999). The Board generally tries to liberally construe the issues presented by a self-represented petitioner. Nonetheless, petitions need to provide sufficient specificity to apprise the Board of the issues being raised. *In re Seneca Resources Corp.*, UIC Appeal Nos. 14-01, 14-02, 14-03, slip op. at 5 (EAB May 29, 2014), 16 E.A.D. ____; *In re Sutter Power Plant*, 8 E.A.D. 680, 687-688 (EAB 1999). The Board also expects the petitions to articulate some supportable reasons or reasons as to why the permitting authority erred or why review is otherwise warranted. *Id.* at 688.

When evaluating a petition that claims a clear error, the Board examines the Record to determine whether EPA exercised its considered judgment. *In re City of Taunton*, slip op. at 8, citing *inter alia*, *In re Steel Dynamics, Inc.* 9 E.A.D. 165, 191, 224-25 (EAB 2000). The Board will uphold a permitting authority's reasonable exercise of discretion if that decision is cogently explained and supported in the record. *In re City of Taunton*, slip op. at 8, citing, *In re Guam Waterworks Auth.*, 15 E.A.D. 437, 443 n7 (EAB 2011), *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 397 (EAB 1997). On matters that are fundamentally technical or scientific in nature, the Board will defer to EPA's technical expertise and experience, as long as EPA adequately explains its rationale and supports its reasoning in the AR. *In re City of Taunton*, slip op. at 8-9, citing, *inter alia*, *In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 510, 560-62, 645-47, 668, 670-74 (EAB 2006). This heavy burden promotes the policy imperative of ensuring "that the locus of responsibility for important technical decisionmaking rests primarily with the permitting authority, which has the relevant specialized expertise and experience." *In re Peabody W. Coal Co.*, 12 E.A.D. 22, 33 (EAB 2005). "[W]here a permit decision pivots on the resolution of a genuine technical dispute or disagreement, the Board prefers not to substitute its judgment for the judgment of the decisionmaker specifically tasked with making such determinations in the first instance." *Id.* at 34.

III. ARGUMENT

III.A HRI's Petition Fails to Satisfy Board's Procedural Requirements

HRI raises a variety of issues. However, there is no basis in the Record to overturn EPA's considered judgment that the selected remedy is the best-suited alternative under the CD-Permit criteria to address PCB contamination. In addition, HRI's claims should be rejected for not satisfying the Board's procedural requirements. These procedural issues are addressed

immediately below in Section III.A. To the extent the Board decides to substantively review these issues, EPA's selection is well justified in the Record, as discussed in Sections III.B through III.H. below.

III.A.1 Petition Relies on Arguments Not Raised in the Public Comment Period

As explained further below, HRI's Petition repeatedly raises arguments that HRI did not raise in its 2014 comments, such as the CERCLA preference for treatment, at RTC III.D.2.c; principal threat wastes, at RTC III.D.2.d; a conceptual site model related to treatment, at RTC III.D.2.e; and HRI's preference for thermal desorption, at RTC III.D.2.g. Att. 4. As such, in accordance with 40 C.F.R. §124.19(a)(4)(ii), those arguments should not prevail.

III.A.2 Petition Fails to Confront EPA's Response to Comments

On all occasions where HRI reiterated its comments on the Draft Permit, HRI failed to address EPA's responses to HRI's 2014 comments. Per 40 C.F.R. §124.19(a)(4)(ii), and as EPA points out below in specific references below, those arguments should not be reviewed by the Board. Specifically, HRI has not shown why EPA's response to the following comments is clearly erroneous or otherwise warrants review: MNR; Riverbank Cleanup; Floodplains and Vernal Pools; Bioremediation; Institutional Controls; and Volatilization.

HRI appears to acknowledge not addressing the RTC Responses, and relying instead on EPA's 2015 Intended Final Decision, in its Petition for Review. Pet. at 3.

The Courts of Appeal consistently uphold the requirement that a petitioner must substantively confront the permit issuer's response to the petitioner's previous objections. *See*,

e.g., City of Pittsfield v. United States EPA, 614 F.3d 7, 11-13 (1st Cir. 2010), *aff'g, In re City of Pittsfield*, NPDES Appeal No. 08-19 (EAB Mar. 4, 2009) (Order Denying Review).

III.B Record Supports Region's Overall Remedy and Specific Remedy Components

EPA's selection of an overall remedy for the sediment and floodplain contamination is clearly supported in the Record, as are the individual components of that remedy. HRI's challenges to the overall remedy and to specific aspects of the remedy cannot overcome EPA's appropriate consideration of criteria pursuant to the CD-Permit, and certainly do not show any clear error or other reason warranting review.

III.B.1 EPA Conducted a Thorough and Fair Remedy Selection Process, Including Its Consideration of HRI's Preferred Alternative

Overall, as discussed in detail in RTC 17 *et al.* at 85-87 (Att. 4), EPA considered HRI's comments and other stakeholder comments in its analysis of the CD-Permit criteria. EPA, in the Record, Comparative Analysis, Statement of Basis, and Response to Comments, explains fully its decision-making in evaluating the CD-Permit criteria for remedy selection. See Sections II.A and II.B herein and Att. 4, RTC 19 *et al.* at 30-31. EPA, based on its evaluation, determined that the selected remedy is best suited to meet the CD-Permit's General Standards in consideration of its Selection Decision Factors, including a balancing of those factors against one another. Att. 4, RTC 19 *et al.* at 31. EPA's determination of the best suited remedy represents a balanced, reasonable approach based on the Permit criteria.

Further, EPA fully evaluated HRI's favored SED 8/FP 7 alternative in selecting the remedy. The Comparative Analysis specifically discusses SED 8/FP 7 in its analysis of all nine criteria. Att. 10, CA §2.2-2.10 at 11-59. Among the Comparative Analysis points regarding

SED 8/FP 7 are that it has the most removal of sediments and soils of the alternatives (CA at 12, 13), a high reduction of annual PCB mass passing Woods Pond and Rising Pond Dams (CA at 17), but also the highest cost (CA at 58) and the greatest potential for short term impacts (CA at 48, 51, 53). Att. 10. EPA was charged with evaluating all nine criteria from the CD-Permit, and based on that evaluation, EPA selected a different remedial alternative as best suited for the Rest of River. The approach selected by EPA is a reasonable, balanced approach that is rational in light of all information in the Record, and warrants deference from the Board.

