This draft permit modification includes proposed changes to the 2016 Reissued RCRA Permit. The changes being proposed for public comment are noted in redline or ~~strikeout~~ text. All other Permit provisions have been the subject of a prior public comment period and if appealed have subsequently been upheld by the EPA Environmental Appeals Board. After the conclusion of the public comment period, unless changes to the redline/strikeout language are warranted based on public comment, the redline/strikeout changes will be adopted, and a clean version of the Permit will be finalized and signed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
EPA NEW ENGLAND

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

General Electric Company
1~~59~~ Plastics Avenue
Pittsfield, Massachusetts 01201
EPA I.D. No. MAD002084093

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

This Permit has been prepared for RCRA Corrective Action activities to be performed by General Electric pursuant to a final Consent Decree, United States, et al. v. General Electric Company (D. Mass.) ("Consent Decree"). The Consent Decree memorializes an agreement to address releases of waste materials, including hazardous substances, hazardous waste, and/or hazardous constituents from the General Electric Company's Facility in Pittsfield, Massachusetts, including, but not limited to, the releases of hazardous waste and/or hazardous constituents addressed in this Permit. This Permit, upon the Effective Date, shall replace the HSWA Permit previously issued to the Permittee, initially issued on February 8, 1991, modified effective January 3, 1994, reissued in October 2000 and reissued again, effective December 5, 2007. Upon the Effective Date of this Reissued Permit, the previously issued 2007 Permit hereby is revoked, and, pursuant to the Consent Decree, the Remedial Action set forth in the Permit shall be implemented pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Consent Decree.

Dated: _____

Signed: _____
~~Bryan Olson, Director,~~
~~Office of Site Remediation and Restoration~~Dennis Deziel, Regional Administrator
U.S. Environmental Protection Agency, EPA New England
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

GENERAL ELECTRIC CO. – PITTSFIELD, MA
RCRA CORRECTIVE ACTION PERMIT

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DEFINITIONS

Unless otherwise expressly provided herein, terms used in this Permit, which are defined in the Consent Decree, or in CERCLA, RCRA, or in regulations promulgated under CERCLA or RCRA, shall have the meaning assigned to them in the Consent Decree, CERCLA, RCRA, or in such regulations.

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

2. "Backwaters" means the areas that are typically inundated or open water adjacent to the main channel of the river in Reaches 5, 6, and 7, a preliminary identification of which is generally depicted on Figure 3-17 of GE's October 2010 Revised Corrective Measures Study.

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

4. "Consent Decree", "Decree", or "CD" means the Consent Decree among the General Electric Company, the United States, Massachusetts and Connecticut state governmental agencies, the City of Pittsfield, Massachusetts, and the Pittsfield Economic Development Authority, which was entered by the United States District Court for the District of Massachusetts on October 27, 2000, in the case of United States et al. v. General Electric Company, Civil Action No. 99-30225-MAP and consolidated cases.

5. "Core Habitat Areas", "Core Area 1", "Core Area 2", and "Core Area 3" mean the areas above Woods Pond in the Rest of River that Massachusetts Division of Fisheries and Wildlife (DFW) mapped to assist the governments in determining areas for habitat protection and the locations of habitats and state-listed species that might be particularly sensitive to impacts from remediation activities. These Core Habitat Areas are described in a letter transmitted from DFW to EPA on July 31, 2012 and shown in accompanying maps, which are included in Attachment B.

6. "Corrective Measure" means corrective measure under RCRA until the Permit, or any severable portion thereof, is finalized pursuant to Paragraph 22 of the Consent Decree, whereupon the finalized corrective measure converts to and means response action under CERCLA.

7. "Effective Date" shall mean the date upon which any relevant Performance Standard(s), Corrective Measure(s) and/or other requirements in this Permit become(s) finalized pursuant to the process set forth in the Consent Decree, Paragraph 22, including, but not limited to, the regulations at 40 C.F.R. Part 124.

8. "EPA" means the United States Environmental Protection Agency, EPA New England, and any successor department or agency.

9. "Exposure Point Concentration" or "EPC" means the concentration of a contaminant that is used in the calculation of risk to humans or ecological receptors.

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

11. "Frequently Used Subareas" or "Heavily Used Subareas" means the areas subject to frequent use by humans, including, but not limited to, trails, access points, and known recreational areas that pose a direct contact risk, which generally include the areas shown in Figure 5.

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

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

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

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

16. "Impoundment" means any area of sediment, soil, or water subject to the influence of a dam or dam component, including, but not limited to, sediment or soil present in spillways, sluiceways, channels, by-passes, conduits, ponds, settling basins, intake structures, or other structures used for collection, withdrawal, or use of water and any water withdrawn and used as process water, non-contact cooling water, etc.

17. "Legally Permissible Future Project or Work" shall mean when the property owner, the owner's successors and assigns, or any other party with an interest in the property such as a lessee or easement holder: (1) has submitted a plan to the appropriate governmental authority(ies) to authorize any project or work (if such plan or authorization is necessary) and such plan (if required) has been approved by the governmental authority(ies), or, provides documentation that a proposed project or work is legal without additional government approvals (for example, authorized by an easement or existing permit) and (2) provides to EPA and to Permittee (directly or through EPA) other documented evidence of a commitment to such project or work (for example, such evidence may include evidence of financing or other financial assurance for the project or work, other plans for implementing the project or work (such as architectural plans, contracts for performance of the project or work, or other similar plans), or an affidavit that the owner intends to go forward with the project or work or if the necessary response actions are taken). Legally Permissible Future Projects or Work includes, but is not limited to, construction and repair of structures; utility work; flood management activities; road and infrastructure projects; dam removal, maintenance, repair, upgrades, and enhancement activities; and activities such as the installation of canoe/boat launches and docks.

18. "Legally Permissible Future Use" shall mean A) when the property owner, the owner's successors and assigns, or any other party with an interest in the property such as a lessee or easement holder: (1) has submitted a plan to the appropriate governmental authority(ies) to authorize any use (if such plan or authorization is necessary) and such plan (if required) has been

approved by the governmental authority(ies), or, provides documentation that a proposed use is legal without additional government approvals (for example, authorized by an easement or existing permit) and (2) provides to EPA and to Permittee (directly or through EPA) other documented evidence of a commitment to such use (for example, such evidence may include evidence of financing or other financial assurance for the project, other plans for implementing the project (such as architectural plans, contracts for performance of the project, or other similar plans), or an affidavit that the owner intends to go forward with the project or other change in use if the necessary response actions are taken); or B) the use of a property changes from the exposure scenario upon which the initial or subsequent remediation(s) was determined, to a different exposure scenario, including those scenarios identified in Tables 2, 3 and 4.

19. "Monitored Natural Recovery" means 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 concentrations 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.

20. "PCBs" means total polychlorinated biphenyls.

21. "Performance Standards" mean cleanup standards, design standards, and other measures and requirements necessary to protect human health and the environment. Such Performance Standards that must be achieved and maintained are identified in the Consent Decree, this Modification of the Reissued RCRA Permit, and/or will subsequently be identified in the Rest of River Statement of Work ("Rest of River SOW" or "SOW"), and/or amendments thereto.

22. "Permittee" means the General Electric Company.

23. "Reach" means the designation established by EPA in its 2000 Supplemental Investigation Work Plan for different segments of the East Branch and main stem of the Housatonic River shown in Figures 1 and 2.

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

25. "Rest of River or Rest of River area" shall mean, for the purposes of this Permit, all sediments, surface waters, and Floodplain soils of the Housatonic River which are downstream of the confluence of the East and West branches of the River, including Backwaters in the Floodplain, and to which releases of hazardous wastes and/or hazardous constituents are migrating or have migrated from the GE Facility, but excluding any Actual/Potential Lawns within the Housatonic River Floodplain – Current Residential Properties Downstream of Confluence, within the definition of the Removal Actions Outside the River in the Consent Decree.

26. "Restoration of Areas Disturbed by Remediation" means, for all areas disturbed by remediation activities under this Permit, the implementation of measures to return such areas to

pre-remediation conditions (e.g., the functions, values, characteristics, vegetation, habitat, species use, and other attributes), to the extent feasible and consistent with the remediation requirements.

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

28. "States", for purposes of this Permit, means the Commonwealth of Massachusetts and the State of Connecticut.

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

~~29.~~30. "Upland Disposal Facility" means the facility described in Section II.B.5. of this Revised Permit and generally depicted in Figure 6.

~~30.~~31. "Vernal Pools" mean ephemeral fresh-water wetlands that meet the criteria specified in the Commonwealth of Massachusetts Natural Heritage & Endangered Species Program's Guidelines for Certification of Vernal Pool Habitat (March 2009 publication, Sections I, II, and III).

I. GENERAL PERMIT CONDITIONS

A. Background

1. Overview of Permit and Consent Decree

On October 27, 2000, the U.S. District Court for the District of Massachusetts, Western Division, entered a Consent Decree in United States, State of Connecticut, and Commonwealth of Massachusetts v. General Electric Company, Civil Action No. 99-30225, 99-30226, 99-30227 – MAP (consolidated cases) (the "Consent Decree," or "Decree").

The following explanation summarizes and describes certain provisions of the Consent Decree regarding the process for finalizing the modified Permit and implementing the work selected in the final Permit as a CERCLA remedial action pursuant to the Consent Decree. Nothing in this summary shall modify or otherwise change the meaning of the Consent Decree.

The Consent Decree, at Paragraph 22.p through 22.dd, provides explicit direction on Permittee's opportunities for challenge of the final permit modification, the ability of EPA or Permittee to perform work pursuant to the final permit modification prior to conclusion of all challenges to the final permit modification, the obligations in the event of the final permit modification, or a revised final permit modification is vacated or remanded, and the obligation of Permittee to perform the work, or

severable work, in the permit modification decision as a CERCLA remedial action and any required Operation and Maintenance (O&M) at the conclusion of all opportunities for a challenge to the final permit modification, or severable portion(s) of the permit modification. (The process for severing portions of the Permit and work is described in Paragraph 3 below).

2. Final Permit Modification Pursuant to Process Set Forth in Consent Decree

Following issuance of the 2016 Permit, certain provisions of the 2016 Permit were not challenged by any party. Permittee has submitted several design documents for the uncontested portions of the 2016 Permit.

Permittee has agreed, pursuant to the 2020 Settlement Agreement, in order to expedite response actions, to commence and perform investigation and design work as contractual obligations effective February 10, 2020. Specifically, Permittee shall submit a schedule for the Rest of River Scope of Work (SOW), develop the Rest of River SOW, and, subject to approval by EPA, implement the investigation and design components of the Rest of River SOW and subsequent Work Plans to accelerate the commencement of the Rest of River cleanup. Such Rest of River SOW shall include provisions and schedules for the subsequent development by the Permittee of Remedial Design Work Plan(s), Remedial Action Work Plan(s), Quality Assurance Project Plan/Field Sampling Plan, and/or other appropriate associated plans to achieve and maintain the Performance Standards and other requirements set forth in this modification of the Reissued RCRA Permit. Paragraph 22.x. of the Consent Decree explains the process for developing a Rest of River SOW. Following EPA approval, disapproval, or modification of the Rest of River SOW, the Permittee shall develop and submit the necessary Remedial Design and Remedial Action Work Plans and other documents to EPA for review and approval in accordance with the Rest of River SOW and Section XV of the Consent Decree and subject to Paragraph 39 of the Consent Decree.

The obligation to perform this investigation and design work shall continue unless and until EPA issues a Revised Permit that does not contain terms substantially similar to those in the terms of the 2016 Permit, revised as specified by terms in Sections II and III of the 2020 Settlement Agreement.

Otherwise, t~~T~~his Reissued Permit, or severable portion(s) thereof, ~~at the conclusion of dispute resolution proceedings under the Consent Decree and~~ after the opportunity for challenges to the EPA Environmental Appeals Board as specified in the Decree and described below in this Revised Permit, shall be performed by the Permittee as a CERCLA remedial action pursuant to the Consent Decree. ~~The Permittee shall~~

~~develop and submit to EPA for review and approval a Rest of River Statement of Work (SOW) in accordance with the Consent Decree. Such Rest of River SOW shall include provisions and schedules for the subsequent development by the Permittee of Remedial Design Work Plan(s), Remedial Action Work Plan(s), Quality Assurance Project Plan/Field Sampling Plan and/or other appropriate associated plans to achieve and maintain the Performance Standards and other requirements set forth in this modification of the Reissued RCRA Permit, or severable portion(s) thereof, and in the Rest of River SOW, and (if applicable) reflecting the outcome of any completed dispute resolution proceeding.~~

~~Paragraph 22.x. of the Consent Decree explains the process for developing a Rest of River SOW whenever the Permittee is required to design and implement the Rest of River Remedial Action or a portion thereof.~~

~~Following EPA approval, disapproval, or modification of the Rest of River SOW, the Permittee shall develop and submit the necessary Remedial Design and Remedial Action Work Plans and other documents to EPA for review and approval in accordance with the Rest of River SOW and Section XV of the Consent Decree and subject to Paragraph 39 of the Consent Decree.~~

As provided in Paragraph 22.z of the Consent Decree, the Permittee shall design and implement the Rest of River Remedial Action, and any required O&M, as a CERCLA remedial action pursuant to the Consent Decree, in accordance with EPA's final RCRA permit modification decision, or severable portion(s) thereof, the final outcome of any dispute resolution proceedings, the Rest of River SOW, and any approved Work Plans thereunder. For purposes of the Rest of River Remedial Action and O&M, EPA's modification of the Reissued RCRA Permit, or severable portion(s) thereof, to select such Remedial Action and O&M that is effective at the time of initiation of the Rest of River Remedial Design/Remedial Action shall be considered to be the selected remedial action pursuant to Section 121 of CERCLA and Section 300.430 of the National Oil and Hazardous Substances Contingency Plan (NCP). If such modification is changed by appeals and/or remands, the subsequent modification of the Reissued RCRA Permit shall be considered the selected remedial action pursuant to Section 121 of CERCLA and Section 300.430 of the NCP, and any and all performance or actions required of the Permittee under this Reissued RCRA Permit shall be incorporated into, and conducted pursuant to, the Consent Decree.

