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

In re:	)	
2020 REVISED PERMIT MODIFICATION TO 2016 REISSUED PERMIT ISSUED TO GENERAL ELECTRIC COMPANY, UNDER THE RESOURCE RECOVERY AND CONSERVATION ACT, FOR THE HOUSATONIC RIVER "REST OF THE RIVER,"	)	RCRA 21-01 D002084093
Permit Recipient:	)	
General Electric Co., 1 Plastics Avenue, Pittsfield, MA 01201	)	

REPLY BRIEF OF HOUSATONIC RIVER INITIATIVE AND HOUSATONIC ENVIRONMENTAL ACTION LEAGUE

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INTRODUCTION

Let's be honest. What happened in this case is that, after the Board issued its remand decision, GE, the Region and a number of other parties entered into closed-door settlement discussions that did not become part of the administrative record. GE threatened that, if the others did not agree to extensive on-site disposal of contaminated sediments, it would tie up the remediation of the River in court for decades, and the communities would end up with three, not one, on-site dumps. At the same time, GE offered that, if the communities would agree to one on-site dump and allow it to save $200 million (the difference in cost between on-site and off-site disposal), it would pay $55 million of that savings to the towns. Sadly, GE also offered large amounts of money to others, such as the Audubon Society, to agree to a deal. The Region, for its part, saw the deal as a way to get a 23-year old "monkey" off its back. *After* the deal was cut, the Region tried to find ways to justify it as "protective of human health and the environment."[1]

No one seriously believes that disposing of 1.3 million cubic yards of PCB-contaminated sediment directly above the River is "more protective of human health and the environment" than disposing of it in an established off-site facility in another state. *No one* seriously believes that disposing of 1.3 million cubic yards of PCB-contaminated waste in any location is "more protective of human health and the environment" than disposing of a much-smaller quantity of treated residue. *No one* seriously believes that "monitored natural attenuation" with no actual

[1] For example, the Region tries to justify on-site disposal as more protective of human health and the environment than off-site disposal by pointing to greenhouse gas emissions. But according to its own calculations, the total greenhouse gas emissions from the proposed 2020 remedy is almost exactly the same as the total greenhouse gas emissions from the proposed 2016 remedy. Determination on Remand, Table 12 (July 2020), https://semspub.epa.gov/work/01/647210.pdf.

performance standards or timeline is "more protective of human health and the environment" than an actual cleanup. These are not honest, scientific conclusions reached after legitimate study; they are the very definition of "arbitrary," "erroneous," after-the-fact justifications for a deal that GE designed, bought and paid for.

STANDARD OF REVIEW

The Region complains that Petitioners' brief used the classic administrative law phrase "arbitrary and capricious" in defining the standard of review, implying that the "clear error" standard set forth in 40 CFR § 124.19(a)(4) is somehow meaningfully different. In fact, no lesser authority than the United States Supreme Court has equated the two. According to the Court's landmark decision in Citizens of Overland Park v. Volpe, 401 U.S. 402, 416 (1971), to assess whether an agency decision was "arbitrary and capricious," a court must decide whether "there has been a clear error of judgment." See also Bowman Transp., Inc. v. Arkansas-Best Freight Systems, Inc., 419 U.S. 281, 285 (1974) (same).

As the caselaw also makes clear, there are subsidiary determinations that go into a decision whether the "clear error" or "arbitrary and capricious" standard has been met. One is whether an agency has adequately justified a 180-degree reversal of position. Petitioners continue to rely on the caselaw cited in their opening brief[2] holding that agencies, like the Region here, did not justify their about-face. GE's response brief cites two cases on this issue, which it claims Petitioners ignored. Both cases, FCC v. Fox Television Stations, Inc., 556 U.S. 502 (2009), and In re Veolia ES Technical Solutions, L.L.C., 18 E.A.D. 194, 208 (EAB 2020),

[2] Indigenous Envt'l. Network v. United States Dep't of State, 347 F. Supp. 3d 561, 583-84 (D. Mont. 2018); Friends of Alaska Nat'l Wildlife Refuges v. Bernhardt, 381 F. Supp. 3d 1127, 1143 (D. Alaska 2019); Am. Wild Horse Pres. Campaign v. Perdue, 873 F.3d 914, 927-28 (D.C. Cir. 2017); Humane Soc'y of the United States v. Locke, 626 F.3d 1040, 1053 (9th Cir. 2010).

actually support Petitioners' position that the reversal of position here was not properly justified. Fox holds that specific justification is needed when "new policy rests upon factual findings that contradict those which underlay its prior policy." 556 U.S. at 515. Veolia holds that, where a Region reverses course in a permitting decision, it *must* consider earlier inconsistent findings and documents as part of the administrative record and adequately explain them in its new decision. 18 E.A.D. at 208, 211. As set forth below, the Region's decision to allow on-site disposal fails both these tests.