III.B.2 The Permit Provides the Appropriate Limited Role for Monitored Natural Recovery

HRI expresses concern over the use of Monitored Natural Recovery, or MNR,¹¹ as a component of the cleanup. Pet at 21. EPA's remedy (referenced in the Comparative Analysis as "SED 9 MOD/FP 4") only selects MNR for the flowing portions of Reach 7, and Reaches 9-16. Initially, HRI has not, in its Petition, confronted EPA's RTC, and as such, the petition should not go forward. EPA's RTC, at 189-197, squarely addresses the public comments related to MNR, including the comments made by Environmental Stewardship Concepts on behalf of HRI, Comments 234, 191, 196, 199, 216, 226, and 261. Att. 4.

If the Board substantively considers the argument, HRI's objection is puzzling because alternative SED 8/FP 7, which HRI favors, *includes MNR for the same river reaches as the*

¹¹MNR is well defined and discussed in the Record for the site. Page 7 of the Statement of Basis states that "Rather than requiring active measures such as excavation or capping, MNR typically relies on physical, chemical, and biological processes to isolate, destroy, or otherwise reduce exposure to, or toxicity of, contaminants in sediment and to achieve Performance Standards." Att. 5. The Permit defines MNR as: "a remedy for contaminated sediment that typically uses ongoing, naturally occurring processes to contain, destroy, or reduce the bioavailability or toxicity of contaminants in sediment, and requires monitoring the natural processes and/or concentration of contaminants in surface water, sediment, or biota to see if recovery is occurring at the expected rate, and the maintenance of institutional controls until the necessary reductions in risk have occurred." Att. 1, Permit, at definition 19.

selected remedy. See Table 1, Combination Alternatives Matrix, in the columns labeled “Reach 7 Channel” and “Reaches 9-16”. Att. 10, CA at 10. Table 1 demonstrates that the selected remedy and SED 8/FP 7 both use MNR only in those two components, neither of the remedies includes MNR elsewhere, and both have active remediation for other remedy components. Att. 10, CA at 10. Thus, the Record shows EPA has already incorporated the same role for MNR as HRI is seeking.

Further, EPA has explained MNR’s appropriate role for the Rest of River. Similar to the discussion above and as discussed at RTC 191 *et al.* at 190-193, which was not acknowledged in HRI’s appeal, EPA believes that MNR is an appropriate remedy for the lower concentrations of PCBs found in flowing sections of Reach 7 and Reaches 9 through 16. EPA stated in the RTC that:

MNR in these reaches, coupled with source removal and containment in other reaches is appropriate for several reasons, including but not limited to:

- PCB concentrations in these flowing sections or reaches are low and are diffuse over large areas;
- The sediment is reasonably stable;
- Human health and ecological risks are generally low; and,
- The effects of MNR are exhibited in decreasing trends in fish and benthic invertebrate PCB levels that have been observed in Reaches 9-16 during the last 25 years.

Att. 4, RTC at 191.

Additionally, far from unproven, MNR’s use is consistent with EPA’s 2005 “*Contaminated Sediment Remediation Guidance for Hazardous Waste Sites*” (“December 2005 *Sediment Guidance*”) (AR287029), which identifies MNR, in-situ capping, excavation/dredging,

and a combination of these actions, as primary methods for consideration during the feasibility/corrective measures study of alternatives.¹² For the Rest of River, MNR is generally occurring due to source control and the physical processes of sedimentation and dilution of upstream sources. Although the rate of decrease in PCB concentrations via MNR is unacceptably slow for the highly elevated PCB concentrations in upstream reaches and in the Reach 7 and 8 Impoundments, the lower concentrations in the flowing subreaches of Reach 7 and in Reaches 9 through 16 make MNR the best suited approach to remediation in these reaches.

Moreover, HRI's claims reinforce the limited role EPA afforded MNR in the remedy, selecting MNR only in discrete segments with attributes consistent with those referenced from RTC 191 *et al.* at 191 above. Att. 4.

HRI also seeks support through citing the Passaic River. However, as EPA pointed out in the Response to Comments, with respect to comparison of this remedy decision to other sites, each remedy decision is site-specific and depends on particular factors and criteria for evaluation. Att. 4, RTC 19 *et al.* at 31. Here, for the Rest of River, EPA did a thorough comparative analysis of alternatives based on the unacceptable risks posed by the PCBs at the site. The comparative analysis was site-specific, evaluating different alternatives based on nine CD-Permit criteria, as referenced in RTC 19 *et al.* at 30-31. Att. 4. EPA has detailed its

¹² Additionally, in a response not rebutted by HRI, the RTC made clear to HRI that MNR was not unproven. Att. 4, RTC 191 *et al.* at 190-193 provides multiple examples of sites using MNR for PCBs. HRI did not challenge any of those examples. Furthermore, Chapter 4 of the "December 2005 *Sediment Guidance*" is titled "Monitored Natural Recovery," and devotes 13 pages to a thorough discussion of MNR.

decision-making process under the Permit in the Record, including the Comparative Analysis, Statement of Basis and Response to Comments.

III.B.3 EPA's Approach to State-Listed Species Habitat Is Supported by the Record

Counter to HRI's concerns (Pet. at 11), EPA's decision to perform less PCB removal in areas of rare, threatened or endangered species under the Massachusetts Endangered Species Act ("state-listed species") (M.G.L. 131A) is justified under the remedy selection criteria.

Generally, EPA determined that the remedy described in the Permit provides the best balance in terms of reducing risk and minimizing long-term impacts of the remedy. As crafted, the remedy limits short-term impacts in key habitats and ensures that disturbed areas will be restored after remediation. As outlined in the RTC:

EPA in consultation with the Commonwealth and the State of Connecticut, believes that the selected remedy best meets the permit criteria in part, because it:

- Provides the best balance between meeting the ecological cleanup goals while minimizing and mitigating the impact of the remedy on the river's ecosystem and its state-listed species and habitats;
- Is protective of human health in all areas, including state-designated Core Areas;
- Considers and reduces the impacts on floodplain habitat, especially in Core Areas; and,
- Includes Restoration of Areas Disturbed by Remediation Activities as a general Performance Standard (Section II.B.1.c of the Permit).

Att. 4, RTC 17 *et al.* at 85-86.

The Permit includes specific provisions to avoid impacts to key habitats designated as "Core Area 1." These areas include the "highest quality habitat for species that are most likely to be adversely impacted by PCB remediation activities." These provisions are described in

Attachment B to the Permit (Att. 1), RTC 17 *et al.* at 86 (Att. 4) and set forth in Sections II.B.2.d. (Backwaters) and II.B.3 (Floodplains and Vernal Pools) of the Permit (Att. 1).

