



# Technical Assistance Services *for* Communities GE-Pittsfield/Housatonic River Site Comments on Project Operations Plan March 29, 2024

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**Technical Assistance Services for Communities (TASC)  
Comments on GE-Pittsfield/Housatonic River Site – Updated Project Operations Plan  
(POP), revised January 2024**

## **Introduction**

This document provides TASC comments on the GE-Pittsfield/Housatonic River – Project Operations Plan (POP). This document is for the Berkshire Regional Planning Commission (BRPC); the city of Pittsfield; the towns of Lee, Lenox, Stockbridge, Great Barrington and Sheffield; Massachusetts Audubon; Berkshire Environmental Action Team and other entities to use as they develop comments to share with the U.S. Environmental Protection Agency (EPA). TASC does not make comments directly to EPA on behalf of communities. This document is funded by EPA’s TASC program. The contents do not necessarily reflect the policies, actions or positions of EPA.

Pursuant to the Revised Resource Conservation and Recovery Act (RCRA) Permit Modification (Revised Final Permit) issued by EPA to the General Electric Company (GE) on December 16, 2020, for the Rest of River (ROR) portion of the GE-Pittsfield/Housatonic River site, GE developed and submitted a Statement of Work (SOW) specifying the deliverables and activities that GE will conduct to design and implement the ROR remedial action. In accordance with that requirement, GE submitted a Final Revised Rest of River Statement of Work on September 14, 2021. Section 4.3.1.2 of GE’s Final Revised Rest of River Statement of Work required the updated POP to be submitted to EPA within 15 months after EPA approval of the Overall Strategy and Schedule document.

## **Summary**

The January 2024 POP has five sections:

- Introduction
- Objectives and Format of Document

- Description of POP Components
  - Field Sampling Plan/Quality Assurance Project Plan (FSP/QAPP) (submitted previously)
  - Site Health and Safety Plan (submitted previously)
  - Waste Characterization Plan
  - Soil Cover/Backfill Characterization Plan
  - Site Management Plan
  - Ambient Air Monitoring Plan
  - Construction Quality Assurance Plan
  - Contingency and Emergency Procedures Plan
  - Construction Monitoring Plan
- POP Modifications
- References

The objective of the POP is to support the design and implementation of the various response actions conducted at the Site, including the ROR remedial action. The POP establishes minimum requirements and general protocols and methodologies for those topics and activities that are common to the various response actions, including any remaining non-ROR activities under the Consent Decree and the activities that are part of the ROR remedial action. Some of the common topics/activities addressed in the POP will vary depending on the specific response action, and the corresponding topics, scope and magnitude of the activities. If different or additional types of topics/activities are required as part of work at the Site, they will be described in an amendment or addendum to the POP or the specific POP plan and/or in the pertinent project-specific work plans or other Remedial Design/Remedial Action (RD/RA) submittal describing such activities, subject to EPA approval.

### **TASC Comments**

The revised POP presents a series of topic-specific plans to be followed by GE and its contractors in the performance of investigative and remedial activities at the Site including:

- Future activities associated with removal actions and other non-ROR activities.
- The ROR remedial action under the Revised Final Permit.
- The construction, operation and closure of the Upland Disposal Facility (UDF) for the disposal of a portion of the sediments and soils removed from the ROR area.

The revised POP summarizes details provided in specific plans as attachments to the POP. In general, the revised POP fulfills the requirements set forth within the SOW and Revised Final Permit; however, TASC identified additional considerations to each plan contained within the POP that may be of value to the community. These comments capture a number of issues that were previously identified in other ROR documents (such as the Conceptual RD/RA and others).

1. The revised POP provides a concise description of a suite of plans that manage and monitor future ROR construction activities. The plans could benefit from a description of any anticipated regulatory oversight to be provided by EPA and other stakeholders. Through the involvement of reviewing, regulatory entities provide the community a sense of comfort and control of this significant construction process. Specific recommendations for each attachment plan are described in additional comments below.

*The community may want to ask EPA if this revised POP should include a description of the anticipated oversight activities to be provided by EPA and others.*

2. Section 1.0 provides the document introduction and states that the revised POP generally describes the minimum requirements, general activities, protocols and methodologies to be employed by GE and its contractors including investigation, remediation and restoration activities at the ROR as well as the construction, operation and closure of the UDF for the disposal of a portion of the sediments and soils removed from the ROR area (pdf page 7). This document describes various aspects associated with the UDF. The UDF represents a singular, important feature associated with the ROR remedial action activities, and as such, the UDF information should be provided in a single, complete document for community referral. It would be useful if all pertinent information were contained within a few select resources, rather than spread out between numerous sitewide and Remediation Unit (RU)-specific documents.