The other subsidiary determination required here is whether the Region considered all "relevant facts." Citizens, 401 U.S. at 416. See also International Ladies' Garment Union v. Donovan, 722 F.2d 795, 815 (D.C. Cir. 1983); Sierra Club v. Watkins, 808 F. Supp. 852, 871 n.32 (D.D.C. 1991). As discussed below, the Region's decision not to use thermal desorption or bioremediation on contaminated sediments from the River fails this critical test.[3]

ARGUMENT

I. The Region's After-the-Fact Analysis of "Hybrid" Disposal was Poisoned by its Desire to Preserve the Settlement.

The Region's Brief confirms the backwards nature of the remedy selection process it followed: before it analyzed the suitability of "hybrid"[4] disposal pursuant to the nine decision-making criteria and before it received public comments, the Region entered a Settlement

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[3] The Region and GE also argue that Petitioners may not rely on certain documents attached to the Petition because they are not part of the administrative record. These arguments are meritless, for the reasons set forth in Petitioners' Opposition to the Motions to Strike.

[4] Again, let's be honest. The Region tries to differentiate its selected remedy from the "on-site" disposal it previously rejected by calling it a "hybrid." In truth, a remedy which proposes to construct an on-site dump that will accept 1.3 million cubic yards of contaminated material and a promise to dispose 100,000 cubic yards of contaminated waste off-site – a 13:1 ratio – is not much of a "hybrid." See Determination on Remand at 31.

Agreement that selected "hybrid" disposal as the remedy. Only after the Settlement had been reached did the Region purport to conduct a supplemental comparative analysis ("SCA").[5] The problem with this order of proceeding is that the analysis in the SCA was then driven, at times explicitly, by the Region's desire to keep the Settlement from falling apart. Instead of actually assessing how "hybrid" disposal would impact the environment, the Region was focused on how its remedy selection decision would affect the continued viability of the Settlement.[6] For example, the SCA favors "hybrid" disposal because the parties to the Settlement, especially GE, will not challenge it on appeal.[7]

Petitioners acknowledge that, generally speaking, a negotiated resolution of a complex dispute may be beneficial to stakeholders.[8] The proper course, however, was for the Region to conduct an analysis of "hybrid" disposal and receive public comments *before* entering into serious Settlement negotiations, instead of locking itself into a remedy and then pretending to

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[5] Region Brief at 24. The Region implies that HRI participated in these secret settlement negotiations. In fact, HRI attended a grand total of two in-person meetings with the mediator and was no longer invited to participate in the negotiations after it made clear that it would not support on-site disposal.

[6] Determination on Remand at 3-4, 6, 32, and Attachments A & B.

[7] Id. In addition to the Region's explicit statements, it defies common sense to believe that the Region would select a remedy that would force all stakeholders back to the negotiating table.

[8] Petitioners do not acknowledge, however, that the "public" favors this Settlement. Apart from the settling parties, the Region received near unanimous opposition to the 2020 Permit from hundreds of commenters. See, e.g., Attachment 1-10, Transcripts of Comments Received By Voicemail and Public Hearing Transcripts. Nearly all commenters expressed vociferous opposition to the proposed PCB dump. Many specifically spoke to the unfairness of the process – that it was a "settled deal," that the remedy was "forced" on the communities, that the process was done "underhandedly," that the citizens had "no opportunity to vote or present [their] views." By no stretch of the imagination does the 2020 Permit have "significantly more community support," as the Region argues. See Region Br. at 21. The parties receiving payments under the Settlement do not fairly represent public's actual views on the remedy.

comply with prescribed decision-making procedures. The concept of notice and comment is premised on agencies being open to change – if the agency has already agreed to a result, the public's right to comment is meaningless. That is precisely what occurred in this case, and such backwards agency action must not be sustained.

II. The Region's 2020 SCA Contains More Inconsistencies Than the 2016 Permit Analysis that this Board Remanded.

As the Board explained in Veolia, the administrative record in an appeal encompasses the record of all prior permit proceedings. 18 E.A.D. at 208, 211. Thus, the Region must explain inconsistencies between the 2016 record and permitting decision and the diametrically opposite decision it reached in 2020. Instead of reconciling inconsistencies on remand, however, the Region generated a supplemental comparative analysis that contains even more inconsistencies. Failure to reconcile such inconsistencies demonstrates a lack of considered judgment. In re GE, 17 E.A.D. 434, 436 (2018).

As the Region acknowledges in the SCA, nothing about the Board's 2018 Decision required the Region to change its conclusion that off-site disposal was the best option for removal of PCB-contaminated sediments from the River.[9] The Region did reconsider off-site disposal, but not because of new information making off-site disposal less protective of the environment, or new information about the safety of the UDF. [10] The substance of the SCA actually confirms that off-site disposal still best satisfies the majority of the nine criteria under the 2000 Permit.

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[9] Determination on Remand at B-4.

[10] As argued in the Petition, the safety features of the UDF are the same as the safety features for on-site disposal proposed in the 2016 Permit.

Only three things changed, and none of them has anything to do with protecting "human health and the environment." One is that GE has agreed not to appeal the Permit.[11] The Region's remedy selection decision, however, cannot be based on appeasing the entity that caused the pollution. What kind of precedent would that set? That pushing your financial weight around is a proper basis for administrative decision?