Furthermore, HRI does not acknowledge EPA's RTC 54 *et al.* at 215-216 that provides, in-depth, the process, rationale and documentation for incorporating the Core Area concept into the Permit. Att. 4. The Core Area concept was included by EPA in both the Draft Permit and the Permit, with Permit Attachment B providing a detailed outline of the specific Rest of River Core Areas. EPA considered that information as part of its nine criteria evaluation.

III.B.4 EPA Appropriately Balanced Criteria for Riverbank Cleanup

Similarly, HRI's objections to the degree of riverbank cleanup in the Permit do not overcome the thorough analysis performed by EPA. Pet. at 13. EPA provided a detailed rationale in the Response to Comments in response to HRI's prior comments regarding cleanup criteria for riverbanks in Reaches 5A, 5B, and 5C (*see* Att. 4, RTC Section III.C.1. at 143-153). Again, HRI has failed to confront EPA's Response to Comments in its Petition, and as such its allegations should not prevail. Section III.A.1 above.

To the extent the Board does consider HRI's argument substantively, the primary rationale for remediation of riverbanks is to prevent PCB-contaminated bank material from eroding into the river. Att. 4, RTC 79 *et al.* at 145. EPA selected a 5 mg/kg erodible bank standard for Reach 5A because it best balances the objective of minimizing erosion of PCB-contaminated banks and subsequent redistribution of the PCBs with the desire to maintain the dynamic nature of the river. Att. 4, RTC 79 *et al.* at 145. For Reach 5B, the PCB concentrations are lower (median PCB concentration in the upper 0-6 inches is 3.3 mg/kg) and minimizing disturbance of the habitat in that reach is paramount. As EPA detailed in the Statement of Basis

at 24 and the RTC 79 *et al.* at 145, “Based on a rationale similar to that discussed above for river sediment, less bank removal in Reach 5B was incorporated into [the] remedy as part of EPA’s evaluation of the Permit criteria, including balancing the remediation of unacceptable risks posed by PCBs with minimizing the amount of bank excavation to preserve the dynamic character and related biodiversity and habitats of the river.” (Att. 5 and Att. 4, respectively). Furthermore, as EPA discusses in RTC 79 *et al.* at 145, due to the limited amount of riverbank soil in Reach 5C (banks generally less than one foot in height), EPA determined that applying a bank standard in Reach 5C was unnecessary. Att. 4.

III.B.5 HRI’s Citation from National Remedy Review Board (NRRB) Comments in 2011 Has Been Addressed

In 2011, the NRRB pointed out that at some point in the future, EPA may determine that leaving the remaining waste on site is not protective of human health and the environment. Following that, Region 1 responded to the NRRB in August 2012 (Att. 17 at 5-8), responding directly to the NRRB comment by pointing to how, subsequent to the NRRB comment, Region 1, EPA Headquarters, and the States worked cooperatively to discuss potential approaches to clean up the Rest of River. Region 1 discussed how EPA’s 2012 draft Outline of Potential Performance Standards-Appendix A and the Revised Comparative Analysis-Appendix B reflect the discussions between the parties. Appendix A and Appendix B, respectively of Region’s 2012 response to the NRRB. AR518898. Following that exchange, the Draft Permit, the Intended Final Decision, and the Permit have all included multiple protections for future determinations. AR558619, AR582991, and Att. 1, respectively. As discussed in RTC 667, 668, and 669 at 69-71, and 446, 451 at 328, the Decree Paragraph 39.a, and Paragraphs 162-163 provide the ability to address unprotective remedies in certain circumstances. Att. 4. Moreover,

the Permit has provisions for future use change in the floodplain in Section II.B.6.b and II.B.6.c and compliance requirements for Downstream Transport and Biota Performance Standards in Sections II.B.1.a and Section II.B.1.b, respectively. Att. 1. Additionally, long-term monitoring in both Massachusetts and Connecticut is a necessary component of MNR to ensure that PCB concentrations in affected media (including surface water, sediment, and biota) are occurring at the expected rate. GE is required to perform such long-term monitoring pursuant to Sections II.B.4, II.B.6, and II.H of the Permit, and the associated costs are included in the estimated cost for the remedial action. Att. 1. The Record is clear that EPA's approach to riverbank cleanup is rational in light of all the information in the Record.

III.B.6 The Permit Provides for Effective Methods to Remove PCB Contamination

As the Record shows, EPA agrees with HRI that there are effective methods and ecologically sound ways to remove PCBs from the environment. Pet. at 26. However, the Record contradicts HRI's claim that concerns of availability dictated a remedy change. As discussed in Section 2.9 of the Comparative Analysis at 56, it is very clear that established and effective methods are available, and have been used in similar situations. Att. 10. "The equipment, materials, procedures, and personnel necessary to construct and operate the technologies comprising each of the alternatives are all readily available. All of the alternatives would be implemented using well-established and available in-river remediation and floodplain soil removal methods and equipment, available construction technologies to build land-based support facilities, and readily available methods to implement monitoring and institutional controls. The remedial components selected (i.e., sediment removal in the dry or wet via mechanical or hydraulic methods, sediment capping and thin-layer capping, floodplain soil removal and backfilling, and MNR) have been used in similar applications as part of previous

work at the GE-Pittsfield/Housatonic River Site and at many other sites.” Att. 10, CA at 56. Furthermore, as discussed in RTC 195 at 368, EPA addressed HRI’s comment concerning effective removal of contaminated media. Att. 4. EPA agrees that the best available technologies and equipment will need to be considered during remedial design of each phase of the project, and that adaptive management principles be employed to make improvements to the process where possible during the life of the project. HRI has shown no clear error or other reason warranting review of EPA’s approach. EPA’s Remedy for Floodplains and Vernal Pools Is Fully Supported by the Record.

With respect to HRI’s specific concerns about the degree of PCB removal in the floodplains and Vernal Pools, initially, HRI does not confront the RTC (54 *et al.* at 215-216) in its Petition; therefore, consistent with III.A.2., the Board should not entertain HRI’s argument. Att. 4.

However, to the extent the Board does consider the substantive assertions, EPA agrees that PCBs pose an unacceptable risk to humans and wildlife.

EPA, however, evaluated the CD-Permit criteria and selected different approaches for Floodplain and Vernal Pools than HRI prefers. As discussed in the RTC 54 *et al.* at 215 - 216, EPA evaluated several alternatives for the remediation of floodplain soil, with estimated removal volumes ranging from 26,000 cubic yards to 615,000 cubic yards. Att. 4. There is generally greater reduction in risk to human health and ecological receptors as the volume of material increases, however, there are also associated increasing short-term impacts to floodplain habitat supporting state-listed species. Under the CD-Permit remedy selection process, these are among the criteria that need to be evaluated.