3. Performance of Severable Work during Remedy Challenges

a. Initial Challenge to Final Permit Modification

In addition to the expedited work commitment by Permittee described above, and the performance of uncontested obligations described above, t~~T~~he Decree provides opportunities for the Rest of River Remedial Action to take place during challenges to this Permit. ~~At Paragraph 22.r of the Decree, prior to the conclusion of the opportunities for challenges to this Permit under the Decree, the Decree provides that if Permittee challenges the Permit modification decision before the EPA Environmental Appeals Board ("EAB") or United States Court of Appeals for the First Circuit ("First Circuit Court of Appeals"), EPA or Permittee may proceed with design work on the selected Rest of River Remedial Action during the pendency of such challenges. In addition, also pursuant to Paragraph 22.r of the Decree, if Permittee challenges the permit modification decision before the EAB or First Circuit Court of Appeals, Permittee shall perform all severable work not subject to such dispute in accordance with EPA's final permit modification decision referred to in Paragraph 22.p and a Rest of River SOW developed in accordance with the provisions of Paragraph 22.x.~~

b. Second Appeal

Pursuant to the 2020 Settlement Agreement, Permittee has agreed not to challenge the Revised Permit unless the Revised Permit is inconsistent with the terms of the 2020 Settlement Agreement. The draft Revised Permit is not inconsistent with the terms of the 2020 Settlement Agreement; however, if based on public comments received on the draft Revised Permit, the final Revised Permit issued by EPA is inconsistent with the terms of the 2020 Settlement Agreement, ~~If EPA's permit modification decision under Paragraph 22.p is vacated or remanded in response to a challenge,~~ Paragraph 22.u of the Decree provides that upon EPA's issuance of a Revised Permit Modification decision, Permittee shall perform the selected Rest of the River Remedial Action and O&M set forth in EPA's Revised Permit Modification decision unless Permittee timely files a petition for review with the EPA Environmental Appeals Board ("EAB"). Further, pursuant to Paragraph 22.u.(iii), in that event, Permittee shall perform all severable work which is not subject to the dispute, or for which EPA's original permit modification decision was upheld previously by the EAB, and if appealed from the EAB, by the United States Court of Appeal for the First Circuit ("First Circuit Court of Appeals"). Permittee shall perform such severable work

in accordance with EPA's Revised Permit Modification decision and a Rest of River SOW to be developed in accordance with that decision and Paragraph 22.x of the Decree.

Paragraph 22.u.(ii), 22.u.(iv), and 22.u.(v) provide for a stay of the disputed portions of the Revised Permit Modification decision in certain circumstances, but pursuant to Paragraphs 22.u.(iv) and 22.u.(v), Permittee is also required to proceed with severable work on the selected Rest of River Remedial Action and O&M in certain circumstances.

c. Subsequent Appeals

Pursuant to the 2020 Settlement Agreement, Permittee has agreed not to challenge the Revised Permit unless the Revised Permit is inconsistent with the terms of the 2020 Settlement Agreement. The draft Revised Permit is not inconsistent with the terms of the 2020 Settlement Agreement; however, if based on public comments received on the draft Revised Permit, the final Revised Permit issued by EPA is inconsistent with the terms of the 2020 Settlement Agreement, ~~P~~pursuant to Paragraph 22.v of the Decree, if the EAB or First Circuit Court of Appeals vacates or remands all or part of EPA's Revised Permit Modification decision, EPA may again revise its permit modification decision. Permittee shall perform such Rest of the River Remedial Action and O&M in accordance with such further Revised Permit Modification unless Permittee timely files a petition for review. Further, Paragraph 22.v provides for a stay of the disputed portions of the Revised Permit Modification decision in certain circumstances, and for Permittee to proceed with severable work on the selected Rest of River Remedial Action and O&M in certain circumstances.

If there are no challenges to the permit modification decision, or no challenges to a severable portion of the permit modification decision, or at the conclusion of all challenges to the permit modification decision, or at the conclusion of all challenges to any severable portion of the permit modification decision, Permittee shall perform the final selected Rest of River Remedial Action and O&M, as stated in the final permit modification, or final portion thereof, as a CERCLA remedial action pursuant to the Consent Decree.

B. General Obligations and Commitments

1. Duty to Mitigate

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

2. Property Rights

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

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

3. Duty to Provide Information

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

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

4. Inspection and Entry

The Permittee shall provide EPA or an authorized representative, upon presentation of credentials and other documents as may be required by law, with access at reasonable times to the GE Facility or other property owned by the Permittee where any activity under this Permit is located or conducted, for the purpose of conducting, inspecting, or monitoring any activity pursuant to this Permit; inspecting or copying records required to be kept under this Permit; conducting sampling or other investigations

related to implementation of this Permit; assessing the Permittee's compliance with this Permit; or conducting other activities described in Paragraph 53 (access obligations) of the Consent Decree insofar as they relate to activities under this Permit. The Permittee's provision of such access to EPA or an authorized representative shall be in accordance with and subject to Paragraph 53 of the Consent Decree.

5. Monitoring and Records

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

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

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

d. Records of data obtained through monitoring shall include:

(1) The date, exact place, and time of sampling or measurements;

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

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

(4) The date(s) analyses were performed;

(5) The individuals(s) who performed the analyses;

(6) The analytical techniques or methods used;

(7) The result of analyses; and

(8) The quality assurance/quality control data.

6. Signatory Requirements

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

7. Notice of Anticipated Noncompliance

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

8. Transfer of Permit

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

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

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

10. Other Notification and Reporting Requirements

a. The Permittee shall report to EPA all instances of noncompliance with the terms of this Permit in the monthly progress reports to be provided pursuant to Paragraph 67 of the Consent Decree. Copies of such reports shall also be sent to Massachusetts and Connecticut Project Coordinators. For each instance of noncompliance, such report shall contain the following information:

(1) A description of the noncompliance;

(2) The name and quantity of materials released, if any, as a result of such noncompliance;

(3) The extent of injuries, if any, resulting from such noncompliance;

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

(5) Any steps taken to mitigate the impact of such noncompliance or otherwise to correct such noncompliance; and

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

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

11. Computation of Time

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

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

12. Severability

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

13. Confidentiality of Information

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

14. Interpretation of Migration from GE Facility

For purposes of this Permit, the Permittee agrees that, for hazardous waste and/or hazardous constituents in the Rest of River area which are also present both at the GE Facility and at the Former Oxbow Areas (as

defined in the Consent Decree) and which could have migrated to the Rest of River area from either the GE Facility or the Former Oxbow Areas, the Permittee will not contend that such waste and/or constituents did not migrate from the GE Facility.

II. SPECIAL CONDITIONS

A. Introduction

The special conditions in this Reissued RCRA Permit for Rest of River describe the Rest of River Remedial Action and required O&M, including the Performance Standards, Corrective Measures, and other related requirements necessary to achieve and maintain such Performance Standards that the Permittee shall perform pursuant to the CD and this Permit, as finalized, or finalized portions thereof.

As described in the CD and this Permit, all Permittee activities shall be conducted pursuant to this Permit and the CD under the oversight and approval of EPA. All EPA approvals, disapprovals, or modifications of plans and other submittals under this Permit will be pursuant to Section XV of the CD, including the reasonable opportunity for review and comment by the Commonwealth of Massachusetts (MA) and Connecticut Department of Energy and Environmental Protection (CT DEEP). "Approval" by EPA, as used in this Permit, represents this process.

Any modification by EPA of a Performance Standard (e.g., work in a riverbank that modifies Performance Standards set forth in Section II.B.2.a.(1)) would have to be based on EPA's determination under Paragraphs 162-163 of the CD or based on agreement under Paragraph 217 of the CD.

B. Description of Performance Standards and Corrective Measures.

Section II.J. of the 2007 Permit provides that this modification of the Permit will include Performance Standards, and the appropriate Corrective Measures necessary to meet the Performance Standards. In Section II.B. of this Permit, provided below are such Performance Standards and Corrective Measures.

1. General

a. Downstream Transport

(1) Performance Standard

The Downstream Transport Performance Standard shall be the PCB flux over Woods Pond Dam and Rising Pond Dam as described in the table below.

An exceedance of the Performance Standard occurs when the average PCB flux is greater than the standard (at either Woods Pond or Rising Pond) in any three or more years within any 5-year period following completion of construction-related activities outlined herein.

Woods Pond		**Rising Pond**	
Average Daily Flow at Woods Pond Dam Gage (cubic feet per second (cfs))	**Average PCB Flux (kg/yr)**	**Average Daily Flow at Great Barrington USGS Gage (cfs)**	**Average PCB Flux (kg/yr)**
≤ 325	2.2	≤ 485	1.9
> 325 ≤ 395	2.8	> 485 ≤ 600	2.4
> 395 ≤ 1,450	3.3	> 600 ≤ 2,670	4.0
> 1,450	NA	> 2,670	NA

Note: The average PCB flux values that correspond to the associated flow ranges were determined as follows: The PCB fate and transport model (EFDC) results were used to generate average annual PCB fluxes at both Woods Pond and Rising Pond for the years following construction, which include a range of average annual flows. The model was run based on the sediment/bank remediation requirements, excluding the use of activated carbon in Reach 5B and the Backwaters, as set forth in this Permit. The average annual fluxes were segregated into the flow ranges shown in the table above and the maximum flux for each flow range was determined. To account for uncertainty, the value at the upper flow range for each flow-bin was selected from a 95% prediction interval of the regression of average annual flux versus flow.

In the event that this Downstream Transport Performance Standard is exceeded, the Permittee shall evaluate and identify the potential cause(s) of the exceedance and propose, to EPA for review and approval, additional actions necessary to achieve and maintain the Performance Standard. EPA, upon reasonable opportunity for review and comment by the States, will determine any additional actions necessary to achieve and maintain the Performance Standard in accordance with the CD.

(2) Corrective Measures

To achieve and maintain this Performance Standard, Permittee shall conduct all of the Corrective Measures set forth in this Section II.B. In addition, Permittee shall measure compliance with the Performance Standard in accordance with Sections II.B.1.a.(2)(a) through II.B.1.a.(2)(g) below and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Install, operate and maintain a flow gauge at the outlet of Woods Pond that is similar to the USGS gage downstream of Rising Pond dam (gage number 01197500).

(b) Conduct sampling at regularly scheduled intervals (each year), regardless of stream flow. On days when the average daily flow exceeds 1,450 cfs at Woods Pond or 2,670 cfs at Rising Pond, sampling does not need to occur.

(c) Calculate the average daily flow for each sampling event using the data from the gage to be installed at Woods Pond outlet for Woods Pond and data from the USGS gage near Great Barrington (gage number 01197500) for Rising Pond.

(d) For each year of sampling, calculate the arithmetic average of the average daily flows on days when samples were collected. This average daily flow determines the flow bin for a given year.

(e) Calculate the PCB flux by multiplying the sample concentration times the daily average flow for the date sampled. The average PCB flux for a given year is the arithmetic average of the flux calculations for each day of sampling.

(f) Compare the average PCB flux to the standard in the table for the corresponding flow bin for Woods Pond and for Rising Pond.

(g) Permittee shall propose further details for EPA approval in a Work Plan submitted pursuant to Section II.H.5.

b. Biota

(1) Performance Standards

(a) The Short-Term Biota Performance Standard shall be an average total PCB concentration of

1.5 milligrams per kilogram (mg/kg) wet weight, skin off, in fish fillet[1] in each entire reach of the river and Backwaters to be achieved within 15 years of completion of construction-related activities for that reach (or if the reach is subject to Monitored Natural Recovery (MNR), upon completion of the closest upstream reach subject to active remediation) under this Permit.

In the event that the Short-Term Biota Performance Standard is exceeded in any two consecutive monitoring periods after the 15-year period specified above, the Permittee shall evaluate and identify the potential cause(s) of the exceedance and propose, to EPA for review and approval, additional actions necessary to achieve and maintain the Performance Standard. EPA, upon reasonable opportunity for review and comment by the States, will determine any additional actions necessary to achieve and maintain the Performance Standard in accordance with the CD.

(b) The Long-Term Biota Monitoring Performance Standard shall be the requirement that the Permittee continue to monitor, even after the Short-Term Biota Standard has been attained, the reduction in risk posed by the biota and the progress towards achieving an average total PCB concentration of 0.064 mg/kg, wet weight, skin off, in fish fillet[2] in each entire reach of the river and Backwaters in Massachusetts, 0.00018 mg/kg, wet weight, skin off, in fish fillet[3] in each entire reach of the river in Connecticut, and 0.075 mg/kg in duck breast tissue[4] in all areas along the river.

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[1] Based on the probabilistic risk assessment central tendency exposure (CTE) adult exposure Hazard Index (HI) = 1.

[2] Based on the probabilistic risk assessment Reasonable Maximum Exposure (RME) 1 x 10^{-5} cancer risk.

[3] Based on CT DEEP consumption calculation assuming 365 fish meals per year and a 1 x 10^{-6} cancer risk.

[4] Based on the probabilistic risk assessment RME 1 x 10^{-5} cancer risk.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall conduct all of the Corrective Measures set forth in this Section II.B. Permittee shall propose, pursuant to Section II.H., a methodology to evaluate compliance with the Short-Term Biota Performance Standard and a plan to continue to monitor biota after the Short-Term Biota Performance Standard has been achieved.

c. Restoration of Areas Disturbed by Remediation Activities

(1) Performance Standards

For all areas disturbed by remediation activities under this Permit, the Permittee shall:

(a) Implement a comprehensive program of restoration measures that addresses the impacts of the Corrective Measures on all affected ecological resources, species and habitats, including but not limited to, riverbanks, riverbed, floodplain, wetland habitat, and the occurrence of threatened, endangered or state listed species and their habitats, and

(b) Return such areas to pre-remediation conditions (e.g., the functions, values, characteristics, vegetation, habitat, species use, and other attributes), to the extent feasible and consistent with the remediation requirements[5].

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall complete the activities in Sections II.B.1.c.(2)(a) through II.B.1.c.(2)(d) below as components of a program that addresses the impacts of the Corrective Measures on all affected ecological resources, species and habitats, including but not limited to: riverbanks, riverbed, floodplain, wetland habitat; the occurrence of threatened, endangered or state-listed species and their habitats; the restoration of all such areas to pre-remediation conditions (to the extent feasible and consistent with the remediation requirements); and in accordance with plans submitted and approved pursuant to

[5] The requirements of Section II.B.1.c. do not alter or modify the Permittee's obligation to comply with ARARs including, but not limited to, any activities to satisfy the separate net benefit mitigation standard in the Massachusetts Endangered Species Act (MESA). See Section II.E.

Section II.H. of this Permit. ~~Either EPA or the Permittee may propose that select components of these Corrective Measures be addressed independently prior to the development of the SOW (see Section II.H.1).~~

(a) Prepare a Work Plan detailing steps to conduct a Baseline Restoration Assessment (BRA). Perform a baseline assessment of pre-remediation conditions, functions, and values of river bottom, bank, Backwater, Floodplain, Impoundment, and Vernal Pool habitat, and the occurrence of threatened, endangered or state-listed species in the areas affected by Corrective Measures. This ~~Baseline Restoration Assessment (~~BRA~~)~~ shall include, but not be limited to:

i. Identification of the presence and location of specific habitat types, including delineation of existing wetlands;

ii. Identification of the presence, location, abundance, and condition of threatened, endangered or state-listed species and their habitats and other representative species;

iii. Identification of the presence, location, abundance, and condition of invasive species;

iv. Evaluation of Vernal Pool locations, hydrology, and species use; and

v. Characterization of physical/biological attributes (e.g., substrate characteristics, water depth, velocity, temperature, elevation/bathymetry, species composition, density, percent cover, structural components).

(b) Develop Restoration Performance Objectives and Evaluation Criteria (RPOEC) to guide the design, remediation, restoration, construction, implementation of Corrective Measures, and evaluation of restoration success. The RPOEC shall include, but not be limited to:

i. Definition of restoration objectives, including without limitation:

A. While achieving the Performance Standards described in this Permit, minimization of the impacts on all ecological resources and habitats, including the riverbanks and Floodplain, resulting from the implementation of the Corrective Measures;

B. Restoration of all ecological resources and habitats, including the riverbanks and Floodplain, impacted as a result of implementing the Corrective Measures;

ii. Identification of measurable evaluation criteria and applicable methods or specifications, including, without limitation, criteria and methods or specifications for evaluating the success in achieving the restoration objectives developed pursuant to Section II.B.1.c.(2)(b)i;

iii. Identification of stakeholder concerns;

iv. Preliminary Monitoring Program;

v. Preliminary Maintenance Program; and

vi. Specification of corrective actions and circumstances.