Second, and related, the Region states that selecting a remedy that GE has agreed not to appeal will lead to "faster implementation."[12] Although Petitioners fervently desire to see the River cleaned up as soon as possible, the Region long ago forfeited any legitimate claim of urgency. If the Region truly believed that immediate action was necessary to prevent bioaccumulation in "fish, benthic invertebrates and other ecological receptors in the Housatonic River," as it astonishingly states in the SCA,[13] it would have ensured that a remedy for the Rest of the River was in place twenty years ago. Apparently, however, timely implementation is only important now that GE has gotten its way (and saved millions).

The third difference between GE's proposal for on-site disposal in 2016, which the Region rejected, and the so-called "hybrid" proposal that the Region now champions is that 100,000 cubic yards of more contaminated sediment will be disposed of off-site. As noted above, this is 100,000 cubic yards, compared to the 1.3 *million* cubic yards that the UDF will be built to hold. Despite the Region's effort to downplay the UDF as a place for disposal of lower

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11 Determination on Remand at B-4.

12 Id.

13 Id. at 123.

concentrations of PCBs,[14] GE will be disposing of "state-listed hazardous waste" in the UDF. GE's own brief makes that clear.[15]

A point-by-point review of the SCA with the 2014 Comparative Analysis demonstrates that the Region reached the same ultimate conclusions under all the decision-making criteria in 2020 as it had in 2014.[16] Yet the Region nonetheless concluded in 2014 that off-site disposal was "best suited to meet the General Standards in consideration of the Selection Decision Factors," but concluded in 2020 that "hybrid" disposal was best suited.[17] The Region has utterly failed to justify these inconsistent conclusions.

i. Overall Protection of Human Health and the Environment

The Region's 2020 analysis under this criterion is not materially different from its 2014 analysis, as the Region both times found on-site and off-site disposal would be protective.[18] The Region explained that this criterion largely draws on the evaluations of long-term and short-term effectiveness.[19] Off-site disposal continues to provide the strongest long-term reliability and effectiveness.[20]

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[14] Region Brief at 2-3, 11, 18-19, 21-23, 29. Despite the Region's repeated emphasis on the fact that the UDF will contain PCBs at lower concentrations than the prior on-site disposal option, the Permit does not preclude PCBs at concentrations higher than 50 ppm from being placed in the UDF. Rather, it simply states that the "average" concentration of PCBs in the UDF will be less than 50 ppm. Attachments C and E to 2020 Permit.

[15] GE Brief, at 19.

[16] As discussed in Part III, the SCA erroneously did not evaluate the reduction of toxicity, mobility or volume through treatment. It also did not evaluate the attainment of IMPGs.

[17] 2014 Comparative Analysis at 77, https://semspub.epa.gov/work/01/557091.pdf; Determination on Remand at 39.

[18] 2014 Comparative Analysis at 60-61; Determination on Remand at 31.

[19] Determination on Remand at 31.

[20] Id. at 31-32. In discussing this factor, the Region attempted to bolster the "hybrid" disposal option by referencing the other benefits of the Settlement unrelated to the method of

ii. Control of Sources of Releases

In 2014, the Region found that off-site disposal best met this criterion.[21] In 2020, the Region again found that off-site would best control releases.[22] In both 2014 and 2020, the Region noted that there is potential for releases of contamination to the River if the UDF is not properly operated or maintained.[23]

iii. Compliance with Federal and State ARARs

In both 2014 and 2020, off-site disposal contained the fewest ARARs.[24] The Region claims that the UDF under the "hybrid" proposal need not comply with ARARs pertaining to disposal of hazardous wastes, but that conclusion is inconsistent with the fact – as acknowledged by GE – that the UDF will contain materials with PCB concentrations greater than 50 ppm.[25] In any event, the Region acknowledges that other ARARs are still applicable, including 310 CMR 16.40(4)(d), the ACEC regulation.[26] The Region's only way out of this ARAR is to invoke a waiver, claiming that not placing the UDF in the ACEC (i.e., selecting off-site disposal) would result in *greater* risk to human health and the environment than proceeding with the UDF.[27]

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disposal. Id. at 32. This is an improper comparison. The question is not whether the entire Settlement is protective of human health and the environment, it is whether the "hybrid" disposal option is more protective of human health and the environment than the off-site disposal option. The record makes clear that it is not.

21 2014 Comparative Analysis at 62.

22 Determination on Remand at 32.

23 2014 Comparative Analysis at 62; Determination on Remand at 32.

24 2014 Comparative Analysis at 63; Determination on Remand at 32-33.