From October 2011 through May 2012, EPA and the States held mediated discussions to resolve issues relating to Rest of River remediation, including the Vernal Pools and Floodplain. Those discussions culminated in the release of a jointly-prepared May 2012 Status Report.¹³ Att. 9. In the Status Report, the governments outlined their shared approach and hierarchy to avoid, minimize, or mitigate impacts to different Core Areas, while also considering potential for downstream transport of contamination. Att. 9. The Status Report approach was later proposed in the Draft Permit (AR558619) and selected in the Permit (Att. 1).

The scope of Floodplain cleanup in the selected remedy continues to be protective of human health. In fact, the selected approach provides a more stringent level of cleanup for human health in many areas of the Floodplain than EPA had earlier proposed in 2011 in its NRRB submittal (e.g., cleanup to a 1×10^{-5} Excess Lifetime Cancer Risk in non-core areas rather than 1×10^{-4}). It also provides a balance between cleanup for protection of ecological receptors with the need to avoid and minimize impacts to critical habitat areas for state-listed species and Vernal Pools, as described in the Comparative Analysis, at 13 (Att. 10).

In summary, to the extent that the Board considers HRI's petition on these issues, HRI has shown no clear error or other reason for review of EPA's selected remedy for PCB-contaminated Floodplains and Vernal Pools.

¹³ HRI, in the context of its challenge, also raises concerns about the position of Massachusetts and its role in remedy selection. The Statement of the Case, above at II.B.4, provides detail on Massachusetts' position in the 2012 Status Report (Att. 9), the Draft Permit (AR558619), and its concurrence with the Permit (Att. 1).

III.C Off-Site Disposal¹⁴

HRI expresses concerns with the possibility of on-site disposal of Rest of River PCB contamination, and with landfilling generally. Initially, HRI objects to any remedy/treatment/disposal option that moves PCBs from one location to another in Berkshire County, as it is another burden on top of “the significant price for GE's environmentally irresponsible behavior” that these communities have already paid (Pet. at 27). HRI notes that, from an environmental justice perspective, all three potential locations GE suggests for on-site disposal are communities whose median household income is significantly lower than the Massachusetts median household income. *Id.* EPA understands HRI's concern regarding on-site disposal, but did not select on-site disposal at any of the three potential locations in Berkshire County.

Regarding landfilling generally, HRI argues that “placement of contaminated materials either at on-site or off-site landfills would simply transfer the risk of release from one location” to another. *Id.* at 30. HRI cites studies noting landfill liner system deficiencies, and increased risk of health effects near landfill sites or hazardous waste sites. *Id.* at 38.

EPA evaluated the selected treatment/disposal remedy as well as the other alternatives on their long-term reliability and effectiveness, as well as their ability to control sources of releases, as part of the CD-Permit analysis. As noted in RTC 56 *et al.* at 235, EPA performed a thorough comparative analysis of remedial alternatives with respect to the criteria specified in the CD-Permit, analyzing the key tradeoffs among different treatment/disposal alternatives. Att. 4. That

¹⁴ HRI's petition combines discussion of disposal options with treatment options. In this Response, the treatment discussion is addressed immediately below in Section III.D.

Comparative Analysis supports EPA's determination of the selected treatment/ disposal alternative – off-site disposal – as best suited to meet the CD-Permit's General Standards in consideration of the CD-Permit's Selection Decision Factors, including a balancing of those factors against one another. *See* Att. 10, CA at 59-77. EPA's Comparative Analysis included the evaluation of each of the treatment/disposition alternatives against nine remedy selection criteria, including: Controlling the Sources of Releases and Long-Term Reliability and Effectiveness (the magnitude of residual risk, the adequacy and reliability of the alternatives, and the potential long-term adverse impacts on human health or the environment). EPA determined that alternative TD-1 (off-site disposal of PCB-contaminated sediment and soil in a permitted landfill) and TD-1 RR (based on TD-1, but specifying that transport of excavated material by rail be maximized) would effectively isolate PCB-contaminated sediment and soil from being released to the environment, and thus would best meet the Control of Sources of Releases criterion among the different treatment/disposition alternatives. Att. 10, CA at 62. With respect to Long-Term Reliability and Effectiveness, TD-1 and TD-1 RR were found to permanently isolate materials from direct contact with human and ecological receptors (CA at 63); the Adequacy and Reliability of Alternatives sub-criterion favored TD-1, TD-1 RR or TD-3 (CA at 64); and with respect to the Potential Long-Term Adverse Impacts on Human Health or the Environment sub-criterion, TD-1 and TD-1 RR were found by EPA to have the least long-term impacts (CA at 66). Att. 10.

In addition, the Permit requires regular checks on the protectiveness of all off-site disposal facilities with the requirement that such facilities comply with EPA's off-site rule. Under the off-site rule, EPA determines the acceptability "of any facility selected for the treatment, storage, or disposal of CERCLA waste," including determining if there are relevant

releases or violations (see 40 C.F.R. §300.440 (a)(4)). Att. 1, Permit II.B.5.a. These checks prohibit the disposal of material at landfills with violations to their permit requirements, and thus ensure protectiveness. EPA's technical judgment regarding landfilling in the Permit deserves deference.

III.D EPA Adequately Analyzed Other Treatment Technologies

Contrary to HRI's allegations (Pet. at 28), EPA properly considered treatment technologies, including bioremediation and thermal desorption, in the remedy selection process. In reaching its decision, EPA used its considered judgment based on its technical and scientific review. As discussed below, for both procedural and substantive reasons, HRI's arguments should not prevail.

III.D.1 HRI's Failure to Preserve Treatment-Related Arguments for Review, or to Confront Region's Response to Comments Precludes Consideration of Claims

The Board need not consider HRI's petition based on procedural flaws. First, several of HRI's arguments regarding treatment were not raised in its 2014 comments, including Biotech, CERCLA preference for treatment, "principal threat wastes", EPA cleanup expectations, and thermal desorption. Thus, those claims should not go forward. Second, all other treatment-related contentions in HRI's petition did not confront EPA's Response to Comments that addressed the same arguments raised in the Petition. As such, and as discussed below, those arguments should be dismissed. EPA's Extensive Consideration of Treatment Technologies Deserves Deference.

To the extent the Board decides to substantively review these issues, EPA's decision-making on each issue is well justified by the Record.