(c) Develop a Restoration Corrective Measures Coordination Plan (RCMCP) to be performed during the implementation of the Corrective Measures. This RCMCP shall include, but not be limited to:

i. Integration of restoration activities with remediation activities (e.g., locations of access roads/staging areas, harvesting of material for subsequent use in restoration construction, habitat layer characteristics, bank stabilization methods, construction of bed/bank interface);

ii. Timing/phasing of remediation activities;

iii. Identification of restoration specialists, roles, and responsibilities;

iv. Specification of pre-construction preparation requirements (e.g., installation of silt fence or other protective/exclusion measures, propagation of materials, monitoring/relocation/propagation of species, field delineation of species occurrences/Vernal Pool boundaries); and

v. Specification of protocols to be implemented prior to and during construction to minimize impacts to threatened, endangered or state-listed species and their habitats, including elements discussed above as well as other measures such as seed-banking, transplanting, wildlife exclusion barriers, and turtle tracking.

(d) Design a Restoration Plan (RP) to return all areas disturbed by the remediation activities to pre-remediation conditions (e.g., the functions, values, characteristics, vegetation, habitat, species use, and other attributes), to the extent feasible and consistent with the remediation requirements. This RP shall include, but not be limited to:

i. Identification of materials, sources, and specifications;

ii. Development of restoration construction plans;

iii. Identification of restoration specialists, roles, and responsibilities;

iv. Revised Monitoring Program; and

v. Revised Maintenance Program.

2. River Sediment and Banks

a. Reach 5A

(1) Performance Standards

(a) Throughout Reach 5A, river bed sediment shall be removed and an Engineered Cap (references in this Permit to "Engineered Cap" shall mean an Engineered Cap as described below in Section II.B.2.i.) shall be placed over the entire riverbed.

(b) Contaminated soil from eroding riverbanks in Reach 5A shall be removed.

(c) A bank shall be considered contaminated if it contains ≥ 5 mg/kg total PCBs.

(d) A bank shall be considered to be erodible if the Bank Erosion Hazard Index (BEHI) and Near Bank Stress (NBS) rating is classified in the BANCS model as "Moderate-High" or greater at the same transect location as the PCB samples.

(e) Excavated riverbanks shall be reconstructed to minimize erosion considering the principles of Natural Channel Design[6] and result in a channel that is in dynamic equilibrium, balances flow and sediment loads, and reduces erosive forces. This will allow the maximum use of bioengineering methods in restoring riverbanks. Riverbank reconstruction shall follow a hierarchy of approaches as follows, with i. being the most preferred.

i. Reconstruct disturbed banks with solely bioengineering restoration techniques;

ii. Reconstruct disturbed banks with an Engineered Cap extending into the riverbank placed under a bioengineering layer; or

[6] Natural Channel Design methods are described in Chapter 11, Rosgen Geomorphic Channel Design, of the Stream Restoration Handbook (Part 654) and in the Natural Channel Design Review Checklist Manual.

iii. Place rip-rap cap or hard armoring on residual surface of banks (e.g., where needed for protection of adjacent infrastructure).

(f) Implementation of remediation activities shall result in no net loss of flood storage capacity (FSC) and no increase in water surface elevation in this reach.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall remove sediment, install an Engineered Cap in the entire riverbed, remove riverbank soils, reconstruct the riverbanks, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Sections II.B.2.a.(2)(a) through II.B.2.a.(2)(d~~e~~) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Sediment and riverbank removal and subsequent capping shall result in a final grade generally consistent with the original grade or with modifications, as approved by EPA, considering the principles of Natural Channel Design. Performance of removal and capping shall generally use engineering methods employed from within the river channel or other methods approved by EPA.

(b) The location of contaminated eroding riverbanks shall be determined using a BANCS model[7] calibrated for the Housatonic River and the collection of additional riverbank soil PCB data. A bank shall be considered contaminated if it contains ≥ 5 mg/kg total PCBs measured in the surficial 0 to 12 inches as the average of three 12-inch cores taken at the toe, midpoint, and top of the bank at a maximum spacing of every 25 feet of linear bank. The Permittee shall complete bank excavation for

[7] A description of the BANCS or "Bank Assessment for Non-point source Consequences of Sediment" model can be found at http://water.epa.gov/scitech/datait/tools/warsss/pla_box08.cfm and in the River Stability Field Guide, David Rosgen, copyright 2008 by Wildland Hydrology.

the Thiessen polygon[8] representing the sample transect that is contaminated and eroding.[9]

(c) In addition to the Reach 5A banks that otherwise require remediation pursuant to Sections II.B.2.a.(2)(a) through II.B.2.a.(2)(b) above, the Permittee shall also evaluate the PCB data, erosion potential, adjacent floodplain removal (if any), constructability issues, and likelihood of future downstream transport at such concentrations should such banks erode, and based on these factors, shall consider supplemental riverbank removal, and shall propose further action as necessary.

~~(c)~~(d) The location of soil excavated shall be determined based on the collection, pursuant to this Permit, of bank soil PCB data and bank erosion/shear stress data, and a further evaluation of bank soils pursuant to subsection (c) of this Section.

b. Reach 5B

(1) Performance Standards

(a) The river bed sediment associated with each discrete sample with ≥ 50 mg/kg total PCBs shall be removed and backfilled. The backfill shall consist of material with characteristics similar to existing sediment and placed to original grade.

(b) Subsequent to excavation and backfill, Enhanced Monitored Natural Recovery (Enhanced MNR or

[8] Thiessen polygon method is described in Technical Attachment E of Appendix E to the Consent Decree.

[9] EPA's May 2012 status report entitled "Potential Remediation Approaches to the GE-Pittsfield/Housatonic River Site 'Rest of River' PCB Contamination" (the Status Report) highlighted the objectives of addressing the unacceptable risks posed by PCBs and of minimizing the amount of bank excavation to preserve the dynamic character and related biodiversity and habitats of the river. To that end, the Status Report proposed a remedial approach that, based on data collected prior to the issuance of the Permit, would result in an amount of bank excavation in Reach 5A of 3.5 miles, and an amount of bank excavation in Reach 5B of 0.2 miles. The actual remediation amounts will be determined during remedial design pursuant to the process described herein. If the new data to be collected identifies the need for greater bank excavation, then the foregoing amounts of bank excavation will change based on new data. Consistent with the remedial approach identified in the Status Report, the Corrective Measures for the riverbanks will be designed and implemented to achieve the Performance Standards while minimizing impacts on river dynamics and other ecological processes, and on the abundance of state-listed and other wildlife species and the diversity of their habitats that are supported by the existing river ecosystem.

EMNR) shall be implemented throughout Reach 5B. Permittee shall place an amendment such as activated carbon and/or other comparable amendments proposed by Permittee and approved by EPA throughout Reach 5B to reduce the bioavailability of the remaining PCBs in the sediment bed.

(c) The riverbank soil with ≥ 50 mg/kg total PCBs shall be removed, and disturbed banks shall be reconstructed using bioengineering methods to minimize erosion and reduce downstream transport of the residual PCBs in bank soil (see footnote 9).

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall remove sediment, install backfill in the riverbed, implement EMNR, including placement of an amendment such as activated carbon and/or other comparable amendments, remove riverbank soils, reconstruct the riverbanks, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Sections II.B.2.b.(2)(a) through II.B.2.b.(2)(d~~c~~) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Four cores (thalweg, center, left, right) shall be collected from the surficial 0 to 12 inches of the river bed along transects at a spacing of every 25 linear feet of river channel. Sediment shall be removed from the Thiessen polygon associated with each discrete sample with ≥ 50 mg/kg total PCBs.

(b) Riverbank soil shall be removed from Thiessen polygon represented by a concentration ≥ 50 mg/kg total PCBs in any of three samples (bottom, midpoint, or top of the riverbank) collected from the surficial foot of the riverbank at an interval of 25 feet of linear bank.

~~(b)~~(c) In addition to the Reach 5B banks that otherwise require remediation pursuant to Sections II.B.2.b.(2)(a) and II.B.2.b.(2)(b) above, the Permittee shall also evaluate the PCB data, erosion potential, adjacent floodplain removal (if any),

constructability issues, and likelihood of future downstream transport at such concentrations should such banks erode, and, based on these factors, shall consider supplemental riverbank removal, and shall propose further action as necessary.

~~(c)~~(d) The location of soil and sediment excavated per this subsection shall be determined based on the collection of the bank soil and sediment PCB data collected pursuant to this Permit and a further evaluation of bank soils pursuant to subsection (c) of this Section.

c. Reach 5C

(1) Performance Standards

(a) Throughout Reach 5C, sediments shall be removed, including any areas with ≥ 50 mg/kg total PCBs, to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment (0- to 12-inch depth) and subsurface sediment in each averaging area and depth interval. ~~river bed sediment shall be removed and an Engineered Cap shall be placed over the entire riverbed and depth interval.~~

~~(a)~~(b) Permittee shall backfill as necessary to ensure channel stability; however, the placement of backfill shall not be considered in the spatially-weighted averaging calculations. The backfill shall be a minimum of 6 inches and consist of material with characteristics similar to existing sediment to provide functions and values equivalent to the pre-existing surficial sediment substrate.

~~(b)~~(c) Implementation of remediation activities shall result in no net loss of FSC and no increase in water surface elevation in this reach.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall remove sediment and ~~install an Engineered Cap in the entire~~backfill the riverbed and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the

requirements in Sections II.B.2.c.(2)(a) and II.B.2.c.(2)(b) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Permittee shall propose in Work Plans separate averaging areas within Reach 5C, additional sampling for PCBs, and a method for averaging surface and subsurface PCB concentrations, including proposed depth intervals.

(b) River bed sediment shall be removed, generally using engineering methods employed from within the river channel with dredging or wet excavation techniques to be approved by EPA. Regardless of sediment removal technique, the sediment shall, if feasible, be conveyed hydraulically to the Upland Disposal Facility location for processing Sediment removal and subsequent ~~capping~~ backfill shall result in a final grade generally consistent with the original grade or with modifications, as approved by EPA, considering the principles of Natural Channel Design.

d. Backwaters adjacent to Reaches 5, 6, and 7

(1) Performance Standards

(a) For contaminated sediment in the portions of Backwaters located outside of Core Area 1 Priority Habitat (as generally shown in Attachment B):

i. For surface sediment (0- to 12-inch depth): remove sufficient sediment, including any areas ≥ 50 mg/kg total PCBs, and replace with a contiguous Engineered Cap to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in each averaging area. When calculating post-remediation surficial spatially-weighted average concentrations, a PCB concentration equal to 1% of the existing average surficial concentration shall be used as the PCB concentration in capped areas.

ii. For subsurface sediment: in areas outside the footprint of the Engineered Cap necessary to meet the requirements in

Section II.B.2.d.(1)(a)i. above, remove sufficient sediment and replace with a contiguous Engineered Cap(s) to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in subsurface sediment in each averaging area and depth interval. For areas beneath an Engineered Cap, a total PCB concentration equal to 1% of the existing average surficial concentration shall be used as the PCB concentration in spatial-weighting calculations.

iii. In lieu of the provisions in Sections II.B.2.d.(1)(a)i. and II.B.2.d.(1)(a)ii. above, Permittee may propose to excavate sediments, including any areas ≥50 mg/kg total PCBs, to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment (0- to 12-inch depth) and subsurface sediment in each averaging area and depth interval. The placement of backfill shall not be factored in the spatially-weighted averaging calculations.

iv. All backfilling or capping shall result in a final grade generally consistent with the original grade.

(b) In the portions of Backwater areas located within Core Area 1 habitat with discrete total PCB concentrations ≥ 50 mg/kg in surficial (0- to 12-inch) sediment, the sediment for each sample ≥ 50 mg/kg shall be removed followed by placement of an Engineered Cap to original grade.

(c) The Permittee shall place an amendment such as activated carbon and/or other comparable amendments proposed by Permittee and approved by EPA to reduce the bioavailability of the remaining PCBs in areas defined as Core Area 1 habitat where total PCB concentrations are between 1 mg/kg and 50 mg/kg in the surficial (0 to 12 inches) of sediment.

~~(c)~~(d) Sediment shall be removed with either dredging or wet excavation techniques to be approved by EPA and, if feasible, conveyed hydraulically to the Upland Disposal Facility location for processing.

~~(d)~~(e) Remediation activities shall result in no net loss of FSC and no increase of water surface elevation in this reach.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall remove sediment, install an Engineered Cap or backfill in the Backwaters, and place an amendment such as activated carbon and/or other comparable amendments in the Backwaters, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Sections II.B.2.d.(2)(a) ~~and~~ through II.B.2.d.(2)(c~~b~~) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Permittee shall propose in a Pre-Design Work Plan (see Section II.H.3. below) additional sampling for PCBs in sediment, and a method for averaging surface and subsurface PCB concentrations using a 50-foot grid, including proposed averaging areas and depth intervals.

(b) The location of sediment excavated or dredged and/or capped per this subsection shall be determined based on the collection of additional PCB data on a 50-foot sample grid. For Section II.B.2.d.(1)(b), sediment shall be removed from the Thiessen polygon associated with each discrete sample with ≥50 mg/kg total PCBs.

(c) Sediment shall be removed with either dredging or wet excavation techniques to be approved by EPA and, if feasible, conveyed hydraulically to the Upland Disposal Facility location for processing.

e. Woods Pond (Reach 6)

(1) Performance Standards

(a) Sediment shall be removed throughout the pond and an Engineered Cap shall be placed over residual PCBs to result in a post-capping minimum water depth of 6 feet measured from the crest of the dam, except in near-shore areas where the slope from the shore to the 6-foot water depth shall be as steep as possible, while also being stable and not subject to erosion or sloughing. In areas deeper than 6 feet prior to remediation, sufficient sediment shall be removed to allow for the placement of an Engineered Cap so that the final grade is equal to or deeper than the original grade.

(b) Permittee shall conduct updated bathymetric surveys before sediment removal, and before and after capping. The post-capping bathymetry survey shall be the baseline used in determining the amount of future sediment deposition on the Engineered Cap.

(c) If during monitoring following construction, EPA determines that significant concentrations and depths of PCB-contaminated sediment have accumulated above the Engineered Cap in Woods Pond, the Permittee shall remove such accumulated sediment while ensuring the integrity of the Engineered Cap.

(d) Remediation activities shall result in no net loss of FSC and no increase of water surface elevation in this reach.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall conduct sediment removal, capping, bathymetric surveys, and perform all other related activities. Sediment shall be removed with dredging or wet excavation techniques to be approved by EPA and, if feasible, conveyed hydraulically to the Upland Disposal Facility location for processing. Permittee shall perform the foregoing pursuant to the Performance Standards and in

accordance with plans submitted pursuant to Section II.H. below.

f. Columbia Mill Impoundment (Reach 7B), Eagle Mill Impoundment (Reach 7C), Willow Mill Impoundment (Reach 7E), and Glendale Impoundment (Reach 7G).