25 Determination on Remand at 32; GE Brief at 19.

26 Determination on Remand at 33.

27 Determination on Remand at B-2 to B-7.

That conclusion is nonsensical. Offsite disposal, which would permanently remove all of the PCB-contaminated waste outside of the River environment and far away from the affected communities, clearly poses less risk to those communities and the local environment than keeping such waste permanently within 1,000 feet of the River. No matter how "safe" the UDF is, it can never be as safe as no UDF at all.[28]

The Region's purported justifications for finding that off-site disposal poses greater risks have nothing to do with the nature of off-site disposal. For example, the "locational deficiencies" refer only to the other alternative on-site locations that are no longer being pursued.[29]

The Region also claims it would be more dangerous for the environment to not permit the UDF because doing so would cause delays in PCB remediation due to likely appeals.[30] As

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[28] The Region's argument that Petitioners may not challenge placement of the UDF in an ACEC because they did not specifically cite the ACEC regulation in their public comments is meritless. First of all, the Region's apparent position that public comments have to be a nearly verbatim recitation of the legal arguments made in a subsequent appeal misconstrues the nature of public comments, which are typically submitted by the *general public*, not solely other agencies or attorneys. It would be patently unfair and against the concept of meaningful public participation to require lay members of the public to make formal legal arguments in their comments, or to require them to fully understand and appreciate the nuances of complex regulatory schemes.

Here, Petitioners' public comments clearly raised their concern that the UDF will have a detrimental impact on the ecological resources in the immediate area. Attachment 1 to Petition, Section 2. The fact that they did not use the acronym "ACEC" or frame their argument within the context of Massachusetts regulations does not mean that the Region was not informed of the substance of Petitioners' argument. Moreover, Petitioners did not inject some new, unforeseen challenge to the Permit into the record by raising ACEC concerns in their Petition. The implications of placing the UDF in an ACEC have been at issue throughout the Region's development of a remedy, and the Region discussed ACEC concerns in its Response to Comments and SCA. Determination on Remand at 33, B-3 to B-7; 2020 RTC at 63.

[29] Determination on Remand at B-4 to B-5.

[30] Id. at B-4.

explained above, this argument does not actually address the relative environmental risks posed by the disposal options themselves but simply considers what option will be most satisfactory to GE. Similarly, the Region states that not permitting the UDF and being "forced to comply with" the ACEC regulations would result in the Settlement Agreement unraveling and loss of its purported benefits.[31] That too has nothing to do with the environmental risks of on-site versus off-site disposal. Instead, the argument exemplifies the extent to which the Region's analysis was driven by its desire to protect the Settlement.

iv. Long-Term Reliability and Effectiveness

In both 2014 and 2020, the Region concluded that off-site disposal presents less long-term adverse impacts than on-site disposal.[32] As acknowledged in the 2014 Comparative Analysis, off-site disposal presents no adverse long-term environmental impacts in the Rest of River area.[33] Nothing in the SCA changes that finding.[34] Other 2014 findings are similarly still true, including that on-site disposal presents a greater risk of release and potential for PCB exposure than off-site disposal; the UDF may need to operate for an extended period of time; onsite disposal relies heavily on proper long-term operation, maintenance, and monitoring; and onsite disposal would result in habitat alteration in an ACEC, including for support areas, such as access roads, remaining after closure of the UDF.[35]

v. Short-term Effectiveness

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31 Id. at B-5 to B-7.

32 2014 Comparative Analysis at 66; Determination on Remand at 35.

33 2014 Comparative Analysis at 65.

34 Determination on Remand at 28, 33-35.

35 2014 Comparative Analysis at 64-66.

In 2014, the Region concluded that off-site disposal presented the fewest short-term impacts, as implementation of that remedy requires only access roads and staging areas for loading vehicles.[36] Nothing in the SCA indicates that the Region has changed that position.[37] Similarly, in 2014, the Region found that onsite disposal would result in loss of habitat and displacement of wildlife.[38] The SCA tries to skirt around this issue by claiming that any disruption of the environment can be restored at some later date.[39] That does not change the fact that implementation of the hybrid disposal remedy will require habitat loss (including "prime forest" located within the UDF's twenty-acre footprint) for, at a minimum, the anticipated thirteen years prior to completion of the onsite disposal activities.[40]

vi. Implementability

In 2014, the Region concluded that on-site disposal would be more difficult to implement from an administrative perspective, as the UDF would be subject to regulations (including ACEC), would require access agreements, would face considerable public opposition, and would

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36 Id. at 68.

37 The conclusion in the SCA that on-site disposal will result in fewer greenhouse gas emissions and less truck trips is nothing new – the Region made those same findings in 2014. Id. at 73. Moreover, the total emissions from the 2020 remedy are little more than the total emissions from the 2016 remedy. Id. Table 12.

38 Id. at 72.

39 Determination on Remand at 29.

40 Determination on Remand at 29, 40, B-3. The Region's argument that Petitioners overstate the ecological sensitivity of the UDF site is unfair. The Commonwealth designated that site and the area surrounding it as an ACEC long after the site had been in use as a sand and gravel operation. It is not for the Region to second-guess the Commonwealth's designation or decide that certain components of the ACEC are more deserving of protection than others.

require extensive coordination with local government.[41] In 2020, the Region again concluded that offsite disposal presents the least amount of opposition and onsite disposal would still require coordination with local and state agencies, including on zoning issues.[42] The Region argues that support for the hybrid disposal option is greater than support for on-site disposal was in 2014. This increased support was essentially purchased from municipalities and organizations that joined the Settlement; it does not represented the actual views of the public.

vii. Cost

In both 2014 and 2020, the Region found on-site disposal to be less expensive than off-site.[43]

In short, both the 2014 Comparative Analysis and the SCA favored selection of off-site disposal. The Region's selection of "hybrid" disposal in 2020 is inconsistent with its selection of off-site disposal in 2016 and inconsistent with its decision-making analysis. It was driven instead by the Settlement Agreement and is arbitrary, capricious, and erroneous.[44]

III. The Region Committed Clear Error By Not Considering Thermal Desorption or Bioremediation on Remand.

Both the Region and GE argue that the Board did not remand as to whether treatment technologies should be used, that the Region did not need to consider the question on remand,

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41 2014 Comparative Analysis at 74-75.