III.D.2 Consideration of Alternative Technologies in Corrective Measures Study ("CMS") Process

EPA, as discussed in RTC 20 *et al.* at 270-272, did require GE to evaluate alternative innovative technologies (including bioremediation) in its CMS Proposal. Att. 4. Several technologies were preliminarily evaluated (screened). In-situ methods evaluated included physical treatment (solidification/stabilization), chemical treatment (chemical dechlorination, or dehalogenation), biological treatment, and thermal treatment (including vitrification). Ex-situ methods evaluated included physical treatment (solidification/stabilization), biological treatment, chemical (solvent) extraction (also referred to as soil washing), chemical destruction (including dechlorination), thermal desorption and thermal destruction (incineration). AR260320 at 4-19 to 4-21, 4-39 to 4-41, 4-49 to 4-61 and 4-66. This includes all of the technologies listed in the EPA document cited by HRI in its Petition, EPA Technology Alternatives for the Remediation of PCB-Contaminated Soils and Sediments, EPA-600-S-13-079 (i.e., incineration, thermal desorption, chemical dehalogenation, solvent extraction, soil washing, solidification/stabilization, bioremediation and vitrification). All but two of these technologies were eliminated based on an initial review of the technologies. Retained for further analysis in the CMS were thermal desorption and soil washing/chemical extraction. AR260320 at 4-19 to 4-21, 4-39 to 4-41, 4-49 to 4-61 and 4-66.

The detailed analysis in the CMS included a pilot study for soil washing, for which results are documented in the Revised CMS. AR580275, Chapters 9.4 and 9.5 and AR580282, Volume 2, Appendices O and P. As discussed in RTC 60 *et al.* at 270-272 (Att. 4), EPA evaluated these technologies in its remedy selection evaluation for treatment/disposition of

contaminated material, and documented the results in the Statement of Basis at 35-39 (Att. 5) and the CA at 59-78 (Att. 10).

Furthermore, as discussed in RTC 60 *et al.* at 270, the Permit, where appropriate, requires alternative treatment technologies by specifying the use of an amendment such as activated carbon and or other comparable amendment in lieu of excavation/dredging (which precludes the need to further treat or dispose of this material) in Reach 5B sediment, in certain Backwaters, and in Vernal Pools. Att. 4; also see Att. 1, Permit II.B.2.b, II.B.2.d, and II.B.3.b.

III.D.2.a Bioremediation

In its 2014 comments on the Draft Permit, HRI referenced use of bioremediation, and in particular, a vendor named Biotech. HRI suggested its bioremediation technology was successfully used at the New England Log Home Site in Great Barrington, Massachusetts. EPA directly responded to this comment. *See* Att. 4, RTC 60 *et al.* at 272. HRI has not addressed EPA's response in its Petition (Pet. at 28), and as such, this challenge should not be considered. *See* Section III.A.2 above.

However, to the extent the Board reviews HRI's claim substantively, bioremediation has been considered extensively. As discussed above in III.C.1.a, a bioremediation screening evaluation was conducted as part of the CMS Proposal (AR260320 at 4-19 to 4-21, 4-39 to 4-41, 4-49 to 4-61 and page 4-66) and was reviewed by EPA. With respect to HRI's references to Biotech (Pet. at 37), EPA reiterates from the RTC:

In addition, there has been a renewed request for EPA to mandate bioremediation as the primary remedy. However, as was the case in 2007, there has not been to date sufficient demonstration that bioremediation would be effective and meet the project goals. For example, for one of the projects cited, New England Log

Homes, the Massachusetts DEP terminated the pilot project, in part, because it determined in a letter dated August 18, 2015 that:

There is no documented evidence found nor are sufficient measures proposed that will conclude that any reduction in dioxin concentrations can be attributed to bioremediation. In fact, all evidence to date points to dilution and redistribution of the dioxin contaminated soil across the site and at depth.

Att. 4, RTC 60 *et al.* at 272.

In addition, HRI's citation to the use of bioremediation at Superfund sites, while an accurate reference for addressing *soil and groundwater contamination*, does not mention *sediment*. (Pet. at 33). U.S. EPA "Contaminated Site Cleanup Information Bioremediation Overview." Furthermore, the document states that: "[c]ontaminants treated using bioremediation include oil and other petroleum products, solvents and pesticides." PCBs are not referenced in this document. Furthermore, HRI's referenced document indicates that for superchlorinated PCBs (which are the predominant PCBs present at this site), the likelihood of microbial degradability is "low."

For these reasons, no re-evaluation of bioremediation is warranted at this time.

III.D.2.b CERCLA Preference for Treatment

HRI claims that the Permit does not comply with CERCLA's preference for treatment. Pet. at 31. The Record shows, however, that EPA has been fully consistent with CERCLA's preference for treatment. Initially, HRI did not raise this issue in its 2014 comments, and thus is precluded from raising it now. Nevertheless, consideration of treatment was one factor EPA considered consistent with CERCLA's mandate: "The President shall select a remedial action that is protective of human health and the environment, that is cost effective, and that utilizes permanent solutions and alternative treatment technologies or resource recovery technologies to

the maximum extent practicable. If the President selects a remedial action not appropriate for a preference under this subsection, the President shall publish an explanation as to why a remedial action involving such reductions was not selected.” 42 U.S.C. § 9621(b)(1).

EPA's actions on this matter are in accord with CERCLA's preference, and EPA's Record thoroughly explains where treatment technologies were or were not selected as part of the Permit. Specifically:

- As discussed above, GE performed a screening analysis on many technologies and conducted a detailed analysis, including a cost estimate, on two others. EPA then evaluated the nine CD-Permit criteria for the remaining two technologies, along with three other Treatment/Disposition alternatives. Att. 5, Stmt/Basis at 35-39 and Att. 10, CA at 59-78).
- As stated in the Statement of Basis, “EPA also expects the Proposed Remedial Action to . . . “(7) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and (8) satisfy the preference for treatment as a principal element, or explain why the preference for treatment will not be met.” Att. 5, Stmt/Basis at 11.”¹⁵
- EPA published an explanation for why it selected its final remedy of off-site disposal, with some incorporation of alternative technologies, in its CA at 59-77 (Att. 10), Statement of Basis at 35-39 (Att. 5), and RTC Section III.F. at 234-273 (Att. 4).

III.D.2.c Principal Threat Wastes

HRI also challenges EPA's consistency with addressing principal threat wastes (“PTW”). Pet at 31. Preliminarily, HRI did not raise the issue of PTW in its 2014 comments and thus is foreclosed from raising it at this stage. Nonetheless, EPA has clearly addressed the issue in its work with the NRRB. EPA's August 3, 2012 reply to the NRRB included in part:

¹⁵ On this point, HRI's Petition may misunderstand the specific language in the Statement of Basis. Pet. at 26, confuses the “general standards” which are the three threshold criteria of the CD-Permit, and which EPA evaluates among the nine CD-Permit criteria, with other expectations or goals of the remedy, including EPA's expectations (7) and (8) immediately above. EPA has thoroughly explained how it is satisfying those two expectations in the Record, including in the Statement of Basis, Response to Comments, and this Response.