(1) Performance Standards

(a) For surface sediment (0- to 12-inch depth): remove sufficient sediment, including any areas with ≥ 50 mg/kg total PCBs, and replace with a contiguous Engineered Cap to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment in each averaging area. When calculating post-remediation surficial spatially-weighted average concentrations, a total PCB concentration equal to 1% of the existing average surficial concentration shall be used as the PCB concentration in capped areas.

(b) For subsurface sediment: for areas outside the footprint of the Engineered Cap necessary to meet the requirements in Section II.B.2.f.(1)(a) above, remove sufficient sediment and replace with contiguous Engineered Cap(s) to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in subsurface sediment in each averaging area and depth interval. For areas beneath an Engineered Cap, a total PCB concentration equal to 1% of the existing average surficial concentration shall be used as the PCB concentration in spatial-weighting calculations.

(c) Engineered Capping shall result in a final grade generally consistent with original grade. Engineered Capping and all actions pursuant to Sections II.B.2.f.(1)(a) and II.B.2.f.(1)(b) above shall not exceed 3 acres within Reach 7E and 6.5 acres within Reach 7G.

(d) For Reaches 7B and 7C, in lieu of the provisions in Sections II.B.2.f.(1)(a) through II.B.2.f.(1)(c) above, Permittee shall remove sediment and remove the dams in these impoundments (which include the coves/ponds adjacent to Columbia Street in Lee).

Materials requiring removal under this paragraph shall include sufficient sediment in any areas with ≥ 50 mg/kg total PCBs, to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment (0- to 12-inch depth) and subsurface sediment in each averaging area and depth interval. Permittee shall backfill with a minimum of 6 inches of backfill of suitable material and additional material as necessary to ensure channel stability; however, the placement of backfill shall not be considered in the spatially-weighted averaging calculations.

~~(d)~~(e) In ~~any~~ Reaches 7E and 7G ~~Impoundment~~, in lieu of the provisions in Sections II.B.2.f.(1)(a) through II.B.2.f.(1)(c) above, Permittee may propose to excavate sediments, including any areas with ≥ 50 mg/kg total PCBs, to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment (0- to 12-inch depth) and subsurface sediment in each averaging area and depth interval. Permittee shall backfill with a minimum of 6 inches of backfill of suitable material as necessary to ensure channel stability; however, the placement of backfill shall not be considered in the spatially-weighted averaging calculations. Permittee shall use this approach to ensure that no more than 3 acres within Reach 7E and 6.5 acres within Reach 7G require capping.

~~(e)~~(f) For ~~any~~ Reaches 7E and/or 7G ~~dam~~, in lieu of the provisions in Sections II.B.2.f.(1)(a) through II.B.2.f.(1)(c~~d~~), Permittee may propose to EPA for review and approval that Permittee coordinate with any entity planning to remove any Reach 7 dam. Such proposal shall include a schedule for reaching an agreement with an entity(s) on the scope and extent of the work to be performed, the entity(s) conducting the work, the allocation of costs, and, if applicable, the prompt payment by Permittee of costs in advance of implementation of the necessary work on the dam removal once necessary approvals have been received. Materials requiring removal under this paragraph shall include soil or sediment that could be mobilized downstream as part of dam removal and sediments greater than 1 mg/kg total

PCBs in the river bed. For any Floodplain area created as a result of dam removal (former impounded areas exposed due to removal of a dam), Permittee shall follow the process outlined in Section II.B.76.b.(2)(b)ii.[10] If Permittee cannot secure and implement an agreement pursuant to this Section in a timely manner, the Permittee shall implement the requirements in Sections II.B.2.f.(1)(a) through II.B.2.f.(1)(c) above and/or implement actions in Section II.B.2.f.(1)(ed) above.

(f)(g) Remediation activities shall result in no net loss of FSC and no increase of water surface elevation in each of Reaches 7B, 7C, 7E and 7G.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall remove sediment, install an Engineered Cap or backfill in the Impoundments, remove dams in Reaches 7B and 7C, and/or secure and implement an agreement with entity(s) to remove dam(s) in Reaches 7E and/or 7G, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards, the requirements in this Section, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

Permittee shall propose in Work Plans separate averaging areas within each Impoundment, additional sampling for PCBs, and a method for averaging surface and subsurface PCB concentrations using a 50-foot grid, including proposed depth intervals. This plan shall include characterization for the three options approaches in Sections II.B.2.f.(1)(a) through II.B.2.f.(1)(fe) above. The submission of a Work Plan(s) for Reaches 7B and 7C shall be expedited per Section II.H.1. below.

[10] In addition to the requirements outlined above, at the time that the dam removal work is anticipated, EPA expects that there will be an agreement in place that, among other things, will ensure that the planned dam removal and material removal are conducted in accordance with applicable legal requirements, and that will ensure EPA review and approval of work plans and oversight of the sediment removal work.

g. Rising Pond (Reach 8)

(1) Performance Standards

(a) For surface sediment (0- to 12-inch depth): remove sufficient sediment, including any areas with ≥ 50 mg/kg total PCBs, and replace with a contiguous Engineered Cap to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment in each averaging area. When calculating post-remediation surficial spatially-weighted average concentrations, a total PCB concentration equal to 1% of the existing average surficial concentration shall be used as the PCB concentration in capped areas.

(b) For subsurface sediment: for areas outside the footprint of the Engineered Cap necessary to meet the requirements in Section II.B.2.g.(1)(a) above, remove sufficient sediment and replace with contiguous Engineered Cap(s) to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in subsurface sediment in each averaging area and depth interval. For areas beneath an Engineered Cap, a total PCB concentration equal to 1% of the existing average surficial concentration shall be used as the PCB concentration in spatial-weighting calculations.

(c) Engineered Capping shall result in a final grade generally consistent with original grade. Engineered Capping and all actions pursuant to Sections II.B.2.g.(1)(a) and II.B.2.g.(1)(b) above shall not exceed 31 acres.

(d) In lieu of the provisions in Sections II.B.2.g.(1)(a) through II.B.2.g.(1)~~(a)~~(c) above, the Permittee may propose to excavate sediments, including any areas with ≥ 50 mg/kg PCBs, to achieve a spatially-weighted average concentration of 1 mg/kg total PCBs in surface sediment (0- to 12-inch depth) and subsurface sediment in each averaging area and depth interval. Permittee shall backfill with a minimum of 6 inches of backfill of suitable material as necessary ~~Backfilling may be required~~ to ensure channel stability; however, the placement of backfill shall not be considered in the spatially-

weighted averaging calculations. Permittee shall use this approach to ensure that no more than 31 acres within Reach 8 require capping.

(e) Permittee shall conduct updated bathymetric surveys before sediment removal and before and after capping. The post-capping bathymetry survey shall be the baseline used in determining the amount of future sediment deposition.

(f) If during monitoring following construction, EPA determines that significant concentrations and depths of PCB-contaminated sediment have accumulated, the Permittee shall remove such accumulated sediment while ensuring the integrity of the Engineered Cap, where present.

(g) Remediation activities shall result in no net loss of FSC and no increase of water surface elevation in this reach.

(2) Corrective Measures

To achieve and maintain Performance Standards, Permittee shall remove sediment, install an Engineered Cap or backfill, conduct bathymetric surveys and monitoring activities, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in this Section, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

Permittee shall propose in a Pre-Design Work Plan (see Section II.H.3. below) separate averaging areas within the pond, additional sampling for PCBs on a 50-foot grid, and a method for averaging surface and subsurface PCB concentrations, including proposed depth intervals. For Section II.B.2.g.(1)(d), sediment shall be removed from the Thiessen polygon associated from each discrete sample with ≥ 50 mg/kg total PCBs.

h. Flowing Subreaches in Reach 7 and Throughout Reaches 9 Through 16, Including Impoundments

(1) Performance Standard

Monitored Natural Recovery (MNR) shall be implemented in these reaches.

(2) Corrective Measure

To achieve and maintain this Performance Standard, Permittee shall conduct monitoring of PCB concentrations in affected media (including surface water, sediment, and biota) in these reaches to see if recovery is occurring at the expected rate, maintain institutional controls, and perform all other related activities. Permittee shall perform the foregoing pursuant the Performance Standard and in accordance with Sections II.B.4., II.B.7~~6~~., and II.H. of this Permit.

i. Engineered Caps

(1) Performance Standards

(a) All Engineered Caps constructed shall include the following layers or functions:

i. A Mixing Layer to prevent contamination of the chemical isolation layer due to mixing with underlying contaminated sediment during cap placement, taking into account geotechnical considerations, placement techniques, and other factors as appropriate.

ii. Chemical Isolation Layer sufficient to minimize (reduce by 99%) the flux of PCB concentrations through the isolation layer.

iii. Erosion Protection Layer to prevent erosion in accordance with federal and state requirements and consistent with pertinent EPA or U.S. Army Corps of Engineers (USACE) guidance.

iv. Geotechnical Filter Layer, as needed based on the design evaluation, to prevent mixing between other layers.

v. Bioturbation Layer to prevent bioturbation from impacting underlying layers.

vi. Habitat Layer to provide functions and values equivalent to the pre-existing surficial sediment substrate.

(b) Installation of the cap shall not result in a loss of FSC, and there shall be no increase in water surface elevations in any of the reaches where Engineered Caps are installed.

(c) Engineered Caps shall be inspected, monitored, and maintained to ensure long-term protectiveness and to ensure that they continue to function as designed.

(2) Corrective Measures

To achieve and maintain these Performance Standards, the Permittee shall design, construct, inspect, monitor, and maintain Engineered Caps and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Section II.B.2.i.(2), including, but not limited to, Sections II.B.2.i.(2)(a) through II.B.2.i.(2)(g) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

The Permittee shall design and construct all Engineered Caps to physically isolate contaminated sediments from potential ecological and human receptors, and minimize the transport of PCBs from the sediment beneath the caps to the bioavailable surface layer and the water column, consistent with the principles presented in pertinent EPA or USACE guidance such as EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (EPA, 2005) and Guidance for In-Situ Subaqueous Capping of Contaminated Sediments (Palermo et al., 1998) and in accordance with federal and state requirements.

Engineered Cap designs generally specify mixing, chemical isolation, erosion protection, filter, bioturbation, and habitat layer(s). They also may specify the inclusion of an amendment such as activated carbon where necessary to minimize the flux of PCBs. Under some circumstances, a single layer of material may serve more than one purpose in achieving the Performance Standards above. Engineered Cap design must also take into account constructability concerns (e.g., placement tolerances, method of construction). The design process shall address the following items:

(a) Mixing Layer

Evaluate the composition and thickness necessary to meet the Performance Standard.

(b) Chemical Isolation Layer

i. Modeling of the isolation layer shall be performed in general accordance with EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (EPA, 2005) and Guidance for In-Situ Subaqueous Capping of Contaminated Sediments (Palermo et al., 1998).

ii. Modeling shall be conducted using site-specific data collected during the design process, as appropriate.

iii. Modeling shall consider the processes of advection, diffusion, sorption, bioturbation, and exchange with the surface water, and sediment deposition consistent with current state-of-the practice for cap design.

iv. Modeling shall be used to determine the thickness and composition (i.e., the amount of activated carbon/total organic carbon (TOC) or equivalent sorptive amendment) of the chemical isolation layer sufficient to meet Performance Standards.

(c) Erosion Protection Layer

i. The stable particle sizes necessary to resist the erosive forces in the different reaches of the Housatonic River shall be computed in accordance with federal and state requirements and consistent with pertinent EPA and USACE guidance such as EPA's Contaminated Sediment Remediation Guidance for Hazardous Waste Sites (EPA, 2005) and Guidance for In-Situ Subaqueous Capping of Contaminated Sediments (Palermo et al., 1998).

ii. The design flow event for the erosion protection layer is a flow event up to and including the applicable return interval event

(for example, 100 year or 500 year flow event), which shall be calculated using up-to-date flow data. However, consideration shall also be given during the cap design to the potential impact of climate change on cap performance, and to including appropriate measures to mitigate the potential impacts.

iii. Site-specific data and modeling will be used to determine the design velocities and associated bed shear stresses associated with various flow events.

iv. In addition, other potential erosional forces, including, but not limited to, bioturbation, wind-generated waves, debris, motor boat wakes, and ice impacts will be considered.

(d) Geotechnical Filter Layer

The use of a geotechnical filter layer between the chemical isolation layer material and erosion protection layer material shall be evaluated and may be necessary for those areas requiring cobble or larger sized material in the erosion protection layer.

(e) Bioturbation Layer

The assemblage of species, bioturbation depth profile, and abundances of dominant organisms shall be evaluated to determine the need for and thickness of a bioturbation layer to be included.

(f) Habitat Layer

Engineered Caps shall include a habitat layer that provides functions and values equivalent to the pre-existing surficial sediment substrate.

(g) Other Design Considerations

i. The geotechnical stability of the caps (e.g., bearing capacity, slope stability, ebullition) shall be evaluated.

ii. The need for over-placement allowances with additional excavation for each layer shall be considered.

iii. The requirement for periodic removal of contaminated sediment that accumulates on top of the Engineered Caps at Woods Pond and Rising Pond shall be considered in the design of such Engineered Caps.

j. Additional Response Actions and/or Inspection, Monitoring and Maintenance for Dams and Impoundments in Reaches 5 through 9

(1) Performance Standards

(a) The Permittee shall minimize PCB releases related to dams and Impoundments by ensuring inspection, monitoring, and maintenance of such dams and Impoundments, and operating the Woods Pond and Rising Pond dams.

(b) If there is a catastrophic failure and/or a material breach of any dam or component of the dam that results in a release of PCBs that is materially greater than the PCB transport from that dam under the normal range of flow conditions, the Permittee shall propose and implement a response to maintain the Performance Standards or to maintain the effectiveness of the Rest of River Remedial Action.

(c) The Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work including, but not limited to, dam removal (either before or after completion of any response action conducted pursuant to Sections II.B.2.e. through II.B.2.g. above). Permittee shall conduct such response actions (including material handling and off-site disposal and engineering controls) to allow such Legally Permissible Future Project or Work to be conducted in a manner that maintains Performance Standards and/or maintains the effectiveness of the Rest of River Remedial Action.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall perform the following: ensure the

inspection, monitoring, and maintenance of the dams, and/or Impoundments; operate Woods Pond and Rising Pond dams to minimize releases; conduct response actions to be protective of any Legally Permissible Future Project or Work including, but not limited to dam removal; if there is a catastrophic failure and/or material breach of any dam or dam component, propose and respond to such release to maintain the Performance Standards or to maintain the effectiveness of the Rest of River Remedial Action; and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards, the requirements in Sections II.B.2.j.(2)(a) through II.B.2.j.(2)(e) below, and in accordance with the plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Permittee shall operate, inspect, monitor, and maintain Woods Pond and Rising Pond dams, even if the Permittee transfers ownership interest in the dams. Such activities shall include, (i) maintaining the integrity of the dam to contain contaminated sediments and (ii) conducting materials handling and off-site disposal and engineering controls related to dam maintenance, repair, upgrades, and enhancement activities (including, but not limited to, addressing sedimentation in sluiceways, conveyances, and other channels that transport water over, through or around the dam); and (iii) and all other related activities. Upon conveyance of either dam, Permittee may seek EPA approval for another party to implement some or all of Permittee's operation, inspection, monitoring and maintenance obligations.