42 Determination on Remand at 38.

43 2014 Comparative Analysis at 76; Determination on Remand at 39.

44 The Region and GE also argue that Petitioners have not sufficiently addressed the Region's Response to Comments. That is incorrect. The Petition plainly and directly addresses the Response to Comments and explains why the Response does not change the fact that the Region's remedy selection constitutes clear error. See Petition at 16, 20-21, 27, 29-30.

and that therefore Petitioners have no right to raise the issue in this appeal. There are several problems with this argument. The first is that it is contrary to common sense. One of the reasons treatment is used, and preferred, under CERCLA and RCRA is that it substantially reduces the volume of contaminated material that must be disposed of *anywhere.* Thus, when the Board remanded to the Region the question of whether some or all of the PCB-contaminated sediments from the River should be disposed of on-site, it was arbitrary and erroneous for the Region *not* to consider whether on-site disposal could be entirely or partially eliminated by using treatment.

The Region complains that Petitioners' opening brief offered no "support, case law citations or explanation" for why re-evaluating "where" sediment is disposed necessitates a re-evaluation of "whether and how" sediment should be treated. However, the Board need look no further than the Comparative Analyses conducted by the Region in 2014 and 2020 for such support. Both use the term "treatment/disposition" alternatives to describe the alternatives the Region needed to consider in determining how to dispose of contaminated sediments.[45] But in 2020, instead of evaluating how treatment could have reduced the toxicity and volume of the sediments to be disposed, the Region rejected these mandatory considerations as "not applicable."[46]

The regulations governing the development of corrective measures under RCRA, found at 55 Fed. Reg. 30,798 (1990) – which were discussed by this Board in its prior ruling -- *require* consideration of treatment technologies. Specifically, in evaluating the "long-term reliability and

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45 See, e.g., Determination on Remand at 24, 31; 2014 Comparative Analysis at 59, 77.

46 Determination on Remand at 35.

effectiveness" of a proposed remedy, the agency must consider "source control technologies that involve treatment of wastes, or that otherwise do not rely on containment structures or systems to ensure against future release." In evaluating the "reduction of toxicity, mobility and volume," the agency must consider treatment technologies capable of permanently reducing the overall degree of risk.

Thus, the Region was required to consider treatment alternatives on remand, both as a matter of common sense, and under the regulatory requirements of RCRA, but the Region admits it did not do so.[47] While the Region protests that it has a "strong, longstanding desire to evaluate technologies" to treat PCBs,[48] it has **never** attempted thermal desorption or bioremediation at this site. The Region then used the fact that these technologies have never been tested on River materials as the basis for rejecting their use.

In their opening brief, Petitioners argued that it was arbitrary and capricious for the Region never to test thermal desorption or bioremediation at the River. In its Response to Comments and brief, the Region argues that it was not necessary to test these technologies because they had been tested elsewhere.[49] However, this is what the Region actually said in its 2014 Comparative Analysis about why it would not use thermal desorption on the River:

> Thermal desorption, although generally accepted as a reliable technology for removing contaminants from soil, has similarly **not been demonstrated on Housatonic River materials**.[50] (emphasis added)

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47 2020 RTC at 23.

48 Region Brief, at 34.

49 2020 RTC at 26; Region Brief, at 37.

50 2014 Comparative Analysis at 74.

Where this is the reason the Region gave for rejecting treatment technologies, after the Petitioners urged the Region for decades to test these technologies on River materials, that is arbitrary, capricious, and clearly erroneous. It is precisely the kind of "inconsistency" that warranted this Board's remand in 2018, and warrants remand again now.

IV. The Region did not Follow Well-Established Principles for Monitored Natural Recovery ("MNR").

A. The 2020 Permit Lacks Remedial Objectives for MNR.

The 2020 Permit does not establish "performance standards for MNR" as the Region misleadingly suggests.[51] The Region argues that its Permit contains performance standards for MNR because it placed a quantitative limit on how many PCBs will be permitted to flow past Woods Pond Dam and Rising Pond Dam. Those limits govern how many *more* PCBs can be added to the downstream reaches from the upstream areas. They are not a measure of rates of natural "attenuation" or "recovery." They do not create a standard for a *level of cleanliness* that MNR is expected to achieve in the subject reaches. The volume of PCB contamination flowing past Woods Pond Dam and Rising Pond Dam is simply not a process that removes or destroys PCBs from the reaches below.