With respect to contaminated sediment sites, [the 2005 *Contaminated Sediments Guidance*] states that although the NCP provides for a preference for treatment for “principal threat waste”, treatment has not frequently been selected for contaminated sediment. High costs, uncertain effectiveness, and/or community preferences (for on-site operations) are factors that lead to treatment being selected infrequently at sediment sites.” The [2005 *Contaminated Sediment Guidance*] goes on to state that “. . . the practicability of treatment, and whether a treatment alternative should be selected, should be evaluated against the NCP’s nine remedy selection criteria. Based on available technology, treatment is not considered practicable at most sediment sites.”

Attachment 17 at 4-5.

Accordingly, the Record demonstrates EPA’s analysis of treatment of principal threat wastes as part of the remedy selection process.

III.D.2.d Conceptual Site Model/Pilot Studies

HRI also questions EPA’s use of a conceptual site model or pilot studies for Rest of River. Pet. at 7. Initially, HRI discussed its preference for alternative technologies in its comments on the Draft Permit, but did not directly address the issue of using a Conceptual Site Model or pilot studies to evaluate these technologies. Therefore, HRI is precluded from raising the issue here. However, to the extent the Board reviews the issue substantively, EPA, in the remedy selection process for the Rest of River, did develop a Site Conceptual Model which considers the factors raised in HRI’s petition, including evaluating the nature and extent of contamination and site characteristics, site hydrology, contaminant fate and transport; and receptor and exposure pathways. AR555789.

As discussed above, with regard to treatability and pilot studies, EPA did require GE to conduct a bench/pilot scale test of an alternative technology: chemical extraction (soil washing). The test found that one treatment cycle of the process was only able to reduce PCB

concentrations to levels of 7 to 48 mg/kg in treated site-specific materials, precluding the on-site reuse of the material and likely necessitating its disposal in a landfill while generating large volumes of wastewater and concentrated PCB-containing water treatment sludge. (Att. 8, RCMS at 9-81 to 9-85). In its Comparative Analysis (Att. 10, CA at 59-77), EPA further evaluated chemical extraction/soil washing against the CD-Permit remedy selection criteria.

Also, as discussed in RTC 60 *et al.* at 272 (Att. 4), the Permit (as did the Draft Permit) requires GE as part of adaptive management requirements to conduct “evaluations of the use the use of innovative technologies, results of pilot studies. . .” Att. 1, Permit II.F. Accordingly, the Record clearly shows EPA’s evaluation of conceptual site model and pilot studies.

III.D.2.e Use of Alternative Technologies in Permit

With respect to HRI’s request in its Petition that EPA renew its commitment to use of alternative technologies, the Permit makes clear that commitment. Pet. at 41. As discussed immediately above, the Permit includes an Adaptive Management section, including “... to adapt and optimize project activities to account for “lessons learned,” new information, changing conditions, *evaluations of the use of innovative technologies, results from pilot studies, if any, and additional opportunities that may present themselves over the duration of the project,* including during periodic reviews. Att. 1, Permit II.F. (emphasis added). Moreover, among the requirements for GE’s Statement of Work is an Adaptive Management Plan to be submitted to EPA for review and approval. Att. 1, Permit II.H. Finally, in part in response to public comments, the Permit has been revised to include the following: “During the implementation of corrective measures, GE may propose to EPA for approval the use of innovative technologies as

part of an adaptive management approach as outlined in Section II.F. [Adaptive management] below.” Att. 4, RTC 60 *et al.* at 272. Also, *see* Att. 1, Permit II.B.5.b.

III.D.2.f HRI Preference

Finally, HRI concludes, at 10 and 28, that, among the alternatives evaluated in the CMS, it now prefers thermal desorption as a Rest of River remedy, citing use at other Superfund sites. Pet. at 41. Initially, HRI did not advocate for thermal desorption or cite the referenced document, "Engineering Forum Issue Paper: Thermal Desorption Implementation Issues," in its 2014 comments. HRI had ample opportunity in its oral, written and technical advisor comments to advocate for this particular remedy, and chose not to do so. Accordingly, HRI should not be allowed to raise the issues here.

Nonetheless, to the extent the Board reviews this issue substantively, thermal desorption was fully evaluated by EPA as one of the five treatment/disposition alternatives considered by EPA in its remedy selection evaluation. EPA required GE, in its CMS and RCMS, to do a detailed evaluation of thermal desorption, referred to as TD-5.¹⁶ Furthermore, as discussed in RTC 56 *et al.* at 235, EPA performed a thorough comparative analysis of the treatment/disposition alternatives with respect to the CD-Permit criteria specified in the Permit. Att. 4. “That comparative analysis supports EPA’s determination of the selected treatment/disposition alternative as best suited to meet the Permit’s General Standards, in consideration of the Selection Decision Factors, including a balancing of those factors against

¹⁶ AR283374, 580283, 580284, 580285 & 472605, 570275, 580282.

one another. Comparative Analysis, pages 59-77.” AR557091. EPA agrees that thermal desorption was appropriate for a site-specific evaluation at this site, and one was conducted.

With regard to HRI's concluding request for appraisal of permanent solutions and alternative treatment technologies for Rest of River (Pet. at 41), EPA has already conducted such an assessment and has performed a detailed analysis of HRI's preferred method of thermal desorption. EPA's thorough analysis considered all CD-Permit criteria and did not select thermal desorption as the best suited remedy.

In addition, HRI fails to acknowledge that the use of alternative technologies, i.e., sediment amendments, such as activated carbon, is required in the Permit for multiple remedy components -- Vernal Pools, sediment in Reach 5B, and in certain Backwaters. *See* Att. 4, RTC 60 *et al.* at 270 and Att. 1, Permit II.B.2.b, II.B.2.d, and II.B.3.b. Also, HRI fails to acknowledge that based in part on comments received, the Permit includes provisions for the evaluation of innovative/alternative technologies throughout the cleanup action, and the potential, that if appropriate, additional innovative technologies can be incorporated into the response actions. *See*, Section III.C.1.f above.