(b) For all other dams and Impoundments in Massachusetts Permittee shall ensure inspection, monitoring and maintenance for such dams. Such activities shall include, (i) maintaining the integrity of the dam to contain contaminated sediments, and (ii) conducting materials handling and off-site disposal, and engineering controls related to dam maintenance, repair, upgrades, and enhancement activities (including, but not limited to, addressing sedimentation in sluiceways, conveyances, and other channels that transport water over, through or around the dam) and (iii) and all other related

activities. Permittee shall make best efforts to obtain an access agreement with each owner of a dam to allow Permittee to perform such inspection, monitoring and maintenance activities. Permittee may seek EPA approval for another party to implement some or all of the Permittee's inspection, monitoring and maintenance activities. If Permittee uses best efforts but cannot fulfill these obligations, Permittee may submit to EPA for review and approval a plan that includes, without limitation, the reasons why Permittee cannot fulfill these obligations, any proposed actions Permittee will take to remediate the PCB contamination behind the dams, any further actions to be taken to obtain agreement from the dam owner, and whether the Engineered Caps will maintain effectiveness without Permittee having fulfilled its obligations regarding dam inspection, monitoring and maintenance.

(c) If there is a catastrophic failure and/or a material breach of any dam or dam component that results in a release of PCBs from the dam that is materially greater than the PCB transport from that dam and/or Impoundment under the normal range of flow conditions, Permittee shall, within thirty (30) days of notification by EPA of such failure or breach, submit a Report for EPA approval that (i) proposes repairs to, or removal of, such dam, and (ii) proposes a plan to characterize and respond to the PCBs released by such failure and/or breach (if necessary to maintain the Performance Standards or to maintain the effectiveness of the Rest of River Remedial Action). The Report shall include a proposed schedule to implement the required response actions. Following receipt of EPA's approval of the Report and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule.

(d) Permittee shall every five years determine whether there has been a change in ownership of any dam. In addition, within 30 days of conducting response actions behind a dam, and at any time there is a change in ownership of such dam, and every five

years after any of the foregoing events, Permittee shall provide notice to such dam owner (for the initial notice, notice shall also be sent to any holders of easements), with copies to EPA, MA DEP, CT DEEP, and applicable regulatory agencies, of:

i. A commitment that the Permittee will conduct the requirements set forth in Sections II.B.2.j.(1)(b) and II.B.2.j.(1)(c) above, and will conduct response actions including inspections, monitoring and maintenance (such as dam maintenance, repair, upgrades, and enhancement activities), including, without limitation, engineering controls, restoration of any aspect of the Rest of River Remedial Action disturbed by such work, and materials handling and off-site disposal. For any activities that would involve the removal, disposal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such materials and the protection of workers and other individuals during such excavation activities, in accordance with applicable laws and regulations.

ii. Notice of contact persons for Permittee, EPA, MA DEP, and CT DEEP and a request that the property owner notify the contact persons prior to conducting work at the dam, and

iii. A description of the PCB contamination behind the dam, including the presence of an Engineered Cap, if applicable.

(e) If Permittee or another entity implements a Legally Permissible Future Project or Work including, but not limited to, the removal of any dam (either before or after completion of any response actions conducted pursuant to Sections II.B.2.e. through II.B.2.g. above), Permittee shall conduct sufficient response actions (including materials handling and off-site disposal and engineering controls) to allow

such Legally Permissible Future Project or Work to be conducted in a manner that maintains the Performance Standards and/or maintains the effectiveness of the Rest of River Remedial Action. Permittee may seek EPA approval for another party to implement some or all of these obligations. Further response actions under this paragraph will be (i) in accordance with and pursuant to the Consent Decree; and (ii) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

k. Additional Response Actions for Sediment, Riverbanks, Backwaters, Impoundments in Reaches 5 through 9

(1) Performance Standard

The Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work. Permittee shall conduct such response actions (including material handling and off-site disposal and engineering controls) to allow such Legally Permissible Future Project or Work to be conducted in a manner that maintains Performance Standards and/or maintains the effectiveness of the Rest of River Remedial Action.

(2) Corrective Measures

To achieve and maintain this Performance Standard, Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work. Such response actions may include, without limitation, material handling and off-site disposal and engineering controls, repairing any aspect of the Rest of River Remedial Action disturbed by such Legally Permissible Future Project or Work, and all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards, the requirements in Sections II.B.2.k.(2)(a) and II.B.2.k.(2)(b) below, and in accordance with the plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work. Within 30 days of Permittee receiving notification from EPA that EPA has determined that an entity has met the criteria for a Legally Permissible Future Project or Work, Permittee shall submit to EPA for approval, a work plan and schedule to respond to such Legally Permissible Future Project or Work. For any activities that would involve the removal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such materials and the protection of workers and other individuals during such excavation activities, in accordance with applicable laws and regulations. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA approval for another party to implement some or all of these obligations. Further response actions under this paragraph will be (i) in accordance with and pursuant to the Consent Decree; and (ii) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

(b) Permittee shall annually provide letters to the Conservation Commissions and Departments of Public Works ("DPWs") for the municipalities located along the River, and the Massachusetts Department of Transportation District 1 ("MA DOT") (with copies to EPA, MA DEP, and CT DEEP), that provide notice of the potential for contamination and request that such entities notify Permittee, EPA, MA DEP, CT DEEP prior to approving any application for and prior to implementing any Legally Permissible Future Project or Work in the Reaches 5 through 9 of the River and/or Floodplains.

l. Additional Response Actions for Dams and Impoundments and Sediment, Riverbanks, and Backwaters in Reaches 10 through 16

(1) Performance Standards

(a) The Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work, where documentation is provided that such Legally Permissible Future Project or Work requires the handling or disturbance of sediment or riverbank soils with total PCBs greater than 1 mg/kg. Permittee shall conduct such response actions (including material handling and off-site disposal and engineering controls) to allow such Legally Permissible Future Project or Work to be conducted in a manner that maintains Performance Standards and/or maintains the effectiveness of the Rest of River Remedial Action.

(b) If there is a catastrophic failure and/or a material breach of any dam or dam components that results in a release of PCBs that is materially greater than the PCB transport from that dam under the normal range of flow conditions, the Permittee shall propose and implement a response to maintain the Performance Standards and/or to maintain the effectiveness of the Rest of River Remedial Action.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work including, without limitation, engineering controls, and materials handling and off-site disposal, and if there is a catastrophic failure and/or material breach of any dam or dam component, propose and respond to such release, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards, the requirements in Sections II.B.2.l.(2)(a) through II.B.2.l.(2)(d~~e~~) below, and in accordance with the plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Permittee shall conduct further response actions to be protective of any Legally Permissible Future Project or Work. Within 30 days of Permittee receiving notification from EPA that that EPA has determined a) that an entity has met the criteria for a

Legally Permissible Project or Work, and b) that such Legally Permissible Project or Work requires the handling or disturbance of sediment or riverbank soils with total PCBs greater than 1 mg/kg, Permittee shall submit to EPA for approval, a work plan and schedule to respond to such Project or Work, including, without limitation, sampling and analysis, engineering controls, and materials handling and off-site disposal. For any activities that would involve the removal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such materials and the protection of workers and other individuals during such excavation activities, in accordance with applicable laws and regulations. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA approval for another party to implement some or all of these obligations.

(b) Permittee shall every five years, determine whether there has been a change in ownership of each dam. In addition, any time there is a change in ownership of such property, and every five years thereafter, Permittee shall provide notice to the dam owner (for the initial notice, notice shall also be sent to any holders of easements), with copies to EPA, CT DEEP and applicable regulatory agencies, of:

i. A commitment that the Permittee will conduct the requirements set forth in Section II.B.2.l.(2)(a) above, and will conduct response actions to be protective of any Legally Permissible Future Project or Work in locations where documentation is provided that such Project or Work requires the handling or disturbance of sediment or riverbank soils with total PCBs greater than 1 mg/kg. Such response actions include, without limitation, sampling and analysis, engineering controls, and materials handling and off-site disposal. For any activities that

would involve materials handling or the removal of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper handling, management, and off-site disposal of such materials and the protection of workers and other individuals during such excavation activities, in accordance with applicable laws and regulations.

ii. Notice of contact persons for Permittee, EPA and CT DEEP, and

iii. A description of the PCB contamination behind the dam.

(c) If there is a catastrophic failure and/or a material breach of any dam or dam component that results in a release of PCBs from the dam that is materially greater than the PCB transport from that that dam under the normal range of flow conditions, Permittee, shall within thirty (30) days of notification by EPA of such failure of breach, submit a Report for EPA approval that (i) proposes repairs to such dam and (ii) proposes a plan to characterize and respond to the PCBs released by such failure and/or breach (if necessary to maintain the Performance Standards or to maintain the effectiveness of the Rest of River Remedial Action). The report shall include a proposed schedule to implement the required response actions. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA approval for another party to implement some or all of these obligations.

(d) Further response actions under this paragraph will be (i) in accordance with and pursuant to the Consent Decree; and (ii) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

3. Floodplain and Vernal Pools

a. Floodplain Soil Adjacent to Reaches 5 through 8

(1) Performance Standards

(a) Primary Floodplain Performance Standards and Secondary Floodplain Performance Standards are outlined in Table 1.

(b) For each Exposure Area (see Figures 3, 3A, and 4), excavate and replace the top 12 inches of soil to achieve either the Primary Floodplain Performance Standards or Secondary Floodplain Performance Standards based upon the approach set forth in Section II.B.3.a.(2) below. The excavated areas shall be backfilled to original grade.

(c) In addition, for each Frequently Used Subarea (shown in Figure 5), excavate and replace the top 3 feet of soil to achieve the Performance Standards presented in Table 2. The excavated areas shall be backfilled to original grade.

(d) For Residential Floodplain Parcels adjacent to Reach 5A, as identified in Table 5, Permittee shall excavate and replace soil to achieve the Residential Performance Standards set forth in Table 3. For Reach 5C, as identified in Table 5, Permittee shall, at the option of the property owner, excavate and replace soil to achieve the Residential Performance Standards set forth in Table 3.

~~(d)~~(e) Permittee shall avoid excavation in Core Area 1 habitat (other than Frequently Used Subareas) except in limited areas where necessary to meet Secondary Floodplain Performance Standards in Table 1.

~~(e)~~(f) Permittee shall minimize the impacts from remediation on a case-by-case basis[11] for Core

[11] Minimization of impacts from remediation of Floodplain and Vernal Pool soil in Core Area 2 and 3 habitat means the implementation of a range of best construction practices that includes, but is not limited to, minimizing impacts when determining the location and scale of staging areas and access roads, phasing the work, use of time of year restrictions, tracking and/or exclusion of animals from work areas, plant transplantation. Minimization of impacts may also include the avoidance of remediation in certain areas where, e.g., the impact to state-listed species or their habitats of constructing an access road or a staging area to remediate such areas outweighs the benefits of remediation. Permittee may propose areas to avoid excavating based on this concept; however, final approval of any avoidance in Core Area 2 and 3 habitats will be made by EPA, after consultation with the States.

Areas 2 and 3 (as shown in Attachment B); however, at a minimum, Secondary Floodplain Performance Standards in Table 1 shall be attained.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall excavate and backfill Floodplain soil and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Sections II.B.3.a.(2)(a) through II.B.3.a.(2)(~~f~~g) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) The Permittee shall conduct additional sampling of Floodplain soil (as needed) to determine the total PCB exposure point concentration (EPC)[12] for each Exposure Area using a Thiessen polygon approach.

~~(a)~~(b) Where applicable per Section II.B.3.a.(1)(d), the Permittee shall submit to EPA for approval a proposed remediation plan based on meeting the Residential Performance Standards in Table 3.

~~(b)~~(c) The Permittee shall submit to EPA for approval a proposed remediation plan based on meeting Primary Floodplain Performance Standards in Table 1 for each Exposure Area and the Performance Standards in Table 2 in each Frequently Used Subarea using the following approach:

i. Remediation in Frequently Used Subareas to attain Floodplain Performance Standards in Table 2;

[12] The EPCs shall be calculated using the methods described in Appendix D to the GE's Corrective Measures Proposal and subsequent revisions described in Section 4.4 in GE's October 2010 Revised Corrective Measures Study, including the use of an approved 95th Upper Confidence Limit method to estimate the mean concentration of total PCBs, the use of spatially interpolated representation of Floodplain soil PCB data, and factoring in habitat community mapping where applicable.

ii. Remediation in all Exposure Areas to attain Primary Floodplain Performance Standards in Table 1;

iii. A proposal for avoidance of Core Area 1 habitat (other than Frequently Used Subareas) except in limited areas where necessary to meet Secondary Floodplain Performance Standards in Table 1; and

iv. A proposal for minimization on a case-by-case basis for Core Areas 2 and 3 (as shown in Attachment B); however, at a minimum, Secondary Floodplain Performance Standards in Table 1 shall be attained.

~~(c)~~(d) Based on the proposal submitted pursuant to Section II.B.3.a.(2)~~(b)~~ (c) above, EPA shall identify any modification to areas proposed to be avoided, and the Permittee shall recalculate the EPC, to ensure that the resultant excavation plan meets, at a minimum, Secondary Floodplain Performance Standards in Table 1 in each Exposure Area as a whole and the Performance Standards in Table 2 for Frequently Used Subareas.

~~(d)~~(e) To the extent that Secondary Floodplain Performance Standards are not met in each Exposure Area as a whole, the Permittee shall propose additional areas to be excavated in order to meet, at a minimum, Secondary Performance Standards in the Exposure Area as a whole, repeating the steps in Sections II.B.3.a.(2)(c~~b~~) and II.B.3.a.(2)(d~~c~~) as needed.

~~(e)~~(f) In conjunction with the steps in Sections II.B.3.a.(2)(c~~b~~) through II.B.3.a.(2)(e~~d~~), the Permittee shall also evaluate the presence of any areas of remaining PCB concentrations in Floodplain soil for erosion potential and the likelihood of future downstream transport at concentrations that could result in the exceedance of the General Performance Standards specified in Sections II.B.1.a. and II.B.1.b. Based on the erosion potential and likelihood of future downstream transport at such concentrations, the Permittee shall reevaluate, as needed, any area of

proposed Floodplain soil remediation, considering the steps in Sections II.B.3.a.(2)(c~~b~~) through II.B.3.a.(2)(c~~d~~) above, and shall propose further action as necessary.

~~(f)~~(g) The Permittee shall submit the revised evaluation to EPA. Upon approval by EPA, the Permittee shall implement the required actions.

b. Vernal Pools Adjacent to Reaches 5 Through 8

(1) Performance Standards

(a) In addition to any remediation conducted in Vernal Pools in order to meet the Floodplain Performance Standards in Section II.B.3.a.(1) above, the Permittee shall remediate Vernal Pools that exceed a spatially-weighted average concentration of 3.3 mg/kg total PCBs (based upon risk to amphibians).