*The community may want to ask EPA if all comprehensive UDF information could be contained within a few, select documents for ease of later referral.*

3. Section 2.0 of the revised POP describes the objectives and format of the document. As identified within this section, the document is to promote a level of consistency, uniformity and comparability among the activities to be conducted at the Site and to ensure that the response actions when implemented are “in compliance with applicable federal, state and local requirements” (pdf page 9). The remedial actions are authorized under a preemptive authority outlined by the Revised Final Permit; therefore, other requirements may be excluded. It may be useful to the community to understand which local requirements may not be met due to this authority. For instance, local noise ordinances may not be applicable to the construction activities.

*The community may want to ask EPA if GE can summarize which local ordinances will or will not be adopted due to over-arching requirements.*

4. The revised POP states that the FSP/QAPP is being provided on separate tracks and is not included in this document. As such, the community is unable to review the FSP/QAPP, which is key to understanding how GE and the contractors are to sample removed media, and how they are going to conduct sampling to verify remedy effectiveness. There are certain elements of the FSP/QAPP that may be of interest to the community including:
  - The in-field method for representative sample collection to characterize collected media for disposal. The revised POP describes a general approach, however the details describing volumes of materials collected for each sample by total unit of waste material volume collected, and the timeline for associated analysis is not included.
  - Occasional comparative sampling and analysis of media for both Aroclor-based and polychlorinated biphenyl (PCB) congener-based analysis. The performance standards

for the ROR are based on total PCBs using Aroclor analysis. TASC has previously commented on the need to conduct comparative congener-based total PCB analysis to ensure that the entire suite of PCB chemicals within the ROR are addressed during the remedial action.

- Results of samples collected by EPA to provide oversight of GE's methods and analytical performance. Oversight samples of media to be removed will likely be collected and analyzed to determine if the remedial action is accomplishing the intended ROR performance standards. The community may wish to review this information to be sure removal actions are addressing the contamination thoroughly.

*The community may want to ask EPA if the revised POP could include the location of the FSP/QAPP, if it has already been released, or if they will have an opportunity to review and comment on the FSP/QAPP, if it has not yet been released.*

5. Section 3.3 and Attachment A of the POP describe the Waste Characterization Plan. TASC identified several questions pertaining to the plan provided in Attachment A as follows:

- Attachment A provides an overview of the methods to address waste characterization. It seems important that GE have available, real-time (conducted as remedial activities are occurring) methods to analyze materials for PCB content in order to allow for continuous construction activity. Currently, the POP states that historical data will be used to meet PCB criteria for disposal (pdf page 33); however, it seems important to collect real-time samples to verify waste disposal assumptions (whether the collected material qualifies for UDF disposal or if the waste needs to be transported off-site). The amount of time required for sample collection, analysis and data interpretation can be substantial and will encumber the construction process. It would be useful to understand how GE plans to obtain the necessary real-time PCB analysis results during removal actions in order to allow for a continuous, uninterrupted construction schedule.
- Attachment A and Attachment B describe the use of Toxicity Characteristic Leachate Procedure (TCLP) analysis to be completed to identify the presence or absence of other RCRA related constituents of potential concern. TCLP is a suitable method of analysis that yields a comprehensive determination of potentially mobile contaminants or elements of concern. TCLP analysis is a leaching procedure designed to replicate the leaching of contaminants in municipal landfills due to typical municipal landfill leachates. It may be appropriate to test materials using Synthetic Precipitate Leachate Procedure (SPLP) analysis, which mimics acid rain conditions and is designed to mimic the leaching of contaminants exposed to normal weathering in situ by acid rain. TCLP is used for waste disposal purposes; the SPLP is used to determine the potential for soil contamination to leach into groundwater (Phase Separation Science, 2024). It may be appropriate to test soils designated as cap and/or fill materials to be analyzed using SPLP methods. Attachment A, Section 2.2 (pdf page 29) mentions that GE may propose to use existing site materials excavated

during construction of the UDF as backfill or cover material. This seems like an appropriate approach; however, the community may want to ask EPA if GE should test this material using SPLP methods to determine suitability of the material as fill and/or cap material.

- Attachment A, Section 2.2.1.1 (pdf page 29) describes the approach to address on-site water treatment and discharge. It is not clear how GE will address encountered groundwater during removal actions (or, if this is even a possible concern given the depth the groundwater). In addition, it is not clear how GE will address large equipment decontamination wash water. GE may dedicate certain pieces of equipment to the removal actions, but may likely want to decontaminate this equipment on occasion, which will produce a large amount of potentially contaminated water.
- Attachment A, Section 2.2.1.3 (pdf page 30) describes the proposed on-site consolidation process for consolidation of demolition debris. These activities will likely create a significant amount of dust. The community may want to have this area monitored for PCB dust emissions.
- Attachment A, Section 3.4 (pdf page 37) describes the waste characterization methods for building demolition debris. There is no mention of possible lead or copper sources of concern. Lead and copper may be associated with the plumbing features of the building.