III.E Region's Scientific Judgments on Risk and Toxicity Deserve Deference

EPA agrees with HRI that there is a substantial body of literature on the risks from PCBs to humans and wildlife. Pet. at 17-19. In its RTC, EPA responded to HRI's claim that this information should result in a more extensive cleanup. Att. 4, RTC 19 *et al.* at 31 and Section II.F. HRI did not confront this response; accordingly, its argument should not prevail. Nevertheless, to the extent the Board reviews this matter substantively, EPA properly considered PCB toxicity and risks. Accordingly, HRI's argument is procedurally and substantively flawed.

EPA evaluated PCB risks on a reach-by-reach basis at the site in its comprehensive Peer-Reviewed Human Health and Ecological Risk Assessments. EPA considered these risks, along with the other CD-Permit criteria, in selecting the remedial alternative for a given reach. The remedy is supported by the technical and scientific judgments performed by EPA throughout the risk assessment, modeling, establishment of cleanup goals, and evaluation of alternative remedies. All steps in the process are documented in the Record, and exhibit EPA's considered judgement. As such, the Permit decision is worthy of significant deference. 10^{-6} is the "point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure." 40 C.F.R. § 300.430(e)(2)(i)(A)(2). The preamble to the NCP explains that this "point of departure"

expresses EPA's preference for remedial actions that result in risks at the more protective end of the risk range, but this does not reflect a presumption that the final remedial action should attain such a risk level. Factors related to exposure, uncertainty and technical limitations may justify modification of initial cleanup levels that are based on the 10^{-6} risk level. The ultimate decision on what level of protection will be appropriate depends on the selected remedy, which is based on the criteria described in §300.430(e)(9)(iii).

National Oil and Hazardous Substances Pollution Contingency Plan, 55 Fed. Reg. 8666, 8718–19 (Mar. 8, 1990).

Thus, EPA begins its evaluation at the most stringent end of the risk range (10^{-6}), and adjusts that target downward only where necessary given site-specific factors. As referenced in the Statement of the Case, above at II.B.3. fn8, EPA strives for parity and consistency between its RCRA and CERCLA remedy selection programs.

The remedy selected in the Permit best meets the CD-Permit's General Standards, in consideration of the Selection Decision Factors, including a balancing of those factors against

each other. The remedy provides protection against cancer and non-cancer risks, and ensures long-term protection of the environment from risks posed by PCBs. Att. 4, RTC 590, 591 at 52. This conclusion is supported by the Record, including without limitation the Comparative Analysis (Att. 10).

HRI references a statement about endocrine disrupting chemicals. Pet. at 26. EPA does not disagree that PCBs have been implicated in endocrine disruption as well as other non-cancer health effects. In its RTC 42 *et al.* at 41, EPA describes the detailed internal and external scientific process used by the Agency to document non-cancer toxicity effect guidelines. Att. 4.

EPA performed the HHRA and the ERA using the best available science and the risk assessment process outlined in the NCP, 40 C.F.R. Part 300, and agency guidance, and used the toxicity values developed in that process. Similarly, EPA's data gathering for Rest of River was consistent with HRI's concerns regarding low-dose effects of endocrine disrupting compounds. EPA conducted PCB congener analysis on multiple media in support of the HHRA and ERA. These analytical techniques were very advanced, and achieved very low detection limits. AR6812, Table 4.2-3, page 4-11; AR219190, Sections 4, 8-10, and Attachment 2; AR215498, Sections 2, 6, 12, Appendix C and Appendix L.

HRI also cites an EPA project manager statement that PCBs in the Housatonic River are posing a risk to humans and harming wildlife, and that such risks and harm will continue. Pet. at 23. That statement is consistent with risks that the Permit is to address, as described in the Record, including the Response to Comments. As stated in the RTC at 2, the Permit provides the Performance Standards and the appropriate corrective measures necessary to meet those Performance Standards to address PCBs and any other hazardous waste, constituents or

substances that have migrated from the GE facility to surface water, sediment, floodplain and bank soil, and biota in the Rest of River. Also, as stated in the RTC, EPA has made the following determinations:

The remedy as outlined in the Final Permit Modification is protective of human health and the environment, complies with, or appropriately waives, all federal and state requirements that are applicable or relevant and appropriate to the remedy, and is cost effective. In addition, the remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable. The remedy also has been determined to be the least environmentally damaging practicable alternative to prevent contamination from impairing wetlands and aquatic habitats. To the extent that the remedy involves occupancy or modification of a floodplain, EPA has determined that there is no practicable alternative to doing so, and that the remedy is the least damaging practicable alternative. In addition, the remedy will not result in an unreasonable risk of injury to human health or the environment.

Att. 4, RTC at 2.

With respect to sediment concentrations HRI references, EPA agrees that the concentrations are reported in the Public Health Assessment for the General Electric Site – Housatonic River (Aug. 25, 2008). Pet. at 25. However, EPA cannot verify how those concentrations were derived. A full analysis of the PCB sediment data is in Housatonic River, Rest of River RCRA Facility Investigation Report, Section 4.5 (AR49294).

Finally, EPA's remedy decision is based on its analysis of the nine CD-Permit criteria overall, and was not based on the limited "notion" regarding removal and containment of PCBs that HRI ascribes to EPA. As discussed in RTC 54 *et al.* at 215-216, GE and EPA evaluated numerous alternatives for the remediation of river sediment and banks, with estimated removal volumes ranging from 134,000 cubic yards to 2,252,000 cubic yards, and of floodplain soil with estimated removal volumes ranging from 26,000 cubic yards to 615,000 cubic yards. Att. 4.

There is generally greater reduction in risk to human health and ecological receptors as the volume of material increases, however, there are also associated increasing short-term impacts to floodplain habitat supporting state-listed species. The selected remedy is deemed by EPA as best suited to address the PCB risks based on the CD-Permit criteria.

III.F EPA's Approach to Floodplain and Vernal Pool Restoration Is Supported by the Record and Is Not Clearly Erroneous

EPA concurs with HRI that restoration of the floodplain, riverbed and banks can be successfully performed. Pet. at 12. For example, HRI cites the success of the remediation and restoration of the upper 2 miles of the East Branch of the Housatonic performed by EPA and GE as well as the work performed on other river systems. EPA concurs and RTC 17 *et al.* at 87 referenced examples of successful restoration projects, including the East Branch of the Housatonic River (which includes the 1.5 Mile Reach). Att. 4. Restoration success of the 1.5 Mile Reach and associated habitats is also discussed in Section III.B.2.b of the Response to Comments with respect to: benthic invertebrates and fish populations at 105 and 110 (RTC 597 and 517, respectively); survival and growth of planted trees and shrubs in at 121-122 (RTC 363a and 521); and Vernal Pools at 128 (RTC 601 *et al.*). Att. 4.