(b) The Permittee shall evaluate the best approach to remediation of Vernal Pools by first conducting a pilot study on not more than ten (10) vernal pools ("Pilot Vernal Pools"), evaluating the following approaches:

i. On a select number of Pilot Vernal Pools, place an amendment such as activated carbon and/or other comparable amendments in Vernal Pools that exceed a spatially-weighted average concentration of 3.3 mg/kg total PCBs ~~(based upon risk to amphibians)~~ to reduce the bioavailability of PCBs to a level less than or equivalent to the bioavailability of PCBs associated with 3.3 mg/kg total PCBs in sediment.

ii. ~~If remediating a Vernal Pool using activated carbon or another comparable amendment is determined to be unsuccessful pursuant to the process outlined in Section II.B.3.b.(2) below in meeting the Performance Standard in Section II.B.3.b.(1)(a) above, Permittee shall~~On a select number of Pilot Vernal Pools, excavate soil and backfill Vernal Pools to pre-excavation elevations to

achieve a spatially-weighted average concentration of 3.3 mg/kg total PCBs in each Vernal Pool except for Vernal Pools in Core Area 1, where no excavation shall occur. Permittee shall minimize the impacts from excavation in Vernal Pools in Core Areas 2 and 3 (as shown in Attachment B) on a case by case basis in the manner described in footnote 11.

~~ii.~~iii. Based on EPA's evaluation of the initial pilot round of Vernal Pool remediation and restoration and taking into the consideration the Core Area habitat, EPA will determine the preferred method/approach to remediation and restoration of each subsequent Vernal Pool and the Permittee shall implement this approach.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall place an amendment such as activated carbon and/or other comparable amendments, and/or conduct excavation and backfill, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Sections II.B.3.b.(2)(a) through II.B.3.b.(2)(g) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(a) The Permittee shall submit a plan to EPA and, upon approval, conduct one or more site visits to identify potential Vernal Pools. EPA will make the determination as to what constitutes a Vernal Pool. Areas determined not to be Vernal Pools shall be considered Backwaters or Floodplain soil under Sections II.B.2.d or II.B.3.a, respectively, depending on whether or not the area is typically inundated.

(b) The Permittee shall conduct additional sampling and characterization of Vernal Pools, to generate baseline data on the concentrations of total PCBs, ~~and~~ the presence and abundance of animal species and a range of taxa, including, but not limited to,

threatened, endangered or state-listed species, and water and soil chemistry. The Permittee shall also conduct additional field reconnaissance as needed to evaluate the potential ecological effects of remediation of the Vernal Pools. The Permittee shall conduct the above actions in accordance with a work plan approved by EPA.

(c) The Permittee shall identify Vernal Pools that exceed a spatially-weighted average concentration 3.3 mg/kg total PCBs.

(d) The Permittee shall submit a plan for EPA approval proposing the number of Vernal Pools to be piloted for remediation by both the use of activated carbon or other comparable sediment amendment and for remediation by traditional excavation and restoration methods. For both methods, Permittee shall submit plans describing the methods to be used and the criteria for success for both reduction of bioavailability/concentration of PCBs and impact to ecological receptors and as outlined below.

~~(d)~~(e) Permittee shall, in the plan referenced immediately above, describe ~~submit a plan describing~~ the type of activated carbon or other comparable sediment amendment, how it would be applied, and a method to measure the effectiveness of activated carbon or sediment amendment to meet the Performance Standard for reduction in PCB bioavailability in Sections II.B.3.b.(1)(a) and II.B.3.b.(1)(b) above. Such methods may include, but are not limited to, measuring the reduction in PCB concentrations in porewater, surface water, benthic invertebrates and/or other biota. The plan shall also identify the criteria for success ~~describe~~ and how to measure the ecological effects of the placement of activated carbon or sediment amendment in comparison to the pre-remediation conditions documented in Section II.B.3.b.(2)(b) above.

(f) Permittee shall, upon EPA approval of the plan submitted pursuant to Section II.B.3.b.(2)(d) above, implement the placement of activated carbon and/or other comparable sediment amendment in an initial set of ~~10~~ Vernal Pools and submit a report describing the following: the effectiveness of

placement activities in achieving the Performance Standards in Sections II.B.3.b.(1)(a) and II.B.3.b.(1)(b) and Section II.B.1.c. above; the ecological effects of the activated carbon and/or other comparable sediment amendment on Vernal Pools compared to the criteria for success; any suggested modifications to the procedures; and a proposal for how to address the remaining Vernal Pools such that the Performance Standard in Sections II.B.3.b.(1)(a) or II.B.3.b.(1)(b) will be met.

~~(e)~~(g) ~~If excavation and backfill is required to meet the Performance Standard in some or all of the Vernal Pools, then the~~ The Permittee shall ~~propose~~submit a plan for remediation by excavation and backfill of an initial number of pools, to achieve a spatially-weighted average concentration of 3.3 mg/kg total PCBs in each Vernal Pool. Permittee shall, upon EPA approval of the plan, implement this method and submit a report describing the following: the effectiveness of excavation and backfill activities in achieving the Performance Standards in Sections II.B.3.b.(1)(a) and II.B.3.b.(1)(b) and Section II.B.1.c. above; the ecological effects of the excavation and backfill on Vernal Pools compared to the criteria for success; and any suggested modifications to the procedures. Permittee shall conduct subsequent remediation activities using excavation and backfill pursuant to EPA approval of this report.

~~(f)~~(h) Upon EPA review and approval of the reports submitted pursuant to Sections II.B.3.b.(2)(e) through II.B.3.b.(2)(g) above, after providing an informal opportunity for public input, Permittee shall proceed with remediation of the remaining Vernal Pools with the placement of activated carbon and/or other comparable amendment, or implementation of excavation and backfill ~~for any of the remaining Vernal Pools for which it is determined that this method can meet the Performance Standard. For Vernal Pools for which it is determined that the placement of activated carbon and/or other comparable amendment cannot meet the Performance Standard, Permittee shall~~

~~remediate such Vernal Pools through excavation and backfill~~ (excluding Vernal Pools in Core Area 1), or a combination of the two methods. The excavation and backfill shall be conducted such that the hydrology necessary for a Vernal Pool is not adversely affected.

4. Inspection, Monitoring and Maintenance for All Response Actions Except for Those Related to the Upland Disposal Facility.

a. Performance Standard

Permittee shall implement a baseline and construction monitoring program and an inspection, monitoring and maintenance program.

b. Corrective Measure

To achieve and maintain this Performance Standard, Permittee shall implement baseline and construction monitoring, and inspection, monitoring and maintenance activities, and perform all other related activities. Permittee shall perform the foregoing pursuant to this Performance Standard and the requirements in Sections II.B.4.b.(1) and II.B.4.b.(2) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(1) Baseline and Construction Monitoring Program

A baseline and construction monitoring program shall be implemented, including but not limited to, the following:

(a) Prior to the commencement of construction activities, PCB data in surface water, sediment, and biota (and other data) shall be collected to serve as a baseline for the evaluation of the potential impacts of the Corrective Measures and project operations as well as to inform model parameterization in the model re-evaluation plan. ~~The submission of a Baseline Monitoring Plan shall be expedited per Section II.H.1.~~

(b) The Permittee shall propose a program to minimize adverse impacts of construction activities on the environment (e.g., resuspension) including:

i. Measures to assess these impacts (e.g., establishing notification and action levels for PCBs measured in surface water);

ii. A monitoring plan to collect these data; and

iii. Establishing response actions (e.g., slowdown and evaluation of operations, stop work and modification of operations, etc.).

This program shall be designed to be consistent with an adaptive management approach, as outlined in Section II.F. below.

(2) An inspection, monitoring, and maintenance program shall be conducted in phases and be implemented upon completion of each phase of the Rest of River Remedial Action, except for areas subject to MNR. For areas where MNR is the Performance Standard, monitoring shall begin with baseline monitoring and shall continue throughout the Remedial Action and O&M.

The inspection, monitoring, and maintenance program shall be implemented throughout the Remedial Action to evaluate the effectiveness of the Corrective Measures in achieving Performance Standards, to evaluate MNR, to monitor the sediment accumulation above the Engineered Caps at Woods Pond and Rising Pond, and to conduct maintenance, repair, or other response actions necessary to achieve and maintain compliance with Performance Standards. This program shall be designed to be consistent with an adaptive management approach as outlined in Section II.F. below.

5. Upland Disposal Facility

a. Performance Standards

(1) The Permittee shall construct an Upland Disposal Facility to contain certain sediment, floodplain soils and other waste material (as defined in the Consent Decree) generated as part of the Rest of River Remedial Action that meet the Acceptance Criteria in Attachment E to this Permit at the location shown in Figure 6.

(2) The Upland Disposal Facility shall meet the following design Performance Standards:

(a) The Upland Disposal Facility shall have a maximum design capacity of 1.3 million cubic yards.

(b) The landfill consolidation area shall have a maximum footprint of 20 acres and a maximum elevation of 1,099 feet above mean sea level. If the seasonally high groundwater elevation is determined to be higher than 950 feet above mean sea level, the maximum elevation of the landfill consolidation area may be increased by the number of feet that is the difference between the seasonally high groundwater elevation and 950 feet above mean sea level in order for the Upland Disposal Facility to have a maximum capacity of 1.3 million cubic yards.

(c) The Upland Disposal Facility shall consist of a double bottom liner, separated by a drainage layer, and shall incorporate primary and secondary leachate collection systems.

(d) The bottom liner of the landfill will be installed a minimum of 15 feet above a conservative estimate of the seasonally high groundwater elevation. The seasonally high groundwater elevation will be projected using site-specific groundwater elevation data collected in the location of the Upland Disposal Facility, modified by an appropriate technical method that takes into account historic groundwater level fluctuations at similarly-sited off-site long-term monitoring wells in Massachusetts. The estimation of a seasonally high groundwater elevation will be performed pursuant to a methodology reviewed and approved by EPA. The estimate of seasonally high groundwater elevation shall then be used to support the design of the landfill relative to achieving the required minimum separation distance from the bottom of the liner system to the seasonally high groundwater elevation.

(e) The landfill will be capped with a low-permeability cap to include liner(s) drainage layer(s) and vegetation.

(f) Liners (bottom liners and cap liners) shall have a permeability equal or less than 1 x 10^{-7} cm/sec, a minimum thickness of 30 mils and be chemically compatible with PCBs.

(g) Landfill design will include a stormwater management system to control surface runoff, to minimize the potential for surface erosion or stormwater contribution to leachate generation.

(h) A groundwater monitoring network shall be designed and installed around the Upland Disposal Facility to monitor for PCBs and other constituents identified in the groundwater monitoring plan as approved or modified by EPA. Groundwater monitoring shall include a sufficient number of monitoring wells to allow detection of groundwater impacts.

(3) Permittee shall identify all non-community and private water supply wells currently within 500 feet of the Upland Disposal Facility consolidation area. Unless the well owner does not consent, Permittee shall pay the installation cost of a connection to public water. In the event any new water users (e.g., new construction) move within 500 feet of the Upland Disposal Facility consolidation area during construction or O&M, Permittee shall pay the installation cost of a connection to public water.

(4) Permittee shall be responsible for the proper functioning of the Upland Disposal Facility landfill during landfill operations and shall remain responsible for the proper O&M of the landfill thereafter. Permittee shall be responsible for the closure of the landfill including the installation of the low-permeability cap and vegetative cover promptly upon EPA's determination that either of the following conditions has occurred: (1) the landfill is full (e.g., when the maximum footprint, elevation and/or design capacity are reached), or (2) excavation and dredging activities conducted as part of the Rest of River Remedial Action are complete. Permittee shall be responsible for post-closure activities and monitoring thereafter.

(5) No material from the Rest of River Remedial Action will be disposed of at any other location in Berkshire County.

(6) No one shall take any materials to the Upland Disposal Facility for disposal except those meeting Acceptance Criteria and generated pursuant to this Permit. No materials from previously remediated sites in the Upper 2-Mile Reach of the Housatonic River cleanup nor any other materials associated with the other response actions conducted pursuant to the Site Consent Decree may be disposed of at the Upland Disposal Facility.

b. Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall construct, operate and maintain an Upland Disposal Facility. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements below, and in accordance with the plans submitted and approved pursuant to Section II.H. of this Permit.

(1) Landfill operations, inspections, maintenance, and groundwater sampling activities will be conducted in accordance with approved plans.

(2) Permittee shall include in its landfill design submissions one or more proposals (based on Permittee's consultations with officials from the Town of Lee) describing how Permittee will prepare the Upland Disposal Facility for potential re-use once the landfill is capped if the Town of Lee desires. Any such proposals shall be described in the final Remedial Design/Remedial Action Work Plans.

(3) During the implementation of the Corrective Measures, the Permittee may propose to EPA for approval the use of innovative treatment technologies as part of an adaptive management approach as outlined in Section II.F. below.

~~5.~~6. Off-Site Disposal of Contaminated Sediment and Soil

a. Performance Standard

The Permittee shall dispose of ~~all~~ contaminated sediment and soil, as well as other waste material, that do not meet the Acceptance Criteria for the Upland Disposal Facility outlined in Attachment E, and any other waste material that is otherwise not placed in the Upland Disposal Facility, off-site at existing licensed facilities that are approved to receive such waste material and are in compliance with EPA's off-site rule (40 C.F.R. 300.440).

b. Corrective Measures

To achieve and maintain this Performance Standard, Permittee shall dispose of ~~all~~ certain contaminated sediment and soil, as well as other waste material, at an approved and licensed existing off-site disposal facility and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standard and the requirements in Sections II.B.6~~5~~.b.(1) ~~and~~ through II.B.6~~5~~.b.(3~~2~~) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(1) The Permittee shall propose the methods and locations for off-site disposal to EPA for review and approval. Permittee's proposal shall include measures to maximize the transport of such waste material to off-site facilities via rail, to the extent practicable.

(2) During the implementation of the Corrective Measures, the Permittee may propose to EPA for approval the use of innovative treatment technologies as part of an adaptive management approach as outlined in Section II.F. below.

~~(2)~~(3) At a minimum, 100,000 cubic yards of PCB-contaminated soil and/or sediment will be disposed of off-site.

~~6.~~7. Institutional Controls and Related Requirements

a. Biota Consumption Advisories

(1) Performance Standard

The Permittee shall cooperate with and support EPA and the States regarding all biota consumption advisories issued by EPA and/or the States for the Rest of River area until such time that the advisories are discontinued.

(2) Corrective Measures

To achieve and maintain this Performance Standard, the Permittee shall cooperate with and support EPA and the States to improve public awareness of the advisories by conducting the following: preparing, distributing, inspecting, monitoring and maintaining educational and outreach activities, including the producing and posting of signs; providing to hunting and fishing license distributors appropriate written notices regarding such advisories to be included with licenses; and performing all other related

activities. Signs and outreach material shall be produced in languages appropriate for communities that hunt or fish in the Rest of River area. Permittee shall perform the foregoing pursuant to the Performance Standard, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

b. Floodplain soils (inclusive of Vernal Pools and Backwaters) in Exposure Areas in Reaches 5 through 8.

(1) Performance Standards

(a) On all property without a registered or recorded Environmental Restriction and Easement (ERE) or Notice ERE (including Conditional Solution properties as discussed below), and for all non-subordinated property interests on properties with an ERE or a Notice ERE, Permittee shall conduct such response actions (including material handling and off-site disposal, engineering controls, repairing any aspect of the Rest of River Remedial Action) to allow such Legally Permissible Future Project or Work to be conducted in a manner that maintains Performance Standards and/or maintains the effectiveness of the Rest of River Remedial Action.