In addition, the Region points to criteria in the Permit relating to fish tissue. But PCBs in fish tissue are not a direct measure of the level to which PCB contamination is being remedied by natural processes. For the flowing subreaches in Reach 7 and throughout Reaches 9-16, the Permit says that MNR will be implemented in those reaches. The description of the Corrective Measure for those reaches describes "monitoring of PCB concentrations in affected media

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[51] See Region Br. at 40.

(including **surface water, sediment, and biota**)."[52] There is no performance standard associated with this MNR section of the Permit.[53] Nowhere does the Permit contain a standard for levels of PCB contamination in surface water or in sediment to be achieved through MNR. Fish tissue levels would be a portion of the biota component, but the separate provisions relating to fish tissue, standing alone, are tangential to the issue of whether natural processes are effectively cleaning the River, particularly since fish migrate. Fish tissue data may not be representative of whether naturally occurring processes are effectively containing, destroying, or reducing the bioavailability or toxicity of contaminants in sediment. Such processes can be studied directly in sediment and surface water. Using fish tissue alone as a proxy for the effectiveness of MNR would be especially problematic since the Region has not even identified what naturally occurring processes are expected to obtain any particular result.

It should also be noted that the fish tissue standards established in the Permit are not designed to allow for safe fish consumption in Massachusetts or in all parts of Connecticut, and that, with respect to Connecticut, the Region acknowledges that its modeling results for consumption of aquatic organisms "are very uncertain due to the empirical, semi-quantitative nature of the analyses."[54] Thus, there is no sound basis to conclude that the fish tissue standard is an adequate remedial objective for MNR.

It is disingenuous of the Region to suggest that it has established actual performance objectives for MNR. Ultimately, the standards which relate to fish tissues and to transport of

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52 2020 Permit at 33 (emphasis added).

53 Id.

54 Draft 2020 Permit (July 1, 2020) at C-11, C-12, https://semspub.epa.gov/work/01/647214.pdf. This is all the more concerning because fishing is currently an important source of sustenance for low-income families and tribes living near the River.

PCBs across the two dams are not designed to address the purpose of a CERCLA remedial action – cleanup of contamination to defined levels.

B. The 2020 Permit Has No Timeframe for Achieving a Defined Level of Cleanliness for Sediment or Surface Water.

The Region argues that it has established time parameters for how much time can elapse after completion of construction activities while high levels of PCBs are transported downstream before the downstream transport standards would be considered breached. After a 13-year[55] construction grace period, the downstream transport standards can continue to be exceeded until they are exceeded three years in any five-year period.[56] Putting aside that this period is potentially indefinite, it is not a timeframe for how long it will take for natural processes to clean the River. Similarly, the Region refers to time periods for reduction of PCBs in fish tissue fails to explain whether or how it was determined that such periods are reasonable compared to what can be achieved through active remediation. Nor does the Region explain whether or how the time periods for fish tissue are designed to achieve an actual cleanup of contaminated sediment and surface water. The fact that the Region can find some references to time periods in the 2020 Permit does not mean they are time periods for achieving a remedial objective through MNR.

C. The 2020 Permit Lacks a Contingent Remedy for Cleaning Up the Applicable Media that Would be Subject to Monitoring.

The 2020 Permit lacks a contingent remedy for when natural processes prove ineffective at removing contamination in the affected media – sediment, surface water, and biota. The Region again points to its unrelated Permit provisions for downstream transport and fish tissue. However, a contingent remedy is dependent on there being a performance goal in the first place,

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55 See, e.g., Determination on Remand at 13.

56 See Region Br. at 52.

and since there is no goal for sediment or surface water, there is no contingency. The Permit should expressly make GE accountable for implementing a contingent remedy (active remediation) if the reaches subject to MNR are not cleaning themselves fast enough.

D. The Requirements for MNR Apply to Sites with Contaminated Sediment, Not Just Groundwater.[57]

The Region argues that the standards for MNR cited by Petitioners only apply to groundwater and not sediment. That is incorrect. Although the seminal 1998 and 1999 EPA guidance documents for MNR focused on groundwater and underground storage tank sites respectively[58], their foundational principles have been frequently endorsed and carried forward to broader contexts – including in sediment specific protocols.

For example, EPA's April 2014 Technical Resource Document on Monitored Natural Recovery is a guidance document specific to contaminated sediment sites.[59] It states:

> MNR should be considered when it would meet remedial objectives in a reasonable time frame as compared to realistic estimates of the time to design, implement, and complete a dredging or capping remedy (EPA, 2005a). **The time frame to achieve risk reduction is site specific and should be explicitly stated and understood**. For each site, the time frame is based on a decision rule (i.e., a specific cleanup level at which the contaminant is no longer considered a risk).

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[57] The Region falsely states that Petitioners did not mention MNR guidance documents in their public comments. However, Petitioners did raise the issue, including specifically citing the seminal 1999 MNR guidance document and raising the substantive issues with the MNR proposal that are discussed in the Petition. See Attachment 1 to Petitioners' Initial Brief, at 4.