*The community may want to ask EPA if GE will have access to real-time PCB analysis methods and if the use of SPLP testing would be appropriate for media to be used for eventual fill and/or cap material. In addition, the community may want to ask EPA how GE intends to manage large volumes of equipment wash water, and if the demolition activities should address dust and possible wastes containing lead and copper.*

6. Section 3.4 of the POP (pdf page 11) and Attachment B (pdf page 50) describes the Soil Cover/Backfill Characterization Plan. The plan describes the criteria for both PCBs and other constituents in suitable cap/cover and backfill for material to be used in the ROR and in other areas. Several questions were developed that are focused on the suite of analysis proposed in Attachment B as follows:

- Attachment B (and other portions of the document) indicates that excavated UDF materials may be of suitable use as fill or cap material. This is an appropriate use for this material; however, it should be acknowledged that the UDF area shows signs of historic debris disposal with the presence of concrete debris. In addition, the UDF area is closely located to an historical landfill, and an area where groundwater has exhibited detections of per- and polyfluoroalkyl substances (PFAS). As a result of these conditions, the local community (and State Health Department) have taken an interest in the occurrence of PFAS. It may be appropriate for GE to coordinate testing of UDF materials for PFAS content to assist the community and the State in a better understanding of the current and potentially future PFAS issues.

- Attachment B describes a method of collection of composite sample from 10 discrete grab subsamples for off-site materials (pdf page 56). This is an appropriate method to acquire a composite; however, it is recommended that this sample be screened/sieved to acquire the smallest size fraction of solid material. This will provide the most conservative estimate of possible PCB occurrence given the larger (cumulative) surface area of the sample.
- Attachment B, Section 3.1.1.2 describes the ROR remedial action process and restates the candidate backfill material PCB Aroclor screening criteria of 0.021 milligram/kilogram (mg/kg). It seems appropriate to test this Aroclor-based result against a total PCB-congener based analysis to be sure all PCBs are evaluated.
- Attachment B, Table 3-1 summarizes criteria for metals/inorganics in cap/cover/backfill material for ROR remedial actions. This table is an example of values and decisions that may change over time as a result of new information. New screening values can be developed and provide more appropriate standards for this screening process. It seems appropriate that GE review this information on a routine basis to be sure the most appropriate criteria are applied.

*The community may want to ask EPA if UDF sample analysis can include PFAS to assist with an understanding of these chemicals in the UDF area, if GE could sieve the composited sample to acquire the smallest (most conservative) fraction, if GE will conduct congener-based PCB analysis of fill materials and if GE intends to routinely review the criteria presented in Table 3-1 to identify current and appropriate criteria.*

7. Section 3.5 of the POP (pdf page 12) and Attachment C (pdf page 65) describe the Site Management Plan. Several questions were developed for these sections as follows:

- Several of the proposed staging areas for Reach 5A (as shown in the Conceptual Remedial Design/Remedial Action Plan) are to be closely located to active traffic areas and residential settings. These staging areas may serve as attractive nuisances for public inquiry and trespass. GE could post perimeter fencing and signs that provide a link to the ROR dashboard or web page for the community to access and understand the purpose of these areas. It may also be suitable for GE to post signage around air monitoring (and other quality of life (QOL) monitoring equipment) to notify the community about the use of the equipment, and how the community can access the generated data.
- Attachment C mentions the monitoring of key QOL parameters of air quality and noise but fails to acknowledge odor and light.

*The community may want to ask EPA if the Site Management Plan could be revised to include a description of the construction area perimeter signage to avert trespass and inquiry, and to also include the QOL monitoring parameters of odor and light.*

8. Section 3.6 (pdf page 12) and Attachment D (pdf page 82) describe the Ambient Air Monitoring Plan. The proposed air monitoring will provide an understanding of particulate dust emissions within and around ROR construction areas. It is recommended that selection of air monitoring stations be coordinated with the community in order to identify key areas of concern. In addition, it is recommended that occasional dust sampling of area residences or community gathering buildings be sampled and analyzed for PCB content directly with the use of swipe sample collection. These samples may help appease community concerns about PCBs transported to public use areas. EPA outlines a building materials method that may be applicable to this sample collection process (US EPA, 2024).