(b) For all Exposure Areas (see Figures 3 and 4) that do not meet the Performance Standard for Residential Use set forth in Table 3, Permittee shall, for the portion of the property within the Exposure Area, record (hereinafter "record" shall mean record or register as appropriate) an ERE or a notice ERE for the purposes of implementing, ensuring non-interference with and/or ensuring the integrity and protectiveness of the response actions performed; or after a response has been implemented pursuant to Section II.B.3. above, implement a Conditional Solution to achieve and maintain the applicable Performance Standard set forth in Tables 3 and/or 4 for any Legally Permissible Future Use and for the purposes of ensuring the integrity and protectiveness of the response actions performed.

(2) Corrective Measures

To achieve and maintain these Performance Standards, Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work, and shall, for all Exposure Areas (see Figures 3 and 4) that do not meet the Performance Standard for Residential Use set forth in Table 3, for the portion of the property within the Exposure Area, record an ERE, a Notice ERE or after a response has been implemented pursuant to Section II.B.3. above implement a Conditional Solution to achieve and maintain the applicable Performance Standard in Tables 3 or 4 for any Legally Permissible Future Use, and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards, the requirements in Sections II.B.7~~6~~.b.(2)(a) through II.B.7~~6~~.b.(2)(c) below, and in accordance with the plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Environmental Restriction and Easements:

For all Exposure Areas (see Figures 3 and 4) that do not meet the Performance Standard for Residential Use set forth in Table 3, Permittee shall, for the portion of the property within the Exposure Area:

i. Prepare and record EREs for properties owned by Permittee in accordance with Section XIII of the CD.

ii. Prepare and record Notices of Environmental Restriction and Easements (Notice EREs) for properties owned by the Commonwealth. These activities shall be conducted in accordance with Section XIII and the Twelfth Modification of the Consent Decree.

iii. For properties not owned by Permittee or the Commonwealth, make best efforts to obtain and record an ERE with an offer of appropriate compensation in accordance with Section XIII of the CD. Permittee shall make such best efforts in coordination with requesting access from the property owners to implement the response actions to be

conducted pursuant to Section II.B.3. above or on a schedule approved by EPA.

iv. Permittee shall, on an annual basis after the recordation or registration of an ERE or Notice ERE, conduct an inspection of any property with an ERE or a Notice ERE that is not owned by Permittee as generally described in Appendix Q to the Consent Decree. For properties not owned by Permittee or the Commonwealth, Permittee shall also on an annual basis determine if there has been an ownership change in the property. Whenever there is an ownership change, and at a minimum of every two years, Permittee shall send a letter to the property owner notifying them of the presence of the ERE.

(b) Conditional Solutions:

If the owner declines the ERE offer in Section II.B.7~~6~~.b.(2)(a)iii. above, or an easement holder or an entity with a property interest declines to subordinate its property interest to the ERE, Permittee shall, after a response has been implemented pursuant to Section II.B.3. above, implement a Conditional Solution to be protective of a Legally Permissible Future Project or Work and/or to achieve and maintain the applicable Performance Standards set forth in Table 3 or 4 to be protective of any Legally Permissible Future Use in accordance with the following requirements:

i. Response actions to be protective of a Legally Permissible Future Project or Work:

For any response action to be protective of any Legally Permissible Future Project or Work that would involve handling, excavation, or the removal of sediment or soil, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such sediment or soil, the protection of workers and other individuals during such activities, and restoration of any aspect of the Remedial Action, in accordance with applicable laws and regulations. Further response actions under this paragraph will

be (A) in accordance with and pursuant to the Consent Decree; and (B) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

ii. Response Action to achieve and maintain the applicable Performance Standards set forth in Table 3 or 4 to be protective of any Legally Permissible Future Use:

For any change in the exposure scenario basis from Table 1 (or from the exposure scenario basis for subsequent response actions), Permittee shall conduct additional response actions, if necessary, to achieve and maintain the applicable Performance Standards in Tables 3 and/or 4. Permittee shall:

A. Determine the appropriate exposure scenario from Tables 3 and 4.
B. Determine the EPC for the exposure area.
C. Evaluate whether or not the EPC meets the Primary Performance Standard for Table 3 and/or the Performance Standard for Table 4. For non-agricultural future uses, if the EPC exceeds the Primary Performance Standard, follow the procedures outlined in Section II.B.3 of this permit to determine if additional response actions are required.
D. The Permittee shall submit this evaluation to EPA. Upon approval, by EPA, the Permittee shall implement the required actions.
~~D.~~E. Further response actions under this paragraph will be (I) in accordance with and pursuant to the Consent Decree; and (II) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's

responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

iii. Timing Requirements for implementing Sections II.B.76.b.(2)(b)i. and II.B.76.b.(2)(b)ii. above. Permittee shall:

Within 30 days of the date that EPA notifies Permittee in writing that EPA has determined that the criteria for a Legally Permissible Future Use or a Legally Permissible Future Project or Work has been met, Permittee shall submit to EPA for approval, a work plan and schedule for the additional response actions described in Sections II.B.76.b.(2)(b)i. and II.B.76.b.(2)(b)ii above. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA approval for another party to implement some or all of these obligations. Further response actions under this paragraph will be (A) in accordance with and pursuant to the Consent Decree; and (B) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

iv. Notifications

Within 30 days of completion of response actions conducted pursuant to Section II.B.3 or Sections II.B.76.b.(2)(b)i. and II.B.76.b.(2)(b)ii above, at any time there is a change in ownership of such property, and no later than every two years after the most recent notification, Permittee shall provide notice to the owner (for the initial notice, notice shall also be sent to any holders of easements), with copies to EPA, MA DEP and applicable regulatory agencies, of:

A. A commitment that the Permittee will conduct the requirements set

forth in Sections II.B.76.b.(2)(b)i. through II.B.76.b.(2)(b)iii. above, including the requirements for conducting response actions to be protective of any Legally Permissible Future Project or Work, or any Legally Permissible Future Use including without limitation, materials handling and off-site disposal, engineering controls, and restoration of any aspect of the Rest of River Remedial Action disturbed by such work. For any activities that would involve the removal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such materials and the protection of workers and other individuals during such activities, in accordance with applicable laws and regulations.

B. A recommendation that the property owner notify EPA or MA DEP prior to conducting soil excavation or disturbance or a change in use. In addition, provide contact persons for Permittee, EPA and MA DEP, and

C. A description of the residual PCB contamination on the property where the Conditional Solution has been implemented.

v. Annual inspections and determinations of property ownership

Following the implementation of any Conditional Solution pursuant to Section II.B.76.b.(2)(b) above, Permittee shall on an annual basis: determine if there is new ownership and conduct an inspection of such property to determine: whether there has been any change in uses that are inconsistent with the exposure scenario basis upon which the Conditional Solution was implemented; identify any activities

resulting in the disturbance of 10 or more cubic yards of soil; and identify other items based on additional criteria developed in accordance with the Institutional Controls and Related Requirements Plan submitted pursuant to Section II.H.20~~19~~. of this Permit. Within 30 days of such inspection, Permittee shall submit a report to EPA and MA DEP based on an evaluation of the criteria set forth above and in the Institutional Controls and Related Requirements Plan submitted pursuant to Section II.H.~~19~~20. of this Permit.

(c) Additional Conditional-Solution related requirements:

With respect to the following three scenarios, Permittee shall within 30 days of Permittee receiving notification from EPA that EPA has determined that an entity has met the criteria for a Legally Permissible Future Project or Work, Permittee shall submit to EPA for approval, a work plan and schedule to respond to such use, project, or work, including, without limitation, sampling and analysis, materials handling and off-site disposal, engineering controls, restoration of any aspect of the Rest of River Remedial Action disturbed by such work. Such scenarios are as follows: prior to the recording of ERE or Notice ERE; after recording of an ERE or a Notice ERE for property interests that do not subordinate their property rights, including property interests other than the owner for properties with a recorded Notice ERE; and, prior to implementing the initial response action set forth in Section II.B.3. for a Conditional Solution. For any activities that would involve the removal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such materials and the protection of workers and other individuals during such activities, in accordance with applicable laws and regulations. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA

approval for another party to assume some or all of these obligations. Further response actions under this paragraph will be (i) in accordance with and pursuant to the Consent Decree; and (ii) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

Permittee shall also, in accordance with a schedule set forth pursuant to Section II.H., provide notice to the owner (for the initial notice, notice shall also be sent to any holders of easements), with copies to EPA, MA DEP and applicable regulatory agencies, that meets the requirements of Section II.B.7~~6~~.b.(2)(a)iv. above.

c. Floodplain Soils outside Exposure Areas in Reaches 5-16

(1) Performance Standards

(a) Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work where there is sampling data documenting that total PCBs are greater than 1 mg/kg on the Floodplain portion of the property subject to the Legally Permissible Future Project or Work.

(b) Permittee shall conduct response actions to achieve and maintain the applicable Performance Standards in Tables 3 and 4 for the Floodplain portion of properties where there is sampling data documenting that total PCBs are greater than 1 mg/kg on the Floodplain portion of the property to be protective of any Legally Permissible Future Project or Work or any change in use of the property after the Effective Date of the Permit that constitutes a Legally Permissible Future Use.

(2) Corrective Measure

To achieve and maintain these Performance Standards, Permittee shall: conduct response actions to be protective of any Legally Permissible Future Project or Work where there is sampling data documenting that there are greater than 1 mg/kg total PCBs on the Floodplain portion of the property; conduct response actions to

achieve and maintain the applicable Performance Standards in Tables 3 and 4 for the Floodplain portion of properties where there is sampling data documenting that total PCBs are greater 1 mg/kg on the Floodplain portion of the property to be protective of any Legally Permissible Future Project or Work or any change in use of the property after the Effective Date of the Permit that constitutes a Legally Permissible Future Use; and perform all other related activities. Permittee shall perform the foregoing pursuant to these Performance Standards, the requirements in Sections II.B.7~~6~~.c.(2)(a) and II.B.7~~6~~.c.(2)(b) below, and in accordance with the plans submitted and approved pursuant to Section II.H. of this Permit.

(a) Permittee shall conduct response actions to be protective of any Legally Permissible Future Project or Work, including, but not limited to, flood management activities, road and infrastructure projects, and activities such as the installation of canoe and boat launches. Within 30 days of the date that EPA notifies Permittee in writing that EPA has determined: a) that the criteria for a Legally Permissible Project or Work has been met, and b) that there is sampling data documenting that there are greater than 1 mg/kg total PCBs on the Floodplain portion of the property, Permittee shall submit to EPA for approval, a work plan and schedule to respond to such Legally Permissible Future Project, or Work, including, without limitation, sampling and analysis, engineering controls, repairing any aspect of the Rest of River Remedial Action disturbed by such work, and materials handling and off-site disposal. For any activities that would involve the removal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site disposal of such materials and the protection of workers and other individuals during such activities, in accordance with applicable laws and regulations. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA approval for another party to implement some or all of these obligations.

(b) For any property subject to Section II.B.7~~6~~.c.(2)(a) above, and for any property with a change in use of the property after the Effective Date of the Permit that constitutes a Legally Permissible Future Use where there is sampling data documenting that there are greater than 1 mg/kg total PCBs on the Floodplain portion of the property, Permittee shall implement additional response actions, (including characterization and evaluation activities) to achieve the applicable Performance Standards in Tables 3 and 4. Permittee shall:

i. Determine the appropriate exposure scenario from Tables 3 and 4.

ii. Determine the EPC for the exposure area.

iii. Evaluate whether or not the EPC meets the Primary Performance Standard for Table 3 and/or the Performance Standard for Table 4. For non-agricultural future uses, if the EPC exceeds the Primary Performance Standard, follow the procedures outlined in Section II.B.3. of this Permit to determine if additional response actions are required, substituting Table 3 for Table 1. For agricultural future uses, if the EPC exceeds the Performance Standard in Table 4, evaluate soil removal necessary to meet the Performance Standard in Table 4.

iv. The Permittee shall submit this evaluation to EPA. Upon approval by EPA, the Permittee shall implement the required actions.

(c) Within 30 days of the date that EPA notifies Permittee that the criteria in this subsection have been met, Permittee shall submit to EPA for approval a work plan and schedule for the additional response actions. Permittee shall submit to EPA for approval such work plan and schedule, including, without limitation, sampling and analysis, engineering controls, repairing any aspect of the Rest of River Remedial Action disturbed by such work, materials handling and off-site disposal. For any activities that would involve the removal, handling or excavation of sediments and/or soils, Permittee shall be required to take response actions to ensure the proper excavation, management, and off-site

disposal of such materials and the protection of workers and other individuals during such activities, in accordance with applicable laws and regulations. Following receipt of EPA's approval of the work plan and schedule, Permittee shall implement the additional response actions in accordance with EPA's approval, including the approved schedule. Permittee may seek EPA approval for another party to implement some or all of these obligations. Further response actions under this paragraph will be (i) in accordance with and pursuant to the Consent Decree; and (ii) consistent with the scope of the response actions selected in this Revised Permit Modification. Permittee's responsibility for the costs of said further response actions will be limited to those costs solely related to the presence of PCBs.

d. Upland Disposal Facility

(1) Performance Standard

Permittee shall record an ERE to restrict future uses of land and groundwater that are inconsistent with the use of the Upland Disposal Facility.

(2) Corrective Measure

To achieve and maintain this Performance Standard, Permittee shall prepare and record an ERE in accordance with Paragraph 54 of the CD to prohibit excavation of the landfill, prohibit extraction, consumption, or utilization of the groundwater located underneath the Upland Disposal Facility, including a 500-foot zone around the consolidation area, and restrict the future use of and access to the Upland Disposal Facility. Permittee shall perform the foregoing pursuant to the Performance Standard above, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

~~7.~~8. Water Withdrawals and Uses

a. Performance Standard

The Permittee shall minimize/mitigate impacts during implementation of Corrective Measures to withdrawals and/or uses of water from the Rest of River by any entity.

b. Corrective Measures

To achieve and maintain this Performance Standard, Permittee shall minimize/mitigate impacts during implementation of Corrective Measures to withdrawals and/or uses of water from the Rest of River by any entity and perform all other related activities. Permittee shall perform the foregoing pursuant to the Performance Standards and the requirements in Sections II.B.8~~7~~.b.(1) through II.B.8~~7~~.b.(3) below, and in accordance with plans submitted and approved pursuant to Section II.H. of this Permit.

(1) Identify all industrial, commercial, private, or other withdrawals and/or uses of water from the Rest of River;

(2) Identify requirements associated with these uses (including water quality and quantity) that may be affected by implementation of Corrective Measures; and

(3) Propose methods to minimize/mitigate impacts during implementation of response actions.

C. Operation and Maintenance

Permittee shall implement an O&M program upon completion of the Remedial Action for the Rest of River. The O&M program shall be implemented to maintain the effectiveness of the Corrective Measures, to evaluate MNR, and to conduct inspection, maintenance, repair, or other response actions necessary to achieve and maintain compliance with Performance Standards. This program shall be designed to be consistent with an adaptive management approach, as outlined in Section II.F. below.

The O&M Plan will be a component of the Final Remedial Action Completion Report. Permittee shall submit a draft O&M Plan to EPA for review as a component of the Draft Remedial Action Completion Report. Upon approval or modification of the Final Remedial Action Completion Report, the O&M Plan will take effect. Components of the O&M Plan shall include, but not be limited to:

1. Monitoring of PCBs in groundwater, surface water, sediment, and biota.

2. Inspection and maintenance of Engineered Caps.

~~2.~~3. Inspection and maintenance of the Upland Disposal Facility, including collection and management of leachate.