[58] See Attachments 12 and 15 to Petitioners' Initial Brief.

[59] **Exhibit 11,** U.S. EPA, Technical Resource Document on Monitored Natural Recovery at 10 (April 2014), https://nepis.epa.gov/Adobe/PDF/P100JDQX.pdf (emphasis added).

Indeed, this Technical Resource Document is currently featured on the agency's "Superfund Contaminated Sediments: Guidance and Technical Support" webpage.[60]

Also featured on that sediment-specific webpage is a 2001 report addressing "monitored natural attenuation (MNA) of contaminants in groundwater, soils, and **sediments**."[61] The 2001 report endorses a decision-making process regarding the suitability of MNR at a particular site "consistent with the spirit of the EPA's guidance as stated in the 1998 *Technical Protocol*" – the very document focused on chlorinated solvents in groundwater.[62] The 2001 report concluded:

> . . . [E]ach site must be considered individually . . . natural attenuation is an appropriate remedy for a specific site only when adequate monitoring now and in the future confirms that risks are declining to acceptable levels at the site.
>
> The NRC's *Natural Attenuation for Groundwater Remediation* (NRC 2000) and *OSWER Directive 9200.4-17P: Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites* (EPA, 1999) recognize the need for sufficient site specific analysis before a remedy is selected and subsequent monitoring to document whether the remedy has achieved the stated objectives. The Subcommittee endorses the NRC's (NRC, 2000) finding that, "natural attenuation should be accepted as a formal remedy for contamination only when the processes are documented to be working and are sustainable." Generic decision-making schemes of the sort currently used by the EPA, which are not based on formal and thorough statistical analyses of large samples of cases, should be prohibited.[63]

Similarly, the current Contaminated Sediment Remediation Guidance for Hazardous Waste Sites continues to recognize the principles set forth in the groundwater and underground

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60 **Exhibit 12,** U.S. EPA, "Superfund Contaminated Sediments: Guidance and Technical Support" webpage, https://www.epa.gov/superfund/superfund-contaminated-sediments-guidance-and-technical-support (viewed May 15, 2021).

61 Id.; **Exhibit 13,** U.S. EPA, Monitored Natural Attenuation: USEPA Research Program – An EPA Science Advisory Board Review at 2 (May 2001), https://semspub.epa.gov/work/HQ/134514.pdf (emphasis added).

62 Id. at 3-4.

63 Id. at 42.

storage tank documents: "An MNR remedy generally includes **site-specific cleanup levels and remedial action objectives**, and monitoring to assess whether risk is being reduced as expected"[64]; "[Site conditions conducive to MNR include that] Natural recovery processes have a reasonable degree of certainty to continue at rates that will contain, destroy, or reduce the bioavailability or toxicity of contaminants within an **acceptable time frame**"[65]; "**Contingency measures** should be included as part of a MNR remedy when there is significant uncertainty that the remedial action objectives will be achieved within the predicted time frame."[66]

There is nothing special about sediment that excuses the application of these principles. As stated in the Superfund Remedy Report, which the Region filed in the Administrative Record, the key difference between MNR in groundwater versus sediment is that the common processes used to reduce risk in groundwater (transformation of contaminants) are typically too slow for persistent contaminants of concern in sediment **t**o provide for remediation in a reasonable timeframe.[67]

In short, the principles for MNR programs – that they must be tied to specific recovery objectives, must establish a timeframe for achieving the objectives, and must provide for a contingent response – apply to sites with contaminated sediment such as the Rest of the River.

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64 **Exhibit 14,** U.S. EPA, "Contaminated Sediment Remediation Guidance for Hazardous Waste Sites," OSWER 9355.0-85 at iii (Dec. 2005), https://semspub.epa.gov/work/HQ/174471.pdf (emphasis added).

65 Id. at 4-3 (emphasis added).

66 Id. at iii (emphasis added).

67 Superfund Remedy Report, 16th Ed. at A-14 (July 2020), https://semspub.epa.gov/work/HQ/100002509.pdf. See also id. at A-13 (defining MNA as "the reliance on natural attenuation processes . . . to achieve site-specific remediation objectives within a timeframe that is reasonable compared to that offered by other more active methods").

By not following the well-established principles for MNR, the Region has failed to select a remedy that will be protective of human health and the environment.

E. The Region's 2016 Response to Comments Confirms that the Sampling in Reaches 9 through 17 is Completely Inadequate.

In its Brief, the Region stated that it "has a detailed understanding of the extent of contamination in the MNR river reaches due to modeling and robust biota and sediment sampling."[68] The Region cited its 2016 Response to Comments. The 2016 Response to Comments actually says:

> We are unaware of any recent or adequate sampling of sediment in front of the dams in Connecticut for PCB contamination. There is no easily accessible single source of data from Reaches 9 through 17 that provides information on the sampling that has been done, including results, locations, dates, protocols, and similar information necessary to judge the representativeness and synopticity of the data. There is also no readily available charting of these data. **This lack of information makes it difficult to judge the sufficiency of any proposed remediation**.[69]

The 2016 Response to Comments further confirms that between 1980 and 2005 only 540 individual samples were collected in sediment across the Connecticut reaches[70] – over 100 miles.[71] That number is itself extraordinarily low and does not support scientifically sound remedy selection, but what the Region's comment neglects to mention is that only 60 of the sediment samples were even collected this century.[72] As shown in the table below from a

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68 Region's Br. at 44.