However, despite similar views on the likelihood of success of restoration, EPA, based on its CD-Permit evaluation, did not reach the same conclusion as HRI.

Specifically, there are specific provisions in the Permit to avoid impacts to key habitats designated as "Core Area 1" in the Permit. Core Area 1 includes the "highest quality habitat for species that are most likely to be adversely impacted by PCB remediation activities." Att. 1, Permit, Attachment B.

As noted in EPA's RTC 749 at 12-13, the combination of different elements in EPA's selected remedy to remediate the unacceptable risks while reducing any adverse effects of the remediation makes EPA's selected remedy the alternative that achieves the project purposes with the least damage to the ecological resources. Att. 4. The selected remedy properly balances the need for protection of human health and the environment and the extent of the remediation with the need for avoidance, minimization, and mitigation for state-listed species. The Permit includes Performance Standards for remediation measures, as well as for restoration. See Permit II generally for remediation, Permit II.B.1.c. for restoration. Att. 1.

The selected remedy has been concurred on by the Commonwealth of Massachusetts (Att. 13), and the Commonwealth's Fisheries and Wildlife Board expressed its support of EPA's balancing definitively:

The remediation plan ... has been crafted to responsibly address public health risks while at the same time responsibly maintaining as much as possible of the natural and recreational values of this section of the Housatonic. It's been a difficult balancing act, but it is a Housatonic plan, and it has our full support.

Att. 4, RTC 21, 50 at 27.

HRI also asks the Board to affirm the recommendations of the NRRB, reminding Region 1 of its previous position: "that habitat restoration and other impact reduction measures will be effective in meeting the requirements of the Commonwealth's endangered species law and therefore any impacts will be only short-term."

As noted in EPA's RTC 74 at 31, the remedy selected in the Final Permit Modification is consistent with the advice provided to EPA by the NRRB with which EPA consulted repeatedly during the investigation and alternatives analysis, and to whose suggestions EPA responded.

Att. 4. EPA's RTC 197 at 355 describes the process by which the NRRB recommendations were documented and addressed by EPA. Att. 4. Thus, HRI's reference to the NRRB comments does not warrant revisions to the selected remedy for sediment.

III.G Permit's Limited Selection of Institutional Controls is Appropriate

HRI's arguments regarding Institutional Controls are flawed both procedurally and substantively. Pet. at 41. Initially, HRI has not confronted EPA's RTC (Att. 4, Section III.G. at 274-278) on this topic, and thus the arguments should not be reviewed. See Section III.A.2 above.

EPA has explained multiple times that institutional controls are a supplement to, not a substitute for, active measures. While EPA responded to HRI's 2014 comments in the 2016 Response to Comments in Section III.G, "Institutional Controls and Related Requirements," in RTC 225 at 274, EPA quoted from the NCP that "EPA expects to use institutional controls ... to supplement engineering controls as appropriate for short- and long-term management to prevent or limit exposure to hazardous substances, pollutants or contaminants." Att. 4. EPA also quoted from the Preamble to the NCP, "EPA agrees that institutional controls should not substitute for more active response measures that actually reduce, minimize, or eliminate contamination unless such measures are not practicable. . ." Att. 4. Also in RTC 263 at 275, EPA states, with respect to the Permit, in pertinent part, "... EPA, consistent with the NCP and EPA guidance on Institutional Controls, uses Institutional Controls in the [Permit] as a supplement to other engineering controls, not as the primary mechanism for reducing risks." Att. 4.

III.H Permit Addresses PCB Volatilization

HRI's Petition makes oblique references to PCB volatilization and its effects on people living near contaminated sites. Pet. at 17. However, initially, HRI did not confront EPA's RTC in this regard; therefore, HRI's assertions do not warrant review. Additionally, HRI does not link these statements to Permit conditions, other than perhaps its desire to remove as many PCBs from the environment as possible. Pet. at 17. To the extent that HRI's link is to the adequacy of remedy selection, EPA has responded at Section III.B. above. If instead, HRI suggests EPA did not consider the volatilization of PCBs in its remedy, EPA addressed PCB volatilization in RTC 58 *et al.* (Att. 4 at 339), which was not acknowledged or addressed in HRI's petition. Specifically, PCB air sampling results from GE sampling in 1995 and EPA sampling in 2000 in the Rest of River area were included in GE's RFI report and EPA 2005 HHRA. Att. 4, RTC 58 *et al.* at 339. These two reports are in the Record and as such the data was considered by EPA in its remedy selection process.

III.I Financial Health of GE is Not Listed as a CD-Permit Criterion

HRI suggests that given the financial health of GE, it is not unreasonable to require the company to do whatever it takes to remove from the Rest of River as much PCB contamination as is technically possible. Pet. at 32.

As discussed in the RTC at 6-7 (Att. 4), and Section II.J of the CD-Permit (Att. 1), Cost is considered one of the six Selection Decision Factors for evaluating remedial alternatives and selecting the corrective measures. Pursuant to Section II.G.2.f of the CD-Permit, cost includes capital costs, operating and maintenance costs, and present worth costs of the alternatives evaluated. Att. 1.

EPA evaluated alternatives pursuant to the cost criterion and the other CD-Permit criteria. The CD-Permit criteria do not include an explicit criterion of financial health of the Permittee. Based on EPA's CD-Permit criteria evaluation, EPA determined that the selected remedy is best suited to meet the Permit's General Standards in consideration of the Permit's Selection Decision Factors, including a balancing of those factors against one another.

IV. CONCLUSION

For all the foregoing reasons, the Petition for Review Submitted by the Housatonic River Initiative, Inc., should be denied.

STATEMENT OF COMPLIANCE WITH WORD LIMITATION

I hereby certify that EPA's Response to the Petition for Review in the matter of General Electric Co., RCRA Appeal No. 16-02, contains less than 14,000 words in accordance with 40 C.F.R. § 124.19(d)(3).

Respectfully submitted,

Dated: February 14, 2017

(s) Timothy M. Conway
Timothy M. Conway

REQUEST FOR ORAL ARGUMENT

In accordance with 40 C.F.R. § 124.19(h), EPA Region 1 requests oral argument in this matter.

Dated: February 14, 2017

(s) Timothy M. Conway
Timothy M. Conway

CERTIFICATE OF SERVICE

I, Timothy M. Conway, hereby certify that true and correct copies of EPA Region 1's Response were served via EPA's e-Filing system on February 14, 2017, and Federal Express on February 15, 2017.

Via the EPA's E-Filing System and Federal Express to:

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Via Federal Express to:

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