~~3.~~4. Maintenance/implementation of Institutional Controls and Related Requirements in Section II.B.7~~6~~. and the requirements in Sections II.B.2.j. through II.B.2.l.

4.5. Inspection and maintenance of restoration activities, including invasive species control.

5.6. Inspection and maintenance of other Corrective Measures to ensure that Performance Standards are maintained.

D. Review of Response Actions

In accordance with Paragraph 43 of the CD, the Permittee shall conduct studies and investigations as requested by EPA to permit EPA to conduct periodic reviews, consistent with Section 121(c) of CERCLA and any applicable regulations, of whether the Rest of River Remedial Action is protective of human health and the environment. The Permittee shall also comply with any additional requirements pursuant to Section X of the Consent Decree with respect to periodic reviews.

E. Applicable or Relevant and Appropriate Requirements (ARARs) and To Be Considered (TBC) Requirements

The federal and state laws and regulations that constitute applicable or relevant and appropriate requirements (ARARs) for the response actions for Rest of River and To Be Considered (TBC) requirements are identified in Attachment C.

The ARAR tables include a description of the listed ARARs and a determination by EPA as to whether the listed ARARs will be met, any ARARs waived and any modified performance requirements based on EPA's waiver determination, and all TBC requirements. EPA may also, in accordance with CERCLA and the National Contingency Plan, 40 C.F.R. 300, waive an ARAR during the implementation of the remedy.

In addition, the technical Remedial Design/Remedial Action (RD/RA) submittals for response actions for the Rest of River shall, consistent with CERCLA, specify additional ARARs (not listed in Attachment C), if any, for such response actions. Additionally, such RD/RA submittals shall contain a proposal as to how the response action will comply with any such additional ARARs, and to the extent that EPA determines a waiver is appropriate, any modified performance requirement. The Permittee shall comply with and attain any such additional ARARs that EPA determines should be met by such response action.

F. Adaptive Management

An adaptive management approach shall be implemented by the Permittee in the conduct of any of the Corrective Measures, whether specifically referenced in the requirements for those Corrective Measures or not, 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. The Permittee shall modify the

implementation of the Corrective Measures, with EPA approval, after a reasonable opportunity for review and comment by the States, through this process to minimize any adverse impacts of the response action, expedite the response, improve the Corrective Measures, and/or to ensure compliance with, or continued progress towards, achieving Performance Standards. To implement an adaptive management approach effectively, Permittee shall submit deliverables identified in Section II.H. (Rest of River SOW) in phases, where appropriate, and identify how any lessons learned and any new information will be incorporated into subsequent deliverables and/or other methods to optimize project activities.

The Permittee shall perform the Corrective Measures in accordance with any modifications that are so identified by the Permittee (with EPA's approval), or that are identified and required by EPA, including, but not limited to, applying an adaptive management approach to the Rest of River SOW, or any other plans, specifications, schedules, or other documents. Any requirements identified by EPA pursuant to this provision cannot be inconsistent with the Consent Decree (including, but not limited to, Paragraphs 39, 162 and 163).

G. Coordination of Corrective Measures

Corrective Measures associated with the Rest of River will require a significant level of project scheduling, coordination, and sequencing, which shall be addressed by the Permittee in the Rest of River SOW. As the corrective measures are expected to be implemented in a phased approach, it is expected that the work to be implemented in each phase will have its own set of deliverables, including several of the deliverables identified in Section II.H.

H. Requirements for the Rest of River SOW

As required in Paragraph 22.x of the CD, the Permittee shall submit a Rest of River SOW for the implementation of the Corrective Measures, including pre-design activities and the subsequent performance of Corrective Measures. The SOW shall incorporate the Performance Standards and Corrective Measures from this finalized Permit, or portion thereof, and shall include a description of, and a submittal schedule for, at a minimum, the documents outlined below. In addition, the contents of the documents required in the SOW are subject to modification or adjustment based on specific activities for a given Corrective Measure and any site- or activity-specific considerations, including, but not limited to, resulting from an adaptive management approach. If deviations to such documents are proposed, such proposals shall be presented for EPA approval in the technical deliverables specific to that Corrective Measure.

1. Expedited Deliverables

a. In order to expedite response actions, Permittee shall commence and perform investigation and design work as contractual obligations effective February 10, 2020. Specifically, Permittee shall submit a schedule for the Rest of River SOW, develop the SOW, and, subject to approval by EPA, implement the

investigation and design components of the SOW and subsequent Work Plans to accelerate the commencement of the Rest of River cleanup. The obligation to perform this investigation and design work shall continue unless and until EPA issues a Revised Permit that does not contain terms substantially similar to those in the 2016 Permit, revised as specified by the 2020 Settlement Agreement.

b. Permittee agreed in the 2020 Settlement Agreement to coordinate as soon as practicable with municipal officials and affected landowners regarding work activities, schedules and traffic routes. Permittee's coordination with officials and landowners shall be described in the relevant work plans submitted to EPA.

c. Permittee has already submitted pursuant to the 2016 Permit the following documents:

- Rest of River Initial Statement of Work, including a section meeting the Requirements for the Overall Strategy and Schedule for Implementation of Corrective Measures submittal relating to GE's project organizational structure: roles, responsibilities, and lines of communication among GE, EPA, and state and local entities
- Baseline Monitoring Plan
- Floodplain Pre-Design Investigation Work Plan, Reach 5A (and related documents)
- Health and Safety Plan, a component of the Updated Project Operations Plan
- Components of the Institutional Controls and Related Requirements Plan limited to Biota Consumption Advisory Outreach Plan – Connecticut; Biota Consumption Advisory Outreach Plan – Massachusetts; and Plan for Obtaining Environmental Restrictions and Easements
- Dam Operation, Inspection, Monitoring and Maintenance Plans and related documents for Woods Pond Dam and Rising Pond Dam

~~2. The Permittee shall submit the following plans for EPA review and approval 30 days after submittal of the SOW:~~

~~a. Work plan for sampling of Reaches 7B and 7C described in Section II.B.2.f.(2) above.~~

~~b. Baseline Restoration Assessment (BRA) described in Section II.B.1.c.(2)(a) above.~~

~~c. Baseline Monitoring Plan described in Section II.B.4.b.(1)(a) above, including a plan to measure the effectiveness of MNR.~~

~~d. Work plan for the siting of Temporary Centralized Contaminated Materials Processing/Transfer Location(s), including:~~

~~(1) Processes to be conducted at centralized temporary location(s) for contaminated materials processing and transfer for off-site disposal, including potential dewatering facility and/or rail transfer facility;~~

~~(2) Criteria to be used in the temporary siting of the contaminated materials processing/transfer location(s);~~

~~(3) Process to coordinate with affected communities regarding the operation of the temporary location(s);~~

~~(4) Evaluation of potential location(s) using the criteria; and~~

~~(5) Development of site-specific construction plans.~~

~~e. Work plan for Phase 1B Cultural Resource Survey.~~

~~3.~~2. Overall Strategy and Schedule for Implementation of the Corrective Measures

The Permittee shall present its overall strategy for implementing the Corrective Measures that have been selected by EPA in this Permit, including the preparation of work plans, designs, and reports, completion of pre-design investigations, construction and implementation of the remediation, and inspection, maintenance, and monitoring. In addition, the Permittee shall describe the Permittee's project organizational structure, roles, and responsibilities, and lines of communication among the Permittee, EPA, and state and local entities, as appropriate, and will include the project organization and a project implementation schedule. The overall strategy shall include:

a. Coordination of Floodplain and sediment and bank remediation;

b. Sequence of remediation;

c. Project management structure.

~~4.~~3. Pre-Design Investigation Work Plans, including for the Upland Disposal Facility

~~5.~~4. Pre-Design Investigation Summary Reports

~~6.~~5. Plan for Measuring Compliance with Performance Standards

~~7.~~6. Conceptual Remedial Design/Remedial Action Work Plans, including for the Upland Disposal Facility

~~8.~~7. Final Remedial Design/Remedial Action Work Plans, including for the Upland Disposal Facility

~~9.~~8. Supplemental Implementation Plans (e.g., contractor health and safety plans (HASPs), operations plan)

~~10.~~9. Updated Project Operations Plan and Field Sampling Plan/Quality Assurance Project Plan for Rest of River-specific changes, including a Construction Monitoring Plan

~~11.~~10. On-Site and Off-Site Transportation Plan

~~12.~~11. Quality of Life Compliance Plan:

a. Noise, air, odor, light standards;

b. Continued recreational activities during and after the remediation, including that Permittee shall work cooperatively with the City of Pittsfield, the Towns of Great Barrington, Lee, Lenox, and Stockbridge, and the State of Massachusetts to facilitate their enhancement of recreational activities, such as canoeing and other water activities, hiking, and bike trails in the Rest of River corridor, on properties where remediation will occur and/or where temporary access roads are constructed;

c. Road use, including restrictions on transport of waste material through residential areas and methods to minimize and/or mitigate transportation related impacts to neighborhoods, infrastructure and the general public; consideration of methods to reduce residential impacts where practical, including remediation techniques that further restrict transport of waste material through residential areas. Examples of roads that would warrant such further restrictions include: Brunswick, Kenilworth, Warwick, and Chester Streets; Noblehurst Avenue; Revilla Terrace; Shetland, Clydesdale, Pinto, and Palomino Drives; and Anita, Lucia, Quirco, Joseph, and Eric Drives;

d. Coordination with local governments, affected residents or landowners at or near areas impacted by remediation to take reasonable steps to minimize the adverse impact of work activities by, among others, coordinating work activities, scheduling, and traffic routes; and

e. Community Health and Safety

(1) The Permittee shall maintain a website (similar to http://www.hudsondredging.com/) to provide community access to information such as data, technical reports, work plans, and project fact sheets, as well as updates on current and future project activities; and

(2) The Permittee shall establish and maintain a system to identify and address community complaints and concerns during construction activities.

~~13.~~12. Baseline Restoration Assessment (BRA) Work Plan, Baseline Restoration Assessment, Restoration Performance Objectives and Evaluation Criteria (RPOEC), Restoration Corrective Measures Coordination Plan (RCMCP), and Restoration Plan (RP)

~~14.~~13. Adaptive Management Plan

~~15.~~14. Sustainability and Climate Adaptation Plan, including measures to ensure that Corrective Measures are designed and constructed to be resilient to potential changes due to climate change and incorporate, where practical and appropriate, methods to minimize greenhouse gas emissions.

~~16.~~15. Work Plan for Phase 1B Cultural Resource Survey and Overall Cultural Resource Plan

~~17.~~16. Model Reevaluation Plan

~~18.~~17. Dam Removal-Related Activities Plan(s)~~, as necessary~~

~~19.~~18. Inspection, Monitoring and Maintenance Plan

~~a. Construction Monitoring Plan; and,~~

a. Inspection, Monitoring and Maintenance Plan(s) (including an Invasive Species Control Plan, a plan for the accumulation of contaminated sediment on top of the Woods Pond and Rising Pond Engineered Caps, a plan for Engineered Caps, and a plan to measure the effectiveness of MNR.)

~~20.~~19. Upland Disposal Facility Operation, Maintenance, and Monitoring Plan

~~21.~~20. Institutional Controls and Related Requirements Plan

~~22.~~21. Dam Operation, Inspection, Monitoring and Maintenance Plan

~~23.~~22. Water Withdrawal and Uses Plan

~~24.~~23. Plan for Further Response Actions, and any implementation of further response actions, in accordance with Section X of the Consent Decree (Review of Response Actions).

~~25.~~24. Remedial Action Completion Report, including an O&M Plan.

I. Schedule

As required under Paragraph 22.x of the CD, whenever the Permittee is required to design and implement the Rest of River Remedial Action or a portion thereof as the Permit or portions of the Permit become finalized, the Permittee shall develop and submit within 7 days to EPA for review and approval, a schedule for the subsequent submission of the SOW or relevant portions thereof. The schedule for the submittal for the SOW or relevant portions thereof shall be no sooner than 90 days and no later than 120 days from the Effective Date of the permit, or relevant portions thereof. The SOW shall contain schedules for the subsequent development of Remedial Action activities.

Implementation of the Corrective Measures shall begin concurrently, if feasible. Permittee shall begin such concurrent implementation in Reach 5A (sediment and Floodplain) and Woods Pond, unless Permittee proposes, and EPA approves an alternate approach.

Unless the Permittee proposes and EPA approves a modified schedule, Corrective Measures shall proceed downstream from Reach 5A and Woods Pond on a parallel track ~~as shown in Figure 6~~. The final sediment caps in the Impoundments shall not be placed, however, until all remediation in the upstream reaches has been completed. Following the placement of the cap in Reach 7G, sediment removal and subsequent capping shall take place in Rising Pond (Reach 8). This approach shall be subject to review under an adaptive management approach to evaluate the effectiveness of sequencing.

~~If remediation in any part of Reach 7 is performed pursuant to Section II.B.2.f.(1)(e), EPA may require an alternative sequencing to that described above.~~ The Corrective Measures in the Floodplain shall be performed by the Permittee while the adjacent sediment cleanup activities are taking place and shall share construction infrastructure to the maximum extent practicable to minimize the Corrective Measures footprint.

J. Project Coordinators

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

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

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

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

EPA's Project Coordinator
Dean Tagliaferro
U.S. Environmental Protection Agency
EPA New England
5 Post Office Square Suite 100
Boston, MA 02109-3912

EPA's Alternate Project Coordinator
Alternate Housatonic Rest of River Project Coordinator
U.S. Environmental Protection Agency
EPA New England
5 Post Office Square Suite 100
Boston, MA 02109-3912

Permittee's Project Coordinator
Andrew T. Silfer
General Electric Company
Corporate Environmental Programs
319 Great Oaks Boulevard
Albany, NY 12203

Permittee's Alternate Project Coordinator
Alternate Housatonic Rest of River Project Coordinator
General Electric Company
Corporate Environmental Programs
1~~59~~ Plastics Avenue
Pittsfield, MA 01201

Massachusetts Project Coordinators
Michael Gorski
Massachusetts Department of Environmental Protection
436 Dwight Street - Fifth Floor
Springfield, MA 01103

Mark Tisa
Massachusetts Department of Fish and Game
Division of Fisheries and Wildlife
Field Headquarters, ~~North Drive~~One Rabbit Hill Road
Westborough, MA 01581

Connecticut Coordinator
Connecticut Housatonic Rest of River Coordinator
Planning and Standards Division
Bureau of Water Protection and Land Reuse
Connecticut Department of Energy and Environmental Protection
79 Elm Street
Hartford, CT 06103

K. Sampling Requirements

The Permittee shall provide the results of all sampling and/or tests or other data generated by the Permittee or on the Permittee's behalf with respect to the implementation of the Permit to EPA and shall submit these results to EPA, at a minimum, in monthly progress reports. Data and supporting information shall be provided in electronic format and shall include locational information for all samples collected.

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

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

L. Reservation of Rights

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

M. Access to or Use of Property

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

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

N. Dispute Resolution

Resolution of disputes arising from implementation of this Permit shall be resolved consistent with the provisions in the Consent Decree.