69 2016 RTC at 194.

70 Id. at 195.

71 See https://www.massachusettspaddler.com/housatonic-river-169-7-miles.

72 Sediment PCB Data Summary Report for Connecticut GE-Pittsfield/Housatonic River Site at 3, https://semspub.epa.gov/work/01/574850.pdf.

Summary Report on sediment PCB data in Connecticut for the Site, there were 40 samples collected in 2001 across reaches 10-16, and 20 samples collected from reach 10 in 2005.[73] The majority of the 540 samples were collected in 1980 and 1992.[74]

Sampling Summary

Table 1 Number of Sediment Samples Collected in Connecticut by Year for Each Reach

Year	Sampling Entity	Reach 10	Reach 11	Reach 12	Reach 13	Reach 14	Reach 15	Reach 16	Total
1980	CAES, CT DEP, USGS	8	2	3	1	79	53		146
1986	GE	7		14		40	31		92
1992	GE	28	3	24	7	44	41		147
1998	GE	24		30	20				74
1999	CT DOT						21		21
2001	EPA	6	7	5	7	2	2	11	40
2005	HRC and NGS	20							20
Total		93	12	76	35	165	148	11	540

If the Region were truly confident that PCB levels in the MNR reaches are acceptably low and will remain low after GE's active remediation in the upper reaches, then the Region should formally establish the acceptable levels in the Permit and make them binding. If monitoring shows high levels of PCBs in the MNR reaches, then the Region should expressly provide in the Permit that GE will be required to conduct active remediation to meet defined objectives.

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73 Id.

74 Id.

F. The Extent of Cleanup under the 2020 Permit is a Proper Issue for Review.

The 2020 Permit differs from the 2016 Permit not only in how PCBs will be disposed of after being removed from the River, but also in the amount of PCBs to be removed. Although the latter issue was not originally within the scope of the Board's remand, the Region chose to reopen the issue during its settlement discussions. The Region has boasted that the 2020 Permit will achieve a "more complete cleanup"[75] and has informed the public that "more cleanup" [76] was one of the Region's objectives for negotiating with GE. During negotiations, and without a risk assessment or comparative analysis, the settling parties agreed to modify the volume of PCBs to be removed from the River. In reopening this issue, the Region recognized that leaving more PCBs in the River poses risk to the surrounding communities and sought to reduce those risks by removing more PCBs. Thus, it was the Region – not the Petitioners – who expanded the scope of the remand in order to close a deal in which large amounts of money also changed hands. That negotiation process resulted in a level of cleanup that leaves hundreds of thousands of pounds of PCBs in the River and is still not protective of human health and the environment.

The Region later developed the SCA to legitimize the chosen remedy. The SCA included a section on changes to the sediment/floodplain alternative, which purported to analyze factors such as the "long-term reliability and effectiveness," the "reduction of toxicity, mobility, or volume of wastes," and the "magnitude of residual risk" associated with the 2020 sediment/floodplain alternative – a new alternative first announced after the Settlement was

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[75] News Release from Region at 1 (Feb. 10, 2020), https://semspub.epa.gov/work/01/643779.pdf.

[76] Public Information Slides at 13 (Feb. 19, 2020) (slide listing EPA's Objectives), https://semspub.epa.gov/work/01/644044.pdf.

signed.[77] The Region found, "The 2020 Alternative, through more PCB-contaminated sediment removal, is favored over the 2014 Alternative on the magnitude of residual risk," and stated that this 2020 Alternative was "better suited" to meet the General Standards for Corrective Measures and decision-making factors.[78] This appears to be based solely on the fact that a greater volume of contaminated sediment would be removed, not a risk assessment to determine the optimal or acceptable level that may remain. The adoption of the 2020 Alternative was an implicit decision to leave massive volumes of contaminated sediment in the River subject only to a vague notion of MNR that does not adhere to MNR guidance documents. In light of the Region's decision to reopen the issue, it is fair for Petitioners to challenge the failure to remove adequate volumes of contaminated sediment and to provide binding performance standards.

CONCLUSION

Petitioners respectfully request that the case be remanded and the specific relief set forth in Petitioners' Initial Brief be provided.

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77 See Determination on Remand at 12-15.

78 Id. at 17, 14.

STATEMENT OF COMPLIANCE WITH WORD LIMITATION

In accordance with 40 C.F.R. § 124.19(f)(5), undersigned counsel certifies that the foregoing Reply contains 6,997 words, as counted by a word processing system, including headings, footnotes, quotations, and citations in the count, and, thus, this Reply meets the 7,000 word limitation contained in 40 C.F.R. § 124.19.

Respectfully submitted,

HOUSATONIC RIVER INITIATIVE

and

HOUSATONIC ENVIRONMENTAL ACTION LEAGUE,

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