*The community may want to ask EPA if GE can coordinate with the community to identify suitable air monitoring locations, and to provide occasional sampling opportunities for dust analysis in residences or community buildings.*

9. Section 3.7 of the POP (pdf page 13) and Attachment E (pdf page 105) describe the Construction Quality Assurance Plan. The basis of this plan is to verify construction is compliant with the design requirements. It is focused on using physical measurements (survey control) of remedied areas to verify the return of disturbed ground to comparable topography. While this is a very important basis of the Construction Quality Assurance Plan, it should also be recognized that the achievement of performance standards is a driver to remedial action completion. It seems important to collect and archive strategic samples (such as sediment borings, exposed riverbank soils and upland soils) to verify PCB performance standards. Furthermore, this plan should describe regulatory oversight procedures that will be accomplished to verify the accuracy and precision of GE's construction field activities.

*The community may want to ask EPA if the Construction Quality Assurance Plan should be revised to include a description of how the PCB performance standards will be checked, and if any regulatory oversight will be provided.*

10. Section 3.9 of the POP (pdf page 13) and Attachment G (pdf page 186) describe the Construction Monitoring Plan. Several questions were developed as follows:
  - There has been a significant amount of baseline and follow-up work to identify the presence of cultural and archaeological resources. There is no mention within this document as to how the construction contractor is to deal with encountered resources. This should be a component to the contractor requirements. Furthermore, excavation activities in areas known to have the potential to contain resources should be overseen by a qualified entity.
  - Similar to the previous bullet, a significant amount of baseline inventory of sensitive/valuable biological environments has been accomplished. Construction efforts within close proximity to these areas should be overseen by a qualified entity to ensure real-time mitigation of impacts is accomplished.

- Attachment G Section 3.8 (pdf page 197) describes the surface water quality monitoring. This section indicates that turbidity is the key water quality parameter to be monitored. While turbidity measurements will effectively evaluate if construction activities impact how much suspended material is in the water, it is recommended that additional measures of temperature, pH and conductivity be included since these changes are not visible and more sensitive to construction disturbances.
- Section 3.8.1 (pdf page 197) describes the placement of continuous turbidity monitors, which include one upstream and one downstream. It is recommended that two downstream locations be established to measure the recovery (settling and dilution zone) rate of turbidity settling. This will enable GE to better understand the entire footprint of disturbance created from construction.
- It is recommended that GE review the possible use of biochar or activated carbon filter socks to assist with the adsorption and control of released, dissolved PCBs into the water. These unique controls may help control dissolved PCB release into the water downstream of construction disturbance (Kaya et al., 2022, and Valizadeh et al., 2021).

*The community may want to ask EPA if oversight by appropriate professionals will be a component of the construction monitoring, and if the plan can be amended to include additional water quality monitoring of temperature, pH and conductivity, an additional downgradient sampling location, and the placement of biochar or activated carbon filter socks to help control PCB releases.*

## References Cited

Anchor QEA (Anchor QEA, LLC), AECOM and Arcadis. Final Revised Rest of River Statement of Work. Prepared for the General Electric Company. September 2021.

<https://semspub.epa.gov/src/document/01/659938.pdf>

Arcadis. Project Operations Plan. GE-Pittsfield/Housatonic River Site. Prepared for General Electric Company. Revised January 2024. <https://semspub.epa.gov/work/01/680355.pdf>

EPA. Revised Final Permit Modification to the 2016 Reissued RCRA Permit and Selection of CERCLA Remedial Action and Operation & Maintenance for Rest of River. December 2020.

<https://semspub.epa.gov/src/document/01/650440.pdf>

Kaya, D., K. Croft, S.T. Pamuru, C. Yuan, A.P. Davis and B.V. Kjellerup, 2022. Considerations for evaluating innovative stormwater treatment media for removal of dissolved contaminants of concern with focus on biochar. Chemosphere. Volume 307, Part 4, November 2022, 135753.

<https://www.sciencedirect.com/science/article/abs/pii/S0045653522022469>

Phase Separation Science: Technical Articles: TCLP EPA 1311 vs. SPLP EPA 1312. Accessed February, 2024. <https://www.phaseonline.com/technical-articles/>;



<https://www.phaseonline.com/wp-content/uploads/2020/05/TCLP-EPA-1311-vs.-SPLP-EPA-1312-water-1.pdf>

US EPA, 2024. Polychlorinated Biphenyls (PCBs), How to Test for PCBs and Characterize Suspect Materials. Non-porous surface samples. <https://www.epa.gov/pcbs/how-test-pcbs-and-characterize-suspect-materials>

Valizadeh, S., S.S. Lee, K. Baek, Y.J. Choi, BH Jeon, G.H. Rhee, KY.A. Line and YK Park, 2021. Bioremediation strategies with biochar for polychlorinated biphenyls (PCBs)-contaminated soils: A review. Environmental Research. Volume 200, September 2021, 111757. <https://www.sciencedirect.com/science/article/abs/pii/S0013935121010513>

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